

The pivotal role of fixed income markets
in the ESG revolution

Bonds
that build back
better

2022

IN PARTNERSHIP WITH



INSTITUTE OF
INTERNATIONAL
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REPORT PREPARED FOR



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Foreword

Some might argue that building a sustainable economy is a technological problem. It isn't. The world is sufficiently stocked with greenhouse gas-reducing technologies such as renewable fuels, carbon capture and energy storage. What it lacks is capital. According to the International Energy Agency, investments in clean energy alone will have to rise to an annual USD4 trillion by the end of this decade to keep global warming in check. Realistically, funding on that scale can only come from the financial market. Bond investors in particular.

Encouragingly, fixed income markets appear to be up to the task. As governments, corporations and investors ramp up their climate commitments, securities that embed environmental, social and governance (ESG) considerations are in the ascendancy.

Albeit from a low base, the ESG-labelled bond market has been growing rapidly for several years while the variety of instruments it contains and the range of green and socially-oriented activities it finances have expanded at a dizzying pace.

Green fixed income securities with specific use-of-proceeds requirements, sustainability-linked bonds with coupons tied to issuers' environmental credentials and social bonds that fund educational programmes are just some examples of the innovative structures vying to go mainstream. Investors have responded enthusiastically so far. In 2021, over USD1.1 trillion of new sustainable bonds were successfully placed, taking the size of the ESG bond market to well above USD2 trillion. Research undertaken for Pictet by the Institute of International Finance suggests issuance could reach an annual pace of USD4.5 trillion per year by 2025.



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While most of that capital will be raised in the developed world, much of it can also be expected to come in the form of emerging market ESG bonds. It is essential that it does. For developing economies, private finance is crucial if they are to fulfil the UN Sustainable Development Goals (SDGs) by 2030. The SDG “financing gap” – the difference between what emerging nations require and what they currently receive in investment – is estimated to be about USD2.5 trillion per year. Covid has made matters worse. As the pandemic drags on, some emerging markets could find it difficult to secure the resources they need to hit environmental and development targets. Here is where green and social bonds could make a real difference. A fully-fledged sustainable debt market would provide developing economies – many of which have the potential to be global leaders in green technologies – with the means to transform their economies.

Yet for sustainable debt to become mainstream, several obstacles need to be negotiated. The immediate priority is universal rules and standards. Currently, the labelling and certification of sustainable bonds differs considerably from one country to another, while efforts to harmonise disclosure requirements haven’t met with much success.

One bid to establish a global framework comes from the International Capital Market Association (ICMA). Earlier this year, ICMA updated its set of principles for issuers of ESG-labelled bonds, covering areas such as data disclosure and transparency. But this rulebook remains voluntary and it jars with the public sector frameworks being put in place in the EU and China, for example.

Making matters more complicated, the agencies that assign ESG ratings to both bonds and their issuers use different methodologies that often conflict with one another and are not wholly transparent. The scoring systems can sow confusion. A company judged “sustainable” by one rating agency can be rated “unsustainable” by another.

Investors, meanwhile, need convincing that ESG bonds measure up as viable alternatives to standard government and corporate debt. Here, the bar is high. Due to their complexity, ESG securities tend to be costly to analyse, requiring far greater scrutiny than their conventional counterparts. Nor do they fit neatly into the portfolio construction frameworks investors favour.

An analysis of the ESG securities with the longest track record – green bonds – reveals other potential trade-offs. Green bonds have delivered similar returns to non-green debt, yet they trade a premium: their yields tend to be persistently lower than those of traditional securities. This is despite the fact that green bonds are less liquid. Our analysis shows that such securities trade less often, in some cases far less often, than conventional fixed income. This reinforces our belief that purchasers of green and sustainability-linked bonds tend to be ‘buy and hold’ institutional investors such as pension funds, insurance funds and sovereign wealth funds. What it also suggests, however, is that the secondary market for such debt is not mature enough to absorb large buy or sell orders without precipitating significant shifts in price.

Ultimately, none of these hurdles are insurmountable. If world leaders are genuinely committed to net zero, they will also recognise that these ambitions require capital to flow freely. Which is why, in the battle against climate change, bond investors could soon find themselves in the front line.

**ABOUT THE INSTITUTE
OF INTERNATIONAL FINANCE**

The Institute of International Finance is the global association of the financial industry, with more than 450 members from more than 70 countries. Its mission is to support the financial industry in the prudent management of risks; to develop sound industry practices; and to advocate for regulatory, financial and economic policies that are in the broad interests of its members and foster global financial stability and sustainable economic growth. IIF members include commercial and investment banks, asset managers, insurance companies, sovereign wealth funds, hedge funds, central banks and development banks.

FIG. 1

ESG BOND CHARACTERISTICS		KEY CHARACTERISTICS OF ESG-LABELLED BONDS				
		ACTIVITY-LEVEL			ENTITY-LEVEL	HYBRID
		GREEN BONDS	SOCIAL BONDS	SUSTAINABILITY BONDS	SUSTAINABILITY-LINKED BONDS	TRANSITION BONDS
USE-OF-PROCEEDS		✓	✓	✓	✓	✓
KPI-LINKED (GENERAL-PURPOSE)		x	x	x	x	x
INTERNATIONAL PRINCIPLES/GUIDELINES		ICMA GBP	ICMA SBP	ICMA SBG	ICMA SLBP	N.A
SIZE OF THE MARKET		✓✓✓✓	✓✓✓	✓✓✓	✓✓	✓
SECTORAL TAKEUP/POTENTIAL	SOVEREIGNS	✓✓✓	✓	✓		
	SUPRANATIONALS	✓✓	✓✓✓	✓		✓
	GOVERNMENT-RELATED (EX. SOVEREIGNS)	✓✓✓	✓✓✓	✓✓		
	FINANCIALS	✓✓✓	✓✓	✓✓	✓	✓
	NON-FINANCIAL CORPORATES	✓✓✓	✓	✓✓	✓✓	✓
	HEAVY EMITTERS	✓✓✓	✓	✓	✓	

KEY
 ✓✓✓✓ 500+ USD, billion
 ✓✓✓ 100-499 USD, billion
 ✓✓ 50-99 USD, billion
 ✓ 0-49 USD, billion

Source: IIF

Overview	11
Section 1 Behind ESG labels	15
Green bonds	16
Transition bonds	22
Social bonds	23
Sustainability bonds	25
Sustainability-linked bonds	26
Section 2 The evolution of ESG fixed income – looking ahead	35
Section 3 Green bonds – returns, volatility, liquidity, and premiums	43
Section 4 ESG in EM bond markets	53
Section 5 Transcending labels – charting the rise of ESG funds	59
Appendix	63



With environmental, social and governance (ESG) issues dominating the international policy agenda – and as investor demand for new ESG financial products and services continues to grow – global debt markets, and by extension fixed income portfolios, are about to undergo a radical transformation. The ESG debt universe is expanding rapidly, not only in size but also in terms of the variety of instruments it contains and the range of activities it finances.

Green bonds with specific use-of-proceeds requirements, sustainability-linked instruments tying coupon rates to environmental credentials of the issuer and social bonds are just some examples of the innovative structures likely to become mainstream investments in the next five years.

It’s an expansion that opens up new frontiers for investors. The opportunity now exists to build diversified portfolios that can fulfil both financial and non-financial goals – the mitigation of climate change, the protection of biodiversity and the promotion of social cohesion have become possible through bond investments.

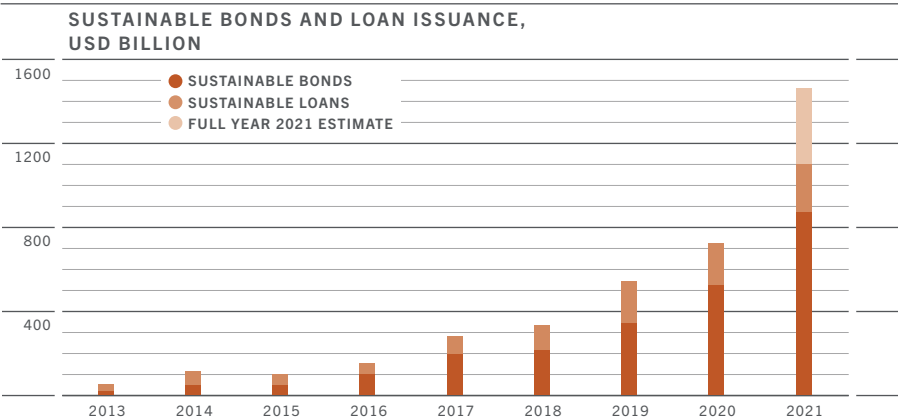
At the same time, the growing importance of ESG factors has given both public and private sector borrowers a wealth of new financing options – each of which offering the possibility to secure funding at attractive rates.

With national and corporate net-zero commitments becoming more ambitious, demand for low-carbon energy investments and technological innovation has boosted issuance of ESG securities.

Total sustainable debt issuance (bonds and loans) during the first three quarters of 2021 reached USD1.1 trillion, exceeding totals for the whole of 2020 (see FIG. 2).

Sustainability on a roll

FIG.2



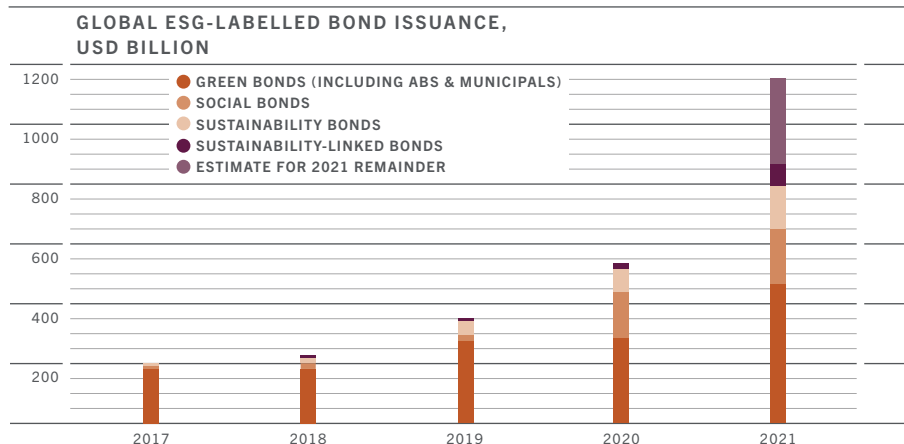
Source: IIF, Bloomberg; data covering period 31.12.2012-31.10.2021

Although demand for ESG loans has been strong, it is the ESG-labelled bond universe, which encompasses green (including asset-backed securities and municipal bonds), social, sustainable, and sustainability-linked bonds, that has seen especially robust growth in recent years.

Issuance of such bonds reached USD800 billion in the first three quarters of this year (see FIG. 3), strengthening a trend that has seen the universe grow from less than USD15 billion in 2010 to over USD2 trillion in 2021; bonds now account for 65 per cent of the sustainable debt universe (see FIG. 4). Also during 2021, ESG-labelled debt funds attracted some USD90 billion, more than double the pace of 2020.

Turning green

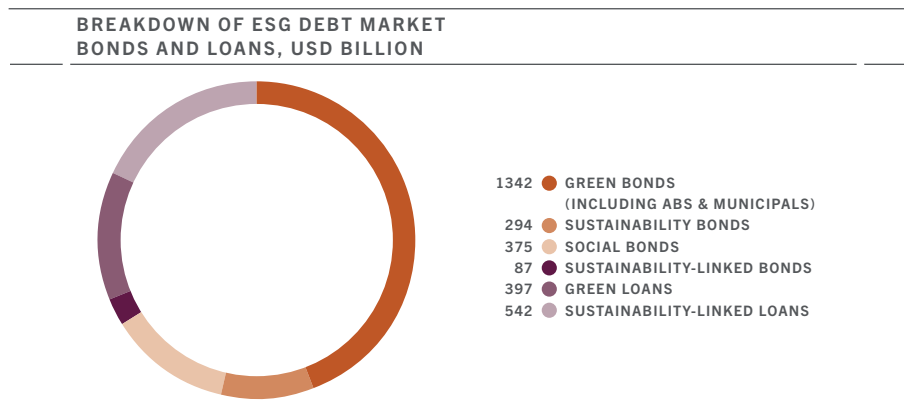
FIG.3



Source: IIF, Bloomberg; data covering period 31.12.2016-31.10.2021

In the sustainable universe, bonds eclipse loans

FIG.4



Source: IIF, Bloomberg; data as of 31.10.2021

At the time of writing, issuance of ESG bonds and loans is on course to reach over USD1.4 trillion by the end of 2021, taking the size of the market to well above USD.3.2 trillion, with bonds accounting for some USD2.2 trillion of the volumes outstanding. Most of those securities were denominated in euro. (see Appendix). With a growing number of large companies and asset managers committing to reduce net carbon emissions, demand for green bond financing is set to increase substantially over the next several years.

