

2020

Green Bond Treasurer Survey



Climate Bonds INITIATIVE



This report was prepared by the Climate Bonds Initiative, with analysis support from Henley Business School.



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Introduction

This is Climate Bonds Initiative's (Climate Bonds) first Green Bond Treasurer Survey, in which 86 treasurers (or equivalent role) from a variety of institutions shared their experiences of issuing green bonds. Respondents represent emerging and developed markets (EM and DM)¹ and supranational issuers. They constitute a total of 34 countries of economic risk,² 29 industries,³ and credit ratings ranging from AAA to BB+.⁴ Chinese issuers were not considered in the scope of this survey and will be addressed in a separate upcoming research project.

In October 2019 the first Climate Bonds Green Bond European Investor Survey (the Investor Survey) was published.⁵ Respondents repeatedly referenced the lack of adequate supply of green bonds. Further, the Investor Survey found a rough match between the most carbon-intensive sectors and investor demand for green bonds in those sectors, but a clear shortage of green bond supply. The overwhelming message from investors was that more green bonds were needed in all sectors, particularly the most polluted ("brown") ones. The European investment community has more experience of, and exposure to, the climate agenda compared to other regions. While demand for green bonds is beginning to spread to other territories, the number of dedicated green bond funds outside Europe is so far limited.

Green bonds offer organisations the opportunity to prepare for the impacts of climate change, initiate the transition to a greener business model or fund green activities by providing access to low cost capital via well understood and labelled products. Climate change will increasingly impact all areas of societies and economies globally. There is widespread consensus that the physical risks arising from climate change are likely to cause unprecedented disruptions to supply chains across industries, whereas transition risks could result in entire industries ceasing to exist. Companies that are unprepared for climate

change effects could therefore incur considerable financial losses through, for example, stranded assets, limited resource availability, prices or the effects of policy choices, such as carbon pricing.⁶

Furthermore, the risks extend throughout the entire financial system. In a recent discussion paper, the Bank of England observed that insurance companies and banks in particular will have to prepare: liability risks i.e. seeking compensation for damage caused by climate change, in the case of the former, and lending decisions and the associated effects for the latter.⁷

The purpose of the Climate Bonds Green Bond Treasurer Survey is to highlight the benefits and challenges of issuing green bonds with the intention of encouraging more issuers to come to the market. Between May and November 2019, 143 green bond issuers were invited to join the project. Issuers were selected from the Climate Bonds Green Bond Database, ensuring proportional representation from EM/DM, country of economic risk, industry, and a variety of credit ratings. Language barriers and time zone restrictions made it easier to engage with some issuers compared to others. The response rate was highest in Europe.

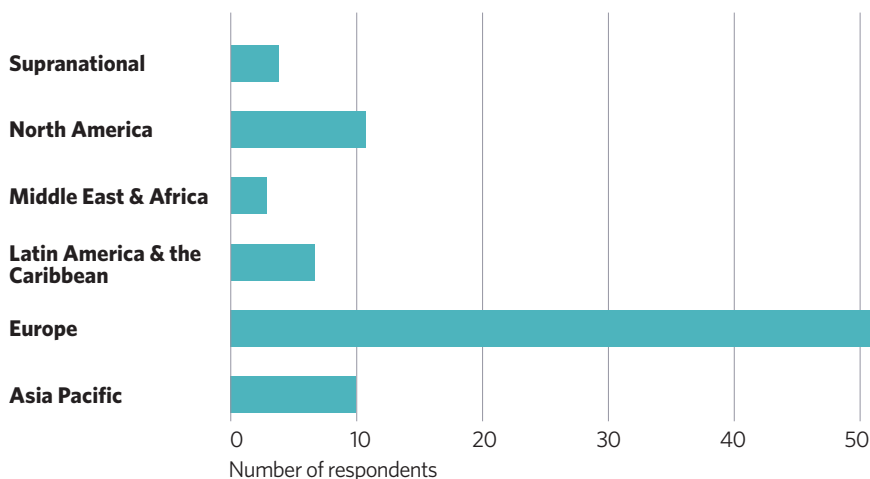
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Chart 1 The treasury departments of the entities in the respondent sample had collectively issued 686 green bonds at the time of data collection, and accounted for a total of USD7.4tn in bonds outstanding, including USD222bn of green bonds.⁸

Full methodology and a description of the respondent sample are provided in Appendix 1.

1. Respondents encompass all regions



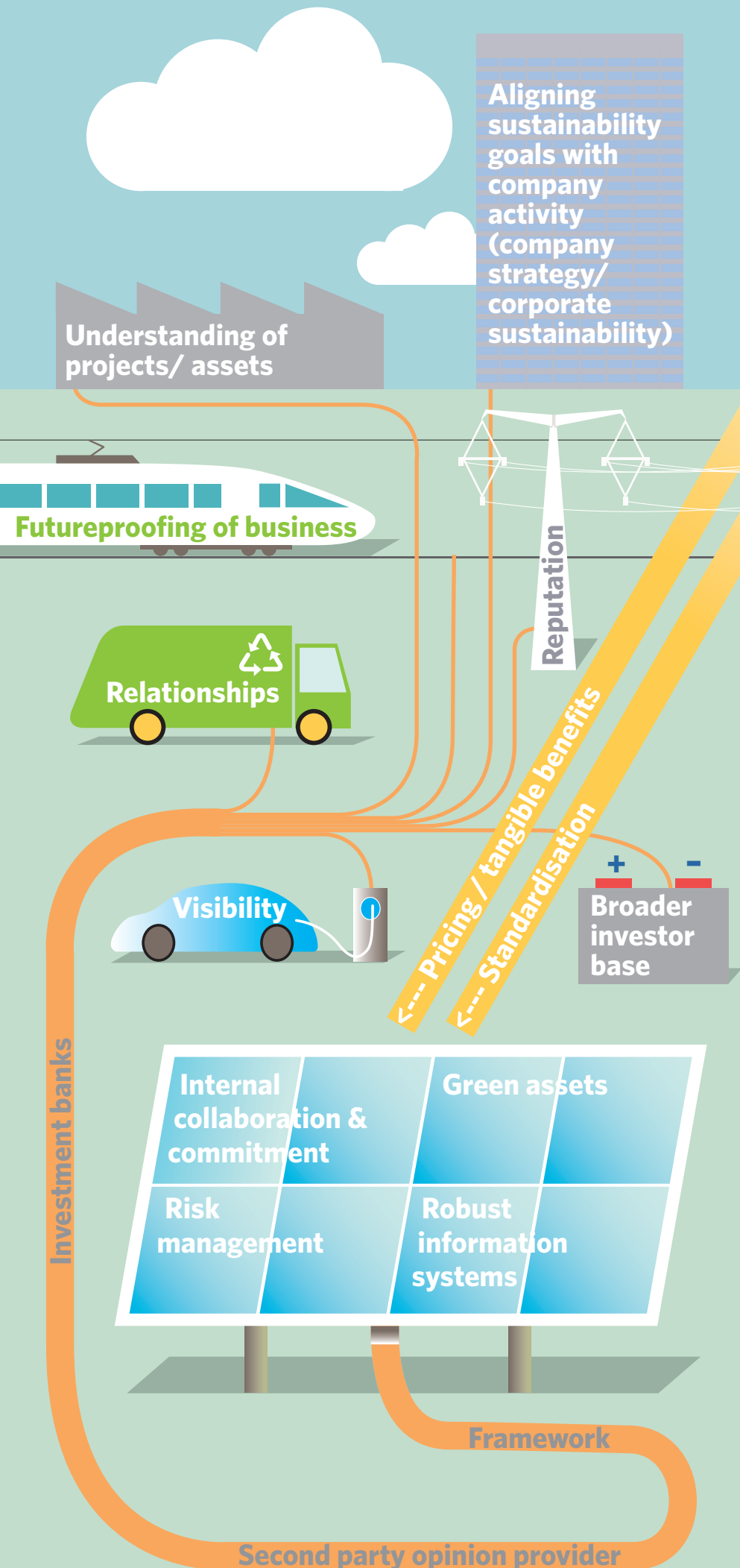
About Climate Bonds Initiative

Climate Bonds Initiative is an investor-focused not-for-profit, promoting investment in the low-carbon economy. Climate Bonds undertakes advocacy and outreach to inform and stimulate the market, provides policy models, market

data and analysis, and administers the international Climate Bonds Standard & Certification Scheme.

Climate Bonds' Green Bond Database is based on alignment with the Climate Bonds Taxonomy, which excludes all fossil fuel power.

Climate Bonds Certification is a labelling scheme. Rigorous scientific criteria ensure that it is consistent with the 2oC warming limit of the Paris Agreement. Certification requires initial and ongoing third-party verification to ensure the assets meet the metrics of Sector Criteria.



Summary of findings

This survey was designed to highlight the benefits and challenges of issuing green bonds. The expectation was that cheaper pricing would be at the core. Results, surprisingly, suggested that pricing was not the principal benefit of green bond issuance. Green bond pricing is the subject of abundant debate, including whether material pricing benefits exist and if so, to what degree.

This raises the question of whether the possibility of cheaper pricing for issuers could be driving the growth of the green bond market. Any benefits other than pricing are largely intangible, and are described as ancillary. The results of this survey suggest that pricing is one of the ancillary benefits, and from the perspective of green bond issuers, other impacts of issuing green bonds exhibit greater value at present.

The results of this survey suggest that green bonds can:

Contribute to transition, risk management, and future proofing the business

Most enterprises are naturally exposed to climate risks and need to adjust their business models towards a low and ultimately, zero carbon future. This exposure is determined by both the company's core business and the extent to which sustainability is integrated into the company's strategy. The degree of integration varies, and organisations are at different stages of transforming models from brown to green.

As climate risks translate into financial risks, companies, particularly those with a low level of integration, must start preparing and managing these risks in a structured manner to protect both revenues and reputation. Green bonds are well understood, transparent instruments, that can help to fund this transition and catalyse this process.

- **The process of issuing a green bond includes an internal audit of climate risks within a business.** Several respondents said that this gave them a better overview of their projects and assets. This in turn can lead to a better understanding of climate-related risks. See page 16
- **Issuing a green bond also often included a thorough review of processes, monitoring, and accountability.** In some cases, improvements to IT were identified as necessary to capture the relevant data. See page 7

- **While there were costs associated with implementing these adjustments, it appears that respondents believe them to be justified.** Respondents told us that this process resulted in a more robust infrastructure, and the goodwill and positive sentiment created between companies and stakeholders as a result of these efforts led to transformative effects on their organisations; See page 9

Broaden the investor base and offer new engagement opportunities

The dialogue with investors appears to be more extensive for those issuing green bonds, with senior management often participating in roadshows. Issuer profile is boosted, as the green bond signals to the market that the organisation is incorporating green considerations directly into capex planning.

- **98% of respondents said that their green bond attracted new investors.** The most frequently stated benefits of this were 1) a more diverse pool of investors, offering greater flexibility to reopen or issue new bonds 2) a stickier investor base and 3) greater visibility. See page 11
- **91% of respondents said a green bond facilitated more engagement** with investors compared to a vanilla one. Investors interrogated issuers on topics including the use of proceeds, the framework, and post issuance reporting. This dialogue resulted in investors having a more intimate knowledge of the organisation. See page 9
- **Over two thirds (70%) of respondents said the demand for their green bond was higher** than for vanilla equivalents. See page 14
- **On average, respondents said that approximately 50% of green bonds** were allocated to investors declaring themselves as green or socially responsible; See page 14

Enhance reputation and visibility

Reputational benefits and sending a signal to the market were ranked as the top motivations for issuing green bonds, followed by a desire to help curb climate change. At present, the scant regulation around green bonds does not influence the decision to issue. This suggests latent potential for regulation to play a critical role in accelerating the brown to green transition. See page 6

- **By issuing a green bond, an organisation is letting the world know it is open for green business,** in much the same way that a taxi puts its light on. Issuers said they were offered more opportunities to participate in green projects as a result, and several banks were motivated to launch green lending products. See page 16
- **88% of respondents said they planned to issue more green bonds,** while a further 15% said they would reopen their current bond. This underscores the positive experience of issuing green bonds. An established investor base and greater visibility in the market were the most frequently cited advantages of repeated green bond issuance. Support from a new pool of investors is invaluable to any treasurer, and it is unsurprising that they would wish to consolidate those relationships. See page 16
- **Of the green bonds in our sample, 84% are listed on at least one stock exchange.** Visibility was the most frequently selected reason for this, followed by perception and integrity; See page 12

Strengthen internal integration

Respondents highlighted that green bond issuance resulted in positive changes to internal relationships.

- **The process of issuing a green bond appears to be triggered by internal stakeholders** and can galvanise momentum towards addressing climate risk. Respondents identified the board and staff (including treasurers) as the main drivers of the initiative. See page 5
- **Preparation of frameworks and reporting,** and identification of green assets, typically involved close collaboration among various departments. This was repeatedly cited as a positive outcome. See page 6
- **A sustainability committee is not a prerequisite** for green bond issuance. However, most who issued a green bond without one were motivated to set one up either during or as a result of the exercise. See page 5
- **Most respondents** said that issuing a green bond had positively impacted their internal commitment to sustainability; See page 16

Encourage better standards to benefit all

Most respondents advocated the standardisation of definitions, taxonomies, and reporting to ensure the integrity of the green bond label.

Many supported the development and implementation of the European Commission's Sustainable Finance Taxonomy (EU Taxonomy).

- **There was debate about the of strictness of the definitions.** Some expressed concerns that making definitions too stringent could discourage smaller issuers from entering the market. Others mentioned that the chances of 'getting it wrong' could be amplified. See page 17
- Standardisation was named as both a factor to enhance, as well as an obstacle that could impede growth and scale. It was noted that taxonomies need to take into consideration the disparity of markets, such as the differences between EM and DM. See page 10

Make the effort - it's worth it

When asked whether they had any advice for other treasurers thinking of issuing green bonds, time and again respondents said simply: 'Do it'.

