



THE GOVERNMENT  
OF THE GRAND DUCHY OF LUXEMBOURG



# Green Bonds Make More Cents?

International Experiences and  
Policy Implications for Viet Nam







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# ACKNOWLEDGEMENT

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## Authors

Hien Minh Tran - Sustainable Finance Policy Senior Associate, Global Green Growth Institute (GGGI) Viet Nam

Srinath Komarina - Senior Green Finance Officer, GGGI Viet Nam

Bertha Wakisa Chiudza - Senior Officer - Gender and Social Development, GGGI

Strategic guidance from Hanh Le - Country Representative, GGGI Viet Nam

Design and layout by Hanh Hoang - Communications Officer, GGGI Viet Nam

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Abbreviation	Definition
ABS	Asset-backed Securities
ACGF	ASEAN Catalytic Green Finance Facility
ADB	Asian Development Bank
AFME	Association for Financial Markets in Europe
AMAC	Asset Management Association of China
ASEAN	Association of Southeast Asian Nations
ASEAN GBS	ASEAN Green Bond Standards
BaFIN	Federal Financial Supervisory Authority
BCL	Banque centrale du Luxembourg
BSP	Bangko Sentral ng Pilipinas
CBI	Climate Bonds Initiative
CBRC	China Banking Regulatory Commission
CBS	Climate Bonds Standard
CDP	Carbon Disclosure Project
CEBDS	Brazilian Business Council for Sustainable Development
CFA	China Futures Association
CIRC	China Insurance Regulatory Commission
CICERO	CICERO Shades of Green AS
CMSA	Capital Markets and Services Act
CO <sub>2</sub>	Carbon Dioxide
CSRC	China Securities Regulatory Commission
CSSF	Commission de Surveillance du Secteur Financier
DFI	Developmental Financial Institutes
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EIB	European Investment Bank
ESG	Environment, Social, and Governance
ESMA	European Securities and Markets Authority
ETF	Exchange-Traded Fund
EU	European Union
FEBRABAN	Brazilian Federation of Banks
FMC	Forward Markets Commission
G20's TCFD	Task Force on Climate-related Financial Disclosure
GBP	Green Bond Principles
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GIIN	Global Impact Investing Network
GLP	Green Loan Principles
ICBC	Industrial and Commercial Bank of China

ICMA	International Capital Market Association
IEA	International Energy Agency
IFC	International Finance Corporation
IIFCL	India Infrastructure Finance Company Limited
ILDS	Issue and Listing of Debt Securities
IMF	International Monetary Foundation
Lao PDR	Lao People's Democratic Republic
LGX	Luxembourg Green Exchange
LuxFLAG	Luxembourg Finance Labelling Agency
LuxSE	Luxembourg Stock Exchange
MAS	Monetary Authority of Singapore
MCA	Ministry of Corporate Affairs
MUFG	Mitsubishi UFJ Financial Group
NAFMII	National Association of Financial Market Institutional Investors
NBFI	Non-Bank Financial Institutions
NDRC	National Development and Reform Commission
NGFS	Network for Greening the Financial System
OECD	Organisation for Economic Co-operation and Development
OTC	Over-the-Counter
POC	People's Bank of China
PRC	People's Republic of China
PSE	Philippine Stock Exchange
PV	Photovoltaic
RBI	Reserve Bank of India
ROC	Registrar of Companies
SAC	Securities Association of China
SC	Securities Commission
SCA	Securities Commission Act
SDG	Sustainable Development Goals
SEBI	Securities and Exchange Board of India
SEC	Securities and Exchange Commission
SGX	Singapore Stock Exchange
SRI	Sustainable and Responsible Investment
SRO	Self-regulating Organization
SSA	Supranational, Sovereign & Agency
SSE	Shanghai Stock Exchange
SPDB	Shanghai Pudong Development Bank
UN	United Nations
UNDP	United Nations Development Programme
UNEP	UN Environment Programme
USD	US Dollars



# FOREWORD

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Climate change is a defining issue of our time. In fact, the economic consequences of climate change are already in evidence. Across the globe, extreme weather events related to climate change are on the rise—droughts, wildfires, hurricanes, and heat waves are all becoming more common. Natural disasters are a major source of losses to households and businesses. Extreme weather events have been shown to disrupt global supply chains and impact corporate profitability. Chronic flooding and sea level rise negatively impact local economies and disrupt affected communities.

Simultaneously the COVID-19 pandemic has revealed, how vulnerable our economies and societies are. The pandemic is undoubtedly bringing its challenges in achieving the 2030 Agenda and addressing climate change, but the changing development landscape also creates new opportunities. The COVID-19 enables a unique opportunity for us “to make” the world more inclusive and sustainable. Investments in green recovery and sustainable finance are vital for greener and more inclusive economies, and more resilient societies post-COVID.

In this context, the Government of Luxembourg recognizes the importance of sustainable finance as a cornerstone strategy to accelerate the transition to a greener, low-carbon economy across the globe. With its most recent Initiative in Sustainable Finance (LSFI), as well as Luxembourg’s Sustainable Finance Strategy, the Government of Luxembourg expresses the highest political commitment in encouraging investments that have a greater positive impact on people and the planet. The initiative evolves around priorities outlined by the Paris Agreement on climate change and the European Commission taxonomy for sustainable activities, while aligning with international commitments to “build back better” – and more sustainable – from the COVID-19 pandemic.

Capitalized on Luxembourg’s strategic positioning as the world’s leading hub for sustainable finance, as well as its long tradition in providing resources and technical assistance to vulnerable countries, the Ministry of the Environment, Climate, and Sustainable Development is proud to be supporting the development of Green Bond market in Viet Nam, via the “Viet Nam Green Bond Readiness Program” (the Program) implemented by GGGI. The Program aims to support the long-term development of a green bond market, enhancing investments in sustainable projects that would reduce GHG emissions and create green jobs, contributing to the achievement of Viet Nam’s NDC targets.

This international practice report serves as the first technical support product that the Program introduces to stakeholders on Viet Nam’s financial markets. The report outlines key components of sustainable finance and green bond market. Simultaneously, the report highlights some international practices in developing green bond market across selected markets and suggests some policy recommendations for Viet Nam.

We hope that the report contributes to the formulation of Viet Nam’s green bond ecosystem. Much more efforts would need to be done to facilitate Viet Nam’s green bond journey. And we are happy to take the lead in this roadmap.

Sincerely,



André Weidenhaupt



**Dr. André Weidenhaupt**

Director General

Luxembourg’s Ministry of  
Environment, Climate and  
Sustainable Development

# FOREWORD

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The world is entering a new decade that is a critical period to deal with the climate crisis. It is estimated that the 2020 – 2030 decade is the world's last chance to take decisive climate action toward a NetZero2050 target if we are to limit the overall temperature increase of the globe to 1.5 degrees Celsius. It is an urgent task: acting later can be extremely costly and may turn out to be ineffective. Nevertheless, shifting economic development towards a sustainable path is a challenging process that involves technological, societal, organizational, political, and economic endeavors. A successful transition requires, therefore, strong global cooperation.

For developing countries, mobilizing green investment from the private sector has probably been the largest challenge. The recession caused by the COVID-19 pandemic could slow down even further the investments required for inclusive, low-carbon and resilient development pathways.

In Viet Nam, it is evident that to sustain an impressive growth rate, while enhancing climate resilience and addressing environmental degradation, is a challenging task. It is estimated that Viet Nam needs at least

USD 35 billion by 2030 to address climate impacts and achieve its NDC target. As such, investments in clean technologies and sustainable infrastructure need to be enabled and scaled up rapidly.

GGGI has been working with the Vietnamese government to support its transition to green growth and addressing climate change. In particular, GGGI focuses our collaboration efforts on enhancing the country's NDC targets through promoting sustainable infrastructure (such as urban cooling measures, green building etc.), accelerating green digital solutions and increasing access to innovative financial instruments such as carbon pricing or green bonds.

This report is part of GGGI's technical assistance under the framework of the Green Bond Readiness Program, funded by the Government of Luxembourg. The Program marks as a strategic transitioning point in the development of Viet Nam's sustainable finance market. We trust that Viet Nam will be growing even stronger and more sustainably with innovative financial tools such as green bonds available to this vibrant market. I wish you all good reading of this report and invite the readers to join our journey in creating a sustainable financial market in Viet Nam!

With warm regards,



Hanh Le



**Ms. Hanh Le**

Viet Nam Country Representative  
Global Green Growth Institute



## EXECUTIVE SUMMARY

Despite impressive economic growth rates in recent years, **Viet Nam remains highly vulnerable to climate change**, primarily due to the country's heavily dependence on agricultural sectors, its location near the end of several trans-boundary river basins, and the low coastline that is constantly threatened by rising sea levels. At the same time, Viet Nam's rapid growth and industrialization have had detrimental impacts on the environment and natural assets. Over the past two decades, **Viet Nam has emerged as the fastest growing per-capita greenhouse gas emitters in the world** – growing at about 5 percent annually.

Recognizing the need to address climate change while sustaining long-term economic prospect, **the Government of Viet Nam has set GHG emission reduction targets and policies in its NDC and national green growth strategy**. Mobilizing private funding via private-sector-led innovation and market-based solutions will accelerate the transition to a low-carbon economy, reduce risks of carbon lock-in and support sustainable growth.

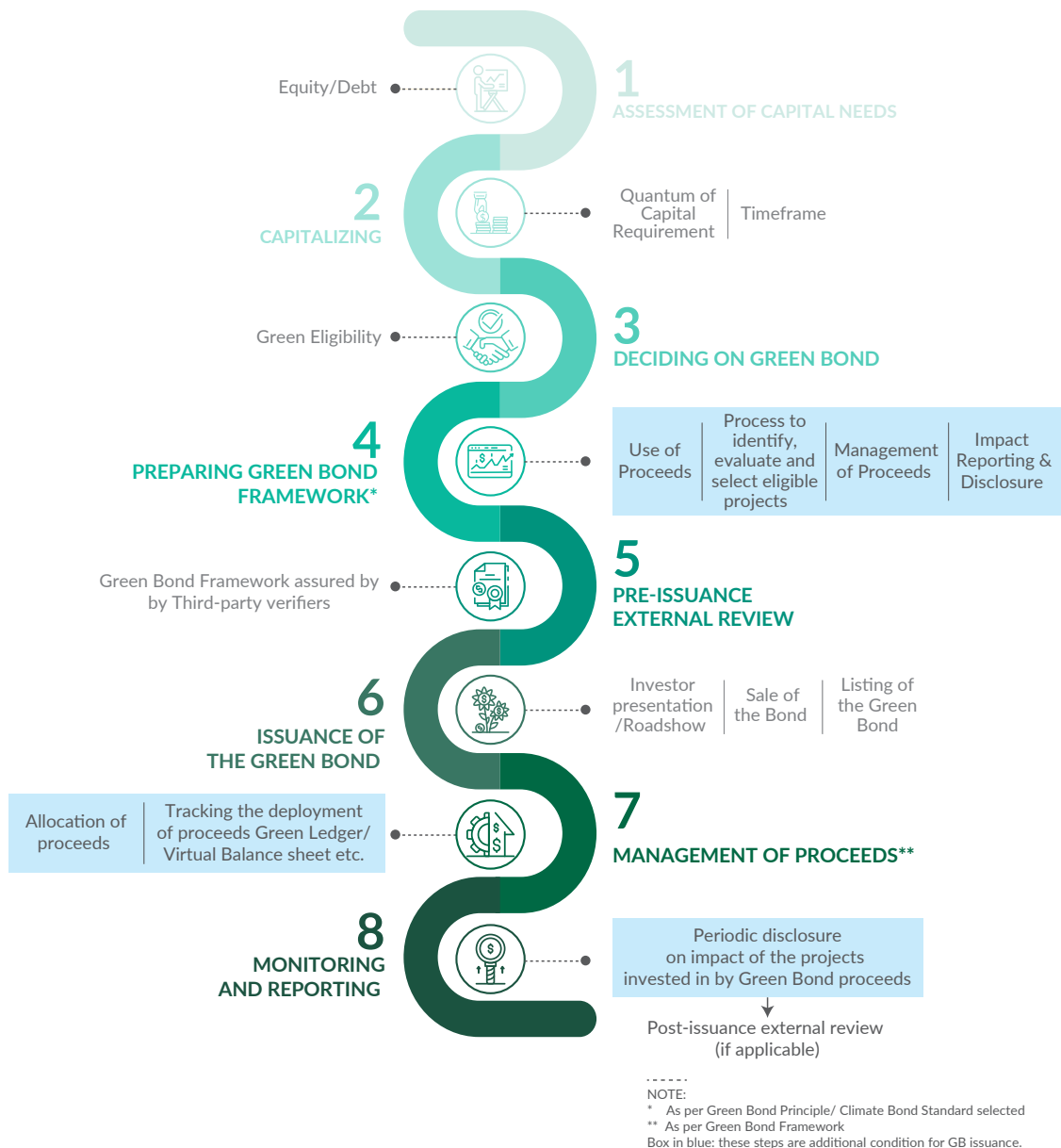
**The key to unlocking climate investment potential from the private sector lies in sustainable finance.** Sustainable finance can be used to fund projects with environmental, social, economic benefits, as well as contributing to other SDGs. Sustainable finance consists of different financial instruments, such as bonds, loans, revolving credit facilities (RCF) and other innovative products. **Green bonds are among the prominent instruments in sustainable finance portfolio.**

**This publication discussed multiple aspects of green bond market development**, including new developments of green bonds and other new sustainable finance instruments globally, green bond ecosystem, green bond issuance process, international experiences in developing domestic green bond market, as well as some policy implications for Viet Nam.

After reviewing the importance of climate change response in Viet Nam in session 1 and the basics of sustainable finance in session 2, session 3 of the report examines the building blocks of green bond markets. **Key stakeholders of the green bond ecosystem include: Government, Issuers, Investors, Market facilitators, Market standard setters/ Third party verifiers, and others.** The issuance process of green bond products is outlined with 8 distinctive steps, as being illustrate in the below figure.



Figure A: Green Bond Process



Section 4 highlights some key trends in global green bond market, with special focus on various innovative products emerged during the pandemic. One direct new product in response to Covid-19 was the introduction of COVID-19 Recovery Transition Bonds. As more countries recognise the need for an equitable social distribution of the bond proceeds, the prospective size of **social, sustainability, and sustainability-linked bond markets are growing substantially**, supported by both supply and demand sides. Notably, in 2020, the European Commission had issued a EUR 14 billion social bond under the EU SURE instrument to help protect jobs and people in work. Later in the year, the EU SURE social bond was listed on the Luxembourg Stock Exchange, and displayed on the Luxembourg Green Exchange, the world's leading platform exclusively dedicated to sustainable securities.

Section 5 reviews experiences in developing green bond market in some selected countries, focusing on key fundamental policies that were introduced to promote green bond market. Overall, **depending on the development status of the local bond market, regulators could utilize various policy actions** (See more in Table 7). In emerging markets, some focused on **setting out clear 'green' standards and specified the use of bond proceeds that meet green bond's definition** (e.g. Malaysia, Philippines, China). Others **prioritized the reporting and disclosure approach** to ensure the transparency of the green bond market (e.g. Singapore, India). On the other hand, more mature markets such as Luxembourg prioritized advanced policy tools such as **establishing a Green Exchange and having a comprehensive sustainable finance strategy**.

**Table A: An overview of policy tools to promote Green bond market in selected countries**

Country	Notable policies	Other supporting tools
Malaysia	<ul style="list-style-type: none"> <li>Setting guidelines and standards for green bond issuance</li> <li>SRI Sukuk and Bond Grant Scheme to promote the application of SRI and Sukuk Framework</li> </ul>	<ul style="list-style-type: none"> <li>Strategically support the long-term development of Green bond market by the SRI Roadmap</li> <li>The development of a local verifier - RAM Sustainability</li> </ul>
Philippines	Setting guidelines and standards for green bond issuance	Innovation in Green bond products: negative yield green bond, green perpetual bond
Singapore	<ul style="list-style-type: none"> <li>Green Bond Grant Scheme, Sustainable Bond Grant Scheme</li> <li>ABS Guidelines on Responsible Financing</li> </ul>	Network for Greening the Financial System
Thailand	<ul style="list-style-type: none"> <li>Introduce Guidelines for Green, Social, and Sustainability Bond and Sovereign Sustainable Financing Framework</li> <li>Introduce waivers for approval and filing fees, as well as bond registration fees</li> <li>Launch a Green, Social &amp; Sustainability Bond information platform</li> </ul>	<ul style="list-style-type: none"> <li>Drafting of a Sustainable Finance policy framework</li> <li>Encouraging the integration of ESG criteria into disclosure and governance practices</li> <li>Promoting local verifiers</li> </ul>
China	<ul style="list-style-type: none"> <li>Setting guidelines and standards for green bond issuance and green bond standard harmonization</li> <li>Developing a priority list of strategic green projects: Green Bond Endorsed Project Catalogue</li> </ul>	Green Finance Pilot Zones
India	Disclosure Requirements for Issuance and Listing of Green Debt Securities	Other supporting initiatives to promote the issuance and investment flow on Green bond market: India Infrastructure Development Fund, Smart Cities Initiative, Swachh Bharat Mission, National Solar Mission
Luxembourg	<ul style="list-style-type: none"> <li>The launch of Luxembourg Green Exchange to facilitate green bond as well as sustainable finance market</li> <li>Introducing Sovereign Sustainability Bond framework. The first Sovereign Sustainability Bond issued in September 2020.</li> </ul>	An integrated Climate Finance strategy to vitalize sustainable finance ecosystem
Germany	The issuance of sovereign green bond and Green Federal Securities Framework	Promoting sustainability risk framework to help de-risk and stabilize Green bond market

In line with those international developments in sustainable finance, green bond market is an opportunity Viet Nam could tap into to mobilize private resources for green infrastructure projects and to attract potential global investors to the domestic market. It is an effective tool to finance projects with high impacts in climate change mitigation and green growth, such as renewable energy, energy efficiency, waste to energy, and other sustainable infrastructure projects. Section 6 of the report outlines **five key policy takeaways for Viet Nam in developing its own green bond market:**

- (i) Defining eligible green investments and national green taxonomy;
- (ii) Introducing regulatory framework needed to establish a Green bond market;
- (iii) Strengthening investor base for Green bond market;
- (iv) Piloting green bond issuance through different issuer types; and
- (v) Sustaining the long-term development of Green bond market.





# 01 INTRODUCTION

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## BACKGROUND

Viet Nam has progressed rapidly over the past few decades to achieve social and economic success. According to IMF, the country tripled its GDP<sup>1</sup> between 1990 and 2015 and the poverty rate dropped to below 5% from 60% in 1980s<sup>2</sup>. This growth has also led to better infrastructure and improved living standards. However, it is evident that this growth shall not be focusing on raising income levels and boosting economic prosperity only. Sustained growth requires incorporating considerations about social and environmental factors. A recent World Bank report suggests that “a productivity-driven development model—combining innovation with balanced development and allocation of private, public, human and natural capital—will be key for Viet Nam to achieve its goal of becoming a high-income economy by 2045”<sup>3</sup>. It is estimated that the contribution of natural capital to total wealth in Viet Nam between 1990 and 2014 was 0.3%, three times higher than East Asia’s average and equivalent to the average percentage of lower middle-income countries (Figure 1). The report further goes on to claim that the country is “in a state of emergency when it comes to damage to environment”<sup>3</sup>. A similar view is reflected across the opinions of the local population who consider pollution as a greater threat than job security<sup>4</sup>.

Given the urgency of this concern, the Government of Viet Nam has been taking bold steps for propelling the country towards a green growth pathway through strategies and plans such as the existing National Climate Change Strategy, the Viet Nam Green Growth Strategy, Viet Nam’s Nationally Determined

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1. In terms of real per capita GDP

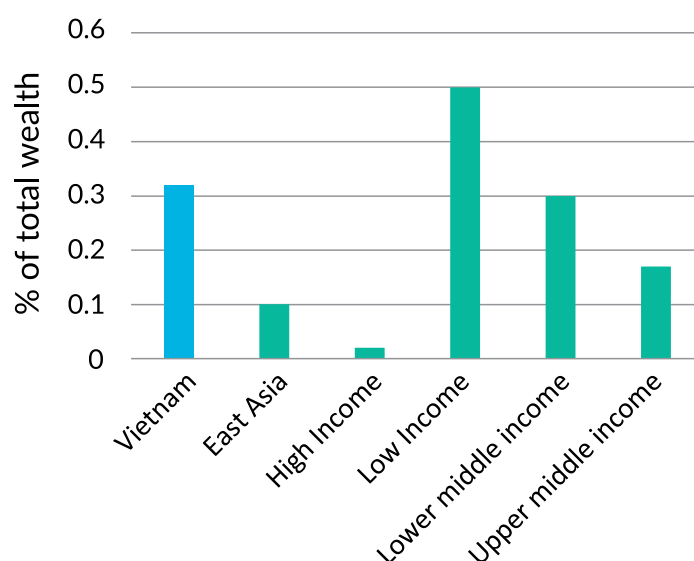
2. Baum, A. (2020). *Viet Nam’s Development Success Story and the Unfinished SDG Agenda*. IMF Working Paper. Retrieved January 15, 2021, from <https://www.imf.org/en/Publications/WP/Issues/2020/02/14/Vietnam-s-Development-Success-Story-and-the-Unfinished-SDG-Agenda-48966>

3. World Bank Group. (2020). *Vibrant Viet Nam : Forging the Foundation of a High-Income Economy*. World Bank, Hanoi. <http://hdl.handle.net/10986/33831>

4. Nguyen, H. (2019, May 15). *Food Safety, Pollution Top Viet Nam’s Latest Survey of Public Concerns*. VoA. [https://www.voanews.com/east-asia-pacific/food-safety-pollution-top-Viet Nams-latest-survey-public-concerns](https://www.voanews.com/east-asia-pacific/food-safety-pollution-top-Viet-Nams-latest-survey-public-concerns)

Contribution and the inclusion of social and environmental aspects in the design of the National Development Strategy 2021-2030. These strategies and plans would need to continuously evolve at a rapid pace as they would have to deal with multiple complexities.

**Figure 1: Viet Nam's reliance on natural capital for creating wealth, 1990–2014**



## CLIMATE CHANGE IMPACTS

One of the most tangible impacts of climate change has been rising sea levels. The causes are mainly two-fold: thermal expansions caused by the warming of the ocean (water expands as it warms) coupled with the increased melting of glaciers and ice sheets in the Arctic and Antarctica.

In fact, rising sea levels are among biggest climate change threats to Asia cities. According to an OECD study, of the top 20 cities with the highest share of population exposed to sea-level-induced flooding by the 2070s, 15 are in Asia, with 5 in ASEAN, 5 in Southeast Asia, 4 in mainland China, and 1 in Japan. In which, Viet Nam is among top 5 countries with cities that are most vulnerable to rising sea levels.

In terms of impact on the economy, Viet Nam is highly sensitive to rising sea levels. Around 40-45% of land in Ho Chi Minh City is less than 1m above sea level, and 154 out of the city's 322 communes and wards have history of frequent flooding (McKinsey Global Institute, April 2020). This has serious implications on future economic prospect of Viet Nam, given that HCMC's contribution to Viet Nam's GDP is as high as 26% of GDP in 2019.

Overall, it is estimated that economic losses to the country due to climate change may be as high as USD 15 billion<sup>5</sup>. According to World Bank, the country loses 1-1.5% of its GDP to natural disasters, with 70% of its population exposed to the risks of typhoons, floods, droughts, storm surges, saltwater intrusion, landslides, forest fires and occasional earthquakes<sup>6</sup>.

Further, this becomes extremely critical given the country's dependence on natural resources. Despite the declining contribution of agriculture, forestry, and fishing, these sectors remain essential to the needs of the local population. E.g. agriculture (inclusive of forestry and fishing) contributes 14% of the GDP and employs over 37% of country's labour force in 2020<sup>7</sup>. Further, rice production plays a vital role in terms of

5. UNU-WIDER. (2013). *The cost of climate change in Viet Nam*. RECOM Brief. <https://www.wider.unu.edu/sites/default/files/Publications/Research-brief/PDF/Research-brief-The-cost-of-climate-change-in-Viet-Nam.pdf>

6. Quy, N. (2018, December 24). *Natural disasters kill 181, cost Viet Nam USD 858 million in 2018*. VnExpress International. <https://e.vnexpress.net/news/news/natural-disasters-kill-181-cost-Vietnam-858-million-in-2018-3858666.html>

7. *Employment in agriculture (% of total employment) (modeled ILO estimate) - Viet Nam* | Data. (2020). [Dataset]. <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=VN>



food security, rural employment, and foreign exchange (Viet Nam being the fourth largest rice exporter in the world in terms of value of exports)<sup>8</sup>. World Bank also suggests that exploitation of natural assets such as sand, fisheries, and timber could significantly impact the sustainability of its economic growth. Waste generation is also expected to double in less than 15 years and disposal may lead to major issues on marine plastic<sup>9</sup>.

Viet Nam has also been susceptible to natural disasters given its long coastline, location and topography. Climate change is expected to further accentuate the impact and frequency of these disasters. Drought and saltwater intrusion in 2016, has impacted over 2 million lives due to shortage of water and food<sup>10</sup>. The saline intrusion emergency severely affected 18 provinces resulting in losses of USD 674 million and negative agricultural growth for the first time in decades<sup>11</sup>. In 2018, natural disasters costed Vietnamese economy a whopping USD 858 million.

