2021

# Sovereign GSS Bond Survey

## The ultimate power to transform the market

Climate Bonds INITIATIVE

HSBC

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# Introduction

This paper reflects the results of Climate Bonds Initiative's (Climate Bonds) first **Sovereign Green, Social, and Sustainability (GSS) Bond Survey** based on conversations with 19 sovereign issuers.

Vanilla sovereign bonds represent almost half of outstanding bonds, and the current size of sovereign bonds with at least one year to maturity is USD45tn.[1] Given the budget and resource allocation responsibilities of most central governments – especially for large-scale infrastructure projects – sovereign issuers have the power to scale up GSS investments more than any other asset class.

For governments with access to domestic and international capital markets, sovereign GSS bonds can attract the investment needed for sustainable development, as well as help to fulfil the greenhouse gas (GHG) emission reduction objectives included in each country's Nationally Determined Contributions (NDCs) under the 2015 Paris Agreement. Moreover, the ongoing COVID-19 pandemic and its ramifications have had an unprecedented impact on the global economy during 2020. We expect that the subsequent recovery will be government-led and some major economies, including the Nordic countries and Germany, have stated that they will seek to preference green and social projects.

As of November 2020, 22 national governments had issued sovereign GSS bonds totalling USD96bn.[2,3] At least 14 other sovereign governments across the world have indicated their intention to issue GSS bonds.[4] This report covers 97% of issuance with **19 out of 22 issuers** participating in the project by sharing their experiences of issuing GSS bonds: eight from Developed Markets (DM), and 11 from Emerging Markets (EM)[5,6] as shown in **TABLE 1**. By mid-November 2020, these 19 issuers had collectively printed 32 GSS bonds with an amount outstanding of just over USD93bn.

Governments have a crucial role to enhance the growth of this market and the preparation required differs from that of private sector issuers. The Climate Bonds Sovereign GSS Bond Survey explored the different approaches and experiences of issuers to enable a broader understanding of this market and encourage others to join the sovereign GSS club.

**Contents**



**Table 1.** The 19 Sovereign Green and Sustainability bond issuers included

| | Green bonds | | | Sustainability bonds |
|---|---|---|---|---|
| Developed Markets | France | Netherlands | Germany | Luxembourg |
| | Belgium | Hong Kong | | |
| | Ireland | Sweden | | |
| Emerging Markets | Poland | Nigeria | Seychelles | Kingdom of Thailand (Thailand) |
| | Egypt | Indonesia | Chile | Mexico |
| | Fiji | Lithuania | Hungary | |

# Survey Summary

The survey was designed to explore the steps, experiences, and challenges embedded in the process of issuing sovereign GSS bonds. For sovereign issuers, the process of raising capital is different from the private sector and other types of entities, particularly for thematic bonds.

The Climate Bonds Sovereign Green Bonds Briefing published in 2017 described how sovereigns can make a crucial contribution to the GSS market beyond capital raising.[7] Benefits extended to the issuing entity and the broader market. The sovereign GSS bonds survey explored the experiences of those that have issued thus far.

## Sovereign GSS bonds have market changing potential

**Catalysing or enhancing local markets**

For most countries, a key motivation for issuing a sovereign GSS bond was to support the growth of a local green bond market. Sovereign issuers can serve as role models for other types of issuers. They can provide investors with safe, liquid investment opportunities which frees up capital for other lower rated and less liquid securities.

**Contributing to larger strategic initiatives**

In most cases a wider strategic initiative to achieve NDC targets, address SDGs, and mitigate climate change and social inequalities triggered the decision to issue. These plans included policies designed to address emission reduction goals as well as net zero ambitions.

**Amplifying transparency**

The process of issuing a sovereign GSS bond typically involved a budget tagging exercise and commitments to report on the allocation of proceeds and their impact. These audits greatly increase transparency for ministries and in parliament and extend to external stakeholders such as investors.

**Diversifying and increasing the investor participation**

In most cases, a sovereign GSS bond broadened and diversified the investor base, a key motivation for issuing. Sovereign GSS bonds also encourage investors to initiate dedicated GSS investment strategies.

**Offering pricing benefits**

A broader investor base can facilitate tighter pricing. If this persists, we expect domestic Debt Management Offices (DMO) to encourage governments to identify and develop a pipeline of suitable GSS expenditures.

**Facilitating cross border collaboration and enhance visibility**

Many respondents collaborated with DMO counterparts both pre and post issuance, in knowledge forums and bilateral conversations. Even the use of proceeds bore an element of international collaboration through funds being used to finance projects beyond the borders of the issuing country.

**Delivering benefits that outweigh challenges**

Issuing a sovereign GSS bond is a large commitment and presented challenges for some respondents. For example, most were not permitted to open additional accounts to manage proceeds from GSS bonds. The results of this survey suggest that there are tested solutions for these difficulties and that most sovereign GSS issuers successfully overcame hurdles.

Challenges and initial costs were usually compensated for by the benefits obtained including increased visibility and reputational benefits. There are multiple channels of support from various organisations such as development banks, structuring advisors, second party opinion (SPO) providers, and NGO's such as Climate Bonds that help to navigate the process from creating the specific framework through to post-issuance reporting.

# Section 1: The decision-making process

## Ministers drove the decision to issue

**CHART 1** The decision to issue a sovereign GSS bond is made by ministers. DM countries highlighted a range of ministers as having a key role. In EM countries, the Ministry of Finance (MoF) was highlighted as the most important contributor to the decision. The Debt Management Office (DMO) was ranked second for EM countries and came third for DM countries. Many countries established a green finance working group to inform their decision-making process and/or bond issuing process; these groups tended to have more influence in EM countries versus minimal influence in DM countries. This could be due to such working groups not being established until after the decision had been made to go ahead with the bond. In many cases those working groups were then solely dedicated to the development and issuance of GSS bonds. Investors usually did not play a crucial role in the decision to issue a sovereign GSS bond.

## Curbing climate change and market development key motivations

**CHART 2** Curbing climate change and supporting the growth of a local green bond market were selected as the primary reasons for issuing GSS bonds. Curbing climate change received similar rankings from EM and DM respondents while market development was mainly driven by high scores assigned by DM. Galvanising a local market was regarded as one of the highest priorities for all but one DM country.

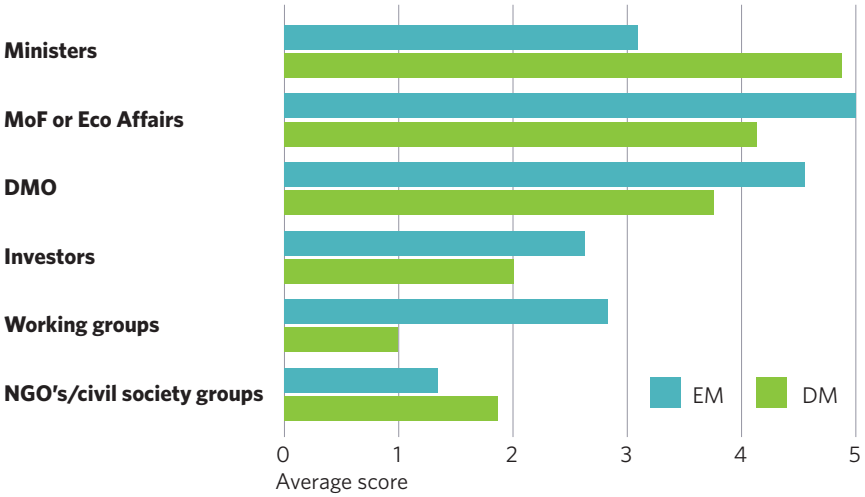
The decision to issue a GSS bond coincided with large strategic governmental initiatives and policies amongst which one of the measures was to issue a GSS bond. For example, in 2016, **Sweden** set up an inquiry to determine how it could promote growth in the domestic green bond market, and issuing a sovereign green bond was one of the recommendations.

Cheaper pricing, the success of peers in issuing, and financial flexibility were all assigned a higher priority by EM countries. One respondent noted their desire to explore alternative ways of capital raising. DM respondents asserted that investors played a part in their decision to issue a GSS bond, and therefore investor pressure as well as response to other stakeholder expectations did contribute but were not the main considerations, with the latter being similarly important in both DM and EM.

EM countries tend to be influenced more by external bodies. In **Hungary's** case their Central Bank offered strong support, while in **Fiji**, the reserve bank played a crucial role.

**France** stated that it was a political decision made jointly by the Ministry of Environment (MoE) and the Ministry of Budget after a careful assessment of financial and reputational risks.

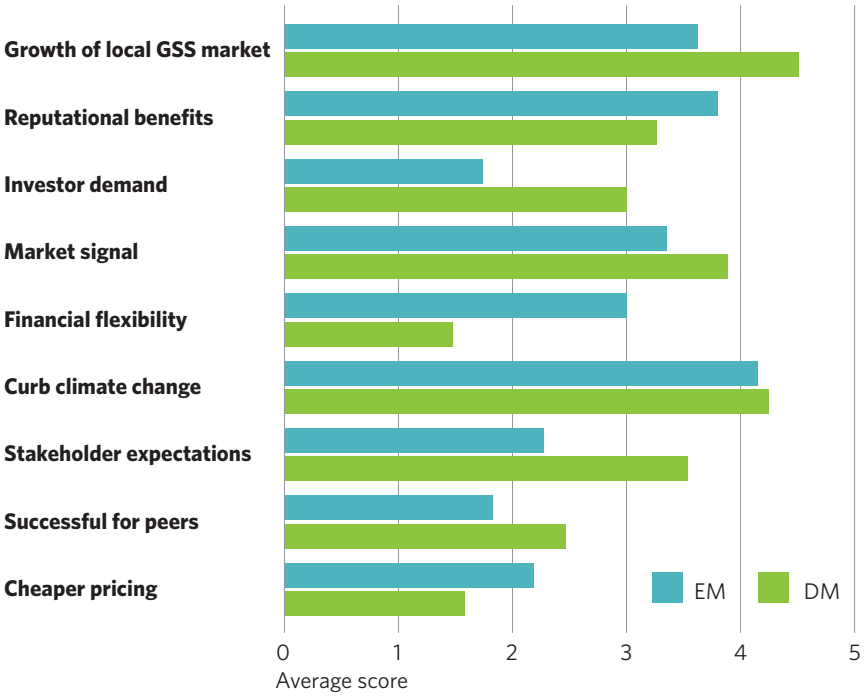
### 1. Ministers drove the decision to issue a GSS bond




Charles Michel, the **Belgian** Prime Minister announced the decision to issue a green bond in 2017. The impetus was the desire to develop a local green finance market, and to show Belgium's commitment to its long-term ecological targets. Belgium's first green bond was priced in February 2018.

**Hungary** cited a desire to curb climate change as its primary driver for issuing EUR and JPY green bonds in 2020. The launch of the project coincided with the Climate Protection Action Plan in February 2020, which was the source of multiple eligible expenditures. The EUR deal was priced as the Climate Action Goals were presented to the parliament, as an amendment to the current law of Environmental Protection.

### 2. Curbing cilmate change was the top reason to issue



## Most established a GSS bond working group

**CHART 3** All DM respondents and 72% of those from EM indicated that they had a working group dedicated to their bond in which different ministries and other bodies were represented. Working groups were responsible for tasks such as identifying green expenditures and supporting the preparation of disclosure. They could also represent a governance body and/or carry out operational tasks. Respondents were asked to name working group members. **TABLE 2** includes a non-exhaustive list of the various ministries and other groups named by at least one respondent. The composition of working groups varied from country to country.

## Involvement in selection and monitoring of expenditures

The selection and monitoring of eligible expenditures was usually conducted by relevant ministries, sometimes represented through the working group. In addition to working group members, various other committees were involved in the process such as steering committees or an independent council (external). Specific sectors were represented via the inclusion of relevant stakeholders e.g. energy regulators or national railways. Stakeholders outside of governmental bodies such as structuring advisors, reserve banks, and the UNDP, were also involved.