- Most respondents (84%) said they had help from independent third parties on the issuance process of their green bond, including setting up the framework. See page 8
- 85% of respondents commissioned a Second Party Opinion (SPO). An SPO can help highlight the integrity of a green bond, reassuring investors of the green credentials of the project. See page 8
- The costs of issuing a green bond were regarded either as negligible or valid due to other benefits. This is contrary to the perception that green bonds carry considerably higher costs, which can be a barrier to market entry. See page 9
- For 90% of respondents, the cost of borrowing for green bonds was either very similar to, or lower than vanilla equivalents. See page 11

Sentiment

Green bonds need not exclude older projects

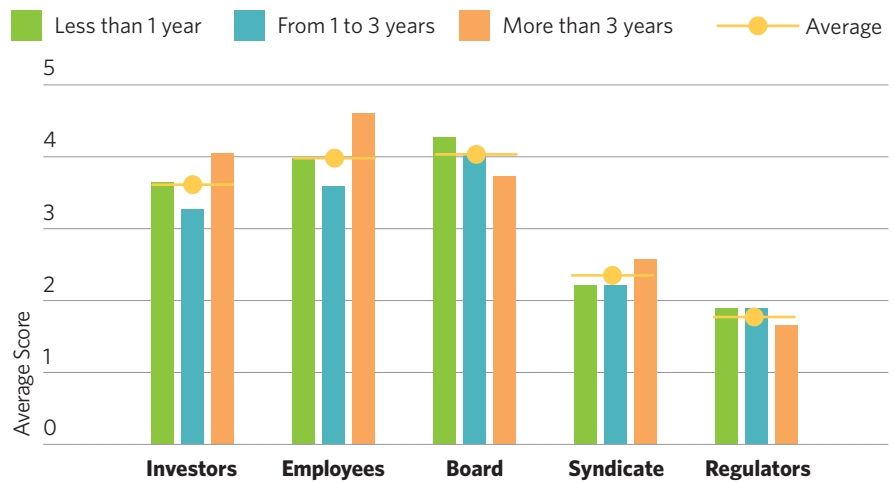
Chart 2 Respondents were asked to select a preferred age limit for projects suitable for green bond financing. The answers largely indicated a desire to include projects initiated more than two years ago, with 58% selecting this option. Preference for the recency of the projects differed by the asset class, and sector of the respondent. Jernhusen AB, and Vasakronan, both Real Estate companies, issue green bonds to finance loans that are utilised to make old buildings energy efficient.⁹ Buildings (i.e. the asset) would only qualify for this if they were more than two years old.¹⁰ KBC opined that the age of a project does not necessarily impact its green credentials, e.g. a five-year-old windmill should be eligible as a green asset. Sub-Sovereign, Supranational, and Agency (SSA) issuers, which included Development Banks, also favoured a longer time frame. For Development Banks, particularly those operating in EM, it is not unusual for the mobilisation of proceeds to take up to two years once the due diligence has been completed. Smaller issuers also preferred this answer, possibly because they have less choice of projects and thus want to choose from a broader pool.

See Appendix 1 for parameters used to capture small, medium and large issuers, and the categorisation by recency of first green bond.

“Green bonds should not only fund new projects but also sustaining projects that support improvement and capital expenditures in relation to green assets.”

Alec Cheng, Treasurer, Ontario Power Generation

3. The Board had the greatest influence on the decision to issue a green bond



The board has the greatest influence on the decision to issue a green bond

Chart 3 Respondents were invited to score a list of stakeholders from 1-5 based on their influence on the decision to issue a green bond. The board was the highest scoring of the stakeholder groups (4.01). It also appeared to have greater influence on those entering the green bond market within the last year (4.29) suggesting that the positive profile of green bonds could have played a role in their motivation.

Employees was the second highest scoring group (3.99), and the respondents, who were mainly treasurers, included themselves in this category. Many treasurers reflected that they pushed for green bonds in response to shareholder pressure.

Debt Capital Markets (DCM) desks at investment banks can exert influence by introducing green bonds to treasurers. Based on the success of similar organisations, they can and do approach clients with the suggestion of issuing a green bond.

Regulators were cited as the least influential stakeholder group in the decision to issue a green bond to date, with an average score of just 1.82. Market forces appear to be driving the green bond issuance for the time being, as opposed to regulation. This could be an opportunity for regulators to enact policies to facilitate an increase in the scale and rapidity of green bond issuance.

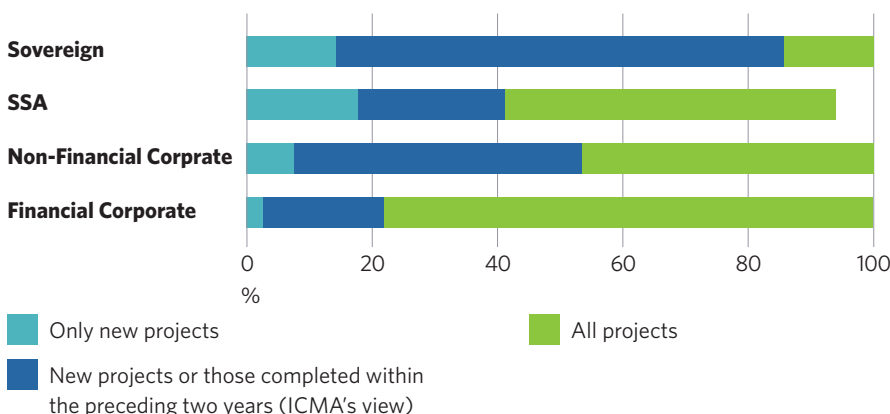
Consensus critical in sovereign green decisions

Sovereign governments issue green bonds in response to different pressures. Sovereign respondents told us that the critical stakeholders in the decision to issue a sovereign green bond were the central government, particularly the environment and finance ministries, the Debt Management Office (DMO), and investors. All had to be committed to sovereign green bonds for them to materialise.

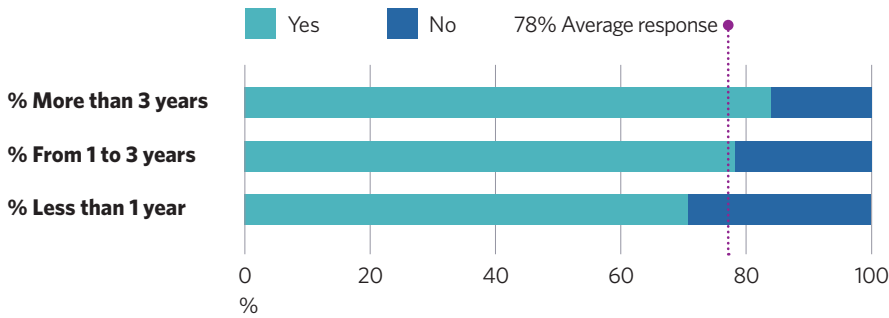
More than three quarters of respondents had a sustainability committee, which played a key role in the decision to issue a green bond

Chart 4 A sustainability committee (SC) can provide a pivotal platform to catalyse internal support for a green bond by lending visibility and influence to the project. Just over three quarters (78%) of respondents had a SC in place. The proportion increased to 84% for those with a longer history of issuing green bonds, perhaps as a result of experience, and to 82% for larger issuers, possibly due to more resources, and greater scrutiny. It has become the norm for large organisations to report on sustainability and overseeing such reporting would fall under the remit of a SC. Among the 22% of those who

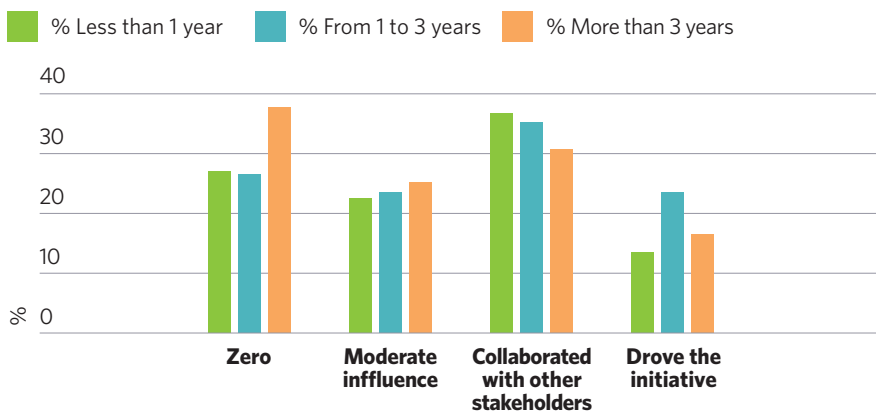
2. Financial Corporates and SSA favoured the inclusion of older projects



4. Most respondents had a Sustainability Committee regardless of experience



5. Sustainability Committees tended to collaborate with other stakeholders in the decision to issue a green bond



replied they did not have an SC, equivalent bodies having a similar function but different name were nominated multiple times. For example, Mexico's FEFA (part of FIRA) has a Sustainability Working Group, which was responsible for driving the initiative to issue a green bond. **Chart 5**

Among those respondents that did have a SC, a minority said that the green bond

franchise was not part of their remit. A quarter said that the SC had zero influence on their decision to issue a green bond. However, most respondents expressed that the SC played a key role in the decision-making around green bonds, mainly in the form of collaboration with other stakeholders or by driving the initiative.

Those that said the SC had zero influence

on the decision often did so because the SC had been founded after the framework had been developed, and tended to be early movers, such as Municipality Finance, and Nederlandse Waterschapsbank (NWB) which issued its first green bond in 2014. Société Générale was one of these early movers. Its more recently established SC has thus had limited contribution on prior issuance but is likely to grow as the committee becomes more established.

For others, including Renewi, the SC was created in concomitance with the issuance of the green bond - in such cases often also titled a 'Green Bond Committee' - and drove the initiative. This suggests that green bonds can make a critical contribution to an organisation focused on sustainability by providing credibility to such initiatives. Even when organisations began the process of issuing a green bond without a SC, the experience of doing so often provided the motivation to set one up.

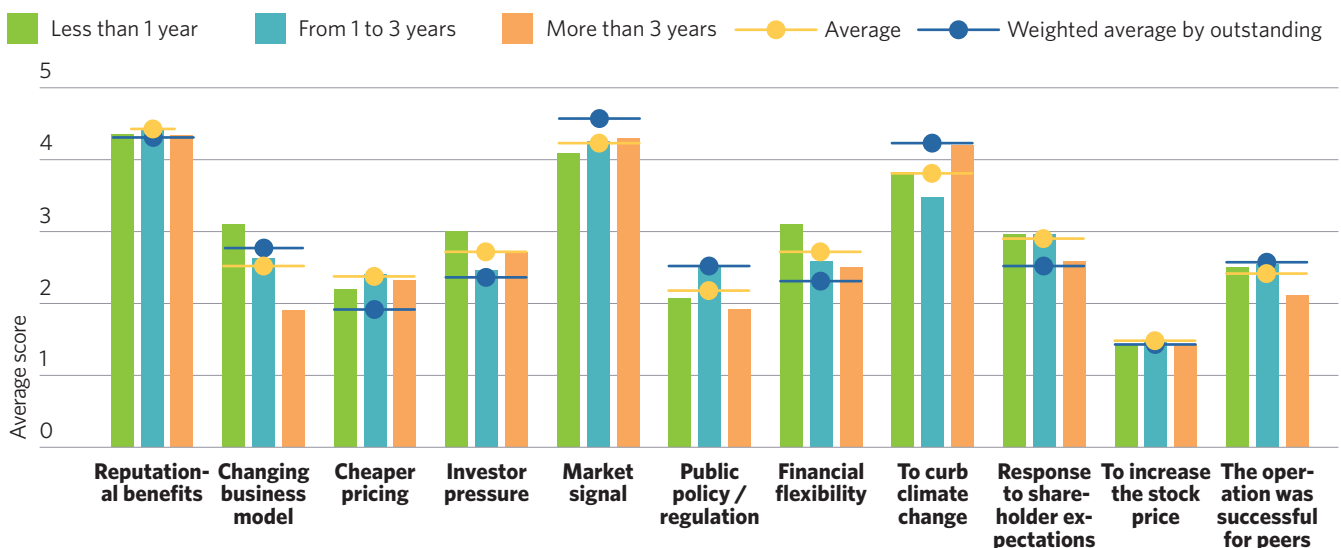
Reputational benefits and market signal were the top motivations for going green

Chart 6 Respondents were invited to assign a score of between one and five to a list of considerations according to what extent each one contributed to the decision to issue a green bond.

Reputational benefits and market signal (4.37 and 4.20 respectively) received the top average scores, followed by a desire to curb climate change (3.8). A green liability franchise can be an effective tool to reinforce all three of these messages.

A desire to increase the stock price ranked

6. Reputational Benefits and Market Signal were the main reasons for issuing a green bond



the lowest (1.44), also receiving the highest number of non-responses, since equity is not part of the capital structure of many bond issuers. Public policy and regulation were rated the second lowest (2.17) again emphasising the potential for regulators and policymakers to support the growth of the green bond market.

When looking at the weighted average of the scores, curbing climate change and market signal seemed to be stronger drivers to consider green bonds for larger issuers, whereas cheaper pricing and investor pressure appeared to be less of a consideration for them. More is at stake for larger issuers: controversy would be relatively more expensive, and therefore the market signal is likely to be a more important driver.

For those that issued a first green bond less than a year ago, changing business model was a stronger driver for issuing green bonds (3.09) than for respondents that had been active in the green bond market for at least three years (1.88). This is possibly because those with more extensive experience of issuing green bonds already have their transition underway.