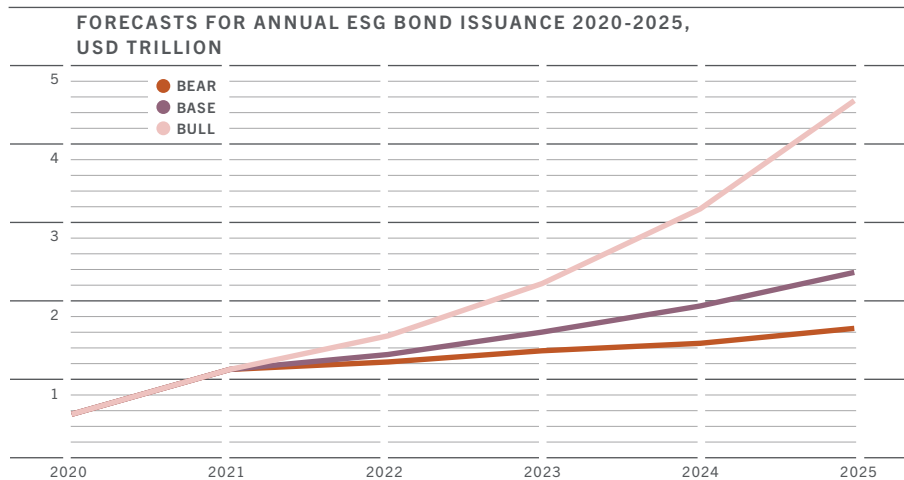
Nevertheless, for all their dynamism, ESG fixed income markets have yet to acquire the scale required to finance the transition to a low-carbon economy (and ultimately to “net zero” emissions globally).

For this to happen, further development of ESG bond markets is essential – and along several fronts. Progress towards greater harmonisation across sustainable finance taxonomies (ongoing efforts include the International Platform on Sustainable Finance) and ESG disclosures (notably the IFRS International Sustainability Standards Board) would foster more rapid market development. In addition, greater transparency on how ESG rating agencies collect, analyse and calculate sovereign and corporate ESG metrics (as noted in a recent International Organization of Securities Commissions consultation) could also boost the demand for – and supply of – ESG debt securities.

Such changes would be transformational. They would alert bond investors to new investment opportunities and also channel private sector funding to projects critical to achieving the UN’s Sustainable Development Goals (SDG). Under this scenario, we believe global ESG-labelled bond issuance could reach an annual pace of USD4.5 trillion in as little as five years. (For forecast methodology, see Appendix).

A USD4.5 trillion behemoth?

FIG.5



Source: IIF, data and forecast covering period 31.12.2019-31.12.2025

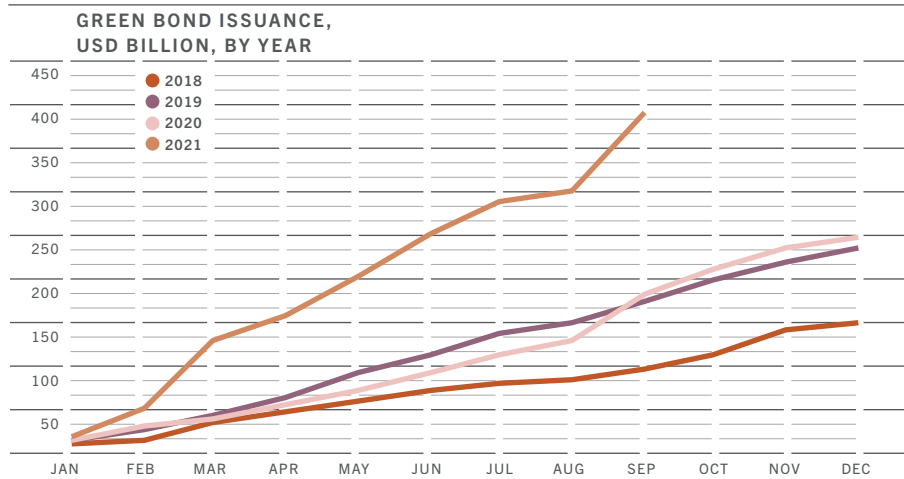
Behind ESG labels

Green bonds

As calls for action to mitigate global warming grow more urgent, the importance of green bond markets as a potential source of climate capital has grown substantially in recent years, particularly following the publication of the Green Bond Principles (GBP) in 2014 (see page 31). With sustainable finance a priority for policymakers and asset owners, green bond issuance reached another record high in 2021, beating the previous record by a significant margin (see FIG. 6). Green bonds represent about 55 per cent of ESG-labelled bond markets, and robust issuance in the first three quarters of 2021 brought the total size of the green bond market to over USD1.1 trillion.

FIG. 6

Turning green



Source: IIF, Bloomberg;
data covering period
31.12.2017-31.10.2021

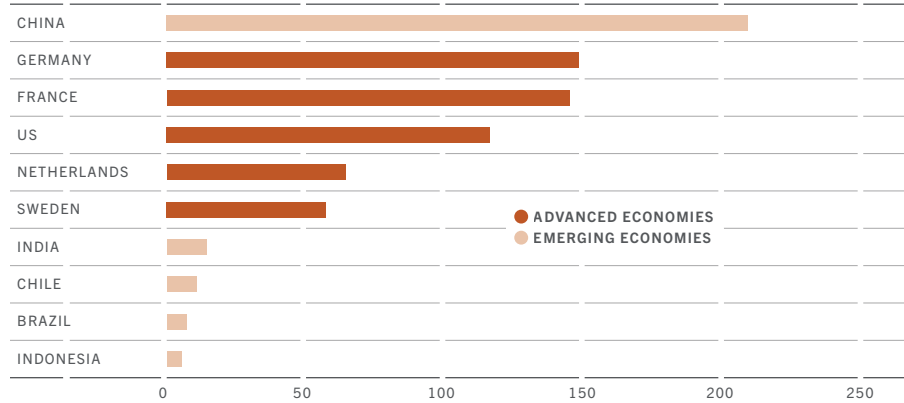
Unsurprisingly, developed economies dominate the market. The expansion of green bonds has been fastest in Germany, France and the US since end-2015 (see FIG. 7). These three countries together account for over one-third of the total amount outstanding. Since the 2020 US presidential election, the pace of green bond sales in the US has reached record highs, driven mainly by non-financial corporations.

Within emerging markets, meanwhile, China, India, Chile and Brazil are the largest issuers, accounting for over 80 per cent of total issuance from the developing world since the end of 2015. After two years of subdued activity, China's pledge to reach carbon neutrality by 2060 has prompted a surge in green bond issues from non-financial Chinese corporations and financial institutions in 2021.

China leads the pack

FIG.7

GREEN BOND ISSUANCE BY COUNTRY, 2015-2021, USD BILLION



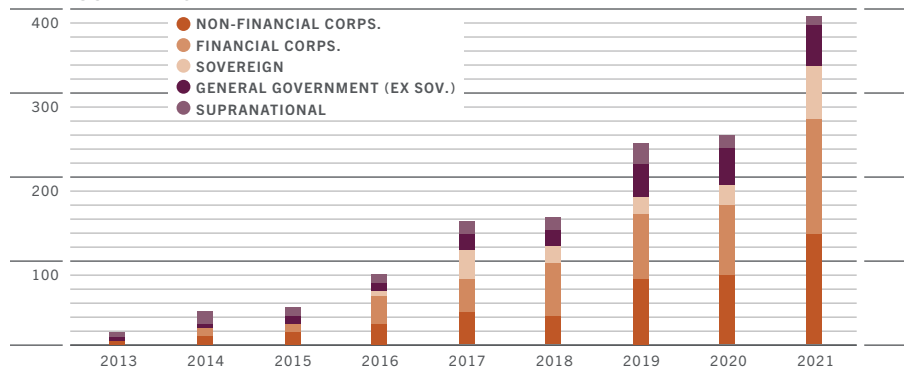
Source: IIF, Bloomberg;
data covering period
31.12.2014-31.10-2021

Until about a decade ago green bonds were issued exclusively by supranational institutions and public sector entities such as regional and local government agencies. However, the landscape has changed significantly in recent years: annual issuance by both financial and non-financial corporations has exploded (see FIG. 8). In fact, since 2019, financial firms have accounted for 35 per cent of all green bonds issued, while utilities and industrial companies made up 17 per cent and 4 per cent, respectively. While financial firms, utilities and sovereigns currently dominate green bond issuance, the issuer base continues to broaden. Ex-financials, and a growing number of firms from the energy, consumer discretionary, and materials sectors, have been raising funds through green bonds in recent years.

Supranational dominance

FIG.8

GREEN BOND ISSUANCE BY SECTOR, USD BILLION



Source: IIF;
data covering period
31.12.2012-31.10-2021

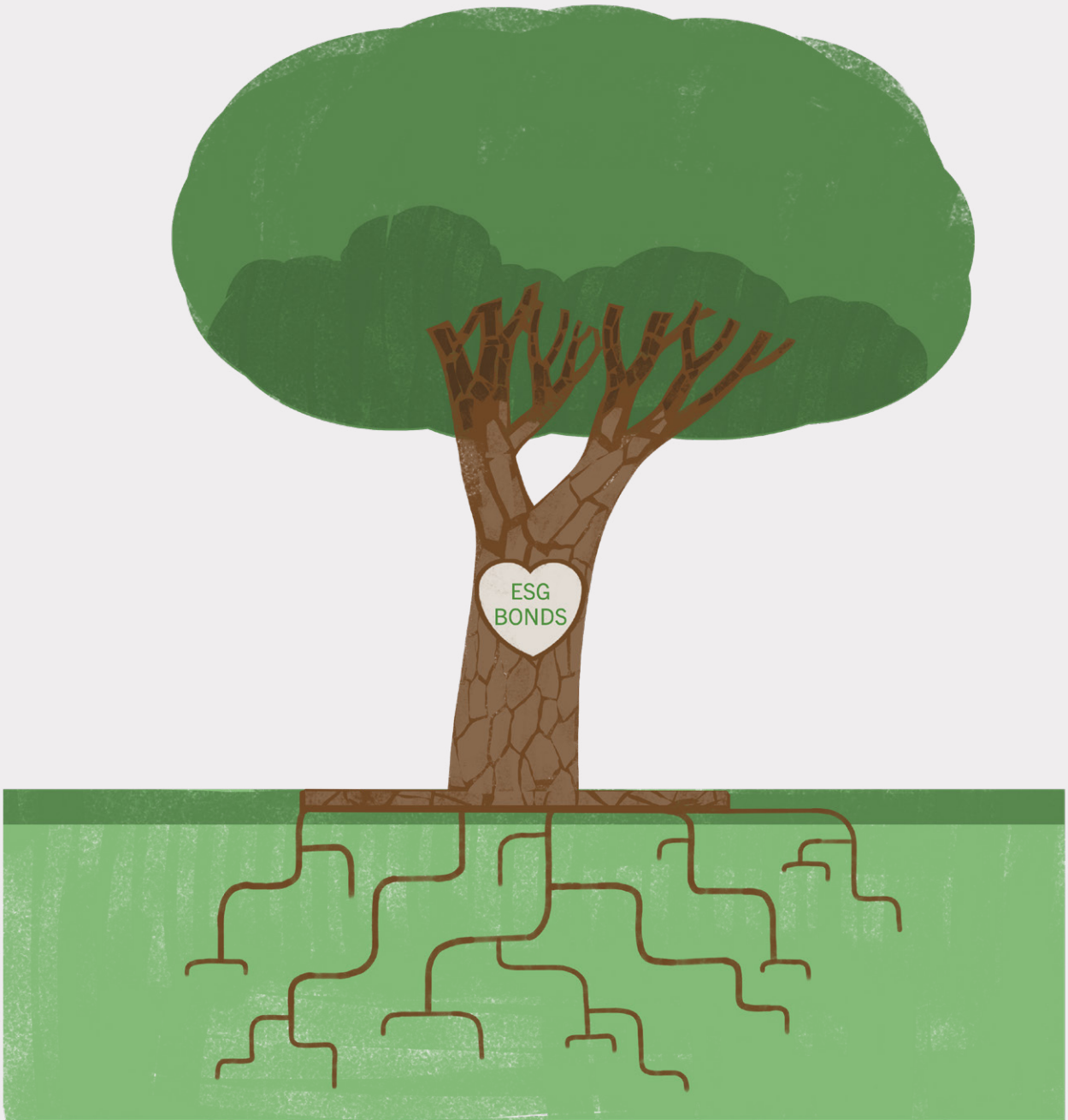
Green bonds have been issued in around 40 currencies. While the euro is the most popular issuing currency (50 per cent of outstanding bonds), the share of bonds denominated in US dollars (21 per cent) and renminbi (8 per cent) has increased in recent years. More than half of dollar-denominated bonds have been issued by supranationals, non-US corporations and sovereigns. At present, the US represents less than 9 per cent of the global green bond market, while the euro zone accounts for over 42 per cent.

