Environmental Finance

Sustainable Bonds Insight 2021

Contents

Introduction

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2020 was another record-breaking year for the green, social, sustainability and sustainability-linked (GSSS) bond market.

According to figures from the *Environmental Finance Bond Database*, total GSSS bond issuance crossed $600 billion in 2020 – nearly double the $326 billion issued in 2019. Growth in the GSSS bond market in 2020 accelerated on the 53% year-on-year growth reported in 2019 compared to the $214 billion issued in 2018.

The number of super-sized issuances also exploded. More than 50 bonds raising $2 billion or more were issued in 2020, up from just 15 such issues in 2019.

More growth is expected in 2021. A poll conducted by *Environmental Finance* indicated more than two-thirds of respondents expect between $600 billion and $700 billion to be raised during the year, with the majority of the remainder forecasting between $700 billion and $800 billion.

Yet, it was not the scale of the growth– impressive as it was – that strikes me the most about the sustainable bond market in 2020. For me, it was the growing diversification of sustainable bond issuance that fascinates. Rewind to 2018 and over 85% of total GSSS bond issuance was through green bonds, in 2019 this proportion only dipped modestly to four-fifths. 2020, however, saw the share of the market held by green bonds – despite continued growth – fall to just under half.

Social bonds, in particular, were the star performer of the year. Driven on by the demands created by the Covid-19 pandemic, social bond issuance jumped nine-fold to $165 billion – supporting projects to get individuals, businesses and economies back on their feet. Sustainability bond issuance also tripled to $140 billion in 2020.

Nonetheless, 2020 has also laid the groundwork for further diversification in the market for the year ahead. The publication of the Sustainability-Linked Bond Principles (SLBP) in June was followed by the *Climate Transition Finance Handbook* in December, providing support for sustainability-linked and transition bond issuance in the future.

By the end of 2020, eight sustainability-linked bonds aligned with the SLBP had been issued – raising just shy of $9 billion in total. The ground-breaking $750 million note from Brazilian paper firm Suzano in September was soon followed by a €1.85 billion ($2.2 billion) bond from Swiss pharma giant Novartis, €600 million note from luxury fashion house Chanel, and a JPY10 billion ($96 million) bond from Japanese real estate firm Hulic.

Our poll suggests some respondents expect sustainability-linked bond issuance to surge to as much as $30 billion in 2021, though more than two-thirds believe the instruments will raise between $20 billion to $25 billion.

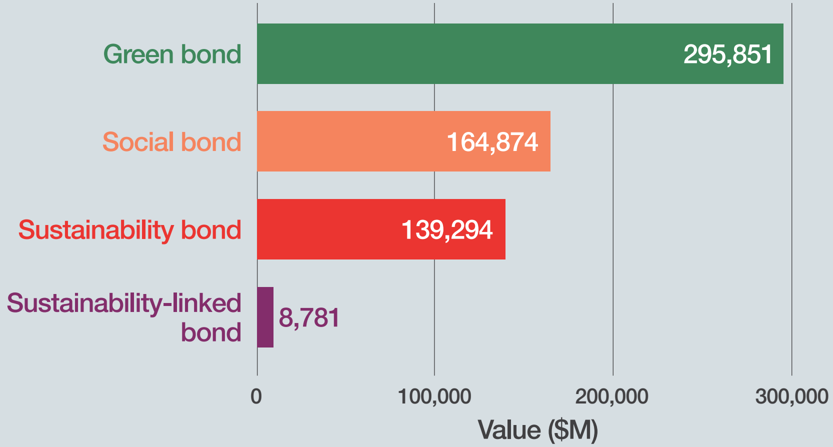
For transition bonds, a marker has already been set in 2021 by the handbook-aligned $780 million dual-tranche Bank of China note in January. Like many of the 'transition' bonds issued before it, the Bank of China bond received a mixed welcome from the market. Nonetheless, the orderbook was strong and we can expect more transition bonds in 2021 as issuers and investors look to refine the instrument.

So, 2020 was certainly an interesting year for the market – but 2021 should prove to be even more so.

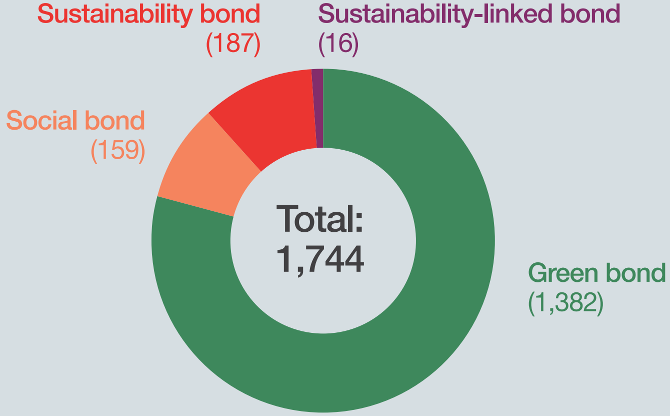
Momentum continues to build to take action on the climate emergency, meanwhile the pandemic and Black Lives Matter protests have focused attention on the social inequality rife in our communities. Governments, companies and consumers are increasingly growing both more empathetic about the challenges around us and more energised to do something about them.

Finance remains one of the most powerful tools to help effect this change, and the sustainable bond market looks set to continue to innovate and grow in order to help set the pace. There is no time to waste, certainly, but the potential of sustainable bonds is increasingly being grasped. ■

Value breakdown by type of bond; total market size $608.8 B



Volume breakdown of green social, sustainability and sustainability-linked bonds of 2020



Top 10 biggest issues of 2020

Issuer		Currency	Value in local currency	Value in USD (M)
	European Union	EUR	17,000	19,976
	European Union	EUR	14,000	16,606
	European Union	EUR	8,500	10,127
THE WORLD BANK	IBRD	USD	8,000	8,000
	Federal Republic of Germany	EUR	6,500	7,771
Société du Grand Paris	Société du Grand Paris	EUR	6,000	7,065
THE WORLD BANK	IBRD	USD	6,000	6,000
CADES	Cades	EUR	5,000	5,897
	Federal Republic of Germany	EUR	5,000	5,845
CADES	Cades	EUR	5,000	5,825

Largest in 2020

The largest deal and issuers of the year in the green bond market

Largest Single Green Bond
Federal Republic of Germany
Value: € 6,500 M
($7,771 M)

Largest Supranational
European Investment Bank
Value: $6,051 M

Largest Issuer
Federal Republic of Germany
Value: $13,616 M

Largest Corporate
Prologis
Value: $3,731 M

Largest Agency
Fannie Mae
Value:
$13,093 M

Largest Financial Institution
China Development Bank
Value: $1,964 M

Largest Sovereign
Federal Republic of Germany
Value: $13,616 M
Number of Deals: 2

Largest Municipal
New York Metropolitan Transportation Authority
Value: $3,697 M

The largest deal and issuers of the year in the social bond market

Largest Single Social Bond
European Union
Value: €17,000 M
($19,976 M)

Largest Supranational
European Union
Value: $46,708 M

Largest Issuer
European Union
Value: $46,708 M

Largest Corporate
East Nippon Expressway
Value: $3,723 M

Largest Agency
Cades
Value: $22,282 M

Largest Financial Institution
Citigroup
Value: $2,500 M

Largest Sovereign
Republic of Chile
Value: $2,308 M

Largest Municipal
Massachusetts School Building Authority
Value $1,445 M

Largest in 2020

The largest deal and issuers of the year in the sustainability bond market

Largest Single Sustainability Bond

IBRD
Value: $8,000 M

Largest Issuer

IBRD
Value: $54,697 M

Largest Agency

Agence Francaise de Developpement
Value: $2,361 M

Largest Sovereign

Luxembourg
Value: $1,777 M

Largest Supranational

IBRD
Value: $54,697 M
Number of Deals: 51

Largest Corporate

Alphabet Inc.
Value: $5,750 M

Largest Financial Institution

BNG Bank
Value: $3,244 M

Largest Municipal

Federal State of NRW
Value: $2,822 M

The largest deal and issuers of the year in the sustainability-linked bond market

Largest Single Deals

Novartis
Value: $2,196 M

Suzano
Value: $1,250 M

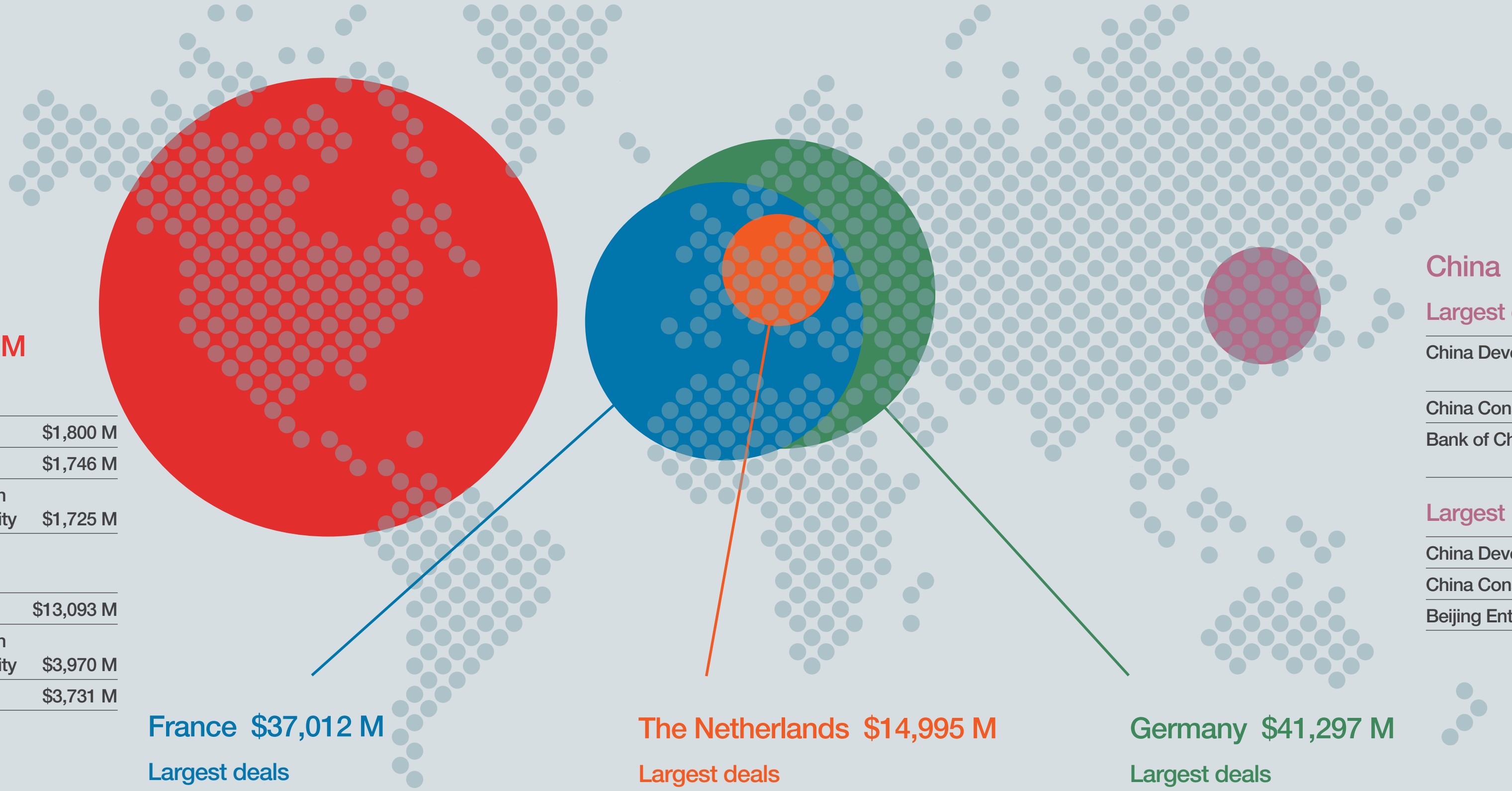
LafargeHolcim
Value: $1,006 M

NRG Energy
Value: $900 M

Schneider Electric
Value: $770 M

Top 5 largest issuing countries in 2020 in the green bond market

For the fourth consecutive year the US and France were two of the top three biggest issuing countries of green bonds, with Germany growing to the second largest.



USA $61,388 M

Largest deals

AES Corporation	$1,800 M
Fannie Mae	$1,746 M
New York Metropolitan Transportation Authority	$1,725 M

Largest issuers

Fannie Mae	$13,093 M
New York Metropolitan Transportation Authority	$3,970 M
Prologis	$3,731 M

France $37,012 M

Largest deals

Société du Grand Paris	EUR 6,000 M	($7,065 M)
Republic of France	EUR 2,607 M	($2,858 M)
EDF	EUR 2,400 M	($2,838 M)

Largest issuers

Société du Grand Paris	$12,550 M
Republic of France	$7,412 M
EDF	$2,838 M

The Netherlands $14,995 M

Largest deals

TenneT	EUR 1,350 M ($1,597 M)
State of the Netherlands	EUR 1,420 M ($1,594 M)
State of the Netherlands	EUR 1,195 M ($1,340 M)

Largest issuers

State of the Netherlands	$2,934 M
TenneT	$2,745 M
De Volksbank	$1,736 M

Germany $41,297 M

Largest deals

Federal Republic of Germany	EUR 6,500 M ($7,771 M)
Federal Republic of Germany	EUR 5,000 M ($5,845 M)
KfW	EUR 3,000 M ($3,432 M)

Largest issuers

Federal Republic of Germany	$13,616 M
KfW	$9,496 M
E.on	$2,482 M

China $15,667 M

Largest deals

China Development Bank	CNY 10,000 M ($1,428 M)
China Construction Bank	$1,200 M
Bank of China	CNY 3,000 M and $500 M ($938.8 M)

Largest issuers

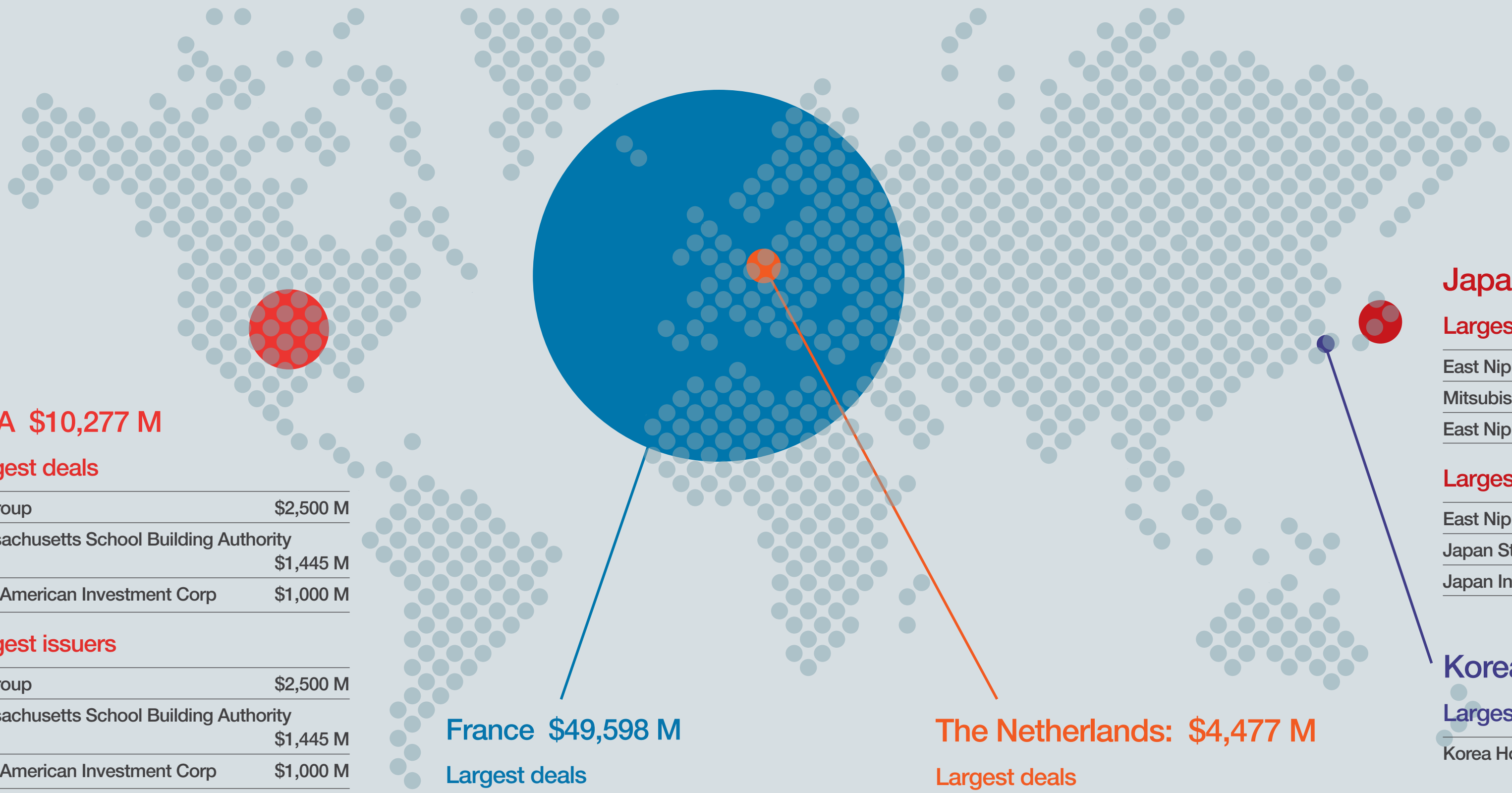
China Development Bank	$1,964 M
China Construction Bank	$1,344 M
Beijing Enterprises Holdings	$1,184 M

USD conversion taken from pricing date resulting in variation in USD value

Methodology: Deals from supranational entities have not been included in individual countries.

Top 5 largest issuing countries in 2020 in the social bond market

France, USA and Japan are the three biggest issuing countries in the social bond market in 2020.



USA $10,277 M

Largest deals

Citigroup	$2,500 M
Massachusetts School Building Authority	$1,445 M
Inter-American Investment Corp	$1,000 M

Largest issuers

Citigroup	$2,500 M
Massachusetts School Building Authority	$1,445 M
Inter-American Investment Corp	$1,000 M

France $49,598 M

Largest deals

Cades	EUR 5,000 M ($5,897 M)
Cades	EUR 5,000 M ($5,825 M)
Unédic	EUR 4,000 M ($4,523 M)

Largest issuers

Cades	$22,282 M
Unédic	$19,378 M
Agence Francaise de Developpement	$2,000 M

The Netherlands: $4,477 M

Largest deals

Nederlandse Waterschapsbank NV	EUR 2,000 M ($2,185 M)
Nederlandse Waterschapsbank NV	EUR 1,000 M ($1,192 M)
Nederlandse Waterschapsbank NV	$912 M

Largest issuers

Nederlandse Waterschapsbank NV	$4,477 M

Japan: $8,296 M

Largest deals

East Nippon Expressway	JPY 70,000 M ($652 M)
Mitsubishi UFJ Financial Group	EUR 500 M ($556 M)
East Nippon Expressway	JPY 60,000 M ($545 M)

Largest issuers

East Nippon Expressway	$3,723 M
Japan Student Services Organization	$1,117 M
Japan International Cooperation Agency	$829 M

Korea: $7,745 M

Largest deals

Korea Housing Finance Corporation	EUR 1,000 M ($1,102 M)
Export-Import Bank of Korea	EUR 500 M ($592 M)
Korea Housing Finance Corporation	EUR 500 M ($561 M)

Largest issuers

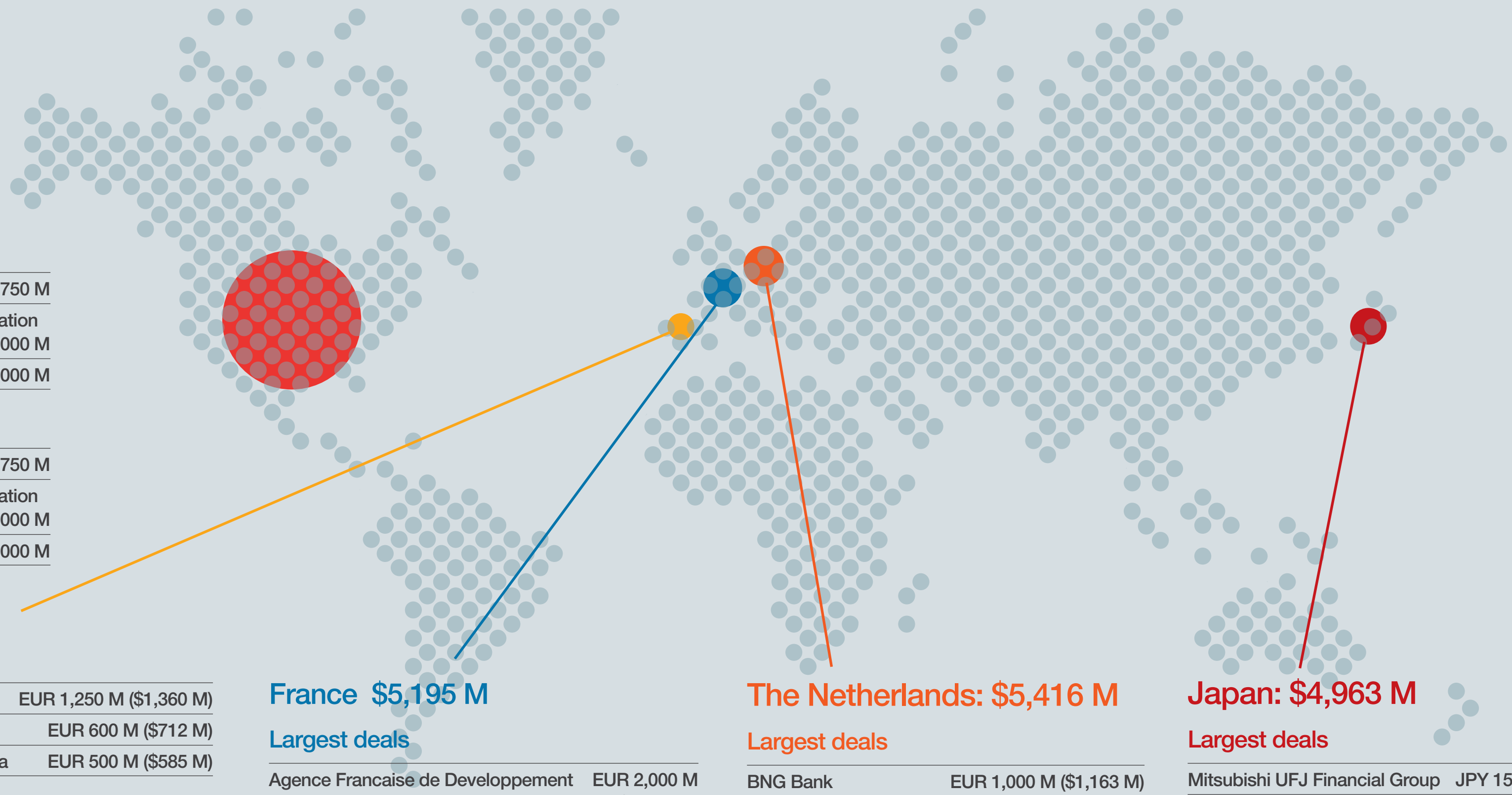
Korea Housing Finance Corporation	$1,102 M
Export-Import Bank of Korea	$1,492 M
Kookmin Bank	$1,000 M

USD conversion taken from pricing date resulting in variation in USD value

Methodology: Deals from supranational entities have not been included in individual countries.

Top 5 largest issuing countries in 2020 in the sustainability bond market

USA, Netherlands and France are the three biggest issuing countries in the sustainability bond market in 2020.



USA $18,631 M

Largest deals

Alphabet Inc.	$5,750 M
International Development Association	$2,000 M
Bank of America	$2,000 M

Largest issuers

Alphabet Inc.	$5,750 M
International Development Association	$4,000 M
Bank of America	$2,000 M

Spain $3,570 M

Largest deals

Comunidad de Madrid	EUR 1,250 M ($1,360 M)
Basque Government	EUR 600 M ($712 M)
Autonomous Community of Galicia	EUR 500 M ($585 M)

Largest issuers

Comunidad de Madrid	$1,648 M
Basque Government	$1,268 M
Autonomous Community of Galicia	$584 M

USD conversion taken from pricing date resulting in variation in USD value

Methodology: Deals from supranational entities have not been included in individual countries.

France $5,195 M

Largest deals

Agence Francaise de Developpement	EUR 2,000 M ($2,361 M)
Region Ile de France	EUR 800 M ($616 M)
Orange	EUR 500 M ($593 M)

Largest issuers

Agence Francaise de Developpement	$2,361 M
Region Ile de France	$616 M
Orange	$593 M

The Netherlands: $5,416 M

Largest deals

BNG Bank	EUR 1,000 M ($1,163 M)
BNG Bank	$1,000 M
BNG Bank	$2,000 M

Largest issuers

BNG Bank	$3,244 M
Koninklijke Philips NV	$1,076 M
Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden NV - FMO	$548 M

Japan: $4,963 M

Largest deals

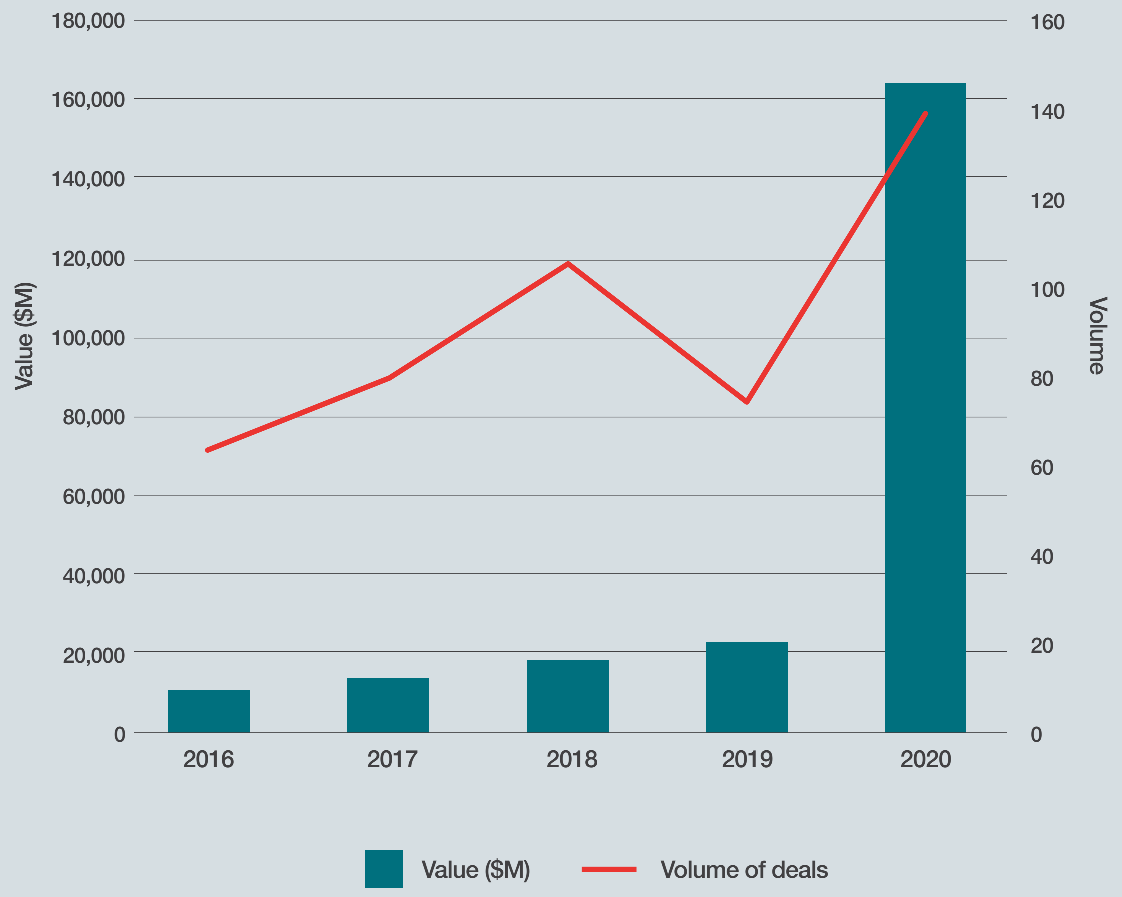
Mitsubishi UFJ Financial Group	JPY 150,000 ($1,413 M)
Development Bank of Japan	EUR ($828 M)
Tokyo Tatemono	JPY 22,000 ($371 M)

Largest issuers

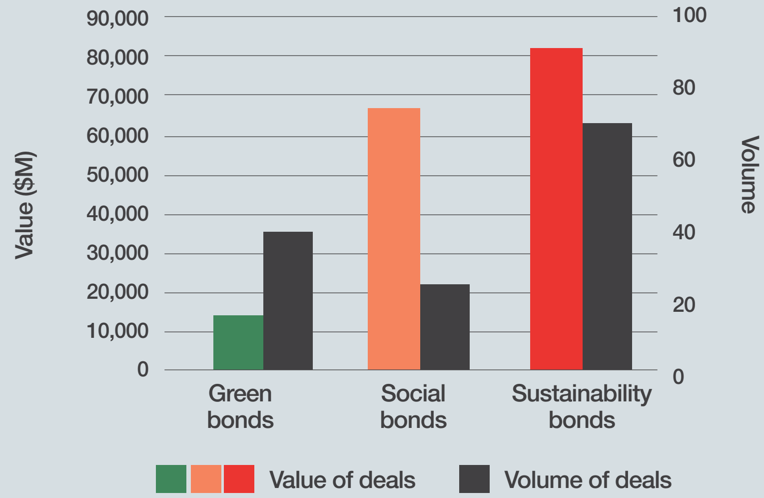
Mitsubishi UFJ Financial Group	$1,413 M
Japan Railway Construction, Transport and Technology Agency	$958 M
Development Bank of Japan	$828 M

Supranational issuance

Annual supranational issuance of green, social and sustainability bonds



Breakdown of supranational issuance in 2020



Top 5 supranational bonds 2020

Issuer	Value	Bond category
European Union	€17,000 M ($19,975.5 M)	Social bond
European Union	€14,000 M ($16,605.8 M)	Social bond
European Union	€8,500 M ($10,127 M)	Social bond
IBRD	$8,000 M	Sustainability bond
IBRD	$6,000 M	Sustainability bond

BNP PARIBAS

At a crossroads of innovation

Sustainable finance continues to drive innovation in sustainable finance solutions for BNP Paribas. Its bankers explain how the events of 2020 are shaping their approach to both the needs of issuers and investors alike

BNP Paribas' 2021 outlook for sustainable finance

Environmental Finance: How is sustainable finance tackling the environmental and social challenges of today?

Constance Chalchat, head of company engagement, BNP Paribas CIB

Constance Chalchat, head of company engagement at BNP Paribas CIB: We have reached a point of no return where both institutional investors and corporates realise that delivering on sustainability is essential to doing business in the 21st century.

Despite the ongoing economic and social impacts of the Covid-19 pandemic, we are continuing to witness how investors and corporates are ramping up commitments towards tackling environmental and social challenges, while recognising the vital role finance has to play in a responsible recovery. This will also drive innovation in sustainable finance solutions, further rebalancing towards solutions with positive impact.

EF: What trends are driving sustainable finance activity in 2021?

CC: We see three trends driving sustainable finance activity in 2021. Firstly, ahead of COP26, industry leaders are setting ambitious targets to tackle climate change. Many companies are setting their own zero-carbon announcements and science-based corporate commitments are also ramping up.

Secondly, with the US re-entry to the Paris Agreement, we foresee an important year ahead and expect we will have a great deal of work to support our clients as they embark on the ambitions of the new green deal. This alignment of climate policies towards a low carbon economy is a global phenomenon too, and we are seeing a scaling up of zero-carbon commitments from governments around the world, including China, the UK, and beyond.

Finally, greenwashing, inflated claims about sustainability credentials and questionable use of green frameworks will be addressed by more rigor and harmonisation across the industry. This will ensure that sustainability-labelled transactions are not met with investor skepticism and remain credible.

Transition as a priority for primary markets

EF: How transformational will climate transition finance be?

Frederic Zorzi, global head of primary markets at BNP Paribas: We are facing one of the biggest industrial challenges in history. Finance will be needed to support industrials and institutions through the low-carbon transition. The validity of

Frederic Zorzi, global head of primary markets

climate transition finance has expressed itself via the use of proceeds concept with transition bonds, and more recently with an expansion of KPI-linked products. Both have attracted a broad demand from investors as it links public environmental, social and governance (ESG) strategies for the issuer with their funding requirements.