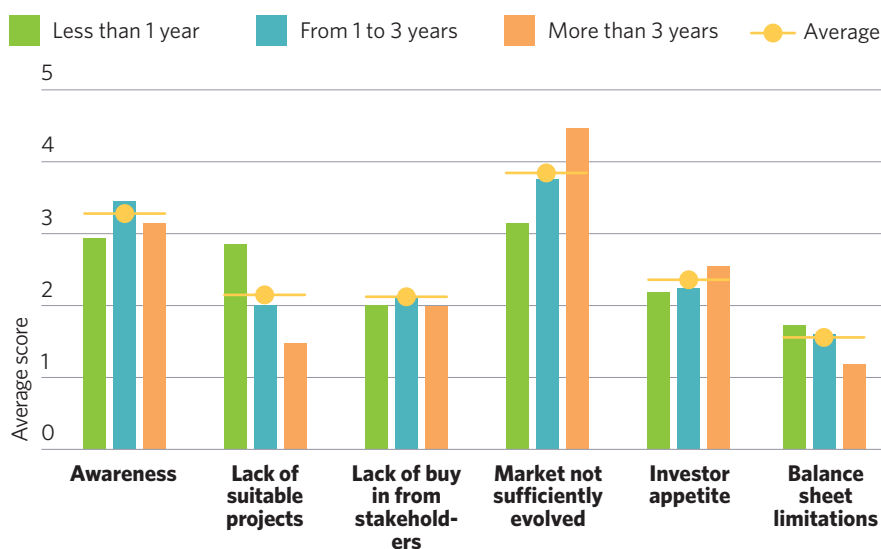
Market evolution a factor for issuers

Respondents were asked to score a range of

Green Tagging refers to a systematic process whereby financial institutions – typically banks – identify the green attributes of their loans and underlying assets as a tool for scaling up sustainable financing. If done successfully, the process enables smoother access to green bond markets by creating a continual pipeline of often relatively small assets that can be packaged into larger debt instruments that the capital markets will accept.

Additionally, it can enable banks to improve the performance tracking of their green loan portfolio, which in turn can contribute to increased transparency of climate risks and portfolio resilience. These capabilities are especially important as disclosure requirements for investors are expected to become more stringent along with the likes of the Taskforce on Climate-related Financial Disclosures (TCFD) and the European Commission’s regulatory proposal on Sustainable Finance Disclosures.

7. Market not being sufficiently evolved was the most popular reason for not having previously issued a green bond regardless of recency



options between one and five to explain why they had not previously issued green bonds. Markets not being sufficiently evolved (3.79) and awareness (3.22) were cited as the main reasons. For larger issuers, these matters were slightly more influential than for smaller ones.

Those that had issued their first green bond three or more years ago assigned an average score of 4.46 to the lack of market evolution. KfW issued its first green bond in 2014 and explained that there was scant awareness of green bonds at the time, an argument supported by other early adopters. IFC elaborated that prior to its first green bond in 2010, investor appetite for the product was extremely niche, and limited to private placement offerings in very small sizes. Those issuing for the first time within 12 months of responding to the survey, assigned an average score of 3.36 to this option. The lack of suitable projects seemed to mainly be a concern for issuers that had brought a first green bond to market in the year prior to the survey (average score 2.83 compared to 1.5 for those that issued at least three years ago).

Related to a lack of suitable projects, several retail banks highlighted difficulties around identifying green assets internally. Mergers and acquisition (M&A) activity can result in multiple legacy IT systems within one organisation making it challenging to search for appropriate assets for inclusion in green bonds, an issue that was set forth by several respondents. Furthermore, green loans may not have been marked as such historically. The implementation of a green tagging system (see box below) can result

in a consistent and clear scoring system for all loans, which can in turn be used to identify projects suitable for green bond financing. More urgently, all organisations should be able to assess the quality of their liabilities from a climate risk management perspective. In this way, the process of issuing green bonds can contribute to better risk management and transparency.

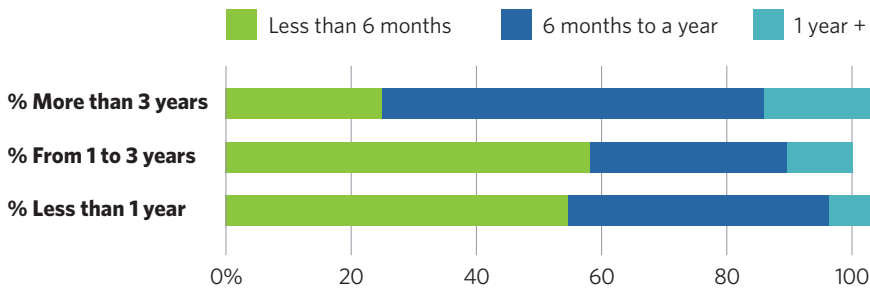
In EM it is the expertise rather than the technology that can present challenges. The legacy software and fragmented systems are not really an issue, but the knowledge and experience needed to identify and track suitable assets is lacking.

Several respondents remarked that they had postponed issuing a first green bond because they had expected the gains to be minimal compared to the costs and time required to complete the process. Such ‘costs’ encompassed commitments around post-issuance disclosure and additional scrutiny by investors. However, these fears were negated once the green bond materialised, and they realised the outcomes were worth the effort.

Deutsche Hypothekenbank brought its first green (covered) bond to the market in 2017. It acknowledged that it is difficult for smaller issuers to create a blueprint and send a signal in a growing market, because of the resources required to do so. It is thus helpful if larger issuers create a precedent for smaller ones to follow.

Issuance Process

8. More recent first time green bond issuers are able to get the deal done in less time



It usually takes less than a year to plan and issue a green bond

Chart 8 The vast majority of respondents (88%) said that the process of issuing a first green bond required less than a year once the decision had been made. Nearly half (47%) said that the exercise took six months or less.¹¹

Those that issued a first green bond more than three years ago needed slightly longer for the process, as indicated by the lower proportion of responses for 'less than six months' (25%). This emphasises the importance of precedent for the growth of the market, with standards and norms being the expected result of market development. The development of well-established practices around key parts of the green bond concept, for example through the Green Bond Principles (including the green bond framework, management of proceeds and post-issuance transparency), has likely benefitted recent issuers. Further, sovereigns and other high-profile issuers with the capacity to sell green bonds at scale can play a role in this process with demonstration issuance going forward, particularly in less developed EM.

DCM desks and SPO providers can help with frameworks

Chart 9 Respondents were asked to name the parties who had guided them on the green bond process and were able to select multiple answers. Sixteen percent said that they had received no external guidance, having internally managed the issuance of their green bonds. Larger issuers (21%), and issuers that have been active in the market for longer (36%), were more likely to manage a green bond issuance without external assistance. In the case of pioneering issuers, this was possibly because there was no infrastructure community to help and they were navigating largely uncharted territory.

An SPO is an assessment of an issuer's green bond framework, analysing the "greenness" of eligible projects/assets. It also establishes whether the framework is aligned with the green bond principles. Most respondents (57%) relied on SPO providers and DCM desks (57%), irrespective of recency of issuance. Some told us that the DCM desks' experience of setting up frameworks and selecting assets had been invaluable in guiding them through the process of issuing a green bond. Others highlighted the

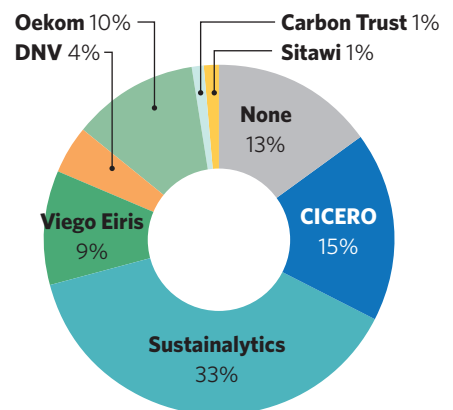
importance of an SPO and obtaining the Climate Bonds Certification in adding credibility and transparency to the project.¹²

Smaller issuers were more likely (36%) to rely on consultants. Half of this category was EM, where the consultant community appears to be very active and able to assist in the process of market discovery and demonstration issues.

Most issuers get an SPO

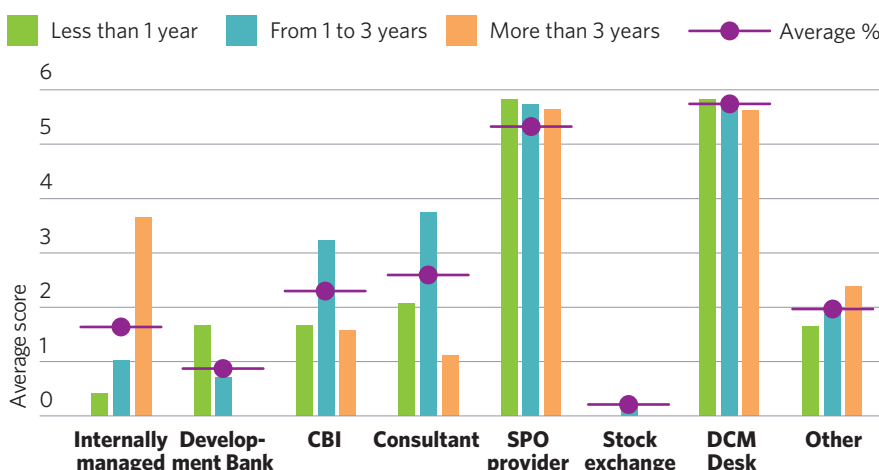
Chart 10 The Investor Survey emphasised the importance of "green integrity". Most (79%) investors said they would not buy a green bond if the proceeds were not clearly allocated to green projects.

10. Sustainability was the most frequently named SPO provider



Over four fifths (85%) of respondents to this survey commissioned an SPO for their first green bond, and a total of seven SPO providers were named. Sustainability was the most frequently chosen external reviewer, followed by CICERO, ISS-Oekom and Vigeo Eiris, respectively. Among issuers that had recently entered the green bond market, Sustainability was the most popular external reviewer, while larger issuers and those that have been in the green bond market the longest relied more heavily on CICERO. This is likely related to many of the first movers coming from the Nordic region, where CICERO has a well-established franchise. Several mentioned the disparities in the methodologies of different SPO providers.

9. SPO Providers and DCM desks provided the most help with green bond frameworks



"An issue for the current market is that there is limited regulation for external reviews - the next step would be to aggregate and standardise how SPO providers operate".

Gerard Kits, Manager Treasury, TenneT

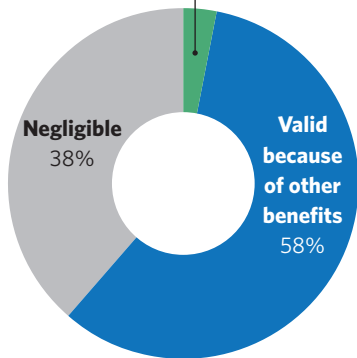
Issuers perceive the extra costs to be valid for reasons other than cheaper pricing

Chart 11 Most respondents (62%) perceived the additional costs, such as those of commissioning an SPO, extra legal costs, and post issuance reporting, as valid because of reasons other than pricing, while 41% described the costs as negligible. Only 4% of respondents said the issuance costs were justified because of cheaper funding. These perceptions do not vary considerably by issuer size or the duration of activity in the green bond market.¹³

Time and effort were regarded as being the main costs rather than the fees linked to direct costs such as SPOs, respondents highlighted a range of benefits to compensate for this. Deutsche Hypothekbank was one of several who said that through their green bond, they gained access to a wider investor base outside the traditional domestic territory.

11. Most respondents said extra issuance costs were valid

Valid because cheaper funding expected 4%



“The green bond label was a stamp of approval for us”.

Sheila Nyachio-Ochieng, Green Ambassador, Acorn Management Services Ltd.

“The extra financial costs of issuing a green bond were negligible. It is the effort, not the cost which is the barrier to entry”.

Kee Chan Sin, Treasurer, Verizon

Vasakronan, among others, highlighted the learning opportunity arising from stakeholder education internally.

Cheaper pricing does not seem to be the primary motivation to issue green bonds. Several respondents asserted that when cheaper pricing was evident, it had been driven by supply demand imbalances which would likely evaporate as supply increased.

Additional issuance costs are frequently cited as a barrier to issuing a green bond. The responses we received to this question indicate that our sample does not believe that to be the case. Even the few that lamented the costs added that they were more than compensated for by gains other than cheaper pricing, which was viewed as “the icing on the cake”.

“Investors were particularly keen to engage with a corporate green bond issuer due to the lack of corporate supply”.

Pasi Kyckling, Group Treasurer, Stora Enso

“Even without cheaper funding, the green bond brought us huge profile benefits and engagement in finance”.

Sakorn Suriyabhivadh, Head of project finance and M&A, B Grimm Group

“The green bond provided us with three clear advantages:

1. Demonstrating our commitment to sustainability to investors
2. Alignment with investors to push the agenda for climate action
3. Avoiding the negative stigma of not being involved in green bonds which, while not currently a problem, will materialise in due course “.

Giorgio Erasmi, Head of Funding, UBI Banca

“Conversations about vanilla bonds tend to revolve around spreads and liquidity, but with green bonds, the discussions are about the transformation of the business”.

Tom Meuwisson, Treasury Manager, NWB

“The in-depth dialogue with investors more than compensates for the extra issuance costs”.