US-domiciled issuance has been largely led by non-financial corporations, which comprise 60 per cent of the US market. Financial institutions and government-related entities represent around 35 per cent and 2 per cent, respectively. Indeed, government-related entities are the largest issuers of green bonds in the euro zone, accounting for 45 per cent of outstanding green bonds in the region. Financial institutions and non-financial firms constitute 30 per cent and 27 per cent of the market. With climate change now a priority for the US under the Biden Administration, green bond issuance has been particularly strong in recent quarters and is set to increase further.

Nevertheless, issuance of such debt in the US continues to lag behind that of the euro zone, particularly among government-linked entities.

Worldwide, among non-financial corporations, issuance has been dominated by investment-grade firms, which have accounted for 80 per cent of total volumes since 2015. While this in part suggests that non-investment-grade firms allocate less capital investment for environmental projects, it also reflects the fact that lower-rated companies find the costs of green bonds – in particular the independent verification and second-party opinions that such transactions require – prohibitively high.

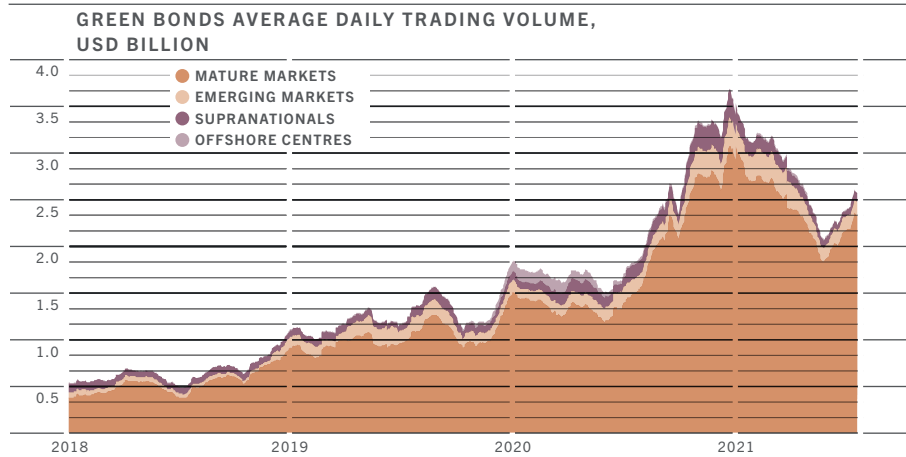
Even so, 2021 saw a significant pickup in high-yield green bond issuance, with US firms making up 30 per cent of new transactions, up from 10 per cent last year.



Liquid green

Although green bonds are perhaps the most dynamic segments of global bond markets, they still represent just a tiny proportion of the fixed income universe – less than 1 per cent of the total amount of securities outstanding. They are also insufficiently diversified across industry sectors. What is more, despite rapid growth in secondary market trading (see FIG. 9), concerns about the liquidity, volatility and credit risk of such securities linger (see section 3). Fears that such bonds could be exploited by issuers and used as greenwashing have also held the market back – while a corporate issuer can only use proceeds from a green bond to fund a specific, qualifying project, there is always the risk this could be negated by unsustainable practices in other parts of the business, for example.

FIG.9



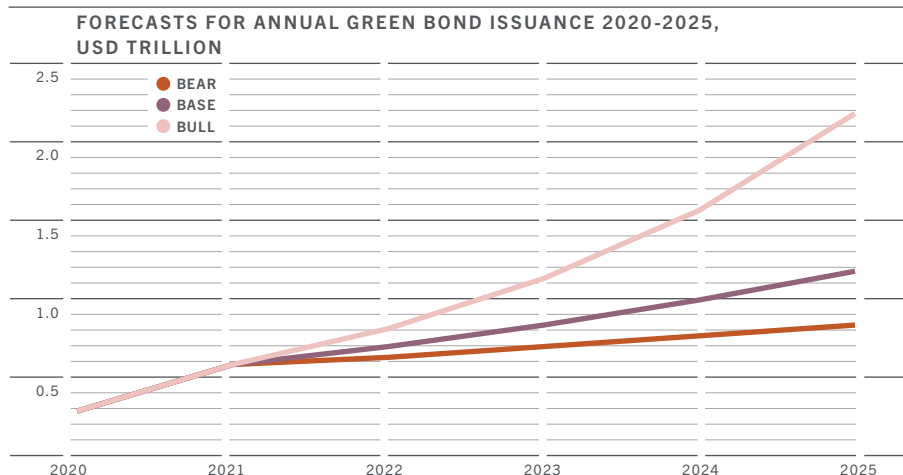
Source: IIF, Bloomberg;
 observations are based on a 60-day moving average;
 data covering period 31.12.2017-31.10-2021

Nevertheless, the next few years could witness a sea change in global green bond markets as a growing number of countries commit to net-zero carbon targets. With policymakers around the world seeking to improve the carbon efficiency of their economies, the resulting increase in climate-related policies and regulation – including carbon pricing initiatives – will be an additional boost.

One obstacle to the market’s development, however, is the lack of a genuinely global investment framework. Several regions and countries are developing their own standards for green bonds and other sustainable financial products — notable examples include the EU Green Bond Standards and China’s Green Bonds Support Catalogue. With these being pursued alongside established private sector-led efforts such as the Climate Bonds Initiative, the lack of coordination could result in a fragmented market. This is where international cooperation is vital. Global efforts to standardise product labelling and certification for green/sustainable financial products would support cross-border alignment, which in turn would boost the growth and the liquidity of ESG fixed income markets. Under our baseline scenario, we project annual green bond issuance to top USD1.2 trillion by 2025 — more than double the approximately USD560 billion sold in 2021 (see FIG. 10).

FIG.10

A USD2 trillion primary market?



Source: IIF, data and forecast covering period 31.12.2019-31.12.2025

Transition bonds

The universe of “transition-oriented” financial products, including transition bonds, is evolving rapidly. Introduced in 2017, transition bonds are designed to help firms with high greenhouse gas (GHG) emissions to finance a transition to greener or lower-carbon activities or methods of production.

Successfully completing the climate transition depends on bridging the funding gap for the development of commercially viable sustainable infrastructure and new technologies. Many climate technologies such as renewable hydrogen, direct air capture and green fuel are currently in the experimental or prototype phase and require significant additional research and development (R&D) investment to achieve the technological and cost-efficiency improvements needed for full commercialisation.

For companies operating in ‘hard-to-abate’ industry sectors, new technologies will have to play an increasingly important role in slashing emissions. By issuing bonds with a “transition” label, borrowers from such industries can raise additional capital to fund their transition to a low-carbon economy (helping bridge the funding gap) and reduce the impact of any climate-negative activities (e.g. deforestation, overfishing, etc.).

The transition bond market is still at a nascent stage of development, with only a handful of issuers to date – cumulative issuance is just over USD7 billion across 16 bond deals since 2017. Given the broad range of industries that could benefit from transition finance, this market has potential for significantly more growth and development. While scaling up transition finance would provide valuable breathing room for high-emitting companies with a credible transition strategy, the lack of widely accepted standards and best practices – and lack of clarity about the “transition” product label – has constrained market development. While the December 2020 release of International Capital Market Association’s Climate Transition Finance Handbook will support market growth, investors to date have shown a preference for sustainability-linked bonds over transition bonds.

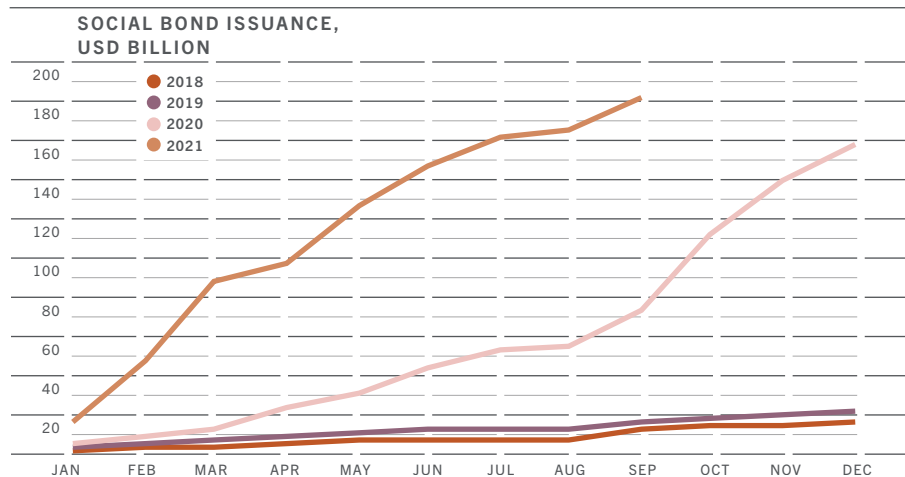
Social bonds

Introduced in 2013, a social bond is a fixed-income instrument whose proceeds go towards projects with positive social outcomes. Such social projects include – but are not limited to – affordable basic infrastructure (e.g. clean drinking water), access to essential services (e.g. health, education, etc.), social and economic empowerment, affordable housing, employment generation (via small and medium-sized enterprise financing and microfinance) and food security.

While still in the early stages of development, the social bond market grew exponentially in 2020 as the Covid pandemic led to a resurgence in social investment projects – social bond issuance in 2020 was eight times higher than in 2019 (see FIG. 11).

Putting the 'S' in ESG

FIG.11

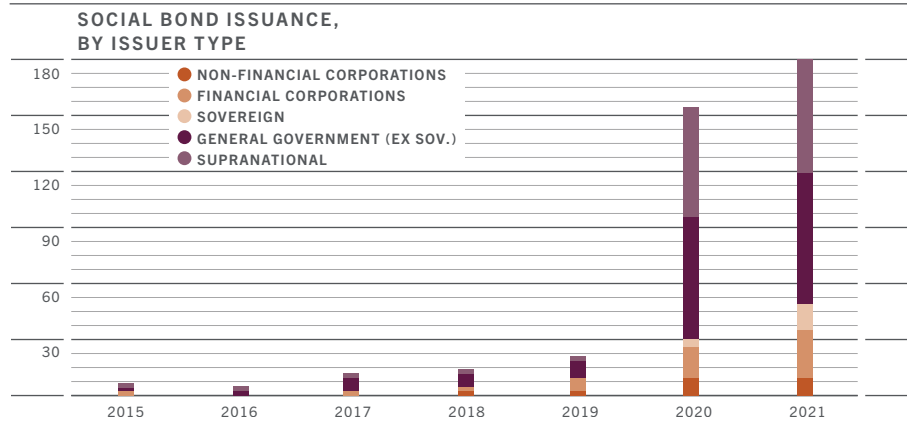


Source: IIF, Bloomberg; data and forecast covering period 31.12.2019-31.12.2025

The positive momentum continued in 2021, with social bond issuance soaring to USD180 billion during the first three quarters of 2021 (over twice the pace seen during the same period in 2020). The majority of social bonds are issued by supranational organisations and general government (ex-sovereign) agencies (see FIG. 12).

Government and supranationals dominate social bond market

FIG.12



Source: IIF, Bloomberg;
data covering period
31.12.2014-31.10.2021

Looking ahead, we expect more corporate sector issuance as social challenges become a priority for a broader range of businesses. Our baseline projection suggests social bond issuance is set to rise from over USD200 billion in 2021 to USD290 billion in 2022 and USD500 billion in 2025.

Sustainability bonds

A sustainability bond is a fixed income instrument whose proceeds are applied to the delivery of environmentally sustainable outcomes or some combination of green and social projects for an identified target population. Such projects can include education, sustainability research, modernisation of public health facilities, climate change and biodiversity.

Sustainability bond issuance surged to near USD140 billion during the first three quarters of 2021, dwarfing annual totals for 2019 and 2020. For the first time, the US dollar replaced the euro as the dominant issuing currency. Many non-financial corporations turned to the sustainability bond market for the first time in 2021.

The largest markets by issuance volume are the US, South Korea and Germany.