From a gender equality and social inclusion perspective, climate change is not gender neutral. 66% of the population in Viet Nam live in rural areas and agriculture employs about half of the labour force – the main source of livelihoods for ethnic minorities<sup>12</sup>. Women farmers rely heavily on climate-sensitive natural resources for their livelihoods; therefore, environmental degradation largely affects women as they are more dependent on water, food, and wood, among others. Further, the female-headed households have less adaptive capacity to cope with climate change as they lag behind men in terms of access to information services, technologies and credit<sup>13</sup>. Women farmers are often more vulnerable than men because of existing social norms and inherent inequalities e.g. at household level, women often have less decision-making power regarding the choice of crops, technologies, or commercial development. Women have fewer opportunities to mobilize resources for disaster preparedness and rehabilitation, for instance, Vietnamese women hold title on 20% of Land Tenure Certificates versus 62% of men and 18% for joint land holders; having less land rights limits women's access to credit for diversifying income sources and for recovery from loss.<sup>14</sup>

## NEED FOR CLIMATE ACTION

Given this, there is a dire need for concerted efforts towards all out climate action across all sectors starting with the ones which may deliver highest impact with quick turnaround times and assisting further productivity in a sustainable manner (such as energy efficiency and renewable energy given their proven profitability and positive environmental impact). However, implementation of climate action in Viet Nam is further marred by multiple financial challenges. According to a report by German Environment Agency<sup>15</sup>, some of these challenges include:

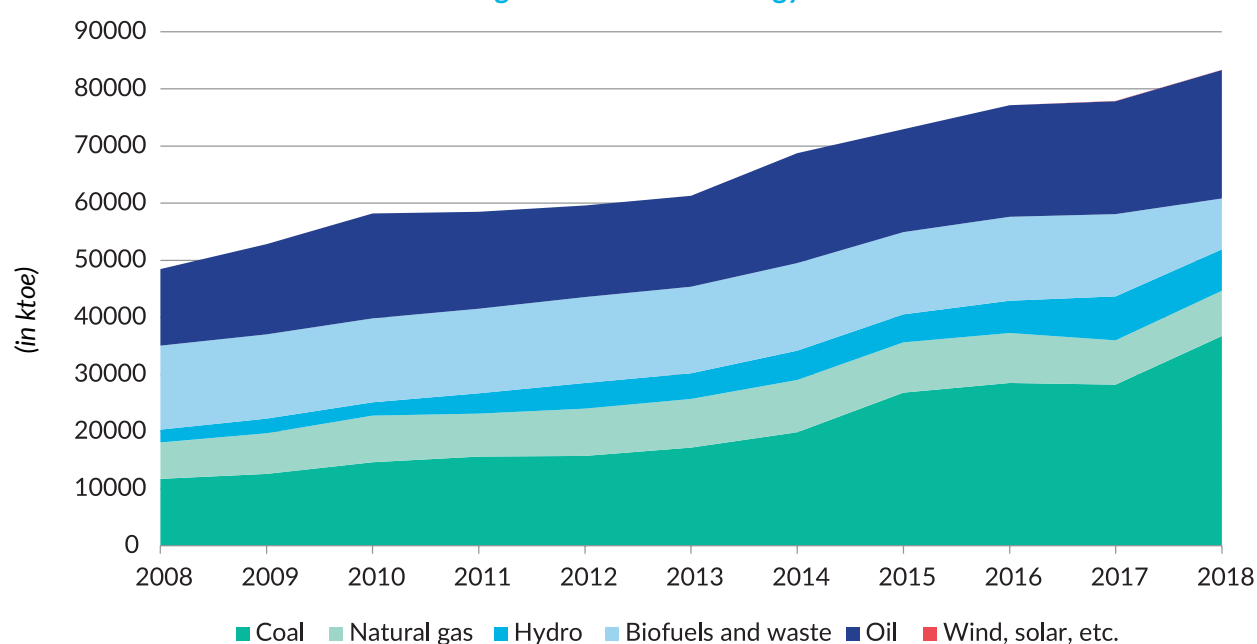
- Low electricity and coal prices
- Perceived high investment risks
- Weak financial capabilities of commercial banks and lack of capacity of investors

- 
8. CCAFS. (2020). Viet Nam. CCAFS: CGIAR Research Program on Climate Change, Agriculture and Food Security. <https://ccafs.cgiar.org/regions/southeast-asia/Viet-Nam#.X5KbItAzblU>
  9. World Bank. (2020). Overview about Viet Nam. <https://www.worldbank.org/en/country/Viet-Nam/overview>
  10. WHO. (2019, April 12). Disaster. World Health Organization. <https://www.who.int/Viet-Nam/health-topics/disasters#:~:text=Major%20natural%20disasters%20in%20Viet,of%20crops%20perished%20in%20floods>
  11. World Bank. (2017). Toward Integrated Disaster Risk Management in Viet Nam. <http://documents1.worldbank.org/curated/en/761091508230982951/pdf/120444-REVISED-PUBLIC-17027-Viet-Nam-Strategy-OVERVIEW-Sep12-2017.pdf>
  12. UN Women. (2020). Strengthening women's livelihoods and resilience to disasters and climate change in Viet Nam. <https://www.unwomen.org/en/news/stories/2020/1/feature--womens-livelihoods-and-resilience-in-viet-nam>
  13. UNDP. (2019). Opportunities to empower women with enhanced access to Climate Information Services for transformative adaptation actions in Viet Nam's agricultural sectors | UNDP in Viet Nam. [https://www.vn.undp.org/content/Viet-Nam/en/home/library/environment\\_climate/opportunities-to-empower-women-with-enhanced-access-to-climate-i.html](https://www.vn.undp.org/content/Viet-Nam/en/home/library/environment_climate/opportunities-to-empower-women-with-enhanced-access-to-climate-i.html)
  14. World Bank. (2011). Viet Nam Country Gender Assessment. <http://hdl.handle.net/10986/26745>
  15. Umwelt Bundesamt. (2017). Implementation of Nationally Determined Contributions - Viet Nam Country Report. [https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2017-10-26\\_climate-change\\_25-2017\\_country-report-Viet-Nam.pdf](https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2017-10-26_climate-change_25-2017_country-report-Viet-Nam.pdf)

- Domination of state-owned enterprises in relevant sectors
- Lack of domestic funds for mitigation

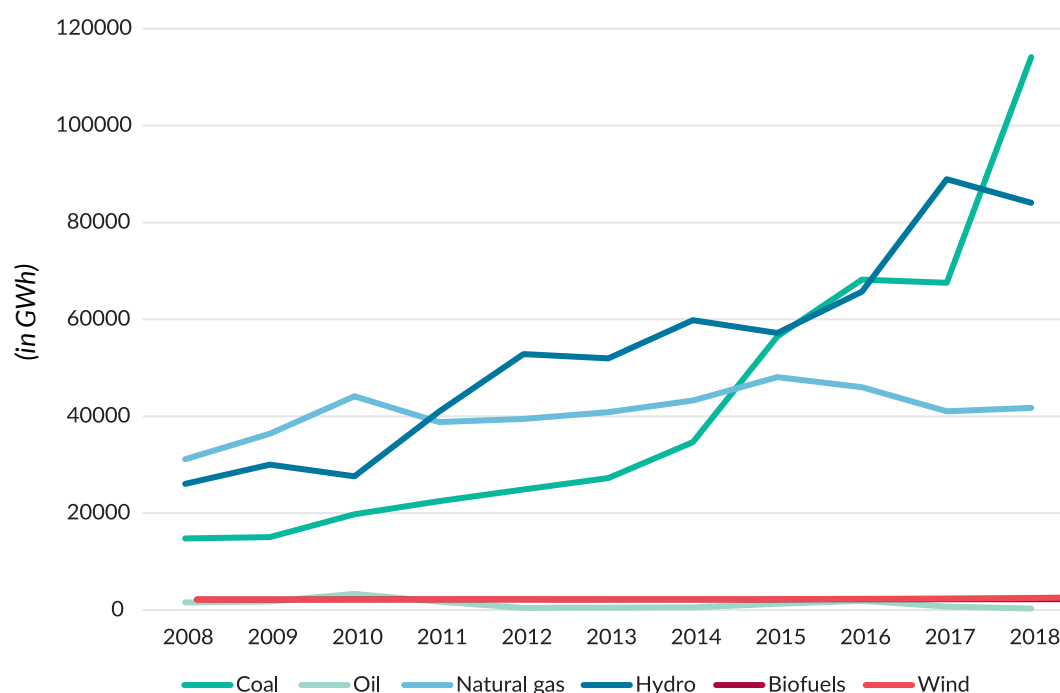
Coal by far remains the mainstay of Viet Nam's energy mix. Its share in the total energy supply grew from 24% in 2008 to over 44% in 2018. While the share of biofuels dropped drastically from 30% to 11% over the same period. A similar scenario is depicted in case of electricity generation by source, where coal contributed to 20% of electricity generation in 2008 with hydro (35%) and natural gas (42%) being dominant players. In 2018, the situation flips with coal eating into the share and contributing to 47% of all electricity generation followed by hydro (35%) and natural gas (17%).

Figure 2: Vietnam's Energy Mix



Source: IEA. (2020). Vietnam - Countries & Regions. <https://www.iea.org/countries/viet-nam>

Figure 3: Vietnam's Electricity Generation by Source



Source: IEA. (2020). Vietnam - Countries & Regions. <https://www.iea.org/countries/viet-nam>

Low coal prices have long acted as the primary economic barrier towards switching to cleaner fuels. Perception about high financial risks associated with power generation in Viet Nam and limited capacities for manufacture, installation and operation of solar PV have limited the growth of renewables<sup>16</sup>. A similar situation exists for energy efficiency projects where the financial institutions are not keen to invest in such projects.

As a result, Viet Nam's GHG emissions have been rising continuously driven by its growing dependence on fossil fuels. The country registered a growth of 724% in its per capita GHG emissions from 1990 to 2019, which is 5<sup>th</sup> highest in the world after Laos (+3,700%), Equatorial Guinea (+2,695%), Nepal (+1,099%), and Bhutan (+826%) in terms of relative changes in the same period<sup>17</sup>.

There is clearly an urgent need to gather greater momentum towards a low carbon transition. In partnership with private players, climate action is a multi-billion opportunity. It has an opportunity which is more than three times the size of its GDP<sup>18</sup>. According to International Finance Corporation (IFC), climate smart business investment potential (*between 2016 and 2030*) in Viet Nam is estimated at USD 753 billion<sup>19</sup>. The report also suggests that over 75% of this potential lies in transportation infrastructure followed by new green buildings and renewable energy.

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16. UNDP, March 2016, [Greening the power mix – policies for expanding solar photovoltaic electricity in Viet Nam](#)

17. Data collected from <https://ourworldindata.org/co2/country/equatorial-guinea?country=VNM~LAO~CHN~LUX~DEU~IND~MYS~PHL>

18. Considering Vietnamese GDP at 2016 levels: USD 205 billion <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=VN-IN>

19. IFC. (2016). *Climate Investment Opportunities in Emerging Markets - An IFC Analysis*. [https://www.ifc.org/wps/wcm/connect/59260145-ec2e-40de-97e6-3aa78b82b3c9/3503-IFC-Climate\\_Investment\\_Opportunity-Report-Dec-FINAL.pdf?MOD=AJPERES&CVID=IBLd6Xq](https://www.ifc.org/wps/wcm/connect/59260145-ec2e-40de-97e6-3aa78b82b3c9/3503-IFC-Climate_Investment_Opportunity-Report-Dec-FINAL.pdf?MOD=AJPERES&CVID=IBLd6Xq)





## 02 OVERVIEW OF SUSTAINABLE FINANCE

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### WHAT IS SUSTAINABLE FINANCE

Finance remains a critical lever for enabling and scaling sustainable growth and climate action across the world and Viet Nam is no exception. The key to unlocking the climate investment potential lies through sustainable finance.

There are multiple definitions and interpretations of sustainable finance in use currently. At times it is considered equivalent to climate finance or green finance, while at other times sustainable finance is considered to be a super set of such constituents.

European Commission which is considered to be the most progressive in the sustainable finance arena opines that “sustainable finance generally refers to the process of taking due account of **environmental, social and governance (ESG) considerations** when making investment decisions in the financial sector, leading to increased longer-term investments into sustainable economic activities and projects.”<sup>20</sup>

As being discussed in Luxembourg Sustainable Finance Strategy (2021), the Government of Luxembourg defines sustainable finance as financial services used to finance the transition of the economy towards a more sustainable future. These financial services consider sustainability criteria into their business and investment decisions.

Others private institutions, such as HSBC, consider sustainable finance as:

- “Any form of financial service that integrates environmental, social and governance (ESG) criteria into business or investment decisions”

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20. European Commission. (2020, March 7). *Overview of sustainable finance*. European Commission - European Commission. [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance\\_en#:~:text=Sustainable%20finance%20generally%20refers%20to,sustainable%20economic%20activities%20and%20projects](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance_en#:~:text=Sustainable%20finance%20generally%20refers%20to,sustainable%20economic%20activities%20and%20projects)

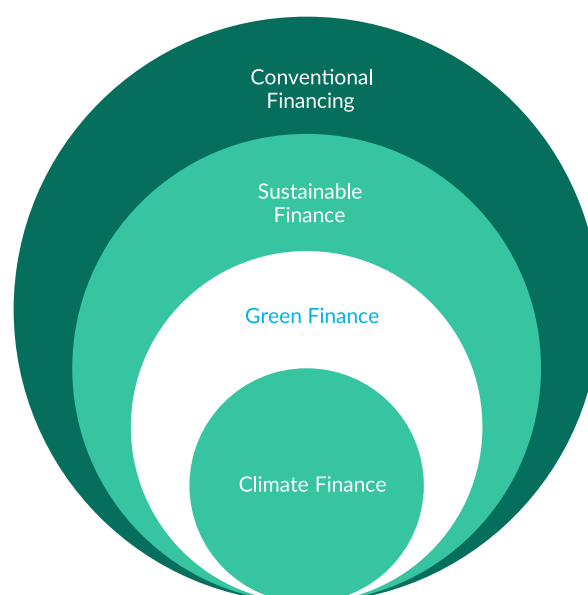
- “Financing and investment activities that support the UN Sustainable Development Goals (SDGs), in particular, taking action to combat climate change”<sup>21</sup>

Following these definitions, sustainable finance may be considered as a process to integrate ESG aspects in financial decision making to reduce risks or make portfolios more resilient or to identify opportunities in sustainable development and capital on them. Sustainable finance is considered as the source of financing which incorporates ESG aspects or utilizes proceeds for specific purposes which lead to sustainable development. These may include support to necessities such as providing drinking water, education, healthcare, affordable housing, sustainable agriculture, clean-technology, renewable energy, waste management amongst others. These processes or services or products must create positive social and/or environmental impact.

According to ICMA (2020), Sustainable Finance encompasses climate, green and social finance while also weighting in additional factors such as the longer-term economic sustainability of the organisations that are being funded, as well as the role and stability of the overall financial system in which they operate. In which:

- **Climate Finance** is that stream of financing that directly results in action towards countering climate change through mitigation activities or adapting to climate change or building a climate resilient economy.
- **Green Finance** can be considered as a subset of sustainable finance, which aims to channel public and private sector resources to finance environmentally sustainable activities that are broader than Climate Finance’s targets, including environmental objectives such as natural resource conservation, biodiversity conservation, and pollution prevention and control.
- **Social Finance** is financing that supports actions mitigating or addressing a specific social issue and/ or seeking to achieve positive social outcomes especially but not exclusively for a target population(s). Social finance project categories include but are not limited to, providing and/or promoting affordable basic infrastructure, access to essential services (such as health and healthcare), affordable housing, employment generation including through the potential effect of SME financing and microfinance, food security, and socioeconomic advancement and empowerment.

Figure 4: Sustainable, Green & Climate Finance



## RELEVANCE OF SUSTAINABLE FINANCE

The year 2015 was extremely important at global level in terms of the two key developments that happened which in future could be termed as turning points of human history. The first one was the adoption of the Sustainable Development Goals (SDGs) and second being the Paris Agreement to restrict temperature increase to less than 2°C. Both these ambitious initiatives were almost unanimously accepted by world leaders.

SDGs which came into effect from 2016, were largely considered to act as the blueprint for achieving a sustainable world for all without leaving anyone behind. On the other hand, Paris Agreement was specific to action on climate change, which also formed one of the Sustainable Development Goals – SDG 13 on Climate Action. Two things which emerged to be common between these initiatives were the need to mobilize finance and its catalytic importance to initiate action and the role of business as not being a part of the problem but to look for innovative technologies and models to drive action.

21. HSBC. (2020). *Providing sustainable finance* | HSBC Holdings plc. <https://www.hsbc.com/our-approach/our-climate-strategy/providing-sustainable-finance>



In 2016, Mark Carney, then Governor, Bank of England said that climate action is a USD 5-7 trillion opportunity. IFC suggests that globally there is a potential of USD 23 trillion in climate smart investments by 2030. In a 2017 report, ADB estimates that developing Asia will need to invest USD 26 trillion from 2016 to 2030, or USD 1.7 trillion per year, if the region is to maintain its growth momentum, eradicate poverty, and respond to climate change (climate-adjusted estimate)<sup>22</sup>.

From a risk perspective, financing is uniquely placed to incentivize the transition through only agreeing to invest in, lend to, and ensure businesses that manage social, environmental and climate impacts well<sup>23</sup>. Experts also argue that with the shift in attitudes of the public and policy makers, sustainable finance is maturing as a subject through sophisticated frameworks, initiatives and financial products emerging. The approach also further distinguish clearly between the use of risk filters to do no harm (such as filtering out sectors such as coal) and impact financing to actively do good with products that tie impacts to payments (such as impact bonds)<sup>24</sup>.

With environmental impacts such as climate change, extreme weather events, natural disasters and water crisis continuing to top global risks<sup>25</sup> and the rising risk perception on stranded assets<sup>26</sup>, financial institutions are continuously looking for means and ways to reduce risk and make their investments more sustainable. Certain institutions are looking to further quantify the physical, regulatory, litigation and reputational risks for their investments. However, a few others take a different approach and adopt a thematic approach towards specific risks.

A few others are also looking to integrate ESG considerations into decision making to reduce such risks. Further, ESG focused investments have been found to<sup>27</sup>:

- Perform better as compared to conventional investments over long term
- Accumulate premium from investors
- Resistant to shocks
- Recover from shocks at a faster pace

## SUSTAINABLE FINANCE INSTRUMENTS

Debt financing accounts for a majority of climate finance flows with about USD 380 billion annually (~66%) over 2017 and 2018. This accounts for two-thirds of all climate finance, of which USD 316 billion was debt provided at market rates (55% of all climate finance). In the same period the green bond issuances were pegged at USD 165 billion<sup>28</sup>. Public institutions (primarily multilateral and national DFIs) accounted for about 66% of all project-level market-rate debt in 2017/2018. Public institutions completely dominated the low-cost project-level debt with 98% contribution to the total USD 64 billion annual flows averaged over 2017 and 2018.

Equity investments made up about 29% of climate finance flows in 2017/18 period. Grants also represent a significant share of 5% of total flows or USD 29 billion averaged over 2017 and 2018. As public actors seek to build strong enabling environments and undertake demonstration projects for sustainable investment across a range of sectors, grants continue to represent a strong proportion.

22. ADB. (2017). *Meeting Asia's Infrastructure Needs*. <https://www.adb.org/publications/asia-infrastructure-needs>

23. WWF. (2017, March 29). *Why is Sustainable finance important?* <https://www.wwf.org.uk/what-we-do/projects/why-sustainable-finance-important#:~:text=Financing%20sustainable%20business%20has%20strong,into%20mainstream%20finance%20and%20lending>

24. Cooper, S. (2019). *Why sustainability should be at the forefront of finance*. Standard Chartered. <https://www.sc.com/en/explore-our-world/the-evolution-of-sustainable-finance/>

25. WEF. (2019). *The Global Risks Report 2019 14th Edition*. World Economic Forum®. [http://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_Report\\_2019.pdf](http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf)

26. Hurst, L. (2020, September 20). 'Stranded Assets' Risk Rising With Climate Action and USD 40 Oil. BloombergQuint. <https://www.bloombergquint.com/quicktakes/why-climate-action-40-oil-create-stranded-assets-quicktake>

27. YES Bank. (2019, December). *ESG Investing Scenario in India Co-creating a better future*. [https://www.yesbank.in/pdf/esg\\_investing\\_scenario\\_in\\_india](https://www.yesbank.in/pdf/esg_investing_scenario_in_india)

28. CBI. (2019). *GREEN BONDS THE STATE OF THE MARKET 2018*. [https://www.climatebonds.net/system/tdf/reports/cbi\\_gbm\\_final\\_032019\\_web.pdf?file=1&type=node&id=36883&force=0](https://www.climatebonds.net/system/tdf/reports/cbi_gbm_final_032019_web.pdf?file=1&type=node&id=36883&force=0)

While on one hand, financial institutions are grappling to understand the risk infused by climate change and making their investments “future proof”, some others are looking to identify the opportunities presented by the low carbon transition and SDGs<sup>29</sup>. Some of the key instruments used by financiers across the globe to action climate finance are shared below:

## DEBT INSTRUMENTS

- **Green Bonds:** Climate Bonds Initiative, an investor focused NGO, characterizes green bonds as issuances to raise finance for climate change solutions. It suggests that the key is for the proceeds to go to green assets. Over the past few years, green bonds have emerged as one of the most preferred and important financing mechanisms for raising money from capital markets for environment friendly business activities and interventions. In 2020, green bond issuances reached a record high of USD 290 billion<sup>30</sup>.
  - **Resilience Bond:** In Sep 2020, a slightly more niche use of green bonds was reflected in EBRD’s launch of the first ever dedicated climate resilience bond raising USD 700 million to finance investments in climate resilience projects. The launch follows the adoption of climate resilience principles by the Climate Bonds Initiative (CBI)<sup>31</sup>.
- **SDG aligned bonds:** Relatively newer to green bonds, SDG bonds are fast emerging as a mechanism for financing a broader range of sectors/ projects which encompass more sectors especially ones with social benefits/ outcomes such as education and healthcare which are key to sustainable development yet are not covered through green bonds.
  - In 2017, World Bank launched the first ever bond directly linked to SDGs<sup>32</sup>. BNP Paribas was the sole arranger for this SDG-linked bond, proceeds of which will support projects that contribute to achieving the SDGs, including eradicating poverty, boosting shared prosperity and tackling climate change.
- **Sustainability-linked Bonds:** According to ICMA (2021), Sustainability-Linked Bonds (SLBs) are any type of bond instrument for which the financial and/or structural characteristics can vary depending on whether the issuer achieves predefined Sustainability/ ESG objectives. In other words, issuers are committing explicitly (including in the bond documentation) to future improvements in sustainability outcome(s) within a predefined timeline. SLBs are a forward-looking performance-based instrument. The market for SLBs was established in 2019, when Enel issued a USD 1.5 billion 5-year transaction with the coupon is linked to the renewable energy installed capacity. The proceeds of SLBs are intended to be used for general purposes, hence the use of proceeds is not a determinant in this type of instrument. However, interest rate applied to SLBs is pegged to a sustainability performance target. This structure features an increase of the interest rate if the issuer does not meet its Sustainability Performance Target. On the other side, if the target is met, the interest rate remains unchanged.
- **Climate Transition Bonds:** Climate Transition Bonds are also a relatively new asset class in the classification of Green bond market instruments. Their objective is to help the issuers that are active in industries with high GHG emissions shift to greener business activities. ICMA in their 2020 “Climate Transition Finance Handbook” noted that: “A ‘transition’ label applied to a debt financing instrument should serve to communicate the implementation of an issuer’s corporate strategy to transform the business model in a way which effectively addresses climate-related risks and contributes to alignment with the goals of the Paris Agreement”. In other words, some industries, however, are not green today, cannot be entirely green tomorrow – yet they can, with the right incentives, take active steps to become more sustainable. For example, Snam, a European-based gas utility provider, issued in total four Transition Bonds since 2019. They also published their Transition bond framework to showcase their commitment in shifting the business model towards sustainability.

30. CBI. (2021). SUSTAINABLE DEBT GLOBAL STATE OF THE MARKET 2020. [https://www.climatebonds.net/files/reports/cbi\\_sd\\_sotm\\_2020\\_04d.pdf](https://www.climatebonds.net/files/reports/cbi_sd_sotm_2020_04d.pdf)

31. Bennett, V. (2019). *World’s first dedicated climate resilience bond, for US\$ 700m, is issued by EBRD*. EBRD. <https://www.ebrd.com/news/2019/worlds-first-dedicated-climate-resilience-bond-for-us-700m-is-issued-by-ebrd-.html>

32. World Bank. (2017b, March 9). *World Bank Launches Financial Instrument to Expand Funding for Sustainable Development Goals*. <https://www.worldbank.org/en/news/press-release/2017/03/09/world-bank-launches-financial-instrument-to-expand-funding-for-sustainable-development-goals>



- Green Loans:** Green loans are structured similar to conventional loans, while the proceeds usage being restricted to specific pre-determined “green” sectors or projects. This is a relatively new mechanism, and the Loan Market Association released the Green Loan Principles (GLP) framework modelled on lines similar to Green Bond Principles. Apart from the GLP, certain countries have developed their own green credit guidelines. For instance, China Banking and Insurance Regulatory Commission (CBIRC) in 2019 issued Guidelines on High Quality Development of the Banking and Insurance Industries along with other coordinated efforts from the central regulator in establishing green financial system. The Guidelines gives instructions to 21 main banks in China on how to include environmental, social, and governance factors in credit. Green credit guidelines primarily remain a mechanism for central banks and regulators to push capital towards greener sectors. For example, Malaysia’s Green Technology Financing Scheme received participation from 28 financial institutions for 319 projects with loans totalling to USD 875 million until July 2018.<sup>33</sup> The Scheme offers borrowers a two percent rebate on the total interest charged by banks for eligible green projects as well as a guarantee of 60 percent of the total approved loan<sup>34</sup>. Bangladesh has also set a minimum annual target for financial institutions for directing 5% of total loan disbursements and investments to green financing. This resulted in a growth of green loan portfolios of banks from BDT 24.2 billion to BDT 94.1 billion (equivalent to USD 0.29 million and USD 1.1 billion) in 2018.
- Social & Sustainability bonds:** Social bonds are use-of-proceeds bonds that raise funds for new and existing projects with positive social outcomes. Social project categories include affordable basic infrastructure, access to essential services, affordable housing, employment generation, food security, and socioeconomic advancement. Sustainability bonds are bond instruments where the proceeds will be exclusively applied to finance or refinance a combination of green and social projects. Social and Sustainability bonds are usually aligned with the ICMA’s Social Bond Guidelines or the Sustainability Bond Principles. According to credit rating agency Moody’s, global sustainability bond issuance reached nearly USD 100 billion in the second quarter of 2020, a quarterly record and 65% higher than the first quarter. Record quarterly issuance of both social bonds at USD 33 billion and sustainability bonds at USD 19.1 billion, accounted for the strong total. Global social bond issuance reached USD 41.9 billion in the first half of 2020, a 376% increase over the same period the previous year.
- Sustainability Linked Loans:** While sustainability linked loans may sound similar to green loans, they actually follow a very different approach. While green loans are linked to the proceeds’ utilization, sustainability linked loans depend on specific sustainability performance targets for the borrower. These targets may be specific to parameters such as improvement in ESG rating, reduction in GHG intensity or attaining specific sustainability ratings. On achievement of the targets, the investor incentivizes the borrower through a relatively lower interest rate.
  - First such deal happened between Philips and ING in April 2017 for EUR 1 billion, where interest rate was inversely tied to borrower’s sustainability performance and rating<sup>35</sup>.
  - Financial institutions have also used specific parameters such as GHG for tying interest rates. E.g. MUFG Bank Ltd. granted NYK a syndicated sustainability-linked loan, Japan’s first advanced loan that required the borrower to maintain its CDP ratings. In case the borrower is unable to maintain its score, it will cause the loan’s interest rate to change prior to the repayment deadline<sup>36</sup>.
- Risk Reduction Mechanisms; Catastrophic Risk Insurance:** These insurance products cover high cost low probability disasters for individuals and communities. The investors bet on insured events not occurring in the time-period of the products to make profits. ActionAid report suggests that “Unlike risk pooling

33. Hussain, F. I. (2020, April 27). *Green loans: Financing the transition to a low-carbon economy*. World Bank Blogs.

<https://blogs.worldbank.org/climatechange/green-loans-financing-transition-low-carbon-economy>

34. Bhd, M. K. A. M. S. (2018). INTRODUCTION OF GREEN TECHNOLOGY FINANCING SCHEME 2.0 (GTFS 2.0) | Green Technology Financing Scheme (GTFS). GTFS. <https://gtfs.my/news/introduction-green-technology-financing-scheme-20-gtfs-20>

35. ING.com. (2017, April 19). *ING and Philips collaborate on sustainable loan*. <https://www.ing.com/Newsroom/News/ING-and-Philips-collaborate-on-sustainable-loan.htm#:~:text=The%20innovative%20loan%20construction%20was,a%20syndicate%20of%2016%20banks>

36. NYK Line. (2019, November 29). *NYK Granted Japan’s First Sustainability Linked Loan*. [https://www.nyk.com/english/news/2019/20191129\\_01.html](https://www.nyk.com/english/news/2019/20191129_01.html)

more generally, catastrophe risk insurance coverage necessitates high quality (and usually expensive) catastrophe risk models<sup>37</sup>.

- Caribbean Catastrophe Risk Insurance Facility emerged as the world's first regional fund for parametric insurance. It is established as a separate company and allows governments to purchase earthquake, hurricane and excess rainfall catastrophe coverage. Similar approaches have been adopted by Turkey and through African Risk Capacity.
- **Aggregation and Securitization:** SDGs focused initiatives at times tend to be localized and even of lower ticket size to be funded by mainstream banks or other financial institutions. These initiatives are driven by local entrepreneurs which not always have the backing of strong credit histories or collaterals. Added to this are the innovative business models which may or may not have been proven under the given conditions. Aggregating and pooling such projects and offering them access to mainstream capital through securitization would increase their attractiveness to investors. Aggregation and securitization would also enable financial institutions to free up capital and reduce costs.
  - In 2017, Connecticut Green Bank (CTGB) used aggregation and securitization to drive the clean energy market locally. 32 energy efficiency and solar PV projects along the collective revenue streams were aggregated for sale. Securitization process was finalized through bidding. Clean Fund, an approved capital provider, purchased a single class of senior bonds (which was 80% of the portfolio) while CTGB retained ownership of two tranches of subordinated bonds. USD 30 million securitization deal allowed CTGB to finance more such projects going forward. CTGB was able to attract more funding for its projects drawing in USD 100 million for funding clean energy projects for commercial and industrial buildings and businesses.<sup>38</sup>
- **Credit enhancement:** Credit enhancement has found success as a risk mitigation approach to enhance the credit profile of portfolio(s) or product(s) or transaction(s) and draw greater funding at a relatively lower cost. Different mechanisms are being used by institutions for credit enhancement. These may include credit guarantees (either full or partial) or others such as first loss provisions, contingent loans or viability gap funding.
  - In 2012, Asian Development Bank (ADB) worked with India Infrastructure Finance Company Limited (IIFCL), to create a partial credit guarantee facility to tap into newer credit sources such as the pension and insurance funds for infrastructure projects; a sector which was primarily dominated by bank financing. ADB developed this USD 128 million facility with IIFCL to provide partial guarantees on rupee-denominated bonds issued by Indian companies to finance infrastructure projects. ADB was to take on a part of the guarantee risk to improve credit rating of the infrastructure to A or AA levels.<sup>39</sup> This approach was later extended to large renewable energy projects as they were marred by relatively high capital costs. In September 2015, IIFCL provided first loss partial credit guarantee to the bondholders along with an irrevocable backstop guarantee with the Asian Development Bank. This led to issuances worth about USD 125 million<sup>40</sup> on a single day<sup>41</sup>. This was a part of the larger bond issuance worth about USD 300 million.