Gerard Kits, Manager Treasury, TenneT

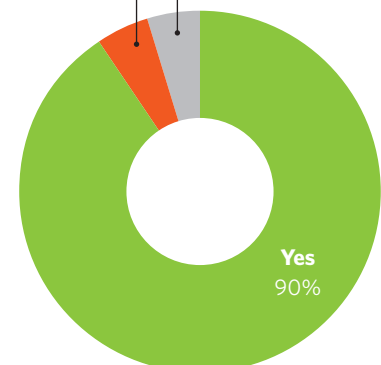
Almost all respondents agreed that green bonds involve deeper investor engagement

Chart 12 Almost all respondents (91%) perceived that green bonds involved more engagement with investors compared to vanilla bonds, and this seems independent of investor size and green bond experience.

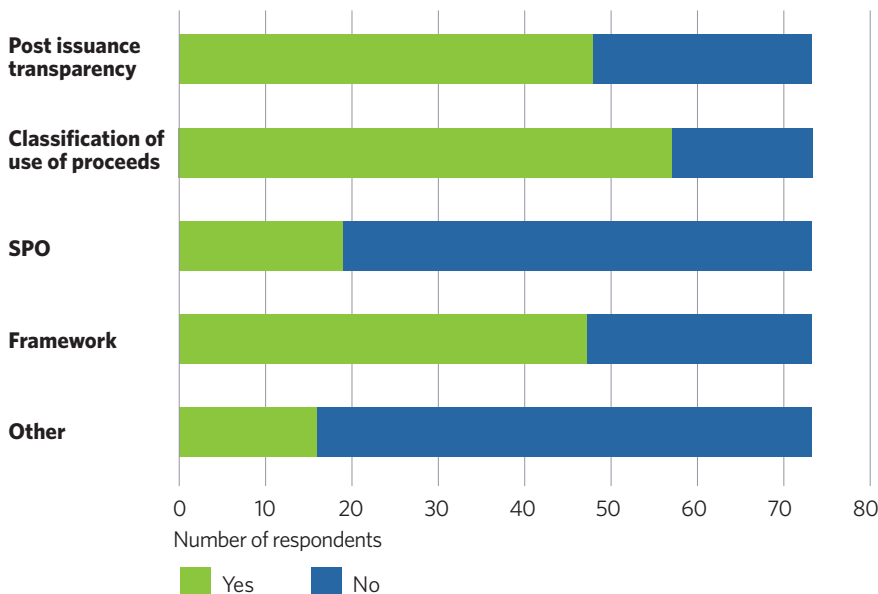
Some told us that they did a more extensive roadshow for a first green bond, and the dialogue resulted in greater understanding of investor perceptions and expectations around the core features of green bonds, such as transparency and disclosure. Generally, green bonds seem to involve a deepening of contact with clients and investors.

12. Green bonds involve more engagement with investors according to 91% of respondents

Same 5%
No 5%



13. Investors wanted more information on a variety of green bond features



Investors wanted more information on use of proceeds and post issuance transparency

Chart 13 Most respondents (57%) reported that investors wanted more information on the classification of the use of proceeds, including details of how the proceeds would be segregated from other funds, as highlighted by Telefonica, among others, in their interview. This was followed by questions around post issuance transparency (48%) and the green bond framework, i.e. eligible asset and project categories (47%).

Classification of the use of proceeds and post issuance transparency were relatively more important issues for those investing in the green bonds of large issuers. Meanwhile, post issuance transparency weighed less heavily for those investing in the bonds of respondents that have been active in the market for more than three years.

This is consistent with increased investor sophistication manifesting as a preference for more transparency, particularly impact reporting (see box). The Investor Survey found that 85% of investors would either sell or be inclined to sell a green bond if post issuance reporting was poor.

Sovereign issuers mentioned they were scrutinised very thoroughly with regards to the government's green strategy. This reflects the relevance of such issuance and can also be seen in other participants' responses to later questions: three respondents explicitly stated that they saw sovereign green bond issuance as a crucial factor that would enhance growth and scale of the green bond market.

A sovereign green bond is the ultimate endorsement for a transition to the low carbon economy.

What is impact reporting?

Impact reporting aims to provide insights into the environmental effects of green bond financing. The objective is to measure changes in the performance of an asset, project or portfolio of projects with respect to a set of relevant indicators. In recent years, several market actors have formed collaborations to create frameworks for reporting on impact in projects and portfolios spanning a variety of use of proceeds sectors.

The earliest of these was initiated by a group of International Financial Institutions (IFIs) in 2015: The Harmonized Framework for Impact Reporting. The International Capital Markets Association (ICMA) has since joined the effort and established a broader Impact Reporting Working Group. The Group has produced reporting guidance for a total of six sectors, the latest addition being Green Buildings. Another well-known example comes from the Nordic region, where a group of public sector issuers came together in 2017 to produce the Position Paper on Green Bonds Impact Reporting. The Paper underwent an update in 2020.¹⁴

CBI conducted research on post-issuance reporting in the green bond market. The analysis, completed in November 2018 and published in March 2019, examined a set of 1,905 bonds and the associated

impact reporting levels and metrics. Most of the frameworks referenced above recommended that issuers report on the impact of financing within one year of issuing the bond. Nearly 80% of bonds were found to have some form of impact reporting in place.

The rate of disclosure has grown at an average rate of 139% since 2010 when the first currently outstanding bonds in the analysed sample came to market. However, the issue of lack of harmonization prevails: the research uncovered more than 50 metrics in the reporting for each of the top three use of proceeds categories (Energy, Buildings and Transport).

In addition to the frameworks listed above, there are efforts underway from the European Commission to help bring consistency and clarity to sustainable finance and the green bond market specifically. This includes the EU Taxonomy, which sets out technical screening criteria for sustainable economic activities and investments, along with the proposed European Green Bond Standard that recommends a uniform process for issuing and reporting on green bonds. We elaborate on both on p. X. Considering this and other developments, Climate Bonds is currently completing an update of our own research on green bond disclosure and impact with publication scheduled for Q4 2020.

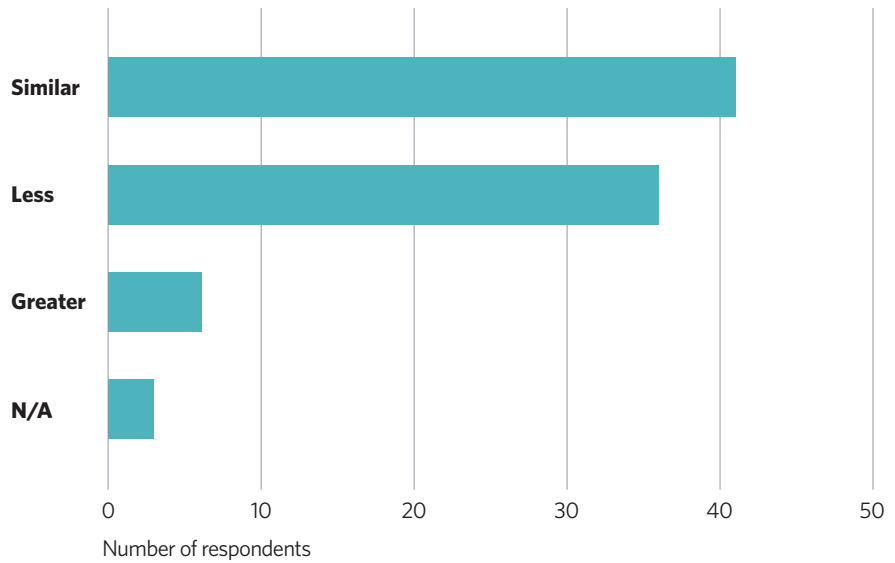
"The French treasury is always engaged with investors, but for the green OAT the dialogue was refreshed to include a broader range of topics".

Alexandre Vincent, Green Bond Manager, French Treasury

The cost of funding a green bond was regarded as cheaper than, or similar to, a vanilla bond

Chart 14 Respondents were asked how the cost of funding for the green bond compared to vanilla bonds. Just under half (48%) told us that the cost of funding green bonds was similar to that of vanilla equivalents, while 42% considered the costs to be lower. For larger issuers, and those with more years of experience in the green bond market, the costs of funding for green bonds were lower than for vanilla bonds. This may relate to spreading the costs of issuing the bond, as well as incurring economies of scale, and possibly achieving a lower interest rate. For example, Berlin Hyp recounted that unique expenses, including the adaptation of IT systems and internal processes, were incorporated into the cost of its first green bond, but the ramifications extended to subsequent issues.

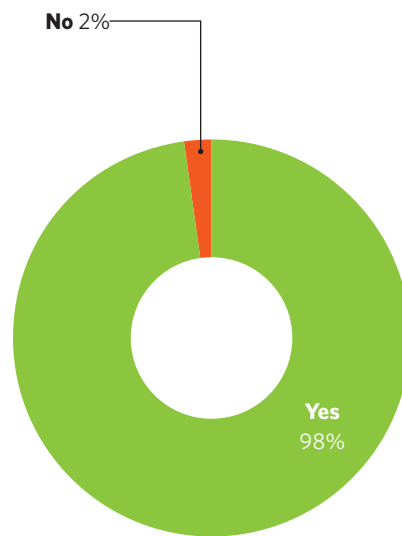
14. Most respondents thought the costs of funding a green bond were similar to or less than a vanilla equivalent



98% said their green bond attracted new investors...

Chart 15 A new investor base is an oft cited feature of issuing green bonds, and 98% of respondents agreed that their green bond attracted new investors. This was particularly helpful for issuers of bonds normally sold to a predominantly domestic investor base. The green label appears to act like a magnet to attract the interest of socially responsible or green investors regardless of domicile.

15. Almost all respondents said their green bond attracted new investors



17% agreed that the demand for green bonds was generally higher. Nearly a third (28%) of the respondents said that they were able to increase visibility and boost their reputation through accessing additional investors. This can lead to more awareness in the marketplace beyond the usual scope, as well as encompassing new geographic regions. The new investor base was something that respondents perceived as an advantage when it came to repeat issuance.

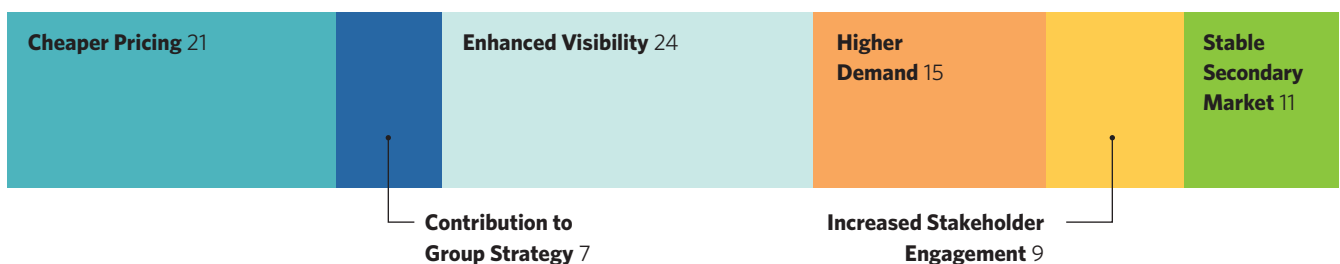
...bringing numerous gains

Chart 16 When asked to describe the value of new investors, the majority (59%) of respondents named a more diverse investor base.¹⁵ Respondents commented that this brought benefits for future financing and enhanced liquidity of the instruments, as well as higher oversubscription levels. The latter may help to secure cheaper pricing, and nearly a quarter of the respondents (24%) stated directly that they perceived this or lower interest rates as a benefit, whereas

The 'stickiness' of green bonds was highlighted by 13% of respondents. Investors tend to hold on to their green bonds rather than selling them. This adds stability to the secondary market, which in turn is attractive to investors.¹⁶

Several respondents declared that green bonds offered exposure to new communities of investors. For example, a traditional EUR issuer sold a green bond in USD. The green label caught the attention of new investors, who as a result, became familiar with the issuer and started buying their vanilla bonds as well.

16. Benefits of new investors



Exchange listing

Green bonds can be listed on any exchange with a bond platform, just like vanilla bonds. As of January 2020, 18 stock exchanges offered dedicated green bond sections, providing additional visibility to the green bond label. Assistance and services vary, but generally stock exchanges can provide guidance and support to issuers. Listing green bonds can offer improved access, flexibility and transparency for investors. Climate Bonds published *The Role of Exchanges in Accelerating the Growth of the Green Bond Market* on this subject in 2017.¹⁷

Issuers can and do list their bonds on multiple exchanges to enable maximum exposure. The green bonds in our sample ranged from zero to 12 listings on 40 different exchanges. Only 14 respondents in our sample did not list their green bond on any exchange.