In terms of a rebalancing, we will likely see some issuers move from traditional financing to transition financing through these approaches. Overall, the objective remains to improve environmental impact and futureproof the business model towards a progressive strategy that aligns to a low-carbon economy.

EF: How have issuers and investors responded to increasing regulatory support for transition strategies?
FZ: Investors increasingly believe in the importance of transition strategies. They fully understand the importance to align what can be seen as the "brown" sectors with a Paris compliant trajectory. For those issuers and investors wanting to be ahead of the regulatory requirements from the EU taxonomy and specifically, the 'do no significant harm' criteria, transition is top of the agenda of investors who are keen to help corporates achieve their sustainability goals.

Innovations ahead for capital markets

EF: What market innovations have caught the attention of BNP Paribas?
Delphine Queniart, global head of sustainable finance & solutions at BNP Paribas Global Markets: Sustainability-linked products are growing alongside the embedding of science-based targets at a corporate level. These enable issuers to have transparent and credible targets to meet their sustainable strategies. Furthermore, a milestone moment was when the European Central Bank (ECB) included sustainability-linked bonds (SLBs) as eligible collateral in their asset purchase programme. This meant the market started to recognise SLBs as a viable tool for supporting corporate transition through finance.

We expect this increased momentum on sustainability-linked products to result in a deeper focus on ESG data and frameworks that will help align and standardise disclosures and reinforce risk management.

There is also a need to scale up the development of blended finance structures in collaboration with the public and social sector to mobilise private sector capital toward riskier investments, and we expect to see more securitisation solutions or derivatives market for climate risk mitigation and better allocation of risk.

Delphine Queniart, global head of sustainable finance & solutions

EF: How is BNP Paribas responding to such market developments?
DQ: We learn and grow by meeting our client's specific needs, which is why knowing our clients is key. We have embedded sustainable finance experts across the entire spectrum of products within our Global Markets division to ensure that whatever the client needs, from innovative sustainable capital markets solutions through to sustainable investment opportunities, we will be able to provide them with the best solution. BNP Paribas innovates in creating climate-aligned financial instruments and also on solutions delivering social impact.

Specifically on climate finance, we are likely to see the translation of global carbon budgets into sector and region-specific pathways. Having sector expertise and a holistic strategy across sustainable finance is vital to our approach, as it is necessary to scale up transition finance across multiple high emission sectors – from steel and transport, to construction and real estate. The corporate commitments emerging across these sectors need to be reflected in the frameworks being created in the sustainable product market, and part of our role is to ensure we can support the integrity, transparency and a genuine transition roadmap for our clients.

Anjuli Pandit, primary markets sustainability manager

The investor perspective

EF: How have investors responded to the events of 2020?
Anjuli Pandit, primary markets sustainability manager, BNP Paribas: 2020 was the year of the "greenium" – the clear trend that there is some pricing advantage to issuers bringing a strong sustainability framework to the market as we saw multiple issuers price inside their secondary curve.

Although there were various market dynamics which contributed to the cheaper pricing, we heard directly from many key ESG investors that they believe there is a value to be placed on ESG data, on ESG frameworks, and on investing directly in the ESG ambitions of an issuer.

The call for social action also stimulated a more balanced look at ESG investing, where social and governance started to take more prominence both from a products perspective (e.g social bonds and Covid bonds), but also in informing the larger ESG view of the issuer. It is no surprise that as investors start to focus on the big picture ESG story, that they will also begin to align with SLB structures. The beginnings of this market started to grow in the second half of 2020, and the first

SLBs received very positive responses from investors. We can imagine this will be a main focus for 2021 now that the ECB can also buy this format (albeit only with an environmental KPI).

EF: What needs to happen for the sophistication of ESG investment strategies to keep improving?
AP: Data will be the key focus on helping investors to develop more sophistication on ESG investing. This will be driven through the EU taxonomy and the EU's Sustainable Finance Disclosure Regulation (SFDR) as investors put market pressure on issuers to disclose more information so that they can report against these new regulations. As investors become more accurate and specific in their measurements, through the integration of scientific data into the assessment criteria – e.g. carbon metrics and biodiversity impacts, or granular social data – such as employment security and gender balance – they will be better able to identify impactful investing opportunities.

KPI-linked products in 2021

Cécile Moitry, co-head, sustainable finance markets

EF: When do you expect to see more sustainability-linked products come to market?
Cecile Moitry, co-head, sustainable finance markets at BNP Paribas: By nature, sustainability-linked loans (SLLs) are available to a wide range of companies and sectors as they aim to improve the overall ESG performance of a company, whilst not being constrained by a specific use of proceeds.

Nevertheless, some sectors haven't yet fully entered this space. On the back of the landmark transactions of Eurazeo and EQT last year, we are expecting private equity funds to be much more present in the SLL market in the near future. We'd also anticipate smaller size companies to tap into SLL funding, with adapted KPIs targeting transition towards a low carbon economy.

EF: What are some of the unresolved questions in this space?
CM: What we anticipate for the year 2021 is a convergence of the SLL with the SLB. Greater transparency and analysis of the two instruments are now being undertaken. Ultimately it will result in a common and integrated approach adapted to the sustainability strategy of our clients and will bring increased integrity to the market.

We already saw an interesting example of this with Tesco, as in October 2020 BNP Paribas supported Tesco to become one of the first UK retailers to establish a SLL which was linked to emissions reduction, renewable energy and food waste. Then three months later the bank was joint sustainability structuring advisor and joint bookrunner on Tesco's €750 million ($910 million) benchmark SLB, which also targeted reduction in the UK retailer's greenhouse gas emissions. This is a great example of how a large corporate can utilise both the SLL and SLB to completely align their financing and environmental strategy, in a transparent and scientific way.

This is the reason why BNP Paribas is taking a very active part in discussions both at the Loan Market Association level, but also in connection with International Capital Market Association (ICMA) dialogues.

Sector specific outlooks for sustainable finance

EF: Which sectors are as yet untapped and have potential for issuance for SLBs?
Agnes Gourc, co-head, sustainable finance markets at BNP Paribas: We are at an interesting crossroad for the ESG bond market, led by regulation on the one hand, investor demand on the other hand, and finally product innovation. The result of these three factors is a greater product and sector diversification.

Agnès Gourc, co-head, sustainable finance markets

With new products, such as SLBs, issuers from resource intensive sectors can now access the ESG bond market provided they have the right sustainability strategy in place. In that respect, LafargeHolcim has opened up the market to the cement industry with its debut SLB, and we expect more carbon intensive sectors to follow suit including steel, and energy intensive industries.

SLBs are also well adapted to sectors which are less capex intensive. We anticipate we will see a range of sectors in that category to tap the market.

2020 was also the year of the auto manufacturers coming in size to the green bond market with great results, pricing through their conventional bond curve for the most part, with more players expected from the sector.

We are seeing the development of sustainable convertible bonds coming to the market as well, and we have been active on several landmark deals including green convertible bonds from EDF and the first ever sustainability-linked convertible bonds for Schneider Electric.

From an issuer category and geographical perspective, we expect a broader range of issuers to come to the ESG bond market in the high yield and emerging market spaces which could open new sectors as well. Also given the notable shift in climate policy in the US, we can expect increased activity in sustainable bonds coming out of issuers in the Americas, which will be matched by equally high engagement from the investor community. ■

Trends in sustainable bonds issuance and a look ahead to 2021

Moody's forecasts that sustainable bond issuance will hit a record in 2021. Experts from Moody's ESG Solutions Group and Moody's Investors Service outlined to *Environmental Finance* the key sustainable finance trends they are keeping an eye on for the year ahead

Matt Kuchtyak

Global issuance of use of proceeds green, social and sustainability (GSS) bonds – collectively referred to as sustainable bonds – hit record volumes in 2020 with $491 billion issued, according to Matt Kuchtyak, assistant vice president, ESG at Moody's Investors Service.

Moody's expects issuance to reach another new record $650 billion in 2021, a 32% increase over last year. This total will be comprised of approximately $375 billion of green bonds, $150 billion of social bonds and $125 billion of sustainability bonds.

The heightened market focus on coronavirus response efforts drove social bond issuance to new heights in 2020 with issuance reaching $141 billion, up from just $17 billion in 2019. Social bonds were heavily concentrated among issuers responding to the pandemic throughout the year. Sustainability bond volumes also continued to grow, with issuance doubling in 2020 to $79 billion.

"Although some of this growth is attributable to financings related to the pandemic, there has been greater diversity in sustainability bond issuance. We see the broader focus on corporate sustainability as a lasting trend in this segment, which will contribute to our forecast of 58% growth in sustainability bonds in 2021 to $125 billion," says Kuchtyak.

Figure 1: Sustainable bonds to hit record $650 billion in 2021

Sources: Moody's Investors Service, Climate Bonds Initiative, Dealogic

After the pandemic slowed green bond issuance during the first half of 2020, the segment rallied in the second half of the year, bringing full-year volumes to a new annual record of $270 billion.

Moody's expects this momentum to continue as the economy continues to rebound and issuers increasingly pursue debt financing for environmentally friendly projects.

"As such, we are anticipating green bonds will total around $375 billion for all of 2021, which would represent 39% growth over 2020," he says.

Although the pandemic-related financings that helped propel sustainable bonds volumes will likely wane as 2021 progresses, the pandemic experience has heightened the focus on global environmental and social risks and accelerated many of the trends supporting sustainable finance that were already underway.

"Thus, we see continued growth in sustainable bond volumes in 2021 and beyond, with more issuers turning to these instruments to highlight their sustainability plans, investors increasingly demanding labelled sustainable bonds, banks seeking to green their underwriting and lending practices and governments increasingly aiming to combat climate change."

Energy transition-related activities will also drive growth within these types of instruments, he adds.

"We also expect sustainable bonds to continue to increase as a share of total global issuance as they have in recent years. With this expected growth in sustainable bonds, and expectations that global debt volumes will pull back after the pandemic-fuelled record year, sustainable bonds may represent between 8% and 10% of total global bond issuance in 2021," he says.

Trend one: Increased issuance by governments and agencies

Environmental Finance: Corporates traditionally have been the main issuers GSS bonds – why do you think they were the trailblazers?

Anna Zubets-Anderson

Anna Zubets-Anderson, Vice President, ESG analyst at Moody's ESG Solutions Group: Corporates have been the leading sector to issue labelled bonds since the green label first kicked off the market in 2014. This is part of the overall trend of growing focus on business sustainability, which we expect to continue in 2021 and beyond.

In addition to managing their corporate social responsibility reputations, companies must respond to asset owners and managers who are increasingly focused on the impact of environmental, social and governance (ESG) risks on their portfolios. Furthermore, there is a real need to advance strategic and operational resilience. In response to these pressures, issuers are shifting how they measure their performance along the ESG dimensions and how they interact with the capital markets.

Labelled bonds often become an effective and efficient way to start the sustainability dialogue with the market and begin building an internal reporting infrastructure necessary to respond to stakeholders' information needs.

EF: What has driven the rise of governments and agencies as issuers of these bonds? Is it a short-term reaction to the pandemic or a longer-term shift in issuer behaviour?

AZ: Governments and agencies are increasingly issuing labelled bonds to raise capital for sustainable development projects more broadly. These issuers are at the forefront of responding to social and environmental risks presented by climate change, as well as other key challenges of the 21st century, such as ensuring social cohesiveness in the face of growing income inequality.

In this regard, we provided second party opinion (SPO) 'firsts' for a sovereign in The Middle East (Egypt), and the first sustainable development goal (SDG) bond for Mexico. Social bond issuance certainly surged in 2020, as the pandemic highlighted the need to direct funds towards projects with social benefits, however this trend did not start with the pandemic.

Furthermore, since Poland issued the first sovereign green bond in December 2016, more countries have been entering the market. Sovereign GSS issuance grew from $10.7 billion in 2017, to $17.5 billion in 2018 and $21.8 billion in 2019, and reached $40.5 billion in 2020, according to data compiled by Moody's Investors Service and Environmental Finance. We believe that we will continue to see growth in issuance from governments and agencies well beyond the pandemic.

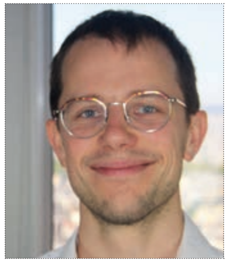
EF: How do you think this will change the landscape for the types of GSS bonds available and the use of proceeds that are being allocated?

AZ: We believe that governments will increasingly issue green bonds to fund climate mitigation and adaptation projects, as they work to combat the effects of climate change and meet their Paris climate agreement commitments.

That said, compared to corporates, these issuers are also more likely to issue labelled bonds that fund programs that are widely diversified, target many different goals and span multiple years. They are likely to cross many eligible categories – climate adaptation, clean water, biodiversity restoration, green transportation, unemployment reduction – to name just a few examples.

Trend two: The rise of sustainability-linked financing

EF: The rise of sustainability-linked bonds (SLBs) has been a key development for green debt issuance. What trends are you seeing in this space?



Benjamin Cliquet

Benjamin Cliquet, head of sustainable finance business development at Moody's ESG Solutions Group affiliate, V.E: 2020 was the breakout year for sustainability-linked instruments. The publication of the Sustainability-Linked Bond Principles and the rapid growth of the SLB market has placed a spotlight on their potential and attractivity as a sustainable financing approach. Amongst others, we provided pioneering SPOs for JetBlue the first airline to deploy a sustainability-linked loan (SLL), and Schneider's first sustainability-linked convertible bond.

Their cross-sector appeal is a key attribute. Since there is no need to identify specific projects or to ring-fence the proceeds related to these instruments, they are innately more accessible to more types of issuers.

In addition, because SLLs and SLBs do not focus on current absolute performance but rather on the improvement of it, they are also more attractive to issuers that may still be in the early days of their sustainability journey.

Given these attributes, in the mid-term, we can reasonably expect the number of sustainability-linked instruments to match the pace of traditional sustainable bonds and loans. SLLs and SLBs will also likely influence more issuers to improve their sustainability performance and to set quantified targets.

There are two related projections that we would draw attention to. Firstly, these instruments will likely become a key tool for companies with heavy environmental footprints to showcase

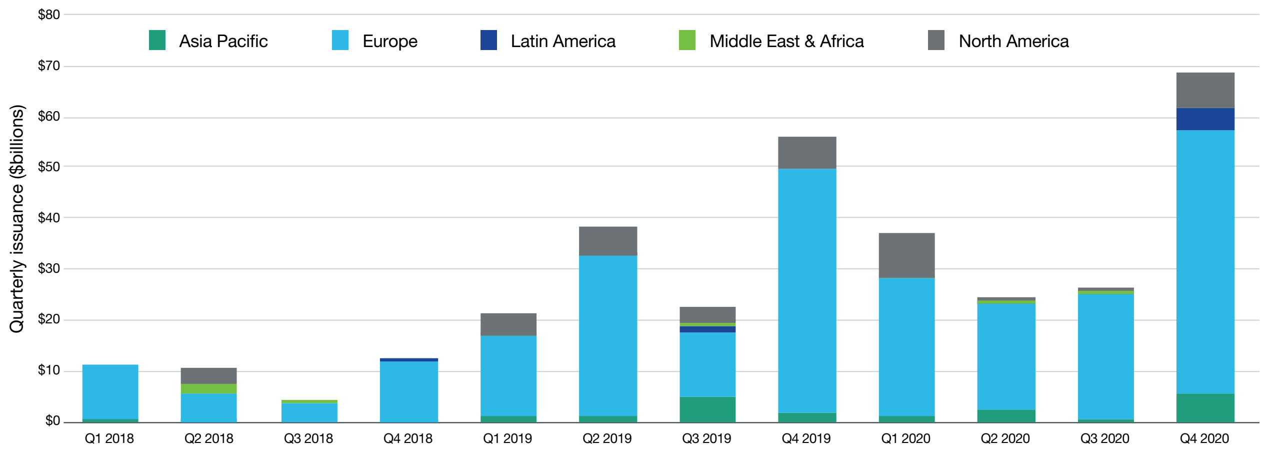


Figure 2: Sustainability-linked loan volumes hit record $68 billion in Q4 2020

Sources: Moody's Investors Service and Dealogic

and finance their climate transition strategy for the coming years. Thus, these issuances will provide an opportunity for external stakeholders to have a view on corporate climate trajectories and their alignment with the Paris Agreement.

Secondly, SLLs and SLBs appear to be complementary to sustainable bonds and loans: while sustainability-linked instruments provide a forward-looking approach of one issuer's strategy, the more traditional use of proceeds model enables them to highlight the concrete investments that will be made to achieve the targets.

EF: What are the risks and the practical challenges of supporting such engagements?

BC: It is not simple for all sectors to identify comparable metrics referring to highly material issues. So, the first challenge is of course for issuers to find the relevant KPI(s) to be included in the mechanism. In addition to this, setting quantified targets for the next five, ten years (or even more), and publicly committing on these, can be considered as both risky and complex. To date, at least in the SLL market, we have seen that banks have used ESG ratings as an easy solution; enabling them to cover a wide range of material sustainability issues in one shot.

Trend three: Climate risk and resilience in the bond markets

EF: How does physical climate risk fit into the green bond conversation?

Natalie Ambrosio Preudhomme

Natalie Ambrosio Preudhomme, director of communications at Moody's ESG Solutions Group affiliate, Four Twenty Seven: When it comes to floods, storms, and extreme temperatures the past is no longer an accurate representation of what the future may hold. When considering any infrastructure project, it is essential to take into consideration a forward-looking view of climate projections at the planned location of these projects.

This means leveraging the best available science to understand what the asset is likely to experience over the duration of its life cycle, in terms of inundation events, water stress, higher average temperatures and other phenomena, based on its location.

Alongside exposure, it is important to understand a project's sensitivity to these hazards, as a hydropower development would be more vulnerable to water stress for example, than a toll bridge which would be more disrupted by flooding. This is particularly important due to the long-life cycles and large capital investments in infrastructure projects.

Whether or not a bond focuses explicitly on a resilience project, to ensure that it remains operational and allows the issuer to repay its loan, it is important that the planning phase accounts for changes in extreme conditions and factors in the necessary steps to construct infrastructure that is prepared to withstand these conditions.

EF: What part can resilience bonds play here?

NA: Resilience bonds are a recently developed capital market instrument to raise money for adaptation and resilience projects. They are a specific type of green bond, and they require that proceeds must be specified for climate resilience projects. The Climate Bonds Initiative lays out Climate Resilience Principles explaining which activities qualify as resilience activities.

The need for climate-resilient infrastructure presents significant investment opportunity and resilience bonds provide an important vehicle to finance climate adaptation while fitting into the investment strategies of many large institutional investors and providing an attractive investment for those striving to integrate ESG factors into their portfolios.

The first resilience bond was issued by the European Bank for Reconstruction and Development (EBRD) in 2019. It was a five-year bond and was oversubscribed by $200 million showing the appetite for this type of investment. Proving the benefits of resilience is challenging because by definition a successful resilience project is about avoiding impacts on a community or project that may have otherwise occurred during an extreme event.

As more resilience bonds are issued, tracked and reported upon it will be easier for the market to quantify the value of resilience. As the frequency of climate change-driven events increases, it is becoming widely understood that investing to prepare for extreme events pays off significantly, compared to repeatedly repairing and rebuilding after the fact. ■

Navigating sustainable debt instruments: from green and social to transition and sustainability-linked bonds

For all its flaws, 2020 was a significant year for the sustainable bond market. Not only did the number of labelled issuances markedly increase, the breadth of sustainability topics being addressed also expanded following the release of key new market guidelines. These, most notably, included the Sustainability-Linked Bond Principles (SLBPs) and the Climate Transition Finance (CTF) Handbook, both administered by the International Capital Market Association (ICMA), as well as the Usability Guideline of the upcoming EU Green Bond Standard. Against this backdrop and as we look ahead to 2021, ISS ESG believes these initiatives are opening the door to more sectors for sustainable debt financing and will allow all issuers more flexibility in structuring their commitments and showcasing ambition. *Environmental Finance* spoke with ISS ESG to discuss the range of options available to issuers and how to select the best approach

Environmental Finance: Looking back on 2020, what stands out to you in terms of market developments?

Federico Pezzolato, sustainable finance business development manager for EMEA & APAC at ISS Corporate Solutions: The numbers speak for themselves, there has been a notable rise in both social and sustainability bonds. What stands out most prominently in our view, however, was the launch of important new industry guidance and standards: the SLBPs and the CTF Handbook and of course the EU Green Bond Standard moving ever closer to finalisation.

Miguel Cunha, sustainable finance business development manager for Americas at ISS Corporate Solutions: While we were excited to conduct the first ever second party opinion (SPO) based on the SLBPs for Brazilian pulp and paper giant, Suzano, we can also relate to issuers who feel overwhelmed trying to navigate the rapidly evolving sustainable finance market. The prevailing two questions going forward will be, firstly, how issuers can select the best option to finance their individual sustainability strategy and, secondly, how these new labelled bond types can help make the real economy more sustainable.

Federico Pezzolato, sustainable finance business development manager

Miguel Cunha, sustainable finance business development manager

Viola Lutz, head of investor consulting climate

Mélanie Comble, head of second party opinion operations

EF: How do these new guidelines complement the existing option of a use of proceeds issuance?

Viola Lutz, head of investor climate consulting at ISS ESG: Use of proceed (UoP) bonds introduced a great degree of transparency on the activities financed through a transaction and the environmental and social objectives they address. While that is correct with respect to the financed projects, a challenge that has been brought up over the past years is that UoP bonds do not put sufficient emphasis on the overall strategy of a company. A lack of insight on that point means that at times investors have no additional information as to the general direction a company is taking.

This concern has been mitigated somewhat by the fact that, in practice, most issuers nowadays give ample information on their overall sustainability plans and characteristics; however, the UoP structure following ICMA's Green Bond Principles

(GBP) lacks a formal requirement in that respect, since the GBPs encourage only issuers to position the bond issuance in their overreaching strategy.

While it has not yet been fully finalised, the EU Green Bond Standard is addressing this information gap by explicitly asking issuers to provide a rationale for issuance and disclosure on how the financed UoP categories impact their business model.

Mélanie Comble, head of second party opinion operations at ISS ESG: Both the SLBPs and the CTF Handbook confirm the trend of putting a strong emphasis on issuers' strategies as well. For example, a core focus of SLB issuances is to select environmental, social and governance (ESG) KPIs material to the issuer's business model and set associated targets that are ambitious compared with the past performance of the company, but also with sector peers and international targets such as the Paris Climate Agreement.

The commitment to achieve the targets is tied to the bond's coupon, reinforcing the level of commitment. Interestingly, if a target is both material and ambitious, it naturally implies the implementation of sustainable actions across a significant share of the issuer's operations and business segments. SLB issuances thus have the potential to have broader effects on the way a company conducts business.

In the case of the CTF Handbook, the strategy of an issuer to shift towards being Paris Climate Goal-aligned takes centre stage. Here again, the company's impact across all its operations is impacted and at the core of the transaction.

EF: How can issuers effectively leverage those new guidance documents and financing options?

VL: Crucially, the new issuance options that the SLBPs and the CTF Handbook represent give issuers the opportunity to address a wider scope of their business instead of focusing just on specific activities. Figure 1 shows that, with UoP bonds, an issuer can predominantly raise funding for the greening of its own products, services and activities portfolio or highlight its social dimension. A SLB structure allows an issuer to also address its operations and processes, including upstream and downstream activities via the selection of appropriate KPIs.

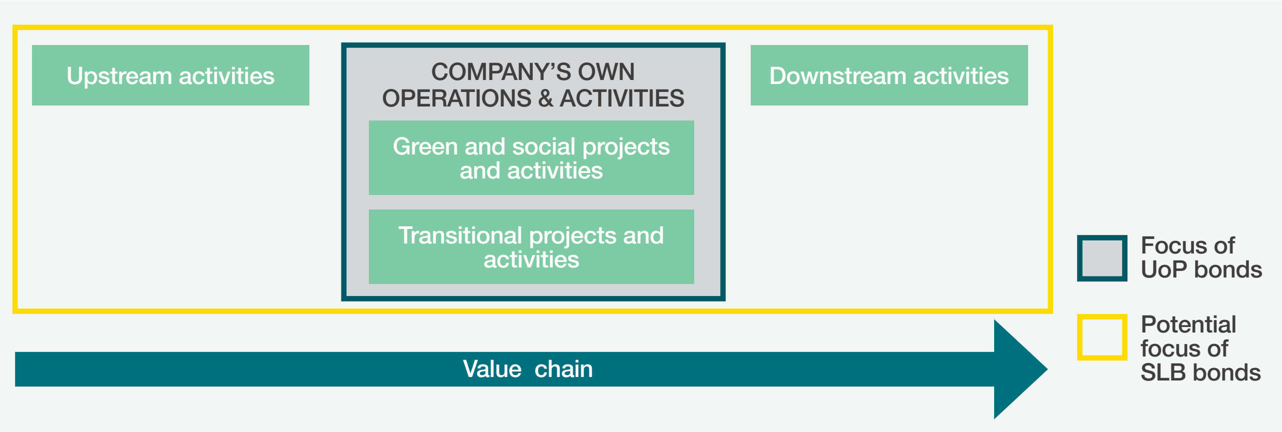


Figure 1: Potential focus of use of proceeds and sustainability-linked bonds

Let's take the example of a transport company's climate ambition and how to make that visible via a sustainable debt issuance. A UoP bond can highlight projects such as replacing old vehicles with electric ones in the company's own fleet and thus address emissions from its own operation. A SLB bond could allow a company to set a broader objective, targeting emissions along its value-chain as well by supporting efforts from its contractors to likewise switch to cleaner alternatives.

EF: Where does the CTF Handbook fit into all of this?

MCo: The CTF Handbook sets out guidelines for issuers to effectively demonstrate and communicate their transition strategy and shows how to issue financing instruments that will help advance their strategy. The focus is on transition towards aligning with the Paris Agreement and is of particular relevance to issuers that are in difficult to abate sectors. The benefit of the Handbook is that it is flexible in terms of the bond structure you apply it to. As such, it can be used by issuers to showcase their strategy on climate change both in the context of UoP bonds and SLBs as illustrated in Figure 2.

EF: What trends do you see for 2021 based on those new options for issuers?

MCu: We are already seeing issuances from a broader set of sectors, such as the cement and paper and packaging industry. This is crucial.

Continuing with the example of the cement industry, it becomes apparent that, according to commonly used Paris Climate Goal scenarios, this industry will be part of the economy in 2050. To achieve the transition to a carbon-neutral world, the negative environmental impacts of such industries must hence be reduced to the lowest level possible. The SLB structure allowed LafargeHolcim, for example, to raise capital tied to a Paris-aligned commitment of reduction of greenhouse gas (GHG) emissions intensity on its entire business model. SLBs are not only expanding the tool kit of issuers for sustainable financing, they are also allowing new sectors to access sustainable investors and funding opportunities. So, in the coming years, we are expecting to see a continued opening of the market to a broader group of issuers and the introduction of KPIs covering a wider range of topics.

FP: It is also important to note that, in 2020, UoP bonds were a critical tool for raising capital to address pressing social issues, all of which came during an unprecedented global health crisis. Social bond issuances surged to \$140 billion in 2020, up an astonishing 778% compared with the previous year. UoP bonds

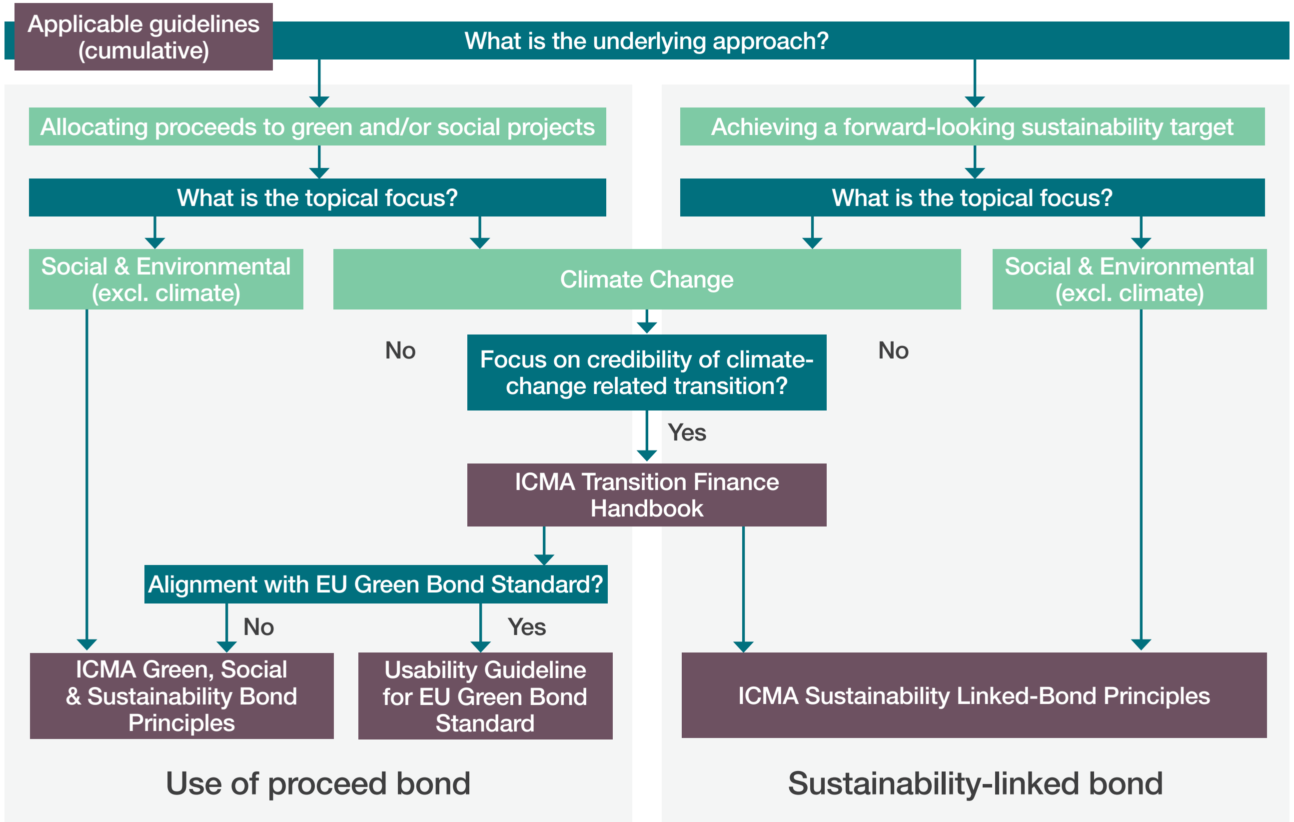


Figure 2: Key considerations for defining applicable market guidelines for sustainable debt issuance

will continue to grow and be a crucial part of the market.

EF: What topics are you especially curious about in the future of the sustainability debt market?
MCo: There are a number of emerging topics we are closely following as we enter the new year. Regarding new technologies, we speculate the potential for more issuances related to hydrogen or carbon capture, utilisation and storage as well as efforts relating to increasing the emission efficiency in a broader range of industrial processes such as in the chemicals sector. One potential new KPI we may see in 2021 concerns issuances linked not only to social or environmental indicators, but also to governance metrics.
VL: And, of course, any issuances linked to the CTF Handbook. It is a highly relevant guidance document but as with the Green and Social Bond Principles and the SLBPs, a guideline really comes to life once it is used repeatedly for transactions in the market. Market participants' critical discussion of issuances, their benefits and improvement options has always been very dynamic in the sustainability bond market. ■

By way of background, ISS Corporate Solutions (ICS) works in collaboration with ISS ESG, the responsible investment arm of Institutional Shareholder Services, as the distributor of SPOs. While the SPOs are sold and distributed by ICS, the analytical work to prepare and issue SPOs is performed by ISS ESG.

Case study one: LafargeHolcim

Why did you decide to issue a sustainability-linked bond?
Leila Sassi, financing and capital markets manager at LafargeHolcim: The issuance of our sustainability-linked bond offered us the great opportunity to link our funding with our sustainability strategy particularly on climate change. Beyond the target we have set by 2030 to decrease our CO_2 emissions, we wanted to give additional comfort to investors that we are committed to reach this target by all means.

What was the biggest challenge in the process?
LS: Compared to a traditional bond, the sustainability-linked bond has additional requirements such as a financing framework which follows the guidelines provided by the International Capital Markets Association. Various teams worked together to make it happen, strengthening cross-functional collaboration across the company.