37. Actionaid. (2019, April 5). *Market solutions to help climate victims fail human rights test*. ActionAid International. <https://actionaid.org/publications/2019/market-solutions-help-climate-victims-fail-human-rights-test>

38. Coalition for Green Capital, Abe Wapner, & Rob Youngs. (2019). *Green Bank Insight: Aggregation and Securitization*. <https://greenbanknetwork.org/wp-content/uploads/2019/04/Green-Bank-Aggregation-and-Securitization-Coalition-for-Green-Capital.pdf>

39. IISD. (2015). *Credit Enhancement for Green Projects*. <https://www.iisd.org/system/files/publications/credit-enhancement-green-projects.pdf>

40. Conversion from INR to USD based on rate of INR 66 = 1 USD <https://www.poundsterlinglive.com/best-exchange-rates/us-dollar-to-indian-rupee-exchange-rate-on-2015-09-24>

41. Business Standard. (2015). *IIFCL's credit enhancement debuts with renewable energy issuance*. BS.Com. [https://www.business-standard.com/article/companies/iifcl-s-credit-enhancement-debuts-with-renewable-energy-issuance-115092301088\\_1.html](https://www.business-standard.com/article/companies/iifcl-s-credit-enhancement-debuts-with-renewable-energy-issuance-115092301088_1.html)

## EQUITY INVESTMENTS

- **Blended finance mechanisms:** At a more holistic level, blended finance can be termed as the “use of development capital to mobilize additional private finance for SDG related investments”<sup>42</sup>. Blended finance models mix different sources of financing with varied objectives to create new financial model specifically to target either new sectors, projects, markets, or models. Typically, these models use a combination of grants, concessional financing, credit guarantees or other supporting mechanisms to mobilize private capital flows towards development related projects. The financier bringing in grant or concessional financing is usually investing with the objective of attaining specific impact driven social or environmental outcomes rather than financial ones. The grants are used as a tool to unlock greater private capital and work towards creating a high leverage. Blended finance has been mobilized by about 1,316 financial institutions through USD 139 billion in capital from 2007 to 2018<sup>43</sup>. Though a relatively small finance stream, blended finance primarily acts as a catalyst for establishing proof of concept. Development Finance Institutions such as IFC utilize complementary tools to draw private capital into areas with high developmental impact. IFC operates on five key blended finance principles<sup>44</sup> and strategically uses blended finance through small amounts of concessional funding to fill financing gaps. According to IFC, it has deployed USD 1.2 billion of concessional donor funds to support 212 high-impact projects in over 50 countries, leveraging USD 4.1 billion in IFC financing and more than USD 5.5 billion from other private sources, from 2010 to 2019<sup>45</sup>.
- **Impact investments:** Global Impact Investing Network (GIIN) terms impact investing as “investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return”<sup>46</sup>. It estimates the global impact investing market size at USD 715 billion with 1,720 organization managing these investments<sup>48</sup>. The level and degree of integration of sustainability criteria into the investment decision process can differ significantly from one type of sustainable investment to another. Different approaches co-exist and can be combined in various ways. Grosskopf & Lo (2020) summarized several approaches in the impact investment spectrum, including: Responsible Investment, Social Responsible Investing, Thematic Investment, and Impact-first Investment. In Responsible Investment, ESG risks are integrated into analysis of all holdings, as a component of financial risk management. In Social Responsible Investing, negative and positive screening of ESG risks is used to align a portfolio to specific values/ principles. Thematic Investing focuses on one or more areas where social and environment needs offer business opportunity for abnormal returns. As for Impact-first Investing, the investments are committed to areas where social or environment needs may require some financial trade-off.

42. Blended Finance Taskforce. (2020). *Why Blending*. <https://www.blendedfinance.earth/why-blended-finance#:~:text=There%20are%20already%20some%20good,commercial%20investment%20for%20developing%20countries>

43. Convergence. (2020). *Blended Finance | Convergence*. Convergence. Finance. <https://www.convergence.finance/blended-finance>

44. IFC. (2021b). *DFI Working Group on Enhanced Blended Concessional Finance for Private Sector Projects*. [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/bf/bf-details/bf-dfi](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/bf/bf-details/bf-dfi)

45. IFC. (2021a). *Blended Concessional Finance*. [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/bf](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/bf)

46. Global Impact Investing Network. (2021). *What You Need to Know about Impact Investing*. The GIIN. <https://thegiin.org/impact-investing/need-to-know/>





# 03 GREEN BONDS BUILDING BLOCKS

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## EVOLUTION OF GREEN BONDS

Clearly green bonds have been a major source of financing climate investments. IFC terms green bonds as fixed income, liquid financial instruments used to raise funds dedicated to climate mitigation, adaptation and other environment-friendly projects<sup>47</sup>.

In the early days of Green bond market, pioneering issuances were initiated by major development financial institutions. The first green bond was issued in 2007 by the European Investment Bank, under the label Climate Awareness Bond, as a structured bond with proceeds dedicated to renewable energy and energy efficiency projects. The World Bank issued its first labelled green bond in 2008, a SEK 2.3 billion bond with a maturity of 6 years for a group of Scandinavian investors. The investors were looking to finance projects which would create financial profits but address climate change. In such a scenario the World Bank was a natural choice for the investors as it had a pipeline of environment projects to finance and has established track record as a high-quality bond issuer. However, the missing link was the framework on which it could report the impact of the projects financed through the bond. This basic premise for the core model of green bonds – project selection, second party opinion, and impact reporting.<sup>48</sup> Since then, green bonds have evolved in their approach and have now been extended to social projects as well in the form of sustainability bonds.

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47. IFC, 2018, [Guidance for Sovereign Green Bond Issuers](#)

48. World Bank, Mar 2019, [10 Years of Green Bonds: Creating the Blueprint for Sustainability Across Capital Markets](#)



Figure 5: Green Bond Evolution

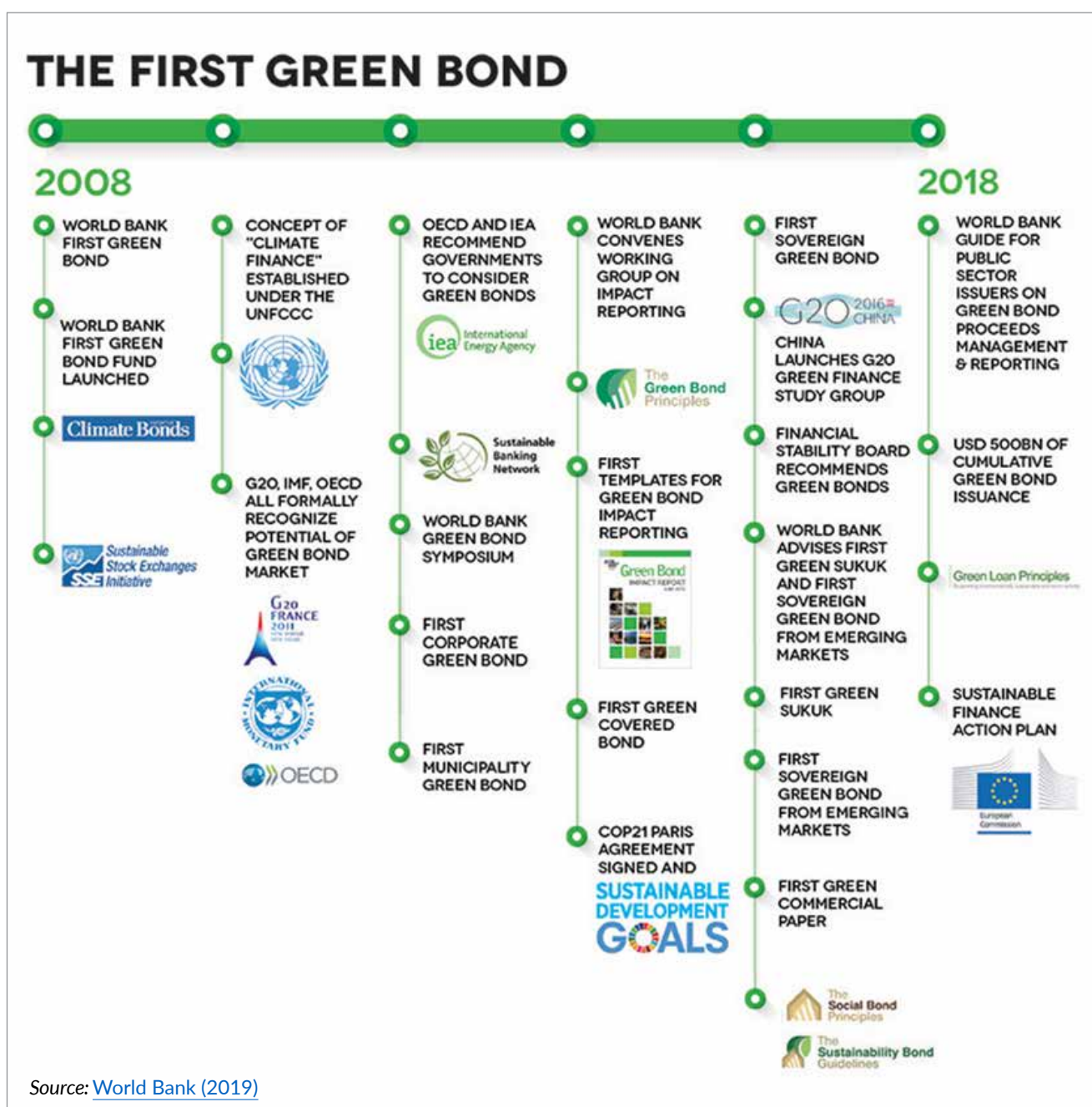


Figure 6: Green Bonds Snapshot

### 2020 in Summary

- In 2020, green bond issuances hit a record high of USD 290.1 billion, slightly above the 2019 level of USD 266.8 billion
- Cumulative issuance since inception: USD 1.05 trillion
- In total, 55 countries have issued green bonds, green loans, and sukuk in 2020
- Top use of proceeds categories: Energy, Building, Transport
- USA top with USD 51.1 billion, followed by Germany (USD 40.2 billion), and France (USD 32.1 billion)
- Second Party Opinion becomes the top choice for external review, accounted for 83% of issuance in H1-2020 (2019: 60%)
- Certified Climate Bonds cumulatively reach USD 150 billion in 2020 (2019: USD 100 billion)

## Types of Green Bonds

Table 1: Types of green bonds

Type	Proceeds raised by bond sale are	Debt recourse	Example
"Use of Proceeds" Bond	Earmarked for green projects	Recourse to the issuer: same credit rating applies as issuer's other bonds	EIB "Climate Awareness Bond" (backed by EIB); Barclays Green Bond
"Use of Proceeds" Revenue Bond or ABS	Earmarked for or refinance green projects	Revenue streams from the issuers though fees, taxes etc. are collateral for the debt	Hawaii State (backed by fee on electricity bills of the state utilities)
Project Bond	Ring-fenced for the specific underlying green project(s)	Recourse is only to the project's assets and balance sheet	Invenergy Wind Farm (backed by Invenergy Campo Palomas wind farm)
Securitization (ABS) Bond	Refinance portfolios of green projects or proceeds are earmarked for green projects	Recourse is to a group of projects that have been grouped together (e.g. solar leases or green mortgages)	Tesla Energy (backed by residential solar leases); Obvion (backed by green mortgages)
Covered Bond	Earmarked for eligible projects typically included in the covered pool	Recourse to the issuer and, if the issuer is unable to repay the bond, to the covered pool	Berlin Hyp green Pfandbrief; Sparebank Bolligkredit green covered bond
Loan	Earmarked for eligible projects or secured on eligible assets	Full recourse to the borrower(s) in the case of unsecured loans. Recourse to the collateral in the case of secured loans but may also feature limited recourse to the borrower(s).	MEP Werke, Ivanhoe Cambridge and Natixis Assurances (DUO), OVG
Other debt instruments	Earmarked for eligible projects		Convertible Bonds or Notes, Schuldschein, Commercial Paper, Sukuk, Debentures

Source: CBI. (2019b, February 19). *Explaining green bonds*. Climate Bonds Initiative.  
<https://www.climatebonds.net/market/explaining-green-bonds>

## "Greenium" of the Bonds

As the global green bond market experiences substantial growth in the last few years, empirical evidence has emerged, implying the existence of "greenium" as well as clarifying the underlying factors that drive this observation. A 'greenium' implies that the yield an investor is willing to accept for a 'green' asset is lower than that of conventional counterparts. In the primary market, where new bond issuances are offered to the market, these price differentials would be represented in a higher price for a green bond than for a conventional bond on the issue price. On the secondary market, after bonds have been issued, they are traded freely on the open market and are sensitive to price fluctuations.

Empirically, the average spreads between green bonds and conventional bonds largely confirm the existence of the greenium. This is particularly pronounced within the secondary market (i.e, Baker et al., 2018; Bour, 2019; Nanayakkara & Colombage, 2019) but less pronounced for primary markets (ie. (Ehlers & Packer, 2017; Gatti & Florio, 2018; Harrison, 2019)). In general, within the secondary

market, bps spreads are more consistently focused in the range from –1 bps to –9 bps. This negative greenium for green bonds suggest that investors in the secondary market are willing to invest in green bonds that are comparable to vanilla bonds, accepting a –1 to –9 bps lower yield in exchange for pro-environmental credentials. At the same time, the findings vary widely in the primary market, where greenium spreads range from –85 to +213 bps.

Nevertheless, it can be noted that green bond issuances on the primary market are often oversubscribed (Burton, 2018), indicating a strong demand for Socially Responsible Investing products. In the most recent report on green bond pricing in the 2nd half of 2020, CBI highlighted that green bonds issued in both EUR and USD attracted larger book cover on average than vanilla equivalents. EUR-nominated green bond issuances were oversubscribed by 4.2x for green bonds, and by 2.9x for vanilla equivalents. Average oversubscription for USD-nominated green bond issuances was 3.5x for green bonds and 3.3x for vanilla equivalents. As for observations about the greenium, the report mentioned that while in H1 2020, 11 out of 21 bonds (52%) priced on or inside their yield curve, exhibiting a greenium, in H2 the percentage rose to 26 out of 33 bonds (79%). This suggests strong and robust demand for the green label demonstrated during book building is following through into pricing, leading to new issue premia, or greenium, on green bond primary market.

In explaining the existence of greenium, many studies agree that there is no reason why a bond being green should impact its price, since green bonds rank *pari-passu* (on equal footing) with bonds of the same payment rank and issuer. There is no credit enhancement to explain pricing differences and issuers of green bonds often incur costs such as Second Party Opinions and Certification, although these are typically negligible. Green bonds and vanilla equivalents are subject to the same market dynamics such as supply, rate expectations, geo-political issues, and the fall-out from global pandemics. In other words, the rationale of greenium is probably driven by high demand from investors, which is in turn fueled by the signaling function of green bond issuance.

In a study published by Harvard Business Review, an analysis of 217 corporate green bonds issued by public companies globally from January 1, 2013 to December 31, 2017, suggested that the reasoning of growing interest in green bond issuing could be explained under the lens of the signalling theory. Under the signalling theory, green bond issuance could “yield a positive stock market reaction, improve financial and environmental performance, increase in green innovations, and increase in stock ownership by long-term and green investors”<sup>49</sup>. Thus, high demand from investors in new green bond issuance reflect the market’s bull bet on these indications.

- **Positive Market reaction:** the analysis suggested that the stock price increase around the announcement of the bond issue is about twice as large for green bonds that have been certified by independent third parties. The stock price increase is larger for companies where environment is a subject of material importance. Further, the announcement returns were found to be much high for first time issuers as compared to more seasoned ones.
- **Improvement in financial performance:** Green bond offerings were also associated with a 2.4% increase in long-term value, measured by the ratio of the firm’s market value to the book value of its assets.
- **Better environmental performance and innovation:** The analysis also suggested that the environmental score of the companies rose by 6.1% Thomson Reuters’ ASSET4 scale and the GHG emissions of the issuers reduced by 17 tons of CO<sub>2</sub> per USD 1 million of assets. The innovations measured by the number of “green” patents filed to the total number of patents they filed in a given year improved by 2.1 percentage points.
- **Increase in ownership by long-term and green investors:** According to the study, the long-term index (a measure of long-term orientation based on a textual analysis of the firms’ annual reports) of green bond issuers increases by 3.9 percentage points. Further the share of long-term investors increased from 7.1% to 8.6% (a 21% increase), and the share of green investors from 3% to 7% (a 75% increase). Clearly this mean that at green bonds provides access to a much larger and diverse investors base.

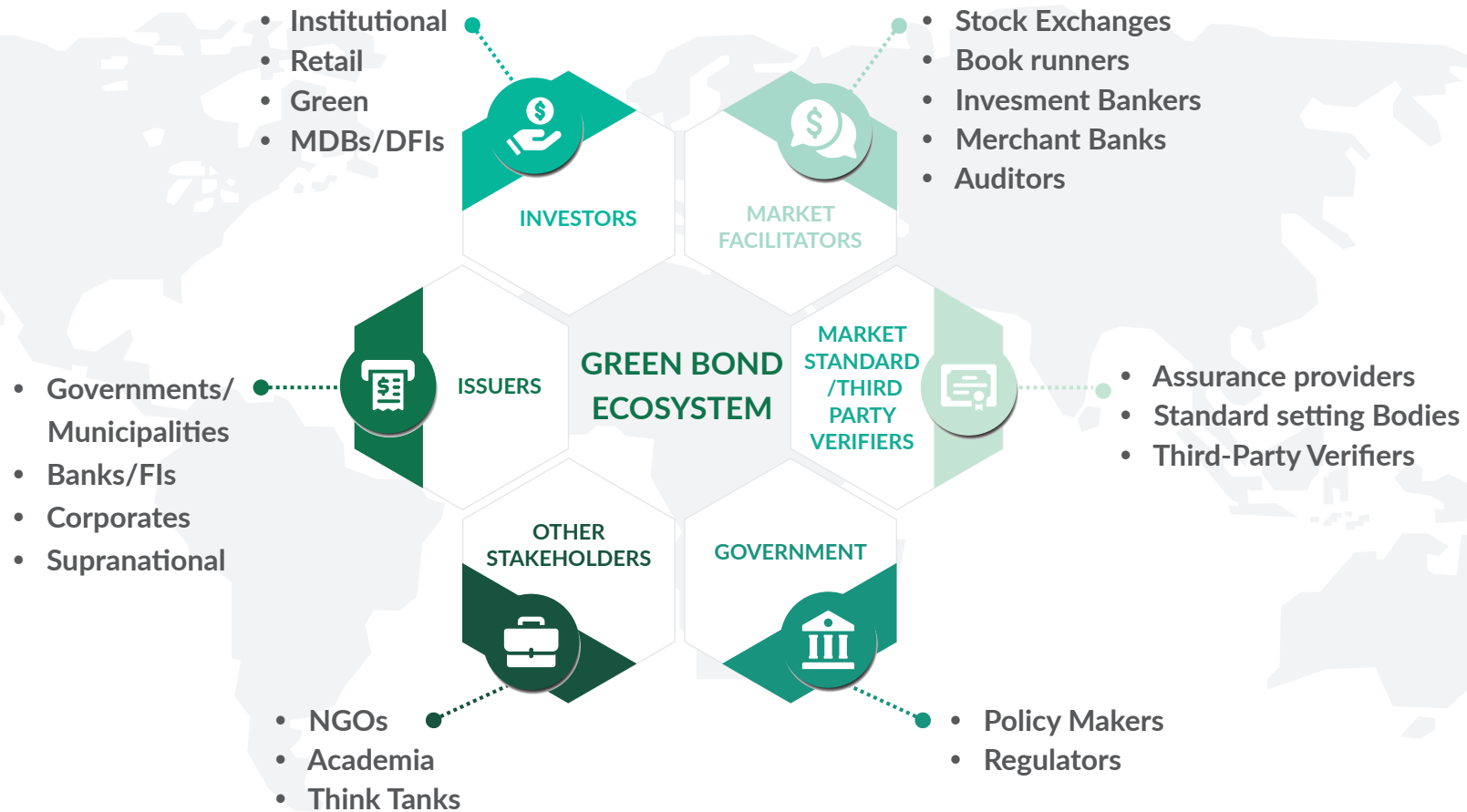
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49. Harvard Business Review, November 2018, [Green Bonds Benefit Companies, Investors, and the Planet](#)



# GREEN BOND ECOSYSTEM

Figure 7: Green Bond Ecosystem



Green Bond Ecosystem can broadly be categorized into different set of players – Issuers, Investors, Government, Market standard/ Third-party verifiers, market facilitators, and other stakeholders – The landscape of green bond ecosystem and its participants are discussed in details in this session.

## Issuers

Key actor in the green bond ecosystem are the issuers of bonds. Most important issuers include **Supranational, Sovereign & Agency (SSA)**, municipalities, financial institutions and non-financial corporates. SSA group includes multilateral and national development banks, regions and cities, sovereign governments and agencies (e.g. Export Credit Agencies, Export-Import Banks and Local Funding Authorities). This stakeholder group plays a very critical role in developing the market initially by stimulating both demand and supply side leading to improved liquidity and size of issuances, benchmark yield curves and establishing best market practices and minimum standards for future issuances. As mentioned earlier, it was World Bank which issued the first ever green bond in 2008. Others such as EIB, KfW, IFC, and ADB have also played key roles in issuing green bonds in specific geographies promoting green bonds. Typically, these players intend to use the proceeds to finance multisector green portfolios. These players are also known to report on proceeds transparently and publicly.

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In terms of **sovereign green bonds**, the first ever sovereign green bond was issued by Poland in December 2016. The EUR 750 million, five-year issuance with a coupon of 0.5% was raised to finance several national green projects such as in renewable energies, clean transport infrastructure, sustainable agriculture, and afforestation. France followed in January 2017 with EUR 7 billion green OAT bond (French sovereign green bonds) that received over EUR 23 billion of bids. With a maturity of 22 years, the Green OAT/1.75%/25 June 2039 issuance became both the largest and longest-dated benchmark green bond issued until date. It was placed with a very wide range of investors: asset managers (33%), banks (21%), pension funds (20%), insurers (19%), official institutions (4%) and hedge funds (3%). The bond was tapped for a further EUR 1.6 billion in June 2017. In 2020, Germany has joined a growing pool of sovereign issuers of green bonds with the launch of a EUR 6.5 billion green bond, which was more than five times oversubscribed by investors, who placed over EUR 33 billion in orders. Other European countries like Sweden also issued its first sovereign green bond of SEK 20 billion in September 2020.

For governments, green bonds may represent an attractive tool to raise low-cost funding for implementing their green agendas such as defined in the Nationally Determined Contributions that governments have committed themselves to against the background of the Paris Agreement. Recently, to cope with urgent public funding need for Covid-19 response and post pandemic recovery programs, governments across the continents have embraced more innovative products in addition to green bonds, such as social bonds and sustainability bonds. Luxembourg was among the pioneering sovereign entity in issuing sustainability bond. In 2020, Luxembourg government issued Europe's first sovereign sustainability bond. This EUR 1.5 billion bond will contribute to finance and refinance sustainable projects with social and green nature. In Asia, with the support from international organizations, Thailand took a bold step in sovereign green issuance, with the THB 50 billion (USD 1.6 billion) sustainability bond deal in August 2020. It could be seen that sovereign issuers provide key boost to the development of new products and instruments on global sustainable finance market.

At the **sub-sovereign level**, globally, green municipal bonds are already commonly used by both state-, county- and city-level governments, as well as other public funding authorities and agencies to satisfy

the public investment needs to finance sustainable infrastructure as well climate mitigation and adaptation projects. The first green muni bond was issued by the Swedish City of Gothenburg in 2013. The first emerging market green muni bond was launched by the City of Johannesburg in 2014. Another notable green bond in Latin America is the USD 2 billion bond issuance by a government agency of Mexico City that will finance its new zero-emissions airport.

Financial institutions play an important role in scaling green bond issuances post the initial push from the SSA group. Bonds play a significant role in funding and refinancing of financial institutions' on-balance sheet lending activities. There has been a growing interest from financial institutions which has led to increasing issuances. An OECD report suggests the financial institutions would continue to use bond markets to raise capital to finance their low-carbon related lending. This can lead to financial sector issuance of bonds that finance this on balance sheet lending. It is further expected that this segment of the market has the potential to add up to USD 1 trillion to the total bonds outstanding in 2025 and over USD 1.7 trillion in 2035.<sup>50</sup>

Non-financial corporates have also realised that green bonds can widen their access to a diverse range of investors to finance futureproofing of their own businesses. Of late the likes of Apple and Google (alphabet) have issued bonds worth USD 2.2 billion and USD 5.75 billion respectively, with Google's issuance being the highest ever by a company. Despite being the large company-led issuance, the bond was significantly oversubscribed, clearly underpinning the demand for such bonds in the market. While Apple intended to use the proceeds for lowering carbon emissions across supply chain and transitioning towards 100% renewable energy, Google on the other hand had a larger spectrum including energy efficiency, clean energy, green buildings, and clean transportation amongst others.<sup>51 52</sup>

## Investors

Institutional investors, specifically pension funds and insurance companies as well as banks and investment funds, have been the main drivers in the growth of green bond markets. In fact, current green bond investor landscape can be categorized into various types based on their approach and area of focus (local vs. international). Local investors such as retail or treasuries can reduce risks in the capital markets by allowing borrowers to borrow in the domestic currency. This can also encourage various new local issuers to enter the market as investor confidence in the market can be a key driver. On the other hand, international investors like sovereign wealth funds or development banks, are useful in encouraging other investors into emerging and developing market. They do so by providing credit enhancement at various risk levels, establish a governance framework and reinforce the commitment to climate change at the institutional level.

Pension funds and insurers typically seek long-term, low-risk investment opportunities that offer predictable, steady returns to match their liabilities. Green bonds very often provide these features:

- **Asset-liability matching:** The average maturity of green bonds is between three and ten years matching the long-term investment horizon of many institutional investors. Roughly 28 percent have maturities of more than ten years.
- **Low risk:** Though not an inherent feature of green bonds per se, 82 percent of issuances are rated investment grade, i.e. classified as BBB- or higher.
- **Comparable yields:** Where data is available, evidence suggests that green bonds are priced in line with regular bonds.
- **Portfolio diversification through diverse currencies:** Although over 80 percent of green bond issuances are in US dollars or Euros, green bonds have been issued in 25 currencies, among them the Chinese Renminbi with growing significance.

50. OECD. (2016). [Analysing potential bond contributions in a low-carbon transition](#)

51. Porat, R. (2020, August 4). [Alphabet issues sustainability bonds to support environmental and social initiatives](#). Google.

52. Wuerthele, M. (2019, November 7). [Apple's USD 2.2 billion "Green Bond" issue will fund carbon emission reductions](#). AppleInsider

Additionally, one of the major benefits of green bonds to investors is their value in communicating their sustainability strategy and commitments to clients and the public without having to bear significant extra costs.

Among the banks, insurers and asset managers that have declared to allocate USD 1 billion or more into green bonds, respectively, are for instance Barclays, Credit Agricole, Deutsche Bank, HSBC, KfW, Actiam, Aviva, AXA and Zurich.

At the same time, strong demand comes from the large mainstream asset managers. From the list of the top 20 asset managers globally (by AUM), six are among the signatories of the Paris Green Bond Statement and the Statement of Investor Expectations for the Green Bond Market. These include BlackRock, the largest asset manager globally with AUM of USD 4.4 trillion, State Street Global Advisors (USD 2.1 trillion), PIMCO (USD 1.3 trillion), Legal & General Management (USD 1.0 trillion), Amundi (USD 985 billion) and AXA Investment Managers (USD 669 billion). Among the top 50 are also BNP Paribas Investment Partners, Allianz Global Investors, APG, AllianceBernstein, Aviva and Natixis Asset Management. Among the largest pension funds that engage in green bond markets are, for instance, California Teachers' State Retirement Systems, North Carolina Retirement System, University of California, Swedish AP-Fonden and South Africa's Government Employees Pension Fund.

Attracted by the long maturities and high credit quality green bonds very often show, another source of demand stems from sovereign wealth funds (SWF) such as the Norwegian Government Pension Fund Global (with USD 885 billion of AUM the largest SWF), which entered the green bond market in early 2014 and allocated USD 6.3 billion in environment-related investments in 2015. A significant segment of demand for green bonds also stems from governments (e.g. Central Bank of Peru, Central Bank of Bangladesh, Treasury of California State), development banks as well as corporate investors (e.g. Apple). Opportunities to invest in green bonds (including for retail investors) are offered by a growing number of dedicated green bonds funds. The larger ones with over USD 100 million under management included BlackRock (which also has a green bond index fund), Storebrand, Foresight, the Brazilian development bank BNDES, Humanis SEB, AXA Investment Managers, and Amundi.

The largest green bond fund, IFC's USD 2 billion Green Cornerstone Bond Fund, which was set up jointly with the asset manager Amundi in mid-2017, invested in green bonds issued by local banks in developing countries. By providing a first loss tranche and additional capacity building measures, the fund aims to build local green bond markets in selected countries. In 2021, Amundi has expanded its emerging market green bonds range, with the launch of the Amundi Funds Emerging Markets Green Bond to invest in Green Bonds issued in hard currency primarily by corporates as well as some exposure to sovereigns in selected emerging markets. Further green bond funds include those managed by Mirova, Calvert, Erste Asset Management, Raiffeisen Capital Management, Allianz, State Street, Columbia Threadneedle, NN Investment Partners, and Nikko AM.