Name of Stock Exchange	Type of Dedicated Segment	Launch Date
Oslo Stock Exchange	Green bonds	January 2015
Stockholm Stock Exchange	Sustainable bonds	June 2015
London Stock Exchange	Green bonds	July 2015
Shanghai Stock Exchange	Green bonds	March 2016
Mexico Stock Exchange	Green bonds	August 2016
Luxembourg Stock Exchange	Green, social, & sustainability bonds	September 2016
Italian Stock Exchange	Green & social bonds	March 2017
Taipei Stock Exchange	Green bonds	May 2017
Johannesburg Stock Exchange	Green bonds	October 2017
Japan Exchange Group	Green & social bonds	January 2018
Vienna Stock Exchange	Green & social bonds	March 2018
NASDAQ Nordic & Baltics*	Sustainable bonds	May 2018
The International Stock Exchange	Green bonds	November 2018
Frankfurt Stock Exchange	Green bonds	November 2018
Moscow Exchange	Green & social bonds	August 2019
Euronext	Green bonds	November 2019
NASDAQ Sustainable Bond Network**	Green, social, & sustainability bonds	December 2019

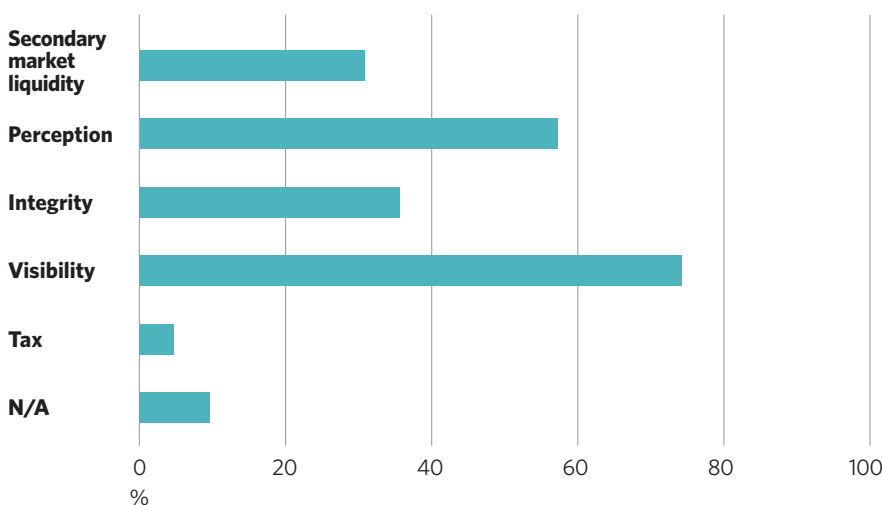
*Nasdaq's joint offering of sustainable debt segments are operated by Nasdaq Europe. Sustainable bonds are currently listed on Nasdaq's sustainable bond markets in the Baltics, Copenhagen, Helsinki, Reykjavik, Stockholm and Vilnius

**The Nasdaq Sustainable Bond Network is not a listing venue but a transparency platform open to all green, social and sustainability bonds meeting its inclusion criteria, regardless of the listing status.

Listing green bonds brings visibility

Chart 17 Respondents were asked to select as many reasons to list green bonds as were applicable, and, in general perceived listing green bonds to be a helpful exercise. Visibility was the most popular choice (74%), followed by perception (of being a green organisation) (57%), integrity (36%), and secondary market liquidity (31%). The integrity refers to the credibility of the bond. Smaller issuers and those that have been active in the green bond market for less time ranked visibility and perception to be relatively more important than the average respondent. Larger issuers viewed secondary market liquidity as a greater benefit of listing green bonds than smaller issuers (41% vs. 18%).

17. Visibility is the main benefit of listing green bonds on a stock exchange

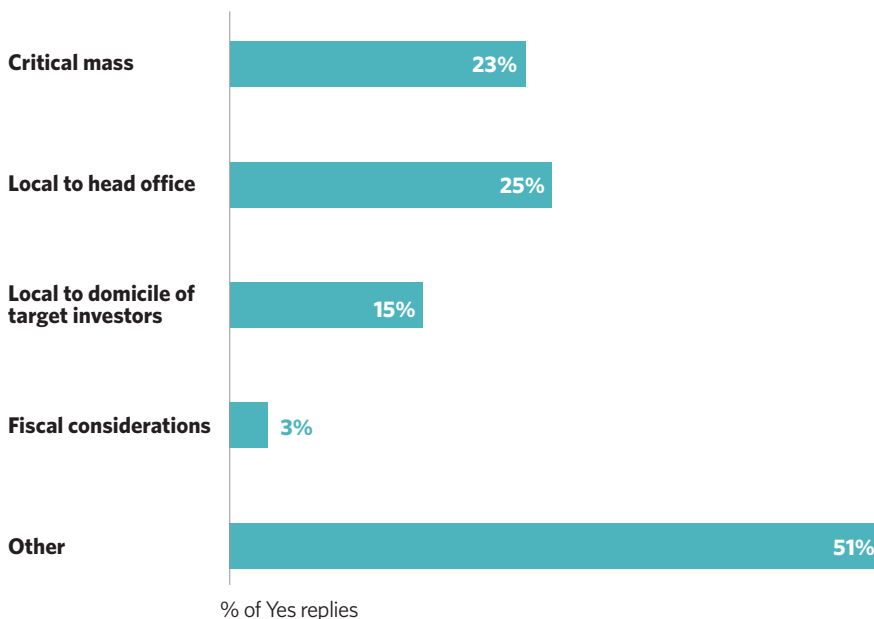


Most actively decided on their listing venue

Chart 18 Most actively decided on their listing venue (64%). This percentage is lower for issuers which only recently entered the green bond market (50%). Respondents were asked to name the criteria guiding the decision and could select as many as were applicable. The most frequently selected reason for having chosen a listing venue was 'Other' (51%). Those who selected this option had stuck with their legacy listing venue. They reiterated that they had done so because they were satisfied with the guidance they received, and the platform afforded good visibility.

Proximity to head office (25%) and critical mass (23%) were the second and third most popular reasons given for choosing a listing venue (and may also explain the original decision in the case of those that selected 'Other'). A very small minority (3%) selected fiscal considerations as a motivation.

18. Criteria guiding the listing venue decision



"If the traditional listing venue offers a green bond platform, it makes perfect sense to use that"

Peter Kammerer, Head of Investor Relations, Landesbank Baden-Württemberg

Choice of listing venue

Just under two thirds (62%) of respondents said that they would not consider changing their listing venue. Smaller issuers were more inclined to consider changing it, mainly for better visibility among their target audience. Responses to this question, and the high number of respondents stating that they stuck with their legacy venue in response to the previous question, suggest that the choice of listing venue tends to be long term.

Liquidity is important to green bond issuers

Respondents were asked whether they cared about the level of liquidity of their green bond in the secondary market, and 70% indicated that they did. This percentage was greater for larger issuers (82%). Several respondents observed that vanilla bonds offer scant liquidity, and green bonds trade even less since they are mainly bought by "buy and hold" investors. NWB added that the liquidity is one sided: selling a green bond is easy, buying one, less so. Within this context, issuers try to do everything they can to ensure their bonds are as easy to buy and sell as possible, and this may include listing them on stock exchanges.

What is liquidity?

The concept of liquidity is relative and difficult to measure but generally describes the ease with which one can buy or sell securities without causing large price fluctuations in the market.

The illiquid nature of many non-sovereign bonds can be because bonds are limited in size, but share similar characteristics such as duration, credit rating, sector or seniority, and are therefore interchangeable.

Bonds are usually most active in the first month post issuance. Liquidity then severely diminishes as investors hold onto the bond either until there is a credit event, or until the bond is called or matures. For green bonds, this is further exacerbated by supply and demand imbalances. Some investors cannot buy bonds on the secondary market

unless they are listed on at least one stock exchange. Not listing could limit liquidity to the degree that green bonds trade on the secondary market, however, this particular is not exclusive to green bonds.

There is evidence to suggest that even during periods of volatility when investors need to liquidate some of their assets, green bond prices remain steady compared to vanilla equivalents. Jason Mortimer (Nomura Investment Management, Tokyo) conducted research on this subject and concluded that the green label does indeed offer downside risk protection. A short summary of Jason's research was featured in Climate Bonds Pricing Paper July-December 2018.¹⁸

Post Issuance

Green bonds experienced higher demand compared to vanilla

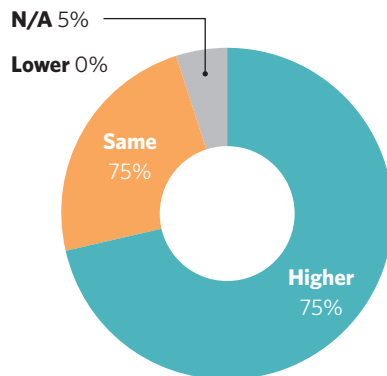
Chart 19 Seventy percent of respondents stated that the level of demand for green bonds was higher than the demand for previously issued vanilla bonds, while 25% said the same, and 5% were N/A (those responding did not have access to that data point). None of the respondents related that they received less interest in its green bond compared to vanilla equivalents. These findings are supported by the Climate Bonds Green Bonds Pricing in the Primary Markets research (Pricing Papers) which has monitored green bond pricing since 2016. The Pricing Papers state, that in general, green bonds tend to be more oversubscribed and experience greater spread tightening during book building compared to vanilla equivalents.¹⁹

The green bond demand was reported to be higher by issuers in the market for less than a year, and marginally, by larger issuers. The results of the Investor Survey highlighted that European investors wanted to buy more green bonds of all types, and in that context, this finding is unsurprising. European investors are currently more engaged than those in other regions, but the low supply of green bonds means that the increased demand extends to all markets.

On average, half of green bonds were allocated to green investors

Chart 20 Green bonds are boosted by a unique source of support in the form of investors having either dedicated green bond mandates or a sustainable investment bias. Non-dedicated investors have no reason not to buy green bonds in principle. Further, larger green bonds are eligible for inclusion in benchmark bond indices, meaning that mainstream investors will also be obliged to look at them.

19. Most respondents said demand for their green bond was higher than their vanilla bonds



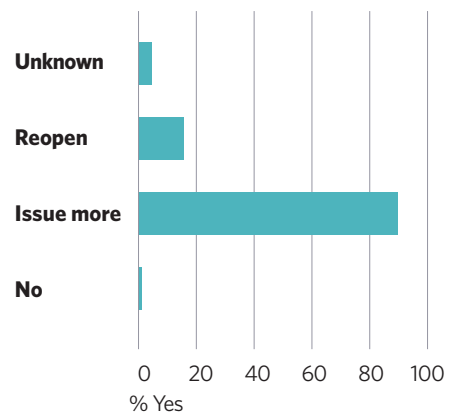
Respondents told us that, on average, 50% of their green bond deals were allocated to investors with an explicit green mandate and this proportion increased with issuer size. The numbers given ranged from 100% to 5%. Again, this is supportive of the findings in the Pricing Papers, which conclude that as of mid-2019, on average, 53% of green bonds were allocated to investors describing themselves as green.

Sixty respondents were able to provide an answer to this question. The remaining 26 either didn't know the precise numbers or were not confident with sharing the data because of a lack of clarity about the definition of a "green" investor. IFC noted that when it issued its first green bond in 2010, the concept of categorizing investors as "green" or "ESG investors" was not the standard.

It was a nascent reverse enquiry driven product at the time. However, two respondents declared 'the majority' and another two asserted that 'a significant proportion' was allocated to green investors.

Giving preferential allocations to green investors can enhance the visibility of a green bond. Some, including SBB, said that they prioritised green investors when issuing green bonds.

21. Most respondents plan to issue more green bonds



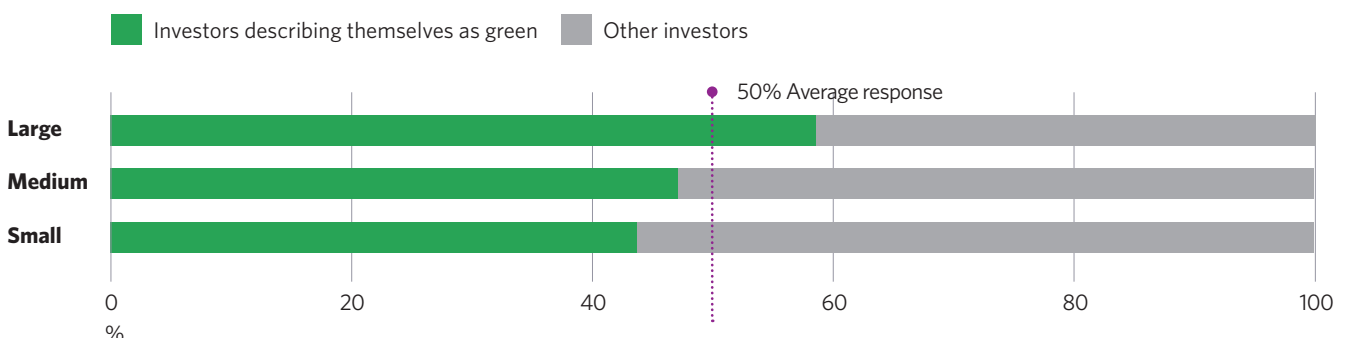
"We have a commitment to sustainability and green capex and financing, and therefore to green investors. It is also worth noting that these investors provide more stability in the secondary market".

Joseba Mota, Head of Fixed Income and SRI, Investor Relations, Iberdrola SA

Most respondents plan to issue more green bonds

Chart 21 Most respondents plan to issue more green bonds (88%), while 15% stated that they will reopen existing green bonds. Only one respondent explained they neither wanted to issue more green bonds nor reopen its existing one, because it had decided to issue under a different label (see box on PAGE XYZ). This gives credence to the fact that issuing a green bond is a positive experience for the issuer. Forty-eight out of 86 respondents have already issued more than one green bond and seven reopened their first bond. Those in the unknown category cited a current lack of suitable assets as a barrier to committing to further issuance.