### **3.** Most established working groups

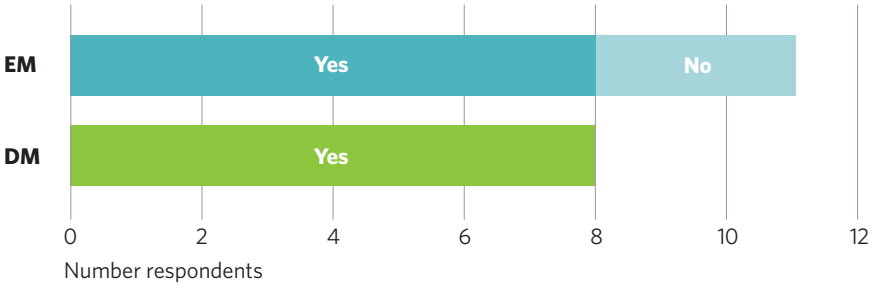



**Table 2.** Aggregated list of potential working group members

| Internal | | External |
|---|---|---|
| **Prime Minister's Office** | | **Attorney general** |
| **DMO/ Treasury/ Ministry of Finance** | | **Bond Market Association** |
| **Other government ministries** | | **Central Bank** |
| Agriculture | Housing | **Reserve Bank** |
| Development | Infrastructure | **SEC** |
| Economic | Innovation and Technology | **Stock Exchange** |
| Education and Research | Interior | **Development Bank** |
| Energy | Labour | **UNDP** |
| Environment | Expenditure and Reform | |
| Family | Public Works | |
| Health | Transport | |

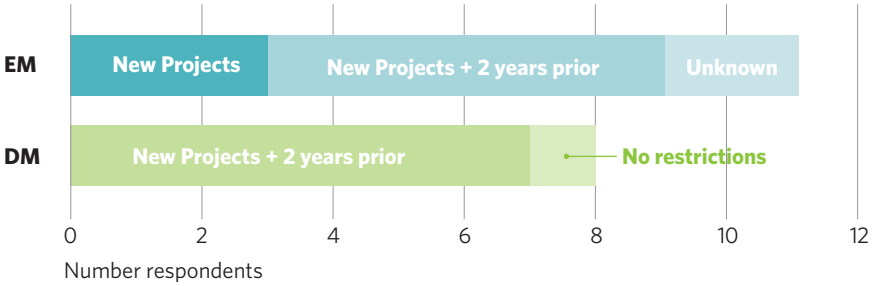
# Section 2: Preparation

**CHART 4** Sovereign GSS bonds finance expenditures rather than projects, and these expenditures are not usually newly created. Most respondents told us their GSS bond financed expenditures from current or previous budgets and only **Lithuania, Nigeria, Luxembourg**, and the **Seychelles** mentioned forward-looking ones.

Due to the nature of such expenditures, the use of proceeds differs from most GSS bonds from other issuer types. Instead of financing certain projects and assets directly, common types of sovereign GSS expenditures are tax credits, tax expenditures, investment expenditures, subsidies, and grants. Accordingly, it is common to include intangibles among the eligible categories, including research and innovation, scientific knowledge, and supporting talent and organization. **Most respondents did not need to introduce new policies to support the projects financed by GSS bonds.** Usually, relevant policies were already in place, and as one respondent stated were complementary.

**TABLES 3 & 4** denote examples of categories of eligible expenditures for **Chile** (EM) and **Belgium** (DM) respectively.

### **4.** Most included expenditures from the preceeding two years




**Nigeria** introduced its sovereign green bond programme to finance projects in the Federal Government's budget. Projects included in the approved budget were reviewed for their green credentials and selected based on the amount set aside out of the approved domestic borrowing in the budget, to be issued as Green Bonds.

| **Table 3.** Examples of eligible expenditures: Chile | |
|---|---|
| **Tangibles** | |
| **Transport** | Investment in public infrastructure and assets enhancing modal shift, electric public passenger transport |
| **Land Use & Marine Resources** | Forestry |
| **Buildings** | Energy efficiency investments in public buildings which result in savings higher than 20% |
| | Subsidies dedicated to energy efficiency improvements in housing |
| | Public lighting improvements (e.g., replacement with LEDs) |
| | Design and construction of public buildings certified under "Sistema Nacional de Certificación de Calidad Ambiental y Eficiencia Energética para Edificios de Uso Público" |
| | Costs associated with retrofits to existing public buildings to meet "Certificación Edificio Sustentable" or improve the current certification level |
| **Energy** | Investments in projects from renewable non-fossil sources |
| | Investments in solar / wind (onshore) energy projects that integrate energy generation and storage (batteries) |
| **Water** | Wastewater management: Installation or upgrade of wastewater infrastructure including transport, treatment, and disposal systems |
| | Water resources conservation: including protection of water catchment areas and prevention of pollution affecting water supplies |
| | Flood defence systems against riverine inundations: including construction of reservoirs for the control of water flows |
| **Intangibles** | |
| **Transport** | Subsidies or incentives to promote public transportation |
| **Energy** | Training programmes to increase technical knowledge in vocational education centres for renewable energy installation |
| **Combined** | |
| **Land Use & Marine Resources** | Marine protected areas protection and surveillance (including research) |
| **Water** | Water distribution: Installation or upgrade of water efficient irrigation systems, construction, or upgrade of sustainable infrastructure for drinking water (including research or studies) |

| **Table 4.** Examples of eligible expenditures: Belgium | |
|---|---|
| **Tangibles** | |
| **Buildings** | Tax credit for corporates investing in energy efficiency |
| | Investments in Sustainable Real Estate Funds with Green Certification |
| **Energy** | Federal State's support to renewable energy infrastructure |
| **Land Use & Marine Resources** | Investment expenditures for soil rehabilitation |
| **Transport** | Federal State's support for investment and operating expenditures related to the extension, improvement and maintenance of public transport and rail-related infrastructure |
| | Tax credits in favour of electric vehicles |
| **Waste** | Tax expenditures for reusable packaging |
| **Intangibles** | |
| **Land Use & Marine Resources** | Operating expenditures of academic research programmes in biodiversity, climate change and other global environmental challenges |
| | Investment in sustainable programs for climate change mitigation and adaptation in developing countries |

## GSS bonds issued as part of wider strategic initiatives

All respondents except one described their GSS bond(s) as part of a larger strategic initiative. Multiple governments have announced concrete plans to reduce their carbon emissions to net zero carbon over the coming decades while for others, this remains a work in progress. The commitments of survey respondents is reported in **TABLE 5**.

There are already many countries where climate impacts can be felt. This is reflected in various strategies which include adaptation and resilience measures as well as climate change mitigation.

These strategies included promoting sustainable and green finance, overall government agendas and legislation to reach the Paris Agreement goals, as well as tackling all dimensions of sustainability at once. **Thailand** noted that environmental and social issues were interlinked, and that climate change and poverty should therefore be addressed together. Meanwhile, the government of **Luxembourg's** intention was to establish the country as a sustainable finance hub.

"The **Netherlands**' primary motivation was to fit the green instrument into the overall green government agenda. We decided to practice what we were preaching by issuing a green bond."

**Elvira Eurlings**, *Agent, DSTA, The Netherlands*

**Table 5.** Survey participants' progress towards net zero emissions as of November 2020

| Country | Target year | Further comment |
|---|---|---|
| **Chile** | 2050 | Proposed legislation |
| **Egypt** | - | - |
| **Fiji** | 2050 | Proposed legislation |
| **Hungary** | 2050 | In law (Law on Climate Protection) |
| | | 95% compared to 1990 |
| **Indonesia** | - | - |
| **Lithuania** | 2050 | Support EU but no country-specific target. |
| **Mexico** | 2050 | Under discussion |
| **Nigeria** | - | - |
| **Poland** | - | - |
| **Seychelles** | 2050 | Under discussion |
| **Thailand** | - | - |
| **Belgium** | 2050 | 80% to 95% compared to 1990 |
| | | Under discussion |
| **France** | 2050 | In law (Law no. 2019-1147 on Energy and the Climate) |
| **Germany** | 2050 | In law |
| | | 80% to 95% compared to 1990 |
| **Hong Kong** | 2050 | Under discussion |
| **Ireland** | 2050 | Proposed legislation |
| | | 80% to 95% compared to 1990 |
| **Luxembourg** | 2050 | Proposed legislation |
| **Netherlands** | 2050 | 95% compared to 1990 |
| | | Under discussion |
| **Sweden** | 2045 | In law (the Climate Act) |
| | | 85% compared to 1990 |

Sources: https://www.climatechangenews.com/2019/06/14/countries-net-zero-climate-goal/ and https://eciu.net/netzerotracker

"The **Seychelles**' sovereign blue bond was an innovative financing vehicle for one of the key economic sectors of the Blue Economy Road Map and Strategic Plan. When it came to discussions on how the transition to sustainable fisheries could be achieved, this was the starting point."

**Jan Robinson**, *Project Manager, Department of Blue Economy, Seychelles*

"Climate change issues affecting **Hong Kong** such as temperature changes and more frequent storms make the topic much more relatable. Hong Kong's main consideration in setting up a green bond issuance programme was to demonstrate the government's support for sustainable development and to promote the development of a green bond market as there were no significant funding needs. The government has placed huge priority on green and sustainable finance aiming at the shift of financial flows to sustainable projects and to raise awareness, not just in the city but also in the whole region. ."

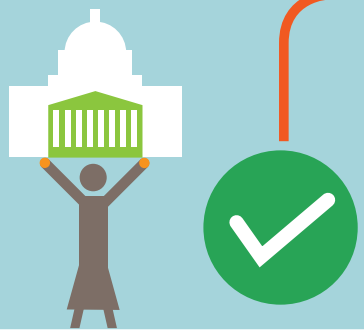
**Grace Wong**, *Senior Manager, Market Development Division, External Department, Hong Kong Monetary Authority*

## A framework sets the parameters for GSS bond issuance.

In the case of green bonds most entities produce a single document that clearly articulates the entity's proposed approach usually by applying the **four Green Bond Principles: use of proceeds, project evaluation and selection, management of proceeds and planned reporting efforts.** Amongst other information the framework can specify the eligible categories of projects being financed or re-financed and an exclusion list of expenditures (i.e. projects prohibited from being financed with the proceeds). To verify the legitimacy of the document, issuers can, and usually do, obtain a second party opinion (SPO), Certification or other types of third-party reviews of their framework.

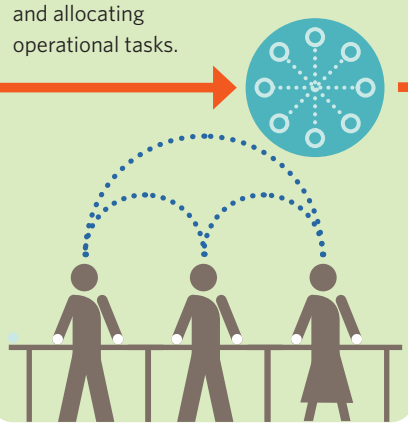
### 1. Get government approval

The decision to issue a sovereign GSS bond is made by ministers.



### 2. Establish a GSS bond working group

Responsibilities include identifying and managing the pipeline of GSS expenditures, supporting disclosure, and allocating operational tasks.

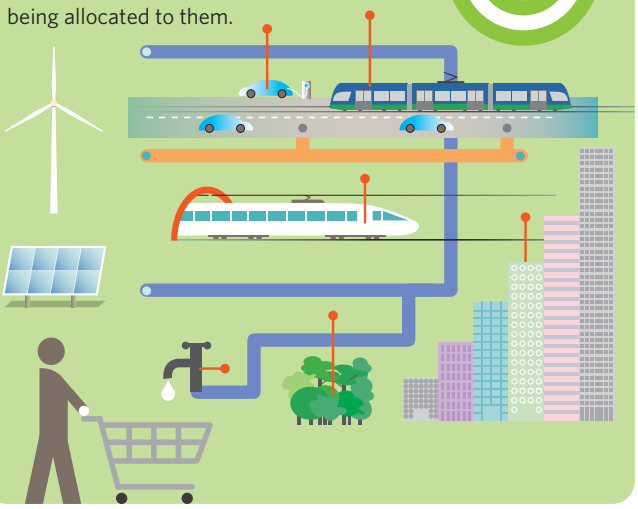


### 3. Selection of eligible expenditures

Suitable categories of expenditures to be included in the sovereign GSS bond are usually aligned with national priorities.

### 4. Identification of suitable projects

Budget tagging can be used to determine which expenditures are suitable for inclusion. Expenditures may also need to meet size thresholds, and have measurable impacts. Selected expenditures need to be clearly marked to avoid other sources of funding being allocated to them.