## Government

Representatives from Government include policy makers and market regulators. Key roles of these players are to set up foundations, operating rules, and incentives to foster green bond market. In certain countries, the governments could also be the driving factor in developing standards and guidelines for green bonds. One of the most recent development in this regard has been the push towards the EU Green Bond Standard. Given the release of the EU Taxonomy on Sustainable Finance, increasing role of green bonds in low carbon assets and the absence of a uniform green bond standard in EU, high level expert group on sustainable finance suggested the development of the standard. In March 2020, the technical expert group published the usability guide for EU Green Bond Standard and later opened the standard for public consultation. A possibility of a legislative initiative for the Standard is being explored.

In **China**, the PBOC initiated policy and guidance for green bonds issuance on interbank market in December 2015 (Green Finance Bond Announcement No. 39), followed immediately by the Green Finance Committee's (GFC) China Green Bond Endorsed Project Catalogue. Also, in 2015, the NDRC published Guidelines for the Issuance of Green Bonds, applicable to the state-owned enterprises subject

to its oversight.<sup>53</sup> In 2017, the China Securities Regulatory Commission (CSRC)'s Guiding Opinions for Supporting the Corporate Green Bonds. Key regulators on China's Green bond market are the PBoC, CSRC, NDRC, and NAFMII.

In 2016, Securities and Exchange Board of **India** (SEBI), Indian securities market regulator, released guidelines on green bonds requirements for Indian issuers, making India the second country (after China) to provide national level guidelines. As per the guidelines, debt securities could be labelled as 'Green' or 'Green Debt Securities', if the proceeds are used specific areas such as renewable energy, clean transportation, water management. In 2017, these guidelines were complemented by disclosure norms which would govern the issuance and listing of 'green bonds' in India.<sup>54</sup>

The same year, **Brazilian** Federation of Banks (FEBRABAN) and the Brazilian Business Council for Sustainable Development (CEBDS) released the "Guidelines for issuing green bonds in Brazil". The guidelines, broadly in line with the Green Bonds Principles, guidance from World Bank, IFC and Climate Bonds Initiative, was introduced in a voluntary and suggestive form with a focus on the process on issuing, managing, and reporting the bonds.<sup>55</sup> The same year also witnessed the landmark creation of certification tools for financial product to integrate Environmental, Social and Governance (ESG) criteria in France.<sup>56</sup>

In 2016 itself, **Moroccan** Capital Markets Authority issued similar guidance which was prepared with support from IFC. In 2018, it was updated to include social and sustainability bonds.<sup>57</sup>

**Japan's** Ministry of Environment in 2017, issued the Green Bond Guidelines to "maintain creditability in the environmental effects of Green Bonds and to reduce the issuer's costs and clerical load".<sup>58</sup>

The guidelines were issued as voluntary in nature and were in accordance with the Green Bond Principles and were revised in 2020 with scope expanding to include green loans and sustainability linked loans.<sup>59</sup>

Year 2017 also saw the release of ASEAN Green Bond Standards (ASEAN GBS) by ASEAN Capital Markets Forum, "a forum which comprises capital market regulators from ASEAN countries whose primary task is to promote greater integration and connectivity of regional capital markets". ASEAN GBS is based on the Green Bond Principles released by International Capital Market Association and intends to promote transparency, consistency and uniformity of ASEAN Green Bonds leading to the development of a new asset class, reduction of due diligence cost and help to investors to make informed investment decisions.<sup>60</sup>

## Market standards and Third-party verifiers

### Market standards

Over the years, the Green bond market has experienced strong growth momentum. This growth has also brought in greater calls for regulation for ensuring that green bonds continue to serve the objective for which they were formulated.

53. ADB. (2018). Promoting Green Local Currency Bonds for Infrastructure Development in ASEAN+3. <https://www.adb.org/sites/default/files/publication/410326/green-lcy-bonds-infrastructure-development-asean3.pdf>

54. Agarwal, S., & Singh, T. (2018). [Unlocking the Green Bond Potential in India](#)

55. FEBRABAN & CEBDS (2016). [Guidelines for Issuing Green Bonds in Brazil 2016](#)

56. HUSSON-TRAORE, A.-C. (2016). SRI: the French government creates official labels for financial products. Novethic. <https://www.novethic.com/responsible-investment-news/sri-the-french-government-creates-official-labels-for-financial-products.html>

57. AMMC & Toronto Centre. (2019). *Program on implementing green capital markets in africa: a white paper*. [http://www.ammc.ma/sites/default/files/AMMC%20%26%20Toronto%20Centre\\_Implementing%20Green%20Capital%20Markets%20in%20Africa\\_White%20Paper.pdf](http://www.ammc.ma/sites/default/files/AMMC%20%26%20Toronto%20Centre_Implementing%20Green%20Capital%20Markets%20in%20Africa_White%20Paper.pdf)

58. *Green Bond Guidelines | The Green Bond Issuance Promotion Platform*. (2021). [The Green Bond Issuance Promotion Platform Japan](#).

59. Japan Ministry of Environment. (2020). [Green Bond Guidelines Green Loan and Sustainability Linked Loan Guidelines](#).

60. ASEAN Capital Markets Forum. (2018). [ASEAN Green Bond Standards](#)

Among which, the most important agencies in standards setting in the green bond ecosystem have been stakeholders like **International Capital Market Association** (ICMA) and **Climate Bonds Initiative** (CBI) which have acted as catalysts to draw in greater interest and investments into green bonds. These agencies have laid out clear taxonomies and processes which have brought credibility into the Green bond market and not restricted it to an unsustainable marketing and promotion propaganda. ICMA and CBI along with other stakeholders have been successful in propagating the development of guidelines and trusted standard. Green Bonds Principles, developed by ICMA, have been widely accepted by policy makers.

### **Third-party verifiers**

Additionally, assurance providers/ third-party verifiers form an important set of stakeholders, as they conduct on ground verification of the green bonds. These verifiers are usually independent reviewer who ascertain green credentials of the bond. Verifiers include firms and consultants with accounting and environmental expertise.<sup>61</sup> There are several types of external reviewers, including Third party assurance, Second party opinion, Green bond rating, and Climate Bonds Certification verifiers.

#### ***Third-party assurance:***

Third-party assurance provides assurance reports, which specify whether the green issuance is aligned with a reputable international framework, such as the Green Bond Principles (GBP) or Green Loan Principles (GLP). Normally conducted by accredited auditing firms (such as KPMG, PwC, EY and Deloitte), third party verification refers to the both pre- and post-issuance regular auditing of the entire green bond process or parts of it, such as the allocation of proceeds. In line with national and/or international professional standards such as the International Standard on Assurance Engagements 3000 (ISAE 3000) such audits may represent the most independent form of assurance to investors that processes are in line with the statements made by the issuer. However, audits may have a stronger focus on procedural and managerial features of the bond issuance and not necessarily cover the assurance of the environmental objectives of the bond.

#### ***Second party opinions:***

A second opinion, which represents the common form of a consultant review for green bonds, is a pre-issuance assessment of the green bond or, more specifically, its associated framework. Conducted upon the issuer's request by external consultants or consultancies with environmental and climate expertise, a second opinion has the purpose to provide investors (and the public) with the relevant information on the greenness and governance features of the bond that they need to make their initial investment decision. The consultancy thereby reviews relevant documents and engages in a dialogue with the issuer. In this process, the consultancy may take an advisory role in revising and refining the issuer's green bond framework.

Most second opinion providers present findings in a descriptive way correspondent to the GBP. A few providers seek however a more analytical approach by evaluating strengths and weaknesses and deducting recommendations (e.g. CICERO). Moreover, second opinions by different providers vary with respect to the granularity (Sustainalytics and oekom, for instance, provide relatively comprehensive assessments), the use of quantitative indicators or rating methodologies (only CICERO and oekom) and the availability of post-issuance review updates. Notably, some second opinion providers evaluate specific projects, for which green bond proceeds are used (e.g. oekom), while others assess the internal processes and governance structures of how the issuer defines eligible project categories, selects projects, and monitors and reports on the use and impact of proceeds (e.g. CICERO).

#### ***Green bond ratings:***

Green bond ratings serve to evaluate different aspects of the bond issue qualitatively and quantitatively against a predefined rating scale and rating methodology. Ratings may, for instance, refer to the actual or expected environmental impact of the project or project category, the governance structures and/or the transparency aspects related to the green bond, or all aspects jointly. The benefit of a rating lies for investors (and the public) particularly in the relative ease of comparing different green bonds – given that

61. ASEAN Capital Markets Forum. (2018). [ASEAN Green Bond Standards](#)

62. Climate Bonds Initiative. (2019). [Green Bonds – a key tool for financial centre competitiveness: Lessons from Europe](#)



the rating is conducted under the same methodology. The different approaches and objectives pursued by different agencies do currently, however, leave a fragmented landscape that may require larger harmonization as green bond rating practices become more common over time.

### **Certification:**

In the absence of a national regulation and supervision in green bond markets, a green bond issuer may want to obtain a green bond certificate that verifies the green credentials of the bond against an externally established standard. Such a label may give investors greater security and, moreover, raise the visibility of the bond. One notable certificate is the Climate Bonds Certification according to the Climate Bonds Standard by CBI. The Climate Bonds Standard is the only Paris Agreement aligned standard available in the market. To be qualified for the certification, a pre-issuance readiness assessment against the Climate Bonds Standard by an accredited third-party verifier is required. Within one year after issuance, issuers need to acquire an engagement assurance that confirms the ongoing eligibility to maintain the certification status. This post-issuance assurance focuses on the actual use of proceeds and unallocated funds. Furthermore, issuers are required to disclose at least annually to investors and the public the use and management of proceeds as well as the environmental objectives and impact based on reporting standards recommended by the GBP.

## **Market facilitators**

International stock exchange indices have also played a key role in providing a platform to scale green bonds. Certain stock indices such as London, Milan, Stockholm, Luxembourg, Frankfurt and Oslo have a dedicated green bond list/segment. The Luxembourg Stock Exchange has emerged as one of the leading exchanges to list green bonds, with 388 listings. The Exchange has established the Luxembourg Green Exchange which has issuers such as sovereigns, public international bodies, agencies and development banks to financial institutions and corporates, listing their bonds on the exchange. Exchanges such as Luxembourg Stock Exchange also bring in additional security to the investors by creating platform to promote greater transparency and more accountability through listing criteria.<sup>62</sup>

Other facilitators in the green bond issuance process include investment bankers, bookrunners, and other merchant banks. The role of these financial intermediaries is to assist the bond issuer in the offering process. Depending on requirements of local regulation as well as the deal structure, these financial institutions could provide issuance consultancy, underwriting, distribution, or bookbuilding services.

## **Other stakeholders**

Apart from the local governments, inter-governmental or international agencies such as **G20** also play a critical role in equipping financial institutions with the right nudge to move towards green financing options not limited to green bonds specifically. These indications underpin many local policies which are adapted to suit local needs<sup>63</sup>. The G20 Financial Stability Board's Task Force on Climate-related Financial Disclosure (TCFD) has developed voluntary climate-related financial risk disclosures for companies to provide information to investors, lenders, insurers, and other stakeholders. Currently, TCFD has received support from over 1,440 organizations representing a market capitalization of over USD 12.6 trillion<sup>64</sup>.

**Network for Greening the Financial System (NGFS)** is a network of Central Banks and Supervisors for greening the financial system. The network shares best practices and aims to heighten the role of the financial system to manage risks and to mobilize capital for green and low-carbon investments.

EU Taxonomy on Sustainable Finance has been termed as one of the first steps towards categorizing and ascertaining the flows towards sustainable finance at a national level. While the EU taxonomy may directly apply to EU states, its impact would be felt across the world as European investments across the world may have to follow the taxonomy. Further, the European Commission is also working with 14 countries under

62. Luxembourg Stock Exchange. (2020). Green bonds. <https://www.bourse.lu/green-bonds>

63. Amundi Asset Management and IFC. (2020). [Emerging Market Green Bonds Report 2019](#)

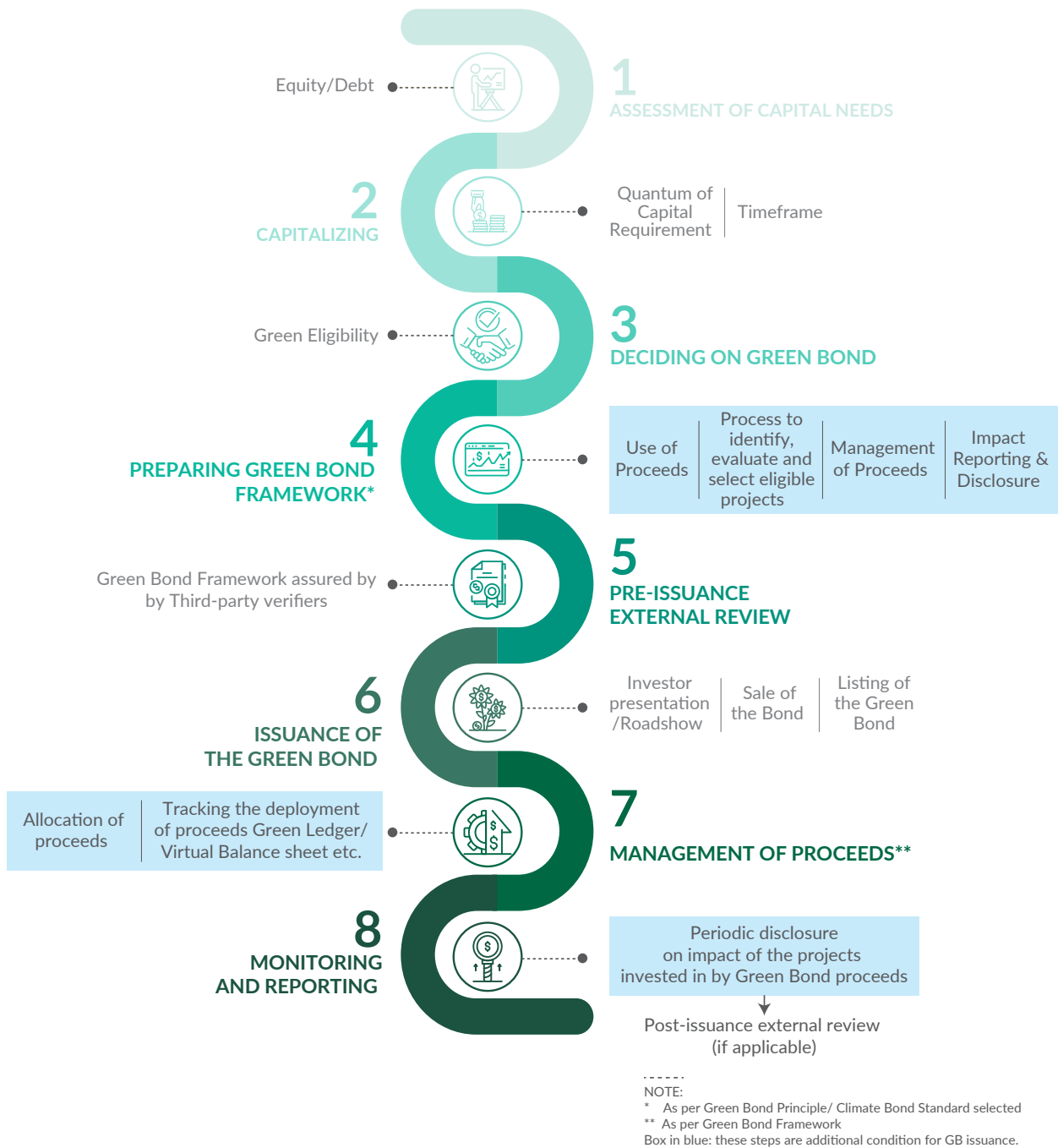
64. ESG Investor. (2020, November 8). [Support for TCFD Climate Disclosure Recommendations Rising. Regulation Asia.](#)

the umbrella of International Platform on Sustainable Finance to promote development of “sustainable finance regulatory measures to help investors identify and seize sustainable investment opportunities that truly contribute to climate and environmental objectives”<sup>65</sup>. These countries include Argentina, Canada, Chile, China, India, Kenya, Indonesia, Morocco, New Zealand, Norway, Senegal, Singapore, Switzerland.

## GREEN BONDS PROCESS

Green Bonds process has been articulated by various agencies including World Bank Green Bond Process Implementation Guidelines<sup>66</sup>. The below figure illustrates the process in simple terms:

Figure 8: Green Bond Process



Source: [GGGI Vietnam](#)

65. The European Commission. (2020). [International Platform on Sustainable Finance](#)

66. World Bank, [The World Bank Green Bond Process Implementation Guidelines](#)



Before starting the issuance process, the issuing entity should identify their fundraising needs as well as their choice of debt instrument (Step 1 and Step 2).

In step 3, the issuer shall decide whether they want to issue bonds to finance projects or operations with green or brown nature. A variety of projects, assets, activities, refinance, new capital raising, and relevant activities are all eligible to be associated with a green bond. The types of projects, assets, and expenditures that can be included in a green bond include (i) owned projects and assets, (ii) financing arrangements for projects and assets, and (iii) related supporting expenditures. Suitable green assets include renewable energy, low carbon transport, low carbon buildings, sustainable water and waste management, sustainable land use as well as climate change adaptation measures such as flood defences. The entity could refer to available taxonomy to support the 'green' criteria used in their classification.

Once the green bond issuance has been confirmed, the entity could develop green bond framework (Step 4), evolving around the four core components of the Green Bond Principles: (i) use of proceeds, (ii) selection of projects and assets, (iii) management of proceeds, and (iv) reporting and external review. The issuing entity could source for external consultancy in building up this framework.

Once the green bond framework has been selected, issuers could seek for pre-issuance external review in Step 5 (if applicable) and conduct the issuance itself in Step 6 following normal practices.

The critical differences in the green bond issuance process lie in the post-issuance steps (Step 7 and Step 8). In Step 7, the issuer should set up internal system and procedure to track the actual allocation of the proceeds, according to guidance from the firm's green bond framework. Finally, in Step 8, the issuer shall provide regular reporting to investors and the market after the green bond has been issued. The format and frequency of the post-issuance report depends on circumstances. In general, issuers could consider producing impact reporting, allocation reporting, or eligibility reporting.

Additionally, the issuer could seek for second-party or third-party assurance opinion on the allocation of proceeds to eligible green projects. If the issued bond is labelled upon Climate Bond Standards, it is mandatory to conduct post-issuance verification of the Climate Bond Certification according to the Standards. Under other green bond principles, the post-issuance external review practice is optional but recommended.

## PREVAILING GREEN BONDS STANDARDS

The available green bond standard is on the voluntary basis and served as a primary framework for green bond issuance. Subjected to their circumstances, issuers may select among those relevant standards to develop their green bond issuance framework. Most prevalent and widely accepted framework for green bonds is the **Green Bond Principles** (GBP) released by the International Capital Market Association (ICMA). GBP presents four core components:

- **Use of proceeds** is the foundation of any green bond. It is quintessential that the proceeds are specifically utilized for specific activities which create a positive environmental impact through climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control. Project categorizes may include activities such as renewable energy, energy efficiency, clean transportation, sustainable water and wastewater management amongst others. It is also suggested that the intended utilization of proceeds be clearly mentioned in the legal document for the security<sup>67 68</sup>.
- **Process for project evaluation & selection:** Green bond issuers should clearly communicate the environmental sustainability objectives of the projects to their investors, along with the process for defining relevant eligible Green Projects categories and the related eligibility criteria. It may also include the exclusion criteria, or any other process applied to identify and manage potentially material environmental and social risks associated with the projects, as applicable. GBP promotes high

67. Beigi, K. (2020, September 2). About Green Bond Principles. Sustainable Finance Solutions. <https://www.sustainalytics.com/sustainable-finance/2019/11/20/about-green-bond-principles/>

68. International Capital Markets Association. (2018). [Green Bond Principles](#)

transparency into the issuer's overall objectives, strategy, policy, process of determining the green eligibility of the project and the process of management any potential material, environmental or associated social risks.

- **Management of proceeds:** GBP suggests that the net proceeds of the Green Bond, or an amount equal to these net proceeds, should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the issuer in an appropriate manner, and attested to by the issuer in a formal internal process linked to the issuer's lending and investment operations for Green Projects. This process should be linked and aligned to the lending or investment operations for green projects. The GBP recommend a high level of transparency and an issuer should articulate the process by which it is managing the proceeds.
- **Reporting:** Reporting is key to bringing in greater transparency, accountability, and credibility to the issuance. GBP requires issuers to report on the allocation of proceeds to eligible green projects. While the issuer is expected to readily maintain up to date information on use of proceeds, annual reports can be released to specify the list of green projects, provide a brief description of the project and stipulate the respective allocations. The issuer may also report on the expected impact of its green bonds.

It is worth noting that an external review is not mandatory according to the GBP. Nevertheless, the engagement of external reviewers is a recommended element in international practices. The use of external review in green bond issuance has also developed in recent years and started to be incorporated into current market standard.

**ASEAN Green Bond Standards** (GBS) were first released in November 2017 and later revised in October 2018. The ASEAN GBS were developed in collaboration with ICMA and are broadly based on ICMA's GBP. The core idea of the guidelines was to develop a standardized set of rules for green bond issuance in ASEAN countries. However, in addition to the GBP, ASEAN GBS had five key additional features:

- **Eligible Issuers:** Issuer or issuance of the green bond must have a geographical or economic connection to the ASEAN region.
- **Ineligible Projects:** Fossil fuel power generation projects are excluded from the ASEAN GBS to avoid greenwashing and protect credibility of the standards.
- **Continuous Accessibility to Information:** Issuers to disclose information on use of proceeds, process for project evaluation and selection, and management of proceeds to investors in the issuance documentation, as well as publicly accessible from a designated website throughout the tenure of the ASEAN Green Bonds.
- **Encourage More Frequent Reporting:** Issuers are encouraged to provide more frequent periodic reporting, apart from the annual report.
- **External Review:** While external review remains voluntary, external reviewers are required to have relevant expertise and experience in the area which they are reviewing. The external reviewers' credentials and scope of review conducted must be made publicly accessible from a designated website designated by the Issuer throughout the tenure of the ASEAN Green Bonds.

Apart from Green Bond Principles, another widely recognized standard for green bonds is the **Climate Bonds Standard**. In 2019, the Climate Bonds Initiative released the third version of the Climate Bonds Standard (CBS). Climate Bonds Standards intend to provide assurance for issuers and investors that a green debt product meets labelling requirements for major global jurisdictions, is science based and is aligned with the goals of the Paris Climate Agreement to limit warming to under 2 degrees. While CBS is a separate more specific and slightly stricter standard, its disclosure requirements have been aligned to GBP. In addition to GBP, the new version of the CBS is compatible with the regional guidance issued in countries and regions such as ASEAN, India, Japan and EU Green Bond Standard. Broadly the CBS is divided into four components<sup>69</sup>:

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69. Climate Bonds Initiative. (2017). [Climate Bonds Standard Version 3.0](#)

- **Pre-Issuance Requirements**
  - Use of Proceeds
  - Process for Evaluation and Selection of Projects & Assets
  - Management of Proceeds
  - Reporting Prior to Issuance
- **Post-Issuance Requirements**
  - Use of Proceeds
  - Process for Evaluation and Selection of Projects & Assets
  - Management of Proceeds
  - Reporting
- **Eligibility of Projects & Assets**
  - Taxonomy of Green Definitions
  - Sector-Specific Eligibility Criteria
- **Climate Bond Certification**
  - Outline of the Certification Process
  - Pre-Issuance Climate Bond Certification
  - Post-Issuance Climate Bond Certification
  - Programmatic Certification

Key features of the latest version of Climate Bonds Standard include:

- Improved issuer guidance: Specific guidance to issuers on establishing a robust Green Bond Framework and its disclosure
- Ongoing reporting: Mandates annual reporting with detailed guidance on the contents of the report such as inclusion of eligibility reporting, allocation reporting and impact reporting
- Improved disclosure: Sets requirements for pre-issuance and post-issuance certification of the bond. It encourages additional disclosures at pre-issuance stage including the proposed projects & assets in the bond disclosure document and post-issuance requirements for the annual reporting
- Robust verification: Assurance framework with independent verifiers following consistent procedures
- Stronger definitions for use of proceeds and expenditure: Clear definitions on low carbon and climate related attributes of eligible projects and assets.

**Table 2: Comparison of Different Green Bonds Standards**

Specific topic	ICMA Green Bond Principles	CBI Climate Bonds Standard	ASEAN Green Bond Standard	Proposed EU Green Bond Standard
Reference of alignment with standard/ framework in legal documentation	Recommended	Required	Not required	Required Alignment with the EU Taxonomy, including four requirements (1) substantial contribution to environmental objectives, (2) do-no-significant harm, (3) minimum social safeguards and (4) technical screening criteria. (For details, see Annex 1 of the TEG June 2019 Report.)

Specific topic	ICMA Green Bond Principles	CBI Climate Bonds Standard	ASEAN Green Bond Standard	Proposed EU Green Bond Standard
<b>Project categories</b>	Guidance on high-level categories	Linked to detailed qualification criteria	Broad green catalogue	Compliance with the EU Taxonomy. Green Bond Framework required. (For a template, see Annex 2 of the TEG June 2019 Report.)
<b>Disclosure of proportion of proceeds used for refinancing</b>	Recommended	Required	Recommended	Required (For a reporting template, see Annex 3 of the TEG June 2019 Report.)
<b>Impact monitoring and reporting</b>	Recommended	Addressed in Climate Bonds Standard qualification criteria	Recommended	Required (For a reporting template, see Annex 3 of the TEG June 2019 Report.)
<b>External review requirements</b>	Recommended External review may be partial, covering only certain aspects of an issuer's green bond or associated green bond framework, or full assessing alignment with all four core components of the GBP	Required	Recommended	Required Verification of the Green Bond Framework and the Final Allocation Report by an accredited verifier to confirm conformity with the EU GBS.
<b>Publication of external review</b>	Recommended	Recommended	Required	Required
<b>Accreditation of external reviewers</b>	Not addressed in GBP	Have a dedicated "Approved verifier" list	Not specified	A centralised scheme of accredited verifiers operated by ESMA. Voluntary interim registration scheme for an estimated transition period of up to 3 years.

## GREEN BONDS POTENTIAL IN GENERATING CO-BENEFITS

Climate change impacts increase financial exclusion which is also a barrier to financial stability. A concrete approach to inclusive climate finance does not only address how funding decisions are made and implemented, but fundamentally alters the focus on funding operations (UNDP, 2018). As green bonds focus on issuances that raise funds for climate change solutions, the socio-economic co-benefits aspect also comes into perspective. NDCs and SDGs have become a priority of national development planning; therefore, there are growing calls on the emphasis of sustainability which includes inclusivity (the need to ensure climate change mitigation actions are consistent with other environmental priorities and socioeconomic needs). The design of the green bonds therefore can be made in such a way that could improve impacts; the growth of bonds markets provides an increasing opportunity finance the implementation of the SDGs and green economy impacts.<sup>70</sup> Integrating gender-responsive and socially inclusive approaches in climate finance improves efficiency and effectiveness of the finance instruments (Schalatek and Nakhouda 2014).

70. Watson, C., & Kellett, J. (2016). Financing sustainable development: The critical role of risk and resilience. UNDP. <https://www.sdfinance.undp.org/content/sdfinance/en/home.html>

In Viet Nam, the expansion in economic opportunities has benefited women as well as men, with women's labour force participation rates being among the highest in the region (at 73.2%) and the gender gap in earnings is lower in Viet Nam than many other East Asian Countries.<sup>71</sup> However, there are still pockets of women having limited access to formal employment and disproportionately engaged in vulnerable employment that do not provide social security.<sup>72</sup> Green bonds can help to promote environmental and social governance in the financial sector, and the direct impact of green bonds on the environment depends on the quality and performance of the underlying projects financed by the proceeds<sup>73</sup>.

While green bonds (by definition) should have a positive impact on the environment, additional steps can also be taken to improve their social impact. At the minimum the quality of the projects can be strengthened through the deeper integration of environmental and climate factors into the project design – achieving multiple environmental benefits. Green bonds sectors create an opportunity to address long-standing gender equity and equality issues – it can facilitate and build upon ongoing processes of promoting equality, fairness, and justice in the global economy. While ESG considerations are critical, there is need to move beyond the environmental and social safeguards especially during project selection processes to ensure that financed projects have clear links on improving every aspect of the society i.e. equality, adaptation and livelihoods, education and health among other social and economic issues for sustainable outcomes. The following are some of the ways/examples of sectors/projects:

- (i) **Renewable Energy:** Multilateral development banks have established a harmonized framework for impact reporting on renewable energy and energy efficiency projects financed by green bonds proceeds that should allow a more stringent measurement of impact (IFC, 2019). More than anything else, the inclusive renewable energy sector provides co-benefits of climate change mitigation including economic value creation, new employment opportunities, cleaner air, access to affordable energy and rural development. Given the capacity this sector has to incentivize governments to implement sustainable and climate friendly energy policies, co-benefits play an important role in efforts to advance climate change mitigation policies<sup>74</sup>. Potential projects under this sector could include provision of clean energy technologies that are labor and time savings especially for the women, poor people and other marginalized groups in Viet Nam (e.g. clean cookstoves for higher and sustainable impact which would lessen the burden of women and girls in fuelwood collection, and save time for other productive and economic activities; and provision of labor and time saving agricultural related technologies that are deemed fit in Vietnamese communities). Biogas technologies/programs as well have the potential benefits of not only reducing women's workloads, but also improve livelihoods, health outcomes and reduce the cost of energy for households, enable children to attend school and spend more time studying etc.
- (ii) **Transport/Sustainable Mobility:** Sustainable mobility is one of the critical aspects for achieving the sustainable development agenda, i.e. transport projects that enhance clean, safe and reliable transport. Transportation facilitates access to the labor market, education, healthcare centers among other services that enhance the welfare of individuals and households. Due to the social and economic roles and activities that are played by women and men, studies have shown that they also have different transport needs, priorities and patterns. It is therefore important that introduction of transport projects in the sector takes full considerations of those different needs/priorities in order to bring significant benefits to all people in Viet Nam. As transport accounts for a quarter of energy related greenhouse gas emissions, there is a current concern that the emissions from transport could accelerate further after the COVID-19 pandemic and this calls for countries to develop cleaner transport systems that will support the economic recovery and improve people's lives<sup>75</sup>. Investment in mobility infrastructure and transport is recognized as a tool for redistribution of wealth in favor of low-income communities. Provision of transport projects that creates new kind of jobs that can provide meaningful, faith and fulfilling employment to the Vietnamese people is also key.