20. Deals issued by larger respondents were allocated to a higher percentage of green investors

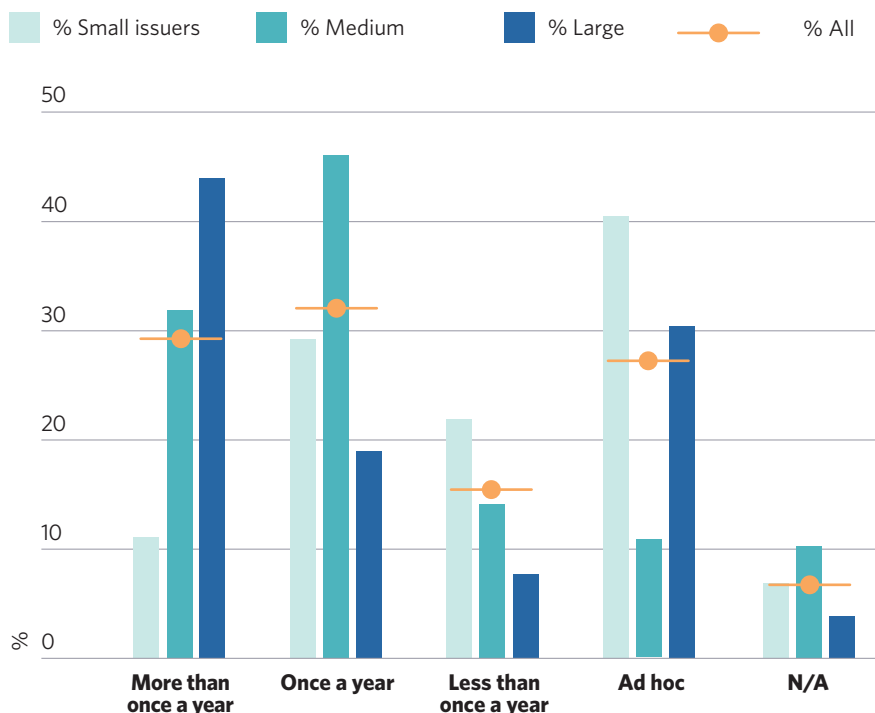


Larger issuers expect to issue green bonds more often

Chart 22 Larger issuers (44%) and those with more than three years of experience in the green bond market (48%) would be more likely to issue green bonds more than once a year. Smaller issuers with less experience seem to be more inclined to issue green bonds ad-hoc (41%). Overall, the lowest frequency for repeat issuance was less than once a year (15%) which, as one would expect, was a more popular option for smaller respondents. Some divulged they had plenty of qualifying assets already on their books that could be refinanced, while others said that the frequency of repeat issuance was contingent on green asset production. For others, issuing green bonds extended green asset production because as a result of issuing a green bond, were invited to support more opportunities.

For sovereign issuers running a surplus, the management plan of a green bond is more complicated. Bond investors rely on sovereign bonds to fill a large part of a broad market fixed income portfolio, and liquidity/size are critical. If there are enough suitable green projects, reopening may be a better solution for a sovereign since this can be done in smaller increments without fragmenting the yield curve. For example, the Green OAT (French sovereign) was issued in January 2017, and by February 2020 had been tapped eight times reaching EUR22.6bn outstanding (USD23.3bn).

22. Most respondents plan to issue green bonds at least once a year



“The green bond programme is in itself a business development outreach. Knowledge of it leads sponsors to create new eligible projects”.

Denise Odaro, Head of Investor Relations, IFC

“Sustainability is a significant part of Danske Bank’s strategy and our ambition is certainly to be a recurring issuer in the green bond market”.

Jonas Wikfeldt, Senior Funding Manager, Danske Bank

Sustainability

Perceptions of integrated sustainability varied in intensity

Respondents were asked to describe their perception of integrated sustainability. The sample included organisations of which the core activity is “green”, such as Renewi, and those that were established without sustainability goals, but most of which seem to be shifting both the business model and strategy towards that of a sustainability-oriented company. The respondents described a variety of perceptions of what integrated sustainability means, ranging from sustainability being a feature add-on, to having individual green business lines, and ultimately to the integration of sustainability considerations into every business decision.

Respondents described different degrees of integration. However, the consensus was that sustainability is becoming increasingly important. This is not just because stakeholder groups other than investors are pushing companies to integrate such factors in business decisions but also because organisations acknowledge that a company with a sustainability focus may constitute a less risky and more future-proof investment. Enel said that they believe a sustainable company is less risky compared to one that takes a different approach.

“Finance got more involved in the business; the business learned more about what was suitable for green financing”.

Roland Metzler, Head of Group Finance and Tax, Encevo S.A.

In terms of green bonds, some respondents explained that they were an expression of an existing sustainability commitment and some stated that the process of issuing a green bond reinforced it. For instance, Zürcher Kantonalbank has offered preferential loans to energy efficient green buildings since 1992, and the green bond spotlighted these efforts.

EBRD explained that organisations don’t have to be sustainable immediately, they should have embarked on the journey and have articulated a credible plan to achieve sustainability. This is consistent with the emerging trend that companies should start transitioning from brown to green business lines, while acknowledging that this will take time. Sparebank described how its traditional lending business was linked to the oil industry; green bonds offered an opportunity to transition to green lending and de-risk its business.

Furthermore, two respondents stated that there is a misconception in the market that sustainability costs are “additional”. Many argue that integrating sustainability is a part of risk management and leads to closer collaboration internally. A fair share of respondents stated that it involved additional work but most thought it was worth the effort.

Green bonds positively impacted commitment to sustainability

Asked whether the green bond had impacted the internal commitment to sustainability, 77% of respondents replied that it had. This percentage rose to 96% for smaller issuers.

Generally, respondents recounted that the green bond had enhanced or consolidated the internal position on sustainability, spreading understanding across various departments and enabling them to learn more about how they can contribute. Encevo stated that through the preparation of issuing a green bond it identified existing assets that it had not known could be financed under such a label. Others mentioned that the green bond encouraged them to think about future projects through a sustainability lens. This point is in fact critical, as the process of issuing a green bond offers an educational experience, giving issuers the motivation to audit what is being done, resulting in a deeper understanding of the business. This enhanced internal commitment also extended to emphasising sustainability to a broad external audience. Several lenders that we spoke to mentioned that the green bond motivated them to design green lending products. Berlin Hyp stated that it is cheaper to finance green rather than conventional buildings because green loans are less risky. In 2016 it issued a USD650m green bond, and by December 2019, its green issuance programme had risen to USD4.5bn.

Among those that said no, several, including the French Treasury and Credit Agricole, observed that its strong commitment to sustainability and the environment had resulted in the green bond, not the other way around. Credit Agricole described this commitment as part of its mission to have a societal impact. Others, such as the Nordic Investment Bank related that its decision to issue a green bond had been taken to enhance its business, rather than transform it.

Green bond issuance and organisational commitment to sustainability seem to be inextricably linked. If policy makers wanted to encourage organisations to be more sustainable, one option could be to insist that all bond issuance be green.

“Our commitment to sustainability was strong due to the nature of our business. The green bond improved this commitment”.

Adam Richford, Treasury and Investor Relations, Renewi Plc

“Our ambition is to be regarded as a green issuer rather than just an issuer of green bonds”.

Enzo Soi, Funding Manager, KBC Group NV

“Our green mortgage – a first in the UK – was launched after the bond was issued”.

Billy Suid, Head of Securitisation and Secured Funding, Barclays

“It was our commitment to sustainability that led us to issue green bond and act as a corporate pioneer in this market but indeed green bonds have contributed to spread the sustainability agenda”.

Philippe Meunier, CSR manager, ENGIE

“We now offer green loans to customers”.

Philipp Bank, Funding & Investor Relations, Deutsche Hypothekenbank

“Issuing a green bond has shown clients and investors that our commitment to sustainability is serious”.

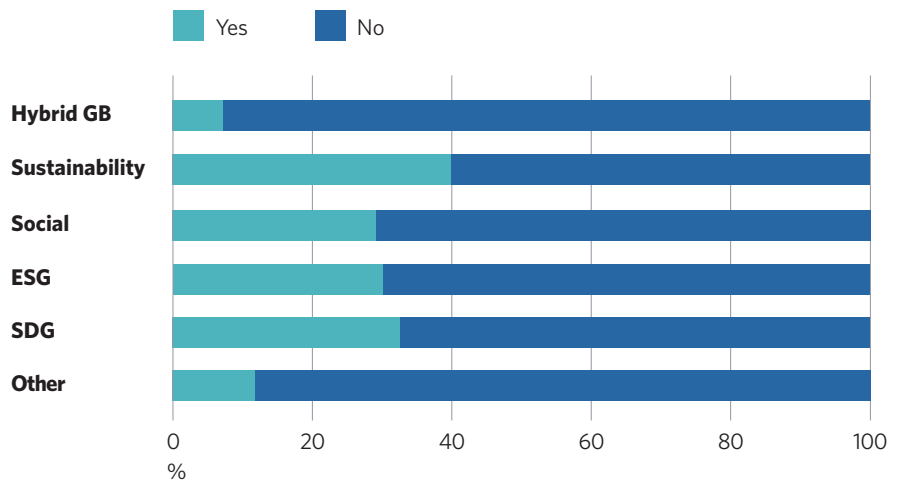
Janice Daly, Head of Sustainable Finance, LeasePlan Corporation N.V.

Moving the market forward

Other labels are growing in popularity

Chart 23 Sustainability and social bonds have been around for several years, but since 2018 the number of sustainability related bonds with labels other than green has gained momentum. A quarter of the respondents indicated that they were not considering other labels, either because they didn't have suitable assets to do so, or because they felt that the introduction of other labels could lead to the fragmentation of a growing market. Among other labels, sustainability was the one that issuers suggested they would be most likely to consider (40%) and was preferred by smaller green bond issuers (52%). Larger issuers expressed a preference for social bonds (52%). Six respondents related they had the assets to fill all the categories and may explore them at some future unspecified time but that it was not on their current agenda. A further one nominated resilience bonds. Anecdotally, at least a dozen respondents lamented that they may struggle to find enough assets suitable for green bonds straight away. However, they did have assets that would fit under other labels, and that they may thus be inclined to explore those labels.

23. For respondents considering other labels, sustainability was the most popular



“The green bond market is based on generally accepted standards and provides transparency to investors to better allocate their funds and the ability to measure their contribution to sustainability”.

Joseba Mota, Head of Fixed Income and SRI, Investor Relations, Iberdrola SA

“If regulators want to preference green bonds, standardisation with flexibility will be needed to determine what is and is not green”.

Peter Kammerer, Head of Investor Relations, Landesbank Baden-Württemberg

Standardisation was preferred

Chart 24 Most respondents prefer standardisation of definitions, taxonomies, and reporting to ensure the integrity of the green label, with a higher preference expressed by least experienced issuers in the green bond market. However, respondents pinpointed standards as having the potential to both support and impede the growth of the market.

Several respondents remarked on the reputational risks associated with issuing green bonds. Strict definitions could expose issuers to more rigorous scrutiny,

thus enhancing the reputational risks of issuing green bonds. There were also fears that if too strict, standards could limit the choice of assets suitable for inclusion in green bonds particularly in EM. On the other hand, for smaller issuers with less experience, guidelines, definitions, and standards would help minimize some of the reputational risks. In general, all issuers appear to be making best efforts to contribute to the transition to a low carbon economy and perhaps this input could be recognized in the form of tax or other support from governments.

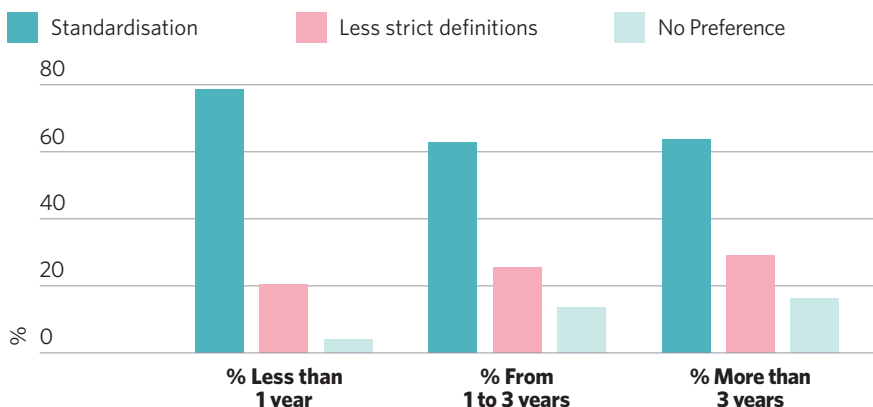
When investors were asked the same question as part of the Investor Survey 48% preferred stricter definitions, 31% preferred broader definitions, and 21% did not have a preference. Among those, many explained that they would like broader definitions to scale up the market followed by a progressive tightening as the market becomes larger.

Regulation and investor demand would grow the market

Respondents reflected that regulation of green bonds would improve the market, and standards would simplify such regulation. In terms of quantifiable advantages, tax incentives were perceived as useful by a few, along with a pricing advantage compared to vanilla instruments, which many issuers would welcome in order to justify the invested resources.

Investor demand was perceived as a factor that could increase the growth and scale of the green bond market. Duke Energy asserted that clear expectations from investors would help issuer confidence. Another issuer considered that disclosure on green and non-green holdings (perhaps encompassed by TCFD) by investors would be beneficial for market developments as well.

24. Standardisation is preferred by respondents regardless of experience



The wider labelled bond universe

Climate Bonds support the Sustainable Development Goals (SDGs) and see green bond finance can directly contribute to achieving specific SDG outcomes, especially SDGs 6, 7, 9, 11, 13, 14 and 15.