### 5. Anticipate reporting

The frequency and nature of post-issuance reporting needs to be determined to establish a pattern of disclosure to investors and parliament.

## Establishing a bond working group is crucial in development of frameworks

**CHART 5** The establishment of working groups played a crucial role in the development of the GSS framework, with fifteen respondents noting that these groups were involved in the process. Twelve respondents analysed the portfolio pipeline while six deployed a green finance roadmap but with varied approaches.

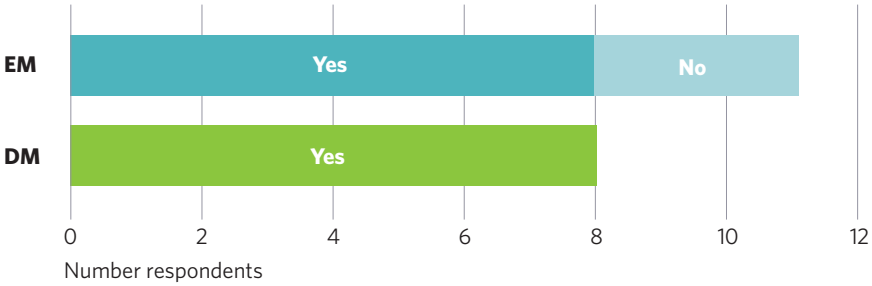
**Fiji** established an oversight committee, and its portfolio was scrutinized with a climate vulnerability assessment by the World Bank.

**Hong Kong** liaised with other stakeholders and examined the GSS frameworks of other countries.

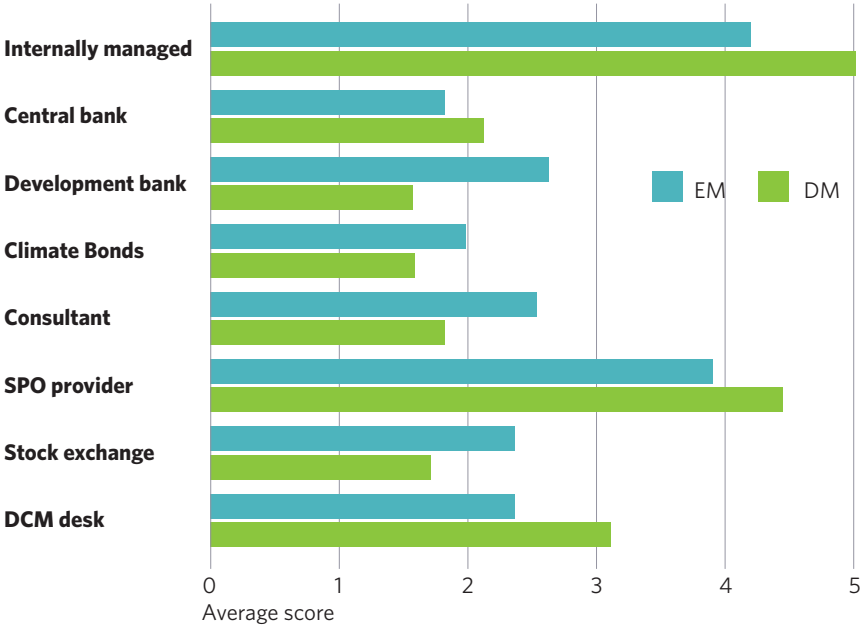
## Finance Ministries most involved in framework development

**CHART 6** Most issuers managed the development of their framework internally. The DMO or MoF equivalent was central to the process. The MoE was also often closely involved. SPO providers ranked second overall and were more common in DM countries. Structuring advisors also contributed their experience and expertise more notably in DM. Development banks, stock exchanges, and Climate Bonds Initiative were relied upon more regularly in EM.

### 5. Green bond working groups were the norm




### 6. Most developed frameworks internally




### The role of development banks in sovereign GSS bond issuance

Development banks can support EM throughout the whole process of issuing sovereign GSS bonds. For example, **Farah Hussein**, *Senior Financial Officer in the World Bank Treasury* described the potential involvement as follows: "The World Bank provides technical assistance to EM public sector issuers to develop sustainable capital markets, facilitate sustainable market-based solutions, promote sustainable investment, and engage in dialogue on ESG issues for all investments. The technical assistance provided by the World Bank Treasury to facilitate the issuance of GSS bonds is part of the Bank's broader work to promote and finance sustainable development, encourage transparency and supportive regulation, drive resources towards national environmental and social priorities, design and implement better policies, strengthen institutions, inform development strategies and contribute to the global agenda. The World Bank Treasury serves as an impartial broker, sharing with issuers its own knowledge and experience, including its innovative market-based transactions such as Green Bonds, Sustainable Development Bonds and debt and risk management practices, expertise in sustainability issues, and relationships with market actors and convening power. The Bank's sustainable finance technical assistance programme is generally funded by its own administrative budget, donors, etc."

## Eligible Use of Proceeds were aligned with national priorities

**CHART 7** Guidance as to what can be defined as GSS is currently being addressed by multiple market participants and regulators. While initially based on voluntary standards, both China and the EU have put in place mandatory green definitional frameworks, a major milestone in this space. The EU Taxonomy regulation was enacted in June 2020 while technical criteria providing thresholds for definitions of green economic activities will be put into legislation in early 2021. Despite the technical criteria of the EU Taxonomy still being under development, four participants used it as a guide when selecting eligible use of proceeds. Overall, the process was mainly driven by alignment with national policies which was indicated by 68% of respondents, seven EM and six DM. Ten out of 19 participants indicated that they were using the ICMA GBP in addition to other guidelines.

## Similar spending rules for GSS and vanilla bonds

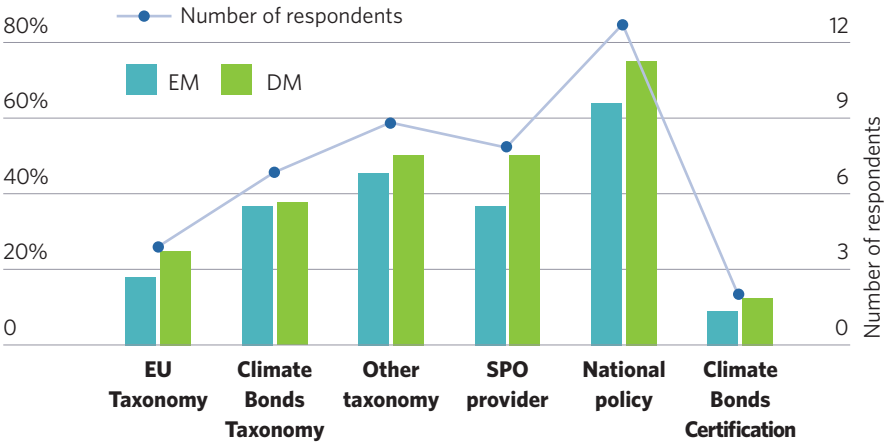
Apart from being linked to specific expenditures, most sovereign GSS bonds are subject to the same rules of public spending as vanilla bonds and therefore fall under a country's main public financing framework. In almost two-thirds of the cases (63%) this framework places restrictions on earmarking revenues for specific uses. **In the corporate world it is a frequent practice to open a separate account to manage the funds raised from GSS bonds, but most governments do not allow this.** The major concern for most sovereign issuers was "double counting", meaning they needed to prevent funding of the same expenditures twice. This applied in cases where other sources for example, the EU, were financing certain GSS expenditures.

## Legal changes rare

Even though many governments were unable to ring-fence money, only two out of 19 respondents made a legal change. One of them was **Poland**, which changed the law to open a dedicated account for the cash inflow from their green bond programme. **Belgium** made a slight amendment to existing law. To circumvent the restriction on earmarking proceeds for specific uses, they drafted an allocation report making federal entities aware that a green bond with certain expenditures had been issued. This was designed to highlight those expenditures and make sure they were not reused by other entities for green or sustainable bonds. **Ireland** specifically mentioned they wanted to avoid making a constitutional change and so worked on a notional equivalent basis.

The concept of notional equivalence refers to a form of hypothecation which seeks to draw a line between proceeds and how they are used without an actual physical separation from general-use proceeds. This notional equivalence acts as a form of floating charge on the general proceeds. This system is used so that all proceeds from debt funding operations are added to the government's central fund - a single account held at the Central Bank of Ireland.

### 7. National policies dictated eligible use of proceeds




The **Seychelles** created a Blue Economy Roadmap which included an analysis of the country's portfolio pipeline as one of the major tasks.

**Ireland** created a roadmap and carried out a shadow price for carbon, evaluating fossil fuel divestments and other similar scenarios and engaging with different government departments and state agencies.

The **Seychelles** is part of the IMF reform programme which places very strong conditions regarding specific uses of revenues. This needs to be considered when issuing bonds for specific uses.

"According to **German** law all expenditures are subject to parliamentary decision and therefore, our green bond issues are designed to finance expenditures that have already been carried out".

**Alexandra Beust**, Head of Investor Relations, Deutsche Finanzagentur, **Germany**

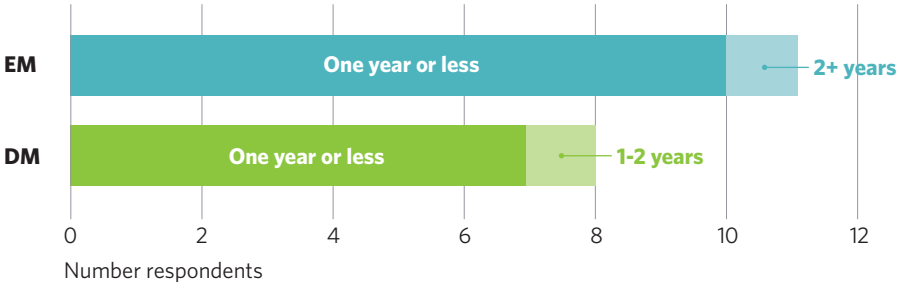
The **Climate Bonds Certification Scheme** is the first and only international science based Certified labelling scheme for green bonds and loans. It sets market best practice in terms of ambitious climate action, reporting and disclosure. Developed together with stakeholders across the market, it incorporates independent verification and assurance against an open standard, and evidence-based eligibility criteria which screens for the types of infrastructure investments aligned with the Paris Agreement. The Scheme has provided Certification to hundreds of debt instruments, which amount to over USD150bn as of October 2020. **Nigeria, Netherlands, Chile, and Thailand have all issued Climate Bonds Certified sovereigns.**

## Short time frames from decision to issuance

**CHART 8** Most (89%) respondents indicated that, having decided to issue a GSS bond, it took less than a year to price it. In fact, most said it took less than nine months. Nevertheless, the time taken to receive the green light should not be underestimated.

This involved speaking to primary dealers, investors, and internal debates. Some respondents also mentioned that the pressure of getting deals done was partially imposed by election dates. This implies that the concept, procedures, and frameworks need to be robust enough to withstand a potential change in government.

### 8. Governments can issue GSS bonds in less than a year



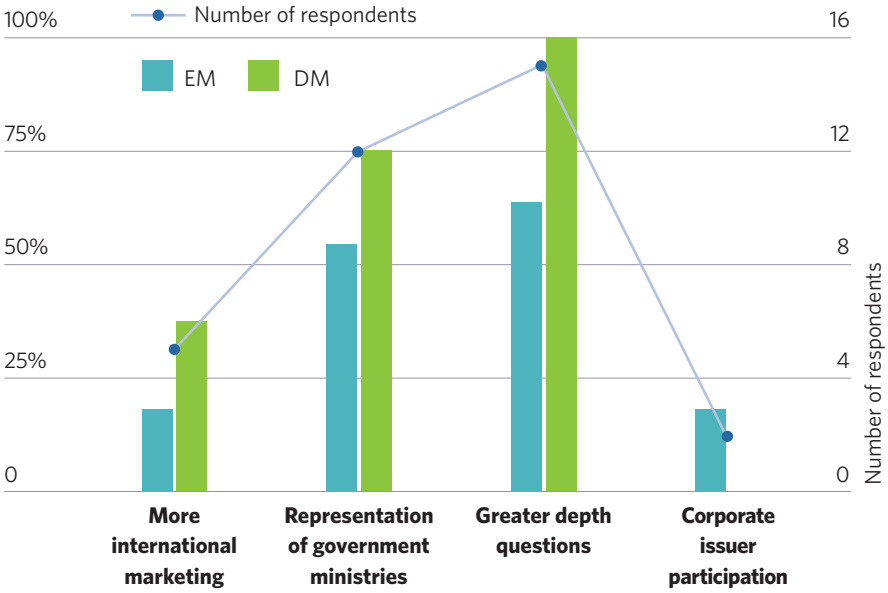

After appointing arrangers, **Thailand** took three to four months to issue its sustainability bond. However, making the decision to issue took a couple of years.