71. World Bank. (2011). Vietnam Country Gender Assessment. World Bank, Hanoi. <https://openknowledge.worldbank.org/handle/10986/26745>

72. UN Women Viet Nam. (2020). UN Women | Asia and the Pacific. <https://asiapacific.unwomen.org/en/countries/VietNam>

73. UNDP. (2016). <https://www.undp.org/content/dam/sdfinance/doc/green-bonds>

74. COBENEFITS. (2020). COBENEFITS - Social and Economic Opportunities of Renewable Energies to Climate Change Mitigation Strategies - Social and Economic Opportunities of Renewable Energies to Climate Change Mitigation Strategies. <https://www.cobenefits.info/our-work/project/>

75. IEA. (2020). Energy Efficiency 2020 – Analysis. [https://www.iea.org/reports/energy-efficiency-2020?utm\\_content=bufferfe85e&utm\\_medium=social&utm\\_source=facebook.com&utm\\_campaign=buffer](https://www.iea.org/reports/energy-efficiency-2020?utm_content=bufferfe85e&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer)







## 04 TRENDS IN THE GREEN BOND MARKET

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### KEY TRENDS IN THE GLOBAL GREEN BOND MARKET

#### The development of global Green Bond market

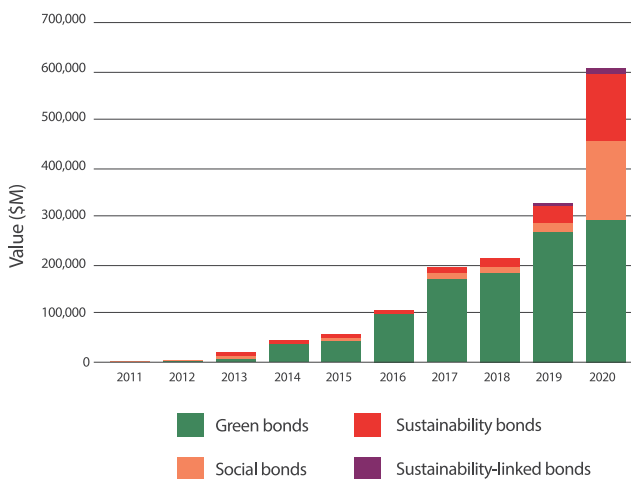
The origins of green bonds date back to 2007 when the EIB launched its first Climate Awareness Bond. The World Bank issued its inaugural green bond in 2008. These were followed by a small but growing stream of issues from government-related entities and local authorities.

The market really started in earnest after the launch of the Green Bond Principles in 2014. The establishment of these principles helped create more transparency for investors and clarified requirements for issuers. This gave a strong impulse to both the volume and diversity of issuers.

The Green bond market experienced rapid growth between 2015 and 2017, with a tilt towards specific segments. Institutions such as the EIB, IBRD and KfW, which by that stage had become relatively established green bond names, expanded issuance, but a substantial part of the growth – particularly in 2016 and early 2017 – came from Chinese names, such as the Shanghai Pudong Development Bank and ICBC. US issuers took over the lead in 2017, with sizeable green bond issuance by US municipalities to finance local transportation and water projects, and by Fannie Mae to finance sustainable housing.

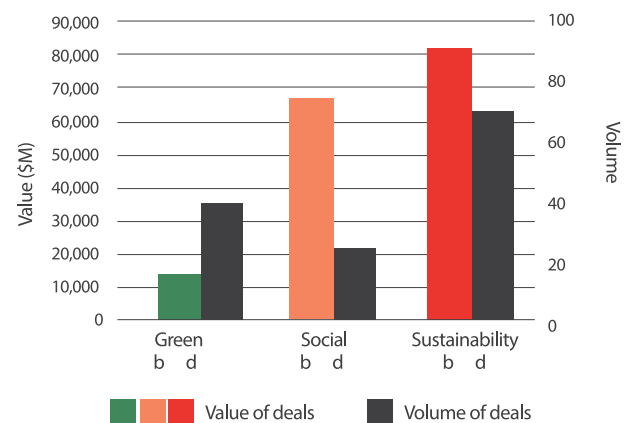
In 2019, globally, the Green bond market outperformed expectations, with record issuance of USD 240 billion. The nascent market for sustainability bonds doubled in size, with issuance of over USD 40 billion in 2019 (Figure 12). Emerging market green bond issuances rose 21 percent to USD 52 billion, bringing the amount outstanding to USD 168 billion (Figure 13).

Figure 9: Green and Sustainability Bond Issuance



Source: Environmental Finance (2021)

Figure 10: Breakdown of supranational issuance in 2020



Source: Environmental Finance (2021)

Region wise, Europe continues to be the leader of green bonds in H1-2020. The region represented more than half of the global total (55%) for the first time ever. Two-thirds (63%) of European issuance stemmed from nonfinancial corporates and government-backed entities, more than the usual 40-45%. North America remained relatively stable. Its 66% decrease was in line with the overall 65% decline and to a large extent driven by lower Fannie Mae (FM) issuance, which totalled USD 2.6 billion from 90 deals. Apart from Africa, which had no issuance in H1-2020, Asia-Pacific was the weakest region, with only USD 12 billion compared to the USD 64 billion in 2019. Although this was mainly due to the large drop in Chinese issuance, various other countries in the region also experienced sharp falls. Australia, India, the Philippines, Singapore, South Korea, Hong Kong, and the UAE all had volumes decline at least 80%, while issuers from Malaysia, New Zealand, Thailand, and Saudi Arabia have yet to come to market in 2020.

Moderate growth of green bond issuance in 2020 was due to the Covid-19 breakout. Nevertheless, green bond issuance was less affected in developed markets compared to emerging markets. Developed market volumes reached their highest (81% vs. 72% in 2019), while the volume in emerging markets hit their lowest (13% vs. 23% in 2019) shares yet, while Supranational issuance increased slightly to 6% (vs. 5% in 2019). This is somewhat expected given that pandemic-related expenditures take special priority in emerging markets (including at the expense of green), whereas in several more mature developed markets green investment is 'stickier' and thus less vulnerable to shocks.

Figure 11. Breakdown of green bond issuers by region in 2020



Source: CBI's Sustainable Debt Global State of the Market 2020

## Key drivers of global Green Bond market

Several factors contributed to the growth of the market.

The first is **strong government policy support**, especially in countries in Asia and Europe. The target to slow the increase in the global average temperature specified in the Paris Climate Agreement, as well as national commitments to the SDGs, in particular SDG 7 'Affordable and clean energy' and SDG 13 'Climate Action', require large sums of funds to facilitate the transition towards a low-carbon economy. Furthermore, private institutions have increased fundraising from the Green bond market. For borrowers, issuing green bonds is consistent with corporate social responsibility, SDGs agenda, and, at least in some cases, saves financing costs.

Secondly, the **standardization of standards** by international associations and the formation of credit rating mechanism for green bonds provide market participants with transparent and reliable assessment tools to supervise the use of proceeds of green bonds ex-ante. Commonly recognized standards (such as GBP) add clarity and increase demand for green bonds from investors. Similarly, CBS provides standard criteria for labeling debt instruments consistent with the GBP and the goals of the Paris Climate Agreement to limit warming to under 2 degrees. In addition, rating agencies track and provide assessment of green bonds' adherence to the stated promises. As an example, Moody's Green Bond Assessment provides an evaluation of an issuer's approach to managing, administering, allocating proceeds to, and reporting on environmental projects financed with green bond proceeds. With such information, investors know their moneys are used to support the environment. S&P's Green Evaluations evaluates the relative environmental impact of the issue. It considers the funding's transparency, its governance, and the relative net environmental impact. With such evaluations by those agencies, investors have comfort that their investments are used as promised. Note that such green bond evaluations by rating agencies will likely be discontinued once more uniform and consistent standards for issuing green bonds are adopted.

Finally, the **diversification of new products and instruments on Green bond market** strengthened market infrastructure as well as boosted investors' confidence. One prime example is the introduction of green bond index on stock exchanges. Many investors include an environmental mandate in their asset allocation. The green bond indexes provide a benchmark to track the performance of their green bond investments. The available green bond indexes include Solactive Green Bond Index, S&P Green Bond Index, BoA Merrill Lynch Green Bond Index, and Bloomberg Barclays MSCI Green Bond Index. In addition, there are several Chinese green bond indexes that measure the on-shore Chinese Renminbi denominated green bonds. Adding both at the same time in a portfolio results in limited diversification benefits for investors.

Furthermore, several vehicles are available for investing in green bonds, including green bond new issues, green bond mutual funds, and green bond exchange-traded funds (ETFs). There are also mutual funds and ETFs tailored for investors to gain exposure in green bonds. As of January 2021, Environmental Finance identified 55 funds that allocate, or intend to allocate, at least 50% of their assets to green bonds. The funds vary significantly in size. More than a third manage assets of more than USD 500 million, while 14% have less than USD 50 million. Table 4 lists the green bond mutual funds and green bond ETFs. In 2021, following the successful launch and close of the USD 1.42 billion Amundi Planet Emerging Green One Fund, the world's largest targeted green bond fund dedicated to emerging markets, Amundi continues to introduce Amundi Funds Emerging Markets Green Bond, targeting Green Bonds issued in hard currency primarily by corporates as well as some exposure to sovereigns in selected emerging markets, such as Brazil, India, China, and Indonesia.

**Table 3: Some examples of most recently launched Green Bond funds**

Green Bond Fund	Base currency	Launched date	Size	% labelled Green bond
PIMCO GIS Climate Bond Fund	US Dollar	23/09/2020	USD 24.00 million	Unspecified
Evli Green Corporate Bond Fund	Euro	01/08/2020	EUR 100.93 million	Unspecified
RobeccoSAM Global Green Bonds	Euro	01/05/2020	EUR 15.46 million	95.60%
Generali Investments SICAV (GIS) Euro Green & Sustainable Bond	Euro	16/12/2019	EUR 148.96 million	>70% green and sustainable
NN Corporate Index and Green Bond I	Euro	26/11/2019	EUR 101.52 million	Unspecified
Mansartis Green Bonds	British Pound	31/10/2019	GBP 11.42 million	>80% green and sustainable
Amundi Funds Emerging Markets Green Bond	Euro	07/06/2019	EUR 5.9 billion	Unspecified

Source: *Environmental Finance* (2021)

## Green bond in the context of post-Covid recovery

The COVID-19 pandemic highlighted the need for resilience across societies so they could better withstand high-impact shocks, including those related to health, safety, social fragmentation, and climate change. As this theme becomes more prominent, the connection between social inclusion and the environment will strengthen, and the effect will spill into the capital markets, leading to a rise in instruments targeting broader sustainability objectives. Various product innovations were introduced, expanding the green and sustainable bond market.

### COVID-19 Recovery Transition Bonds

An approach suggested specifically to build momentum in the capital markets, given the COVID-19 context, is that of the COVID-19 Recovery Transition Bonds (CRTB). These are green bonds tailored and structured to the needs of the time period impacted by COVID-19, supported by government and multilateral development bank funds providing risk assurance. They will carry the same level of diligence in terms of green definition to avoid any greenwashing, but with a focus on recovery and an ambition to build back better. Key features of the instrument, structured as a two-step bond include:

- Zero coupon period: The first 5 years of bond repayments to be pegged at a 0% coupon rate. This is designed to enable on-lending of funds raised at concessional rates to projects with very low revenue projections in the next 4–5 years due to COVID-19 impacts.
- Stepped-up coupon period. A second period of repayment of between 5 to 15 years (ideally long tenure bonds are better suited for infrastructure), would see bond repayments pegged at a market return, likely on a yield to maturity basis coupon payment. This step-up is suggested to ensure returns to investors who have supported the transition period and enable greater liquidity for the bonds.

### The surge of Social and Sustainability Bonds in response to COVID-19

Social bonds have become an increasingly popular fixed-income product since the Social Bond Principles were published in 2017, and their growth and popularity have accelerated in recent years. Social bond issuances have skyrocketed since the start of the pandemic, with the first quarter of 2020 recording the highest level of social bond issuances in history, as the COVID-19 pandemic has resulted in the growing

need for new funding avenues to address the unforeseen economic and social disruptions. In 2020, according to Environmental Finance, the volume of social bonds and sustainability bond issuance reached USD 165 billion and USD 139.3 billion, respectively.

As more countries recognize the need for an equitable social distribution of the bond proceeds, the prospective size of sustainability and sustainability-linked bond markets are growing substantially, supported by both supply and demand side.

In 2020, in response to the outbreak of Covid-19, the EU has launched the temporary Support to mitigate Unemployment Risks in an Emergency (SURE) program. This public finance instrument is available for Member States that need to mobilise significant financial means to fight the negative economic and social consequences of the coronavirus outbreak on their territory. It is designed to provide financial assistance up to EUR 100 billion in the form of loans from the EU to affected Member States to address sudden increases in public expenditure for the preservation of employment. As of the latest disbursement in May 25, 2021, the EU has provided nearly EUR 90 billion in back-to-back loans to 19 EU Member States.

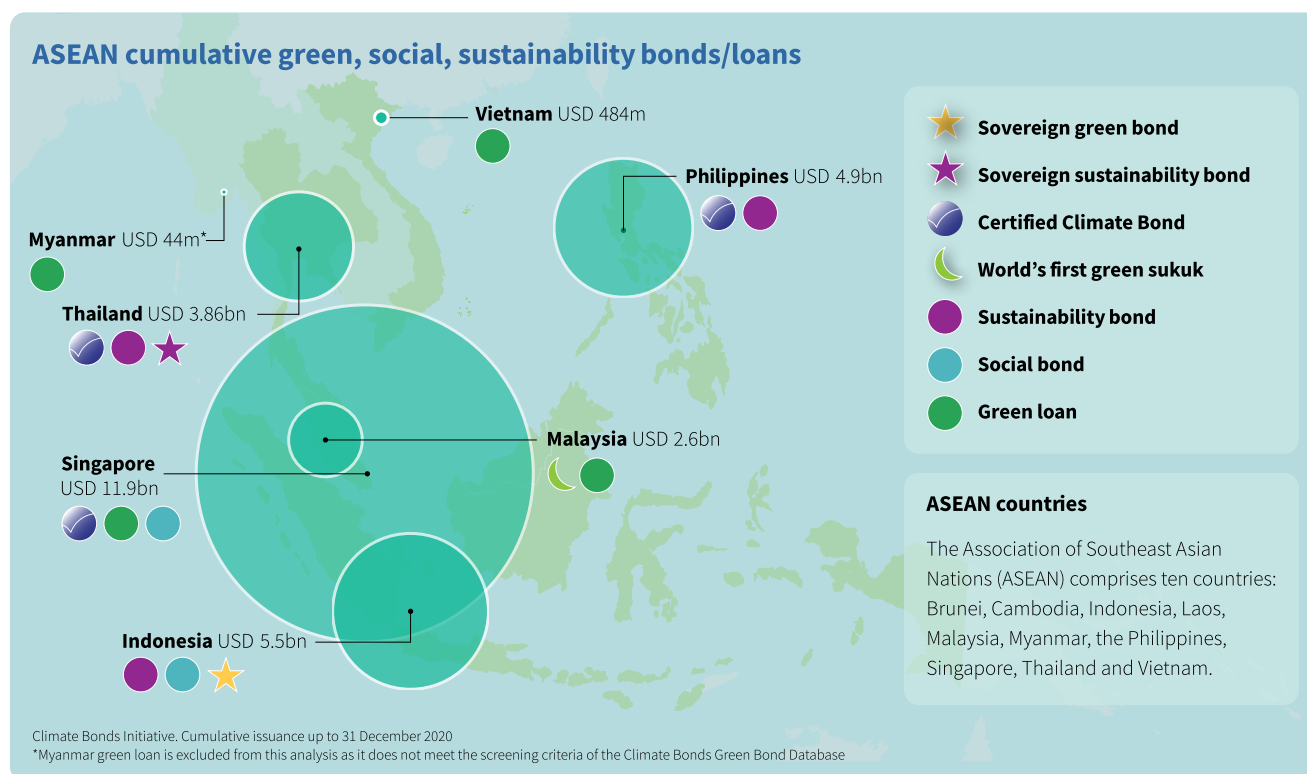
To finance this SURE package, since 2020, the European Commission has been issuing social bonds. By 18 May 2021, the European Commission had issued EUR 89.6 billion social bonds in six rounds under the EU SURE instrument. The issuings consisted of 5-, 10- and 15-year bonds. There was very strong investor interest in these highly rated instruments, and the oversubscription resulted in favourable pricing terms for the bonds. The raised funds are transferred to the beneficiary Member States in the form of loans to help them directly cover the costs related to the financing of national short-time work schemes and similar measures as a response to the pandemic.

On October 27, 2020, the first EU SURE social bond was listed on the Luxembourg Stock Exchange, the EU SURE social bond was listed on the Luxembourg Stock Exchange. The issued SURE social bonds are displayed on the Luxembourg Green Exchange, the world's leading platform exclusively dedicated to sustainable securities.

Looking forward, Moody's forecasted that USD 150 billion of social bonds and USD 125 billion of sustainability bonds could be issued in 2021, with strong growth potential in new sustainable finance instruments such as sustainability-linked bonds and transition bonds, as they allow issuers to maintain the flexibility of general corporate purposes borrowing while potentially still appealing to sustainability-minded investors. Companies will seek to finance their carbon transition plans with both use-of-proceeds and sustainability-linked bonds as relevant standards advance, although the definition of credible transition targets across a wide range of sectors remains a hurdle to rapid market growth.

# KEY TRENDS IN THE ASEAN GREEN BOND MARKET

Figure 12: ASEAN green finance market overview



Source: ASEAN Green Finance State of the Market 2020, <https://www.climatebonds.net/files/reports/asean-sotm-2020.pdf>

The overall sustainable finance market in ASEAN region performed strongly in 2020 despite COVID-19, with USD 12.1 billion issued versus USD 11.5 billion for the full year 2019, indicating a growth rate of 5.2% year-on-year.<sup>76</sup> In which, having gained some traction before the pandemic, green, social, and sustainability bonds are now an even more important financial instrument for ASEAN countries to mobilize funds to support green and sustainable recoveries as well as to build up systemic resilience to future shocks.

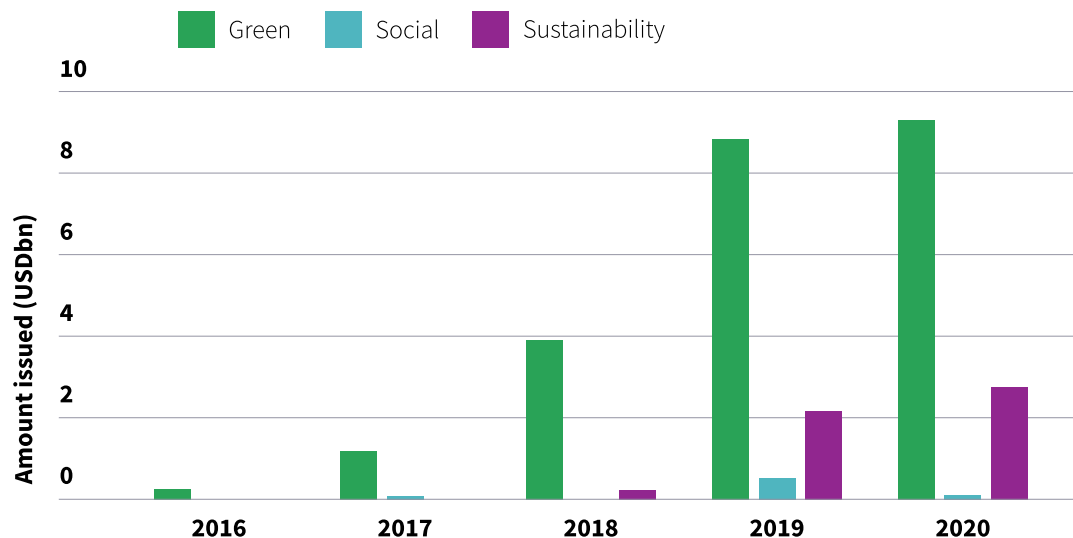
Green labelled theme continued to be the most popular theme, with regional issuance going up, rising from USD 8.8 billion in 2019 to USD 9.3 billion in 2020. Though the pace has been much slower than previous years, this is a positive sign amid the short-term downward trend in the global market in 2020, displaying a greater interest from green investors in the region.

At the same time, the market has become more diverse with the acceleration of social and sustainability bond issuances. Immediately after the outbreak of the COVID-19 pandemic, and in line with the global trend, the ASEAN sustainable finance market has been dominated by social and sustainability bonds, driven by an increasing need for financing health services and poverty alleviation projects, as well as to meet the United Nations Sustainable Development Goals (SDGs). Sustainability bond volumes have grown since the inaugural deal of MYR 500 million (USD 121 million) by HSBC Amanah Malaysia Bhd in the region in October 2018. In 2020, six new deals came to the market with a total size of USD 2.9 billion. However, the social bond market was less active, reaching a size of only USD 48.7 million in 2020 from three small deals, shrinking to 10% of the 2019 equivalent.

76. Climate Bonds Initiative. (2021). [ASEAN Green Finance State of Market 2020](https://www.climatebonds.net/files/reports/asean-sotm-2020.pdf)



Figure 13: ASEAN green bond markets growth between 2016 – 2020



Source: CBI. (2021). ASEAN Green Finance State of Market 2020

Country-wise, Singapore took the lead in the issuance amount ranking in 2020, achieving the largest share of 53% of total issuance of green bonds and green loans in the region. Indonesia replaced the Philippines to become the second biggest issuer with 24% of the total, thanks to its third sovereign green sukuk. The Philippines' share dropped from 19% in 2019 to 9% as at the end of 2020, closely followed by Thailand with 8%. Viet Nam came back to the regional race since 2019 and continued to issue two green loans in 2020 with total size of USD 257 million, accounting for 3% of regional green volumes. Malaysia was placed at the bottom of the rank with only 3%.

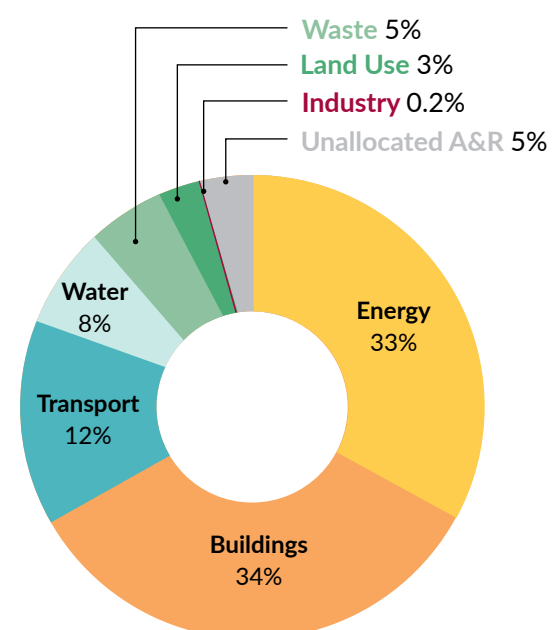
Cumulatively, Indonesia is the largest green bond issuer in the region in terms of issuance size with approximately USD 5 billion, followed by the Philippines and Singapore with USD 2.9 billion and USD 2.3 billion respectively. Meanwhile, Singapore is the largest market for green loans with 35 deals and a total volume of about USD 9.6 billion.

## Sectors Financed

Buildings and energy sector continues to be the most preferred destination of proceeds from green bonds and loans, with the combined share of the two sectors increasing to a record 79% of the total. Green buildings have clearly been the driver, achieving almost half of the cumulative volume, while Energy accounted for 30%, followed by 6% of Transport. Adaptation and Resilience projects have had a higher share of allocation than the global average with 3% versus around 0.6%, while very modest amounts have been invested in the Industry and ICT categories.

The allocation of proceeds is notably different for each country with Buildings dominating in Singapore, Energy being the largest in Vietnam, Indonesia, Malaysia and the Philippines. In the meantime, Thailand seeing an even split between Energy and Transport. Issuance by government-backed entities focuses heavily on Buildings, while development banks and the sovereign categories have seen

Figure 14: Sectoral Break-up of green bonds in ASEAN



Source: ASEAN Green Finance State of the Market 2020

a more balanced and diverse allocation of use of proceeds. In the private sector, non-financial corporates focused on the Energy sector, while financial corporates tend to fund a greater variety of projects.

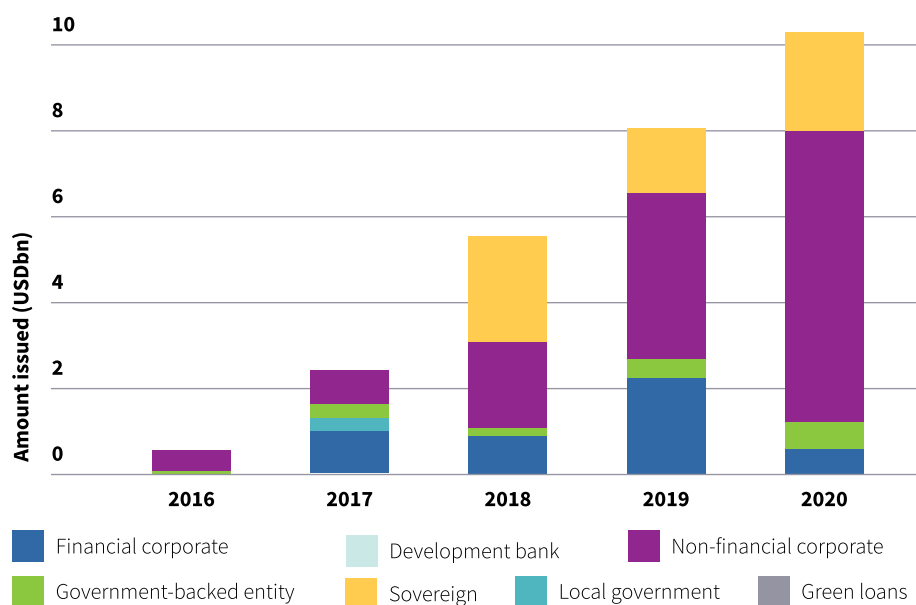
## ASEAN trends by issuer types

As for issuer types, by the end of 2020, ASEAN had seen 75 issuers (44 green bonds and 31 green loan) since 2016, up from 39 in 2019. Of these issuers, only four were repeat issuers. One example is the Republic of Indonesia with its third green sukuk transaction issued in local currency. Meanwhile, there were 26 debut issuers, most of whom Singapore-based, launching 34 new green bonds and loans for the regional market. Examples include Ascendas Real Estate Investment Trust (with one perpetual and one 10-year deal), Global Power Synergy of Thailand, and Arthaland of the Philippines. Among these debut issuers, 2020 saw 19 non-financial corporates, 5 financial corporates, and only 2 government-backed entities (13 new issuers of bonds and loans each) demonstrating that ASEAN corporates are increasingly turning to green bond and loan markets.

It can be seen that issuance from ASEAN in 2020 was notably driven by the private sector. In 2020, with 73% combined of total green bond issuance, corporates dominated the ASEAN green bond market. Among them, non-financial corporates were the most active issuer type, representing 67% of total green bond issuance in 2020. There was a sharp fall in the issuance volume by financial corporates from USD 1.1 billion in 2019 to USD 295.1 million in 2020, almost equivalent to that of government-backed entities and equating to only 6% of the region's green bond volume in 2020.

Green loans, albeit experiencing a minor fall in issuance volumes, still performed strongly in the ASEAN market, with USD 4.2 billion, representing 46% of the 2020 total green issuance. Unlike the green bond market, which has featured different issuer types, the ASEAN green loan market has been largely conquered by financials and nonfinancials (accounting for 73% and 26% of green loan volume in 2020, respectively), mostly related to Singapore's real estate sector.