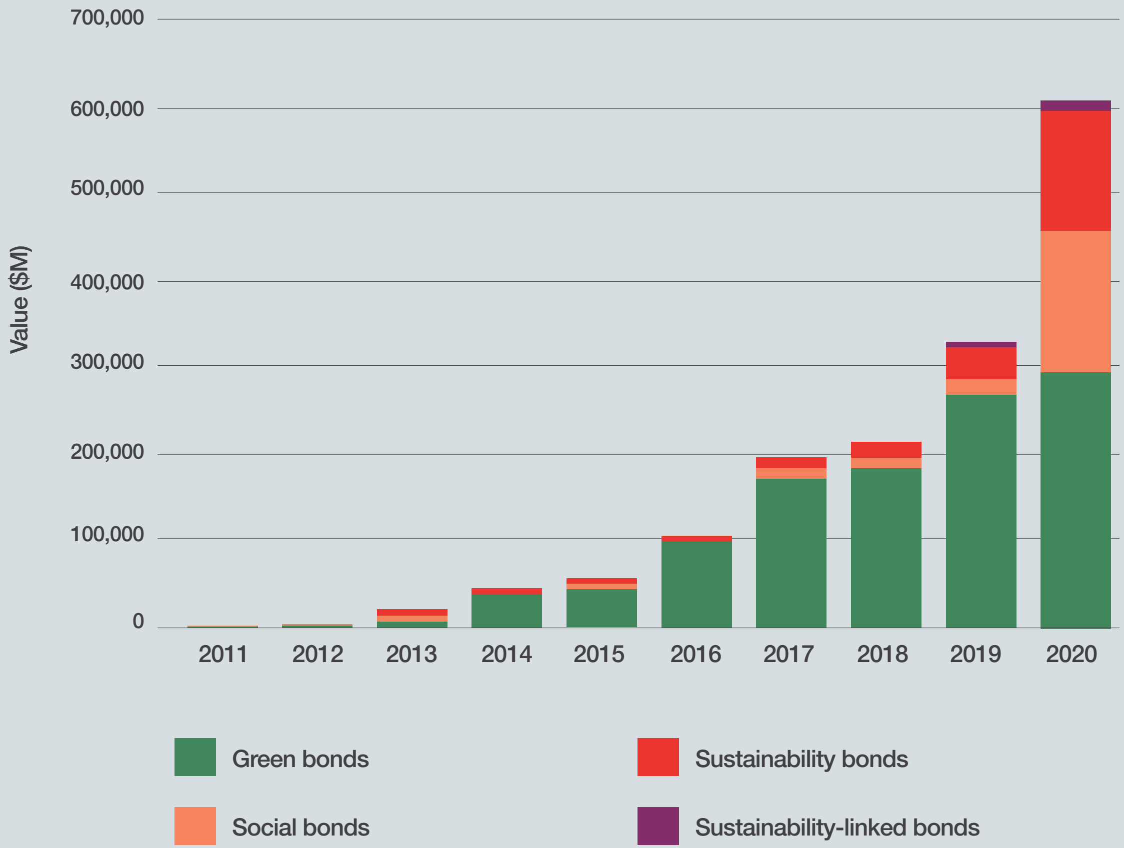
Case study two: Suzano

Why did you decide to issue a sustainability-linked bond?
Cristiano Oliveira, sustainability executive manager at Suzano: We decided to issue a SLB to further integrate sustainability into our business in order to drive environmental performance where we have the ability to effect positive change. Through our issuance, we commit to specific environmental outcomes with skin-in-the game.

What was the biggest challenge in the process?
CO: The biggest challenge lies in the fact that it is a new instrument in the market, and the short period of time that there was to structure it. Suzano was only the second company in the world to issue an SLB, and the first to issue according to ICMA's SLB Principles and with a second party opinion, so there was little in terms of reference. Everything we did was new.

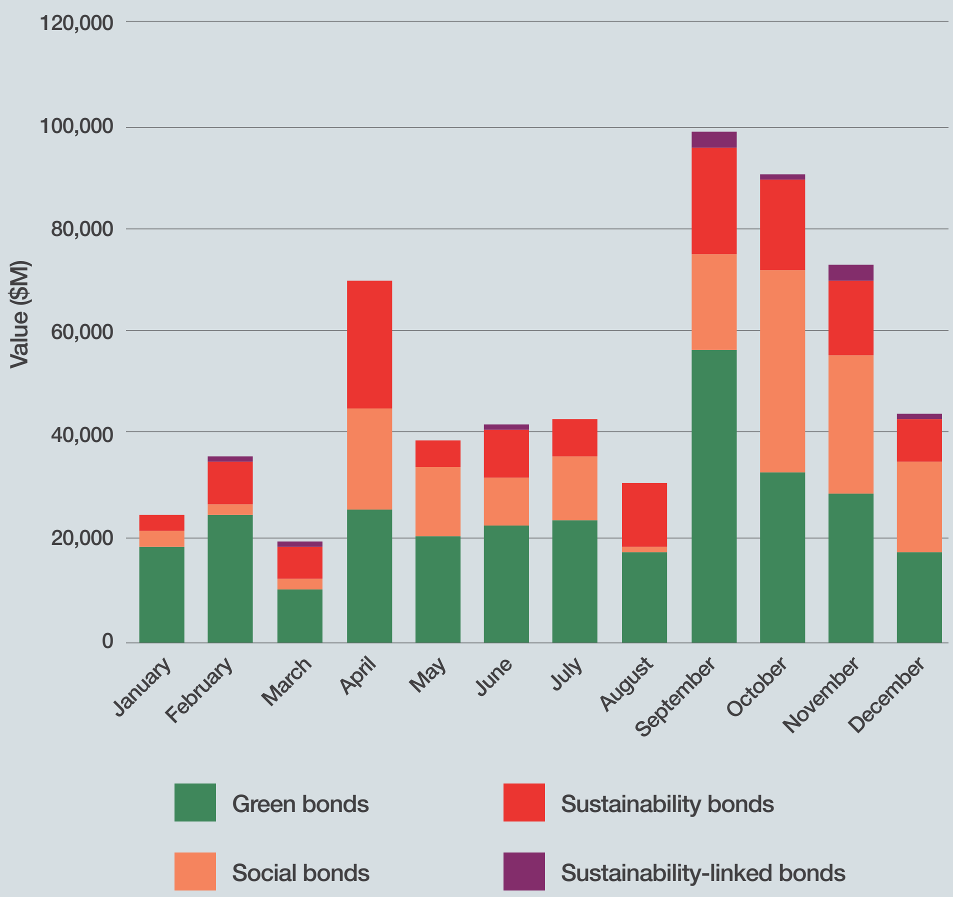
Annual issuance

The green bond market grew modestly in 2020 but total issuance almost doubled as social and sustainability bonds grew rapidly in response to the Covid-19 pandemic. The average tenor of bonds shortened in 2020 while the average value of bonds issued continued its upward trajectory.

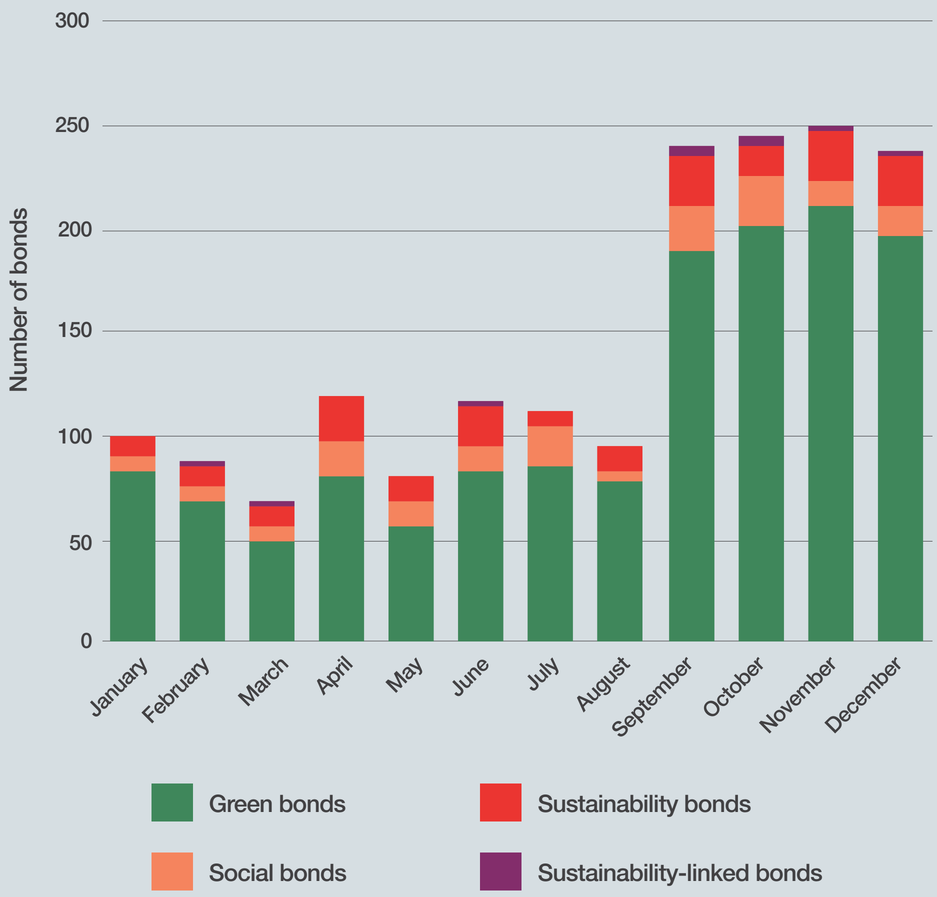


*Average dollar value and tenor excluding Fannie Mae

Monthly issuance value of green, social, sustainability and sustainability-linked bonds in 2020

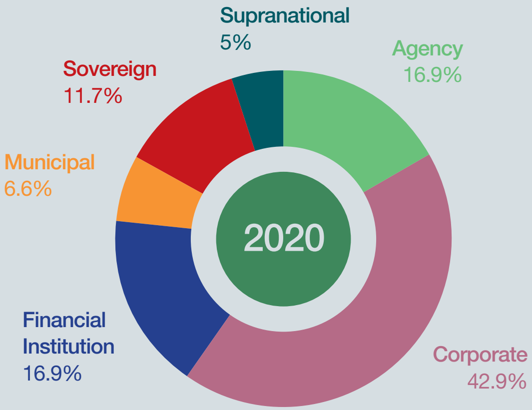


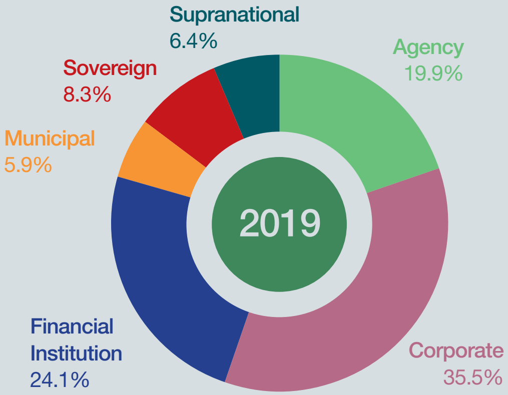
Monthly volume of issuance of green, social, sustainability and sustainability-linked bonds in 2020



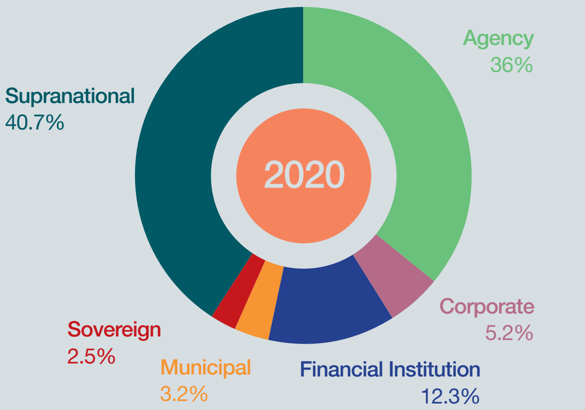
Breakdown of issuers of green, social and sustainability bonds

Green bonds

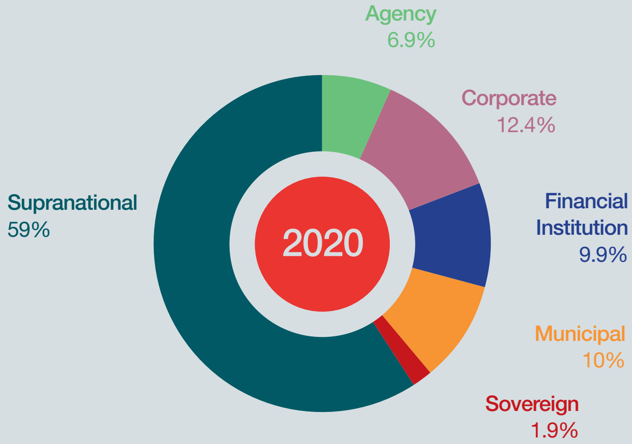




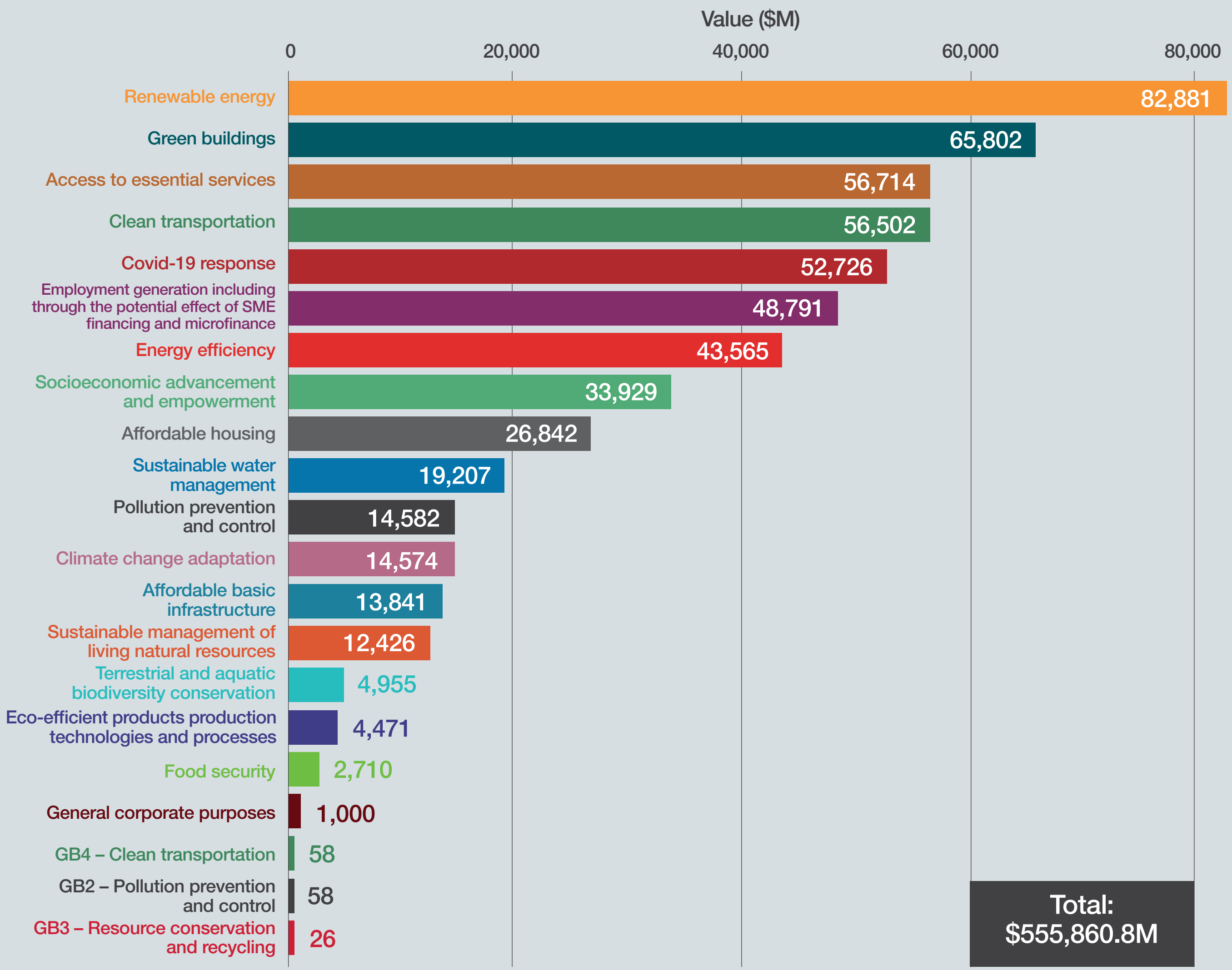
Social bonds



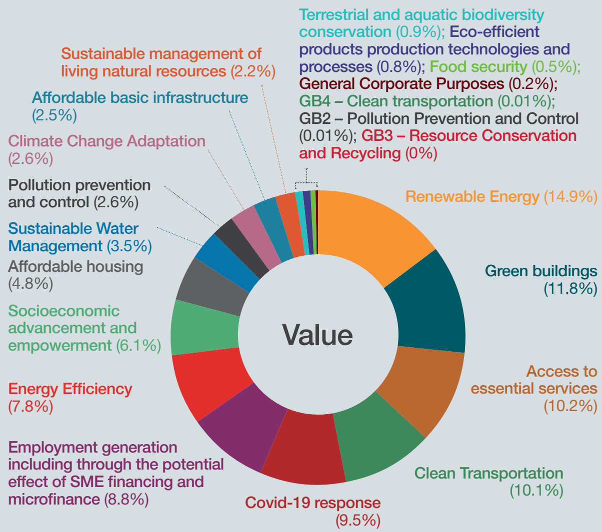
Sustainability bonds

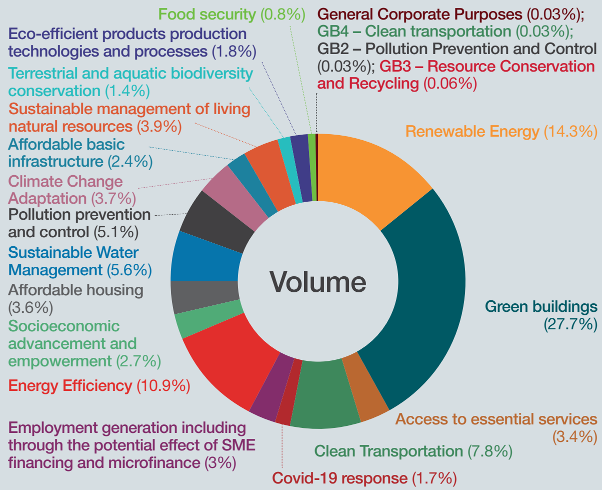


Use of proceeds breakdown of bonds issued in 2020 by value



Percentage breakdowns





McDermott Will & Emery

Impact finance: the case for harmonising finance and social good

Private sector participants are increasingly joining their peers in the public sector in providing finance that marries impact with investment returns. Ranajoy Basu and Priya Taneja of McDermott Will & Emery explain

Environmental Finance: Let's start by defining our terms: what do we mean when we talk about social impact finance?

Ranajoy Basu, partner, McDermott Will & Emery: Broadly speaking, it is any structured financial solution which aligns with the implementation of the UN Sustainable Development Goals (SDGs), and which aims to create a positive impact, whether in environmental or social terms. So one bucket includes, amongst others, green energy, clean water, environment and climate change. The other bucket relates to, amongst others, social sustainability, health, education, skills and entrepreneurship. It involves either domestic financial solutions or, what we specialise in, global cross-border impact finance solutions. Delivering a positive impact (and related measurement and reporting) plays a central theme in impact finance transactions. The Operating Principles of Impact Management defines impact investing as "investments made into companies or organisations with the intent to contribute to measurable positive social or environmental impact, alongside financial returns".[1]

Crucially, the impact element is specifically measured and reported on so that the economics of the transaction are directly linked to the positive impact delivered. Confusingly, impact bond transactions are not necessarily bonds in the traditional capital markets sense: they are not debt instruments and, for example, they can't be traded (yet!). However, we do see certain jurisdictions, such as France, where impact bonds are capital markets securities. More recently, we have seen 'blended finance' transactions include (very effectively) a combination of grants and debt instruments.


Ranajoy Basu, partner


Priya Taneja, counsel

EF: What does a typical impact bond transaction look like?

Priya Taneja, counsel, McDermott Will & Emery: Investors provide capital to an intermediary, whether a corporate or an NGO, which wants to make an intervention to create impact, such as educating girls by building schools in remote villages. The intermediary builds and runs the school (either directly or through third-party service providers), and the intervention and its outcomes are monitored – in this case, the grades achieved by the girls and/or general retention rates of the students over a certain time period – by an independent evaluator. The investors then earn a return based on the outcome. Investors are paid for success by Outcome Payers.

If the Outcome Payer is a government body, such a transaction would tend to be called a social impact bond, but if it's a charitable or philanthropic organisation, it would be called a development impact bond.

Examples include the alliance between UNICEF and the Education Outcomes Fund (EOF), aimed at delivering SDG 4, in setting up a joint structure in relation to an outcomes-based model for EOF's underlying education programmes in various jurisdictions.

Another is the Utkrisht Bond, which aims to reduce the number of mother and baby deaths by improving the quality of maternal care in Rajasthan's health facilities, the impact of which is intended to reach up to 600,000 pregnant women

1. The Operating Principles for Impact Management were officially launched at the World Bank Group-IMF Spring Meetings in Washington, DC on April 12, 2019.

by improving care during delivery. This could lead to up to 10,000 lives being saved over a five-year period. The "Educate Girls" impact bond aims to improve learning outcomes for more than 20,000 children in some of the remotest parts of Rajasthan in India. And the International Commission on Financing Global Education Opportunity's establishment of a finance facility (the International Finance Facility for Education (IFFEd)) to enhance financing initiatives for education in low-income and lower-middle-income countries. In its initial phase, this innovative approach is estimated to unlock $10 billion in new funding for education from the international community.

EF: What sort of organisations have been tapping the market? What are they using impact finance for?

RB: The social impact market emerged from the development finance world, from institutions such as the World Bank, the Asian Development Bank, government agencies such as USAID and global foundations. However, it is encouraging to see that the sector is now attracting a very wide variety of participants from both the private and public sectors.

What has changed? Two things drive participants in the market. One is the SDGs. These involve some very ambitious objectives, which in many jurisdictions are backed by legislation – and it's no longer just development institutions that will be responsible for achieving those targets. This effort has become a partnership between the public and private sectors.

The second is a realisation that these two sectors need not be divorced from each other in the type of transactions that they can do. There is a realisation that private sector participants can still be profitable at the same time as having a very positive impact with the structures that are available to them.

EF: What does the investor base look like, and what is the appeal to buyers?

RB: What appeals is the impact element. They are driven by the big change – how are we changing the world? It is two-fold; being part of the journey of change, but there is also the return element. You can have investors who are impact first, and other investors who are driven by the return.

EF: How has the market been growing in recent years?

RB: The Brookings Institute has tracked 193 social impact bonds and 13 development impact bonds since 2014. These bonds have raised more than $400 million in up-front capital, and have supported some 2.6 million beneficiaries.

EF: What are the challenges in structuring social impact bonds?

RB: At a very high level, there is confusion about the terminology and a lack of consistency, not just in reporting, but also in documentation. We're involved in a number of initiatives to address this, including with the Government Outcomes Lab at Oxford University, which is developing a template document for outcome funding. A lot of terms used in social impact come from the development finance world, so they don't necessarily resonate with capital markets investors.

There are also challenges directly linked to the nature of the transaction, which remains bespoke and can involve high transaction costs. First, social impact takes time to deliver, to measure and to report, but all three elements are critical for the funding structure. Second, from an investor or asset manager's perspective, unlike commercial transactions, you can't easily unwind these transactions, because you have very vulnerable populations involved, especially on the social sustainability side. There are very complex governance mechanics regarding restructurings or any factors which adversely impact the life of the transaction. Covid is illustrating this. There are some very broadly drafted force majeure provisions. In education, for example, how do you measure impact when children are not able to attend school due to lockdowns?

PT: The third challenge is the size and depth of the impact bond market and whether there are enough investment opportunities. We asked participants at a conference last year whether there was a lack of capital, or a lack of projects to invest in: the answer was very much the latter.

RB: There are also challenges relating to the scaling of social impact transactions. Because you're evaluating the performance over a period of time, what is being targeted is actually quite specific. This means that transactions often don't lend themselves to scaling, even if you have an unlimited amount of funds. There are exceptions: Covid has been a great example of impact finance transactions which are being structured at a global scale – for example, if we consider what GAVI, the Vaccine Alliance, is doing with its Covax initiative aimed at equitable access to vaccines – but these exceptions (such as the Education Outcomes Fund, The International Finance Facility for Immunisation or the International Finance Facility for Education) are few and far between.

EF: What should investors consider when evaluating transactions?

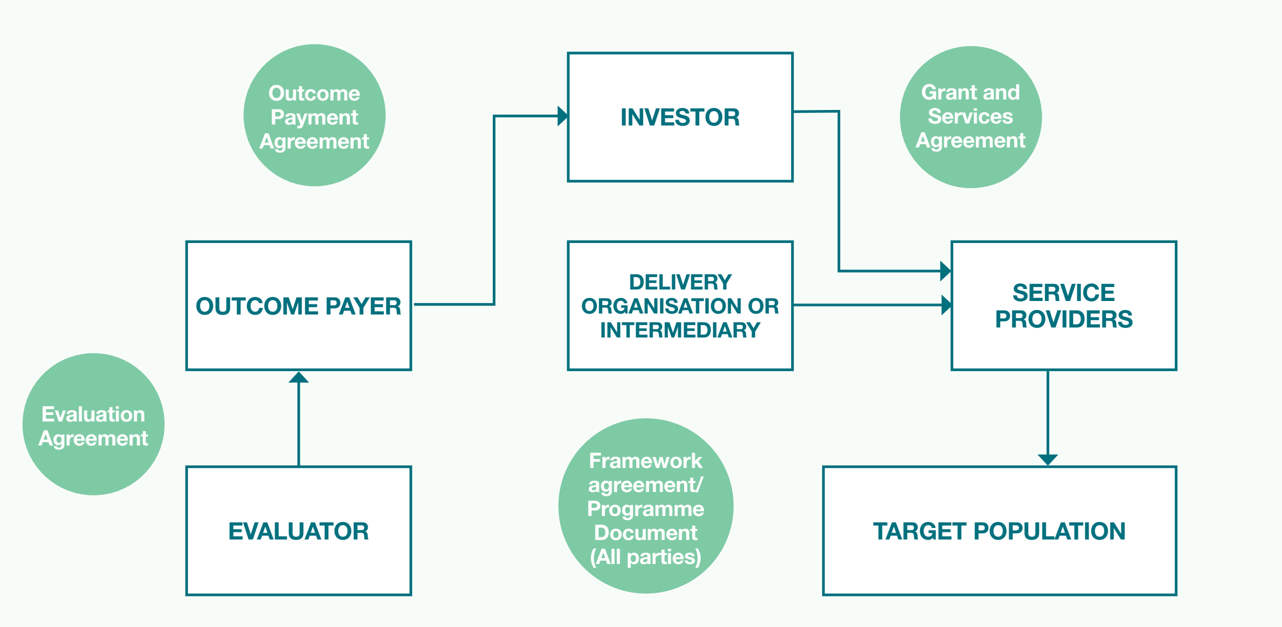
RB: Investors tend to look at four things: One, where is the money being used, how much money is required, and what is it being applied to if it's a use of proceeds model? The second is with implementation. How much risk is involved? How is it measured? The third thing is that investors want complete clarity over the return proposition. They want to understand what, during the life of the transaction, can disrupt the implementation model and the measurement evaluation, and how that affects their return on investment.

Finally, and this is a critical issue, is how much control they have during the life of a transaction. It's a bit of a 'balancing act' during the negotiations. You don't want the project to be so investor-orientated that the service providers are so constrained with restrictive covenants and reporting obligations that it becomes very difficult for them to actually carry out the intervention. You need to ensure that the investor's money is being used properly for the objectives of the project in order to maximise returns, while also ensuring that project governance is not too burdensome and service providers have the flexibility they need to adapt on the ground.

Early transactions tended to be structured on a full 100% risk basis – so if the project didn't achieve 100% of its outcomes, the full investment would be lost. We're now seeing much more structuring coming to the market, with milestones in the form of specific outputs included in the contracts.

EF: How are blended finance approaches being applied to social impact finance?

RB: Blended finance is representative of the coming together



Impact bond structure, parties and documentation

of different actors – public, private, philanthropic, donor-based and return-based. The beauty of these transactions is that you can marry up all of these different sources of funding to ultimately deliver a positive impact. Classic examples include development impact bonds, educational impact bonds, and recent ones such as the rhino conservation bond.

Essentially, it's a way of sharing the risk. You can structure the capital stack in such a way that the grant funding takes the first loss piece, and the returns-based model is used as a catalytic component to scale the volume of funding (or a blended combination of both elements). You can structure transactions differently, so that not all of the risk is on single investors or sponsors. Recent transactions have shown one can successfully aggregate capital (and consequently spread the risk particularly in first time interventions) both at an investor and sponsor level. There are various 'back-to-back' structures being put together to achieve risk participation and scale of funding.

For example, the Quality Education India development impact bond was the first transaction to use an aggregated model to attract funding at both the outcome funder level as well as the investor level – so you have numerous investors standing behind the core investor, and numerous sponsors involved. Each transaction has a slightly different risk profile.

EF: How did the sector perform in the face of the Coronavirus pandemic?

RB: While many sectors have contracted during the pandemic, the impact finance sector has gone the other way. This is one of the most encouraging factors around the sustainability of the sector. Over the last 12 months, there has been exponential growth, not just in relation to Covid-related funding, but also to other issues, such as clean water, renewables, climate change. These issues are not going to go away overnight.

The coronavirus pandemic has tested the sector, but it has shown that this sector is extremely resilient, despite all of the disruption. There is a genuine drive by both the public and private sector to address some of the social interventions around the world at the moment. We only see it increasing over time. The road ahead is definitely a busy one for impact investment.

EF: What developments do you anticipate in social impact finance over the coming year?

RB: There are three things to mention. As an industry, there are numerous organisational activities underway. For example, HSBC, in collaboration with some of the leading banks around the world, is fostering a 'Fast Infra' project to catalyse infrastructure financing around the world. There's the Coalition of Impact Investors, co-ordinated by the Red Cross and others to bring together the investor community to try and grow the sector. There are various working groups, including legal groups such as the International Impact Lawyers Working Group. There are organisations at the government or sponsor level, such as the GO Lab at Oxford.

But also what's interesting is that there are rapid developments underway to ensure greater clarity, clearer reporting and the standardisation of documents.

The third thing is that people are now very acutely concerned about protecting the growth in the sector. There are ratings being developed of impact measurement, and organisations which are looking at monitoring the impact evaluation aspects of transactions. From a regulatory and governance perspective, there's been a great deal of activity to address a lack of definition and clarity around some of the terms used in the market. One has to be careful about this because, in any growing market, over-regulation can stifle innovation.

Finally, in the last few months we've seen that not only has the number of transactions increased, so too has their average value. The market is not without its challenges and, overall, it remains quite fragmented. However, what is emerging quite rapidly is an appetite for supporting these types of transactions at scale. ■

Driving ESG bond markets to new heights

The environmental, social and governance (ESG) debt market had an eventful year in 2020 with the pandemic spurring the growth of social bonds and increased issuance of other types of sustainable debt. BBVA was also the first private institution in Europe to issue a Covid-19 bond, setting the precedent for others to follow. Patricia Cuenllas and Michael Gaynor review the events of 2020 and assess what this means for the year ahead

Environmental Finance: One of the big trends for ESG bonds in 2020 has been the proliferation of social bonds. What has driven this trend and are social bonds here to stay?

Patricia Cuenllas, DCM, green and sustainable bonds, BBVA: Social bond issuance exploded last year. The total amount issued was well above €200 billion ($240 billion) and it now represents around half the total ESG issuance volume. To put this in perspective, the volume has more than tripled in the last year. It shows a rebalancing has taken place in the green, social and sustainability (GSS) bond space.

In the first instance, there was a need to mitigate the effects of the pandemic. But at the same time, the exceptional situation made the market become more aware of the importance of including social aspects in corporate and investment strategies.

While the pandemic put the social bonds in the spotlight, this is just the beginning.

Patricia Cuenllas, DCM, green and sustainable bonds

Michael Gaynor, senior credit research analyst

EF: Which geographies and sectors have most potential for increased issuance of social bonds?

PC: We expect to see more social bond issuance in the public sector, mainly by financial institutions in those geographies where there are more opportunities for a positive social impact.

Increasingly during the pandemic, we are also seeing more interest from corporates in this same category. However, it can be difficult for corporates to analyse how to incorporate social categories into their frameworks and transactions. Therefore, I think that instead of standalone social bonds, we can probably expect more issuance of sustainability bonds that incorporate environmental and social categories.