However, Climate Bonds remains focused on green bonds, which are specifically linked to climate change mitigation, adaptation and resilience. Consequently, the proportion of proceeds allocated to social projects which are not also green may not exceed 5% for inclusion in the main Climate Bonds Green Bond Database. As of the end of December 2019, labelled instruments that focus on contributing to non-climate related SDGs amounted to 85.1bn USD. ²⁰ **Chart 26**

With the growth of the sustainable finance agenda, the labelled bond market has diversified beyond green bonds. The issuance of sustainability and social bonds has accelerated since 2018. SDG bonds have emerged as issuers and investors have started adopting policies and strategies linked to the UN's 17 Sustainable Development Goals. More recently, some issuers have labelled their bonds or loans sustainability- or SDG-linked. As opposed to the traditional use-of-proceeds model where funding is earmarked to specific green and/or sustainable assets or projects, the cost of funding for such instruments is reliant on sustainability improvements at the organisational level. This could involve, for example, a company committing to improving its Environmental, Social and Governance (ESG) rating by a specific margin or meeting greenhouse gas emission reduction targets within an agreed timeframe. A prominent example of this type of issuance came from global energy provider Enel, which issued "General Purpose SDG Linked Bonds" in September (in US dollars) and October 2019 (in euros). The bonds coupons are subject to Enel meeting a "Renewable Installed Capacity Condition", i.e. having at least 55% of its installed energy

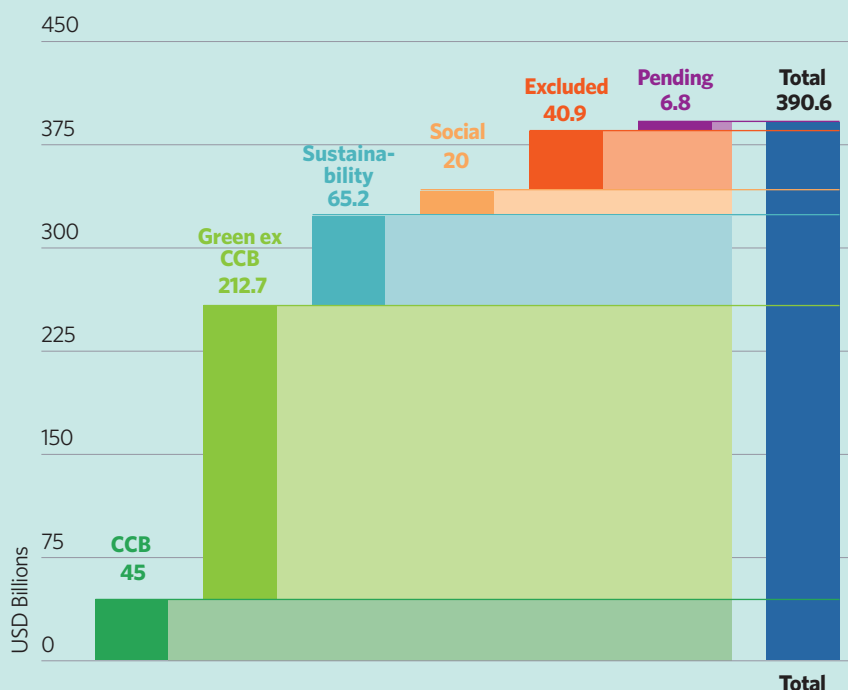
generation capacity from renewable sources by the end of 2021 or, in the case of the 2034 tranche of the EUR bond, 125 g/KWh direct Green House Gas Emissions by 2030, as confirmed by an external verifier. If the company fails to meet the target, the interest rate of its debt will be revised upwards by 25 basis points.

Additionally, the market has seen the appearance of labels that address more specific agendas within the environmental financing space. A prominent example of this are blue bonds, which target the sustainable use of ocean resources. They first emerged with the launch of the Sustainable Blue Economy Finance Principles by the European Commission and UNEP FI in 2018. The Republic of Seychelles was the first globally to issue a blue bond in October 2018. The proceeds were allocated to financing the expansion of Marine Protected Areas (MPAs), improving the governance of fisheries and facilitating the development of the Seychelles' blue economy.

bring clarity to eligible assets and projects in such financing, as well as the need for the bond issuance to be accompanied with adequate transparency and disclosure around organisations' transition strategy and associated decarbonisation targets and timeframes.²¹ Climate Bonds is also undertaking work in this area in 2020 and beyond in partnership with Credit Suisse.

Beyond climate change mitigation, adaptation and resilience are becoming more prevalent in the discussion around sustainable financing needs globally. Climate Bonds published the Adaptation and Resilience Principles in September 2019.²² That same month, the European Bank for Reconstruction and Development (EBRD) became the first institution to issue a Climate Resilience Bond in line with the guidance in the Principles. The bond's proceeds fall under three broad categories that the bank can match with its USD7.7bn equivalent pool of climate-resilient assets, including infrastructure (e.g. water, energy, communications

26. Labelled issuance



Other themes that are emerging include so-called transition bonds, which are aimed at issuers that operate in 'brown' industries today but have the ambition to transition to green. This includes firms which lack enough green projects and assets to finance using labelled green bonds. AXA IM published proposed Transition Bond Guidelines to help

and urban infrastructure), relevant business and commercial operations; and agriculture and ecological systems. Examples of eligible projects include water irrigation infrastructure in water-stressed areas (e.g. Morocco) and resilience-specific upgrades to a large hydropower plant in Tajikistan.

A **taxonomy** is a classification system which, in the context of green bonds, is applied to sustainable economic activities. Current taxonomy development involves harmonising a list of eligible green and sustainable assets and metrics across the market with the aim of providing guidance to both issuers and investors in the relevant jurisdiction.

In December 2016 the European Commission established the **High-Level Expert Group (HLEG)** on Sustainable Finance to propose measures that could be taken to mobilise capital for sustainable investments.

One of the recommendations was to establish an EU Taxonomy of Sustainable Finance to provide a common framework for investor disclosure, sustainable financial products and the green bonds market.

HLEG recommendations formed the basis of the European Sustainable Finance Action Plan, which was adopted by the Commission in March 2018. To develop key regulatory proposals under the Action Plan, including drafting a Taxonomy, the Commission convened a **Technical Expert Group (TEG)** on Sustainable Finance. The TEG published a draft taxonomy for consultation in June 2019; In December 2019

the European Parliament, member States and the Commission reached agreement on implementation of the Taxonomy.

The first set of technical screening criteria were issued in March 2020 and will enter into force by December 2021. These will cover activities that make a substantial contribution to climate change mitigation and adaptation.

The EU Taxonomy on Sustainable Finance will comprise performance criteria for assessing the performance of an economic activity to the following six areas:

- Climate change mitigation
- Climate change adaptation
- Sustainable Use and Protection of Water and Marine Resources
- Transition to a Circular Economy, Waste Prevention and Recycling
- Pollution Prevention and Control, and
- Protection and Restoration of Biodiversity and Healthy Ecosystems

In order for an activity to qualify, it must make a substantive contribution to at least one of the six objectives and can **“Do No Significant Harm (DNSH)”** to the others. Activities must also be carried out in compliance with minimum social safeguards to ensure a just transition as well as complying with specific technical screening criteria.



Insufficient opportunity could be an obstacle to growth

The lack of eligible assets was highlighted as an obstacle by 15 respondents. Further, where there were sufficient assets, several banks noted that IT infrastructure needs to be updated in order to be able to adequately monitor what could be identified as a green asset. UBI Banca pointed out that the financial flexibility of the bank can be limited through a green bond since the proceeds cannot be used for repurchase agreements or collateral.

Many respondents viewed enhanced awareness and reputation as beneficial, which is difficult to quantify. Hence, not easily measurable benefits stand against the cost for issuance including annual reporting. A tangible pricing benefit would allow issuers to justify the investment.

“A lack of suitable assets could hamper growth of the green bond market. In Germany, no more than 2% of new buildings are green. The real economy needs to become green for the green bond market to grow”.

Peter Kammerer, Head of Investor Relations, Landesbank Baden-Wuerttemberg.

Respondents advise other treasurers to simply “do it”

Overall, issuing a green bond is perceived as beneficial and most respondents recommend any treasurers considering taking the plunge to simply “do it”. They agreed that the advantages outweighed the effort and costs that accompanied

green bond issuance. Some did stress that there was additional work, which required resources and commitment, but this also offered a learning process. Those same respondents emphasised the importance of this process culminating in a robust framework. Post-issuance reporting should be considered from the beginning and well-thought through in advance. At the same time, the involvement of different parts of the organisation was considered crucial. Respondents stated that they got in touch with experienced issuers or had been, in turn, approached by others who were seeking advice. In addition to that, they stressed the importance of the sequence of the issuance process: the assets and projects should be in place first, and after that funding could be sought. Altogether, the process should be kept simple.

Conclusions

The results of this survey indicate that issuing green bonds is a positive experience for an organisation.

There are multiple benefits beyond pricing, which encourage issuers to return to the green bond market and consolidate their reputation as an organisation committed to a sustainable future.

Issuing a vanilla bond is business as usual. Issuing a green bond presents an opportunity for an organisation to thoroughly review its business model, tighten up areas such as IT systems and transparency, and prepare for a low carbon future. Even if an organisation did start off with the idea of using a green bond as a marketing tool, it would very soon become aware that the results are so much more penetrative. Most organisations have sustainability sections on their web sites, or in their annual reports or produce a sustainability report. A green bond is an opportunity to demonstrate to the capital markets that the commitment is serious and supported by thorough review of internal practises required for pre and post issuance reporting. Despite additional monetary costs and time investment, the exercise of issuing a green bond is widely perceived as valuable due to enhanced visibility and higher engagement with stakeholder groups.

The bond market appears to reward issuers for this effort, through willingness to buy the resulting bond and support the transition to a low carbon economy. Cheaper funding could unfold on a more consistent basis in the medium term at least until supply can meet demand, and hence offer even greater motivation for issuers to preference green projects. However, for the time being, cheaper pricing was not laboured as the main benefit.

Respondents highlighted two main business opportunities that arose as a result of having issued green bonds:

1. Platform to attract further opportunities: a green bond is a signal that the issuer is engaged in green activities. Respondents said that after they had issued a green bond, they were actively offered more opportunities to get involved in green projects.

2. Green bonds have inspired banks to offer green mortgages and green loans to clients. Notwithstanding the fact that green projects are few and far between, perhaps the availability of cheaper financing will encourage more green projects.

Organisations stated that going through the process of issuing a green bond reinforced their “green commitment”. At times, green business lines are developed on the back of issuing a green bond. Hence, issuing a green bond can be both, the initiator of becoming green(er) or the result of having considered climate-related risks in the past.

Larger issuers tend to have been active in the market for longer than the smaller ones. This is promising – larger organisations with more resources and projects, are leading by example and helping to determine the market standards as they should be.

If issuing green bonds adds as much value as respondents claim, and the investor demand remains robust, issuers will likely be encouraged to actively seek out green assets as some are already doing. The shortage of green assets was highlighted by respondents

as a potential barrier to market growth, but as the transition to a low carbon economy becomes more pervasive, suitable projects will no doubt become more commonplace.

Despite the positive sentiment, there is still huge potential to convert to green assets and scale up the green bond market as also stated by our ‘Bonds and Climate Change: The State of the Market 2018’ report which highlighted issuers that could potentially issue green labelled debt based on the “greenness” of business lines.²³ Even though the green bond market saw rapid growth over the past years (USD774.9bn cumulative issuance at the end of 2019 compared to only USD36.8bn at the end of 2014), as of December 2019, green bonds still constitute less than 1% of the USD100trn bond market.²⁴ Most issuers view the development and enhancement of standards as well as more tangible benefits as the main factors that can lead to an expansion of this market.

Issuers contemplating green bonds and having access to the relevant assets to support the debt should not hesitate to issue. The results of the Investor Survey emphasised the need for more green bonds of all types. This survey provides solid evidence from 86 organisations that issuing green bonds is a transformative and satisfying experience for the issuer and beneficial for the overall business from a reputational as well as a risk management perspective.

The motivations for issuing green bonds including visibility, reputation, and a broader investor base all appear to be satisfied in doing so. Support and guidance is available from numerous sources including but not limited to NGO such as Climate Bonds, investment banks, third party SPO providers, development banks and stock exchanges with green bond segments. The overwhelming advice from those that have taken the plunge is simply “do it”.

Appendix 1: Methodology

Survey respondents

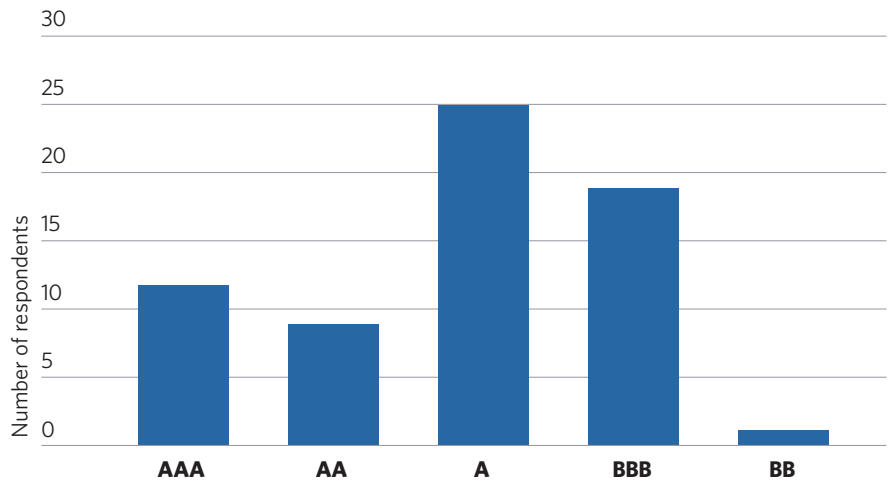
Treasurers (or equivalent roles) of green bond issuers were invited to join the project. Issuers were selected from the Climate Bonds Green Bond Database. The intention was to create a diverse sample, with representation from EM/DM, a broad range of countries of economic risk, industries, and credit ratings.

143 green bond issuers were approached

- 86 green bond issuers participated in the project
 - 71 participated in a full telephone interview of approximately 40-minutes to discuss their responses to the questionnaire
 - 15 completed and returned the questionnaire, and were sometimes contacted for more information or clarification
- 8 declined and,
- 48 either did not respond or were unable to commit to an interview before the deadline.

The overall response rate was 60%. The sample of respondents broadly matched the characteristics of the Climate Bonds Green Bond Database in terms of market split. There were some differences in the regional split, the most prominent discrepancies being the over representation of Europe, and the under representation of the US. China was not considered, and Fannie Mae, the largest green bond issuer in the US, did not respond, and was thus excluded from the 'market' numbers used for the below charts.