Figure 15: Issuer type Break-up of green bonds in ASEAN



Source: CBI. (2021). ASEAN Green Finance State of Market 2020

## Maturities and Size

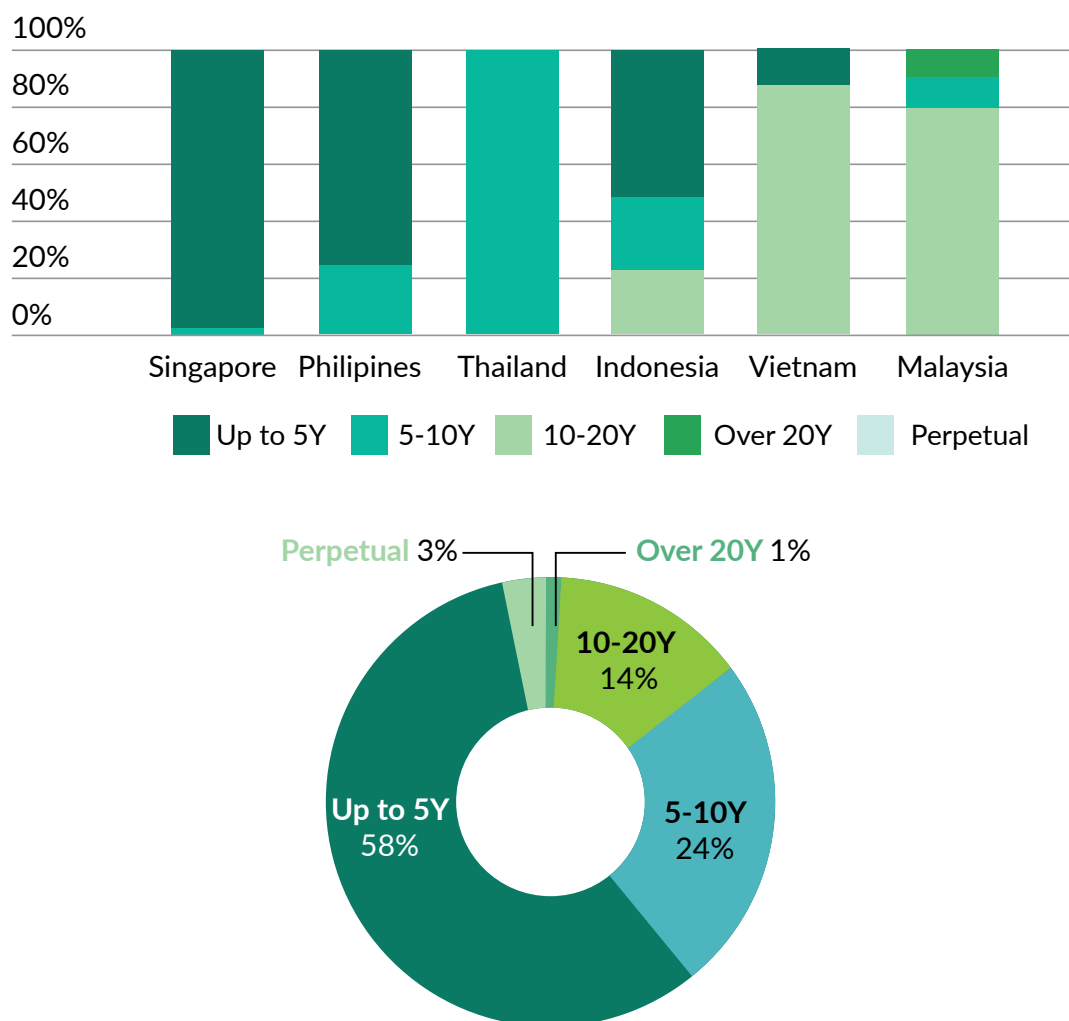
The average size of ASEAN green bonds and loans has remained between USD 200-250 million, which is small compared to more developed markets, but relatively large for the regional bond markets. However, there has been a gradual increase in the share of larger deals. Compared to 2019, the number of bonds and loans in the USD 500 million to USD 1 billion and USD 1+ billion ranges grew by 33% (from three to four) and 100% (from zero to one), respectively.

Of all the bonds and loans with at least a benchmark-size, two were from Singapore, while two were from Indonesia and one was from the Philippines. The only USD 1+ billion deal was a green loan from the Singapore-based company, MS Commercial Pte Ltd, to refinance its Marina One green building project.

In terms of bond duration, short-term (5-10Y) and medium-term (10-20Y) bonds are preferred in the ASEAN markets, with 36% and 38% of the cumulative volume, respectively. Among new issuers in 2020, there were nine green bonds and loans with a maturity between 10 and 20 years, compared with seven of 5-10Y and six of shorter than five years.

Average bond size in the ASEAN market varies between USD 200-250 million for the issuances made between 2017-2019. However, two large issuances witnessed in the region were the green sukuk from Indonesia worth USD 1.25 billion in 2018 and ICBC Singapore's deal worth the same amount in 2019.

Figure 16: Green Bond Tenors and Size deals in ASEAN



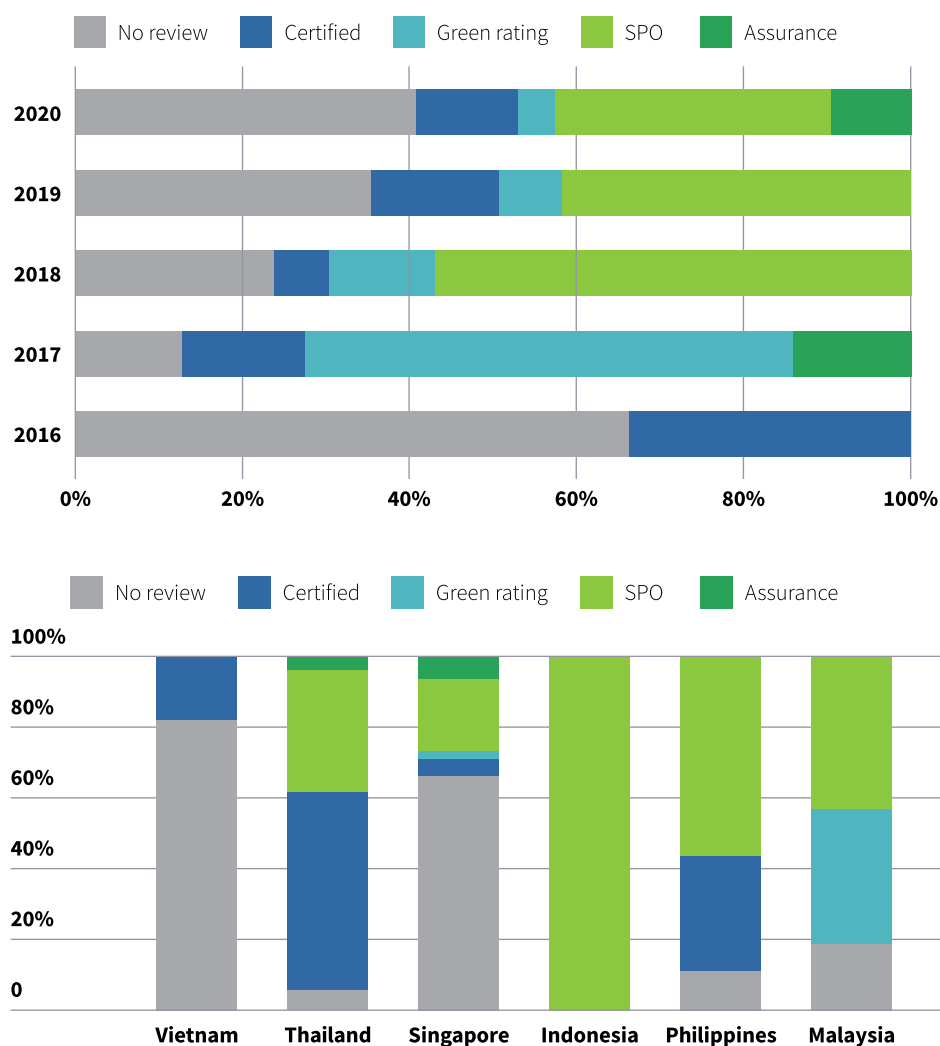
Source: CBI. (2021). ASEAN Green Finance State of Market 2020

## External Review of Green Bonds

The profile of external reviews has shifted over the past years, with the Second Party Opinion (SPO), although gradually losing its popularity, still being by far the most common type of review. In 2020, SPO accounted for 33% of issuance versus 41% in 2019 and was the most popular in Indonesia, Philippines and Malaysia. Meanwhile there was an uptick in issuances with no external review over years owing to a rise in the number of unreviewed loans, especially in Singapore, representing 43% in 2020 compared to 37% in 2019.

In addition, 2020 saw the comeback of Assurance after two years, with four deals from Singapore and KPMG and EY as the providers. Certification under the Climate Bonds Standard was granted to five deals in 2020 versus seven deals in 2019, representing a total amount of USD 600 million issued. This brings the total of ASEAN Certified Climate Bonds to date to 15, from 10 issuers in four sectors (Energy, Buildings, Transport and Land Use).

Figure 17: ASEAN Green Bonds External Reviews



Source: CBI. (2021). ASEAN Green Finance State of Market 2020



# 05 INTERNATIONAL PRACTICES IN PROMOTING GREEN BOND MARKET

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To kick-start and scale up Green bond markets for sustainable development, the role of public sector is crucial. In fact, the need for public sector support is not specific to green; for any new bond market there is a central role for the government to create an enabling environment to support healthy and dynamic growth of bond market.

Overall, the public sector can use the tools that are commonly used for general bond market development, with a more concentrated and customized approach, to facilitate specific investment in green projects. In emerging economies, such green bond specific public sector support must come in addition to support for more general foundational aspects of bond market development must occur to enable a Green bond market to flourish.

In the following session, experiences in developing Green bond market in each country will be reviewed, focusing on key fundamental policies that were introduced to promote Green bond market. If applicable, other supporting policies could be mentioned.

## SOUTHEAST ASIA



Malaysia

### Regulatory structure of Capital markets

The Malaysian financial system is regulated by two main authorities: the Securities Commission (SC) and Bank Negara Malaysia (BNM). As for capital markets, the SC is a regulatory authority with broad powers to regulate the operation of capital markets in Malaysia, with regulatory authority over equity securities, debt securities and derivatives, whether traded over-the-counter (OTC) or on regulated markets, as well as other capital markets activities such as discretionary portfolio management and the management of collective investment schemes (CIS—or unit trusts). The SC reports to the Minister of Finance (Minister).



The regulatory structure in Malaysia makes use of self-regulatory organizations (SROs) that exercise some direct oversight responsibility for certain market participants and whose rules are subject to meaningful sanctions. There are two such SROs in the jurisdiction – Bursa Malaysia and FIMM. FIMM is a recognized and authorized SRO under the CMSA. Bursa Malaysia is recognized as an exchange holding company under the CMSA, while undertakes certain functions of an SRO and is the front-line regulator of the stockbrokers and futures brokers that are members of the exchanges and the participants in the related clearing houses. FIMM is responsible for the supervision of participants in the unit trust market. This includes registration of distribution agents (individuals and institutions). If banks or stockbrokers distribute unit trusts to their clients, they are required to be registered with FIMM.

There are two components to the capital markets in Malaysia: conventional and Islamic. The Islamic capital market (ICM) is conducted based on Shariah principles and operates parallel to the conventional market. The fundamental securities regulatory scheme for each market is similar (extensive product disclosure, licensing requirements for intermediaries, etc.), but with an additional set of requirements layered on top to ensure the Islamic products and services are Shariah-compliant. In determining the Shariah-compliance status of a given security, SC is guided by the Shariah Advisory Council (SAC), which is made up of Islamic finance and Shariah experts.

### Green bond market development in Malaysia

Malaysia was amongst the first countries to release a framework for sustainable investment. In 2014, Securities Commission Malaysia introduced the Sustainable and Responsible Investment (SRI) Sukuk framework to facilitate the financing of sustainable and responsible investment initiatives. In addition to the existing Sukuk criteria, the framework required inclusion of utilisation of proceeds, eligible SRI projects, disclosure requirement, appointment of independent party and reporting.<sup>77</sup>

Another emerging player in the Malaysian SRI ecosystem is its Central Bank – Bank Negara Malaysia which issued a discussion paper on “Climate Change and Principle-based Taxonomy” in December 2019. The discussion paper aimed to provide an overview of climate change and its impact to the financial system and serve as a guidance to facilitate financial institutions in identifying and classifying economic activities that could contribute to climate change objectives. This came on back of the Central Bank joining the Central Banks and Supervisors Network for Greening the Financial System (NGFS) in October 2018.<sup>78</sup>

In the process of developing the SRI Sukuk Framework, in January 2017, SC and the Central Bank of Malaysia formed a Technical Working Group with the World Bank to encourage investments in green or sustainable projects through the development of green Islamic finance markets. The Technical Working Group promoted the concept of the green sukuk and shared international experience of green bond issuance with various stakeholders in the green economy.

Further in November 2019, SC Malaysia launched SRI Roadmap for capital markets to create a facilitative SRI ecosystem and chart the role of the capital market in driving Malaysia's sustainable development.

In 2020, the domestic credit rating agency RAM Group, with technical support from ADB, introduced RAM Sustainability, the first ASEAN-based provider of sustainability ratings and second opinions. RAM Sustainability is qualified as an Approved Verifier for the certification of Climate Bonds under the Climate Bonds Standard & Certification Scheme.

### Policy highlights: The introduction of SRI Sukuk Framework and SRI Roadmap

The SRI Sukuk Framework was developed with reference to international standards, such as the Green Bond Principles and Social Impact Bond Framework. The Framework is designed to be versatile, as it provides guidance for the issuance of green, social and sustainability sukuk, providing greater financing options for issuers. Given this wide coverage, Malaysian authorities did not develop a dedicated standard for green bond and sukuk. However, the ASEAN Green Bond Standards can also be used as a reference

77. Securities Commission Malaysia. (2014). [Press Release - SC introduces Sustainable and Responsible Investment Sukuk Framework](#)

78. Publication of the first NGFS progress report. (2018, October 11). Banque de France. <https://www.banque-france.fr/en/communiqu-e-de-presse/publication-first-ngfs-progress-report>



point. Issuances that comply with both sets of guidance can carry both labels, such as in the case of Malaysia's Permodalan Nasional Berhad (PNB) first green SRI sukuk.

In 2018, Malaysia launched a green bond grant scheme - Green SRI Sukuk Grant Scheme - to reimburse external review costs of issuers by subsidizing 90% of external review costs with a cap of MYR 300,000. This grant scheme was administered by Capital Markets Malaysia, an affiliate of the SC, with a total size of MYR 6 million (equivalent to USD 1.5 million) scheme and is open to domestic and foreign issuers, provided the facility is issued in Malaysia.<sup>79</sup> The grant is tax-exempt for the recipient issuers. In early 2021, the SC announced an expansion of the Green SRI Sukuk Grant Scheme and renamed it as SRI Sukuk and Bond Grant Scheme. The extended SRI Sukuk and Bond Grant Scheme is applicable to all sukuk issued under the SC's SRI Sukuk Framework or bonds issued under the ASEAN Green, Social and Sustainability Bond Standards (ASEAN Standards). Under this new scheme, eligible issuers can claim the grant to offset up to 90 percent of the external review costs incurred, subject to a maximum of MYR 300,000 per issuance. Additionally, recipients of the scheme are qualified for income tax exemptions for a period of five years until 2025.

### Other supporting policies

To better strengthen the Green bond market, Malaysia launched the SRI Roadmap in 2019. The five-year SRI Roadmap identified 20 strategic recommendations to drive the development of a facilitative and vibrant SRI ecosystem and position Malaysia as a SRI centre in the region. These included widening the range of SRI instruments, increasing SRI investor base, building a strong SRI issuer base, instilling strong internal governance culture, and designing an information architecture in the SRI ecosystem.<sup>80</sup>

Additionally, the fostering of a local verifier, RAM Sustainability, is also a part of the strategy to strengthen Malaysia's position as a SRI hub in the region, as well as to enhance the implementation of the SRI roadmap for the Malaysian Capital Market.



## Philippines

### Regulatory structure of Capital markets

In Philippines, the SEC is the primary regulatory authority over the capital markets and their participants. The Securities Regulation Code (SRC) is the main legal basis for the regulation of the markets. The SRC narrowed and redefined the scope of responsibilities of the SEC to enable the regulator to focus on regulation of the securities market and its enforcement.

In addition to the SRC, the Corporation Code provides basic rules for establishment and governance of companies. There are also laws dedicated to governing each type of NBFIs and universal banks participating in the market. Those include the Presidential Decree 129 on Investment Houses, the Financing Company Act of 1998 and the Investment Company Act of 1960. For each law, the SEC provides Implementing Rules and Regulations (IRR) to substantiate the laws with detailed provisions.

### Green bond market development in Philippines

The Securities and Exchange Commission (SEC) is the authority responsible for formulating and regulating activities on Philippines' Green bond market. Led by the SEC, the Philippines has developed Guidelines on the Issuance of Green Bonds Under the ASEAN Green Bonds Standards in the Philippines (SEC MC. No. 12, s. 2018). It has also developed the Guidelines on the Issuance of Social Bonds Under the ASEAN Social Bonds Standards in the Philippines (SEC MC. No. 9, s. 2019) and the Guidelines on the Issuance of Sustainability Bonds Under the ASEAN Sustainability Bonds Standards in the Philippines (SEC MC. No. 9, s. 2019).

79. World Bank, October 2020, [Pioneering the Green Sukuk: Three Years On](#)

80. Securities Commission Malaysia. (2019). [Press Release - SC launches SRI Roadmap for the Capital Market to drive Malaysia's Sustainable Development](#)

These Guidelines set out to adopt the ASEAN Green Bond Standards and provide for the rules and procedures for the issuance of ASEAN Green, Social, and Sustainability Bonds in the Philippines.

Prior to the adoption of the ASEAN Green, Social, and Sustainability Bonds Standard, in 2016, the first local currency Climate Bond in Asia and the Pacific was issued by a Philippine firm. AP Renewables, Inc., a subsidiary of AboitizPower Corporation, raised PHP 10.7 billion (USD 225 million equivalent) local currency bond for the Tiwi-MakBan geothermal energy facilities. The deal is structured as an addition to a direct ADB loan of PHP 1.8 billion (USD 37.7 million equivalent). ADB's credit enhancement is in the form of a guarantee of 75% of principal and interest on the bond.

Upon the introduction of these Guidelines, Rizal Commercial Banking Corporation (RCBC), who was also the first entity to have release a Green and Sustainability Bonds Impact Report in the Philippines, issued the first Green Bond from the Philippines under the ASEAN Green Bond Standards, raising PHP 15 billion (USD 290 million) in 2019.

With the assistance from financial and non-financial corporates across several core markets, the green finance market in the country continues to evolve.

### Policy highlights: The adoption of ASEAN GBS to facilitate Green bond market in Philippines

Under the Guidelines, issuers incorporated in ASEAN member countries or may be non-ASEAN issuers but implementing the eligible green projects in ASEAN countries. ASEAN member countries may also issue bonds. Other features of the Guidelines adopted from the ASEAN GBS included:

- **Use of proceeds:**
  - **Requirements for eligible Green Projects:** Projects must provide clear environmental benefits, which will be assessed and, where feasible, quantified by the issuer
  - **Ineligible Green Project:** Fossil fuel power
  - **Documentation on the Use of Proceeds:** utilization of proceeds from the green bonds must be described in the documentation for issuance
- **Process for Project Selection and Evaluation**
  - **Project Evaluation and Selection Process Determination:** Process for project evaluation and selection prior to the issuance of the green bonds must be established
  - **Disclosure of the Project Evaluation and Selection Process:** Project evaluation and selection process must be disclosed to the investors in the documentation for the issuance
- **Management of Proceeds:**
  - **Treatment of Net Proceeds:** The net proceeds from the bonds must be credited into a sub-account, moved to a sub-portfolio or otherwise tracked in an appropriate manner and attested to by a formal internal process
  - **Periodic Adjustment of Net Proceeds Balance:** Balance of tracked proceeds of outstanding green bonds must be periodically adjusted to match allocations to eligible green projects made
- **Reporting Requirements:**
  - **Continuous Reporting on the Use of Proceeds:** Issuers must report at least annually till full allocation and as necessary thereafter on:
    - List of the projects to which the proceeds have been allocated
    - Description of the projects
    - Amounts allocated and their expected impact

"In addition, the Guidelines include a provision on applicability on existing green bonds, wherein in certain circumstances, and at the discretion of the Commission, outstanding bonds issued by Philippine-based

issuer and/or in instances where the proceeds were used in the Philippines, will be considered for eligibility under the ASEAN Green Bonds Standards, provided the issuance is compliant with the requirements of these Guidelines, and already carries an internationally recognized green label.”<sup>81</sup>.

### Other supporting policies: Innovation in Green bond products

Apart from being the second largest ASEAN issuer, Philippines has probably been the most innovative in its approach towards these bonds. Further to issuing the first ASEAN green bond and first negative yield bond in Asia, the country also issued ASEAN's first perpetual bond. The issuance was made by an energy company with a size of USD 400 million in December 2019.

In 2019, Philippines did another first by the issuance of a negative yield bond, first of its kind green bond from Asia. The bond was issued by Bank of the Philippines Islands in the Swiss markets, raising CHF 100 million at a coupon of 0% and a yield of -0.02% (negative 0.02%). The bond was listed on the Swiss Stock Exchange. The government continues to further develop the sustainability agenda basis which more issuances can be expected<sup>83</sup>. Up to date, Philippines has been successful in issuing USD 2.02 billion green bonds cumulatively.



## Singapore

### Regulatory structure of Capital markets

The Monetary Authority of Singapore (MAS) is the sole regulator in Singapore having regulatory oversight of the financial services industry across various sectors. The MAS is also the central bank of Singapore.

The Singaporean financial services industry covers the following sectors: banks; merchant banks; finance companies; insurance; securities, futures and fund management; financial advisers; money brokers; money-changing and remittance businesses; business trusts; trust companies; and payment and settlement systems.

Under this regulatory set, the MAS supervises the securities industry. It has less oversight of an exchange's disciplinary procedures and rule changes. The day-to-day supervision of the market is still left with the SGX, which is now a for-profit company. The internal management of the SGX is regulated by its constitution.

Trading in securities is regulated by the SGX Rules. The criteria for listing and the obligations of listed companies are found in the SGX Listing Manual. The stock exchange also performs regulatory functions with respect to issuer regulation, member supervision, and market surveillance with its SingReco division.

### Green bond market development in Singapore

Singapore focuses on three key areas with respect to green finance: the deeper integration of environmental, social, and governance (ESG) issues into financial institutions in Singapore, more R&D in ESG products, and the expansion of available green finance products and growth of the asset class in the region. The implementation of green finance strategy in Singapore required close cooperation and seamless coordination from various stakeholders in financial system.

Green finance initiatives in the Singapore were kicked off by the introduction of ABS Guidelines on Responsible Financing in 2015 by the Association of Banks in Singapore (ABS). Subsequently, Singapore has been pushing for greater ESG integration, which is evident from Singapore Stock Exchange's mandate on sustainability reporting in 2016<sup>82</sup>.

As for Green bond market, the MAS started Singapore's Green bond market with the green bond grant scheme in March 2017. Accordingly, the Monetary Authority of Singapore (MAS) announced a green bond grant scheme to subsidize green bond issuance for three years starting 2017. The grants were intended to cover costs incurred and promote external reviews and require issuers to meet three conditions regarding qualifying issuers, eligible expenses, and qualifying criteria. Such external reviews must be based strictly

81. Securities and Exchange Commission Philippines, August 2018, [Press Release - SEC adopts the ASEAN Green Bonds Standards](#)

82. *Sustainability Reporting*. (2020). Singapore Stock Exchange. <https://www.sgx.com/regulation/sustainability-reporting>

on the international guidelines such as Green Bond Principles, ASEAN Green Bond Standards and Climate Bonds Standard. The scheme states that “100% of any costs incurred by an issuer in relation to the external reviewer’s provision of an independent assessment will be reimbursable, subject to a cap of SGD 100,000.”<sup>83</sup> In 2020, the MAS extended the Grant Scheme, introducing Sustainable Bond Grant Scheme valid till 2023.

### Policy highlights: A focus on voluntary disclosure on ESG to promote green bond issuance

To promote green finance market, the Association of Banks in Singapore (ABS) published the ABS Guidelines on Responsible Financing on October 8, 2015 and revised the guidelines on June 1, 2018 (ABS 2015 and 2018). Responding to a call for promoting a low-carbon future following the Nationally Determined Contribution by individual countries to the Paris Agreement 2015, the ABS published the guidelines to support more transparent “Environmental, Social and Governance (ESG) disclosures.” The disclosure adopts a “comply or explain basis” in reporting.

The ABS Guidelines on Responsible Financing require companies to strictly comply with ESG disclosures when they finance. According to the ABS Guidelines, there are three principles on responsible financing: disclosure of senior management’s commitment to responsible financing, governance on responsible financing, and capacity building on responsible financing. The guidelines provide the principles of financing for issuing green bonds.

### Other supporting policies

Singapore intends to share its experiences and best practices in green finance with the central banks of other countries. In 2017, its central bank joined hands with seven other central banks to launch the Network for Greening the Financial System (NGFS), which addresses climate change and sustainability. The eight founding members are the central banks of the PRC, the United Kingdom, France, Germany, Mexico, the Netherlands, Singapore, and Sweden. The network is a voluntary platform and forum to share views and best practices of dealing with climate related risks for the financial sector and to develop green finance. As of February 2021, the NGFS consists of 87 members and 13 observers.



## Thailand

### Regulatory structure of Capital markets

In Thailand, the Bank of Thailand (BOT), the Ministry of Finance, the Securities Exchange Commission (SEC), and the Office of the Insurance Commission are the key financial sector regulators.

In which, the broad framework of capital markets in Thailand is governed by the Securities and Exchange Act BE 2535 (1992) (the Securities and Exchange Act), which provides for the establishment of the Securities and Exchange Commission of Thailand (the Thai SEC) and empowers it to introduce policies for the development and supervision of the securities markets and related activities, including the governing of the offering of securities, governance of an issuing company, and securities business in Thailand. The Thai SEC’s organisation extends to the Capital Market Supervisory Board and the Office of the Securities and Exchange Commission (the Office of the SEC), a regulatory body that supervises securities businesses including day-to-day operations, public offerings and business takeovers, and includes implementing policies, inspecting licensed or approved companies and individuals, and developing financial products.

The Securities and Exchange Act also established the Stock Exchange of Thailand (SET), which is the principal stock exchange in Thailand consisting of securities companies that are the SET’s members. The SET is responsible for, among other things, processing all listing applications, ensuring that disclosure requirements for listed companies are fulfilled and monitoring all trading activities in connection with listed securities.

83. ADB. (2019). [Green Finance in Singapore: Barriers and Solutions](#)

## Green bond market development in Thailand

The issuance of green bonds of Thai corporates began in 2018. However, the earlier bonds issued were offered to overseas markets. Some notable green bond issuances included USD-denominated bond issued by TMB PCL in June 2018 or the THB 5 billion (equivalent to USD 159.8 million) bond issued by B.Grimm in December 2018. It is worth highlighting that the THB 5 billion green bond issuance by B.Grimm was fully invested by the Asian Development Bank, as a catalyst to develop the green bond market in Thailand.

In 2019, the green bonds from the BTS Group (with an issue amount of THB 13 billion or USD 415.5 million and maturities ranging from 2Y to 10Y) was issued for the local market. Most of the investors were institutional investors. It was also reported that this bond was 8.41 times over-subscribed, which could indicate some appetite from investors. In addition, Energy Absolute PCL issued green bonds in 2019, with a total issue amount of THB 10 billion (~USD 319.6 million). ADB is also among the investors for this bond, investing around THB 3 billion.

In July 2020, Thailand launched the Sovereign Sustainable Financing framework to facilitate the issuance of green, social and sustainability bonds and loans, and to channel the use the proceeds to finance and refinance existing and future government loans or expenditures in the form of direct investment expenditures, subsidies, fiscal measures and operational expenditures.

The Framework defines eligibility criteria in seven green areas and three social areas:

Green Eligible Categories: (1) Clean Transportation (2) Renewable Energy (3) Energy Efficiency (4) Sustainable Water and Wastewater Management (5) Sustainable Management of Living Natural Resources and Land Use (6) Terrestrial and Aquatic Biodiversity Conservation (7) Green Buildings

Social Eligible Categories: (1) Employment Generation Including Through the Potential Effect of SME Financing and Microfinance (2) Access to Essential Services (a) Healthcare (b) Educational and Vocational Training (c) Affordable Housing (3) Food Security.