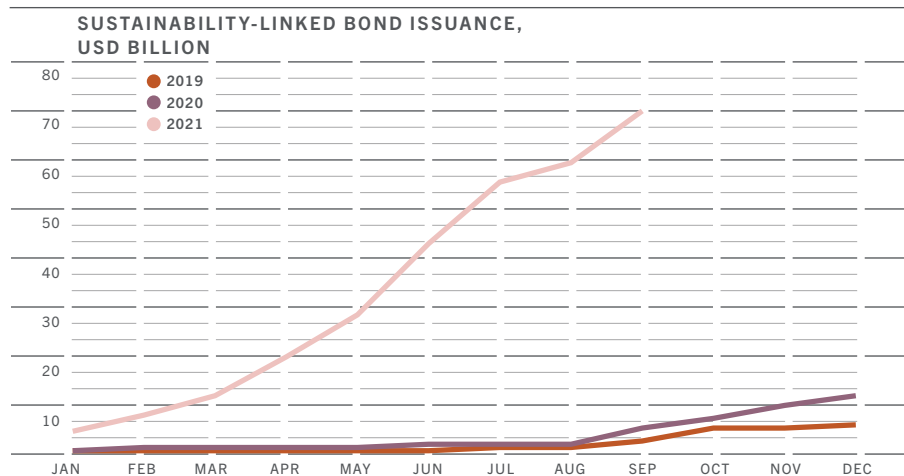
Sustainability-linked bonds

Sustainability-linked bonds (SLB) are general-purpose instruments that – unlike “use-of-proceeds” debt such as green bonds – don’t compel issuers to direct all proceeds to pre-defined sustainability projects. Instead, the borrower commits to achieving a sustainability performance target. Key features of these increasingly popular securities (and their equivalents in loan markets) are the reward-penalty mechanisms that link discounts (coupon step-down), or premiums (coupon step-up) applied to coupon rates or principal payments to an issuer’s ESG rating or other key performance indicators (KPIs). These KPIs can take many forms, ranging from environmental targets covering energy efficiency or greenhouse gas emissions to social objectives such as the construction of affordable housing. In aligning the bond structure with their own sustainability performance targets, issuers aim to create incentives to improve their overall ESG credentials.

At around USD70 billion during the first three quarters of 2021, global sustainability-linked bond issuance was markedly higher than 2020 (see FIG. 13). The growth boost came courtesy of new market guidelines – ICMA’s Sustainability-linked Bond Principles were published in June 2020 – and the European Central Bank’s decision in January to accept SLBs as collateral for new loans. The expansion has been fastest in Europe, particularly in the Netherlands and Luxembourg. Emerging market appetite for SLBs has also been strong, notably in Brazil, Mexico and China (see FIG. 16). To date, issuers have been mostly from the utilities and materials sectors.

FIG. 13

Corporations warm to sustainability-linked debt



Source: IIF;
data covering period
31.12.2018-31.10.2021'

Part of the appeal of sustainability-linked bonds for both investors and issuers is that they offer more flexibility than use-of-proceeds bonds; they can be used by a wider variety of borrowers than green bonds and can also target a broader range of environmental and social objectives. One advantage of SLBs is that KPIs are firm-wide, which stands in contrast to project-focused use-of-proceeds approaches where a firm’s broader business practices and trajectory might have a negative net impact on environmental sustainability. Moreover, given the growing importance of bond financing for public entities, SLBs may be a more attractive option for governments than sustainability-linked loans. Small wonder then that cumulative SLB issuance by public entities has already outpaced that of loans. However, challenges remain:

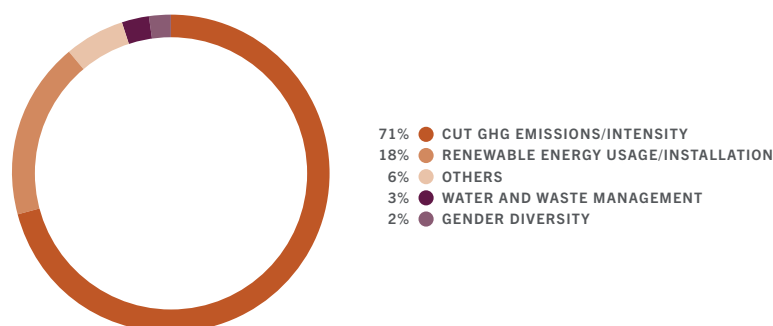
Challenge #1
Selection of key performance indicators and target setting

The integrity of SLB markets hinges on the borrower’s choice of sustainability performance indicators. KPIs should be measurable and relevant for the issuer’s overall business; ambitious and attainable targets can help effect positive, impactful change. However, without standardised sustainability-related disclosure practices, it remains difficult to assess sustainability performance. At present, over 90 per cent of outstanding SLBs are tied to a specific metric (in some instances to a combination of different KPIs), while the remainder commit the issuer to achieving an improved ESG score. Among SLBs with a specific KPI, greenhouse gas emissions are the most prevalent metric, followed by renewable energy usage and installation (see FIG. 14).

FIG.14

BREAKDOWN OF SUSTAINABILITY-LINKED BONDS, BY OBJECTIVE TYPE, %

CO₂ the target of choice



Source: Bloomberg, IIF; as of 31.10.2021

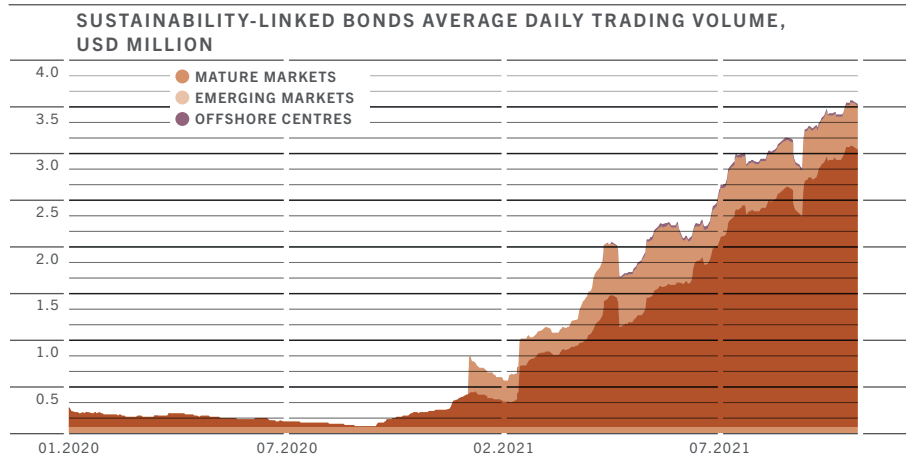
Yet most targets restrict their focus to carbon emissions with only limited inclusion of Scope 3 emissions, emissions that are generated across a firm’s entire value chain, including distributors and customers. While there are a limited number of SLBs with KPIs tied to social and governance indicators, we will likely see more of these as the market evolves. Overall, three-quarters of outstanding SLBs are callable bonds, and, in some instances, KPI target dates come after the call date, meaning that if an issuer realises that it cannot meet – or decides that it will not meet – its KPI, it could call the bond in order to avoid an almost certain step-up in coupon payments.

Challenge #2
Credit and liquidity risk

Around one-third of outstanding SLBs are not currently rated by the big three credit rating agencies, and another 15 per cent are below investment grade. Having nearly half of SLBs either unrated or below investment grade has curtailed market growth, as speculative-grade debt is of limited appeal for most investors; this is reflected in overall trading volumes in secondary bond markets, which have been stagnant this year after a big ramp-up in 2020 (see FIG. 15).

FIG.15

Ever more liquid



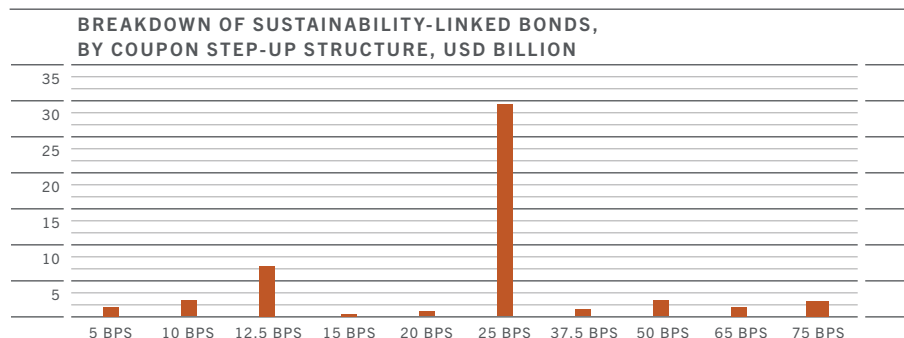
Source: IIF, Bloomberg;
 data covering period
 31.12.2019-31.10.2021

Challenge #3 SLBs can be hard to value

Coupon step-ups are currently the main pricing structure in SLB markets to incentivise issuers to act. The amount of the step-up in coupon does not tend to vary much: a 25-basis point step-up is the most common penalty attached to SLBs (see FIG. 16).

25 basis-point step-up of the default option

FIG. 16



Source: IIF, Bloomberg;
as of 31.10.2021

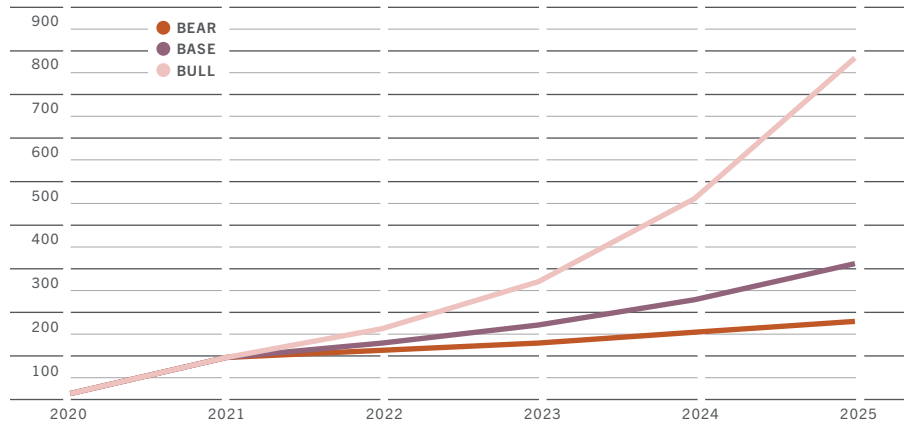
However, the jury is still out on whether relatively modest coupon step-ups serve as a sufficient incentive for issuers to pursue significant improvement in sustainability practices, particularly given that traditional bond market penalties – e.g. a credit rating downgrade – are typically associated with a much larger increase in borrowing costs. For instance, the spread between junk bonds and investment-grade bonds in the US has averaged some 300 basis points in recent years, though a breach of the KPI is not directly comparable with a credit rating change. More broadly, until there are widely accepted valuation mechanisms for SLBs linking the penalty structure with the level of ambition of KPI targets (and their attainability), investor uptake of these instruments may be limited.

Other design features, such as coupon step-downs and two-way coupon mechanisms (step-up and step-down), can also influence valuation. Although these mechanisms are widely used in sustainability-linked loan markets, they are not employed extensively in sustainability-linked bond markets. While the use of step-downs may further motivate borrowers to reach their targets, pricing step-down structures can be even more challenging than step-ups. Investors and issuers may disagree on the value of a potential cut in the coupon rate, and this divergence in views could reduce the appeal of these securities. Such a divergence, or “wedge”, is in fact a common feature of state-contingent debt instruments that offer issuer benefits such as step-downs.

Discussions regarding how issuers should distribute proceeds from the reward-penalty mechanism have yet to come to any firm conclusions. While most outstanding SLBs offer to pay the extra coupon fee directly to investors following the failure to meet a KPI, some investors suggest the additional payments might instead be directed to a charity or third party; this would further complicate valuations. However, as these markets become more mature, the use of well-designed and standardised contract structures should give investors greater clarity over SLBs' pricing/valuation. Under our baseline scenario, we project SLB issuance to reach USD125 billion in 2022 and some USD310 billion in 2025 (see FIG. 17).

FIG.17

FORECASTS FOR ANNUAL SUSTAINABILITY-LINKED BOND ISSUANCE
2020-2025, USD TRILLION



Source: IIF, data and forecast covering period 31.12.2019-31.12.2025

Surging to USD800 billion per year

ICMA principles: Maintaining integrity and transparency in the market

The Principles, formulated by the International Capital Market Association (ICMA), are guidelines that recommend transparency and disclosure and promote the integrity of sustainable bond markets. These guidelines are a collection of frameworks dedicated to different segments of sustainable bond markets: the Green Bond Principles (GBP), the Social Bond Principles (SBP), the Sustainability Bond Guidelines (SBG) and the Sustainability-Linked Bond Principles (SLBP). The Principles seek to further develop the role of bond markets in financing progress towards environmental and social sustainability. These voluntary frameworks outline best practice to launch a credible instrument and provide investors with tools to measure investment impact.

The GBP, the SBP and the SBG require alignment with four key components: 1) use of proceeds, 2) process for project evaluation and selection, 3) management of proceeds, and 4) reporting. The 2021 edition of these principles identifies two key recommendations to strengthen transparency: 1) the issuer's bond framework needs to explicitly affirm alignment with the relevant voluntary principles, 2) the alignment needs to be verified and monitored by way of an external and independent review.