A1. Credit rating category of respondents



There was no restriction on credit rating, and the sample included high yield and investment grade rated issuers.

The ratings of the last green bond issued by the respective entity were identified. The first source was the Bloomberg Composite Rating, and where this was not available, individual rating agency data was used. Ratings were available for 66 out of 86 bonds ranging from AAA to BB.

At the time of data collection, collectively these organisations had issued 686 green bonds. The bonds issued by these entities mainly financed projects in the buildings (USD64bn) and transport (USD36.5bn) space. Water, waste and land use accounted for USD14.4bn, USD8bn and USD13bn respectively. Industry projects contributed USD0.2bn and USD7bn were not allocated at the point of issuance.

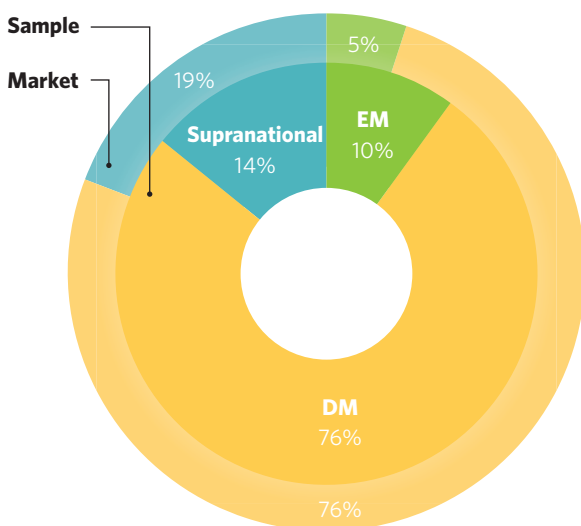
Survey design

The questionnaire included 32 questions and was designed to capture details of the broad experience of issuing a green bond from the motivation, to ideas for moving the market forwards. Twenty-six of the questions were closed responses, the rest open ended.

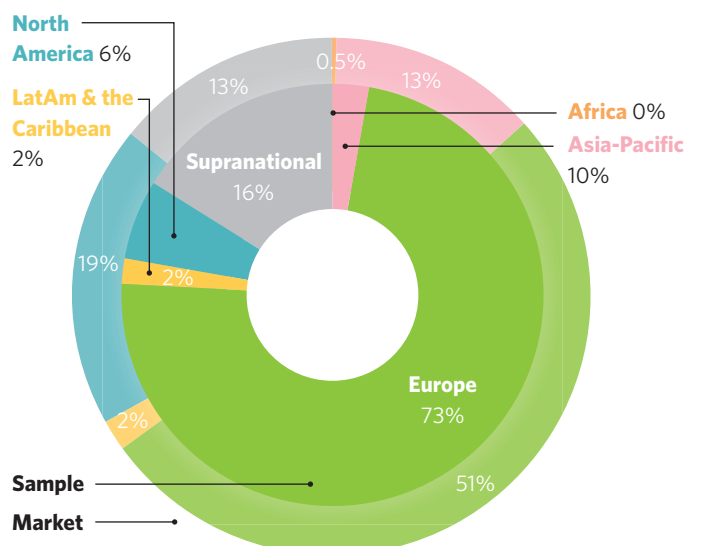
Data collection

Participants were approached between May and November 2019, with all interviews concluded by November 29th, 2019. Respondents participated in a telephone discussion during which the questions were answered, and responses discussed. The questionnaire was seen in advance to enable respondents to prepare. For the 15 respondents who could not, the questionnaire was completed and returned.

A2. Market type: Sample vs. Climate Bonds Green Bond Database



A3. Country split: Sample vs. Climate Bonds Green Bond Database

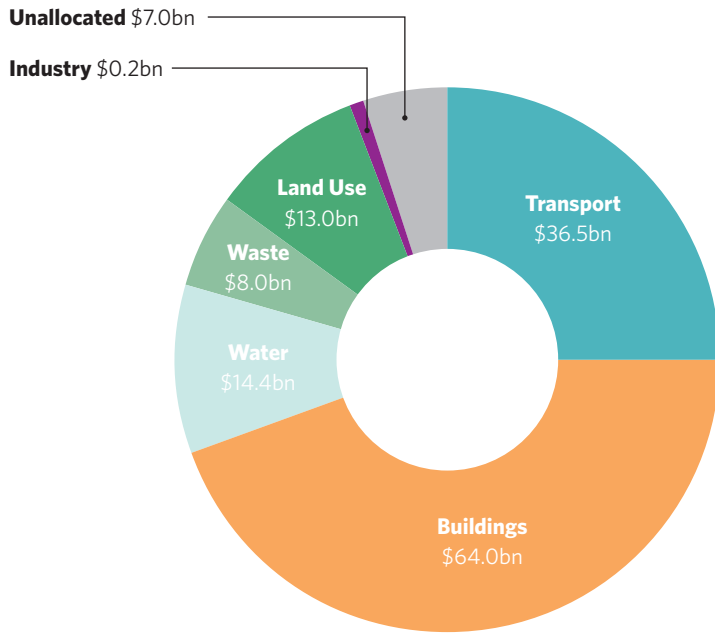


Data analysis

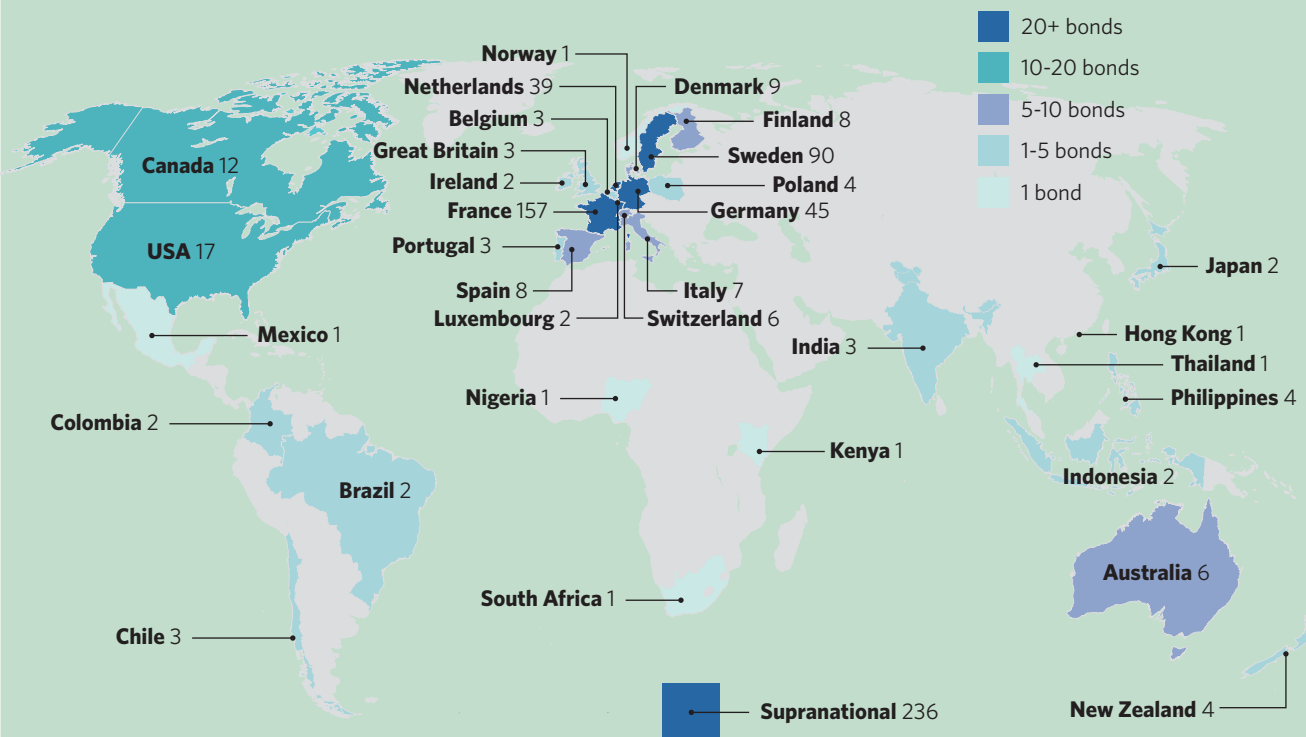
Climate Bonds partnered with Henley Business School on the statistical analysis of the results. Some of the responses were split according to recency of entry into the green bond market. This variable is defined as the difference between 31/12/2019 and the pricing date of the first green bond. The range is two months to 12.5 years, and the average 2.62 years. The categories are based on the empirical distribution of the variable, less than a year, one to three years, and three years plus.

Total Bonds Outstanding (USD billion) is the sum of all green bonds and vanilla bonds outstanding. These numbers are based on data collected between 2nd and 6th December 2019 taken from the Climate Bonds Green Bond Database, and Bloomberg. The first, second and third tertiles of the variable Total Bonds Outstanding was used to classify the issuers based on size into small, medium, and large. Each category thus includes a similar number of issuers (small 29, medium 29, large 28).

A4. Collective use of proceeds of survey participants



Number of bonds (including matured) issued by respondents, shown by country of risk



Appendix 2: The following organisations agreed to be named for their participation in the survey

AC Energy	ESB Finance DAC	Neder Financierings-Maat
Access Bank Plc	European Bank for Reconstruction & Dev.	Nederlandse Waterschapsbank
Acorn Project Two LLP	European Investment Bank	Nordic Investment Bank
B Grimm Power PCL	Ferrovie dello Stato Italiane SpA	Ontario Power Generation Inc.
Bancolumbia	Flexigroup	Oregon School District WI
Bank of America	Fondo Especial para Financiamientos Agropecuarios	Orsted A/S
Barclays PLC	French Republic Government Bond	Provence of Quebec
Berlin Hyp AG	Iberdrola Finanzas SA	RCBC Philippines
BNG Bank NV	ING	Renewi Plc
California Pollution Control Financing Auth.	International Finance Corporation	SBB
Cape Town City	Inversiones CMPC SA	SBAB Bank AB
Celsia	Investa Property Group	Schiphol
Chile Government	Ireland Government Bond	Societe du Grand Paris EPIC
Concordia	Japan Railway Construction, Transport and Technology Agency	Societe Generale SA
Contact Energy Ltd	Jernhusen AB	Societe Wallone des Eaux
CPI Property Group SA	KBC Group NV	Sparebank 1 SR Bank ASA
Credit Agricole	Klabin	Stora Enso
Danske Bank	Kommuninvest	Svenska Handelsbanken
Deutsche Hypothekbank	Kreditanstalt fuer Wiederaufbau	Telefonica Emisiones SA
Deutsche Kreditbank AG	Landesbank Baden-Wuerttemberg	TenneT
Digital Realty Trust LP	LeasePlan Corporation NV	Unione di Banche Italiane
Duke Energy	Manulife Financial Corp	Vasakronan AB
Dutch Ministry of Finance	Ministry Of Finance Indonesia	Verizon Communications
EDP Finance BV	Municipality Finance PLC	Yes Bank Ltd.
Encevo SA		Zurcher Kantonalbank

Endnotes

- <https://www.msci.com/market-classification>
- According to Bloomberg Country of Risk classificaton
- According to Bloomberg Industry Classification Systems (BICS)
- The source of credit rating information is Bloomberg
- <https://www.climatebonds.net/resources/reports/green-bond-european-investor-survey-2019>
- <https://www.cdp.net/en/articles/media/worlds-biggest-companies-face-1-trillion-in-climate-change-risks>
- <https://www.bankofengland.co.uk/paper/2019/biennial-exploratory-scenario-climate-change-discussion-paper>
- Source, Bloomberg data collected between 2nd and 6th December 2019
- BICS
- Jernhusen: apart from new buildings also issue green bonds to finance existing building with a certification of at least Breem In-Use Very Good where investments have been made to create a more sustainable and energy efficient building.
- Some issuers selected more than one response hence the total is greater than 100%
- <https://www.climatebonds.net/certification>
- Some issuers selected more than one response hence the total is greater than 100%
- https://www.kuntarahoitus.fi/app/uploads/2020/02/NPSI_Position_paper_2020_final.pdf
- Measuring the responses to open questions was an art rather than a science, since not all participants were able to answer them. Furthermore, in some cases there was the opportunity given to name multiple aspects of which some of the respondents made use of and others didn't. These answers were then grouped into different categories and different answers by an organisation may have fallen under the same category. Therefore, the percentages and absolute numbers of these questions will not add up to 100% or 86 participants respectively.
- The work of Jason Mortimer (Nomura Investment Management, Tokyo), was featured in Climate Bonds Green Bond Pricing in the Primary Market H2 2018: https://www.climatebonds.net/files/reports/cbi_gb_pricing_2h2018_08052019.pdf
- <https://www.climatebonds.net/resources/reports/role-exchanges-accelerating-growth-green-bond-market>
- <https://www.climatebonds.net/resources/reports/green-bond-pricing-primary-market-july-december-2018>
- <https://www.climatebonds.net/resources/reports/green-bond-pricing-primary-market-h1-2019>
- Climate Bonds data
- https://realassets.axa-im.com/content/-/asset_publisher/x7LvZDsY05WX/content/financing-brown-to-green-guide-lines-for-transition-bonds/23818
- <https://www.climatebonds.net/files/files/climate-resilience-principles-climate-bonds-initiative-20190917.pdf>
- <https://www.climatebonds.net/resources/reports/green-bonds-state-market-2018>
- Source: Climate Bonds Initiative Green Bond Database



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Authors: Caroline Harrison, Lea Muething, Krista Tukiainen

Henley Business School, analysis support: Dr. Ivan Sangiorgi, Dr. Lisa Schopohl

Design: Godfrey Design



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