In terms of geographies, we have seen increased interest in Europe, but also and Latin America. In the beginning of the pandemic we saw large transactions from International Finance Corp (World Bank) and Inter-American Development Bank (IDB), as well as the social bond issue of Ecuador. Most recently, also Chile updated its framework to incorporate social categories.

We also anticipate seeing more microfinance related social bonds in Latin America. They have a unique opportunity to focus on the impact they want to have on society.

Without a doubt, we have had more issuers from Latin America contacting us to find out how they can add value to their clients and to see if they are in the position to issue a social bond.

EF: You were the first private institution in Europe to issue a Covid-19 bond last year. What drove your decision making and how did you approach structuring the use of proceeds for it?

PC: At BBVA we have always tried to innovate in the ESG bond market, and we are conscious of the impact such transactions can make.

The decision to issue our own social bond in May was an easy one. On the one hand, our sustainable development goal (SDG) bond framework already included social categories and, on the other hand, BBVA was already providing support and financing to the most affected sectors of the pandemic.

We placed €1 million towards our Covid-19 social bond and it was a very successful execution. We were particularly happy to see that many of the investors that subscribed to the bond had already invested in our green bond transactions before. The demand was closed at €5 billion and it goes without saying, we were pleasantly surprised.

In terms of use of proceeds, we wanted our social bond to contribute to one of the four social categories defined in our SDG bond framework: healthcare, affordable housing, small and medium-sized enterprise (SMEs) financing and education. However, since this was a Covid-19 social bond and as many companies are now struggling, we decided that this bond should primarily focus on SME financing.

EF: What were some of the challenges you experienced in issuing this bond?

PC: Being the first private institution to issue a Covid-19 bond was a challenge. We were sure that we wanted to do it, but at the same time, we needed to make sure that the deal was going to be a success. Our primary concern was linked to the volume. As BBVA had been very active in helping clients during the pandemic, we knew we had enough loans – a total collateral of over 3 billion euros – to justify the exercise. However, we were not sure if we would have the data needed to do the reporting.

We needed to see if we had enough information to provide a value analysis in our reporting, around areas such as employment retainment figures. We are now looking at this, and will be publishing our first impact report for the Covid-19 social bond in May or June.

> The decision to issue our own social bond in May was an easy one. On the one hand, our sustainable development goal bond framework already included social categories and, on the other hand, BBVA was already providing support and financing to the most affected sectors of the pandemic

EF: Looking at other innovative structures in the market, such as sustainability-linked bonds (SLBs), why might some issuers and investors favour this structure over a use of proceeds structure?

PC: Before the International Capital Market Association's (ICMA) Sustainability-Linked Bond Principles were announced, some companies were already looking for a way to enter the ESG bond market but adopting a use of proceed format to identify specific green or social projects or initiatives did not fit their strategy.

When a company opts for a SLB format, they are making a forward looking statement about their strategy, and this broadens the scope of the issuer. For instance, cement companies are aware of their environmental impact and have worked on their targets for CO_2 reduction. These targets have been validated by the science-based target initiative (SBTi) and are aligned with the Paris Agreement. These companies are now making a strong statement about their future and can tap the market for investors to finance these strategies. This pushes the sustainable debt capital market toward financing transition.

Michael Gaynor, senior credit research analyst, BBVA: From the investor perspectives, if we compare SLBs with the use of proceeds model, there is a degree of separation between the issuer and the capital with the use of proceeds format. It is the green capital that has traditionally been judged on the ESG criteria, not necessarily the company or the top-level corporate strategy.

As such, there are some investors who are concerned about 'greenwashing' as there might be ringfencing of capital going to fund green projects from the bond being issued, but there is no explicit commitment at the corporate level to greening up the rest of the balance sheet or business operations.

The key point is that investors want to understand the decarbonisation or socialisation story of companies' balance sheet in a much more holistic manner and, as such, SLBs can benefit both issuers and investors.

EF: How do the valuations of the different types of GSS bond and KPI-linked instruments structures compare?

MG: This is something that investors are keen to know. Despite the growth of social bonds this year, we still see that green-labelled instruments have the strongest pricing dynamics and largest investor interest.

This is partly because they have been around longest, and we now have the EU regulation that supports them. For the time being, it is difficult for investors to quantify what is a meaningful social impact. Even if the data is there, the materiality and the meaning of what it means can be missing.

In the green bond space, however, there is more supporting information for investors to make a materiality-based decision on these instruments and this feeds through to the pricing.

We expect this to change when investors become more comfortable with different instruments as they become more mainstream. Then we would also expect to see preferential pricing dynamics emerge and more sustained outperformance in the medium- to long-term.

EF: Are KPI-linked structures easier for investors to track and measure impact?
MG: It depends. With KPI-linked instruments there is a coupon step up or down that is likely to be linked to an already existing, and relatively transparent, corporate target, hence allowing the investors to benchmark these targets versus the sector. With the use of proceeds bonds, investors need to do more digging into the allocation and tracking of the capital. For those investors engaged at the corporate level and looking at decarbonisation transition strategies, it is possibly easier to track the impact of SLBs than use of proceeds.

> One of the key barriers for issuers is identifying an eligible asset pool on their balance sheet. A taxonomy allows them to identify those assets

Another issue is the scalability. Some of these instruments have multiple metrics and targets linked to multiple coupons. As we start to see the number of these issuances grow over time, modelling the optionality of these products in a portfolio will not be an easy task, especially for smaller assets managers. This is an important consideration to address for the scalability and marketability of these products.

There have also been some controversial transactions due to the strengths of their targets. It requires a lot of resource intensive analysis from investors to assess what is material or not, in terms of targets and measurable KPIs.

In summary, this market is incredibly nascent, and investors are still learning exactly how they can incorporate such instruments into their portfolios. The idea behind these instruments and why they need to exist is undeniable; the outstanding issue is how we build these nitty gritty technicalities into the portfolios and how to scale them up moving forwards.

EF: You mentioned the importance of regulation for supporting the markets. How are such regulatory developments framing the market?
MG: In 2020, with the EU Sustainable Finance Action Plan, the Taxonomy, and the Green Bond Standard (GBS) that the European Commission was developing, it appeared they were being incredibly supportive of the development of the green bond market – and of a possible social taxonomy in the future as well.

Then in November 2020 we received a draft from the European Commission which had some meaningful deviations from what the Technical Expert Group (TEG) had originally suggested. Whilst most of the defined activities were fine, there were some questions around some specific details, including natural gas related activities and activities related to real estate.

The future success of the taxonomy is now very much in the balance. The key question is, how willing are the European Commission going to be to change their position when addressing some of the feedback and putting forward a new draft of the Delegated Act?

One of the key barriers for issuers is identifying an eligible asset pool on their balance sheet. A taxonomy allows them to identify those assets. Ultimately for investors, the EU regulations remain a significant step up in terms of the disclosures at a corporate and product-level. This will be massively supportive, not just for the green market, but also for ESG investing. Despite the uncertainty around the taxonomy, the GBS is already being applied by issuers, showing an awareness and enthusiasm from issuers to align themselves to this regulation.

In summary, regulatory frameworks are helping the issuers understand what they can issue and the scope of what is possible under green taxonomy. It is also helping investors understand what is materially green and what can contribute to their targets. Materiality is the most important factor that is really going to drive this market to new heights. ■

BBVA's ESG track record

2004	• First Spanish financial entity to sign Equator Principles
2006	• Signed Principles for Responsible Investment
2014	• Signed Green Bond Principles
2016	• Led first green bond transaction for Iberdrola
2017	• Signed first bilateral green loan for a utility globally with Iberdrola
2018	• Among the first banks to publish a sustainability pledge • BBVA issued its inaugural green bond • BBVA joined four other international banks in the Katowice commitment • BBVA structured the first green bond for a UK corporate
2019	• Signed the Principles for Responsible Banking with 131 other banks • BBVA structured the first SDG framework for a telecom company
2020	• Mobilised €50 billion of sustainable finance; adopted sustainability as one of BBVA's six strategic priorities; committed to being carbon neutral at the end of 2020; created a Global Sustainability Office and was the first bank to issue Covid-19 social bond.
by 2025	• Commitment to mobilize €100 billion within the bank's sustainable pledge

Fannie Mae

Driving impact in housing affordability and environmental sustainability

After issuing $87.5 billion in mortgage-backed securities (MBS) in the green bond market with its multifamily residential financing products, Fannie Mae has expanded its efforts into multifamily social MBS and single-family residential green MBS. *Environmental Finance* spoke with Chrissa Pagitsas and Lisa Bozzelli to hear how the company worked together to increase the positive impact of Fannie Mae's sustainable products and to pass savings on to tenants and homeowners

Environmental Finance: Fannie Mae has a long-standing history in US housing. How does your environmental, social and governance (ESG) strategy fit into your firm's objectives and integrate within the organisation?

Chrissa Pagitsas, head of ESG, Fannie Mae: ESG is a natural fit with, and strengthens, Fannie Mae's mission to provide liquidity and promote stability and affordability in the US single-family and multifamily residential mortgage market. Our ESG strategy builds on our existing mission activities to deliver additional positive environmental and social outcomes in US housing.

To ensure ESG is incorporated into our enterprise, we integrated ESG oversight, strategy and implementation at multiple points within our organisation. Fannie Mae has committed to ESG as an enterprise strategic objective in our Form 10-K. Our ESG strategy is governed and implemented by our Community Responsibility and Sustainability Committee of our Board of Directors as well as our dedicated ESG team.

EF: You entered the ESG bond market with your Multifamily Green Bond program in 2012 and have been the world's largest issuer of green bonds since 2017. How has that program evolved?

> Investors have responded positively to our green bonds; in the past two years, we have seen a noticeable increase in the number of our investors who either have a dedicated green fund or an ESG mandate for their portfolios

CP: We strongly believe that innovating and testing products is the best way to meet growing investor needs and evolving global standards. Over time we have refined our product offerings while keeping our strategy focused on delivering financial, social and environmental impacts, or "triple bottom line impact." As a result of feedback from our lenders and investors, our offerings evolved into the two current offerings: our Green Building Certification (GBC) program and our energy and water consumption reduction program, Green Rewards.

As we grew green financing volume, we calibrated the eligibility requirements to help deliver more cost reductions to the residential tenants within the property and to the property owner through efficient use of capital and an increased focus on positive environmental impact. We have required minimum energy consumption reductions, which drive greater savings to the tenants who often pay for their own electricity.

Over the past ten years, we have also seen growth in the number and type of GBCs in the market with increasingly stringent and higher environmental standards. Each year we assess the new existing certifications and select those that meet our environmental standards for inclusion in our program. Just last year we celebrated a first for the mortgage and green bonds industry – a securitised mortgage backed by a property meeting passive house standards. What does this mean? The green bond collateral was a multifamily property successfully designed and built to meet standards for properties striving for net-zero energy use through use of highly efficient construction, deep energy efficiency features and renewable energy generation (see box on next page).

Lisa Bozzelli, senior director, multifamily capital markets, Fannie Mae: As we've built our program, we

Pax Futura

In 2020, Fannie Mae provided $5.9 million in financing for its first property with a PHIUS+ green building certification for properties striving for net-zero energy use. Pax Futura, a newly constructed 36-unit apartment building in Seattle, Washington, combines highly efficient construction, deep energy efficiency features and renewable energy generation.

With micro units comprising half of the apartments, its resource conservation, solar thermal hot water system and durable construction are projected to reduce energy consumption and costs by at least 70% compared to a similar multifamily building built to code.

continue to invest in our disclosure systems, leading the residential mortgage market in transparency. We publicly disclose the projected environmental impact of the multifamily green bonds in our portfolio at the individual bond level, both at issuance and on an ongoing basis. We've disclosed new fields such as the US Environmental Protection Act (EPA) Water Score, and Electricity Generated (kBtu).

Investors have responded positively to our green bonds; in the past two years, we have seen a noticeable increase in the number of our investors who either have a dedicated green fund or an ESG mandate for their portfolios. We're excited to see continued interest in our green bonds and the overall desire in the market for more impactful investing.

EF: You began issuing Single-Family Green MBS in April 2020. What do you hope to achieve by adding that program to your green bond suite?

Chrissa Pagitsas, head of ESG

LB: In a word: impact. We believe every loan can be a green loan. We're proud of the $87.5 billion in Multifamily Green MBS we've issued. Now it's time to expand the program to our single-family business. The single-family residential mortgage market is about seven times bigger than the multifamily market, with Fannie Mae accounting for roughly 30% of that market as of September 2020.

Expanding our established green financing business into the single-family market allows us to take a new approach to improve environmental sustainability in the homes we finance. Our Single-Family Green MBS program is the next step in our ongoing effort to promote and expand the growth of an active green bond market.

Lisa Bozzelli, senior director, multifamily capital markets

EF: How do Single-Family Green MBS compare to your Multifamily Green MBS?

CP: We built the green eligibility criteria for our Single-Family Green bonds based on our existing process for Multifamily Green bonds. Single-Family Green MBS include only mortgage loans backed by newly constructed single-family residential homes with ENERGY STAR® certifications that meet or exceed the national program requirements for ENERGY STAR Certified Homes, Version 3.0. ENERGY STAR certified homes are at least 10% more energy efficient than homes built to code and achieve a 20% improvement on average. We believe that this level of efficiency will not only support the transition to a low-carbon economy, it can also provide significant cost savings for the owners and renters of single-family housing.

Fannie Mae

Unlike multifamily properties where energy and water savings are often divided between the property owner and the multiple residential tenants, our Single-Family Green Financing business provides an opportunity for the homeowner to benefit directly by choosing to purchase an ENERGY STAR-rated home. With our programmatic approach in 2020, we issued over $100 million in bonds in just ten months.

LB: For readers unfamiliar with Fannie Mae's single-family residential securities, one important differentiator between the Multifamily MBS and the Single-Family MBS is the number of loans and properties backing the security. Our Multifamily MBS are generally backed by one loan on one multifamily property or an apartment building. For single-family, each MBS is backed by multiple loans backed by individual single-family homes.

In the multifamily green world, this possible diversity of properties is found in the re-securitised Real Estate Mortgage Investment Conduit (REMIC) structures which we issue a few times each year. We have issued $11 billion of the green Fannie Mae Guaranteed Multifamily Structures (Fannie Mae GeMS™) structures as of the end of 2020. It is also important to mention that both multifamily and single-family MBS are guaranteed by Fannie Mae for the timely payment of principal and interest on the bonds.

EF: In early 2021, Fannie Mae published its sustainable bond framework. What does this mean for the company?

LB: Our sustainable bond framework builds on our existing business. The new framework acts as an umbrella, enabling us to issue social bonds, green bonds and a combination of the two. The framework was reviewed by Sustainalytics and is aligned with ICMA's Green Bond Principles (GBP) and Social Bond Principles (SBP). As a result, we issued our first Multifamily Social GeMS this January, a $315 million REMIC offering backed by 26 affordable housing or manufactured housing community properties. We will continue to work to grow the number of affordable units we finance without sacrificing bond performance.

CP: Both our Single-Family and Multifamily Green Financing businesses are a key part of our sustainable bond framework. We believe we are on the leading edge of growth in these markets and can establish market standards for the housing sector. As such, we chose to maintain the rigor of our green financing businesses within the sustainable bond framework. In order to maintain a strict expectation of environmental impact, a Fannie Mae Sustainable MBS must be an affordable property that also complies with our green bond frameworks.

> We are excited about the progress we have made in creating impact in US housing, but there is always more work to be done with partners and market stakeholders to determine best practices, develop common standards and work together to increase impact

EF: Given the hardships many homeowners and renters are facing due to the Covid-19 pandemic, what actions is Fannie Mae taking to help support America's housing market?

CP: Our social mission has been put to the test given the pandemic. One of the most effective tools to provide rapid relief to borrowers was ensuring that all borrowers impacted by Covid-19 are provided an opportunity for a temporary suspension or reduction of the monthly mortgage payment through payment forbearance.

As of the end of September, we have helped lenders to initiate forbearance plans for more than 1.2 million Fannie Mae borrowers in 2020. We designed simplified paths out of forbearance that are catered to the varying circumstances the impacted borrower may be experiencing. We also temporarily suspended most foreclosures and evictions. The goal is to help borrowers find a long-term solution that meets their needs once the Covid-related hardship is resolved.

Fannie Mae also has been reaching homeowners and renters through our Here to Help campaign, a multi-channel campaign to educate borrowers and renters on their options and provide them with tools to navigate a Covid-19-related hardship.

LB: From a market perspective, we have supported the stability and liquidity of the mortgage market through the crisis with clear and frequent communications with investors. We have worked hard to speed the information from borrower to servicer to Fannie Mae disclosure systems. We have invested in technology improvements and have adapted existing technology to increase our efficiency in this time of crisis. These efforts have enabled millions of homeowners to refinance and save money in this time of need.

EF: As Fannie Mae continues its ESG journey, what can we expect next?

LB: We are excited about the progress we have made in creating impact in US housing, but there is always more work to be done with partners and market stakeholders to determine best practices, develop common standards and work together to increase impact. Unfortunately, the economy may be working its way through the negative impacts of the pandemic for several years.

The inability of families and individuals to pay their rent or make their mortgage payments is top of mind and has exacerbated an already challenging affordable housing crisis in the United States. It is our intention to continue to find creative and impactful ways to address these challenges while continuing to support the liquidity of the mortgage market.

CP: From a corporate perspective, we're continuing to drill down on our ESG strategy, focusing on where we can truly make a difference in US housing, and continuing to examine ways to measure that impact, grounded in our commitment to transparency. Continuing to lead the way with standards for green bonds and now social bonds will be top priorities. We're more excited than ever to continue to help lead the mortgage market to a more sustainable future. ■

Nomura: helping to finance Asia's low-carbon transition

Rising volumes, an ever-diversifying issuer base, new structures and yield-hungry investors have characterised the sustainable bond market in Asia, say Jarek Olszowka, Nomura's head of sustainable finance, and Olcay Yagci, a senior banker in its sustainable finance group

Environmental Finance: What were the highlights for the sustainable bond business at Nomura in 2020?

Jarek Olszowka: We had a great 2020 in terms of sustainable bonds. We acted on the equivalent of more than $62 billion in aggregate notional of bonds underwritten, with some really landmark transactions. For example, we were joint lead managers on the EU's record-breaking inaugural dual tranche SURE social bond issuance, helping to raise €17 billion ($23.5 billion) off an order book of well over €233 billion. We helped bring to the market the first Covid-19 response bond from a European bank, from BBVA, and the first green Tier 2 subordinated debt instrument from a European bank, for the Dutch bank de Volksbank.

We also arranged the first sovereign green bond in Samurai format, selling Hungarian government debt in yen to Japanese investors. Of the four tranches, totalling ¥62.5 billion ($24 million), two were in green bond format.

In terms of market development, we were one of only five underwriters elected to the International Capital Markets Association (ICMA) Green and Social Bond Principles inaugural Advisory Council, and we have been actively participating in ICMA's Climate Transition Finance Working Group, which published a key handbook on climate transition in December 2020, as well as a number of others, such as the Social Bond and Sustainability-Linked Bond Working Groups. We also picked up a number of awards, including the Investment Bank of the Year for Sustainable Corporate Finance from *The Banker*.

Jarek Olszowka, head of sustainable finance

Olcay Yagci, sustainable finance group

It was also a year where, as a large international financial institution, we have put in a lot of inward-facing efforts to improve our own sustainability metrics and footprint, and also to further widen the breadth of environmental, social and governance (ESG) solutions and products we are able to offer. We completed our acquisition of Greentech Capital Advisors, now Nomura Greentech, a leading boutique investment banking firm focused on supporting clients across sustainable technology and infrastructure. This has certainly strengthened our primary and advisory services relating to our ESG capabilities.

In 2020, we have also, among other things, published our first TCFD Report, joined the UN Principles for Responsible Banking and launched the Nomura Sustainability Research Center in Japan, focusing on conducting research and identifying strategic sustainability themes directly linked to the financial and capital markets.

To accelerate our efforts and to provide financing and other solutions for low-carbon projects, we formed the Wholesale Sustainability Forum across our Wholesale Division at Nomura. Led by Steve Ashley, our head of wholesale, and comprising senior employees from across the firm, the forum's purpose is to monitor market and regulatory trends and identify opportunities for financial products and services that contribute to sustainability. We have also put in place a Wholesale ESG Sectoral Appetite Statement to guide us where, from an ESG perspective, we do and do not want to get ourselves involved.

In Retail, we have been continuously expanding our line-up of SDG-linked investment products, having launched a number of ESG-related funds. Apart from giving our clients opportunities to invest in companies that are working to resolve social or environmental issues by marketing these funds, we also aim to bring greater awareness to investors about sustainable finance.

So, rather unsurprisingly, it was a very busy year for us on the ESG front, with a lot of work which has also been externally recognised, with Nomura receiving significant uplifts in three of our ESG ratings.

EF: What have been the key developments in the sustainable bond market in Japan and Asia more broadly?

JO: It was a record year for green bond issuance in Japan – both the overall volume and the number of transactions nicely maintained the upward growth trajectory which we have been observing over the past years, despite the onslaught of the Covid-19 pandemic. (See figure 1 overleaf)

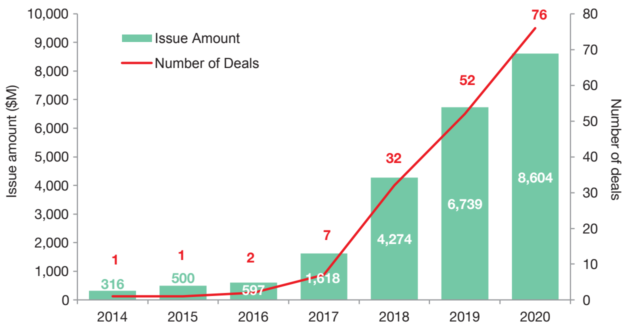


Figure 1: Annual green bond issuance in Japan, 2014-2020

Source: Bloomberg

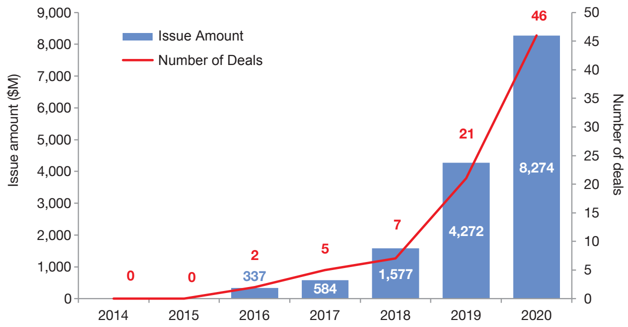


Figure 2: Annual social bond issuance in Japan, 2014-2020

Source: Bloomberg

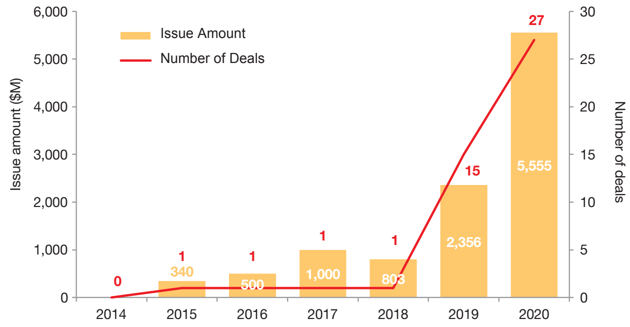


Figure 3: Annual sustainability bond issuance in Japan, 2014-2020

Source: Bloomberg

Issuance of social bonds in Japan virtually doubled to over $8 billion. Based on our own observations, social bonds in Japan have historically been overrepresented as a percentage of overall ESG bond issuance and when compared to other developed markets. In 2020, the volume of social bonds issued almost matched the amount of green bonds, which is pretty much unprecedented. (See figure 2)

The same is also true about the issuance of sustainability bonds, which allow the mixing of green and social eligible projects, with the volume more than doubling to over $5.5 billion equivalent. (See figure 3)

We think that the announcement in September by Japan's new prime minister, Yoshihide Suga, that the country will become a net-zero economy by 2050, will be transformational.

At the same time, an interesting taskforce on climate transition finance was established by the Ministry of Economy, Trade and Industry (METI), the Ministry of Environment and the Financial Services Agency of Japan to further work on the concept of transition bonds and how to help companies from harder-to-abate sectors transition to a low-carbon business model. There have been calls from METI to introduce a goal of 30 transition bonds to be introduced by fiscal year 2023, and there was discussion around perhaps introducing a subsidy programme to reimburse the incremental costs incurred by issuers compared with issuing conventional bonds, similar to the scheme which has been introduced in Japan to stimulate green bond issuance.

Corporate Japan tends to closely follow government policy, so we expect a transition towards decarbonisation will accelerate in the years to come.

In terms of ESG bond product innovation, last year we lead-arranged the first sustainability/KPI-linked bond for a Japanese issuer, a real-estate company called Hulic, which has committed to source 100% of its energy from renewables by a predefined date and also to construct a new commercial property using specific green technologies. If the issuer does not meet both of these targets, there will be a step-up in its financing costs.

Olcay Yagci: One other element of ESG bond markets in Asia ex-Japan is the relatively higher yield offered by many issuers. Given the current low yielding environment, this technical element had helped Asian ESG issuers to look into this product. The sovereign frameworks have been especially encouraging non-sovereign issuers, leading to a more vibrant and diverse market. In the past two months, we have seen transactions from issuers in China, Hong Kong, Korea, the Philippines, Indonesia and India in different formats.

EF: Interest in Japan in ESG investing, and in sustainable fixed income in particular, appears to have reached a tipping point. What's behind that?

JO: One of the triggers in our view has been the involvement of the Government Pension Investment Fund (GPIF), which is the largest pension fund in the world. Having commissioned a lot of research, GPIF has over the years become a vocal proponent of ESG integration and sees ESG bonds as another way to fulfil its long-term goals. This has provided an additional push for asset managers acting on behalf of GPIF to integrate ESG factors more comprehensively also into fixed income portfolios. Also worth mentioning here are the numerous direct partnerships entered into between GPIF and the leading global sovereign and supranational ESG bond issuers which aim to strengthen and develop sustainable capital markets and further promote ESG integration in fixed income through purchases of ESG bonds from these issuers.

Another development in 2020 is that issuance has moved beyond the financial sector, and other established green bond issuers, such as say Japan Railways, and into the broader real economy. So we've had bonds from issuers such as Asahi Kasei, the chemicals company, Asahi Group Holdings, the food and beverages giant, telecoms group NTT and Komatsu, which manufactures industrial equipment, just to name a few.

We are also seeing the Japanese municipal market broadening beyond the longstanding participant, the Tokyo Metropolitan government. We've seen other prefectures such as Nagano and Kanagawa tapping the market. Finally, we've seen some of the big government agencies continuing to be active in the ESG bond markets – such as DBJ, with its numerous sustainability bonds, and JASSO, the overseas students association, issuing a number of social bonds over the years to fund scholarships.

EF: What patterns of issuance have you seen from sovereigns in the region?

JO: One interesting development was the decision by both the Kingdom of Thailand and South Korea to issue sustainability bonds. Most governments tend to issue green or social bonds; in Europe, it's only Luxembourg that has gone down the sustainability bond route, because it has a limited amount of pure green assets.

Elsewhere in Asia, both Hong Kong and Indonesia have issued green bonds. There have been discussions about Japan potentially doing so, but we're not expecting anything imminently.

OY: For emerging market sovereigns, including those in Asia, the significance of these sustainable bond issues is not so much about raising revenue, but about putting the market infrastructure in place to encourage other entities to follow along in the footsteps of the sovereign. When sovereigns issue these bonds, they create the legal and taxation frameworks, they start to create a green yield curve, and then you see domestic corporates, financial institutions and other government-related entities come to the market. There has been a number of examples of such initiatives, namely in Indonesia, Thailand, and South Korea in Asia and, in the Americas, with Chile and a number of Central American states.

EF: How are transition bonds thought about in the Asia-Pacific region? What sort of issuance do you expect?

JO: As discussed, we have been active in discussions around transition. We see transition finance as much needed across the board, but particularly in the Asia Pacific region with hard-to-abate sectors and resource-intensive industries featuring prominently in many of the countries located in that part of the world. Take countries such as Australia or Japan, whose economies are dominated by mining and natural resources and high-end manufacturing, respectively; we're seeing lots of enquiries from clients who want to participate in the ESG bond market but who don't have sufficient volumes of eligible green or social assets to issue benchmark-sized use of proceeds-based bonds.

However, between use of proceeds-based transition bonds and sustainability/KPI-linked bonds, where the margin or some other key features of the bond are linked to issuer sustainability performance targets, we think the latter are going to be more effective in opening the ESG market to companies which lack qualifying capital expenditures.

OY: One of the key things here is what investors think. One school of thought favours the labelled use of proceeds products, such as green or social bonds, because the assets being financed are readily identifiable. The other school of thought prefers sustainability-linked products, which are linked to quantifiable direct evidence that the company is transforming itself. We think sustainability/KPI-linked products are going to gain momentum in the future, because they open the market to so many issuers who aspire to become more environmentally friendly.

JO: The challenge with transition bonds is that it is very hard to define 'transition' across every industry, and therefore to draw up guidelines about what is an appropriate use for the proceeds from transition bonds. As we've seen with the EU's effort to create a taxonomy of green economic activity, it's taken years and it's still not finalised.

I think the risk of 'transition washing' is much higher with transition bonds than green washing is with respect to green bonds. There are limited standards at present to measure what is the acceptable minimum level of transition, whereas with KPIs, we have a much more transparent and potentially more holistic transformational instrument.

EF: What about on the investor side? How are investors in the region approaching the market?

OY: There is certainly a different investor base in the region compared with Europe, which is more institutionalised, and dominated by large pension funds and asset managers that are risk-aware. In contrast, Asian investors, especially private banks, tend to be more open to risk and prefer higher-yielding products. So we're likely to see more structured products and lower-rated entities coming to the market, because they can offer the yields necessary to attract domestic investors in the region.

As a consequence, I expect to see smaller public companies and even private equity-owned firms in the region tapping the ESG market. Asia is going to be a quite interesting market over the next five to 10 years for that reason. In our view this region (and Latin America) are therefore going to be ahead of the curve when it comes to market growth.

JO: For example, in January 2021, we arranged a US dollar green bond for a Chinese real estate company called Modern Land China, which paid a coupon of above 9%. I believe this is not something you'd see in Europe.

EF: What opportunities does the acquisition of US-based Nomura Greentech create for Nomura's sustainable bonds business?

JO: The acquisition, which completed on 1 April 2020, is transformational for us. Prior to the acquistion, Nomura Greentech was a leading boutique investment banking firm focused on supporting clients across sustainable technology and infrastructure. It comprises close to 80 professionals, which is huge in the sustainable finance space. The firm is a market leader in sustainable finance advisory and M&A, with a focus on connecting investors and clients across different geographies, with a particularly strong foothold historically in North America, to help them incorporate innovation into particular sustainability themes such as energy, transportation, food, water and waste infrastructure systems.

Some of their clients are very fast-growing but have yet to access the public bond markets. We believe that the new policies that the Biden Administration is looking to promote on climate and clean energy are going to accelerate their growth, and we're going to see a lot of opportunities in green infrastructure and sustainable transport.

We think Nomura Greentech is going to represent a good pipeline for new issuers – which is exactly what ESG investors want to see. They want more diversity in terms of types of issuers, sectors and credit ratings. This allows investors to develop more interesting investment strategies rather than following the same names and the same indices.