**Germany** spent at least nine months analysing whether a green bond would be economical. This was one of the conditions that needed to be satisfied before the green light could be given.

## Roadshows generated in depth discussion

**CHART 9** Local currency sovereign bonds are traditionally issued through an auction process. Foreign currency sovereign bonds, and bonds from all other types of issuers are syndicated meaning the bond sales are managed by a group of banks. Occasionally, local currency sovereign bonds are syndicated and all DM European issuers except the Netherlands utilised this route for their first GSS bond. Issuing through syndication usually involves a roadshow. For sovereign GSS bonds the setup differed from "normal" roadshows, with 79% of respondents noting that questions from investors went into greater depth than usual. Anticipating such engagement can extend preparation time, and in 63% of the cases, members of other ministries were part of the team deployed to respond to these questions.

### 9. How sovereign GSS roadshows differ from usual set-ups




## Budget tagging and eligible expenditure definitions

Most issuers went through a budget tagging exercise to determine exactly which expenditures were suitable for inclusion. In most cases, this involved scrutinising each budget line and identifying whether it could be classified as green or not. The process was often accompanied by discussions with ministers, working groups and cabinets as well as supported by third parties such as structuring advisors and underwriters who could contribute expertise on what investors considered green and what constituted market best practice. Projects were also selected based on their size and measurability foreseeing potential issues with post-issuance reporting and making sure that not too many expenditures were included.

Through the budget tagging exercise, issuers became familiar with the system of classifying expenditures according to green and social taxonomies, the data needed to make those assessments, and differences among various standards. Future expenditures could be tagged as part of the approval process thus streamlining the work required for future GSS bond issuances.

**Indonesia** described a two-tier process. Firstly, the Fiscal Policy Office put tags on the budget lines based on predetermined categorisations. Secondly, the MoF examined each tagged line to determine eligibility.

**Fiji** looked at its budget and split it into three shades of green.

**France** assigned a green coefficient to each budget line according to how green the expenditure was relative to the six environmental priorities of the EU Taxonomy: climate change mitigation, climate change adaptation, water management, circular economy, pollution, and biodiversity. This exercise has now been integrated into the budgeting process.

The **Netherlands** wanted their bond to be 'dark green'. This was a risk management measure to avoid controversy. There were different rationales behind each category of eligible expenditure. For example, housing was chosen as it is very tangible and 'down to earth', while transport was selected for its size. The list was kept short for simplicity.

## Investors probed on policy alignment and expenditures

Questions asked at roadshows for conventional bonds tend to revolve around liquidity and credit, but these topics were not the primary focus of sovereign GSS roadshows, which typically involved deeper engagement. Investors wanted to know about the government's strategy and the actual expenditures that the GSS bond would finance. There were also questions on the commitment to issue on a regular basis, liquidity management, and whether there was any ambition to create a green curve. 84% of respondents agreed that investors wanted more information on the use of proceeds, followed by the link to national policies (74%) and, in a few cases, emission reduction (42%). Only two issuers – both from EM countries – had corporate issuers participating in their roadshow to learn more about the process. Roadshows provided a forum for investors to clarify any ambiguities in advance such as double counting and to guide expectations on allocation and impact reporting.

**Lithuania** issued its green bond via auction and spoke to investors bilaterally instead of road showing it. Investor feedback regarding tenors and expected participation in auctions were gauged through contact with primary dealers.

The **Belgian** roadshow lasted much longer than is customary and had a focus on institutional investors. Representatives from the MoE joined to answer investors' in-depth questions regarding certain expenditures/ line items, which would usually not occur.

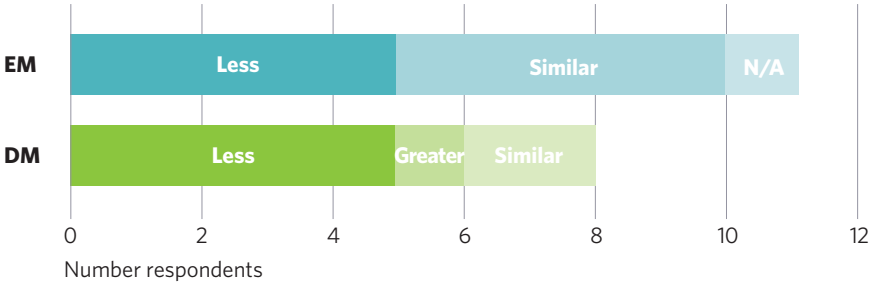
# Section 3: The issuance

## The cost of funding through sovereign GSS bonds is similar to or less than for vanilla bonds.

**CHART 10** The consensus among respondents was that the cost of issuing GSS bonds was either less than, or similar to vanilla bonds when comparing yields like-for-like. One EM issuer did not have a point of comparison (N/A), and one DM issuer described the costs as being greater including the peripheral expenditures required.

The organisation and administration costs need not be a barrier to entry for EM sovereign GSS issuers. Some of the costs can be met through programmes funded by the IFC, IMF, ADB, IDB, UNDP and equivalent institutions. Most EM respondents received technical assistance, often from multiple sources. Such collaboration can offer an additional layer of comfort to investors strengthening the transparency and validity of the endeavour.

**10.** The cost of funding GSS bonds was similar to or less than vanilla equivalents



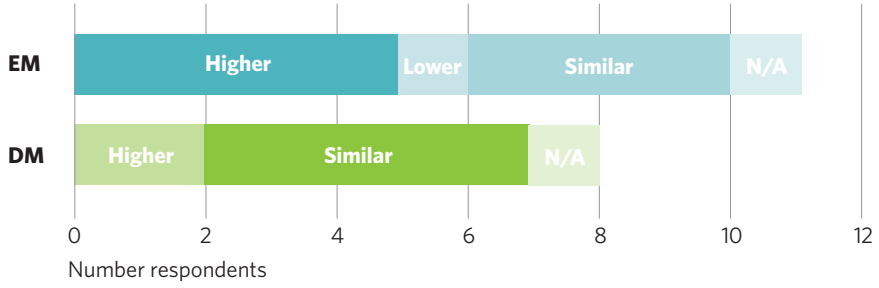

UNDP provided an alignment letter on **Mexico's** framework, praising its unique features, including the use of the SDGs as an entry point, and an eligibility criteria that included collecting spatial data to identify the most deprived communities. UNDP will also provide an opinion on the impact report.

## Sovereign GSS bonds tend to attract higher book cover

**CHART 11** Respondents said that demand for GSS bonds was similar to, or greater than for vanilla equivalents. In some cases, such as **Sweden**, **Hong Kong**, and the **Seychelles**, there was no like-for-like benchmark.

To give context to the discussion of demand, some comparisons are given in **CHART 12**. These are averages of the bid to cover ratio or book cover for the three prior auctions of vanilla securities with similar characteristics to the GSS bond. Acknowledging that demand dynamics vary according to the prevailing economic and geo-political backdrop as well as size and maturity of different securities, the results nevertheless indicate that more often than not, there is increased demand for sovereign bonds bearing a GSS label.

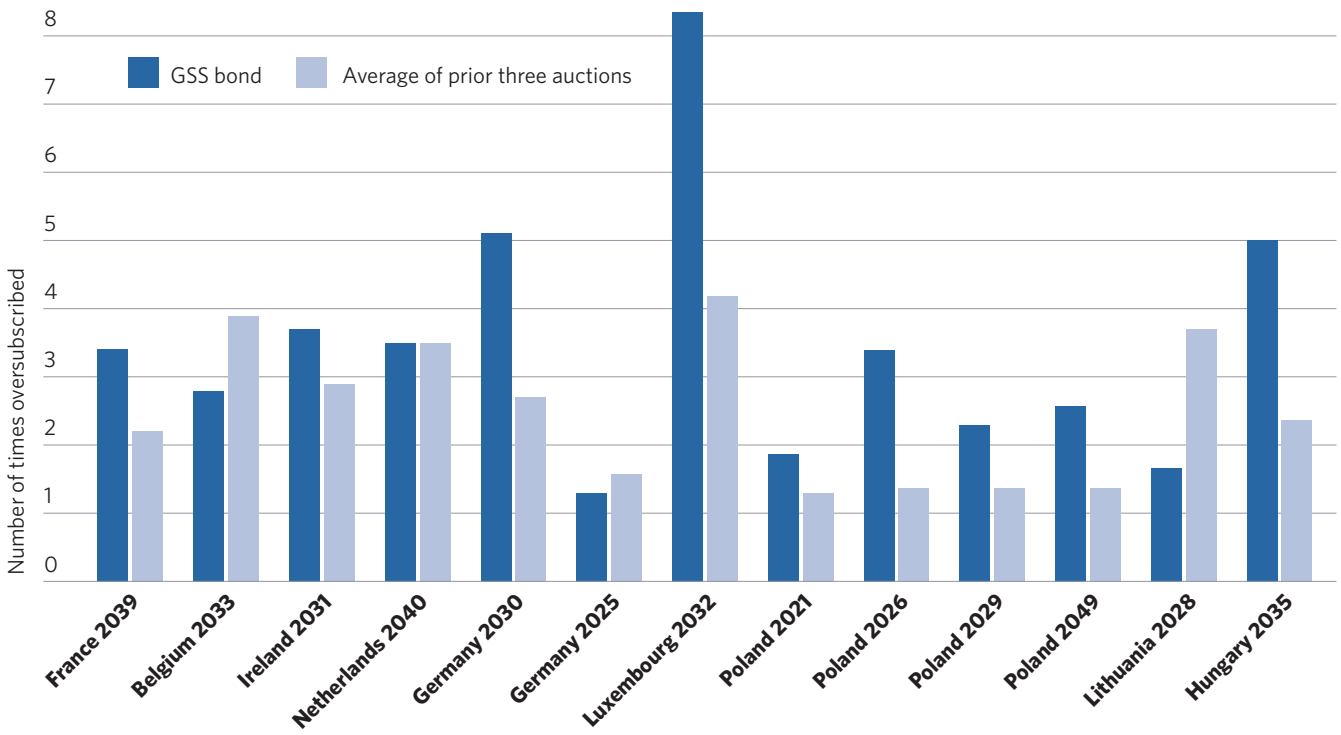
**11.** Book cover was similar to or greater for GSS bonds compared to vanilla




"ESG investors were two thirds of the order book which reached EUR7.5bn. The book cover was much higher than for our prior deal."

Zoltan Kurali, CEO, Government Debt Management Pte, **Hungary**

**12.** Book cover of sovereign GSS bonds compared to the three prior auctions of vanilla bonds from the same issuer



## Greenium and sovereign GSS bonds

A new issue premium is the extra yield that a buyer gets, and a seller pays for a new bond compared to where seasoned bonds from the same issuer are trading in the secondary market at the time of issuance. This is a standard feature of the bond market.

Occasionally, however, a bond may be issued with a higher price, and lower yield compared to existing debt and will price inside its existing yield curve. When this new issue concession is present in green bonds, we call it a **greenium**.[8]

Yield curves were available for 23 individual sovereign GSS bonds issued by respondents (some have issued multiple bonds in more than one currency), and the pricing outcomes are shown in **TABLE 6**.[9] Four bonds in our sample exhibited a normal new issue premium, with nine and ten bonds falling into the greenium and on the curve categories respectively. **This suggests that, broadly speaking, there is a supply/demand imbalance pointing to a shortage of sovereign GSS bonds.** This is consistent with the results of the Climate Bonds Green Bond European Investor Survey, in which investors said they would like to buy more green bonds from sovereign issuers.[10]

Investor focus on sustainable investment has further increased since the Investor Survey was published in 2019. The number of dedicated investors has grown rapidly as the COVID-19 pandemic has illuminated the role the investment community must play to achieve a sustainable and green recovery.