Under the Sustainable Financing Framework, in August 2020, the Thai MOF's Public Debt Management Office issued the first 15-year sovereign sustainability bond, paving the way for two more tranches of the bond in the following months, bringing the total amount raised to THB 50 billion (about USD 1.6 billion) to finance green infrastructure and social impact projects supporting Thailand's recovery from the COVID-19 pandemic. The first and third tranches of this sovereign sustainability bond are used to finance clean infrastructure projects such as the construction of the Bangkok MRT (Mass Rapid Transit) Orange line, while the second tranche raised financing for public health expenditures and support to small and medium-sized enterprises hit hard by the pandemic. The issuance was supported by ADB's technical assistance through the Association of Southeast Asian Nations' (ASEAN) Catalytic Green Finance Facility.

The bond was initially listed on Thailand's Bond Electronic Exchange. In April 2021, this THB 50 billion-sustainability bond has been dual-listed on the Luxembourg Green Exchange via Luxembourg Stock Exchange, which emphasizes Thai government's commitment in green financing and expresses accountability from providing full disclosure on green projects financed by the sustainability bond. The listing of Thai's first sovereign sustainability bond on LGX also strengthens the visibility of the bond to the international investor community.

### Policy highlights: The leading role of market regulators in building up momentum for green bond market

The issuance momentum has in part been due to the SEC's efforts to promote green bonds by issuing guidelines on green, social and sustainability bonds in 2018 and 2019, which allow issuers to use any internationally accepted green, social or sustainability bond standards. In this guideline, SEC Thailand noted that green bonds are not a new product, and thus should follow the regulations for corporate bonds. In addition, green bond offerings should comply with internationally recognized standards. SEC Thailand also encourages the appointment of an external reviewer. The issuer of green bonds is required to disclose the credentials of the external reviewer and scope of review on the issuer's website or any other designated channel throughout the tenure of the bond.

SEC has also supported bootcamps to build up capacity among potential issuers, underwriters, and investors. Efforts have also been made to offset the additional monitoring and verification costs associated with issuing green bonds. Since 2018, SEC has committed to cut the ESG bond issuance fee. The fee has been cut twice and will be continue at least until mid-2021. Reduction in bond registration fees has also been introduced by the Thai Bond Market Association.

In the progress to establish fundamental infrastructure for green bond market in Thailand, the promotion of local verifiers is crucial. In November 2020, the first local verifier service for green bond in Thailand was certified by CBI. The launch of local external reviewers offers green bond issuers more diverse choice in selecting green bond verifiers. The fee charged by local verifiers are also more competitive compared to international service providers.

Simultaneously, the Thai Bond Market Association has launched a Green, Social & Sustainability Bond information platform in 2020 to support the transparency and efficiency of green bond market transactions in Thailand.

Looking forward, the SEC commits to provide support for Thailand's corporate green bonds that plan to list on the Luxembourg Green Exchange (LGX) as part of a plan to facilitate long-term sustainable growth in finance.

### Other supporting policies:

Furthermore, financial market regulators in Thailand have been extremely active in following up with international best practices in green bond market development. With technical support from international partners, in 2019, the BOT has been developing a Sustainable Finance policy framework, which includes a sustainability roadmap and tools to help the banking sector improve ESG risk management practices. The framework also includes a Sustainable Banking Roadmap to recommend pathways, policies, frameworks and key initiatives, which will enable the banking sector to effectively manage ESG risks and contribute more systematically to the transition to a resilient and sustainable economy.

At the same time, capital market regulators also commit to promote responsible business and sustainable investment practices, as being mentioned in the Corporate Governance Code 2017 and Investment Governance Code 2017. In upcoming time, Thailand has committed to build up a cohesive framework to further integrate ESG criteria into current disclosure and governance practices. This further boosts the capacity of listed companies in complying with Green Bond standards.

## CENTRAL ASIA



### China

#### Regulatory structure of Capital markets

The regulation and supervision of the financial sector in China is set broadly along sectoral lines, whereby the securities industry is mainly regulated by the China Securities Regulatory Commission (CSRC); while the banking industry and the trust company industry is regulated by the China Banking Regulatory Commission (CBRC) and the insurance industry by the China Insurance Regulatory Commission (CIRC). In 2018, CBRC and CIRC were merged to become the China Banking and Insurance Regulatory Commission (CBIRC).

The CSRC was established in October 1992 as a ministry-level government agency directly under the State Council (SC), to which it is accountable. The main governing body of the CSRC is the Chairman, whose position has Ministerial rank. He is currently supported by four Vice-Chairmen and two Assistant Chairmen. The Chairman has responsibilities for all matters; while each Vice-Chairmen and Assistant Chairman has responsibilities to oversee day-to-day operations of specific departments. The executive team is appointed by the State Council (SC).

The SC plays a key role providing strategic direction to the CSRC. The regulation and supervision of the capital markets is driven by a capital market development strategy aimed at ensuring that the capital markets play a larger role in financing the real economy. This strategy emanates from the National People's



Congress (NPC) annual meetings and is transformed into actionable points via opinions of the SC. The most relevant opinions are the Opinion on Further Enhancing the Protection of Small Investors' Rights and Interests from 2013 and the Opinion on the Healthy Development of the Capital Markets from 2014. CSRC strategic priorities are driven by such opinions.

In general, the mandate of the CSRC covers the regulation and supervision of the securities and futures markets. Such responsibilities are mainly established by law (the Securities Law and the Securities Investment Fund Law); and complemented by regulations and decisions of the SC. Pursuant to the legal and regulatory framework the CSRC authorizes the public offering of securities and funds, licenses all categories of intermediaries with the exception of private securities investment fund managers (which are only subject to registration with the Asset Management Association of China (AMAC)), licenses futures markets, while the licensing of equity markets falls to the SC acting on the recommendation of the CSRC, and licenses information service providers, including credit rating agencies and auditors that provide services in the securities and futures markets.

## Green bond market development in China

The PRC's Green bond market started after the promulgation of three essential national regulatory documents on green bonds, namely the People's Bank of China (PBoC) Announcement (2015) No. 39 for Green Financial Bonds, the Guidelines on Green Bond Issuance for Green Enterprises Bonds by the National Development and Reform Commission (NDRC), and the China Securities Regulatory Commission (CSRC)'s Guiding Opinions for Supporting the Corporate Green Bonds.

China's green bond regulatory framework has many participants such as the People's Bank of China (PBoC), China Securities Regulatory Commission (CSRC), National Development and Reform Commission (NDRC) and National Association of Financial Market Institutional Investors (NAFMII)<sup>84</sup>. In 2015, PBoC and NDRC first published the 'Green Bond Endorsed Project Catalogue' which served as the first green bond standard in China. Next year in 2016, NDRC released the Guidelines on Green Bond Issuance to promote issuances of green bonds and leveraging it as a financial tool to achieve green growth. These guidelines were focused on 12 categories/themes such as energy-conservation and emission-reduction, green urbanization and circular economy.

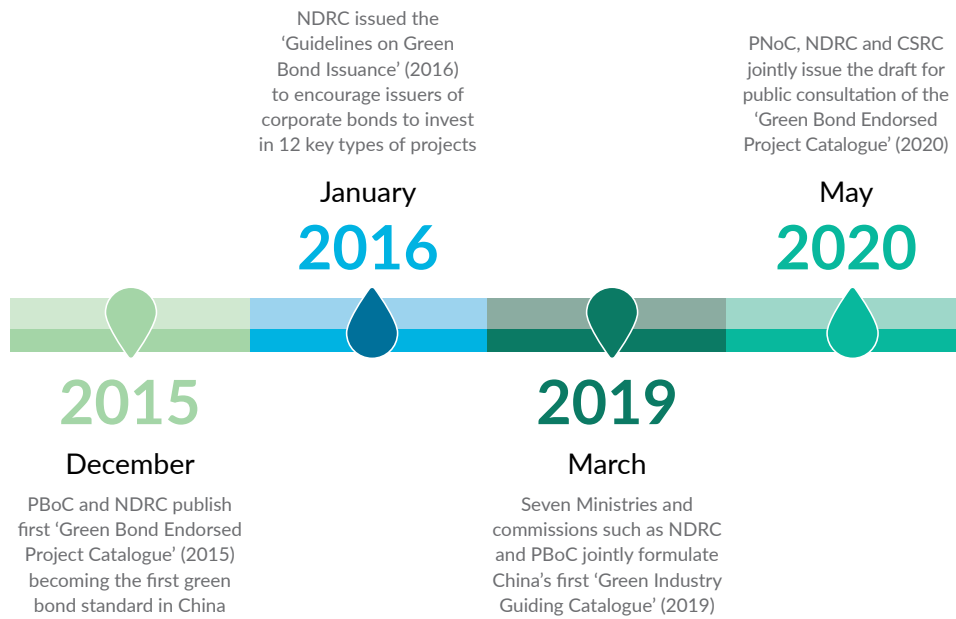
In 2019, seven Chinese ministries including the NDRC, PBoC, and the Ministry of Ecology and Environment published 'Green Industry Guiding Catalogue'. This is to serve as a guiding document covering six categories of green activities – energy saving and environment protection, clean energy, cleaner production, eco-environmental industry, sustainable infrastructure and services such as third-party verification and consulting that support green development. With this document, it was expected that there would be clear understanding of green assets and activities in China.

Additionally, in March 2016, the Shanghai Stock Exchange (SSE) published its own set of green bond guidelines for corporate issuers. The SSE guidance refers to the PBoC's catalogue for what projects qualify as green, and provides similar guidance to the PBoCs on management of proceeds, reporting and disclosure, and use of third party audits or certification.

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84. Sustainable Banking Network. (2018). [Creating Green bond markets – Insights, Innovations, and Tools from Emerging Markets](#).

**Figure 18: Chinese Green Bond Taxonomy Timeline**



Source: Chen, R. (2020). *A Greener Green Bond Catalogue: The incoming China's unified Taxonomy notches new win*. Natixis

**Table 4: Overview of Green bond regulation in China**

Bond type	Regulatory Authority					Related Green Bond Policies
	PBoC	NDRC	NAFMII	CSRC, Stock Exchanges	Ministry of Finance	
<b>Financial bonds</b> Issued by financial institutions, including three policy banks and commercial banks, traded on the interbank market	X					PBOC Announcement No.39 (2015); Notice on Strengthening the Supervision and Administration of the Continuation Period of Green Financial Bonds (2018)
<b>Corporate bonds</b> Bonds issued on the Shanghai or Shenzhen Stock Exchanges.				X		Guidelines for Supporting Green Bond Development (2017); Notice on GB Pilot Program (2016)
<b>Non-financial corporate debt instruments</b> Bonds issued by non-financial corporates, including medium term notes and short-term commercial paper	X		X			Guidance on Debt Financing Instruments Issuance from Non-financial Corporates (2017)
<b>Enterprise bonds</b> Bonds primarily issued by state-owned enterprises, traded on the interbank market, Shanghai or Shenzhen Stock Exchanges		X				NDRC Green Bond Guidelines (2015), NDRC 2019 Green Industry Guiding Catalogue
<b>Municipal bonds</b> Bonds issued by local governments and municipalities					X	No official policy

Source: Adapted from Zhang. (2020). *Regulating Green bonds in the People's Republic of China: Definitional Divergence and Implications for Policy making*. ADB Institute.

## Policy highlights: China Green Bond Endorsed Project Catalogue and the harmonization with International green standards

The official green definitions for projects qualifying for green bond issuance in China are broad and comprehensive. PBoC requires issuers to refer to the China Green Bond Endorsed Project Catalogue (the Catalogue), an official list of the types of green projects eligible for financing via green bonds. The Green finance Committee, which sits under the China Society for Finance & Banking, developed the Catalogue.

The Catalogue, endorsed by PBoC, is the most comprehensive guideline for what is green in the Chinese Green bond market. It covers climate change mitigation and adaptation projects, and broader environmental projects, such as projects addressing air pollution, to be in line with China's environmental policy priorities. The Catalogue sets up six categories with 31 sub-categories of projects that are eligible for financing via green bonds.

NDRC's guidelines also define a list of projects eligible for green bond issuance, which are largely in line with the Catalogue of projects endorsed by PBoC. The exception is with nuclear energy, which is included by NDRC but not endorsed by PBoC.

The main difference between the two sets of green definitions is that the Catalogue endorsed by PBoC provides an exclusive list of what projects qualify for regulatory green bond approval, while NDRC's guidelines aim to highlight specific project types they are particularly encouraging to be financed by green corporate bonds.

Technically, PBoC's guidelines are a resource also for non-financial corporates to refer to, as they offer more extensive guidance on the whole green bond issuance process. NDRC's guidelines are limited to a list of qualifying green projects that should be supported by green corporate bonds, and proposals for policy incentives for green bonds.

In terms of aligning with International Green standards, China had been put under pressure given the discrepancies that existed between its local green bond guidelines and the international ones, especially with respect to the eligibility of green projects and disclosure on the proceeds allocation. This was primarily due to two factors:

- 2015 Catalogue allowing use of proceeds for 'clean coal'
- Allowance of green corporate bonds to use up to 50% of proceeds to repay loans or invest in working capital

In June 2020, PBoC, CSRC and NDRC released the 'Green Bonds Endorsed Projects Catalogue' to align and harmonize China's green bond standards with the global standards. This catalogue is primarily in line with the 2019 Industry Catalogue and converged with the global standards on aspects such as clean coal.

One notable update in the 2020 Catalogue was that clean coal was removed. Additionally, the definition on green bond was also clarified. While in the 2015 Catalogue, green bond was presented as "as an economical investment instrument with high mobility and low risk. It can effectively enhance the financing availability for green projects, especially those with medium and long-term duration. Meanwhile, it can also lower financing cost, and provide investors with a new channel to engage in green investment."<sup>85</sup> In the 2020 draft of the Catalogue, green bonds have been more specifically defined. It states that "Green bonds refer to the use of raised proceeds to support green industries, green projects or green economic activities that meet the prescribed conditions and are issued in accordance with legal procedures and Securities that are agreed to pay back principal and interest, including but not limited to green financial bonds, green corporate bonds, green debt financing instruments, and green asset-backed securities".<sup>85</sup>

The 2020 version of the catalogue is a sign of further alignment between Chinese and International green standards. Specific updates are summarized in the below table.

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85. Chen, R. (2020). A Greener Green Bond Catalogue: [The incoming China's unified Taxonomy notches new win](#). Natixis

**Table 5: Comparison of the newly published 2020 catalogue versus existing version**

What's been cut	What's been added
Large ultra-supercritical or supercritical coal-fired power plants, which were previously included as energy saving projects	More clean energy projects, including hydrogen, geothermal, tidal power, biomass, energy storage and carbon capture and sequestration
Projects that process coal to remove impurities	A new category of 'green services' which includes trading carbon emission credits and renewable energy certificates, as well as demand side management in the power market and designing green industrial projects
Ventures that produce fuels and fuel additives including gasoline and diesel with higher environmental standards	Infrastructure supporting new energy vehicles including distributed charging points and hydrogen charging points

Source: Bloomberg and [Natixis](#) GHS

## Other supporting policies

The Chinese government strongly promotes “green finance,” which PBoC defines as “financial services provided for economic activities that are supportive of environmental improvement, climate change mitigation and more efficient resource utilization.”<sup>86</sup> In September 2016, PBoC launched Guidelines for Establishing the Green Financial System. Accordingly, key green finance tools include green bonds, green credit, green development funds, green insurance, markets for pollution control rights (carbon market), local government initiatives, and international cooperation in climate finance.

Since 2017, China has been experimenting with the concept of Green Finance Pilot Zones. These zones are part of the country's efforts to build a robust green financial system. These pilot zones are set up to test specific green finance-related policies and innovations in which the experience gained locally would inform how to incorporate zones on a national scale.

Primarily, the key goals for pilot zones include enhancing the role of green finance in domestic financial institutions, promoting green credit, green insurance and green bonds, exploring the establishment of the markets for environmental rights, strengthening government policy support, and developing green finance risk control mechanisms. Initially, five zones were set up in the provinces of Guangdong, Guizhou, Jiangxi and Zhejiang, as well as the far western region of Xinjiang. The newest addition to the green finance pilot zone roster is Lanzhou, capital of Gansu Province in the west of China in 2019.

Each pilot zone focuses on different aspects of green financing. Green bond-related programs were piloted in Jiangxi, Zhejiang, and Guizhou. Jiangxi introduced China's first green municipal bond issuance that was used to fund the first domestic “livestock clean loan” product, with livestock and poultry farming management rights as collateral. In Zhejiang, the Quzhou pilot zone has issued China's first specialized green financial bonds for small and micro-enterprises. The total issuance was CNY 1.5 billion (~USD 0.23 billion) with a three-year bond period. Another innovative policy to foster market-based green finance tools was Guizhou's program to develop green asset securitization product. Green assets in the form of future contract revenue were separated from the company balance sheets, allowing for off-balance-sheet financing that raised CNY 1 billion (~USD 0.15 billion) to construct more distributed energy stations.



**India**

## Regulatory structure of Capital markets

Securities and Exchange Board of India (SEBI) is the principal capital markets regulator in India. The Securities and Exchange Board of India Act of 1992 (SEBI Act) created SEBI and authorized it to protect

86. People's Bank of China. (2016). [Guidelines for Establishing the Green Financial System. PBoC is China's central bank.](#)

the interests of investors, to regulate and to promote the development of the securities market. In addition to the SEBI Act, the Companies Act of 1956, amended by the Companies Act of 2013, the Securities Contracts (Regulation) Act of 1956, and the Depositories Act of 1996 are other relevant laws. SEBI regulates the public offering of equity, debt and asset backed securities, as well as collective investment schemes (CIS) and the trading of securities and derivatives in recognized stock exchanges (RSEs). SEBI is the principal regulator of all intermediaries in the securities market as well as infrastructures providers, including exchanges, central clearing counterparties and central securities depositories. In 2015, the Forward Markets Commission (FMC) merged with SEBI and SEBI assumed all responsibilities of FMC for regulation of India's national and regional commodity derivatives exchanges. With regard to commodities, SEBI has been vested with responsibility for regulation of commodity derivatives market only. Commodity spot markets are regulated by Ministries of Central Government and State Governments.

The Ministry of Corporate Affairs and the Reserve Bank of India (RBI) have certain regulatory responsibilities pertinent to capital markets. The Registrar of Companies (ROC), within Ministry of Corporate Affairs registers all companies. Under the Companies Act, all registered companies (including listed companies) must submit their annual reports including financial statements to ROC. The RBI has regulatory responsibility over contracts on government securities, gold related securities, money market securities and securities derived from those securities (including currency derivatives) and repo contracts in debt securities. SEBI regulates exchange trading in these securities and collective investment schemes that invest in these assets.

Three nationwide recognized stock exchanges (RSE), the Bombay Stock Exchange Ltd. (BSE), the National Stock Exchange of India Ltd. (NSE) and Metropolitan Stock Exchange of India Ltd. (MSEI), are recognized by SEBI. The BSE and NSE dominate secondary trading. They perform a range of regulatory functions. They each have authority to carry out market surveillance functions. They admit member stockbrokers (followed by SEBI registration). They supervise firm compliance with capital requirements and other requirements, through off-site and on-site inspections programs. Public companies must list on a stock exchange and comply with a listing agreement that covers, inter alia, periodic disclosure reporting requirements. The BSE and NSE have demutualized and become listed companies.

### Green bond market development in India

Green bond market in India is regulated by SEBI. As green bonds differ from regular bonds primarily in terms of their designated use of proceeds, existing regulations concerning issuance, listing and disclosure requirements for debt securities continue to be applicable as specified under the general Issue and Listing of Debt Securities (ILDS) regulation under the Securities and Exchange Board of India (SEBI).

To promote domestic Green bond market, SEBI introduced the first green bond guidelines in 2016, outlining Requirements for Issuance and Listing of Green Bonds. After consultation with the Ministry of Finance and the Ministry of New and Renewable Energy, as well as with industry bodies, banks, law firms, individuals and international institutions, SEBI finalised the Disclosure Requirements for Issuance and Listing of Green Debt Securities in May 2017. In this 2017 guidelines, SEBI specifically defined green bonds and the disclosure requirements.

### Policy highlights: Mandatory disclosure requirement for green bond issuance

While in most countries, guidelines have focused on taxonomies and specific definitions, SEBI mandated disclosures for green bonds. SEBI guidelines tied “green” aspect of the bonds with the use of proceeds and restricted it to the following broad activities:

- Renewable and sustainable energy (wind, solar etc.)
- Clean transportation (mass transportation)
- Sustainable water management (clean and/or drinking water, water recycling etc.)
- Climate change adaptation
- Energy efficiency (efficient and green buildings)

- Sustainable waste management (recycling, waste to energy etc.)
- Sustainable land use (including sustainable forestry and agriculture, afforestation etc.)
- Biodiversity conservation

Further, the guidelines recommend alignment of bonds and defining green activities for using bond proceeds in line with international standards such as those developed by the Climate Bonds Initiative.

Disclosure requirements mandated by SEBI include:

- Statement on environmental objectives of the issue of Green Debt Securities
- Decision making process on defining eligibility of projects, criteria formulated and environmental sustainability objectives of the investment
- System deployed for tracking proceeds
- Details of projects where proceeds would be deployed
- Details on external reviews conducted

In addition, SEBI requires half yearly and annual financial results on utilization of proceeds and details of unutilized proceeds. Further in the annual reporting, disclosures need to be made on list of projects where proceeds are utilized, qualitative performance indicators, quantitative performance on environmental parameters, and methods and underlying assumptions in preparing performance indicators and metrics<sup>87</sup>.

### Other supporting policies

Initiatives that support the growth of the domestic Green bond market include, inter alia, the government's India Infrastructure Development Fund, which supports infra-structure funds in the issuance of rupee-denominated bonds by multilateral institutions, such as the Asian Development Bank, which carry out currency swaps to provide long-term debt to infrastructure projects in public private partnerships. Moreover, other national initiatives such as the Smart Cities Initiative, Swacch Bharat Mission, and National Solar Mission, help building the required project pipeline, of which many projects may be suitable for green bond financing.

## EUROPE



### Regulatory structure of Capital markets

The Luxembourg financial sector supervisory authority (CSSF) regulates the financial services sector. It is responsible for investigating possible wrong-doing; and, bringing enforcement actions against credit institutions and professionals in the financial sector (PFS) for breaches of applicable law. It has the widest powers to supervise and control Luxembourg credit institutions and the PFS. The CSSF cooperates with foreign supervisory authorities on prudential supervision matters. Circulars and regulations issued by the CSSF complete the legislative framework of the Luxembourg financial sector.

The CSSF also supervises the securities markets and receives complaints from investors. It is the Luxembourg competent authority for approving prospectuses that are compliant with the Prospectus Regulation, certain provisions of which were implemented in Luxembourg by an act dated 16 July 2019 on prospectuses for securities (Prospectus Act). The CSSF furthermore monitors the compliance of issuers with their obligations arising under the act dated 11 January 2008 on transparency obligations, as amended (Transparency Act), and the Market Abuse Regulation, certain provisions of which have been implemented into Luxembourg law by an act dated 23 December 2016 relating to market abuse.

87. SEBI. (2017). Circular No.: CIR/IMD/DF/51/2017 - [Disclosure Requirements for Issuance and Listing of Green Debt Securities](#).



Finally, the CSSF participates, at a European Union and international level, in negotiations concerning the financial sector, and coordinates the implementation of governmental initiatives and measures to bring about an orderly expansion of activities of the financial sector.

The Luxembourg Central Bank (BCL) has a dual role: it is an integral part of the European System of Central Banks and the Eurosystem, on the one hand, and it is the central bank of Luxembourg, on the other. The BCL is responsible for implementing the monetary policy in Luxembourg decided by the Governing Council of the European Central Bank (ECB) and, among other things, for payment systems and clearing of settlement systems, cash operations and financial stability.

The Luxembourg Finance Ministry has general competence over the financial services sector (including tax legislation and financial legislation). The Ministry of Finance is also in partnership with the Ministry of Sustainable Development and Infrastructure (Department of the Environment) and UN Environment to formulate roadmap for sustainable finance in Luxembourg in 2018. This roadmap aimed at establishing the groundwork for a comprehensive sustainable finance strategy for Luxembourg, as well as serving as a part of a broader movement globally, from both investors and policymakers, to move towards sustainable financing and investment practices.

### Green bond market development in Luxembourg

Green bond market in Luxembourg is an initiative driven mainly by market forces. Luxembourg launched the world's first and largest platform dedicated exclusively to sustainable financial instruments: Luxembourg Green Exchange (LGX), which is part of the Luxembourg Stock Exchange (LuxSE) group, in 2016. It aims to provide issuers, asset managers, and investors with an environment that ensures transparency for bonds and funds that are green, socially responsible, sustainable, or ESG-focused. Entry is restricted to issuers and asset managers that provide full disclosure and fulfil their reporting obligations.

Furthermore, Luxembourg continues its proactive endeavour to push the sustainable finance agenda both internally and externally. As a result of these efforts, the Ministry of Finance – Luxembourg became the first European country to launch a sustainability bond framework in August 2020. The framework aligns with the EU taxonomy, draft EU GBS and Green, Social & Sustainable Bonds Principles of the International Capital Markets Association. This framework is also in line with the country's National Plan for Sustainable Development which presents sustainable finance as a priority area<sup>88</sup> and the 10-year integrated National Energy and Climate Plan<sup>89</sup>. The launch of the framework was further backed by action with the issuance of first sustainability bond, by a European government, resulting in raising EUR 1.5 billion (~ USD 1.7 billion)<sup>90</sup> in September 2020.

Additionally, Luxembourg utilizes the covered bond legal framework to diversify funding channels for renewable energy projects. Luxembourg's covered bond legal framework started in 1993 and was last amended in 2018, with the introduction of the fifth covered bond type, Lettres de Gage énergies renouvelables, which are backed by renewable-energy assets. The legal framework is supplemented by circulars of the CSFF, which lay down further requirements. Currently, the Luxembourg covered bond backed by renewable energy market comprises one benchmark issuer, NordLB Luxembourg.

### Policy highlights: Green Exchange as a key pillar in Luxembourg's sustainable finance strategy

The Luxembourg Green Exchange is the world's first platform dedicated entirely to sustainable securities. Its overriding objective is to unlock sustainable capital and to help redirect capital flows towards sustainable investment projects. The LGX also features a dedicated social and sustainable bond window, and recently tap into new product portfolio such as sustainability linked bonds.

88. Presentation of National Plan for Sustainable Development. (2020). IMS Luxembourg. [https://imslux.lu/eng/news/193\\_presentation-of-national-plan-for-sustainable-development#:~:text=The%20National%20Plan%20for%20Sustainable%20Development%20proposes%20in%20its%20chapter,10%20priority%20fields%20of%20action%3A&text=Ensure%20sustainable%20mobility,change%20and%20ensure%20sustainable%20energy](https://imslux.lu/eng/news/193_presentation-of-national-plan-for-sustainable-development#:~:text=The%20National%20Plan%20for%20Sustainable%20Development%20proposes%20in%20its%20chapter,10%20priority%20fields%20of%20action%3A&text=Ensure%20sustainable%20mobility,change%20and%20ensure%20sustainable%20energy)

89. Luxembourg Ministry of Finance. (2020, September 2). Luxembourg – First European country to launch a Sustainability Bond Framework. Government.Lu. [https://gouvernement.lu/en/actualites/toutes\\_actualites/communiqués/2020/09-septembre/02-cadre-obligations-durables.html](https://gouvernement.lu/en/actualites/toutes_actualites/communiqués/2020/09-septembre/02-cadre-obligations-durables.html)

90. Al Jazeera. (2020, September 7). Luxembourg raises USD 1.77bn in 1st sustainability gov't bond. Business and Economy News | Al Jazeera. <https://www.aljazeera.com/economy/2020/9/7/luxembourg-raises-1-77bn-in-1st-sustainability-govt-bond>

As the world's leading platform for sustainable securities, LGX has an international footprint with more than 135 issuers from 32 countries, issuing securities in a total of 33 currencies. As of end of 2020, LGX displayed more than 890 green, social, and sustainability securities, with total value reaching USD 475+ billion.

LGX promotes the sustainable finance agenda. It provides visibility to issuers who raise funding for green and sustainable investment projects, thereby supporting sustainable development and the green transition. Issuers wishing to display their financial security on LGX first need to comply with the platform's stringent eligibility criteria and then commit to ongoing reporting on their investments. All the related documents and reports are made readily available on the LGX website and make it easy for investors to verify whether the issuers deliver on their commitments.

Additionally, to activate the sharing of knowledge and raising market awareness on green financing/ green bonds, in May 2020, the Luxembourg Stock Exchange established the LGX Academy to strengthen sustainable finance knowledge in Luxembourg and beyond. The LGX Academy offers tailor-made lectures to participants of all levels on a broad range of topics linked to sustainable finance, such as its foundations, products & standards, applicable regulations and current market practice, thereby allowing participants to start their sustainable finance journey.

In September 2020, LuxSE established the LGX DataHub, a centralised data hub for sustainability data on green, social and sustainability bonds. The LGX DataHub responds to the data challenge by turning unstructured data into structured data, made possible by years of in-depth expertise on documentation linked to bond issuance at LuxSE.