This acquisition shows how serious Nomura is about its sustainable finance business. This isn't about announcing some goals for the future, or how much money we plan to invest in time – this is a major investment in the business right now. ■

Top 15 lead managers for green, social, sustainability and sustainability-linked bonds 2020

Lead manager	Value ($M)	Volume of deals
HSBC	37,960	186
J.P.Morgan	37,052	166
BNP PARIBAS	33,676	130
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	33,013	133
citi	31,393	151
BANK OF AMERICA	30,048	162
BARCLAYS	27,602	112
Morgan Stanley	22,877	164
Deutsche Bank	20,021	94
SOCIETE GENERALE Corporate & Investment Banking	18,801	65
TD	18,722	55
NOMURA	16,543	86
NATIXIS BEYOND BANKING	15,772	50
Goldman Sachs	15,350	73
NatWest	13,072	54

Top 5 lead managers issuing in EUR

Lead manager	Value ($M)
BNP PARIBAS	25,748
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	23,475
J.P.Morgan	18,323
HSBC	17,276
SOCIETE GENERALE Corporate & Investment Banking	17,239

Top 5 lead managers issuing in USD

Lead manager	Value ($M)
citi	21,294
BANK OF AMERICA	17,192
HSBC	16,501
J.P.Morgan	15,723
Morgan Stanley	13,705

Top 5 lead managers issuing in GBP

Lead manager	Value ($M)
BARCLAYS	2,953
NatWest	2,560
J.P.Morgan	2,513
HSBC	2,484
RBC Capital Markets	1,520

Lead managers

Top 15 lead managers for green bonds 2020

Lead manager	Value ($M)	Volume of deals
JP Morgan	17,423	99
BNP Paribas	14,853	77
Bank of America Merrill Lynch	13,650	100
Credit Agricole CIB	13,536	71
HSBC	12,794	99
Citigroup	12,152	81
Barclays	11,257	59
Deutsche Bank	10,399	61
Morgan Stanley	10,375	92
Société Générale	7,563	35
Goldman Sachs	7,349	43
ING	6,751	46
NatWest	6,214	30
Unicredit	5,576	29
Commerzbank	5,054	21

Top 15 lead managers for social bonds 2020

Lead manager	Value ($M)	Volume of deals
Credit Agricole CIB	13,980	33
BNP Paribas	13,394	25
HSBC	12,097	35
Bank of America Merrill Lynch	10,088	25
Citigroup	9,734	34
JP Morgan	9,569	25
Société Générale	8,781	17
Barclays	8,543	20
Nomura	7,280	24
TD Securities	6,964	10
Natixis	6,620	13
Commerzbank	5,629	5
Unicredit	5,480	10
Morgan Stanley	5,191	37
Deutsche Bank	5,114	8

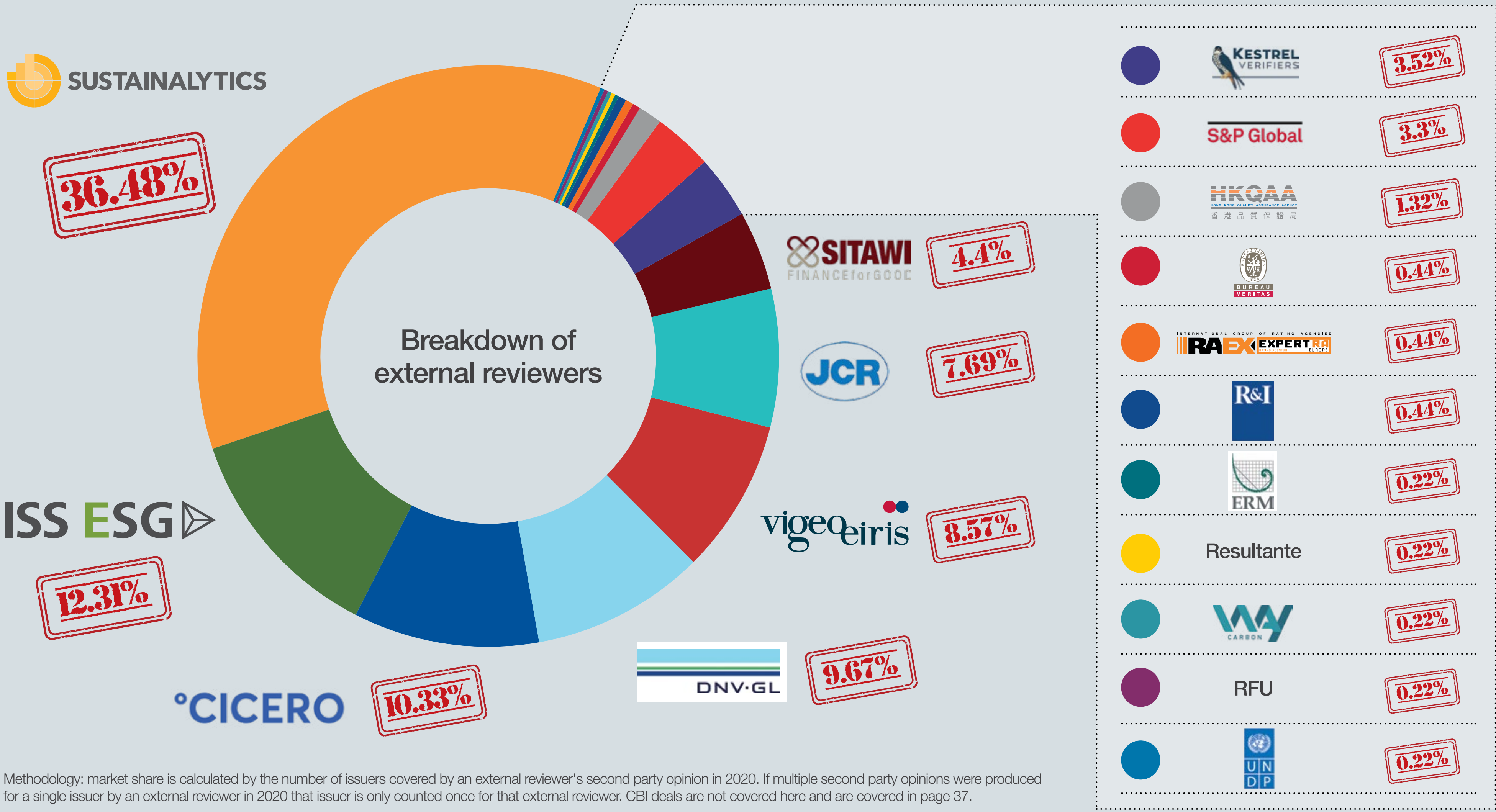
Top 15 lead managers for sustainability bonds 2020

Lead manager	Value ($M)	Volume of deals
HSBC	11,790	47
JP Morgan	9,292	37
Citigroup	9,258	34
TD Securities	8,686	21
Morgan Stanley	7,092	31
Barclays	6,866	28
Bank of America Merrill Lynch	6,090	33
Credit Agricole CIB	4,881	23
RBC Capital Markets	4,814	16
Nomura	4,612	17
BNP Paribas	4,465	21
Deutsche Bank	4,392	23
BMO Capital Markets	4,152	9
Natixis	4,074	11
Goldman Sachs	4,062	16

Top 5 lead managers for sustainability-linked bonds 2020

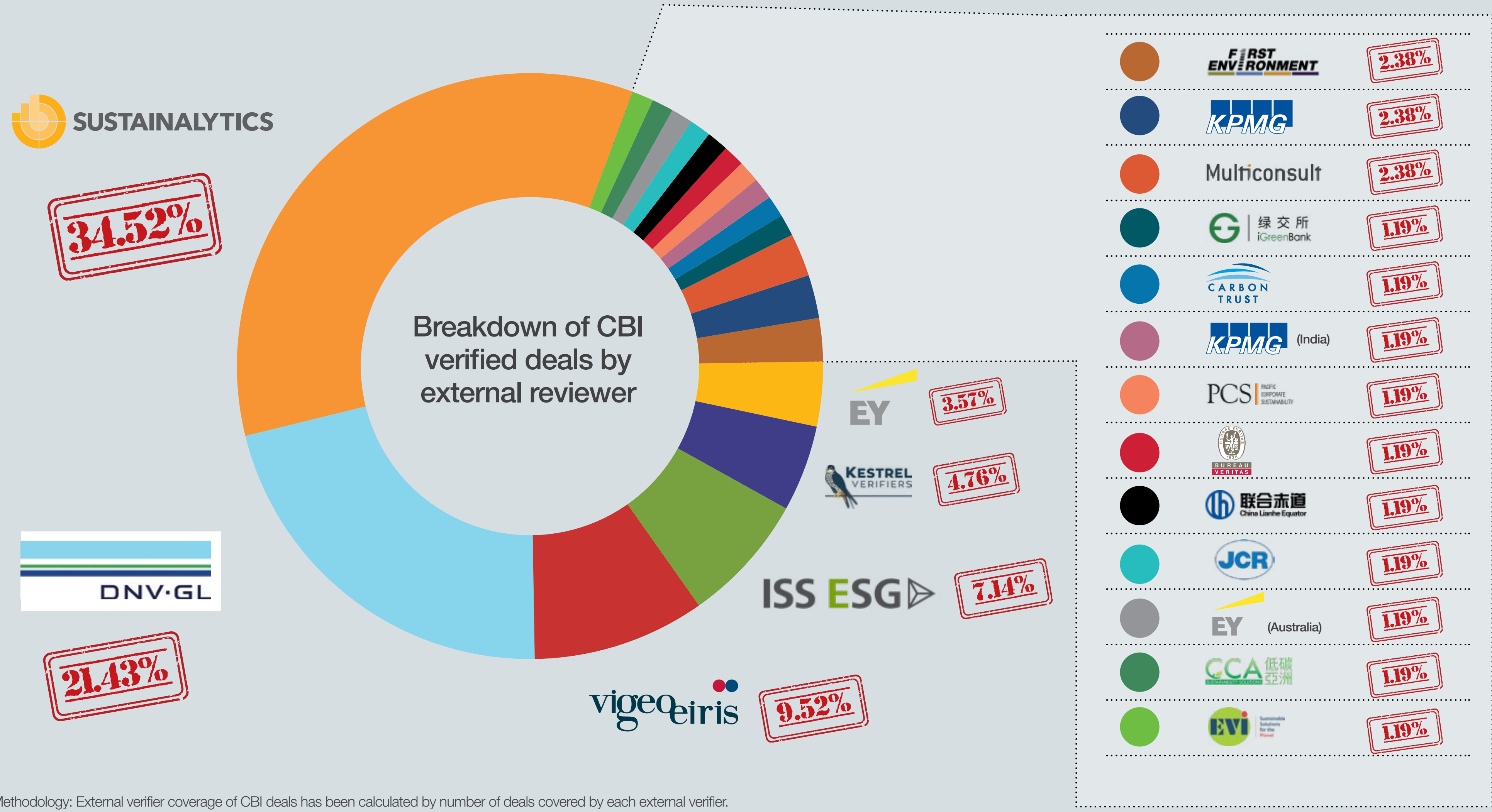
Lead manager	Value ($M)	Volume of deals
HSBC	1,279	5
BNP Paribas	963	7
Barclays	937	5
Société Générale	870	4
JP Morgan	768	5

External reviewer share of the green, social and sustainability bond markets 2020 (by number of issuers).



Methodology: market share is calculated by the number of issuers covered by an external reviewer's second party opinion in 2020. If multiple second party opinions were produced for a single issuer by an external reviewer in 2020 that issuer is only counted once for that external reviewer. CBI deals are not covered here and are covered in page 37.

Breakdown of CBI verified deals by external reviewer.



Methodology: External verifier coverage of CBI deals has been calculated by number of deals covered by each external verifier.

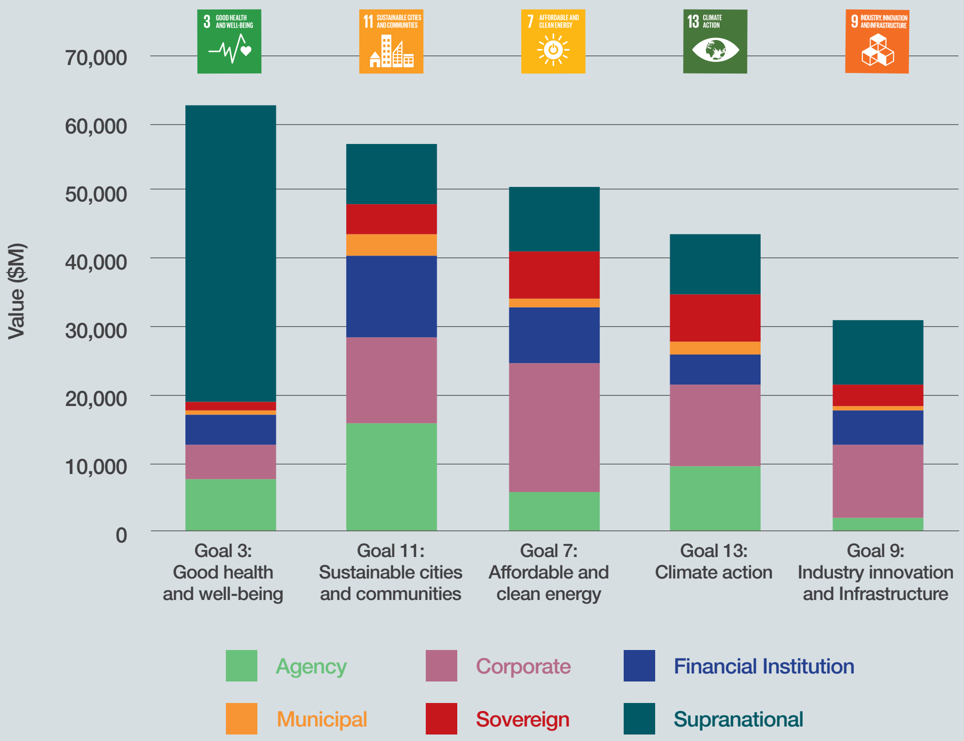
Breakdown of bonds aligned with the SDGs in 2020

The green, social, sustainability and sustainability-linked bonds aligned with the UN's Sustainable Development Goals amounted to $382 billion in 2020. 63.6% of green, social, sustainability and sustainability-linked bonds issuances were aligned with the Sustainable Development Goals in 2020.

The five most covered SDGs amounted to over 50% and include: Goal 3 (Good health and well-being), Goal 11 (Sustainable cities and communities), Goal 7 (Affordable and clean energy), Goal 13 (Climate action), Goal 9 (Industry innovation and infrastructure). The largest increase was for Goal 3, which saw an increase from 4.36% to 16.34%, largely driven by supranationals in response to the Covid-19 pandemic.

Methodology: The value of each bond is divided up by the amount of SDGs it covers and allocated equally amongst them.

Sector breakdown of the top 5 largest SDGs in 2020



Top 5 lead managers in bonds aligned with SDG 3

Lead manager	Value ($M)
BNP PARIBAS	11,670.84
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	11,537.54
SOCIETE GENERALE Corporate & Investment Banking	8,962.95
J.P.Morgan	8,292.84
HSBC	7,735.30

Top 5 lead managers in bonds aligned with SDG 11

Lead manager	Value ($M)
HSBC	14,883.71
J.P.Morgan	14,648.00
citi	12,498.06
BNP PARIBAS	12,279.84
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	11,777.04

Top 5 lead managers in bonds aligned with SDG 7

Lead manager	Value ($M)
J.P.Morgan	14,233.79
citi	13,133.41
HSBC	13,063.29
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	10,511.74
TD	9,992.82

Top 5 lead managers in bonds aligned with SDG 13

Lead manager	Value ($M)
J.P.Morgan	13,135.90
HSBC	12,594.16
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	10,442.53
BNP PARIBAS	9,260.34
BARCLAYS	9,187.86

Top 5 lead managers in bonds aligned with SDG 9

Lead manager	Value ($M)
HSBC	11,479.56
J.P.Morgan	10,831.90
citi	10,205.16
TD	8,387.40
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	6,611.55

DZ BANK
Bank on Germany

The sustainable bond market beyond 2020 – green bonds strike back

2020 was a turbulent year for the green bond segment but all's well that ends well, says Marcus Pratsch, head of sustainable bonds and finance at DZ Bank

Without doubt, 2020 was an exciting year for the sustainable bond market. In the blink of an eye, a pandemic has turned the world upside down. The Covid-19 crisis had a firm grip on the sustainable bond market – with varying effects on the individual segments.

It gave social and sustainability bonds, which already contributed to the diversification of the market with above-average growth in 2018 and 2019, additional tailwind. In 2020, they have proved themselves a suitable financial instrument to raise funds for the fight against the Covid-19 outbreak and for mitigating its negative economic and social impact. The maiden issue of the EU SURE social bond was a milestone for the entire sustainable bond market.

These developments are ultimately reflected in impressive growth figures. While the new issuance volume of sustainability bonds increased by almost 80% compared to the previous year, that of social bonds increased by more than 700%.

In contrast, things were more turbulent in the green bond segment. It experienced lows and highs during the year.

In particular, at the beginning of the pandemic the green bond segment took a deep "breather". As an initial emergency response to Covid-19, many issuers – especially sovereigns, supranationals and agencies (SSAs) - that issue both green bonds and social or sustainability bonds have focused on the latter. As a result, the new issuance volume in March 2020 amounted to only $5.4 billion. This was the lowest monthly new issuance volume since December 2015.

Luckily, a recovery of the green bond segment began as early as in April. This recovery continued steadily in the following months taking the segment to new, unimagined heights. With a monthly new issuance volume of $36.8 billion, the green bond segment set a new record in September.

Ultimately, there was a conciliatory year-end for green bonds. With a new issuance volume of $269 billion, the segment finally still managed a marginal growth of 1% compared to the previous year. And more importantly: in the fourth quarter, green bonds reached its most substantial milestone yet, surpassing $1 trillion in cumulative issuance since market inception in 2007.

"Build back better" must include a green recovery

The furious comeback of the green bond segment shows that "build back better" only works if we also consider the environmental dimension of sustainability.

Without doubt, combating the Covid-19 pandemic and mitigating its economic and social fallout is urgent and has absolute priority. Nevertheless, in the long term, we must not ignore climate targets and risk a climate pandemic. This would have negative economic, environmental and social consequences that are far more serious than those resulting from the corona crisis are. Moreover, most of them will be irreversible.

The positive trend in greenhouse gas emissions we have experienced during the lockdowns in 2020 is not sustainable. In fact, it can be firmly assumed that there will be a "rebound effect" in 2021 and beyond as there was after the financial crisis in 2008. Hence, emissions might soon even exceed the pre-Covid-19 level.

Among the Top 5 highest likelihood risks of the next ten years identified in the Global Risks Report 2021 by the World Economic Forum, four are of environmental nature: extreme weather, climate action failure, human environmental damage, infectious diseases and biodiversity loss.

Therefore, even in the current situation, we should be careful to ensure that we do not neglect the urgent challenge of tackling climate change and other environmental challenges. Rather, the Covid-19 pandemic should be seen as an opportunity to allocate investments required for reconstruction in a way that takes account of all dimensions of sustainability. Besides economic and social projects, climate and environmental protection must also be included.

Hence, the green recovery is an important piece of the puzzle to recover prosperity after the Covid-19 pandemic and to ensure a sustainable transformation. Green bonds will play a fundamental role on this recovery agenda. The European Commission for example intends to raise 30% of its €750 billion ($908 billion) Next Generation EU recovery fund through the issuance of green bonds, hence becoming one of the largest issuers in the segment globally.

Promising news for the green bond segment from different corners of the world

Without a doubt, with the EU a new giant will appear in the green bond segment. Recently, we have also received other promising news from various corners of the world that will further accelerate green bond issuance.

More than 15 sovereign governments across the globe are waiting in the wings to issue sovereign sustainable bonds in the future. Among them, for example, countries such as Austria, Brazil, Canada, Italy, Spain, UK and Vietnam. There is huge potential as just two of the ten largest sovereign issuers – France and Germany – have joined the "Sovereign Sustainable Bond club" so far.

We expect the majority to choose the colour green for their first appearance in the market. Moreover, it can be assumed that the maiden issuance will not remain a flash in the pan for many. The inaugural green gilt announced by the UK for example is expected to be the first of a series of sovereign green bond issues by the UK government over the next few years as it looks to build a green bond yield curve.

China's aim to go carbon neutral by 2060 and its push to bring its domestic green bond standards closer to the international ones will also be a driver for more issuance. The latest Green Bond Guidelines published by the People's Bank of China have reduced the gap with international standards on eligible projects. The second-largest world economy and the largest Asian green bond market will no longer allow green bonds to fund clean coal projects for example.

Many non-Chinese asset managers previously had to exclude Chinese green bonds from their portfolios, as the inclusion of clean coal was not in line with their internal environmental, social and governance (ESG) investment policies. Its removal from the eligible projects will make investing in China's green bonds much more attractive for non-Chinese investors and the ambitions to open the onshore market to foreign investors might even drive further standardisation.

We also expect accelerating growth of Japan's burgeoning green bond market. The world's third largest economy and Asia's second largest green bond issuer is aiming to cut greenhouse gases to zero by 2050 and become a carbon-neutral society bringing Japan in line with the European Union. In the past, the growth prospects of the Japanese green bond market were very much limited by its national energy policy still reliant on coal power.

Marcus Pratsch, head of sustainable bonds & finance

The aim to go carbon-neutral by 2050 and the public announcement that responding to climate change is no longer a constraint on economic growth will require more funds and this could definitely boost green bond issuance.

A look across the pond reveals that President Joe Biden is turning words into action. He has moved to reinstate the US to the Paris climate agreement just hours after being sworn in as president.

The Biden Administration is also considering reversing Trump's ESG rule change. President Biden has great ambitions when it comes to green investments. In his election programme, projects that directly or indirectly promote climate protection add up to $2 trillion. That is more than twice as much as the European Union has earmarked for its Green Deal. And a not insignificant part could also be financed through green bonds. This is the historic opportunity to make "America green again".

There are also signs that more and more central banks – giving their role as anchor investors - are warming up to the idea of buying green bonds. Recently, the Federal Reserve has joined the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). Sweden's Central Bank ("Riksbank") has recently announced that it will increase its asset purchasing programs and to include green considerations in it. The purchase program will target, amongst others, sovereign green bonds and municipal green bonds as well as corporate green bonds whose issuers comply with the UN Global Compact.

Furthermore, the Bank for International Settlements (BIS) has launched a Euro-denominated, open-ended fund for green bond investments by central banks and official institutions in January 2021. The launch follows the successful introduction of a first USD-denominated green bond fund in 2019. With cumulative $2 billion, still a small but shiny light – expected to grow considerably in the nearby future.

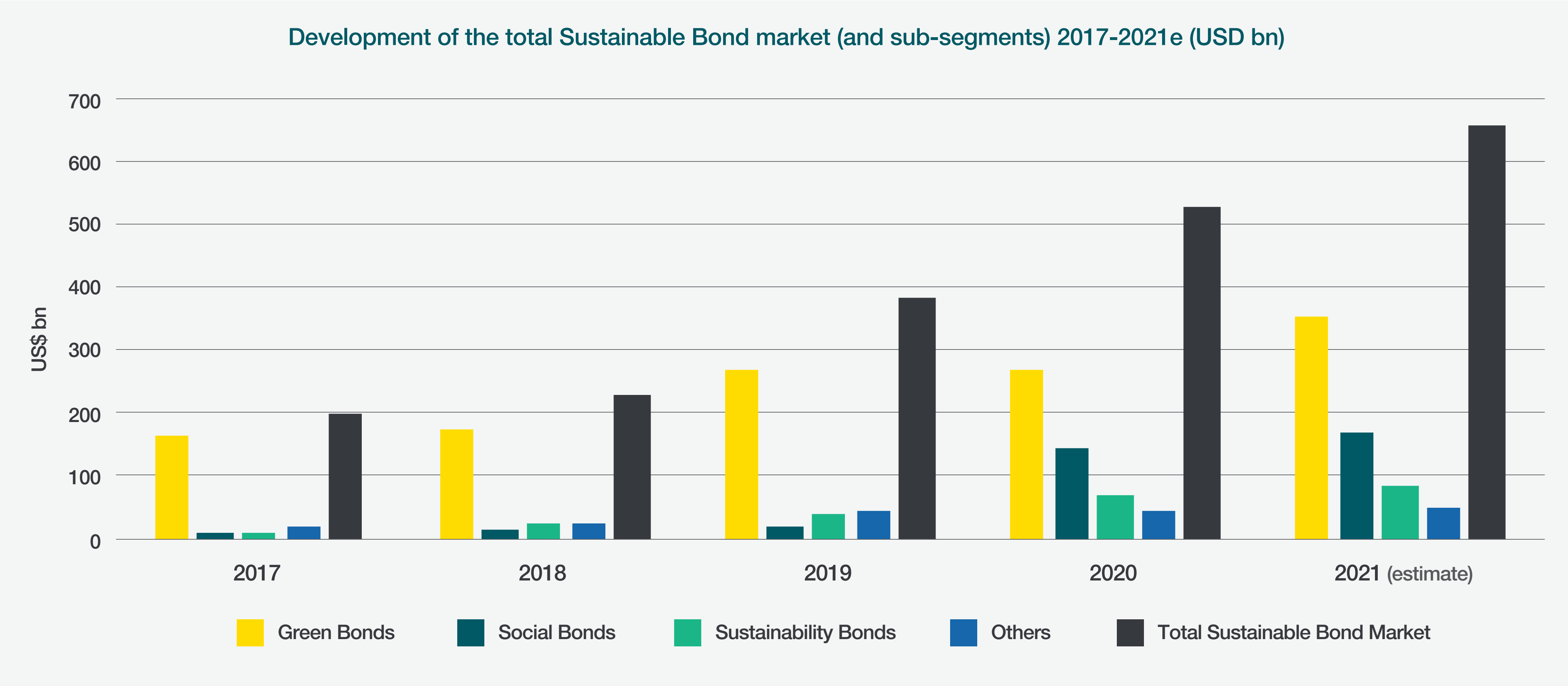
Forward ever backwards never: The annual new issuance volume is steadily approaching the $1 trillion mark

Given the prominent role environmental topics will play on the recovery agenda as well as the promising news from different corners of the world, we are confident that the green bond segment will strike back in 2021 and beyond.

We forecast that the new issuance volume of green bonds will increase by 30% to $350 billion. Green bonds are expected to account for more than 50% of the new issuance volume in the total sustainable bond market in 2021. In about two to three years, the annual new issuance volume should approach the $1 trillion mark.

A look beyond the green edge: The other segments of the sustainable bond market

We have shown earlier that the Covid-19 pandemic must not be used to ignore the environmental challenges facing our blue planet. At the same time, we must not risk economic death for



fear of virological death. It is therefore important to create a recovery scenario that encompasses all four dimensions of sustainability, with the aim to build a more sustainable tomorrow rather than simply rebuilding yesterday.

Hence, the "S" will remain a crucial element of the sustainable transformation and recovery in 2021 and beyond. We expect growth in the social bond segment and sustainability segment to continue in 2021, though to a smaller degree than in 2020. We forecast new issuance volume in the social bond segment to increase by 20% to $170 billion and new issuance volume in the sustainability bond segment to increase by 25% to $85 billion.

Furthermore, target-linked issues are becoming increasingly important, especially in the non-financial corporate segment. Compared to "use of proceeds" bonds they offer more flexibility for issuers as the use of proceeds could be used for broader (general) purposes. Hence, we expect a threefold increase of the new issuance volume of sustainability-linked bonds to around $30 billion in 2021 – well aware that they are not suitable for all socially responsible investors.

In addition, transition bonds have the potential to become their own asset class. A sustainable world won´t be reached by solely focusing on companies which are already 100% "sustainable". To successfully work through the sustainability agenda, we must not exclude anyone from sustainable funding. In this context, it is important that transition is not limited to environmental transformation alone. There is also a social and a governance-focused transformation.

To conclude, we expect the total sustainable bond market to grow by 25% to $655 billion in 2021. ■

London Stock Exchange

London Stock Exchange: enabling a credible transition

London Stock Exchange's Sustainable Bond Market is to welcome transition bonds for the first time – opening a pathway to financing decarbonisation beyond traditionally 'green' industry sectors

The low-carbon transition is picking up steam. According to figures from Refinitiv, just under $750 billion of sustainable debt was raised in 2020. But this is scratching the surface. The decarbonisation of the global economy will require a multiple of this figure, much of it directed to currently carbon-intensive industry sectors not considered as 'green'.

"Given how ambitious global climate targets are, there is a clear need to go beyond those companies who are already able to raise green financing," says Elena Chimonides, product specialist, fixed income primary markets at London Stock Exchange. "Where we might see the biggest impact against those goals would be by finding ways to support issuers from sectors that have traditionally not been active in green bond markets, to enable them to raise the finance they need to move towards greener operating models."

However, these sectors are not currently well served by existing forms of sustainable debt financing, she notes, as investors want "the bigger picture", that is, more than just the information mandated through market standards and regulation. This has encouraged London Stock Exchange to step in. "The exchange plays a key role in convening our markets," she says. "We're closely involved in the conversations around market developments and innovation, in terms of how we can bring together issuers and investors, help improve transparency, disseminate data and set standards that can help investment to flow."

In August 2019, London Stock Exchange began exploring its potential role in servicing this emerging area of sustainable fixed income, issuing a consultation on developments to its Sustainable Bond Market (SBM) – its platform dedicated to green, social and sustainable bonds, as well as bonds issued by green companies measured by their green revenues. The consultation asked for views on identifying the principles that would govern a potential 'transition bond segment'.

That consultation also sought input on, among other things, whether transition bonds should be treated as a separate asset class, what criteria should be used to avoid any risks of 'greenwashing', and what disclosure should be required. The message came back from both issuers and investors that London Stock Exchange has a role to play in facilitating transition bond financing. Since then, London Stock Exchange has taken a prominent role in industry discussions through the International Capital Markets Association (ICMA), participating in the Climate Transition Finance Working Group, and setting up its own SBM Advisory Group, with a specific workstream on transition finance.

Elena Chimonides, product specialist, fixed income primary markets

Shrey Kohli, head of debt capital markets

Taking a view on transition strategy

Transition finance adds a further layer of complexity compared with existing forms of sustainable debt financing – namely use of proceeds bonds, where revenues raised are directed to specific and ring-fenced green, social or sustainable projects, and sustainability-linked debt, where repayments are linked to corporate-wide sustainability performance indicators. It involves coming to a judgement as to whether an issuer's

transition strategy is rigorous and realistic.

"The feedback we received from the industry and from our consultation was that the focus needed to be on how companies create credible climate transition strategies," says Shrey Kohli, head of debt capital markets at London Stock Exchange. "The core of how a company finances itself, and how it communicates that intent to the market, doesn't lie in the asset class that it uses, but in its strategy, vision and objectives."

"What was clear was that companies need to provide better disclosure to investors – through following global standards such as the Task Force on Climate-related Financial Disclosures [TCFD], and by providing a sense of their decarbonisation pathway, using science-based methodologies to the extent possible. And overall, they need to be aligned to the Paris Agreement or commit to being net-zero within a specific timeframe. Those were some of the building blocks we heard from the consultation."

The result of the consultation and the Working Group deliberations was the publication of the ICMA Climate Transition Finance Handbook in December 2020, and the launch, in February 2021, of London Stock Exchange's new Transition Bond Segment. As Chimonides explains, transition bonds will be admitted to a separate SBM segment, for reasons of transparency, clarity and ease of messaging to investors. However, the new segment's eligibility criteria operate as "an overlay across the SBM segments that we already offer."

Issuers can therefore display either: use of proceeds bonds that are aligned with the Green or Social Bond Principles, or with the Sustainability Bond Guidelines; or bonds used to finance general corporate activities that are aligned with the Sustainability-Linked Bond Principles.

However, for an instrument to be eligible as a transition bond, London Stock Exchange sets the following criteria. The issuer must:

- Publish a transition framework, using the guidance set out in the ICMA Climate Transition Finance Handbook;
- Disclose in line with the recommendations of the TCFD, or commit to do so within a reasonable timeframe;
- Publicly commit to the goals of the Paris Agreement, or have approved targets to achieve net zero emissions by 2050; and
- Commit to report on its transition performance annually.

London Stock Exchange also allows issuers to use their Transition Pathway Initiative (TPI) scores as a way to seek eligibility to the segment, should they be assessed as integrating the management of climate risks in its operations. This provides effective disclosure and describes what emissions pathway a company is on and how it is aligning itself to international targets and national pledges made as part of the UN Paris Agreement, for example the aim to limit global warming to 2°C above pre-industrial levels. The TPI is a global asset-owner led initiative that assesses companies' preparedness for the transition to a low-carbon economy, and is supported by over 90 investors with more than $23 trillion in assets under management (AUM) or under advice.

"We decided to integrate TPI within our eligibility criteria as it is becoming a market standard, and brings together data related to a company's strategy, processes, disclosure and carbon pathways in an easy to understand and robust manner," adds Kohli. This builds on London Stock Exchange Group's pioneering work with TPI to develop a set of climate transition indexes launched by FTSE Russell earlier in 2020, and to which the Church of England's Pension Board allocated over £600 million ($825 million).

Chimonides expects that the Transition Bond Segment will be particularly of interest to emerging market companies who may not be well known to the investor base in London. "London Stock Exchange is helping issuers provide an additional layer of credibility needed to access the sustainable finance market," adds Kohli.

Issuer-level classification

The Transition Bond Segment will follow on the heels of London Stock Exchange's Issuer-Level Segment. Launched alongside SBM, it was originally open to organisations whose core business is aligned with the green economy and, more recently following the publication of the Sustainability-Linked Bond Principles, where proceeds are linked to sustainability performance. "It helps issuers move from a 'use of proceeds' mindset towards looking at their broader balance sheet, their sustainability targets, and how they can link the two," says Kohli.