The greenium has become more pervasive in the latter half of 2020 but cannot be guaranteed for every GSS bond. Beyond the green label normal bond market dynamics can and do influence pricing outcomes.

Among the DM issuers, the delivery of a large, liquid asset in EUR, the local currency of most dedicated green investors has helped to achieve either a greenium, or pricing on the yield curve for all except **Luxembourg**. Luxembourg generally has low funding needs, and indeed has just over EUR11.8bn (USD13.7bn) in total outstanding bonds with a maturity of 1-year or more, compared to for example **Germany** which has close to EUR1.2tn (USD1.3tn). The combination of an established investor base and socially responsible investors can really help to squeeze yields for sovereign GSS issuers in DM.

In EM, where liquidity is typically lower, three bonds priced with a new issue premium. Historically, the majority of dedicated GSS investment has been concentrated in DM, since that is where most of the investible opportunity set has been. A combination of more investment opportunities (facilitated by more sovereign issuance), a low yield environment, and the increased focus on GSS investment strategies should give rise to more dedicated mandates. Each government can contribute to the growth of the market by greening its own investments, for example, making GSS mandates the default choice for public sector pension funds. Those in DM can allocate a portion of their investment portfolio to bonds originating from EM.

**Table 6.** Sovereign GSS bonds tend to price on their curves or with a greenium

| Issuer | Pricing date | Original size (bn local) | Original size (bn USD) | Currency | Pricing outcome |
|---|---|---|---|---|---|
| **France 2039** | 24/01/2017 | 7.0 | 7.5 | EUR | Greenium |
| **Belgium 2033** | 26/02/2018 | 4.5 | 5.5 | EUR | On the curve |
| **Ireland 2031** | 10/10/2018 | 3.0 | 3.5 | EUR | On the curve |
| **Netherlands 2040** | 21/05/2019 | 6.0 | 6.7 | EUR | Greenium |
| **German Bund 2030** | 02/09/2020 | 6.5 | 7.7 | EUR | Greenium |
| **Luxembourg 2032** | 07/09/2020 | 1.5 | 1.8 | EUR | New issue premium |
| **German BOBL 2025** | 04/11/2020 | 5.0 | 5.9 | EUR | Greenium |
| **Poland 2021** | 12/12/2016 | 0.8 | 0.8 | EUR | New issue premium |
| **Poland 2026** | 31/01/2018 | 1.0 | 1.2 | EUR | On the curve |
| **Indonesia 2023** | 22/02/2018 | 1.25 | 1.25 | USD | On the curve |
| **Lithuania 2028** | 30/04/2018 | 0.02 | 0.02 | EUR | New issue premium |
| **Indonesia 2024** | 12/02/2019 | 0.75 | 0.75 | USD | On the curve |
| **Poland 2029** | 28/02/2019 | 1.5 | 1.7 | EUR | On the curve |
| **Poland 2049** | 28/02/2019 | 0.5 | 0.6 | EUR | New issue premium |
| **Chile 2050** | 17/06/2019 | 1.4 | 1.4 | USD | Greenium |
| **Chile 2031** | 25/06/2019 | 0.9 | 1.0 | EUR | On the curve |
| **Chile 2040** | 21/01/2020 | 1.3 | 1.4 | EUR | On the curve |
| **Chile 2032** | 22/01/2020 | 0.75 | 0.75 | USD | Greenium |
| **Hungary 2035** | 02/06/2020 | 1.5 | 1.7 | EUR | On the curve |
| **Indonesia 2025** | 16/06/2020 | 0.75 | 0.75 | USD | Greenium |
| **Thailand 2035** | 13/08/2020 | 30 | 0.975 | THB | Greenium |
| **Egypt 2025** | 29/09/2020 | 0.75 | 0.75 | USD | Greenium |
| **Mexico 2027** | 09/14/2020 | 0.75 | 0.9 | EUR | On the curve |

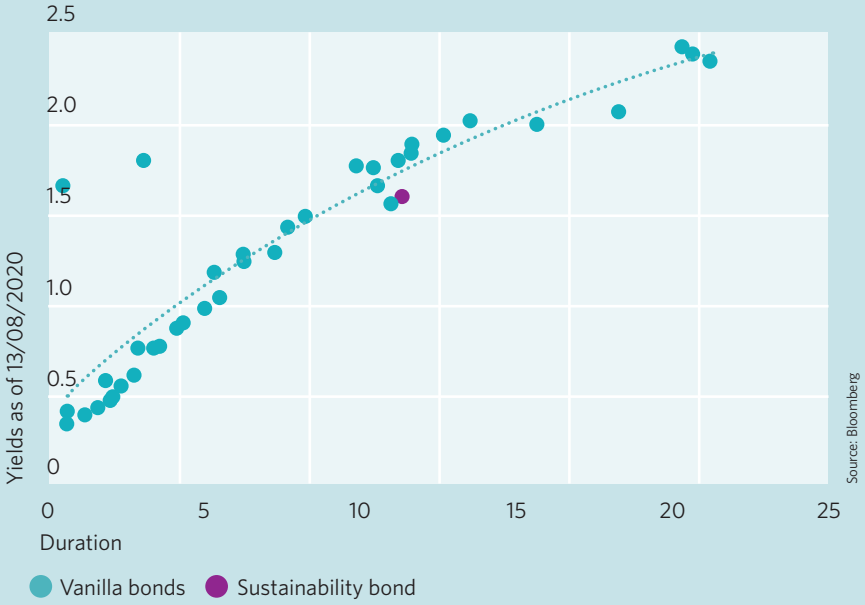
**Lithuania** noted that GSS bonds add responsibility and extra work through reporting which is not required for vanilla bonds. These efforts need to offer a tangible benefit in addition to the soft reputational rewards. A difference in pricing would be helpful and this should arise from a dedicated investor base.

"If investors attribute a value to the additional green element and the full transparency it provides, they may well accept a slightly lower yield."

**Alexandra Beust**, Head of Investor Relations, Deutsche Finanzagentur, **Germany**

On August 13th, 2020 **The Kingdom of Thailand** priced the first sovereign sustainability bond in the ASEAN region. The total size of the bond was THB30bn (USD975m) divided into two tranches. Each tranche had a different settlement date as required by Thai bond market regulation for dual tranche bonds with different uses of proceeds. The smaller THB10bn (USD300m) tranche was allocated to low carbon transport green expenditures and the remaining THB20bn (USD600m) to the social component, composed of expenditures pertaining to a COVID-19 rehabilitation package. Investors submitted a single indication of interest and received allocations of each tranche proportionally. The order book exceeded THB60bn (USD1.9bn) and the bond priced inside its yield curve close to the existing 15-year bond which is three times larger.[11] **CHART 13**

## **13.** Thailand 2035 THB - greenium




**Germany** took a unique approach to issuing green bonds with its 'twin' bond structure.

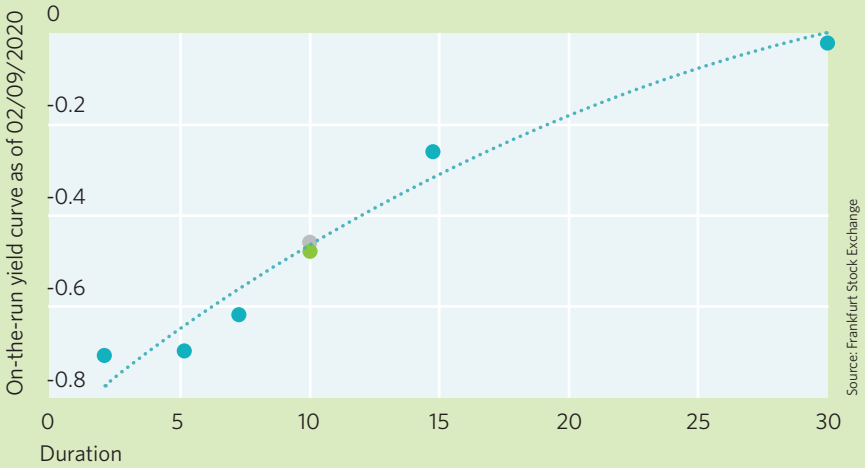
On 17th June 2020, the German Finanzagentur (DMO) issued a EUR5bn (USD5.6bn) vanilla Bund (10-year). This was subsequently reopened multiple times, reaching EUR30.5bn (USD34.1bn) by 20th November 2020. On 2nd September, the DMO also printed a EUR6.5bn (USD7.28bn) green Bund sharing the same characteristics as the vanilla one except for the use of proceeds, which the DMO has termed the 'green twin'. In effect this is a non-fungible tranche that will continue to maintain a separate identifier until maturity.

Although the green twin is smaller, the twins share the same cash flows so we can determine whether investors attach a value to the green label. The DMO has promised to exchange the green twin for the vanilla twin at any time, so the difference in size should not affect liquidity. The green Bund priced with a greenium, and as of late November 2020 had remained inside the vanilla curve.

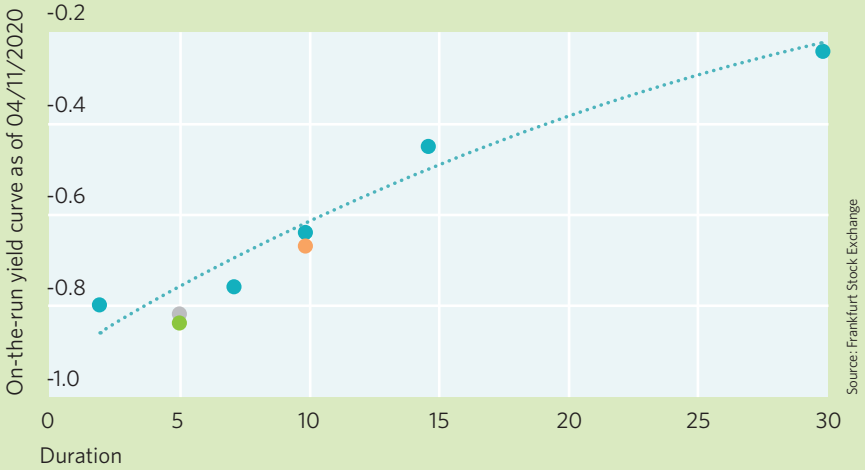
**Germany** repeated this exercise on the 4th November, issuing a green twin 5-Year (BOBL). The DMO operates to a strict calendar of issuance, and the date coincided with the US Presidential election, hence press coverage was more muted. However, the green BOBL priced with a 1.5bp greenium, and as of late November 2020, had remained inside the vanilla curve.

*box continues on page 16*

## **14.** German Bund 2030 EUR - greenium




## **15.** German Bobl 2025 EUR - greenium




New issue green bonds · Vanilla bonds · Seasoned green bond · Vanilla bonds issued on the same day as the green bond

Prices are Bundesbank reference prices from Frankfurt stock exchange recorded around noon daily. Since auctions typically close at 11.30 am, this is the closest possible match in terms of timing.

*continues from page 17*

As of 18th November 2020, the green Bund had recorded slightly lower price volatility than its vanilla twin on both a ten and 30-day basis. The DMO retained some of the bond for market intervention which could be contributing to the relative stability. Regardless of the reasons, all things being equal, investors prefer lower volatility instruments which, if detected in sovereign GSS bonds, could help investors to justify a primary market greenium to their asset owners.[13]

**Table 7.** The green Bund exhibited slightly lower price volatility compared to its vanilla twin.

| Price volatility | Green Bund | Vanilla Twin |
|---|---|---|
| 10 day | 6.73 | 6.77 |
| 30-day | 4.39 | 4.41 |

Source: Bloomberg

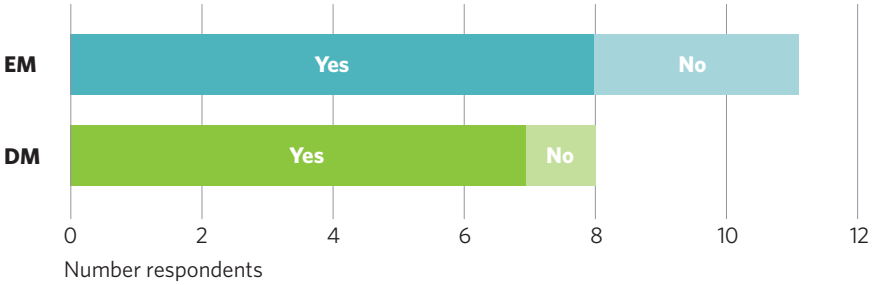
## Sovereign GSS bonds attract new investors.