### Other supporting policies: Luxembourg's Climate Finance Strategy

On a broader context, the LGX is among key pillars of Luxembourg's Climate Finance Strategy. Since 2015, the Luxembourg government and Luxembourg's financial services industry have been working together in a dedicated Climate Finance Task Force, implementing a coherent and fully integrated Climate Finance Strategy with the dual objective of contributing in a meaningful way to the international fight against climate change and cementing Luxembourg's role as an international centre for climate finance. The strategy is built on four key vectors:

- consolidate and leverage Luxembourg's existing expertise in sustainable finance to drive and develop climate finance capabilities,
- enter into strategic partnerships with climate finance leaders such as the European Investment Bank and the International Finance Corporation,
- ensure quality control in the specific area of climate finance notably via standards and dedicated labels, and
- to encourage innovation in climate finance.

This strategy has already resulted in several key initiatives, including:

- The Luxembourg Green Exchange in 2016
- Luxembourg-EIB Climate Finance Platform: The Luxembourg-EIB Climate Finance Platform between the European Investment Bank (EIB) and the Luxembourg government aims to mobilise investments for projects with a strong impact in the fight against climate change.
- IFC/ Amundi Planet Emerging Green One: the Luxembourg government contributes to the technical support facility of the Amundi Planet Emerging Green One, the largest green bond fund in the world. This Luxembourg based investment fund targets green bonds emitted by banks in developing countries and at the same time helps develop green bond policies, training programs, and best practices in such markets through the technical support facility. The fund thereby deepens new green capital markets and facilitates the adoption of the Green Bond Principles across the globe.

- Climate Finance and Green Bond labels: in 2016, the labeling agency LuxFLAG launched a dedicated Climate Finance quality label to ensure the effective climate focus of investment funds in the implementation of their investment policy. In the same spirit, the agency launched a specific Green Bond label in 2017.
- The Climate Finance Accelerator: The Luxembourg government and partners from the private sector will set up a Climate Finance Accelerator facility to help innovative fund managers specialising in climate action by offering various forms of support, including support in fund raising with institutional and public investors as well as financial and operational support during the launch phase of a new fund structure.
- The Luxembourg Sustainable Finance roadmap: formulated by the Ministry of Finance, in partnership with the Ministry of Environment and UN Environment Programme Financial Initiative (UNEP FI) in 2018. The roadmap establishes a comprehensive sustainable finance strategy, notably leveraging Luxembourg's inherent strengths as an international financial centre, to contribute to the Agenda 2020 and the objectives of the Paris Agreement.



## Germany

### Regulatory structure of Capital markets

In Germany, capital markets encompass two key segments: (i) the market for financial instruments (within the ambit of Annex I, Section C of the Markets in Financial Instruments Directive (MiFID II)); and, (ii) the 'grey capital market' that conceptually includes any financial products that are not technically financial instruments in the narrow sense (mostly for lack of tradability in a legal sense, such as stakes in closed-ended fund structures outside the Alternative Investment Fund Managers Directive (AIFMD), which are legally partnership interests and shares in limited liability companies).

BaFin is the supervisor for every issue related to financial instruments, whereas the grey capital market is (extremely sparsely) supervised by the local trade boards under the GewO (with BaFin only being competent for the approval of prospectuses and the banning of products and certain misleading advertising). Under an operational agreement between BaFin and the Bundesbank, the latter is assigned most of the operational tasks of day-to-day supervision of banks and financial services providers. The Bundesbank's responsibilities notably include evaluating the documents, reports, annual accounts, and auditors' reports submitted by the institutions, and carrying out regular audits of their operations. The Bundesbank holds both routine and ad hoc prudential discussions with institutions. The supervision of trading in financial instruments by BaFin serves the objectives of market transparency, market fairness and investor protection. The stock exchange supervisory authorities of the federal states are responsible for the supervision of compliance with stock exchange regulations. BaFin's competences with regard to credit institutions within the ambit of the Capital Requirements Regulation are now partly superseded by the ECB under the Single Supervisory Mechanism.

### Green bond market development in Germany

In February 2019, the State Secretaries' Committee for Sustainable Development tasked the Ministry of Finance and the Ministry for the Environment, Nature Conservation and Nuclear Safety with developing a Sustainable Finance Strategy in the framework of the German Sustainable Development Strategy, in collaboration with the Ministry for Economic Affairs and Energy and in consultation with all federal ministries. As sustainable finance depends on dialogue between various stakeholder groups, the Finance Ministry and the Environment Ministry, in close collaboration with the Ministry for Economic Affairs, established a Sustainable Finance Committee in June 2019 to consolidate recommendations and discussion to introduce German Sustainable Finance Strategy. To this end, the Committee published an interim report in March 2020 setting out initial substantive ideas, and invited discussion by launching a consultation.

Alongside the Committee's official meetings, informal workshops have also been held on various key issues, such as the integration of sustainability-related issues in the context of federal investments, the issuance of green or sustainable federal securities, technical issues regarding the implementation of the EU taxonomy, or the role of the real economy in sustainable finance.

Moving on to 2020, the first framework for Green German Federal Securities, with the aim of “greening” Germany’s budget and strengthening Germany’s position in sustainable finance was introduced. The State Secretary committed that the Germany would issue green federal bonds every year. The government intends to issue “twin bonds” i.e. issue green securities alongside conventional federal securities on the conventional curve, with the same characteristics such as same maturity and coupon. The Ministry believes that through this “twin bonds” approach it would be able to offer future investors different maturities and establish a green euro interest rate benchmark and attract newer investors.<sup>91</sup>

Through the framework, an inter-ministerial working group was established to oversee and validate key decisions on green German Federal securities including the framework itself. This working group includes:

- Federal Ministry of the Interior, Building and Community
- Federal Ministry for Economic Affairs and Energy
- Federal Ministry of Food and Agriculture
- Federal Ministry of Transport and Digital Infrastructure
- Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
- Federal Ministry of Education and Research
- Federal Ministry for Economic Cooperation and Development

Further, a Core Green Bond Team (CGBT) has also been constituted to manage all operational tasks related to green German Federal securities and the framework. CGBT includes Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and Federal Republic of Germany – Finance Agency<sup>92</sup>.

The framework also commits to annual reporting on allocation of proceeds along with the impact. The framework also states that the Federal Republic of Germany will engage an independent external body annually to provide third-party verification on the allocation reports and their conformity with the Green Bond Framework.

### Policy highlights: The role of development bank and the Federal Government in promoting Green bond market

Similar to Luxembourg, the development of a Green bond market in Germany is integrated as a part of the Sustainable Finance Strategy. In this strategy, the Finance Ministry expressly supports the involvement of the Federal Financial Supervisory Authority (BaFin) and the Bundesbank to ensure better integration of risks, and the work of KfW Bankengruppe (KfW) to ensure that better use is made of the existing opportunities. In addition, sustainability-related issues are increasingly being taken into consideration in federal investments, and in debt management via green federal securities.

KfW plays a vital role when it comes to the integration of sustainability-related issues in the financial market. Since 2014, KfW Bankengruppe has been supporting the Green bond market both as an issuer and as an investor. KfW has successfully issued green bonds worth a total of EUR 25 billion so far.

The Federation – which plays a key role as a “benchmark issuer” for the bond market in the euro area – has also entered the Green bond market in 2020 with its first issuance of sovereign bonds to provide positive impetus for the development of the Green bond market both in Europe and globally. In addition, the Federation is underlining its commitments, for example under the Climate Action Programme 2030, to expand and give greater weight to its expenditure on environment and climate action in the coming years.

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91. Federal Ministry of Finance Germany. (2020, August 24). *Germany to issue [Green German Federal Securities from 2020 - Federal Ministry of Finance - Press. Bundesministerium Der Finanzen.](#)*

92. Federal Ministry of Finance Germany. (2020, August 2020). [Green Bond Framework](#)

## Other supporting policies: Sustainability risk framework

To ensure the stability of Green bond market, supervisory authorities and central banks treat sustainability risks as financial risks and expect financial market participants to engage with them to a growing extent. Sustainability risks must therefore be integrated into supervised entities' risk management and the supervisory review processes. BaFin and the Bundesbank are also actively involved, including at the international level, in the further development of the supervisory and regulatory framework for dealing with sustainability risks.

The Bundesbank and BaFin are among the founding members of the Central Banks and Supervisors Network for Greening the Financial System (NGFS). The NGFS is a worldwide network of central banks and supervisory authorities which work together towards a more sustainable financial system; it now consists of 65 members and 12 observers.

In December 2019, BaFin also published a Guidance Notice on Dealing with Sustainability Risks. It implements an NGFS recommendation and provides input for European work on the integration of sustainability risks. This non-binding notice is intended to provide support to entities supervised by BaFin and the Bundesbank to enable them to better assess and manage their sustainability risks. The notice sets out good practice guidelines which should be followed by the supervised entities, with due regard for the principle of proportionality. The guidance notice can thus be seen as a useful addition to the minimum requirements with regard to risk management for credit institutions, insurance undertakings and asset management companies.







# 06 POLICY RECOMMENDATIONS FOR VIET NAM

## POLICY TOOLS TO DEVELOP GREEN BOND MARKET

Overall, depending on the development status of local bond market, regulators could utilize various policy actions to promote Green bond market. These policies could focus on addressing infrastructure issues for market development, facilitating green bond issuance, developing innovative instruments to scale up deal flow for green bond issuance, and promoting green bond investment.

On emerging markets, some focused on setting out clear ‘green’ standards and specified the use of bond proceeds that meet green bond’s definition. Others prioritized the reporting and disclosure approach to ensure the transparency of Green bond market. On the other hand, on mature and developed markets, the priorities are in sustainable finance strategy as well as more advanced policy tools such as Green Exchange. Some notable policies from selected countries are summarized in the following table.

**Table 6: An overview of policy tools to promote Green bond market in selected countries**

Country	Notable policies	Other supporting tools
Malaysia	<ul style="list-style-type: none"> <li>Setting guidelines and standards for green bond issuance</li> <li>SRI Sukuk and Bond Grant Scheme to promote the application of SRI and Sukuk Framework</li> </ul>	<ul style="list-style-type: none"> <li>Strategically support the long-term development of Green bond market by the SRI Roadmap</li> <li>The development of a local verifier - RAM Sustainability</li> </ul>
Philippines	Setting guidelines and standards for green bond issuance	Innovation in Green bond products: negative yield green bond, green perpetual bond

Country	Notable policies	Other supporting tools
Singapore	<ul style="list-style-type: none"> <li>Green Bond Grant Scheme, Sustainable Bond Grant Scheme</li> <li>ABS Guidelines on Responsible Financing</li> </ul>	Network for Greening the Financial System
Thailand	<ul style="list-style-type: none"> <li>Introduce Guidelines for Green, Social, and Sustainability Bond and Sovereign Sustainable Financing Framework</li> <li>Introduce waivers for approval and filing fees, as well as bond registration fees</li> <li>Launch a Green, Social &amp; Sustainability Bond information platform</li> </ul>	<ul style="list-style-type: none"> <li>Drafting of a Sustainable Finance policy framework</li> <li>Encouraging the integration of ESG criteria into disclosure and governance practices</li> <li>Promoting local verifiers</li> </ul>
China	<ul style="list-style-type: none"> <li>Setting guidelines and standards for green bond issuance and green bond standard harmonization</li> <li>Developing a priority list of strategic green projects: Green Bond Endorsed Project Catalogue</li> </ul>	Green Finance Pilot Zones
India	Disclosure Requirements for Issuance and Listing of Green Debt Securities	Other supporting initiatives to promote the issuance and investment flow on Green bond market: India Infrastructure Development Fund, Smart Cities Initiative, Swachh Bharat Mission, National Solar Mission
Luxembourg	<ul style="list-style-type: none"> <li>The launch of Luxembourg Green Exchange to facilitate green bond as well as sustainable finance market</li> <li>Introducing Sovereign Sustainability Bond framework. The first Sovereign Sustainability Bond issued in September 2020.</li> </ul>	An integrated Climate Finance strategy to vitalize sustainable finance ecosystem
Germany	The issuance of sovereign green bond and Green Federal Securities Framework	Promoting sustainability risk framework to help de-risk and stabilize Green bond market

In the blueprint to develop Green bond market, policy tools could be divided into 3 groups: fundamental actions, proven support tools, and innovative additional policies.

The most fundamental actions are market-building activities that have low fiscal impacts and proven success in supporting bond markets. Key agendas in this category include: (i) Establish green project pipeline, (ii) Strengthen local bond markets, (iii) Strategic public green bond issuance; and (iv) Develop green standards.

Next, there are proven support tools that have been used to further support bond market growth in certain countries, but their use for labelled green bonds will vary depending on the policy priorities and fiscal space in different countries. Some notable practices available in this area could be: (i) Strategic public green bond investment, (ii) Credit enhancement, (iii) Provide tax incentives, and (iv) Develop instruments to aggregate assets and structure risks.

Lastly, there are innovative ideas that could be explored to deepen the scale of Green bond market. When exploring these potential areas for action, the public sector needs to consider possible unintended consequences of supporting green bonds through these mechanisms. Some examples of innovative tools are: Adjust risk weightings for green investments or Preference green investments in central bank operations.

As for fundamental action steps, it is highlighted that some form of policy guidance shall be introduced as a policy signal to stimulate the market. The introduction of these guidelines is normally benchmarked against international recognized green standards, providing the alignment in the understanding of 'green' definition as well as the green bond framework across market participants. A summary of regulations and guidelines for green bonds in some selected countries is presented in Table 7.

**Table 7: A summary of regulations and guidelines for green bonds in selected markets**

Country	Entity	Type of Guidance	Alignment with international guidelines	Use of proceeds	Reporting requirements	Mandatory external review	Selection of external review providers
Malaysia	Securities Commission	Sustainable and Responsible Investment (SRI) Sukuk Framework	<ul style="list-style-type: none"> <li>Benchmarked against GBP and Social Impact Bond Framework</li> <li>In accordance with Shariah requirements</li> </ul>	Eligible sectors and projects are specified	Annual reporting	The review is mandatory for offerings to retail investors, optional for other SRI sukuk	Verifier must be an independent third party
Philippines	Securities and Exchange Commission (SEC)	Guidelines on the Issuance of Green/ Social/ Sustainability Bonds in the Philippines	Under the ASEAN Green/ Social/ Sustainable Bonds Standards	Not specified	Annual reporting	Recommended: Any independent external reviewer	Not specified
Singapore	<ul style="list-style-type: none"> <li>Monetary Authority of Singapore (MAS)</li> <li>Association of Banks in Singapore (ABS)</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable Bond Grant Scheme</li> <li>ABS Guidelines on Responsible Financing 2020</li> </ul>	Endorsing the adoption of international standards: Green Bond Principles, ASEAN Green Bond Standards, and Climate Bonds Standard	Not specified	Annually for the first 3 years or up till the tenure of the bond, whichever is earlier.	To be eligible for the Grant Scheme, external review is mandatory	External reviewers and sustainability advisory and assessment consultants shall be presented in Singapore
Thailand	<ul style="list-style-type: none"> <li>Securities and Exchange Commission (SEC) &amp; Stock Exchange of Thailand</li> <li>Public Debt Management Office - MoF</li> <li>Bank of Thailand (BOT)</li> </ul>	<ul style="list-style-type: none"> <li>Guidelines on Issuance and Offer for Sale of Green Bond, Social Bond, and Sustainability Bond</li> <li>Sovereign Sustainable Financing Framework</li> <li>Thailand Sustainable Finance Roadmap</li> </ul>	<p>Endorsing the adoption of international standards:</p> <p>ASEAN Green/ Social/ Sustainability Bond Standards or ICMA Green/ Social/ Sustainability Bond Principles</p>	Not specified	Post-offering at least once a year, throughout the tenure of the bond	Recommended	Not specified

Country	Entity	Type of Guidance	Alignment with international guidelines	Use of proceeds	Reporting requirements	Mandatory external review	Selection of external review providers
China	<ul style="list-style-type: none"> <li>People's Bank of China (PBoC)</li> <li>China Securities Regulatory Commission (CSRC)</li> <li>National Development and Reform Commission (NDRC)</li> <li>National Association of Financial Market Institutional Investors (NAFMII)</li> </ul>	<ul style="list-style-type: none"> <li>PBoC's Guideline on Issuance of Green Financial Bonds (2015)</li> <li>Guidelines for Supporting Green Bond Development (2017)</li> <li>NDRC Green Bond Guidelines (2015)</li> <li>Guidance on Debt Financing Instruments Issuance from Non-financial Corporates (2017)</li> </ul>	Mostly aligned. However, NDRC allows issuers to use up to 50% of proceeds for non-green activities (e.g. working capital).	2020 'Green Bonds Endorsed Projects Catalogue'	<ul style="list-style-type: none"> <li>Quarterly</li> <li>Semi-annually</li> <li>Annually or semi-annually</li> <li>Semi-annually</li> </ul>	Issuers are encouraged to have an external review	PBoC and CSRC jointly released the qualification criteria and guidance for verifiers
India	Securities and Exchange Board of India (SEBI)	Disclosure requirements for issuance and listing of green bonds	Aligned	Broad categories indicated	<ul style="list-style-type: none"> <li>Bi-annually, an audited report on the use and management of proceeds</li> <li>Annually, the selection of projects and environmental impact</li> </ul>	Optional	Not specified
Luxembourg	Luxembourg Exchange: Luxembourg's Green Exchange initiative	International principles and standards	Aligned with International Capital Markets Association (ICMA) Green Bond Principles (GBP)	Broad categories of eligible green projects	Annually	Mandatory	All forms of external reviews recommended by ICMA's GBP
Germany	<ul style="list-style-type: none"> <li>Ministry of Finance</li> <li>KfW</li> </ul>	<ul style="list-style-type: none"> <li>Green Bond Framework 2020</li> <li>'Green Bonds – Made by KfW' Framework</li> </ul>	<ul style="list-style-type: none"> <li>In line with ICMA's GBP and EU Green Bond standard</li> <li>Aligned with ICMA's GBP 2018</li> </ul>	<ul style="list-style-type: none"> <li>Specified green sectors that could be funded by sovereign green bond</li> <li>Broad categories of eligible green projects</li> </ul>	<ul style="list-style-type: none"> <li>Annually</li> <li>Annually</li> </ul>	<ul style="list-style-type: none"> <li>Third party verification engaged</li> <li>Second opinion on KfW's Green Framework</li> </ul>	<ul style="list-style-type: none"> <li>Selected by the Federal Government</li> <li>Appointed by KfW</li> </ul>

At the same time, it is important to implement policies that promote the pipeline of green projects and increase the supply of green bonds. There are two main approach in this area: policies that provide stable and regulated pricing for essential services to attract bond investors; and policies that identify certain priority sectors of public policy to be eligible for government support. In fact, the green project portfolio mainly involves large-scale infrastructure projects with high risk and intensive capital requirement. As a result, policies that provide some certainty on future revenue streams of projects could directly impact the quality of green bond issuance and the attractiveness of green bonds on financial market. On the other hand, by directly identifying prioritized industries that meet green criteria, project developers could be incentivized to mobilize capital and invest more in green projects. This consequently leads to the supply of projects pipeline for Green bond market.

Furthermore, the verification of 'green' projects and of proper green bond framework management is among critical mechanisms that help reduce the information asymmetric on Green bond market, while increase the market creditability and trust among potential investors. Though this area is more private-driven, regulators could support the long-term development of Green bond market by facilitating technical assistance programs for external reviewers as well as strengthening the research capacity and source of talents in topics of sustainable finance and impact investing.

## RECOMMENDATIONS FOR VIET NAM

Viet Nam has been building up substantial momentum to kick-off its green finance journey. The updated NDCs declared by the government reinforce its focus and commitment towards a low carbon pathway. The figure below presents a SWOT analysis of Viet Nam's green finance scenario.

Strengths	Weakness
<ul style="list-style-type: none"> <li>• <b>Resilience in the economy:</b> with Viet Nam restricting the impact of the pandemic, though slow but it has continued grow at a pace of 2.62% in Q3 2020. It remains the only major Asian economy to grow, apart from China during the pandemic<sup>93</sup>.</li> <li>• <b>Market-oriented &amp; outward looking policies:</b> Viet Nam scores higher in the ease of doing business as compared to ASEAN average and with improvement in the regulatory quality, it has supported private sector led growth. Its commitment towards greater transparency, improved fiscal debt scenario and extensive market reforms make it a favorable destination.</li> <li>• <b>Increasing international free trade:</b> Viet Nam has recently signed free trade agreements with the some of the world's largest economies like EU and UK. This will bring unprecedented developmental opportunities to the Vietnamese economy.</li> <li>• <b>Development of regulatory framework supporting green finance:</b> The launch of Securities Law 2019 strengthens the country regulatory framework on its securities market. In this context, Government also aims to strengthen regulation on green finance market by launching new guidance regulation such as Decree No. 153/2020/ND-CP and Circular 122/2020/TT-BTC to provide primary guidance on green bond.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reliance on state resources:</b> Currently, Viet Nam relies mostly on public sources for financing climate adaption; however, state resources can only meet about 30% of the financial need<sup>94</sup>.</li> <li>• <b>Visibility of Investment Opportunity Pipeline:</b> Given that Viet Nam is amongst the most prone countries to climate risks, it has revised and submitted its ambitious updated Nationally Determined Contribution. As a follow up, an updated opportunity pipeline with clear steps/investment opportunities for both Government and Private Sector would be beneficial.</li> <li>• <b>Capacity building on climate finance:</b> Viet Nam needs to build strong capacities across its financial ecosystem to capitalise on the fast emerging opportunities of climate finance. Some sectors to focus could be on the limited presence of third party verification/second party opinion providers especially in the climate finance space.</li> <li>• <b>Lack of clear definitions:</b> Absence of clear Vietnam's standards for green bond could pose as a hindrance for potential international investors.</li> </ul>

93. Xu, N. (2020, September 29). One major Asian economy besides China is set for growth this year—and its GDP just rose 2.6%. <https://fortune.com/2020/09/29/Viet-Nam-q3-2020-gdp-china-economy-growth-coronavirus/>

94. The Socialist Republic of Viet Nam. (2020, July). Updated Nationally Determined Contribution



Opportunities	Threats
<ul style="list-style-type: none"> <li>• <b>USD 35 billion opportunity:</b> Viet Nam requires USD 3.5 billion/year of private finance till 2030 to meet climate adaptation needs. This is an opportunity to tap into international investors.</li> <li>• <b>Green Taxonomy:</b> Recently passed Law of Environmental Protection (2020) lists out the Green sectors. This sets out the roadmap for potentially defining a national taxonomy of Green which could give the investors much needed clarity on what defines Green in the context of Viet Nam.</li> <li>• <b>Bond Market:</b> Viet Nam is still in the early stages of its bond market. However, reforms introduced in 2018, on easing private placement of bonds and improving disclosures, are bound to propel the bond market which would attract quality investors to invest in Viet Nam's growing economy.</li> <li>• <b>Green Standards:</b> ASEAN Green Bond Standards present a viable framework for issuance of green bonds. With Viet Nam's increasing leadership in the ASEAN economy, it is well poised to adopt the ASEAN GBS.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>COVID:</b> As short-term as it may seem, but the pandemic has put brakes on the speed of climate action across the world. Viet Nam's inter-linkages with the global economy, may put brakes on the speed of Viet Nam's economic recovery.</li> <li>• <b>Climate Change:</b> Viet Nam is highly vulnerable to climate change and at the same time it may also be subjected to the impacts of global carbon pricing that may be put in place to combat climate change. This could be a potential dual threat to the Viet Nam's economy.</li> <li>• <b>Diversity of challenges:</b> Climate finance requirements are considerably diverse given the country's need. These would have to vary across energy, buildings, industry and new infrastructure. A focus on only one sector may risk the other sectors falling behind.</li> <li>• <b>Risk of green washing:</b> China faced a similar risk due to the criticism faced over its green bond guidelines. Viet Nam is a growing economy and needs to ensure that greenwashing is not an option and complete transparency is maintained for all its green investments.</li> </ul>

Given the above analysis, inclusive climate finance needs to be a top priority for the Vietnamese government and the challenges it needs to overcome in drawing in climate finance. Green bonds are one of the most obvious options for the government to tap into given its acceptability in the international markets, availability of local standards and variety of purposes it may serve. As pointed out in the analysis above, green bonds will also be a factor of the international markets, local economic factors, debt capital market and the opportunity Viet Nam decide to present to its potential investors. It may be an obvious approach to address the sectors which can bring in high impact with a short turnaround with relatively quick paybacks, such as energy efficiency.

Considering the nascent state of Green bond market in Viet Nam, in the short-term, to explore the potential of the market and test its viability, policy priorities could focus on the following areas:

### Priority 1. Define eligible green investments.

The starting point of Green bond market development involves with the green criteria. The definition of what is green is important to provide credibility to the market as well as achieve Vietnamese government's commitment to sustainable agenda. It is important that green definitions follow performance-based metrics to ensure that transparency and understanding of use of proceeds in bonds is maintained after the money has been raised by the issuer. Definitions can then provide the foundation for the development of a standardized certification system for qualified enterprises and projects, funded by the market and using existing credible actors as verifiers. Typically, the green criteria would involve identifying the types of investments necessary with green cities, clean water, environmental remediation, low-carbon transport, energy efficiency and, of course, clean energy. In developing definitions for the domestic market, as Viet Nam is a member of ACMF, the ASEAN Green Bond Standards could be endorsed. Alternatively, market participants could opt for other internationally acclaimed standards that have been recognized or adopted by local regulators.

### Priority 2. Introducing regulatory framework needed to establish a Green bond market

To promote an open and transparent Green bond market, some updates in regulatory framework could be introduced, including:

- Guidelines or rules for disclosure on the use of green bond proceeds and adequate reporting platforms for post-issuance monitoring of use of proceeds. One supporting policy is the introduction of ESG reporting on financial markets.



- Tax-based incentives or grant schemes for green bonds issuers, possibly linked with some conditions on the use of external reviews.
- Other regulations to facilitate the introduction of new products on Green bond market.

### Priority 3. Strengthening investor base for Green bond market

Simultaneously, it is crucial for the development of Viet Nam's Green bond market to expand domestic investor base. The introduction of Decree 153/2020/ND-CP is expected to improve market transparency, as the offering of corporate bonds under private placement regime is restricted to professional investors only. This regulatory shift could create opportunity to encourage local institutional investors, especially insurance companies, to invest in green bonds. It is highly possible that those that are subsidiaries of global financial institutions are required to follow ESG investment mandate as their holding firms. By diversifying local institutional investor base, Green bond market in Viet Nam can attract more sizable demand.

In addition to efforts to promote domestic investor base, to facilitate diversified investment flow in Green bond market, it is essential to ensure the high quality of bond issuances up to international standards. As a result, mechanisms to enhance capacity of local external reviewers as well as to encourage the use of external review in green bond issuance could help attracting prominent investors locally and internationally.

Furthermore, experiences from developed markets also suggested that increased exposure and strengthening linkages to international market generate strong momentum for domestic Green bond market, as this international profile helps attract foreign investors. One viable route to enhance the access to international markets is issuing hard currency cross-border bonds and having the bonds cross-listing on partnered stock exchanges overseas.

### Priority 4. Pilot green bond issuance through different issuer types

On the supply side, it is essential to secure high quality and stable sources of green projects in the country. Policy-wise, to promote a pipeline for potential projects, a Project Catalogue could be developed. Additionally, a sovereign green bond framework or other green bond framework introduced by multilateral development agencies or development banks would be beneficial to generate market's momentum.

As for green bond issuance, Vietnamese government could encourage municipal provinces, development bank, and corporates to run pilot program to gauge market interaction and support the formation of standardize practices and framework on Viet Nam's Green bond market.

In the longer-term, it is highlighted from multiple international experiences that the promotion of national sustainable finance strategy and sustainable finance ecosystem fuels the expansion of Green bond market. The robustness of the overall sustainable finance sector would also create synergy to promote Green bond market in the long-term.

### Priority 5. Sustaining the long-term development of Green bond market

To sustain the development of Green bond market in Viet Nam, in terms of capacity building, growing the Green bond market in Viet Nam requires strong pipeline of well-educated talents. As a result, it is recommended to support sustainable finance training programs at selected pools of Viet Nam's prestigious universities with strong research capacity. Additionally, these initiatives could provide ample resources to develop sustainable finance research centers, supporting the long-term development of sustainable finance market in Viet Nam.

A long-term strategy to boost the adoption of advanced technologies that are less carbon intensive than outdated technologies in green fields, such as energy efficiency, green buildings, renewable energy, low carbon transport, waste recycling, water, etc., is required to generate sustained competitive advantages for the economy in general and Green bond market in particular. The application of new technologies not only accelerates Viet Nam's progress in meeting CO<sub>2</sub> emission target. It also activates new demand for green finance, which in turn drives the demand to raise fund via Green bond market.

On the final note, as Viet Nam's growing population intensifies demand for construction, electricity, jobs, and other social services, Viet Nam should also continue to explore other green financing options and instruments. It would also be crucial to continue building technical and financial capacity of its institutions to understand new green business, while developing innovative sustainable financing mechanisms that are suitable to the local context.



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The Global Green Growth Institute

19F Jeongdong Building, 21-15, Jeongdong-gil, Jung-gu, Seoul, Korea 100-784

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