Organisations are eligible to issue bonds through this segment if they either qualify under London Stock Exchange's green revenues criteria or if they commit to future improvements in sustainability outcomes. For the former, they must have been awarded the London Stock Exchange's ground-breaking Green Economy Mark. This is awarded to companies whose equity is listed on a London Stock Exchange-operated market and which derive more than 50% of their revenue from products or services that contribute to the green economy. However, to qualify for the SBM's Green Revenues segment, the threshold is set at 90%.

"It's a high enough threshold that investors can be confident of the pure-play nature of the issuer," says Chimonides, "while for issuers, it ensures that companies which may not wish to issue use of proceeds types of instruments, because pretty much everything they do is green, can get their story out there and benefit from the additional visibility."

Issuers of bonds on SBM that are eligible via the green revenues criteria have raised around £8 billion, with over £1 billion of this raised in 2020 alone. United Utilities was a frequent issuer in the market, pricing four transactions which raised some £700 million.

Launched in June 2020, the other Issuer-Level sub-segment, Sustainability-Linked Bonds, is for issuers who are committing to future improvements in measurable sustainability outcomes, such as reductions in greenhouse gas emissions, or increased use of renewable energy. These bonds must be issued in accordance with ICMA's Sustainability-Linked Bond Principles. These set out a series of pre-issuance disclosures, such as demonstrating consistency with an overall sustainability and business strategy, the identification of precise key performance indicators, and justification for specific targets. The principles also require post-issuance reporting, including verification and assurance of performance.

At the start of this year, UK retail giant Tesco issued its first sustainability-linked bond, a €750 million, 8.5-year issue linked to its greenhouse gas reduction goals. That bond is displayed on London Stock Exchange's Sustainability-Linked Bond Segment, Kohli says. "It provides a good example to UK issuers as to how to use the new type of instrument: it involves ambitious greenhouse gas reduction targets, with a step-up in the coupon if those targets are not achieved, and it combines balance-sheet management with the group's sustainability strategy."

Responding to Covid-19

Sustainable debt finance is able to address a much broader range of concerns than climate change – and it came into its own in response to the Covid-19 pandemic. Here, the exchange's Sustainable Bond Market played a critical role in mobilising finance from investors to help address the pandemic and its impacts, with £75 billion raised though Covid-19 related response bonds, including £7 billion from supranational issuers.

London Stock Exchange offered to waive listing fees for Covid-19 response social bonds, says Chimonides. "We said that for any instrument that can prove, through the use of proceeds language, or by refering to the relevant SDGs, that its proceeds will be directed towards mitigating the impacts of Covid-19, we'll waive the admission fees," she says. "That was really well received by the market and, subsequently, other exchanges did the same."

Looking ahead to 2021

Kohli is seeing growing interest in the sustainable finance space as the UK looks forward to the critical COP26 climate talks, to be held in Glasgow in November, and as the UK government seeks to cement London's position as a centre of green finance – including through the issuance of the UK's first green gilts.

"The UK government has put its front foot forward, in terms of the ambition to issue its first green gilts and for mandatory TCFD reporting" across the UK economy by 2025, he says. This increased disclosure, and the need among financial market participants to better understand ESG risk and opportunity across issuers and financial instruments, plays to London Stock Exchange's strengths, says Chimonides. "I think there's going to be a growing focus around data and how solutions can be used to increase the consistency across different issuances and different platforms … There is a desire for information providers to be better aligned [on ESG data]."

Here, the recent acquisition by London Stock Exchange Group of financial data giant Refinitiv will turbocharge this effort, says Kohli. "The larger group will have a substantial role to play, not just in helping issuers access capital markets, but also in helping them disclose the right data to investors who include ESG in their investment criteria. Our role as a market infrastructure provider puts us at the centre of this nexus." ■

Recent landmark transactions

- **Egypt** listed its first sovereign green bond, selling $750 million of five-year paper, becoming the first sovereign issuer from the Middle East.
- **Qatar National Bank (QNB)** raised $600 million and became the first issuer from Qatar to list a green bond.
- **Standard Bank of South Africa**'s $200 million green bond was not only the bank's first but was also the country's first offshore green bond issue and the largest yet from an African issuer.
- **Corporacion Andina de Fomento** issued a €700 million debut social bond to raise funds for its Covid-19 mitigation efforts.
- **Mexico** launched its $750 million sustainability bond, making it the first country in the Americas to issue a sustainability sovereign bond linked to the UN Sustainable Development Goals.
- UK-based luxury brand **Burberry** raised £300 million with its first sustainability bond, which will be used to increase the sustainability of its energy use, cotton sourcing and packaging
- **Clarion Funding** raised £350 million in a bond issue that recorded the lowest interest rate for a primary bond issuance by a housing association.
- The **Government of the Hong Kong Special Administrative Region** of the People's Republic of China listed their green bonds, raising a total of $2.5 billion under their Green Bond Programme, including $500 million of 30-year green bonds, the first of that tenor green bond to be issued by an Asian sovereign.
- The **Republic of Chile** raised $4.25 billion through green and social bonds. This milestone transaction allowed them to achieve their lowest ever yields for 10-year US dollar and euro notes and their longest ever tenors for both currencies.
- **IDB Invest** launched its new Sustainable Debt Framework supporting a wide range of green and social projects by the private sector with the greatest impact in Latin America. IDB Invest has five active bonds on London Stock Exchange's markets, raising the equivalent of £2.4 billion.
- **Tesco** become the first company to issue a sustainability-linked bond on the Sustainable Bond Market, with a €750 million 8.5-year bond. Tesco aims to reduce its Scope 1 and Scope 2 greenhouse gas emissions by 60% by financial year 2025-2026 from a 2015-2016 baseline.

Fostering clarity in sustainability

As Europe's 'climate bank' the European Investment Bank (EIB) has spent the past year accelerating its sustainable finance initiatives and aligning its activities with both the Paris Agreement and the upcoming European Union's (EU) taxonomy for sustainable activities. *Environmental Finance* spoke with the key individuals leading this work at the bank to discuss what has been achieved and what this means for capital markets

The EIB has maintained and achieved ambitious climate action targets for almost a decade. The EIB's pledge in 2019 to align all of its financing activities with the Paris Agreement by end 2020 was nothing short of a colossal commitment.

More recently, the EIB has been working towards the delivery of its sustainability financing strategy within the European Green Deal – the EU's plan to make the EU's economy sustainable.

To achieve this, the need for a common language and a clear definition of what is 'green' was identified by the European Commission, leading to the creation of a common framework for the classification of economic activities making substantial contribution to EU environmental objectives: the EU taxonomy regulation. This regulation is now law, with a first proposal for an EU taxonomy for climate objectives published in 2020.

The EIB responded to these regulatory and technical developments with a pledge to effectively transform itself from "an EU bank supporting climate" into "the EU climate bank".

In November 2020, the EIB published its Climate Bank Roadmap 2021-2025, which outlines its goals for aligning its activities with the Paris agreement.

"The Climate Roadmap provides the framework for all our issuance and investor work," says Aldo Romani, head of sustainability funding at the EIB. "The EIB plans to take the green share of its new lending to over 50% of the total by 2025; it will also align its tracking methodology for green finance with the framework of the EU taxonomy regulation. In other words; it will measure results using the classification framework that the European Commission has established for the market."

Aldo Romani, head of sustainability funding

EIB also plans to gradually align its two sustainability funding products – Climate Awareness Bonds (CABs) and Sustainability Awareness Bonds (SABs) – with the proposed EU Green Bond Standard, which requires alignment of the use of proceeds with the EU taxonomy regulation.

Not only were the EIB's CABs the world's first green bonds, the EIB has now also become the first issuer to tune CAB- and SAB-documentation to the EU taxonomy regulation. In this way, the EIB will be able to reflect the ongoing developments to the capital markets via the progressive extension of CAB and SAB eligibilities – thereby extending the sustainable activities that they can cover.

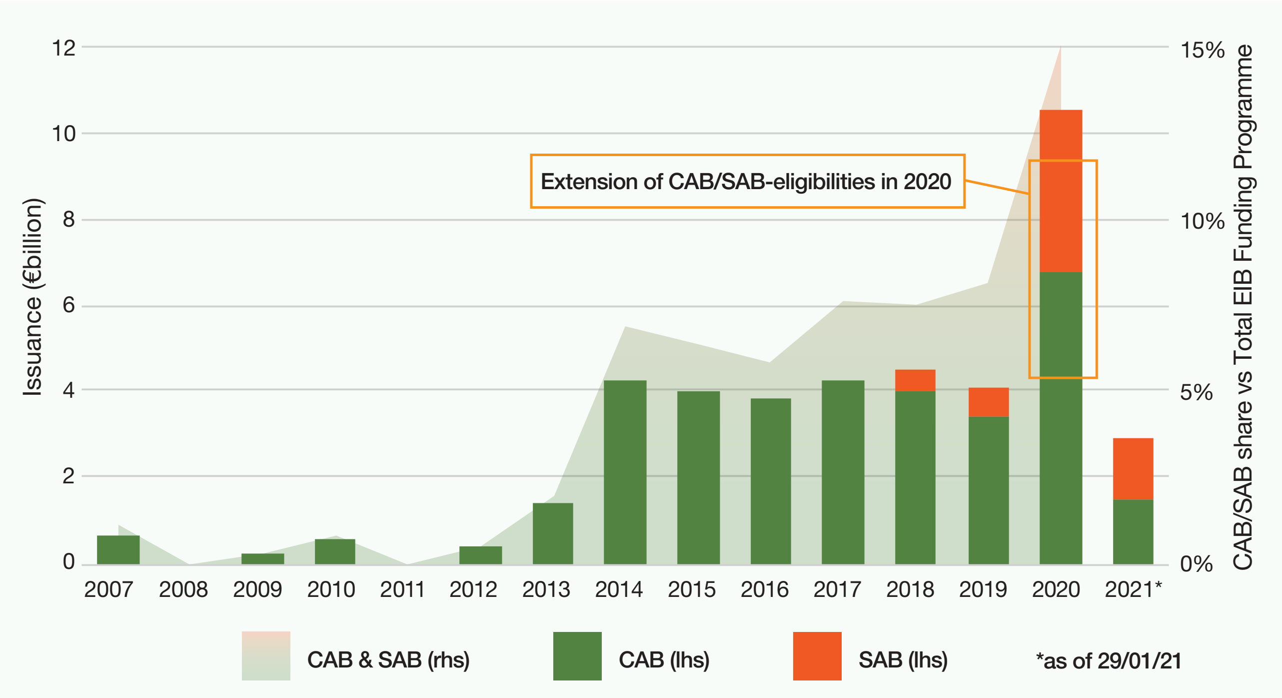
"These commitments are essential because they crystallise the initiatives that the sustainability funding team has been working on in close cooperation with the projects directorate for the past three or four years," says Romani. "The extension of CAB and SAB eligibilities has permitted us to more than double our issuance in these two instruments last year compared with the year before. We issued €10.5 billion ($12.6 billion) which was 15% of the total programme."

It is in this unleashing of issuance that Romani sees the merits of the EU taxonomy regulation.

"It is an enabling framework that permits issuers to better articulate their sustainability efforts and for investors to implement environmental, social and governance (ESG) investment strategies," he says. "It is also an empowering framework that permits us to undertake initiatives in a systematic manner."

The EIB's course of action is to prove on the ground that "it is possible to improve clarity in sustainable finance," says Romani, particularly now that the first set of technical screening criteria for the EU taxonomy is about to be adopted by the European Commission.

In the meantime, Romani says the EIB is already taking the recommendations of the European Commission's Technical Expert Group (TEG) of March last year as a reference for the



CAB/SAB issuance and its share in EIB's total funding programme

Source: EIB Sustainability Funding Team

new CAB-eligibilities established in 2020.

"Our project experts are following the logic of the taxonomy regulation. This provides an opportunity to communicate with the market in an accountable and transparent way where the EIB is going and how it plans to proceed," he says.

"For the first time, it is possible for the market to refer to an organic framework as a touchstone and for issuers to prove their sustainability statements. This is very important as the EU taxonomy regulation provides not only a yardstick for action but also a yardstick for judgment. Issuers can now increasingly identify and communicate the objectives that they want to pursue and how they measure substantial contributions against them," he adds.

Romani is certain that this systematic approach will help capital markets identify what is important and material with regards to not only climate change mitigation and adaptation but also other environmental and social objectives.

In the last quarter of 2020 alone, he has seen the quality of dialogue with investors increase enormously as the EIB was able to detail the substance of its initiatives with reference to the EU framework.

More generally, Romani also expects such developments will allow for the more efficient functioning of capital markets.

"I am a big believer in the fact that once you have a framework, you can take initiatives forward and do something meaningful. These 'rules of the game' will help markets to work better because they will enhance knowledge on all sides and permit a better interaction between issuers and investors. As a result, markets will become more efficient, as issuers and investors will be able to focus on what is important and investors can establish informed investment guidelines."

The technical screening criteria are a particularly important component of this process, he says.

"You need to establish a baseline that cannot be tweaked. The screening criteria provide thresholds that can then be used as a baseline from which to measure deviation. What we are talking about here is a comparability of logic and a common language."

This is especially key for climate transition strategies where progress can be monitored against what is compatible with certain objectives that are embedded within the taxonomy regulation, he says.

"If you do not have these references then you cannot measure additionality and improvements over time. People now have the possibility to combine economic rationality with an agreed upon value for society. There are no excuses now anymore and I think everyone will agree, in fairness, that this is a very positive development that we all need to support."

Trends for sustainable debt markets

Environmental Finance: What regulations and market dynamics are shaping sustainable debt markets?

Eila Kreivi, head of capital markets: After five to seven years of the green bond market growing, becoming more global, and more players entering the market, people want a definition of what is green. However, we have seen that different regions may want to define 'green' differently and so there are several initiatives underway around the globe. Some are voluntary, some are regulated, and some are related to the EU's efforts to establish a taxonomy. Europe has been a trailblazer on this front but there is plenty more work to do. It is complex, but the world is complex.

EF: What have been the EIB's most important recent innovations in terms of sustainability criteria and issuance? Do you have any lessons for the wider market?

Eila Kreivi, head of capital markets

EK: Our recent innovations are a continuation of what we have been working on for many years. One of the most important steps on this path has been the linking of our sustainability funding to the taxonomy regulation. We are committed to follow it and we are doing this on both sides of the balance sheet. We were one of the first to commit to this and now others are following suit.

Our advice to the wider market is "strive for good quality". It is not always possible to achieve perfection and it is not always an exact science. Do what you can in the best possible way and in a transparent manner. We have the definitions, and now we must use them.

The EIB's advisory role

EF: What benefits and challenges do you see for market participants from the new EU Sustainable Finance regulations?

Peter Munro, head of investor relations, sustainable capital markets & advisory: For a long time, the market has been asking for definitions of green and better data quality. With the advent of the taxonomy regulation and sustainability disclosure obligations, we are starting to resolve those concerns.

As with anything new, the challenge is in the implementation. In the EU sustainable finance architecture, there are several moving parts that make it challenging in some ways. Fundamentally, the clarity on definitions of green is a positive development that should enable us to move forwards. On the other hand, that raises technical challenges that we are looking to resolve in cooperation with our clients and the wider market.

EF: How is EIB helping clients and the wider market to adapt to the EU taxonomy?

Peter Munro, head of investor relations, sustainable capital markets and advisory

PM: The EIB has recently used its advisory service to help clients – especially those in the banking sector – who are looking to adapt to the EU taxonomy.

There has been a very positive response to that service, and we intend to scale it up as a consequence. We are also about to extend our coverage to include support with the structuring of sustainable financial products. Initially, this will be for mid-size corporates and potentially sub-sovereigns.

The EIB is committed to aligning its new business with the Paris agreement and we think we can support and accompany our clients to take the necessary steps to ensure Paris alignment for their projects as well.

Focus on taxonomy

EF: What are implications for the EU taxonomy on a global scale?

Nancy Saich, chief climate change expert: It is a game changer. To be counted as green an investment must not only be making a substantial contribution to environmental objectives, but it must also not be causing significant harm to other environmental objectives. It must also meet minimum social safeguards. It supports robust approaches for Paris-aligned financing because it sets out clear criteria for investments, to assess compatibility with low carbon pathways, and address climate change impacts and material climate risks.

Secondly, the screening criteria allow entities to report against standardised, mainly quantitative, science-based technical criteria. Previously, the most widely referred to common definitions for mitigation finance were the 2015 Common Principles for Climate Mitigation Finance Tracking, which

Nancy Saich, chief climate change expert

allowed financiers to define substantial contributions with their own metrics.

The world is watching the development of the EU taxonomy, but the EU knows this must be an international discussion. Therefore, the European Commission and others launched the International Platform for Sustainable Finance. It is important to remember that the taxonomy is not meant to do everything for everybody – it is however a powerful tool for a common sustainability language that can be referenced by the whole sustainable finance system.

EF: How important are taxonomy criteria for transition strategies?

NS: Very. There seems to be some misunderstanding that the taxonomy does not address this. The TEG spent a lot of time on transition discussions.

The taxonomy identifies 'transitional activities' and 'enabling activities' so that companies and entities can plan their green transitions. Importantly, economic activities can raise finance and attract investment for improvements – provided that the enabling activity measures, such as investments for energy efficiency, make a substantial contribution, do not cause significant harm, and meet minimum social safeguards.

The TEG recommendations have enough flexibility to allow transition to happen over a period of time. But obviously it is still a very hot topic and that is why the Commission has recently asked the EU Platform for Sustainable Finance to look at how the taxonomy can be used to support transition in different sectors. ■

For more information on the topics covered in this article please visit our Investor Relations webpage: www.eib.org/en/investor_relations or email us at: investor.relations@eib.org

In 2020 EUR and USD expanded their share of the green, social, sustainability and sustainability-linked bond market, each seeing an increase of nearly 4% and remaining the top two currencies to issue in. JPY remained steady in its percentage share of the market as JPY issuance grew in value at the same pace as the market, it also meant that as EUR and USD issuances took up more space in the market JPY increased its position to third biggest currency by issued value in 2020.

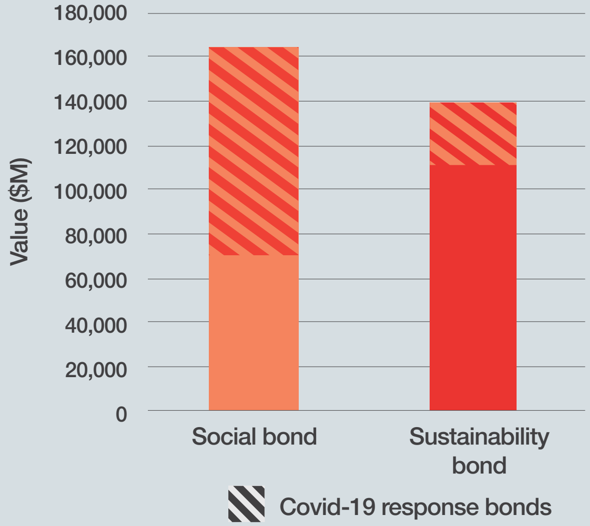
2019

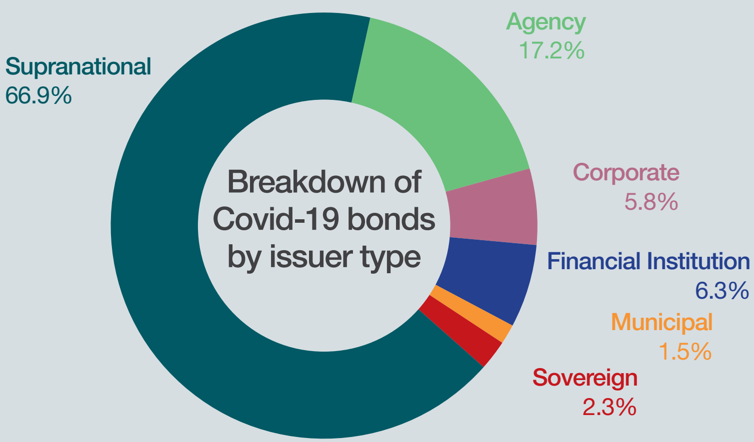
- EUR: 44.96%
- USD: 31.85%
- CNY: 5.02%
- SEK: 3.43%
- JPY: 3.41%
- CAD: 2.44%
- AUD: 2.41%
- GBP: 2.38%
- CHF: 0.83%
- NOK: 0.4%
- HKD: 0.38%
- NZD: 0.34%
- TWD: 0.29%
- PHP: 0.24%
- KRW: 0.23%
- THB: 0.22%
- MXN: 0.22%
- MYR: 0.16%
- PLN: 0.16%
- DKK: 0.14%
- BRL: 0.11%
- IDR: 0.09%
- COP: 0.07%
- ZAR: 0.04%
- INR: 0.04%
- NGN: 0.03%
- HUF: 0.03%
- CLP: 0.03%
- ISK: 0.02%
- PEN: 0.01%
- KES: 0.01%
- RUB: 0.01%

2020

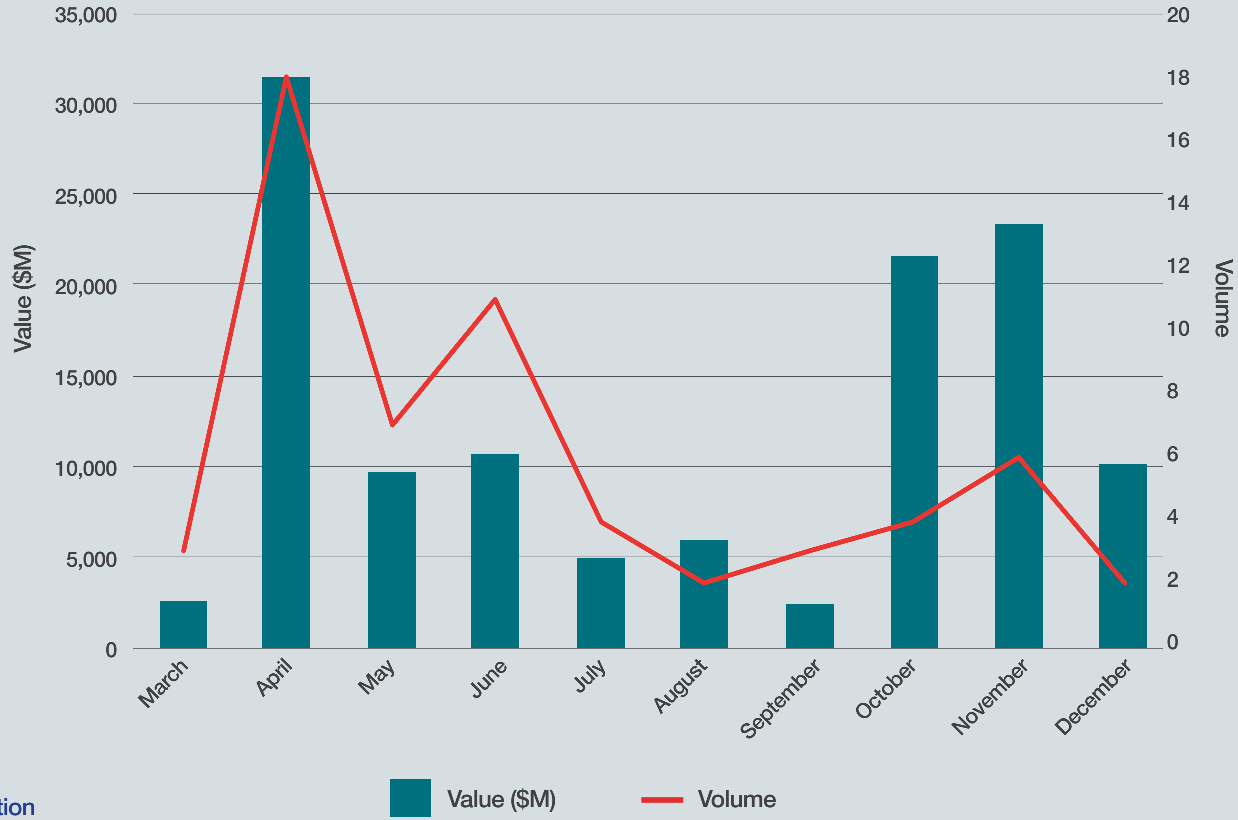
- EUR: 48.72%
- USD: 35.3%
- JPY: 3.41%
- GBP: 3.03%
- SEK: 2.02%
- CNY: 1.71%
- CAD: 1.56%
- AUD: 1.02%
- THB: 0.45%
- CHF: 0.45%
- CLP: 0.38%
- NOK: 0.36%
- TWD: 0.36%
- HKD: 0.29%
- NZD: 0.34%
- PHP: 0.24%
- SGD: 0.08%
- RUB: 0.08%
- MXN: 0.07%
- PLN: 0.07%
- BRL: 0.04%
- COP: 0.03%
- ISK: 0.03%
- ZAR: 0.02%
- MOP: 0.02%
- HUF: 0.02%
- IDR: 0.02%
- MYR: 0.01%
- UYU: 0.01%
- AMD: 0.01%
- PEN: 0.01%
- INR: 0.01%

Proportion of social and sustainability bonds issued in response to Covid-19 in 2020





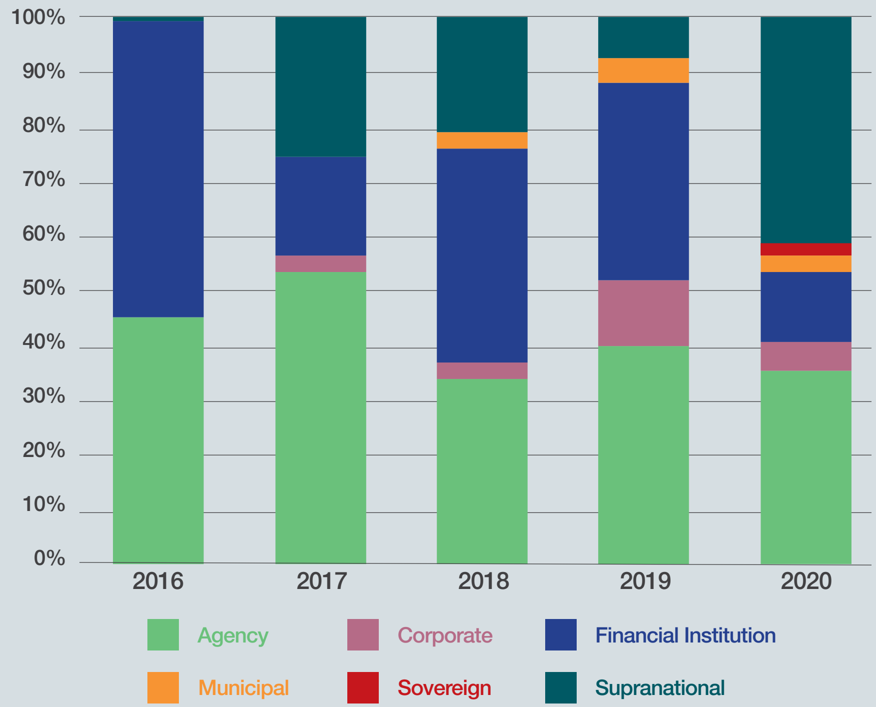
Monthly issuance of Covid-19 response bonds in 2020



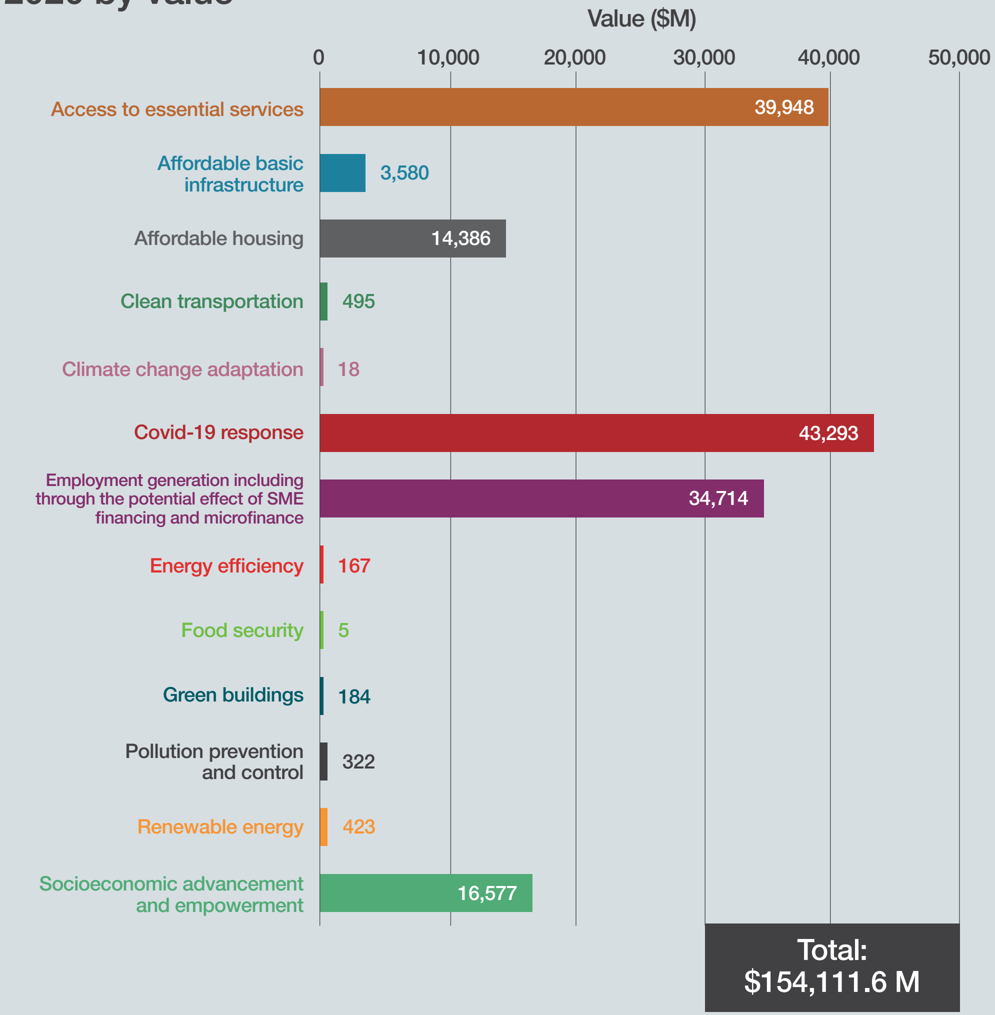
Methodology: Covid-19 bonds include any bonds which explicitly mention a Covid-19 response as part of its Use of Proceeds.

2020 saw a massive increase in social bonds, as we can see from these graphs it was mostly driven by a response to Covid-19. Employment generation was oftentimes a major component to these pandemic bonds along with access to essential services as suprantationals, agencies and sometimes sovereigns rushed ensure healthcare services had the funding they required to tackle the virus head on and to support small businesses in order to retain employees after a standstill in the world economy.