**CHART 16** For many EM and DM sovereign issuers such as **Indonesia, Hungary**, and **Luxembourg** attracting new investors was a stated objective of the GSS label. Some respondents noted that GSS segments of their traditional investors got involved in the deal, and several reported that multiple investors tried to convince them of their green credentials such was their desire to be included in the allocations. Smaller issuers such as **Fiji** and the **Seychelles** had a handful of both domestic and international investors, including those new to the credits.

**Respondents identified four benefits arising as a consequence of capturing new investors**

- **Diversification** – sovereign GSS bonds tend to introduce a broader range of investors from different geographic regions including more investors in the buy and hold category
- **Proof of concept** – attracting new investors to GSS labels
- **Messaging** – communicating the message to a broader audience
- **Greenium** – interest from more investors can help to squeeze yields

## 16. GSS sovereign bond attract new investors




"Our Blue bond had been discussed at several international events, and we actively engaged with investors we had met there regarding their interest in participating in the deal. 100% of the deal was placed with impact investors".

Jan Robinson, Project Manager, Department of Blue Economy, **Seychelles**

"The intention was to gain new investors for the green market more than new investors for the issuer **Germany**."

Alexandra Beust, Head of Investor Relations, Deutsche Finanzagentur, **Germany**

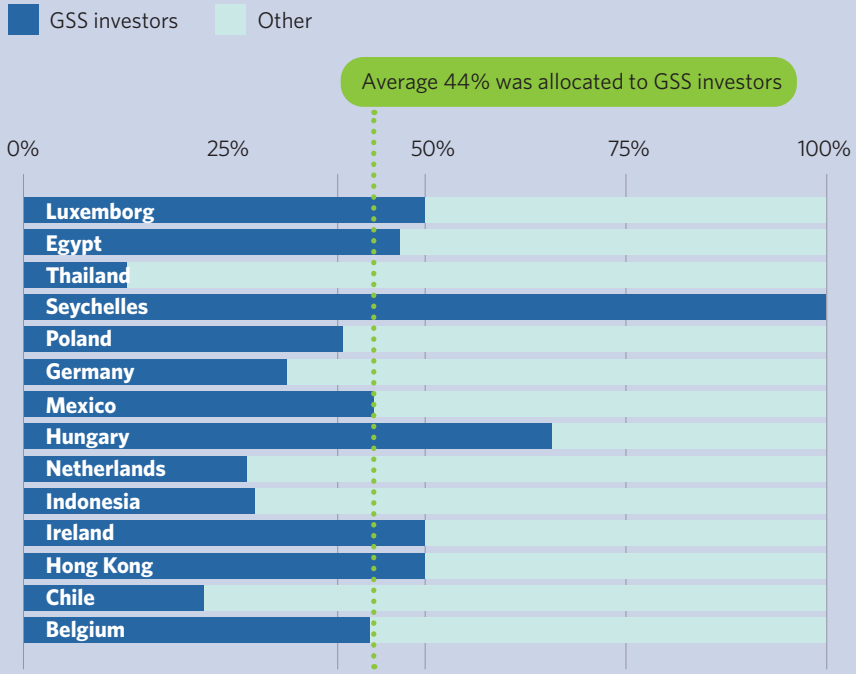
At the end of September 2020, **Egypt** became the first sovereign with a B rating to issue a green bond. The 5-year bond was originally intended to raise USD500m. The order book reached USD4.93bn close to ten times covered, and the deal was upsized to USD750m. Almost half was allocated to investors with a GSS mandate, suggesting that there is growing appetite within the GSS investment community for non-investment grade issuers. This is consistent with the results of the *Climate Bonds Green Bond European Investor Survey*.[12] Respondents to that survey indicated that they would like to increase their holdings in EM sovereign green bonds.

## On average, 44% of GSS deals were allocated to green investors

**CHART 17** Fifteen respondents disclosed how much of their GSS bond was allocated to investors describing themselves as green. The average was 44% and the range was 13% to 100%.

Efforts are currently being made to standardise the definition of a green investor. From 1st January 2022 European investment firms describing their products as green, or socially responsible will be required to disclose the percentage of their investments in compliance with the EU taxonomy, i.e. consistent with a net zero economy by 2050. This will give green bond issuers a clear benchmark to measure the relevant credentials of bidders and offer asset owners more transparency in the manager selection process.

**17.** 44% was allocated to GSS investors on average




## Green investors tended to gain preference

Eleven respondents actively gave preference to investors describing themselves as green or socially responsible. Several mentioned that **investors were very keen to demonstrate their green credentials in the hope of getting better allocations**.

One DM issuer noted that the advantage of issuing through a syndicate as opposed to directly through the DMO meant that allocations could be made using different considerations than normal.

**Indonesia** issued a green Sukuk in 2018, 2019, and 2020, each with a 5-year tenor. The MoF had a stated ambition to attract new investors with their green Sukuk. In each case, Indonesia collaborated with its lead managers to ensure the highest possible participation of green investors. The green investor participation increased from 29% in 2018 to 34% in 2020.

The **Dutch** State Treasury Agency (DTSA) endorsed a formal declaration by offering priority allocation of its first green sovereign, Netherlands 2040, to 'real money' (unleveraged) bidders willing to verify their green credentials. Investors were invited to confirm that they met at least three of the four criteria formulated by the DSTA with a letter signed by their head of compliance. The four criteria were:

**1. A dedicated team within its organisation**, which performs ESG analyses for its respective investment universe;

**2. Specific ESG requirements and criteria related to green bonds** (e.g. reporting), which need to be met in order to be able to invest in a green bond;

**3. It aims to potentially purchase green bonds offered by the State of the Netherlands** either for full or partial inclusion in a specific green (bond) fund or to take the purchased volume into account for a specific target on green bonds amounts;

**4. It intends to transparently report on its investments** in green bonds in its annual report or specific sustainability/responsible investment report.

Thirty-two investors registered this status, and they collectively received 29% of the allocation.

## New issuance and reopening foreshadowed

**TABLE 8** Among the 19 respondents, six had already issued at least two bonds and six had reopened bonds. This suggests that there is a pipeline of projects available for financing through GSS bonds, and perhaps GSS bonds can catalyse governments into a more focused approach to prioritising expenditures designed to tackle climate and social issues. Twelve respondents stated their intention to issue more bonds, four said they planned to increase the size of their existing instruments (two said they planned to do both), and five did not know. For some respondents like **Sweden** and **Luxembourg**, funding requirements do not need to be met through borrowing, and there is less urgency to reissue.

**Germany**, **Poland**, **Chile**, and **Hong Kong** plan to build a steady and reliable pipeline, while others including **Thailand**, and **Belgium**, will concentrate on enlarging their existing bond first.

In June 2019, **Chile** became the first GSS bond issuer from the Latin America and Caribbean (LAC) region with a USD1.42bn green bond. A week later, this was followed by a EUR861m (USD973) green bond. On 21st January 2020, a new EUR1.27bn (USD1.4bn) bond was printed, and the existing bond was tapped for EUR693m (USD765m). The following day, a USD750m was added, and the original bond was tapped for USD900m. The USD bonds priced with a greenium, while the EUR bonds priced on their yield curves. Chile indicated its intention to issue more and tap its existing stock as part of a national strategy to finance projects that contribute towards Chile's NDC targets.

In January 2017, **France** became the first DM sovereign GSS bond issuer with a EUR7bn (USD7.55bn) 22-year instrument. This bond was subsequently tapped ten times, increasing to a total size of EUR27.4bn (USD29.5bn), by July 2020 making it the single largest GSS bond. The bond is now comparable in size to other OAT and France will introduce a new tenor in 2021.

"The **Fijian** Government's perception of climate centric capital markets, confidence and financial awareness in the climate finance space has evolved substantially since 2017 along with the global market for GSS bonds. While there is no immediate intention to issue more or reopen the existing green bond, we are exploring options to issue blue, sustainable, gender and catastrophe bonds as and when the opportunity arises in a conducive macro-economic environment."

**Vineil Narayan**, Acting Head of Climate Change and International Cooperation, Ministry of the Economy, **Fiji**

**Table 8.** Actual and intended repeat issuance of sovereign GSS bonds

| Country | Pricing date of original bond | Outcome to 20/11 2020 | | Future Intention | |
|---|---|---|---|---|---|
| | | Repeat Issuer | Increased size | Repeat Issuer | Increased size |
| **France** | 24/01/2017 | | 7 times | ✓ | |
| **Belgium** | 26/02/2018 | | 5 times | | ✓ |
| **Ireland** | 10/10/2018 | | Twice | ✓ | ✓ |
| **Netherlands** | 21/05/2019 | | Twice | ✓ | ✓ |
| **Hong Kong** | 21/05/2019 | | | ✓ | |
| **Sweden** | 01/09/2020 | | | Undecided | Undecided |
| **Germany** | 02/09/2020 | ✓ | | ✓ | |
| **Luxembourg** | 07/09/2020 | | | Undecided | Undecided |
| **Poland** | 12/12/2016 | ✓ | | ✓ | |
| **Fiji** | 31/10/2017 | | | Unknown | Unknown |
| **Nigeria** | 20/12/2017 | ✓ | | ✓ | |
| **Indonesia** | 22/02/2018 | ✓ | | ✓ | |
| **Lithuania** | 30/04/2018 | | Twice | Unknown | Probably not |
| **Seychelles** | 29/10/2018 | | | Unknown | Unknown |
| **Chile** | 17/06/2019 | ✓ | Twice | ✓ | |
| **Hungary** | 02/06/2020 | ✓ | | ✓ | |
| **Thailand** | 13/08/2020 | | Once | ✓ | ✓ |
| **Mexico** | 14/09/2020 | | | ✓ | |
| **Egypt** | 29/09/2020 | | | ✓ | |

## Tenor selection, liability and investor choice

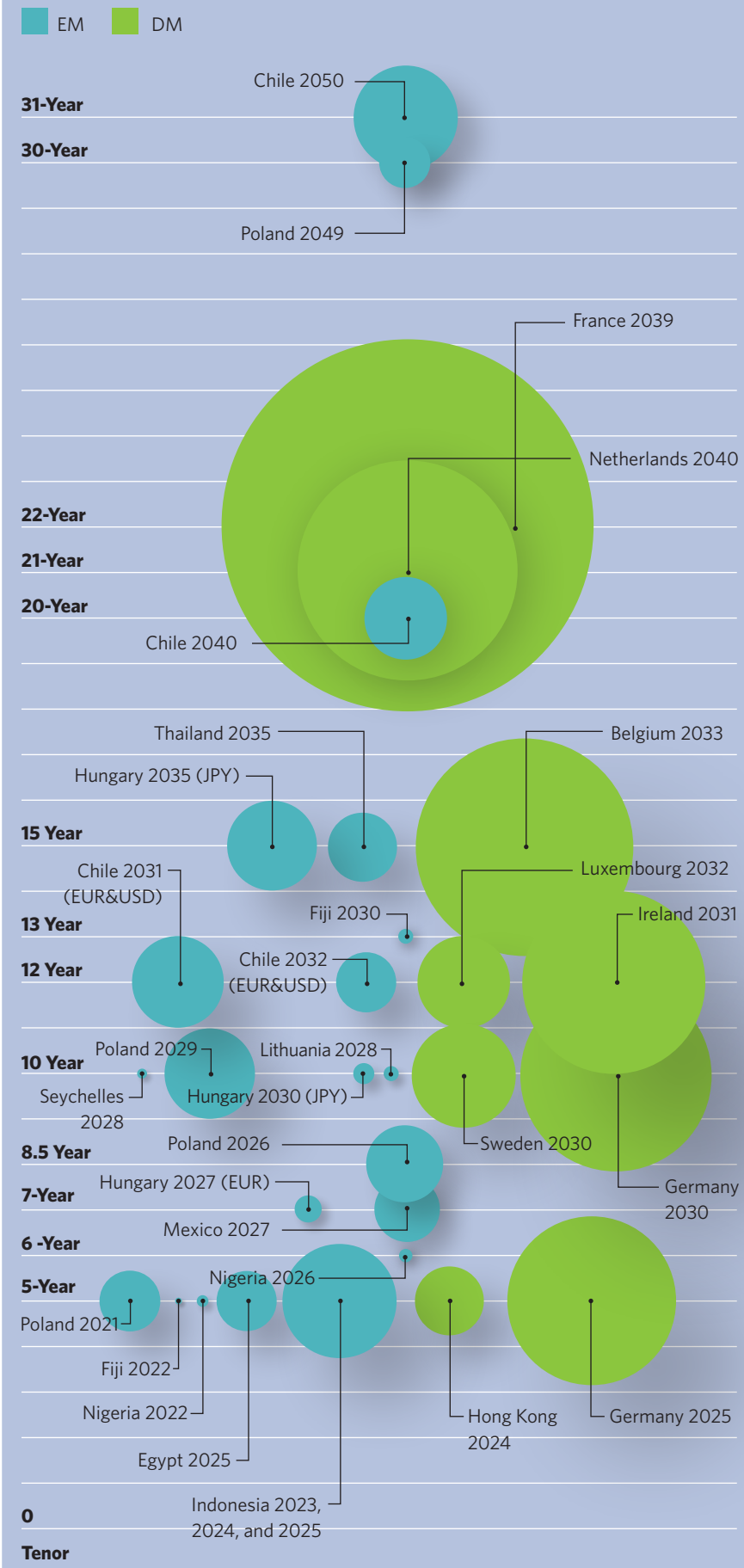
**TABLE 9** The selection of tenor is a critical decision because it can influence appetite for the bond, and appetite for a particular tenor can vary according to market and currency. Sovereign GSS issuers must carefully balance their existing redemption profile, the duration of chosen projects, and investor appetite. Several European respondents said that they considered the tenors that their GSS cohort had issued to give investors more alternatives.