The Green Bond Principles were first established in 2014 by a group of 13 global banks. Since then, the principles have been updated by ICMA. The GBP play a key role in providing greater clarity in the green bond market as they define the structure, documentation, monitoring and reporting requirements. While some countries and institutions such as the World Bank and International Finance Corporation (IFC) have developed their own green bond criteria to define eligible green projects, ICMA's GBP are the most commonly used framework for labelling green bonds. The GBP do not provide a strict definition for 'green' projects or activities; rather, they give bond issuers a considerable degree of flexibility in the setting of environmental objectives and in pro-

ject design. Examples of projects the GBP would consider 'green' include renewable energy, energy efficiency, pollution prevention and control, green buildings, clean transport, sustainable water and wastewater management, climate change adaptation, etc. At present, there are four types of green bonds: standard green use-of-proceeds bond, green revenue bond, green project bond and green securitised bond. As the market continues to develop, new types of green bonds will likely emerge.

The Social Bond Principles were initially launched as part of GBP's 2016 update and define social bonds as instruments whose proceeds finance or refinance existing social projects. The goal of a social project is to address or mitigate a specific social issue that threatens the well-being of society (or a specific segment of the population), and/or attempts to achieve positive social outcomes especially for a target population. These projects must provide benefits that are clear, descriptive and quantifiable. Some examples of social project categories include affordable housing, affordable basic infrastructure, access to essential services, food security and sustainable food systems. The issuer must state the expected positive social impacts and may also list the beneficiaries.

The Sustainability Bond Guidelines were developed in 2017 and are based on a combination of the GBP and the SBP. The bond proceeds from sustainability bonds must be used exclusively to finance or re-finance a combination of both green and social projects. The issuer determines the classification of a use of proceeds bond as green, social or sustainability based on its primary objective for the underlying project.

ICMA also provides guidance to evaluate the financing objectives of a green, social or sustainability bond against sustainable development goals (SDGs). Other supporting documents by ICMA include a checklist for social bonds, a green project mapping document and the Climate Transition Finance Handbook. Published in December 2020, the Climate Transition Finance Handbook provides guidance on issuer-level practices, actions and disclosures, as well as climate transition strategies for issuers raising funds for projects that implement a net-zero emissions strategy (aligned with the Paris Agreement goals).

Sustainability-Linked Bond Principles outline best prac-

tice for issuers of instruments that incorporate ESG targets and clarify the approach for SLB issuance. The SLBP have five core components: 1) selection of key performance indicators (KPIs), 2) calibration of sustainability performance targets, 3) bond characteristics, 4) reporting and 5) verification. The sustainability performance of the issuer is measured by sustainability KPIs, which should be relevant, quantifiable, externally verifiable and benchmarkable. The sustainability performance targets for each KPI must be set in good faith and should be determined on a timely basis.



The evolution of ESG fixed income – looking ahead

The ESG bond revolution rests on several pillars.

For one thing, the rapid growth of global debt markets should aid its expansion. Global bond markets have grown at a brisk pace since 2010, increasing by over USD37 trillion to reach some USD125 trillion. While around USD12 trillion of this surge occurred in the US, emerging markets accounted for over USD17 trillion of the increase. Recent estimates by the US Congressional Budget Office suggest that the size of the US Treasury market will rise by a further USD13 trillion between now and 2030. This implies an average growth rate of 5 per cent per year, on a par with the annual average expansion over 2015/19. Assuming other segments of the bond market expand at a similar pace, as occurred over 2015/19, a basic extrapolation suggests that the global bond market could approach USD200 trillion by 2030 – adding USD65 trillion to the current debt stock outstanding.

The growth of climate-aligned bonds

Climate-aligned bonds – securities that don't carry an ESG label but are issued by companies that contribute directly to the clean energy transition – will add further heft and variety to the sustainable bond market.

Achieving net-zero targets will require an exponential increase in both the supply of – and demand for – climate-aligned debt products. Despite robust growth in the ESG-labelled debt universe in recent years, supply continues to fall short of demand. Difficulties in sourcing climate-aligned debt securities have prompted many asset managers and asset owners to use alternative approaches to identify climate investment opportunities. For example, many investors are focusing efforts on identifying the debt securities of companies that generate a significant portion (though not all) of their revenues from climate-aligned activities. Recent estimates from the Climate Bonds Initiative suggest that the size of this “climate-aligned” bond universe (excluding actual ESG-labelled climate bonds such as green bonds and sustainability-linked bonds) surpassed USD900 billion in 2020.

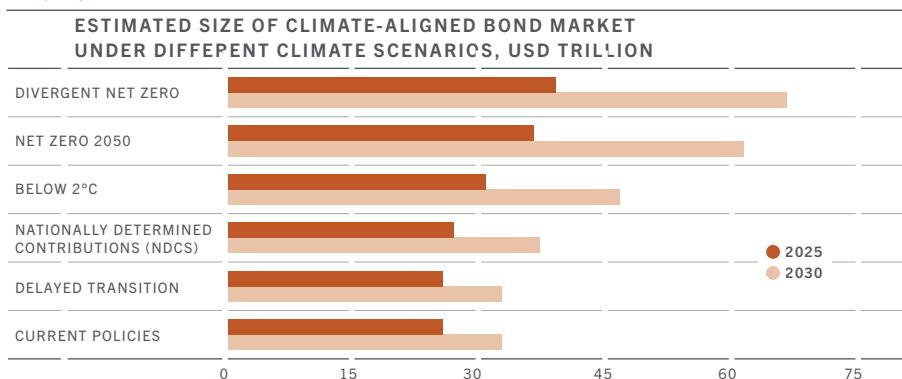
Sustainable bonds and transition scenarios

In addition to the forecasts produced for green, sustainability-linked bonds, as well as social bonds, we have also devised projections for climate-aligned bonds under various transition scenarios.

If we assume the transition in global bond markets keeps pace with energy consumption patterns, the climate scenarios set out by The Network of Central Banks and Supervisors for Greening the Financial System imply that the size of the climate bond universe (ESG-labelled climate bonds and climate-aligned bonds) should reach USD25 trillion by 2025 and over USD32 trillion in 2030, even under current climate policies. Achieving net zero by 2050 might require the climate bond universe to reach USD36 trillion by 2025 and over USD60 trillion by 2030 (see FIG. 18).

Achieving net zero by 2050 requires USD60 trillion of climate bonds

FIG. 18



Source: IIF, forecast covering period 31.12.2025 and 31.12.2030

Growth dynamics for ESG-labelled bonds

Demand for better climate and ESG disclosure from corporate issuers and investors should also boost sustainable debt product development and differentiation. Recent surveys suggest that the global sustainable investment universe – equities and bonds – rose from USD30 trillion in 2018 to USD35 trillion in 2020, with fixed income the largest sustainable investment asset class. However, a high proportion of reported sustainable assets is held in undisclosed investment vehicles, where investments are not made public. This lack of clarity makes it difficult to determine the true size of sustainable-investment markets, raising concerns that many of these assets have simply been 'greenwashed'. That said, these surveys show that there is plenty of scope for growth and product diversification in ESG-labelled bond markets.

With climate finance topping the global policy agenda and a growing number of firms – now approaching 4,000 – becoming signatories of the UN Principles for Responsible Investment (PRI), rapid growth of the ESG-labelled debt universe is set to continue. At present, ESG-labelled bonds represent only a small portion of global bond issuance, with significant differences across sectors and countries. For instance, green bonds have accounted for only 1.3 per cent of total issuance since end-2015, though this ratio is inched upwards to nearly 2 per cent in 2021.

More broadly, achieving net zero demands that the share of green bonds in total issuance increases to well above 50 per cent. Given that average annual bond issuance amounted to some USD15 trillion over the past three years, this implies that green bond issuance could increase from its current level of over USD500 billion to some USD7.5 trillion per year, surpassing the most bullish of our three main forecast scenarios.

While fundamentals remain supportive for ESG-labelled bond markets, the pace of growth depends on a number of other factors.

To begin with, the introduction of new ESG-labelled debt instruments could alter the growth prospects of some types of ESG bond. For example, the fledgling nature/biodiversity bond could end up attracting funds that would otherwise have flowed to a different category of debt.

Second, the lack of reliable and comparable ESG data and benchmarks, which prevents investors from carrying out comprehensive analysis, could act as a brake on the market's growth. Here is where the establishment of a minimally accepted global taxonomy and disclosure standards around ESG themes could make a difference. (For recent policy and regulatory developments, see Appendix). The need for forward-looking ESG data and metrics is substantial; persistent anomalies and inconsistencies in ESG-related data serve to discourage investors from making large allocations to ESG debt. Policies that give rise to greater transparency on how sovereign and corporate ESG scores and ratings are calculated could boost demand for ESG debt securities.

Because the market lacks universally accepted standards covering the labelling and certification of securities and issuers (ESG rating providers use proprietary method-

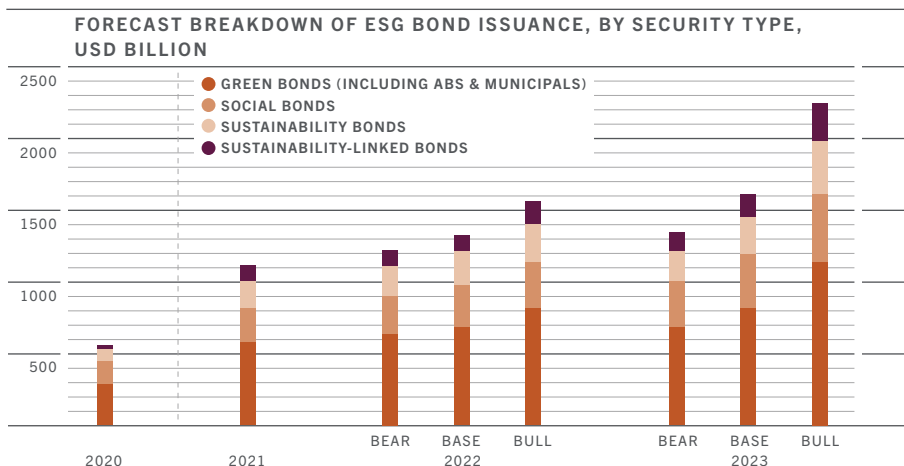
ologies), and given the complexity of sustainable investment terminology – ESG bonds remain vulnerable to accusations of greenwashing. This can constrain the ability and willingness of issuers to shift from conventional to sustainable debt financing. Low levels of liquidity and limited trading activity in secondary markets is another impediment to growth. Moreover, the higher issuance costs for sustainable debt (such bonds are subject to independent verification, certification, and strict reporting requirements) can also weigh on issuer appetite. These difficulties are particularly acute for emerging market issuers, as additional third-party verification and reporting costs are mainly priced in developed market currencies.

Taking all this into account, and assuming that governments and regulators will continue to focus on sustainability, our baseline estimates (built on the issuance trends over the past six years) suggest that annual ESG-labelled bond issuance could climb over fourfold from some USD525 billion in 2020 to over USD2.3 trillion in 2025.

Social and sustainability bonds will be a larger part of the investment universe.

A richer hunting ground for investors

FIG.19

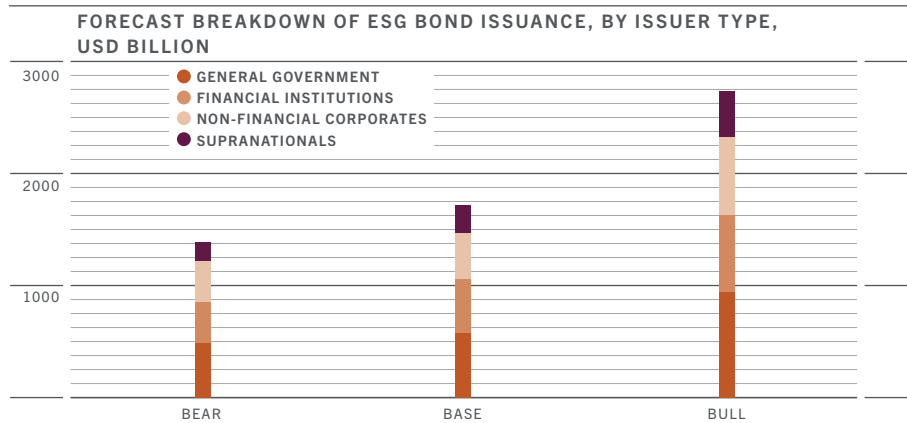


Source: IIF, data and forecast covering period 31.12.2019-31.12.2023

A diverse range of issuers

Social bond issuance, for instance, can be expected to rise from USD240 billion in 2021 under our baseline scenario to an annual USD290 billion in 2022 and USD345 billion in 2023. Separately, we forecast sustainability bond issuance will rise from some USD185 billion in 2021 to over USD220 billion in 2022 and USD265 billion in 2023. Across sectors, we see corporate issuers (both non-financial and financial firms) dominating issuance as corporate net-zero commitments continue to accelerate (see FIG. 20). We anticipate substantial issuance by general governments (ex-sovereigns) in order to raise capital for climate mitigation and adaptation projects in line with national climate targets.