Annual composition of social bond issuer type by value

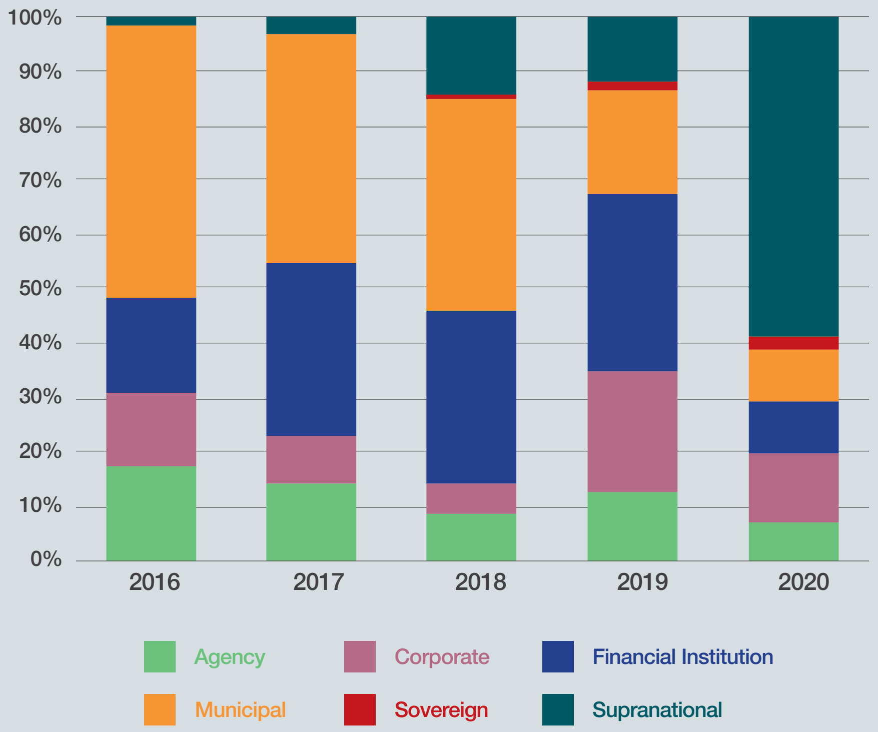


Use of proceeds breakdown of social bonds issued in 2020 by value

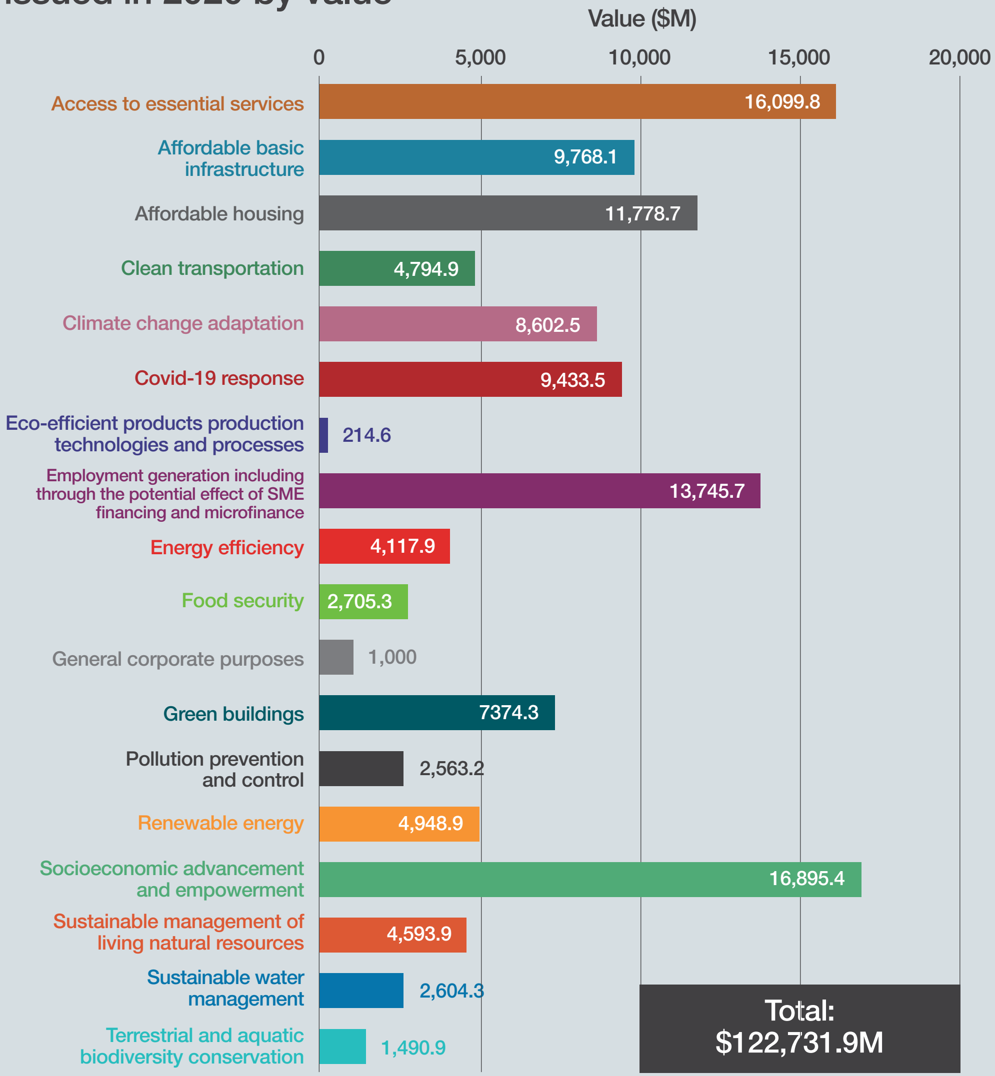


Much like with social bonds, supranationals stepped in to provide massive funding to essential healthcare services and to keep small business buoyed with the issuance of sustainability bonds in 2020. These issuances, however, also looked to fund the global recovery in a more sustainable manner, with a focus on building back green: climate change adaptation, green buildings and clean transportation featured relatively heavily in the use of proceeds of these bonds.

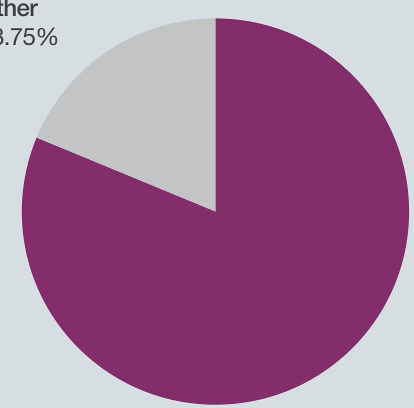
Annual composition of sustainability bond issuer type by value



Use of proceeds breakdown of sustainability bonds issued in 2020 by value



Percentage of sustainability-linked bonds that follow the ICMA's Sustainability-Linked Bond Principles in 2020



Value of sustainability-linked bonds issued in 2020 by country

Country	Value ($ M)
Switzerland	3202.46
France	1840.42
Brazil	1250
USA	900
Italy	650
United Arab Emirates	600
Japan	190.94
Iceland	80
Australia	66.87

Top 5 largest issuing countries in 2020 in the sustainability-linked bond market

Switzerland $3,202 M

Largest deals

Novartis	EUR 1,850 M ($2,196 M)

Largest issuers

Novartis	$2,196 M

France $1,840 M

Largest deals

Schneider Electric	EUR 650 M ($770 M)

Largest issuers

Schneider Electric	$770 M

Brazil $1,250 M

Largest deals

Suzano	$1,250 M

Largest issuers

Suzano	$1,250 M

US $900 M

Largest deals

NRG Energy	$900 M

Largest issuers

NRG Energy	$900 M

Italy $650 M

Largest deal

Enel	£500 M ($650 M)

Largest issuer

Enel	$650 M

Bringing transparency to the sustainable bond market

With more than 4,800 bonds included, the Nasdaq Sustainable Bond Network offers an unrivalled overview of the global market. Ann-Charlotte Eliasson explains how the network is digging into the SDGs, expanding into Asia, and offering additional services to investors

Environmental Finance: Nasdaq launched its Sustainable Bond Network (NSBN) at the end of 2019 – what was the thinking behind the initiative?

Ann-Charlotte Eliasson, head of European debt and sustainable bonds

Ann-Charlotte Eliasson, head of European debt and sustainable bonds, Nasdaq: The idea behind the Nasdaq Sustainable Bond Network is to increase the transparency of the sustainable bond market by collecting the data that investors need in one location, enabling comparability and aggregation. The intent of the platform is for issuers to showcase their green, social and sustainability bonds to investors, and to allow investors to be able to access, understand, collect and compare sustainable bonds, including their impact. This will give them the opportunity to assess the impact they have contributed to through their investments.

The network is not a typical exchange initiative but rather a response to the sustainable bond market's needs. Nasdaq got into the sustainability bond world in 2015 when we launched a dedicated listing segment for green, social and sustainability bonds on Nasdaq Stockholm; at the time, we were the first exchange doing so. To be eligible for the Sustainable Bond Market, issuers have to fulfil certain criteria, such as annual reporting of use of proceeds, and we also encouraged impact reporting.

When we entered into dialogue with issuers and investors, we found they were quite far from each other regarding relevant measures. It was difficult for issuers to know which indicators that investors would be interested in, and what they should therefore report on. There was a lot of time and energy wasted. We decided to apply the typical responsibility of an exchange – to help issuers and investors come together in as straightforward a way as possible – and apply it to the sustainable bond market. As investors are active all over the world, we realised that what we have observed in the Nordic sustainable bond market was also a challenge elsewhere, so we launched the Nasdaq Sustainable Bond Network.

To be clear, the network is not a listing venue for bonds; it instead collects information on sustainable bonds' use of proceeds, impact, frameworks, certifications, etc. By doing so, in the words of Emilie Béral of Vigeo Eiris, it helps "investors to make data-driven decisions for investment due diligence, selection and monitoring". The collected data is available in regular Nasdaq market data feeds and will also be available in our investor portal that we are launching during the spring.

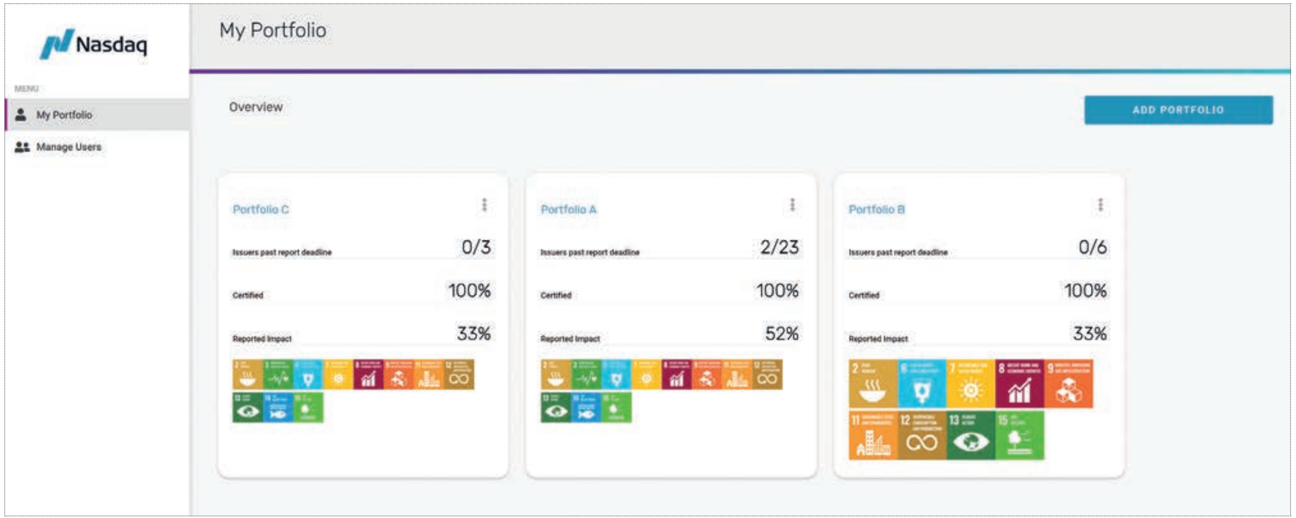
EF: What distinguishes the NSBN from other initiatives in this area?

ACE: When we launched the network, there were no other platforms where you could easily aggregate impact and allocation figures. As investors' portfolios of sustainable bonds grew, we realised it wouldn't be possible to keep track of annual PDF reports on allocation and impact that have become the norm. Therefore, we wanted to create a platform that would both simplify the reporting from the issuers and the data collection and analysis undertaken by the investors. The Nasdaq Sustainable Bond Network is not just a database, it is a tool that can help both issuers and investors make their processes more efficient.

So we looked into what issuers were reporting, talked to investors, and we looked at the analysis that the Climate Bonds Initiative (CBI) carried out on post-issuance reporting. In that process, we realised a local initiative called the Nordic Public Sector Position Paper on Green Bond Impact Reporting had gained a lot of traction. We used that framework as a base for the first draft of our dataset and list of KPIs, and we begin asking issuers to present their data accordingly, and how KPIs that they already presented could be transformed into ours.

EF: How has participation in the NSBN grown since its launch?

ACE: The network now comprises 350 issuers and approximately 4,800 bonds, out of a global universe of around 7,000. Among those issuers, around one-third are Nasdaq ESG transparency partners, who release their sustainable bond



A screenshot from the upcoming NSBN investor portal, showing the landing page with portfolios, high-level statistics and related SDGs

reports and detailed data directly to the network. Information on other bonds is collected by Nasdaq using publicly available information which we then transform into our standard to improve comparability between bonds.

After collecting the data, we offer issuers the opportunity to become a Nasdaq ESG transparency partner, which allows them to edit and enrich the data that will be disclosed on the network. If they decide not to, we continue to collect the data ourselves. The reason for this dual approach is that it would be time consuming to get full coverage if we solely relied on the issuers uploading the sustainability information, meaning that the network would be less useful for investors. We now have full coverage of European sustainable bond issues, and we expect to reach full coverage of the Asian market by the time of the launch of the investor portal. We are expecting to reach full global coverage later this year.

We're also really pleased with the increase that we've seen over the last year in the number and breadth of issuers joining the network. When we launched, we started with a handful of very different issuers in terms of both size and geography, such as the very large Fannie Mae, and a number of smaller Swedish firms and a few municipalities in the US and Europe – which illustrated the breath of the network and that the reporting burden was reasonable for smaller issuers as well as larger ones. Since then, we have attracted a wide range of issuers and investors. For example, we've welcomed supranationals such as the International Finance Corporation and the African Development Bank, as well as a wide range of corporates. On the investor side, we were particularly pleased to have BlackRock join our NSBN advisory board in June, along with APG, Alecta, Allianz Global investors and Pimco. However, we have not yet started any investor dialogues outside the advisory board, ahead of the launch of the investor portal.

EF: Does the NSBN requesting that issuers submit specific KPIs risk increasing the reporting burden that they face?

ACE: At present, many issuers report impact a certain way, but then find themselves fielding numerous enquiries from investors for different information, or in different formats. Going forward, I expect them to refer to the data on the Network instead.

The whole idea for this is that we can support issuers. Rather than them spending hours and hours in meetings figuring out what to report, and hours and hours searching for data and filling in spreadsheets from different investors, they can instead spend their time continuing to make investments that deliver positive environmental and social impacts. That's why we embarked on this.

This is where our advisory board has been really important to us. It consists of issuers, investors, debt capital markets bankers and sustainable bond expert companies, such as second-party opinion providers. We're an exchange, and we know about financial technology, but we're not experts on sustainable bonds. We depend on our advisory board to help us make decisions on things like data and KPIs.

Last but not least, the platform is designed to accommodate as much of the existing reporting as possible. An active participant is not required to report any specific KPIs on the network. Most issuers' reports are already great, it's just that the effort involved in collecting and gathering the data within them has become burdensome.

EF: The NSBN encourages issuers to map their impacts not only to the Sustainable Development Goals (SDGs), but down to the target level.

ACE: That's right. We are encouraging issuers to report now not only on the 17 SDGs but, to the extent possible, on the 167 SDG targets that underpin those goals. The reason we are encouraging that is because investors said they would like to see such reporting. This will become a feature on the NSBN Investor Portal, which we are currently testing ahead of its launch during the spring. The portal will allow investors to upload their sustainable bond portfolios and they will be able to see, for those bonds included in the platform, the impact of their portfolio translated into KPIs and SDGs. This will both be useful for investors' own impact reporting, but it will also allow investors to find bonds that deliver specific impacts. So, if they are particularly interested in SDG 13, for example, they could search on that.

Investors	Issuers	Expert Organisations	Investment Banks
alecta	Fannie Mae	Bloomberg	BANK OF AMERICA
Allianz Global Investors	Freddie Mac We make home possible	CICERO Shades of Green	CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK
apg	New York State of Opportunity. Homes and Community Renewal	Climate Bonds Initiative	SEB
BlackRock	NIB	SUSTAINALYTICS	
PIMCO	San Francisco Water Power Sewer	vigeo eiris	

Nasdaq Sustainable Bond Market Network Advisory Board Members

EF: What's the NSBN's view on sustainability-linked bonds?

ACE: When there are developments in the market, such as new products, for example, we bring them to the advisory board for discussion with the experts on whether they should be included on the network or not. When sustainability-linked bonds began to emerge, we discussed them in the advisory board and decided to include them. However, due to their construction, we are looking to do some development to make sure we capture a data set that is going to be quite different from the use of proceeds-type bonds we include today.

We also looked at transition bonds. For a subject as controversial as climate transition financing, we needed more than one discussion to decide whether to include them or not. In the end, we decided to disclose them on the network as well since investors who are not interested in those type of bonds can just use the search function to exclude them.

Another change we have made in response to the evolving market relates to second-party opinions. When we launched the network, it seemed obvious to us, being located in the Nordics, that all the bonds included on the network should have a second opinion or third-party review from an expert organisation. But, at our first advisory board meeting, the non-European members questioned that decision, and suggested that they would rather see the underlying sustainability bond information and make a judgement for themselves. So, a second-party opinion is no longer a necessary criteria for inclusion on the NSBN. We of course include all pre- and post- issuance verifications when they are available, as many investors are keen to see them.

EF: You have announced plans for a tie-up with the Singapore Exchange on the NSBN. Can you explain what's involved?

ACE: We're aiming to have global coverage of the sustainable bond market, but we face some challenges in Asia. For example, some issuer reports are only in local languages, and while the Nasdaq group has a presence in the region, we don't have enough capacity there in the sustainable bond space. So, given our long relationship with the Singapore Exchange – which is one of the leading exchanges in the region and which already lists a large number of sustainable bonds – we thought it would be a good idea to partner up with them.

They will follow the approach we have taken in Europe: Nasdaq ESG transparency partners in the region will showcase their bonds through the partnership while, to complement this, Singapore Exchange will collect the relevant data from other Asia-Pacific sustainable bond issues.

EF: What are the next steps for the NSBN?

ACE: Our role is to bring together issuers and investors, provide transparency in the marketplace and facilitate trading. We rely on our advisory panel to guide us on how we should develop the network, and what additional features we should consider developing. We will continue to listen closely to the guidance they provide, and we look forward to continuing to be at the service of the sustainable bond market as it evolves. ■

A broader approach to ESG

In response to market developments and the economic fallout of the Covid-19 pandemic, NRW.BANK adapted its approach to capital markets and environmental, social and governance (ESG) initiatives this year. Frank Richter outlines key milestones for the German lender, including the issuance of the bank's first social bond and a revision of its Green Bond Framework

Last year was a remarkable year in many ways. During the Covid-19 pandemic, we have had to weather many changes in the private and public sphere. NRW.BANK, for instance, relocated up to 75% of its staff into home offices. Thanks to good IT infrastructure, the agency's productivity has not been hurt by this unconventional working environment.

Frank Richter, head of investor relations

NRW.BANK has been active in mitigating the economic consequences of the Covid-19 pandemic. As part of the federal development network, it has channeled KFW – the German state-owned development bank – funds to the North Rhine-Westphalian region to assist the regional economy. On behalf of the regional government, NRW.BANK also administered its own programs to target infrastructure operators (such as airports and hospitals), municipalities, and small and medium-sized enterprises (SMEs) which were not covered by KFW funds.

During this period, there have been many milestones for the bank as our approach to capital markets and ESG factors have had to rapidly adapt as well. Our ESG focus has become both broader and deeper; broader in the sense that the bank's first social bond was issued, and deeper in that the Green Bond Framework has been updated in line with the latest market developments.

NRW.BANK's inaugural social bond

The decision to enter the social bond market was made in the Autumn of 2019. Using ICMA's Social Bond Principles (SBPs), and in close cooperation with CA-CIB and HSBC, a robust framework was applied. A second-party opinion (SPO) was provided by ISS ESG and reporting by Wuppertal Institute. The impact reporting will be part of our sustainability report and will be published in June 2021.

NRW.BANK issued a use of proceeds bond that will refinance an asset pool (pool-to-bond approach) that intends to help provide affordable homes for young families, loans for businesses and schools, and to address structural economical disequilibrium in the region.

Affordable home ownership has been targeted towards young families specifically as they often struggle to access properties in the areas where home and flat prices are increasing rapidly. According to the Federal Construction Child Allowance (Baukindergeld), couples qualify as along as their taxable annual income is lower than €75,000 ($90,400). The bulk of taxable income per debtor is below €50,000.

General loans to small- and medium-sized companies will target corporate demand for labor. With these loan programs NRW.BANK intends to stabilise employment levels and stimulate job creation. If the annual turn-over over the business is below €50 million then it qualifies. In cases where this number is exceeded, they still qualify if it is a "family business", meaning management corresponds to ownership.

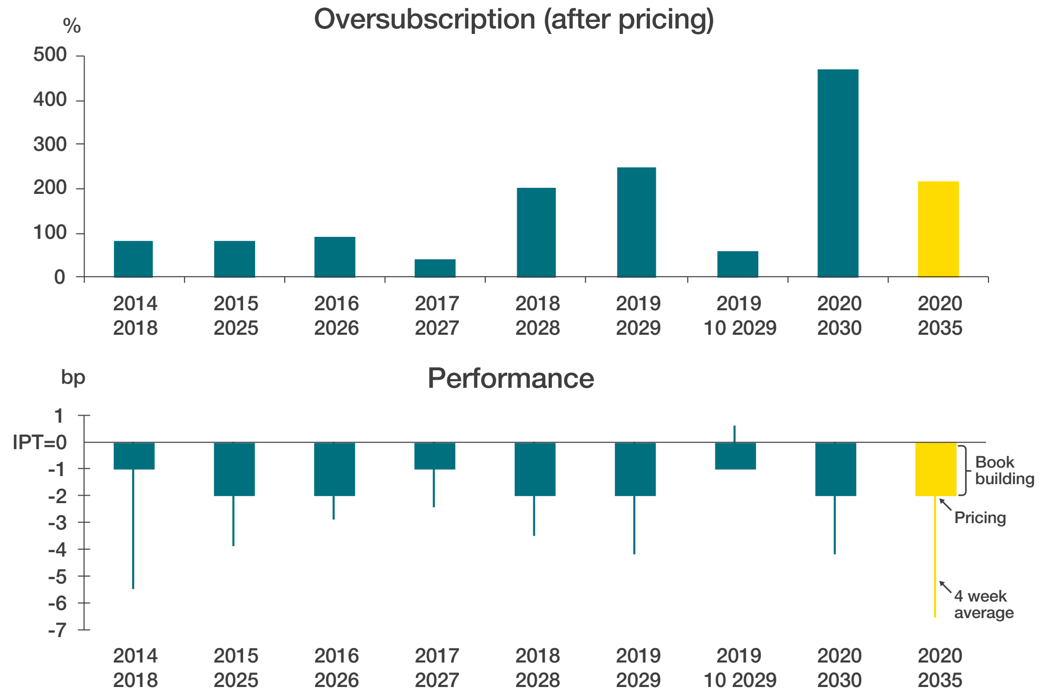
Special loans granted to municipal and/or denominational school boards will be used for upgrading the school buildings to make them digital, accessible and energy efficient. The aim is to have a positive impact on the qualifications of students so that they become a valuable resource for the future workplace and that schools should be inclusive as well.

Economically disadvantaged municipalities will also receive funding. Municipalities with a GDP/Capita in the lowest (fourth) North Rhine-Westphalian quartile, with an unemployment rate above the regional average, will receive loans to improve public goods and services.

Our look-back period

We believe benefits from social infrastructure erode slowly. In other words, a longer look-back period does not harm the project's quality. As the Social Bond Principles do not specify a recommended length of look-back periods, we applied the EU Green Bond Standard (GBS), as drafted by the Technical expert group on sustainable finance (TEG), as reference. Here, operational expenditure can be refinanced by a green bond as long as it is not older than three years. Three years sounded reasonable to us and so we applied the EU GBS advice to our social bond framework.

Based on the defined targeted population outlined above and the fixed look-back period, we estimate the size of the social bond asset pool is approximately €8.5 billion. The distribution



Green and social bond performance

over the three years is more or less equal. However, we note that during cyclical upswings we tend to experience increased lending to SMEs, while lending to economically disadvantaged municipalities shrinks. The reverse is true during recessionary periods.

Pool-to-Bond approach

The asset pool is dynamic and rolling through time. At the beginning of each calendar year, the past year will be added to the pool, while the assets of the oldest year will leave the pool. Against this pool NRW.BANK can issue bonds in every currency and tenor as long as the volume of outstanding bonds is smaller than the available asset pool. Limitations occur only due to internal guidelines. For instance, usually our maximum maturity doesn't exceed 30 years, or the maximum issue size is not larger than €1 billion. The pool-to-bond approach also allows for more flexibility so that taps and commercial papers could be used.

Investor reception

During June, NRW.BANK familiarised investors with the social bond framework. Some investors criticised the look back period and the thresholds, but the majority agreed and confirmed their interest.

Once the decision was taken to offer a 15-year €1 billion transaction, the books opened immediately. After 90 minutes the book closed with more than 100 individual orders mounting beyond €3 billion. Both are record levels for NRW.BANK.

After tightening in the book building process, the inaugural bond tightened further by 4.5 basis points on average in the first four weeks after pricing. The bond is listed at the Luxembourg Green Exchange (LGX).

EU GBS integrated Green Bond Framework

Immediately after finalizing the social bond transaction, we reviewed our Green Bond framework. The aim was to align it as closely as possible to the drafted EU GBS. Even though the standard and the taxonomy is not yet finalised, we believe the new framework – even if only temporary – is useful for market participants. We want to keep the green bond market buoyant and we want to issue regularly. Therefore a "wait and see" position does not suit us.

The updated framework prepared the ground for our first green bond that was issued in January 2021 and was well received by investors and the market, who applauded the bond and framework's alignment to the EU GBS and EU Taxonomy. As with our social bond, ISS ESG provided the SPO and Wuppertal Institute will be responsible for the impact reporting to be published in June 2022.

ISS ESG confirmed that the framework is in line with the draft EU GBS. In addition, assets we chose for the first transaction under the new framework correspond to the drafted EU Taxonomy. We met the technical screening criteria without harming other environmental objectives and the projects still comply with minimum social safeguards.

For the mitigation part of the bond, 40% of the green bond was focused on renewable energy i.e. on wind, solar power and transmission grids. The second largest block was focused on upgrading the existing housing stock and four university hospitals, at 37%. Finally, investments in clean transport (e-mobility, public and freight transport) completed the mitigation unit with a further 17%.

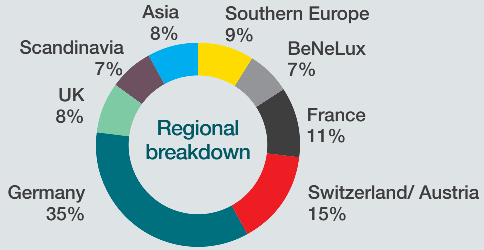
The remaining 6% supports adaptation efforts through restoration of the river Emscher and its tributaries. Increasing the climate resilience of the region is one of the top priority targets. The entire Emscher loan program has been aligned to

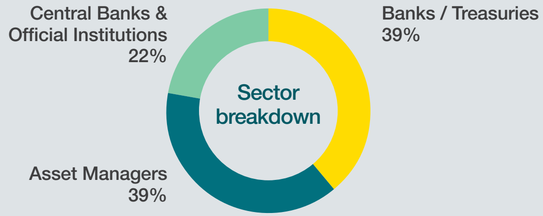
NRW.BANK's inaugural social bond

- First social benchmark bond from a German development bank
- Significant contribution to UN SDGs: 4, 8, 10, 11
- SPO by ISS ESG: positive
- Overwhelmingly strong demand from the outset and throughout the book-building process
- Books closed after 1.5 hours with orders in excess of €3 billion thereby achieving NRW.BANK's largest order book to date with over 100 individual orders
- 40% was allocated to ESG investors
- Investors showed little price sensitivity
- Midswaps + 14 basis points (bps); spread tightened by 2 bps
- +39.9 bps over German Bund bonds 0.00% 05/2035

ISIN: DE000NWB0AK3
Coupon: 0.100%
Maturity: 09 July 2035
Leads: CACIB, DekaBank, HSBC, NatWest Markets

Investor response:





the EU taxonomy since the summer of 2020 and, consequently, it benefits from the green refinancing curve where we pass funding advantages - generated by our green bond program – through to the lending side.

We made sure that the selected projects also contribute to the EU's Green Deal. Projects worth €500 million meet the required thresholds and all our projects are aligned with the do no significant harm (DNSH) criteria. They also comply with minimum labor, human or environmental standards.

Given that our mission is limited to the German Federal State of North Rhine-Westphalia and that we are focused on SMEs, private individuals or public sector entities, we only operate in a highly regulated market with regional clients. No stakeholders have had any concerns that we do not meet the DNSH criteria and minimum standards.

Other developments

In addition to these two important milestones, NRW.BANK made progress in several other areas this year with regards to its sustainability initiatives:

- Since April 2020 the entire lignite and hard coal value chain has been excluded from our Sustainability Guidelines. Since January 2021 NRW.BANK has committed itself explicitly to the Paris climate goal and our loan, service and investment policies will contribute to climate neutrality by 2050.
- Corresponding to NRW.BANK's broader funding approach, the Green Bond Investment Portfolio broadened its scope towards sustainability. All bonds corresponding with ICMA's Green or Social Bond Principles and the Sustainability Bond Guidelines qualify for the Sustainability Bond Investment Portfolio. Our ambition is to increase the volume up to €500 million at the end of 2021.
- NRW.BANK became an UN PRI signatory in 2020.
- In 2020, NRW.BANK also became a member of the Green Asset Wallet (GAW) and the NASDAQ Sustainable Bond Network (NSBN). NRW.BANK supports transparency and welcomes all initiatives supporting market participants collecting information in an efficient manner.

With regards to external developments that are encouraging, on 1 January 2021 Germany's Federal Government kicked off

the national emission trading system (nETS). Covering the transport and heating sector the nETS is complementary to the EU ETS, which covers the industry, power generating and air traffic. The nETS prices a tonne of CO_2 initially at €25. In 2025, the price per tonne will be €55. Auctions are scheduled after this time.

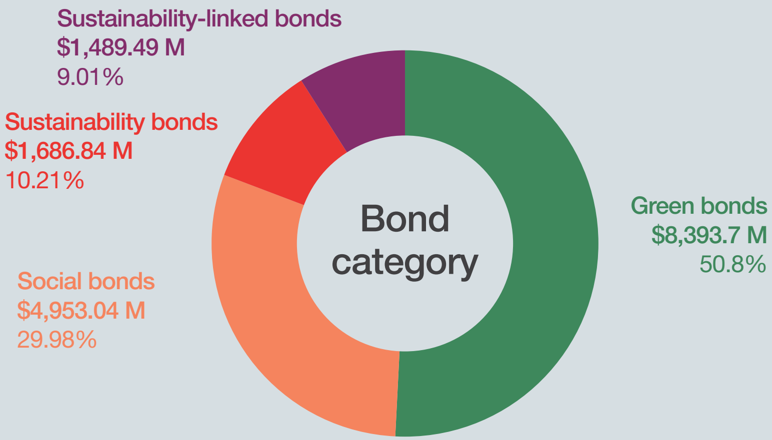
Towards the end of 2020, the first 300 MW lignite power plants closed. On the hard coal side, 4785 MW – thereof 2830 MW in North Rhine-Westphalia – left the market as well.

All in all, there are many reasons to be cautiously optimistic. ■

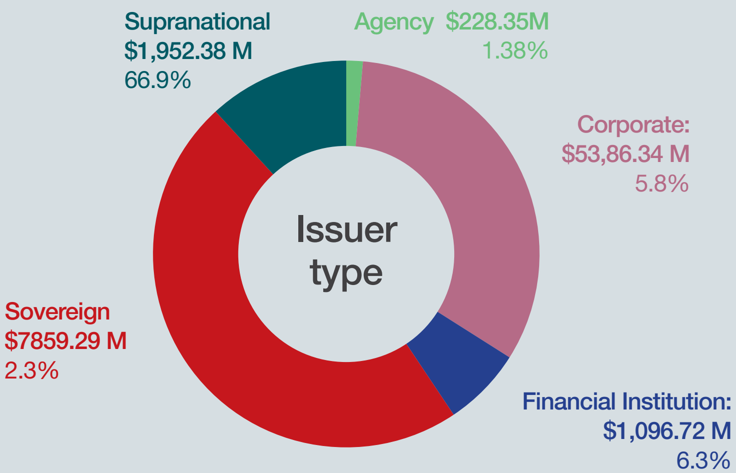
NRW.BANK in a nutshell

NRW.BANK is a regional German development bank. The agency is owned and explicitly guaranteed by the Federal State of North Rhine-Westphalia. With total assets of €149 billion (2019) NRW.BANK is the second largest German development bank. NRW.BANK's mission is to support SMEs, municipalities, affordable housing and to fight climate change in the region. Since 2013 NRW.BANK issue green bonds to refinance environmentally friendly projects. Since January 2020, an (internal) green refinancing curve is in place. EU Taxonomy (drafted version by the TEG) aligned projects have access to additional interest subsidised loans.