**Longer tenors tend to attract insurance companies and particularly pension funds seeking to match long dated liability cash-flows. This intersects with the source of most of the dedicated green investment.**

**France** intended to issue EUR10bn worth of green bonds in the first year and selected a 22-year maturity. Since most GSS corporate debt has a five to ten-year maturity, the choice of a longer tenor would not crowd out that part of the curve.

**Fiji** issued a dual tranche bond with a five and 13-year tenor. The shorter tenor was designed for domestic banks with shorter funding needs while the longer tenor filled a gap in the yield curve and that was better suited to insurance and pension funds.

**Table 9.** GSS sovereign debt issued at each tenor



# Section 4: Reflections

## Confidence and profile boosted; sovereign curves unmoved

More respondents than not said that their GSS bond(s) had not impacted their sovereign curve. **Belgium**, for example, has close to EUR410bn (USD460bn) in outstanding liabilities and its EUR8.2Bbn (USD10.1bn) green bond is a tiny part of that profile. **Germany** made a concerted effort to separate its green bond programme from its other debt with the twin bond concept and stated that it did not want its green programme to impact its vanilla issuance.

**Egypt** mentioned that the success of hard currency GSS bonds had provided the impetus to explore issuing such instruments in its local currency. **Fiji** responded that their green bonds had not impacted its overall sovereign curve, there was an acknowledgement that it had created substantial market awareness and it had been encouraged to explore similar opportunities as a result.

In September 2020, **Sweden** became the first country from the Nordic region to issue a sovereign green bond. The SEK20bn (USD2.3bn) 10-year was issued by the Kingdom of Sweden under the EMTN programme as a Swedish Government International Bond (ticker SWED), and not as a Swedish Government Bond (ticker SGB). The green bond was thus not part of the regular issuance backed by primary dealer contracts and standing repo facility. The government instructed the Swedish DMO to execute one bond. The bond will be evaluated for the long-term cost and risk to determine whether it should be repeated. The green bond was a complement to regular SGB issuance.

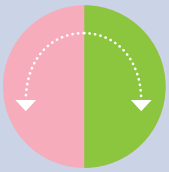
Inclusion in dedicated bond indices can help to increase the profile of the issuer. **Indonesia** is a case in point as its bonds were included in the MSCI green bond index resulting in more international interest.

## Boost in cross-border collaboration

GSS bonds afford issuers greater visibility and press coverage compared to vanilla equivalents the benefits of which can extend to other regions. This is particularly true for sovereign issuers, especially EM issuers, where the visibility and scrutiny are greater, and the impact can be much more powerful in terms of messaging and scale.

**Germany's** green bond framework embedded international cooperation into its eligible expenditures to reflect the global impact of climate change. The objective defined in the framework was to "assist emerging market and developing countries in their transition towards a more environmentally friendly economy and support international cooperation in that field (i.e. mitigation of and adaptation to climate change, transition towards more renewable energies, protection of habitats and biodiversity, sustainable use of natural resources and energy including developing renewable energy generation facilities and sustainable agriculture)."

**Respondents specified four areas in which GSS bonds involved cross boarder collaboration:**



**1. Other DMOs** – respondents mentioned that they collaborated with their counterparts at other DMOs both before, to ask for advice, and after, to share experiences.

**2. Stock exchanges** – sovereign GSS issuers can register their green bonds on stock exchanges to give them more visibility. Stock exchanges can support issuers with guidance on frameworks and reporting, and improve access for investors by acting as central repositories for documentation and reporting.[14]

**3. Invitations to share knowledge** at debt forums, panel invitations etc.

**4. Development banks and other organisations** – working together to get the GSS bond fit for purpose, and then sharing the message with other potential issuers afterwards. EM issuers work with multiple organisations, e.g. Nigeria collaborated with FSD and Climate Bonds.

**The Kingdom of Thailand** listed several cross-border collaboration opportunities arising from its sustainability bond. While designing the framework, it studied those of other countries. Since the launch of the bond, it has received multiple panel invitations to share details of the experience. Several development banks have expressed interest in learning more, and Thailand will discuss the bond at ASEAN debt forums when the opportunity arises.

## Issuance encourages local market growth

The transition to a low-carbon, climate resilient, and equal global economy requires all types of issuers to engage in the GSS bond market. Given that sovereigns make up almost half of the volume of the global bond market, their leadership role is critical. Sovereign GSS bonds support growth in local markets by attracting investors and in turn demonstrating investor demand, setting precedent, and increasing visibility. By boosting issuance volume in local markets, they can both increase liquidity and facilitate the growth of the essential market infrastructure and technical skills necessary for the development of a green bond market. This includes verifiers, specialist underwriters etc. Sovereign GSS bonds can therefore assist in green market creation, and for many respondents this was a motivation for issuing. Such market creation includes the private sector and regional governments. In Belgium for example, the sovereign green bond encouraged the region of **Flanders** to issue a sustainability bond.[15]

**Respondents identified five ways that sovereign GSS bonds can encourage green market creation**

**1. Attracting new investors** – the profile and scale encourages investors to implement dedicated strategies.

**2. Creating space for other issuers** - supporting the local green bond market with a large, riskless asset enables investors to diversify towards more risky or less liquid assets.

**3. Establishing best practice** – the creation of a blueprint for disclosure, transparency, and procedure.

**4. Provision of a reference benchmark** – an anchor for pricing other GSS instruments.

**5. Highlighting the priorities of government** – communicates a strong message that the government is working to resolve social inequalities and/or mitigate the impacts of climate change.

"Going through the process of issuing ourselves, from creating the framework, asset selection, post issuance reporting etc. has helped us understand more about the process so we can be more credible. This experience has also helped to ensure there are no hurdles from the regulatory or legal / taxation perspectives."

**Grace Wong** Senior Manager, Market Development Division, External Department, **Hong Kong** Monetary Authority

The **Seychelles'** blue bond, issued in October 2018, developed understanding of the fishery and ocean conservation space. The transaction piqued the interest of numerous countries in the region and elsewhere, leading to a continuous stream of inquiry. Every month there are bilateral meetings with other countries to share lessons learned. The required level of ocean conservation necessitates funding on a scale larger than grants or aid packages can support. The blue bond demonstrates how the issue can be addressed at scale.

"All the additionality arguments on market development were Hong Kong's reasons for issuing green bonds. We did it to promote development of a green bond market and to highlight the government's commitment. Those were our primary reasons, not our additional ones."

**Grace Wong** Senior Manager, Market Development Division, External Department, **Hong Kong** Monetary Authority

"Fund managers tell us they went into the green impact fund market and tried to raise money when sovereigns became active in the market. The market simply was not big enough before. This is evidence that sovereigns catalyse private money."

**Elvira Eurlings**, Agent, DTSA, **Netherlands**

## Sovereign GSS bonds offer multiple additionalities

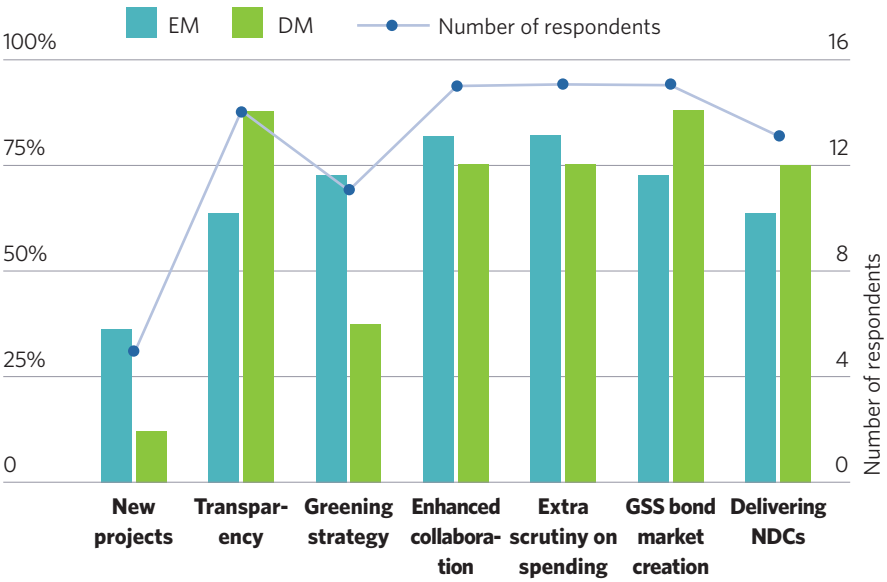
**CHART 18** GSS bonds must, by definition, have a use of proceeds that contributes to the goals of the Paris agreement (green bonds) and/or clearly defined social projects (sustainability/social bonds). While such expenditures could be funded using unlabelled debt, GSS labels bring sovereign issuers other advantages that would not have otherwise happened.

When asked to select from a list of additionalities beyond the expenditures, respondents mostly selected enhanced collaboration with different stakeholder groups, the opportunity for investors to have extra visibility into public spending, and the creation of a green bond market.

"For the first time, parliament will get metrics to see the impact of the investments they authorize. Historically, the importance of government projects is measured by how much money is allocated to them rather than the outcome. Performance metrics for government spending is a different approach to budgeting."

**Lennart Duschinger**, Advisor for Sustainable Finance, Ministry of Finance, **Luxembourg**.

### 18. Sovereign GSS bonds bring multiple additionalities



# Moving from a fraction of the market to the majority: seven steps to turbo-charging the sovereign GSS market

## More GSS sovereign bonds needed

Every country will need to rapidly increase expenditure on climate friendly infrastructure, the energy transition, adaptation measures, and climate resilience to meet the goals of the Paris Agreement and achieve net zero by 2050. The OECD estimates that for infrastructure alone, the required investment is at least USD6.3tn a year.[16] Meanwhile, the IEA highlighted that total cumulative spending on renewable energy and energy efficiency to 2030 should increase to USD13.5tn.[17]

While these figures seem astronomical, the core sovereign bond market, at USD45tn outstanding, is big enough to absorb a substantial proportion of this need. Ultimately, to avoid catastrophic climate change, almost all government expenditures should be linked, in some way, to the transition to the low carbon economy – whether directly through infrastructure provision or indirectly by helping communities to adapt and build resilience. This could, in turn, be financed by a much greater issuance of sovereign GSS bonds.

Fortunately, the results of this survey indicate that, for sovereign issuers, the process of issuing GSS bonds is a journey that brings numerous rewards.