FIG.20



Source: IIF, data and forecast covering period 31.12.2019-31.12.2023

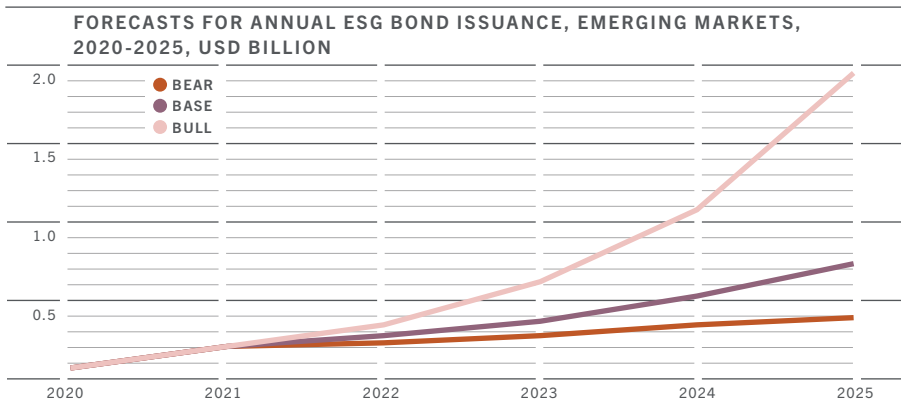
Greater scrutiny could deter emerging market borrowers

One risk to our baseline scenario is reluctance among some sovereign borrowers to open themselves up to the level of scrutiny required to establish and maintain large ESG bond issuance programmes. Given the complexity of public sector balance sheets, the challenges associated with managing and tracking bond proceeds could reduce the appeal of ESG debt securities for some sovereign issuers – particularly those that are still developing – or lack – debt management expertise. Such difficulties could be even more acute in countries with limited public debt transparency; in some cases, there may be political sensitivities about having policy conditionality “imposed” by foreign investors given the use-of-proceeds and performance obligations that come with ESG-labelled bonds.

Our baseline projection suggests that ESG-labelled bond issuance in emerging markets could increase from some USD50 billion in 2020 to USD360 billion in 2023 (see FIG. 21). This should bring the EM share of in total issuance from 10 per cent to over 22 per cent. Among emerging markets, China – with its goal of climate neutrality by 2060 – is expected to remain dominant, accounting for over half of emerging market issuance through 2023 (see FIG. 22). Under favourable market conditions, our bullish scenario, issuance of ESG labelled bonds among emerging market borrowers could reach USD2 trillion by 2025.

Emerging markets' green wave

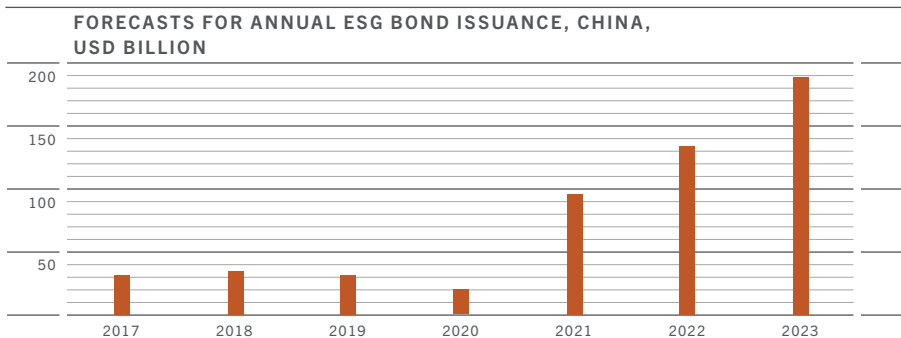
FIG.21



Source: IIF, data and forecast covering period 31.12.2019-31.12.2023

Green Dragon

FIG.22



Source: IIF, Bloomberg; data covering period 31.12.2016-31.10.2021

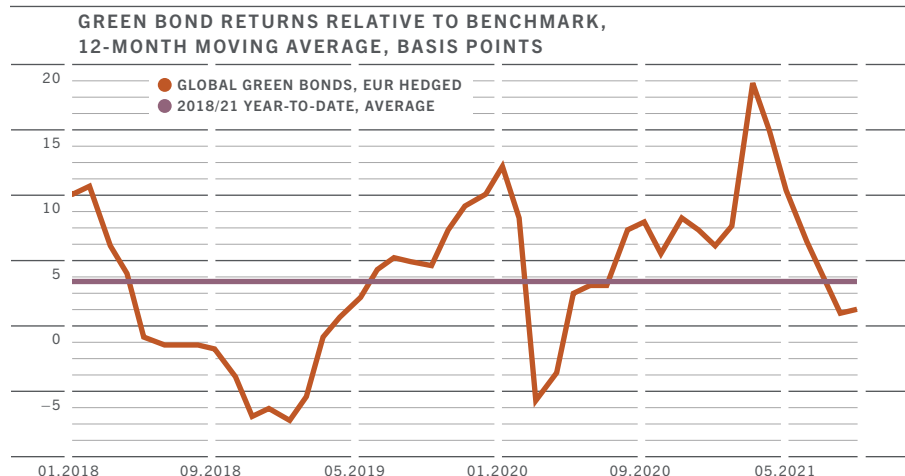


Green bonds – returns, volatility, liquidity and premiums

Green bonds have exhibited similar – or better – performance than non-green peers in recent years: while performance varies considerably across individual securities, returns on green fixed-income benchmarks have been slightly above those for conventional bond indices. Green bonds have delivered an average monthly excess return of around 3.5 basis points over conventional peers since end-2017 (see FIG. 23).

Beating the benchmark

FIG. 23



Source: IIF, Bloomberg;
data covering period
31.12.2007-31.10.2021

However, there has also been variation across geographies — while EUR-denominated green corporate bonds have outperformed broad EUR-denominated corporate bond benchmarks, excess monthly returns on USD-denominated green corporate bonds have been lower than their conventional counterparts (see FIG. 24).

Returns generated by green government bonds have outpaced those on conventional benchmarks since end-2017, with an average monthly excess return of over 1 basis point.

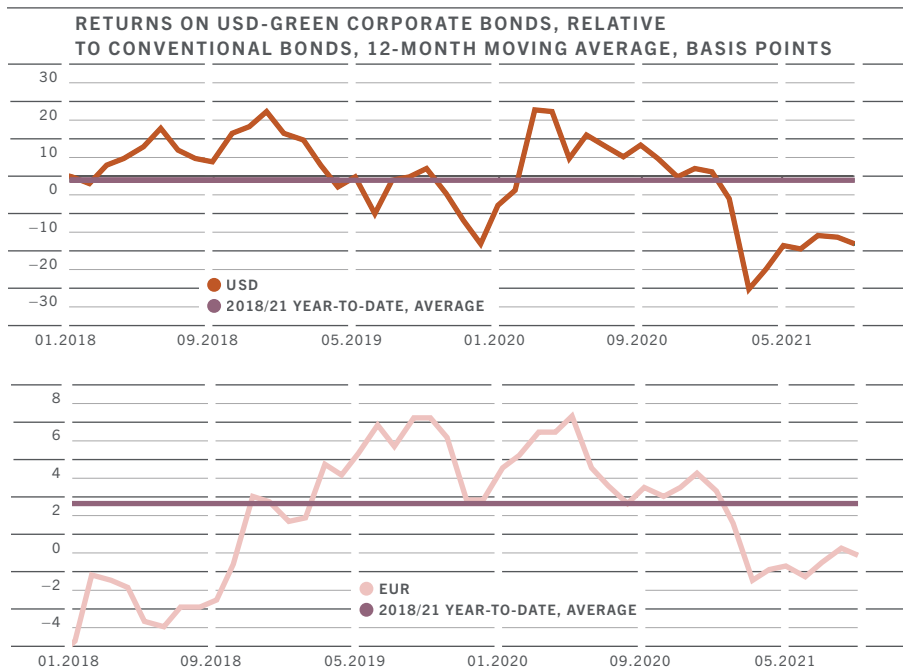
Green bond indices have been more volatile than their conventional counterparts in recent years, however, albeit with significant differences across sectors:

- In government fixed-income markets, green bonds have been more volatile than nominal bond indices. This has resulted in a slightly lower information ratio, i.e. volatility-adjusted return, for government-related green bonds.
- The volatility of corporate green bonds remains below that of conventional bonds, particularly for USD-denominated green corporate bonds. This means the information ratios for green USD-denominated corporate bonds are slightly higher than for conventional corporate bonds. The lower volatility of green bonds may be a positive consequence of the additional disclosure and third-party verification that is required of such securities.

In aggregate, volatility-adjusted returns on green vs conventional bonds appear similar since end-2017 (see FIG. 25).

Corporate green spells attractive returns

FIG.24



Source: IIF, Bloomberg;
data covering period
31.12.2017-31.10.2021

FIG.25

GREEN GOVERNMENT BOND INDICES HAVE BEEN MORE VOLATILE THAN CONVENTIONAL PEERS; GREEN CORPORATES LESS SO

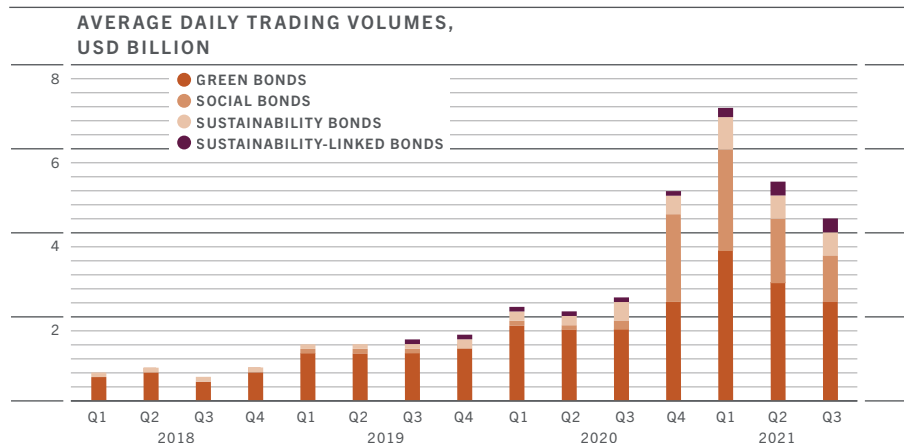
JAN. 2018 – JULY 2021 PERIOD	MEAN RETURN, %	VOLATILITY, %	INFORMATION RATIO
GLOBAL GREEN BONDS, EUR HEDGED	0.24	1.17	0.20
GLOBAL GREEN CORP. BONDS, EUR HEDGED	0.24	1.32	0.18
EUR GOV-RELATED GREEN BONDS, UNHEDGED	0.21	1.20	0.18
USD GREEN CORP. BONDS, UNHEDGED	0.48	1.54	0.31
EUR GREEN CORP. BONDS, UNHEDGED	0.22	1.35	0.17
GLOBAL BONDS, EUR HEDGED	0.17	0.84	0.21
GLOBAL CORP. BONDS, EUR HEDGED	0.28	1.65	0.17
EUR GOV-RELATED BONDS, UNHEDGED	0.16	0.90	0.18
USD CORP. BONDS, UNHEDGED	0.50	1.93	0.26
EUR CORP. BONDS, UNHEDGED	0.20	1.37	0.15

Source: Bloomberg, IIF;
*Information ratio = mean return/standard deviation of returns;
monthly observations covering period 31.12.2017-31.10.2021

How liquid is the green bond market? Although the green bond market can trace its origins back 15 years, it has yet to acquire the heft that enables investors to execute large, rapid transactions without instigating adverse, if not drastic, swings in price (see FIG. 26).

Modest volumes

FIG. 26



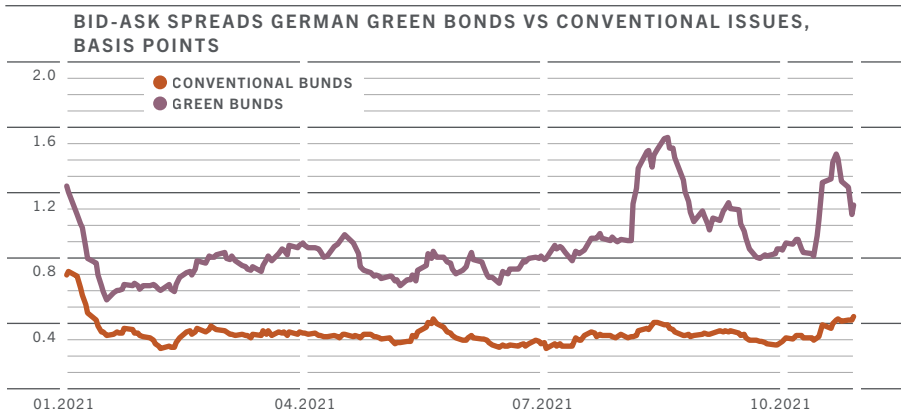
Source: IIF, Bloomberg;
data covering period
31.12.2017-31.10.2021

As things stand, green bond markets are relatively small and not especially diversified. At over USD1 trillion, green bonds represent less than 1 per cent of global bond markets, which means there is a limited stock available for investment. Most of the issuance is denominated in euros and dollars and is largely concentrated in a few mature economies, with very limited activity in emerging market economies ex-China.