Breakdown of Latin American bond categories in 2020



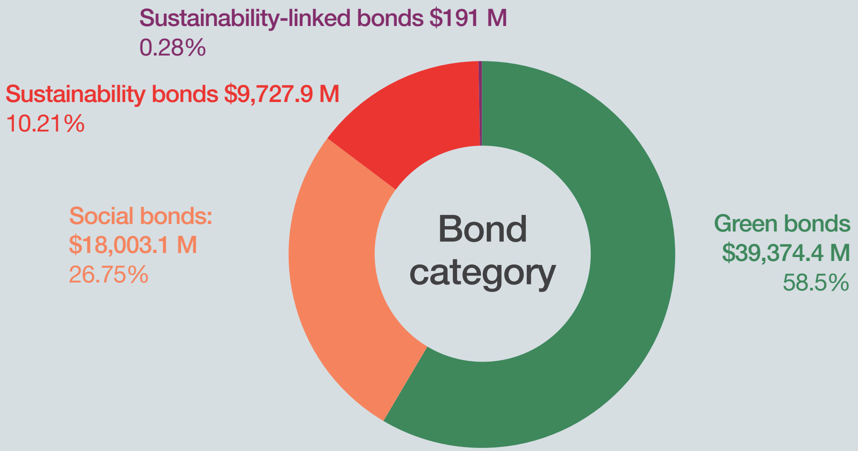
Breakdown of Latin American green, social and sustainability bond issuer types in 2020



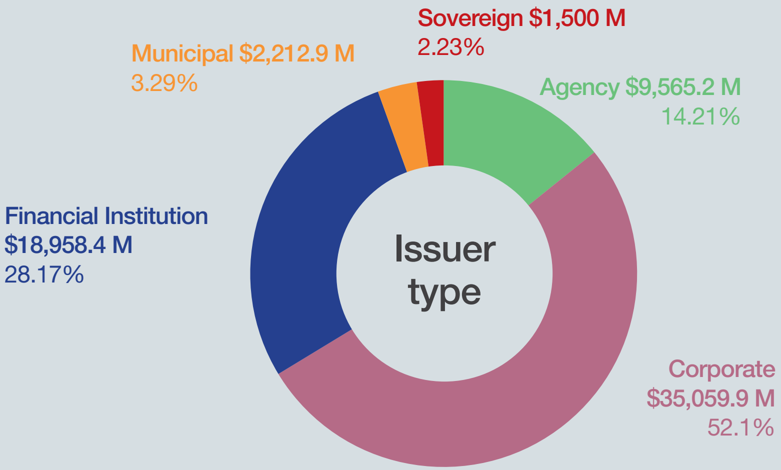
Top 10 lead managers in Latin America

Lead manager	Value ($M)
Santander	1,826
J.P.Morgan	1,431
BNP PARIBAS	1,311
BANK OF AMERICA	1,293
citi	1,193
Morgan Stanley	1,183
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	1,133
HSBC	903
SCOTIA CAPITAL Partners	769
SOCIETE GENERALE Corporate & Investment Banking	729

Breakdown of Asian bond categories in 2020



Breakdown of Asian green, social and sustainability bond issuer types in 2020



Top 10 lead managers in Asia

Lead manager	Value ($M)
MIZUHO	7,537.5
HSBC	4,795.9
Morgan Stanley	4,568.4
NOMURA	3,730.3
MUFG	3,518.6
citi	2,810.8
CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	2,758.2
J.P.Morgan	2,696
BNP PARIBAS	2,575.7
Standard Chartered	1,384.6

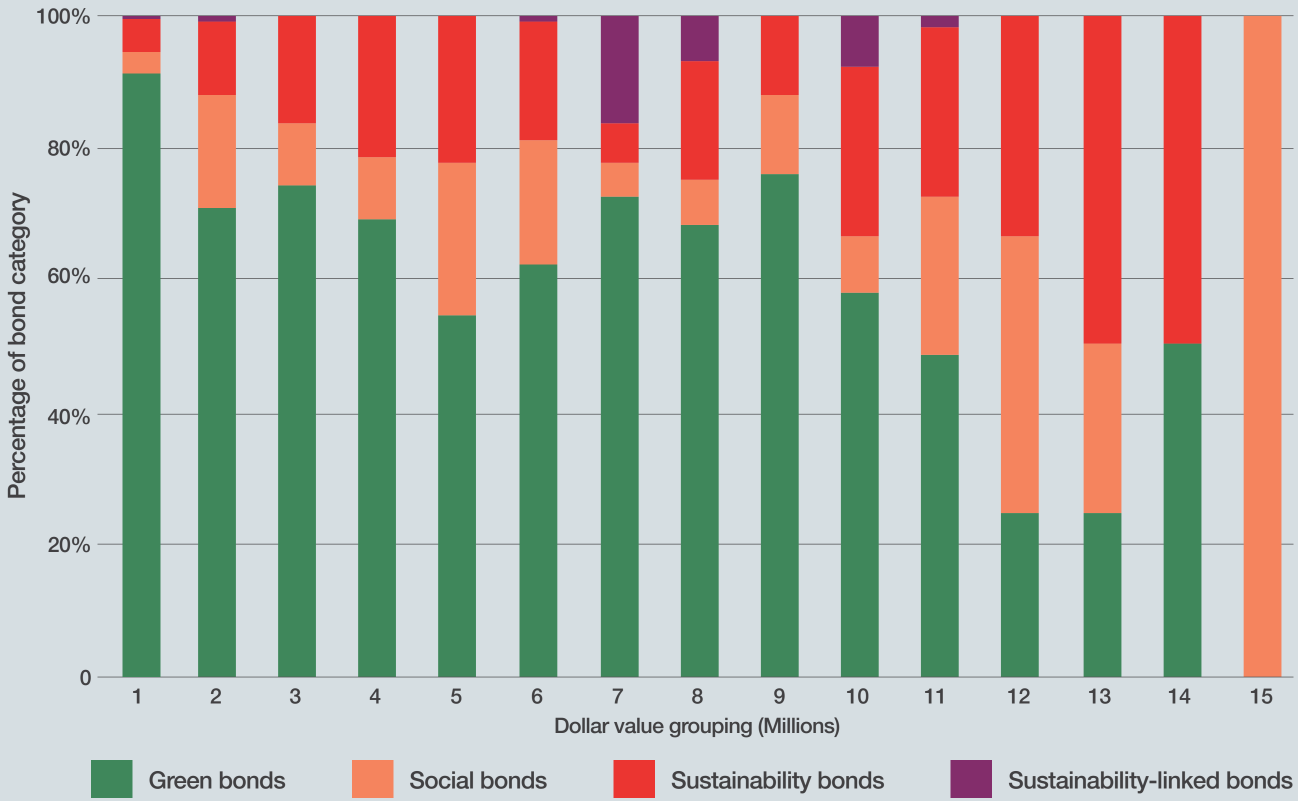
Distribution of values

Graph demonstrating the distribution of values of individual bonds issued in 2020 by bond category. Each bond is designated a grouping based on where its value falls in the range (e.g. group 1 are bonds valued up to $100 million and group 15 are bonds valued at $10 billion or more.)

In general, there is a decrease in the size of green bonds as the dollar value increases from group 1 to 15. However, we do see two peaks in volume at group 6 and group 11 which represent dollar values $500-599 million, $1000-2499 million, respectively. This implies that green bonds dominated smaller and mid tier issuances in 2020 but the largest issuances were mostly other bond types.

Social and sustainability bonds follow a similar pattern to the green bonds in terms of volume, but as a proportion they dominated largest issuances. Only social bond issues fell within the highest dollar value in group 15 (valued $10 billion and above). These social bonds have been issued by the EU Sure programme in response to Covid-19.

Dollar value grouping by bond category in 2020



Bond value ($ M)	Group	Bond value ($ M)	Group	Bond value ($ M)	Group	Bond value ($ M)	Group
0–99	1	400–499	5	800 - 899	9	5000 - 7499	13
100–199	2	500–599	6	900 - 999	10	7500 - 9999	14
200–299	3	600 - 699	7	1000 - 2499	11	10000+	15
300–399	4	700 - 799	8	2500 - 4999	12		

Growth, impact, engagement: a year in sustainable fixed income through a Covid-19 lens

Environmental Finance spoke with investment management firm Brown Advisory to see how its approach to sustainable fixed income has changed through the lens of the pandemic. Amy Hauter and Lisa Abraham discuss which investment factors arose and demonstrate how various bond issuers in their portfolios rose to the occasion to generate a positive impact during a challenging time

Amy Hauter, CFA, portfolio manager and head of sustainable fixed income

Lisa Abraham, senior ESG fixed income research analyst

Environmental Finance: From your perspective, how did the sustainable fixed income universe respond to the pandemic?

Amy Hauter, CFA, portfolio manager and head of sustainable fixed income, Brown Advisory: We break the sustainable fixed income market into three categories: labelled bonds (this includes green, social, sustainability and other labelled bonds), targeted use of proceeds (also known as unlabelled bonds), and "impactful issuers," meaning issuers that are generally positive contributors via their business model or operations. We found compelling opportunities in 2020 in all three of these categories, and generally saw the sustainable bond space thrive during the pandemic.

For labelled bonds specifically, we saw tremendous growth in 2020. The global green bond market exceeded $1 trillion in total cumulative issuance and when one takes social and sustainability labelled debt into account, that number exceeded $2 trillion, according to Bloomberg.

Social and sustainability bonds gained popularity as issuers sought to address some of the social challenges presented by the pandemic. This included direct expenditures for Covid-19 relief efforts, as well as proceeds used to address some of the underlying racial disparities laid bare by the pandemic.

We also saw that despite pandemic-related disruptions, governments, corporations, and investors remained focused on addressing climate change and contributing to the continued growth in the green bond market.

EF: The pandemic has resulted in unprecedented economic disruption as well as an historic market downturn. What environmental, social and governance (ESG) risks emerged, or grew more concerning, during the pandemic?

AH: There is an inherent asymmetry to bond returns – upside potential is limited while downside risk in the event of default is significant. So managing downside risks is very important to us, and we find ESG research to be very valuable as a complement to fundamental research in thinking about those risks. ESG information helps us make better decisions, especially during periods of extreme volatility as we saw last year.

We generally focus on ESG issues we think are material to an issuer's long-term health and prosperity, such as employee treatment, customer care, health and safety, and other responsible management practices. These factors are always meaningful for companies, but the global pandemic greatly amplified their importance.

Specifically, we were very focused on three key ESG risks:

- Employees – how our holdings were managing employees and prioritising their health and safety relative to the pandemic.

- Customers – how our holdings were managing relationships with customers (for example, consumer lending companies and how they handled borrowers whose incomes were interrupted).
- Society – how our holdings were innovating to find solutions to fight the pandemic and provide aid to vulnerable communities.

While sending employees home, closing stores, waiving fees and charges may have decreased a firm's earnings in the short term, we believe that those actions often positioned companies well for the future through stronger employee morale, customer loyalty, and brand value. Further, companies that found a role in addressing this crisis provided the kind of impact we look for, and in some cases may have opened up new long-term business opportunities.

EF: Did sustainability factors make a discernible difference in investment results during this period?

AH: In general, we found that the issuers focused on the long-term success of their business did better. These are the same kinds of companies that also focused on issues like climate change, energy usage, treating customers and suppliers fairly, etc.

Asset-backed securities (ABS) issuers are a good example. Some are focused on gathering loans and selling them quickly to investors to offload risk and lock in profits. Others use the ABS market as a funding tool but are focused on running a sustainable business for the long-term.

The pandemic showed that the second set of issuers were doing better underwriting, but also focused on maintaining good relationships with both their customers and investors during a rough period. That is the kind of firm any investor should want to do business with, and we look to lend to these types of issuers. These are the same issuers who came out on top during this period.

EF: Has Covid-19 influenced your engagement discussions with bond issuers?

Lisa Abraham, senior ESG fixed income research analyst, Brown Advisory: Yes, many of our conversations with issuers revolved around how they were addressing the pandemic and balancing the needs of multiple stakeholders. We recognised that the pandemic is an unprecedented situation and there is no singular engagement ask that applies to the many different issues that arose for companies and issuers in 2020. Nonetheless, it was important for us to engage with management teams to understand how they were managing any near-term risks but also to see how they reacted in times of crisis, which can serve as a helpful data point for us assessing long-term ESG risks and opportunities. This was particularly important for our ABS holdings (as noted earlier), as well as our mortgage-backed securities (MBS) and commercial mortgage-backed securities (CMBS) holdings where the underlying loans were to low-income or otherwise underserved communities that experienced disproportionate job losses and financial distress from the pandemic.

> In general, because we have always looked for a strong alignment of interest between lenders, investors, and the end borrowers, we were pleased to see that many issuers were quick to react and were working with borrowers that were experiencing hardship

Given this exposure to more vulnerable populations, it was important for us to engage with the issuers to understand and evaluate what the programs lenders were putting in place to help borrowers reschedule payments or otherwise avoid default. Robust programs, in our view, will benefit borrowers and lenders in the long run.

EF: How did lenders generally conduct themselves with respect to loan terms/forgiveness/etc.?

LA: In general, because we have always looked for a strong alignment of interest between lenders, investors, and the end borrowers, we were pleased to see that many issuers were quick to react and were working with borrowers that were experiencing hardship.

In our ABS portfolio, we invest in Oportun (a community development finance institution) and Freedom Financial (a consumer lender focused on helping customers already facing some financial hardship). Both of these investments are not labelled bonds but fall under the impactful investor category.

We were pleased to see them implement flexible deferment policies, working with borrowers that were experiencing hardship.

In our MBS and CMBS portfolio, Fannie Mae and Freddie Mac implemented a suspension of foreclosure sales and evictions for single family housing, and grants of forbearance for multi-family property owners with the requirement that they suspend evictions of any tenants facing Covid-19-related hardship.

We viewed these measures as largely positive for all parties involved; if stressed borrowers are given more time to get current on their payments, fewer of them would be forced into default, which can destroy long-term value for bondholders.

EF: Can you tell me about the direct positive impacts generated by your portfolio holdings, and how they have contributed to fighting the pandemic?

LA: In fixed income, we have the ability at times to address societal challenges from multiple angles. For example, we are invested in several hospitals that were on the frontlines of addressing the pandemic – some directly caring for and treating patients, and others driving treatment research.

A good example is the University of Pittsburgh Medical Centre (UPMC). An international team led by scientists at UPMC pooled data from 121 hospitals in eight countries to find that widely available steroids improved the odds that critically ill Covid-19 patients will survive the illness. Between March and June, a randomised trial found that giving Covid-19 patients in intensive care a seven-day intravenous course of hydrocortisone led to a 93% chance of better outcomes than not giving the steroid. According to the University of Pittsburgh, the results were consistent across age, race and gender.

For corporates, we were exposed to companies that were key to the development and rollout of screening and treatment. One example to highlight is CVS, the pharmacy and healthcare provider. We have been invested in CVS for a while and we were impressed by CVS' reach and ability to provide access to affordable healthcare around the country.

According to CVS, more than 50% of Americans live within ten miles of a CVS MinuteClinic, and services provided at MinuteClinics can cost up to 90% less than at urgent care centres or emergency rooms. More and more, we saw how CVS was evolving into a one-stop shop for all healthcare needs.

We found that CVS' reach and versatility helped it to quickly respond at the onset of the pandemic by quickly setting up testing sites in parking lots. And now, we are seeing the company play a critical role in vaccine distribution. It was announced at the JP Morgan Health Care Conference that, as of mid- January, CVS was responsible for 10% of vaccines administered in the US to that point, primarily in long-term care facilities. They expect to ramp this up and will be able to administer 20-25 million vaccines per month once the vaccine becomes more widely available.

In fixed income, we have the ability at times to address societal challenges from multiple angles. For example, we are invested in several hospitals that were on the frontlines of addressing the pandemic – some directly caring for and treating patients, and others driving treatment research

Finally, through supranationals like the World Bank, we were able to help ensure that developing countries also have access to the necessary resources to fight the pandemic.

At the onset of the pandemic, the International Bank for Reconstruction and Development (part of the World Bank Group) issued $8 billion in financing for Covid-19 emergency health support in low- and middle-income nations, as part of a $160 billion World Bank Group Covid relief program.

The World Bank states that this programme includes training and supporting front-line health care workers, provides PPE and portable ventilators, and other vital medical equipment and builds or expands clinical care facilities. We thought all these initiatives were very important.

It was very inspiring for us to see many of our holdings rise to the occasion and play their role in fighting the pandemic.

EF: Do you expect labelled bond issuance to continue its rapid growth trajectory, or might it pause if the immediate covid threat recedes?

AH: We expect the momentum to not only continue but also to accelerate. The Covid-19 pandemic served as a proof point of why we need to focus on some of the "S" factors that may have been previously overlooked. As a result, we expect to see more social and sustainability bonds being issued.

We also expect to see a heightened focus on climate change. We saw many companies and governments double down on their commitments to address climate change. In 2020, we saw Japan, South Korea, and Canada commit to net zero by 2050, and China net zero by 2060. We also saw large corporations like General Mills, Facebook, BP and Shell make net zero by 2050 commitments. While this is an encouraging first step, we know that these commitments will need to be followed with significant investment in order to achieve these goals, and we believe the fixed income market is going to play a central role in financing that.

In a way, the pandemic has led us all to reflect and reimagine what "normal life" should look like, and we think the continuing momentum in the sustainable fixed income markets will show that. ■

Connecting and developing markets

The Inter-American Development Bank (IDB) is the largest source of development financing for Latin America and the Caribbean. The Connectivity, Markets and Finance (CMF) Division works with the public sector financial institutions to design funding solutions that mobilise private investments and ensure inclusive and sustainable development. According to Juan Antonio Ketterer, division chief of the IDB's CMF Division, the most important activity in the coming decade will be to unlock and scale-up sustainable finance. Two specialists within the division outline the key lending and technical assistance initiatives that the IDB has been working on in the past decade

Environmental Finance: How is the IDB supporting the development of sustainable bond markets in Latin America and the Caribbean and what opportunities do you see in the region?

Maria Netto, principal specialist, CMF division

María Netto, principal specialist of the Connectivity, Markets and Finance Division at the IDB: When we started working on green bonds five to six years ago, we mostly focused on public banks because they are our traditional clients and were used to international bond issuances. However, as time has passed, we have seen the increasing sophistication of issuances and a diversification away from the low-hanging-fruit, such as green bonds focused on renewables, for example.

We now work with a variety of sectors and a wide range of public and private institutions. For example, we recently provided technical assistance to Mexico's Trust Funds for Rural Development (Fideicomisos Instituidos en Relación con la Agricultura, or FIRA) to issue the first internationally certified agricultural green bond in October 2018. The IDB supported the development of a methodology to assess the environmental impacts of protected cultivation in Mexico. We are also working with Eletrobras in Brazil to develop its first green bond framework and we are working with water utilities in Chile and Colombia.

There are also numerous opportunities to help build climate resilience, through the issuance of blue bonds for the Caribbean or the protection of bioeconomy and biodiversity throughout Latin America. With the Covid-19 crisis, we have also seen fixed-income investors become more focused on good governance and social benefits.

Overall, we see a lot of potential for those issuers who have not yet taken advantage of the thematic bond market.

We are also looking at ways in which the IDB can be a neutral broker in the market to promote more transparency, best practice and education on several issues. We have been working at the national level in several countries to develop public and private dialogues and work with regulators to develop good taxonomies and transparent practices in the market. For example, we are working with the Brazilian financial innovation laboratory (see box).

The other way we support the market is to provide public-private instruments whereby IDB can provide a credit enhancement. We have seen increasing opportunities for blended instruments that can help investors access these products and increase the credibility of them.

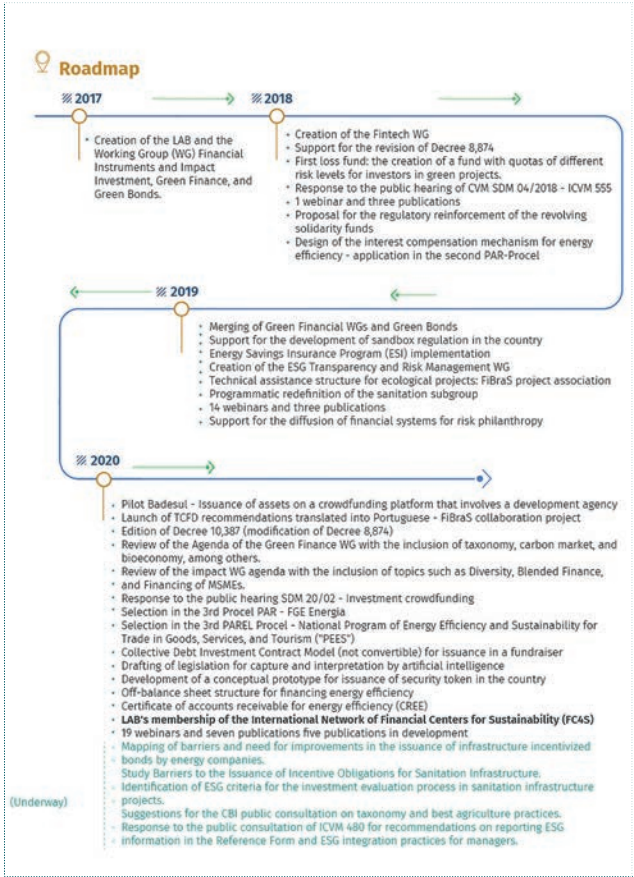
Brazilian Financial Innovation Laboratory

Over the past three years, the IDB, in partnership with the Brazilian Securities and Exchanges Commission (CVM), the Brazilian Development Finance Institutions Association (ABDE), and the German Development Agency (GIZ) have been implementing the Financial Innovation Laboratory (The Lab), a forum for intersectoral interaction of over 600 specialists, representing about 190 institutions, from the entire Brazilian financial and capital markets.

It is dedicated to thinking, designing and implementing innovative models to promote sustainable finance in Brazil, in line with the United Nations Sustainable Development Goals (SDGs) as well as carbon pricing in line with the Paris Agreement.

Operating through four key thematic groups, including on Green Finance, Social Investment Impacts, ESG transparency and Fintech, the Brazilian "Lab" achieved a great number of innovation boosting local sustainable financial markets, developing financial solutions and instruments and regulations, spurring the green and sustainable bond markets, social investments alternative funding through crowdfunding and venture philanthropy, promoting adoption of taxonomies and transparency by financial players to integrate ESG factors and climatic risks in their business.

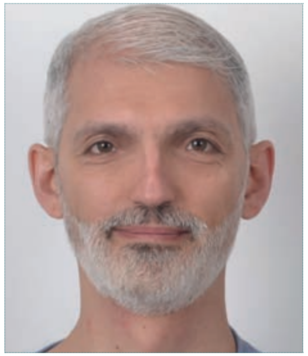
More information: www.labinnovacionfinanciera.com



Brazilian Financial Innovation Lab overview 2017-2020

We started with a view on sustainable development, but now we are looking for ways to diversify the pool of investors, offer new financial instruments and engage with governments and regulators.

EF: Can you tell me more about your Green Bond Transparency Platform and how that is attempting to bring increased transparency to the market?



Alexander Vasa, senior specialist, CMF Division

Alexander Vasa, senior specialist of the Connectivity, Markets and Finance Division at the IDB: The Green Bond Transparency Platform is an online, free-of-charge, public good (see box). It provides the following information on green bond players in the Latin America and the Caribbean market:

- Which green bonds have been issued and by whom?
- Which bonds have received which certifications and external reviews pre- and post-issuance and by whom?
- What are the environmental impacts of the projects financed by each bond?

The platform provides a way to aggregate this data for analysis and enhanced decision making according to project categories and key performance indicators, by currency and external verification status.

The platform gives issuers a simple way to upload granular and disaggregated data via standardised excel sheets on projects, project categories, allocations, disbursements, and key performance indicators that issuers have committed to report on in their framework or other commitments, such as for KPI-linked bonds. Therefore, issuers can reduce the time it takes to respond to inquiries.

It also provides investors with a way to compare the environmental performance of each bond and to answer questions like, what is the green impact of my portfolio? What are the emission reductions that my bond investment achieved? What data has been reviewed externally and what are the conclusions of these reviews? Which methodologies have been used to calculate the impacts?

To achieve this, the platform allows external reviewers to link their review results to a bond issuance – a tag appears on the respective bond issuance that has received the external review. We want it to be easy to aggregate this data and for investors to analyse their portfolio impacts.

We also want our platform to become a benchmark for the market. We believe that if it can work in the Latin America and Caribbean region, it can be scaled globally.

The Green Bond Transparency Platform

This platform is an initiative developed by the Inter-American Development Bank with the objective of supporting the harmonisation and standardisation efforts on Latin America and the Caribbean green bond reporting. Its goal is to contribute to transparency and comparability, helping attract new investors to the region and providing a greater level of confidence to existing investors. The platform uses Blockchain (DLT) technology and by accessing the platform, issuers, investors and other market actors can upload and research information on transaction details, bond performance, use of proceeds, and environmental impacts of the region's green bond issues.

More information http://greenbondtransparency.com

EF: Can you outline some of the market challenges that the platform is looking to address?

AV: Some of the main challenges in current green bond reporting are consistency, accuracy and depth, and different methodologies being used for impact calculations, which make aggregation difficult.

The platform aims to illustrate the current state of the market. We hope that the availability of data will spark a discussion with partners about which data is material for investment decisions and how to achieve meaningful data harmonisation over time.

Since we announced the initiative at the COP 25 in December 2019, we have also been working with other data platform innovators such as NASDAQ and Luxembourg Stock Exchange, as well as in impact reporting technical working groups, to harmonise nomenclatures with a view to facilitate cross-platform data interoperability. We plan to continue to engage in technical dialogues and are running a webinar series on the data trends captured in the platform by key market actors.

EF: The social bond you did with Ecuador was the world's first sovereign social bond. Can you tell me a bit more about this and the other innovations occurring in region?
MN: Ecuador partnered with IDB to issue a first of its kind social bond with the aim of diversifying its financing sources for addressing the country's increasing housing deficit which affects almost half of households in Ecuador. The proceedings from the issuance, around US$1.35 billion will be offered to benefit 24,000 middle- and low-income households. IDB backed the issuance with a partial credit guarantee to attract international investors and reduce the cost of financing.

We also assisted Chile with its first sustainable sovereign bond by supporting the Chilean Ministry of Finance to prepare the framework document and second party opinion. The framework was evaluated by Vigeo Eiris, who confirmed its alignment with the standards of the International Association of Capital Markets (ICMA).

The CLP$1.6 million (US$2.1 million) sovereign bond was the first time that a government in our region has issued a thematic bond in local currency. The government announced an over-demand of 3.1 times and a record adjudication of 48% to foreign investors.

We also recently supported Peru with the issuance of a small social Covid-19 bond. We think there are several opportunities to link social issues to sustainability bonds going forward. For example, we structured and subscribed a one of its kind gender-focused social bond issued by a development bank with FIRA in Mexico.

The deal, worth U$S100 million, will finance the growth of women-led small- and medium enterprises portfolio (WSMEs), as well as the purchase of social interest houses by women in Colombia. The financing will contribute to the development of capital markets and thematic bonds in Colombia and the region. We are seeing an increasing interest in the region to start promoting such types of bonds, especially as part of their green recovery efforts.

Juan Antonio Ketterer, division chief, CMF Division

EF: What other market or regulatory developments do you hope or expect to see for the region?
MN: One priority is to increase transparency of information and develop taxonomies on what is green. We have been doing this in Chile.

Another priority is to promote the good functioning of the markets themselves and help issuers with adopting transparent ways to present relevant information. For example, in the case of Brazil, through Brazilian Financial Innovation Laboratory we supported the process being led by the securities commission (CVM) to call for a new transparency policy for investors and issuers. These can help the stock markets and investment funds to use better information and share it in a transparent way. We also worked with the Brazilian government to promote capital market investment for green infrastructure, through the Financial Innovation Lab.

We are also working to help our clients understand the growing importance of environmental, social and governance (ESG) ratings as we have experienced a few occasions where issuers were not fully aware of the importance of real and accurate ESG ratings.

We have had to convince the clients that it is beneficial to be attentive to these reviews and ensure that the information available to ESG rating agencies is thorough and up to date. You can have great KPIs or a great project, but if someone out there did an unsolicited rating of your entity – using generic, publicly available information – then it can be incorrect and quite damaging.

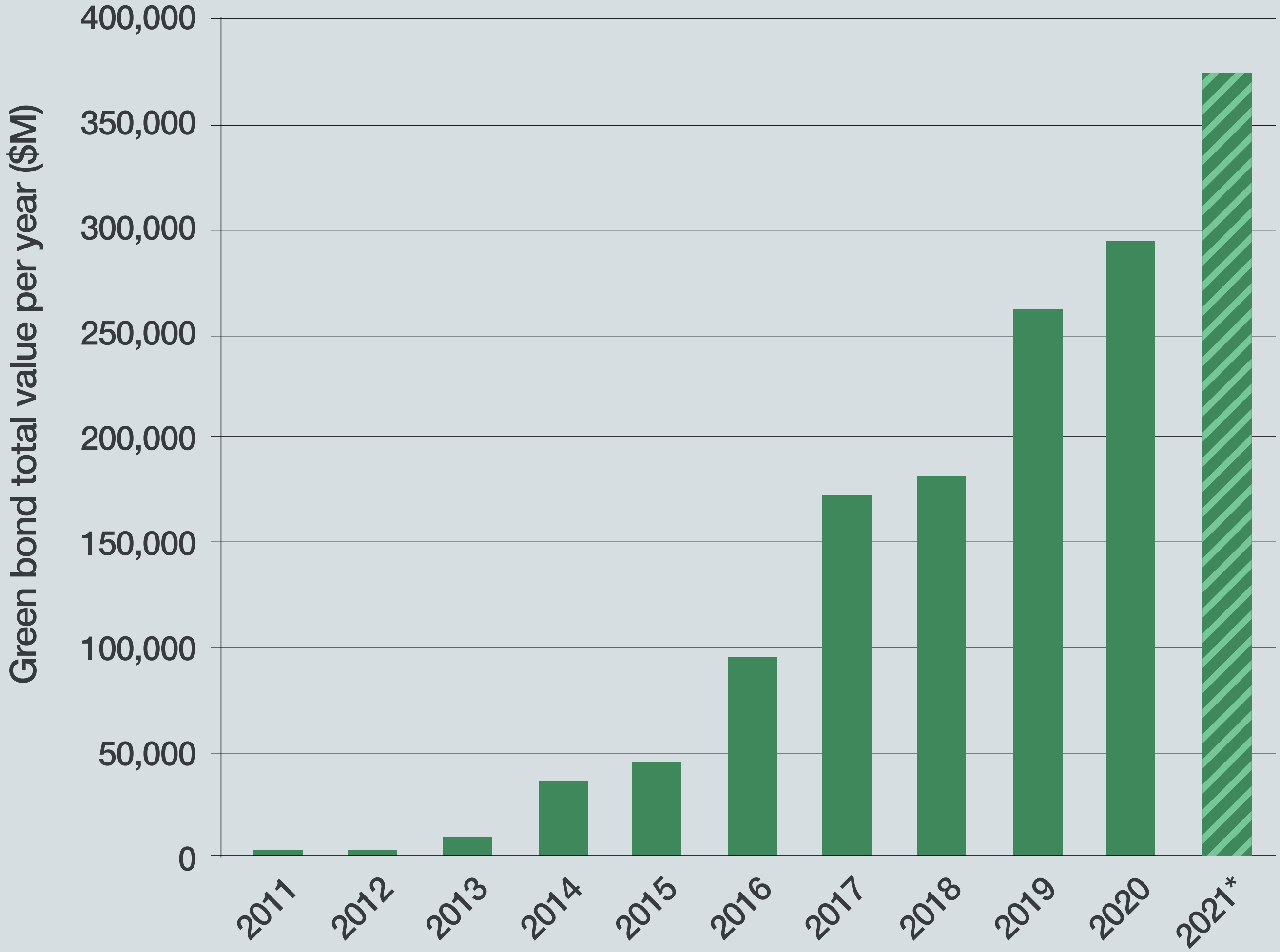
We are now supporting our clients to ensure the ESG ratings are up to date before they issue a bond. We also welcome harmonisation efforts on the ESG front. ■

For more information about CMF Division's Green Activities and Initiatives visit the Green Finance LAC Platform: www.greenfinancelac.org/our-initiatives

IDB Green Bond Technical Assistance Programme

The program was the first of its kind when it started in 2016. Technical assistance is available for commercial financial institutions and National Development Banks (NDBs) to support their efforts to raise private funds at adequate maturities and terms, in both local and international capital markets, through the issuance of green or sustainability bonds. Those issuances have attracted national and international institutional and impact investors and therefore diversify issuer's sources of funding, while promoting low-carbon investments or investments with high positive social impacts. We have supported Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Panama, and Peru with technical assistance to structure green bond deals.

Market predictions for 2021 in the green bond market



*Environmental Finance prediction

Predictions for the green bond market in 2021:

- SEB: $500 B
- Climate Bonds Initiative: $400-450 B
- Environmental Finance: $350-400 B
- NN investment partners: €300 B ($366 B)
- HSBC: $310-360 B