## A large and liquid sovereign GSS market will:

**...catalyse system-level change**

Sovereign bonds wield the ultimate power in the GSS market because of their size and visibility. Governments must use that power to create a blueprint for other issuer types such as corporations, local governments, and state-owned enterprises in their local markets. Existing sovereign GSS issuers demonstrate that these bonds can be adapted to accommodate the smallest to the largest of funding needs.

**...create investor impact**

A sovereign GSS bond offers investors a large, high profile, liquid instrument which attracts new investment. Labelled GSS bonds can be easily identified and accelerate the growth of capital committed to green and social investment strategies. Dedicated mandates will give other types of issuers more reason to come to the market.

**...set a precedent in green budgeting and transparency**

The preparation and reporting required for a sovereign GSS bond sets precedents in rigour and transparency. This benefits multiple stakeholders within the government including parliament as well as external stakeholders such as investors and enhances the visibility of the whole GSS market.

**...enable a larger and more diverse group of issuers** – the GSS market is the financial consequence of what is happening in the real economy. As the sovereign GSS market grows, it will pave the way for the growth and diversification of the corporate GSS market in a number of countries. At the same time, corporate issuers will become more adept at addressing GSS challenges and transition their business models away from potential stranded assets towards better alignment with the goals of the Paris Agreement. The development of transition bonds will broaden the range of sectors in the GSS market and make it more reflective of the real economy.

## Seven steps to turbo-charge the sovereign GSS market

The current sovereign GSS market (USD96bn) is not even 0.2% of the USD45tn worth of government bonds outstanding. Meanwhile, the OECD estimates that USD6.9tn of infrastructure investment is needed each year to 2030 to meet the goals of the Paris Agreement. All new government expenditure should be approved through a GSS lens.

Building on the results of this survey, seven conduits have been identified for sovereign issuers to move the GSS bond market forwards:

**1. Stimulating investor demand through supply** – corporate and other types of treasurers will be more inclined to issue GSS bonds if there is a dedicated pool of capital. Sovereign issuers should consider benchmark size where possible to add liquidity and scale to the market and encourage more dedicated investment mandates.

**2. Assuming the role of green investor and enabler** - governments must assume the role of investor and enabler by actions such as GSS mandates for public sector pension funds and investing public sector money in GSS labelled investment.

**3. Governments must create more expenditures** – sovereign GSS bonds offer more flexibility to DMOs by introducing a broader investor base which can offer numerous benefits including tighter pricing. This can energise policy priorities and create a culture of suitable projects being developed to facilitate repeat issuance for example, build a hospital or school and make it green, create parks, or add cycle lanes. Enhanced taxonomies which extend to adaptation and resilience will give ministers additional sources of eligible expenditures for green bonds. Both the EU taxonomy and the China Green Bond Endorsed Project Catalogue are being extended to encompass a broader range of potential assets. Taxonomies are also being extended to include social assets.

**4. Fund high-profile projects** – sovereign GSS bonds should channel capital towards necessary projects of national importance to draw attention to the potential of GSS bonds and the types of projects they can finance. This can also help to get political buy-in for future bond issuance

**5. Develop and promote best practice standards** - giving the financial sector clear definitions will encourage market development without being too restrictive. Government initiatives to establish clear and transparent green definitions such as the China Catalogue and EU Taxonomy have helped to provide rigour and clarity to the market while also helping to avoid greenwashing. The International Platform on Sustainable Finance (IPSF) includes both the EU and China as members and offers opportunities for countries around the world to learn from each other on the process of creating and harmonising green criteria and definitions.

**6. Work collaboratively on sovereign GSS bonds** - GSS bonds offer opportunities for finance ministries to collaborate with environmental and other ministries, and with supranational organisations. This is vital - the transition from theoretical climate targets to actual implementation and financing of those targets cannot happen without those relationships developing. Going through the process of issuing sovereign GSS bonds can inform government contributions to meaningful discussions on regulation.

**7. Prepare for whole economy transition** - to meet the goals of the Paris Agreement requires, not just the greening of a few sectors but the transition of entire economies to a pathway that is in line with net zero carbon by 2050. The sovereign GSS market is one key to facilitating an economy wide transition.

## Advice for issuers considering a GSS bond

Respondents were asked to share the wisdom of their experience with other potential sovereign GSS issuers. The notion of simplicity was a common message, and suggestions encompassed five categories.

**1. Get a clear mandate from government** – to ensure collaboration between all stakeholders and give credibility to the enterprise.

**2. Design a robust and simple framework** - choose indicators that the investment community is familiar with to ensure broad acceptance. A solid framework will facilitate continuous commitment regardless of changes in government as well as simplify the reporting process.

**3. Choose a few high-profile projects** - to maximise impact and streamline the reporting process.

**4. Implement budgetary reporting standards** - to simplify the identification of eligible expenditures.

**5. Prepare for the reporting process** - inform each department of their expected contribution well in advance. The results will be closely scrutinised.

"Act now to save the planet. Do the best you can to contribute to resolving climate change issues. Issuing green bonds is a good testimony to the institution. Anyone ignoring the climate crisis will eventually go bankrupt, as investors will not embrace those risks."

**Luky Alfirman**, Director General of Budget Financing and Risk Management, Ministry of Finance, **Indonesia**

"We were surprised by the amount of eligible expenditures that we were able to identify. Any government looking into it may also discover there is a lot more (green expenditure) they could take into account for their prospective green bonds."

**Zoltan Kurali**, CEO Debt Management Office AKK, **Hungary**

"Invest time in talking to colleagues from other ministries. A green bond is a strange animal for them. Invest in those relationships and get them involved so they can be ambassadors for the project"

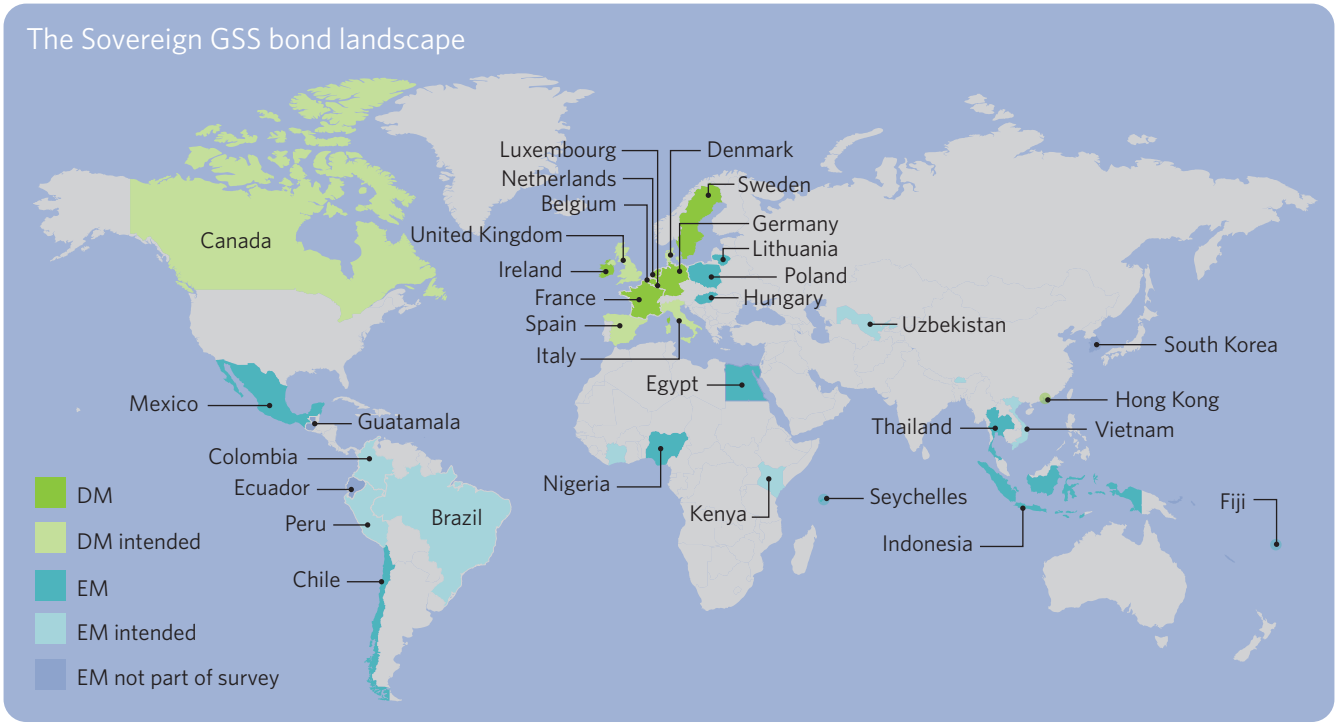
**Elvira Eurlings**, Agent, DTSA, **Netherlands**

**Table 10.** Just two of the ten largest issuers have joined the sovereign GSS bond club

| Issuer rank | Country | Amount USD tn | Amount USD sovereign GSS bonds |
|---|---|---|---|
| 1 | United States | 13.5 | 0 |
| 2 | Japan | 8.6 | 0 |
| 3 | UK | 2.5 | 0. Indicated 2021 |
| 4 | China | 2.4 | 0 |
| 5 | Italy | 2.0 | 0. Indicated 2021 |
| 6 | France | 1.9 | 29.5bn |
| 7 | Germany | 1.3 | 13.6bn |
| 8 | Brazil | 1.2 | 0 |
| 9 | India | 1.2 | 0 |
| 10 | Spain | 1.0 | 0. Indicated 2021 |

**Endnotes**

1. Bloomberg as of 20/11/2020, based on BICS Level 2 classification = sovereign; total size of bond market = 89.5bn
2. Exchange rates used throughout this paper are taken from Bloomberg close of business on 20/11/2020
3. This figure does not include state and/or regional government issuance.
4. DM: Canada, Denmark, Italy, Spain, UK. EM: Bhutan, Brazil, Colombia, Cote d'Ivoire, Ghana, Kenya, Peru, Uzbekistan, Vietnam
5. Those who did not participate were invited to do so but did not respond.
6. Based on MSCI market classifications https://www.msci.com/market-classification
7. https://www.climatebonds.net/files/reports/sovereign_briefing2017.pdf
8. Harrison, Caroline, Partridge, Candace and Aneil Tripathy. 2020. What's in a Greenium: An Analysis of Pricing Methodologies and Discourse in the Green Bond Market. The Journal of Environmental Investing 10(1), Available at http://www.thejei.com/journal/., Available at SSRN: https://ssrn.com/abstract=3684927
9. Yield curves require a minimum of four securities sharing similar characteristics to the subject bond in terms of currency, size, and coupon type (index linked bonds cannot be compared with bullet bonds for example).
10. https://www.climatebonds.net/files/reports/gb_investor_survey-final.pdf
11. On 24th November 2020, Thailand reopened the 2035 sustainability bond for THB20bn (USD600m), raising the total liability to THB50bn (USD1.6bn). Subsequent taps will eventually increase the bond to THB100bn (USD3.2bn).
12. https://www.climatebonds.net/files/reports/gb_investor_survey-final.pdf
13. More work needs to be done over a longer time horizon to determine the credibility of this data with regards to sovereign GSS bonds. Ulf G Erlandsson of Anthropocene Fixed Income Institute has written on the topic of green bond secondary market volatility by https://anthropocenefii.org/afii-research
14. https://www.climatebonds.net/files/files/RoleStock%20Exchanges.pdf
15. Flanders (ticker FLEMSH) issued sustainability bonds in 2018, 2019, and 2020. The total amount outstanding was EUR2.8bn (USD3.1bn) as of November 2020.
16. policy-highlights-financing-climate-futures.pdf (oecd.org)
17. IEA 2015a

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Ministry of Economy, **Republic of Fiji**

Department of Blue Economy, **Republic of Seychelles**

Debt Management Office, **Federal Republic of Nigeria**

Ministry of Finance, **Republic of Indonesia**

Ministerio de Hacienda (Hacienda), **Republic of Chile**

State Treasury Department, Ministry of Finance of the **Republic of Lithuania**

National Treasury Management Agency, **Republic of Ireland**

Hong Kong Monetary Authority, **Hong Kong SAR**

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Government Debt Management Agency (ÁKK), **Republic of Hungary**

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Debt Management Office, the **Kingdom of Thailand**

Ministry of Finance, **Kingdom of Sweden**

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