Also hampering market liquidity is investor behaviour. Most investors in ESG bonds tend to take a buy and hold approach, keeping green bonds until maturity. This in large part reflects investors' efforts to "green" their portfolios in line with their commitments to net-zero emissions. Looking ahead, this phenomenon could continue to weigh on secondary market liquidity. A close look at German fixed income markets shows that green bonds exhibit slightly higher bid-ask spreads than their conventional counterparts (see FIG. 27). Similar trends have been evident in corporate bond markets (see FIG. 28). While this suggests green bonds are more costly to buy and sell — and thus less liquid — the difference appears negligible given the size of daily transaction volumes in green bond markets.

Liquidity risks spell wider spreads

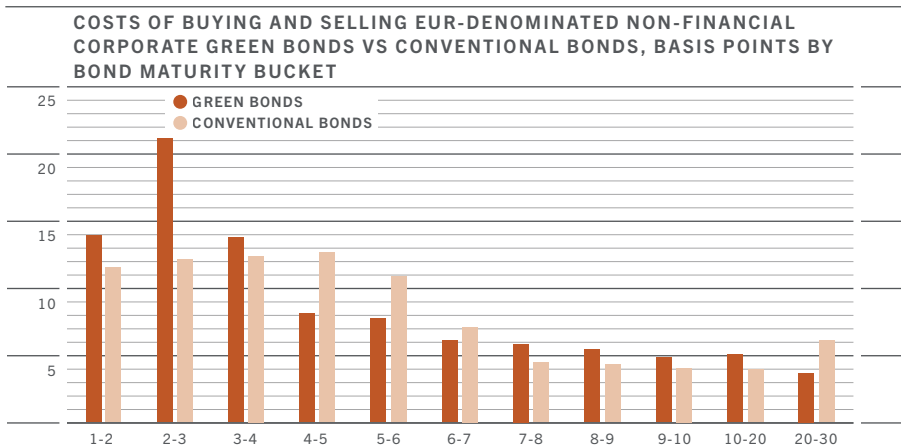
FIG.27



Source: IIF, Bloomberg;
data covering period
31.12.2020-31.10.2021

Cost of going green

FIG.28

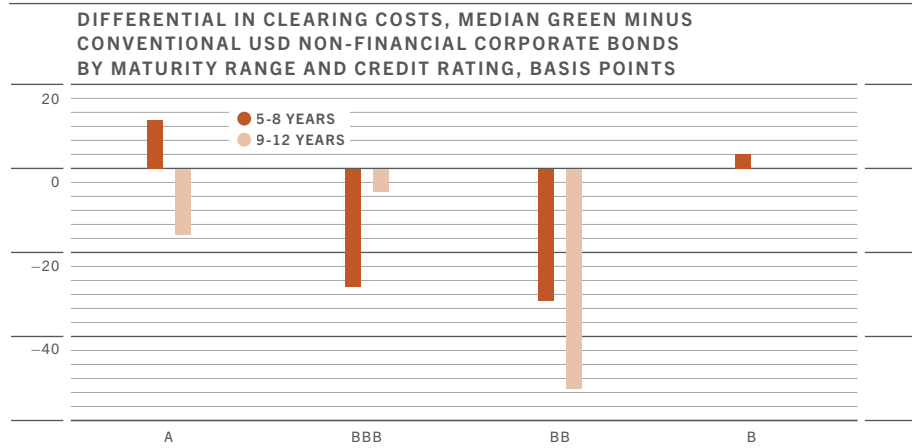


Source: IIF, Bloomberg;
data covering period
31.12.2014-31.10.2021

The “greenium” — does it exist? Strong appetite for green bonds appears to have translated into lower borrowing costs for some issuers. This solid demand has been evident in both primary and secondary bond markets, leading to a small price premium (“greenium”) for green bonds over conventional bonds. Overall, the median clearing yield at issuance for non-financial corporate green bonds has been lower than for conventional bonds, meaning that green bonds are more highly valued (priced). The premium appears to be more pronounced in lower-rated bonds (see FIG. 29 - FIG. 30)

Cheaper going green in dollars...

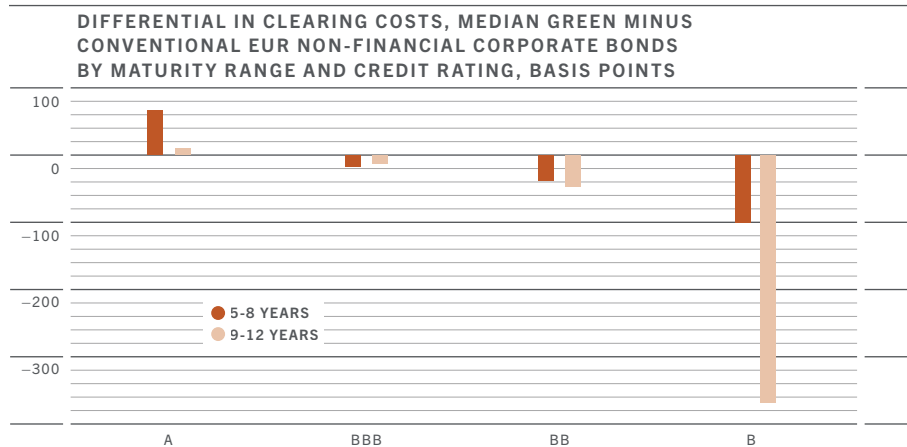
FIG.29



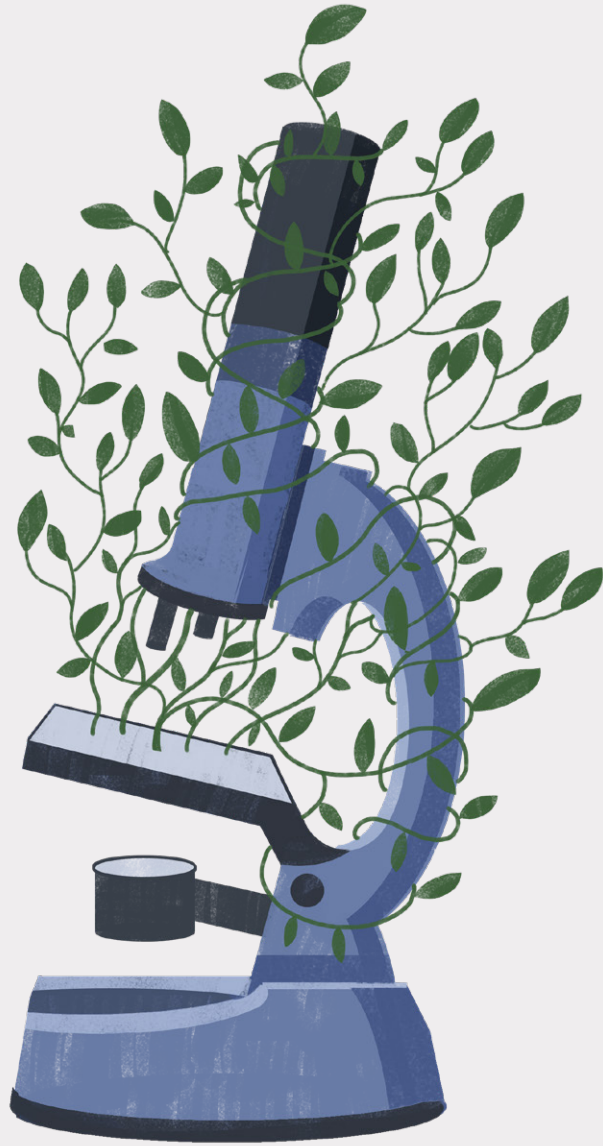
Source: IIF, Bloomberg;
data covering period
31.12.2014-31.10.2021

...and also in euros

FIG.30



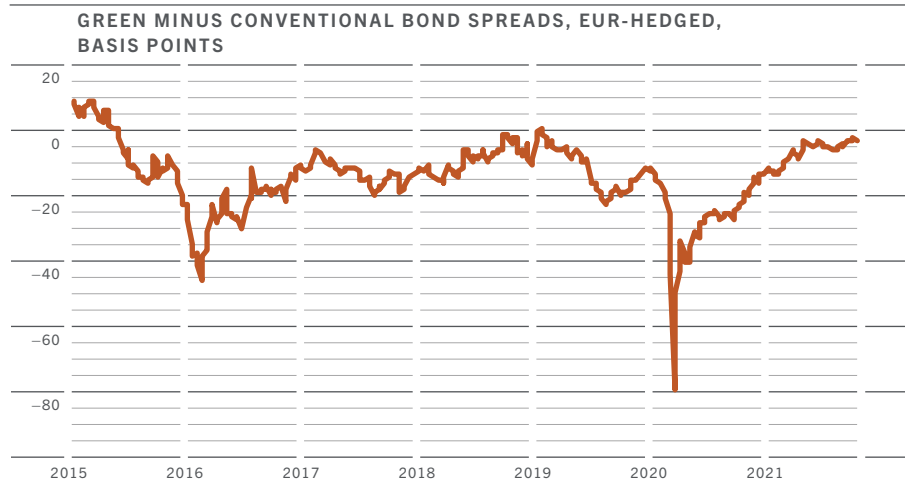
Source: IIF, Bloomberg;
data covering period
31.12.2014-31.10.2021



A close look at benchmark indices for corporate bonds also suggests the presence of a greenium (see FIG. 31), particularly in certain sectors such as utilities. Evidence of investors paying premiums for green bonds has been also seen in sovereign bond markets: German green bunds trade at a premium to conventional bunds with similar maturities.

FIG. 31

Greenium – the premium for going green



Source: IIF, Bloomberg;
data covering period
31.12.2014-31.10.2021

The role of supranationals in market development

While corporations still dominate issuance in ESG-labelled bond markets, supranational agencies such as the European Investment Bank (EIB) and the Inter-American Development Bank (IADB) have increased their presence in recent years; together, they now account for over 17 per cent of annual issuance – up from 8 per cent in 2019. This surge is primarily down to a marked increase in the issuance of social bonds, which in turn is a reflection of the societal problems laid bare by the COVID-19 crisis.

Since 2019, ESG-labelled bonds have accounted for more than 18 per cent of total supranational bond issuance. The true figure could be even higher as a large proportion of supranational bonds could be considered ESG-aligned even though they do not carry the ESG label. For instance, supranational agencies introduced green bonds to capital markets more than a decade ago, well before the Green Bond Principles were introduced.

In Europe, there has been growing interest in social and green bonds following the introduction of the EU's Sustainable Finance Disclosure Regulation (SFDR), much of which came into effect in March 2021. The framework imposes mandatory disclosure obligations for asset managers and other financial market participants. The EU itself entered the sustainability market in 2020 with social bonds to finance the Commission's temporary Support to mitigate Unemployment Risks in an Emergency (SURE) – an instrument created to counter the socioeconomic impact of the pandemic.

These social bond funds are used to provide loans to beneficiary member states – to date nearly EUR90 billion has been distributed to 19 countries. European supranationals thus play an essential role in offsetting COVID-19's impact on health, the economy and society, given that they implement government policy priorities. The EU issued its first green bond in 2021 and is aiming to use such instruments to finance around 30 per cent of its Recovery Plan, which will invest in environmentally friendly technologies, introduce greener vehicles and public transport, and ensure energy efficiency in buildings and public spaces. The EU's landmark green bond sales come after debut sales from Spain and the UK in September.

The World Bank and the IFC are the largest supranational ESG bond issuers domiciled in the US. In 2020, the World Bank issued a record USD75 billion in sustainable development bonds in 27 currencies to support the financing of projects such as training medical staff and financing COVID-19 vaccine purchases – though only a small portion of that has been labelled as ESG. Additionally, the World Bank has issued around USD16 billion of green bonds in 23 currencies.

Supranationals thus have a crucial role to play in the development of ESG debt markets. First, they can step up support for mobilising capital towards ESG/SDG projects, particularly in developing countries. Second, they can enhance efforts to increase funds available for climate finance. They also help improve the quality of ESG data, as well as its collection, reporting and dissemination. Supranationals are uniquely positioned to develop governance frameworks and new databases to collect comprehensive, detailed and internationally comparable ESG data. Through technical assistance and training, they can establish ESG educational programmes for corporations, national governments, asset owners and investors. Moreover, they can provide developing countries with guidance and a roadmap for the development of ESG bond markets, which should in turn enhance the ability of these countries to access international capital markets.

ESG in EM bond markets

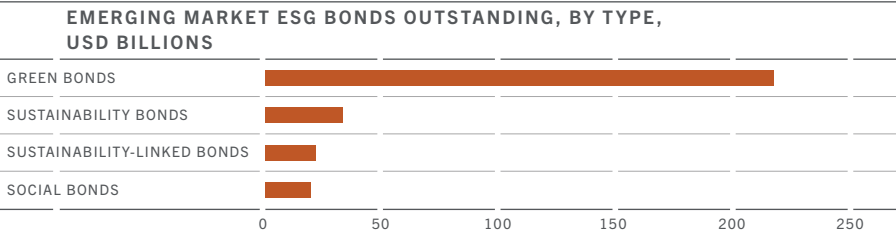
ESG integration in emerging market bonds accelerated in 2021. At around USD300 billion, ESG-labelled bonds represent 1 per cent of the market (vs 1.5 per cent for developed markets). Since the end of 2012, over half of ESG-labelled emerging market bonds have been issued by Chinese sovereign and corporate borrowers; issuers from Chile, India, Brazil, and Mexico are also well represented.

Accounting for about USD145 billion of green bonds outstanding, China is the world’s third-largest green bond market after France and Germany. India, Colombia, and Poland are the largest emerging market green bond issuers after China in 2021 – together making up some 12 per cent of emerging market green bond issuance.

Sustainability bonds, meanwhile, constitute about 12 per cent of emerging market ESG-labelled bond markets (see FIG. 32), with borrowers based in China, Chile, and Mexico dominating issuance.

Sustainably niche in emerging markets

FIG.32



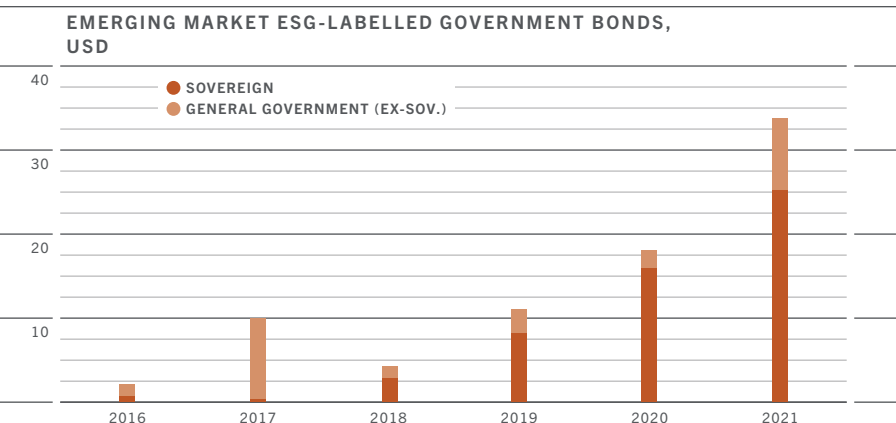
Source: IIF, Bloomberg, data as of 31.10.2021

The sale of social bonds has picked up during the Covid pandemic; sustainability-linked bonds have also gained traction, particularly among corporations based in emerging Asia.

Across sectors, non-financial corporations and financial institutions lead the way, accounting for 40 per cent and 35 per cent of issuance since end-2018, respectively. Outside the corporate sector, sovereign issuers have been responsible for a substantial surge in ESG-labelled bond offerings in 2021 (see FIG. 33).

EM governments discover green borrowing

FIG.33



Source: IIF, Bloomberg; data covering period 31.12.2015-31.10.2021



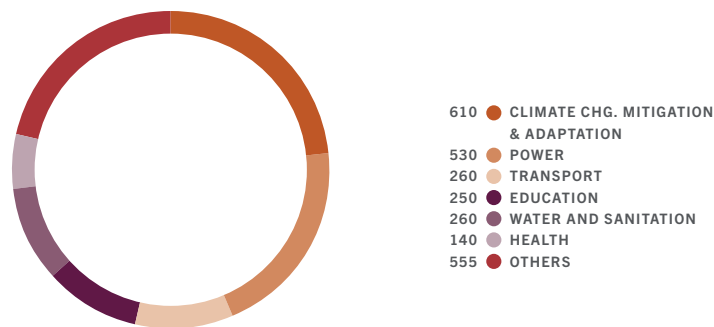
With emerging market sovereign and corporate borrowers increasingly reliant on international bond markets, effective integration of ESG considerations by developing world issuers is vital to ensuring the continued flow of capital.

- Scaling up emerging market ESG bond markets would help direct domestic and international capital towards green and sustainable investment projects. Mobilising private capital is crucial to achieving the United Nations’ Sustainable Development Goals (SDGs) by 2030. The “SDG financing gap” is estimated to be USD2.5 trillion per year across emerging and developing economies; funding needs are particularly acute for projects focused on climate change mitigation and adaptation – they account for nearly 25 per cent (USD610 billion) of the overall SDG investment gap (see FIG. 34).
- Cross-border climate capital flows into emerging markets remain well below what is required to close the climate-related SDG financing gap: at an estimated USD82 billion in 2020, climate finance flows to emerging nations and low-income countries accounted for less than 8 per cent of total cross-border capital flows into these countries. Official bilateral and multilateral creditors continue to be the main source of external financing for climate-related projects in the emerging world, while cross-border private climate finance flows are still limited, and often volatile.

FIG. 34

Financing needs to be sustainable

GLOBAL UN SUSTAINABLE DEVELOPMENT GOALS INVESTMENT SHORTFALL, BY FINANCING NEEDS, ANNUAL AVERAGE FOR 2015-30 PERIOD, USD TRILLION



Source: IIF, Bloomberg; data covering period 31.12.2014-31.12.2030

As the pandemic wears on, many emerging markets and low-income countries are finding it increasingly difficult to secure the finance they need to meet SDGs. Domestic sources of investment are limited. It follows, then, that the development of ESG bond markets could be an effective way of steering international private capital towards climate and broader sustainable investments in emerging markets. With an increasing number of companies committing to reducing carbon emissions, there has been an upswing in international investor appetite for EM ESG-labelled debt securities in recent months. At nearly USD7 billion, investment fund flows into emerging market ESG debt securities in the first three quarters of 2021 were over three times higher than in the same period in 2020, with Latin America receiving the largest share.

Looking ahead, deeper and more liquid ESG bond markets should help investors price ESG-related risks appropriately. Our baseline projection suggests that ESG-labelled bond issuance in emerging markets will increase from some USD50 billion in 2020 to USD360 billion in 2023 and to over USD700 billion in 2025. Under our most bullish scenario, annual issuance could reach USD2 trillion. However, further expansion is dependent on a number of reforms to address the following problems:

- The lack of universally accepted bond standards and a clear taxonomy for debt securities, including labelling, certification, terminology.
- Poor transparency and quality of ESG data
- Limited and costly ESG data.
- Limited project pipeline and challenges in identifying projects and assets that meet relevant ESG criteria.
- High bond issuance costs (in particular those related to independent verification of – and third-party opinions on – issuers, securities and green projects).
- Limited technical capacity to underwrite ESG bonds, although technical assistance from MDBs could help.
- Relatively low credit ratings of emerging market sovereigns and corporations.
- Low public awareness about ESG issues in many emerging nations.



Transcending labels – charting the rise of ESG funds

Asset owners and the asset management industry will play a key role in providing the finance required to achieve the climate targets set in the Paris Agreement and broader sustainable development goals; their influence will be greater still in emerging markets and low-income countries. Encouragingly, the investment community is beginning to flex its muscles. Take the ESG-aligned investment fund universe, for example.

It has grown more than 65 per cent over the past year, from around USD1.5 trillion to over USD2.5 trillion. Much of this increase has occurred over the past nine to 12 months, in the wake of the 2020 presidential election. While the embrace of ESG investment principles has been strong across most asset classes, it has been weaker among bond funds, which began incorporating such factors much later than equity funds did. As of end-June 2021, the size of fixed-income funds dedicated to ESG investing reached USD500 billion – up from USD300 billion in 2017. At over USD30 billion, bond ETFs represent around 6 per cent of the ESG fixed-income market.

While Luxembourg and France continue to be the home of the largest ESG-aligned bond funds, Ireland, the US and Switzerland have seen rapid ESG integration in the investment fund industry. At present, these five countries together represent over 80 per cent of the ESG-aligned bond fund universe. The euro is still the dominant currency, accounting for 55 per cent of the market. However, the USD (25 per cent) appears set to take the lead, especially given increased appetite for USD-denominated ESG bond funds among non-US investors.

Despite robust growth in the ESG-labelled bond universe this year, only a small fraction of ESG fund assets is allotted to emerging market securities, as developing nations represent only around 10 per cent of ESG bond funds. Considering emerging nations represent more than 20 per cent of global bond markets, they are significantly under-represented in ESG fixed income.

Although investors poured some USD90 billion into ESG-aligned bond funds during the first three quarters of the year (vs just USD12 billion in the first half of 2020 and USD45 billion in the second half of 2020), the supply of ESG debt securities continues to fall short of demand. This shortfall has prompted many asset managers to seek out alternatives. A broad selection of proxies for ESG-labelled bonds has emerged, ranging from various “screening” methods – such as negative or best-in-class – to impact investing. These investment styles are not necessarily mutually exclusive, and in many cases, investors deploy a combination of different approaches at the same time. For

instance, “ESG integration”, i.e. the practice of utilising ESG ratings and scores, has become the most common approach to identifying sustainable investment opportunities. “Screening” is the second most common technique. While the use of relatively more flexible approaches could accelerate the expansion of the market, many remain vulnerable to claims of greenwashing, leaving asset managers who market such products exposed to reputational risks.

Addressing such concerns and removing the obstacles hindering the expansion of ESG-labelled bonds and bond funds is therefore vital to climate capital.

The absence of globally agreed ESG terminology and product labels continues to inhibit the growth of the ESG fund universe growth. Without universally agreed terminology and disclosure standards, significant differentiation in ESG fund classifications from data and rating providers will persist.

Disparities in fund labelling can also heighten concerns about greenwashing; moreover, insufficient data and detail about the precise nature of a fund’s sustainability characteristics also make it hard to track whether investments are truly flowing to sustainable projects. The establishment of internationally accepted ESG terminology could help clarify a fund’s investment objectives. Similarly, a common and consistent set of global disclosure standards would aid investors in ESG risk assessment, helping to galvanise growth in ESG bonds and funds.

The EU Sustainable Finance Disclosures Regulation (SFDR) is an example of such a standard. It aims to alleviate the risk of greenwashing by promoting greater transparency on the impact of funds on the environment and society. It sets mandatory disclosure standards for funds available for sale in the EU. The main provisions of the SFDR (Level 1) took effect in March 2021 and require fund companies to classify each of their product offerings into one of three categories based on their sustainability objectives: Articles 9, 8 and 6. Article 9 products have an explicit sustainability objective. Article 8 products promote broader environmental or social characteristics but do not have them as an overarching objective. Instruments that meet neither definition will be classified as Article 6 products. SFDR’s Level 2 measures will take effect in January 2023 and involve more technical disclosure requirements at the firm and product level. These additional rules include reporting on “Principal Adverse Impact Indicators.”

Available data on fund prospectuses show that some 17 per cent of the outstanding funds in the EU are classified as Article 8 products while just 2.4 per cent are classified as Article 9. By asset size, Article 8 and 9 products currently amount to over USD3.2 trillion. By country, the share of funds classified as Article 8 or 9 currently is the highest in the Netherlands (65 per cent of funds), followed by Denmark and Belgium.

While the SFDR is an EU regulation, some non-EU fund products registered for marketing in the EU also fall within its scope. As a result, non-EU fund managers, particularly in Switzerland and the UK, have already started to classify their products per SFDR rules. While more non-EU managers may join their ranks, the breadth of the Article 8 classification also raises concerns that it could increase the risk of greenwashing in the absence of globally accepted standards.

Bond market forecast methodology

IIF estimates for 2021 represent the annualised issuance volumes seen during the first three quarters of 2021.

Beyond 2021, we have provided three scenarios to reflect the high level of uncertainty over the outlook:

Our base scenario assumes that the annual issuance in green, social, and sustainable bond markets will expand at a rate of growth that is set to equal one-half of the average growth rate seen in the ESG-labelled bond universe over the past three years (2018/20). For sustainability-linked bonds, we follow a take-off scenario that resembles the earlier years of ESG bond markets, assuming a growth rate about half of the average growth rate seen in the ESG-labelled bond universe in 2015/17.

For emerging markets, we assume that issuance activity will mirror earlier years of mature market ESG bonds and increase at a rate equal to one-half of the average growth rate in the ESG-labelled bond universe across mature markets in 2015/17.

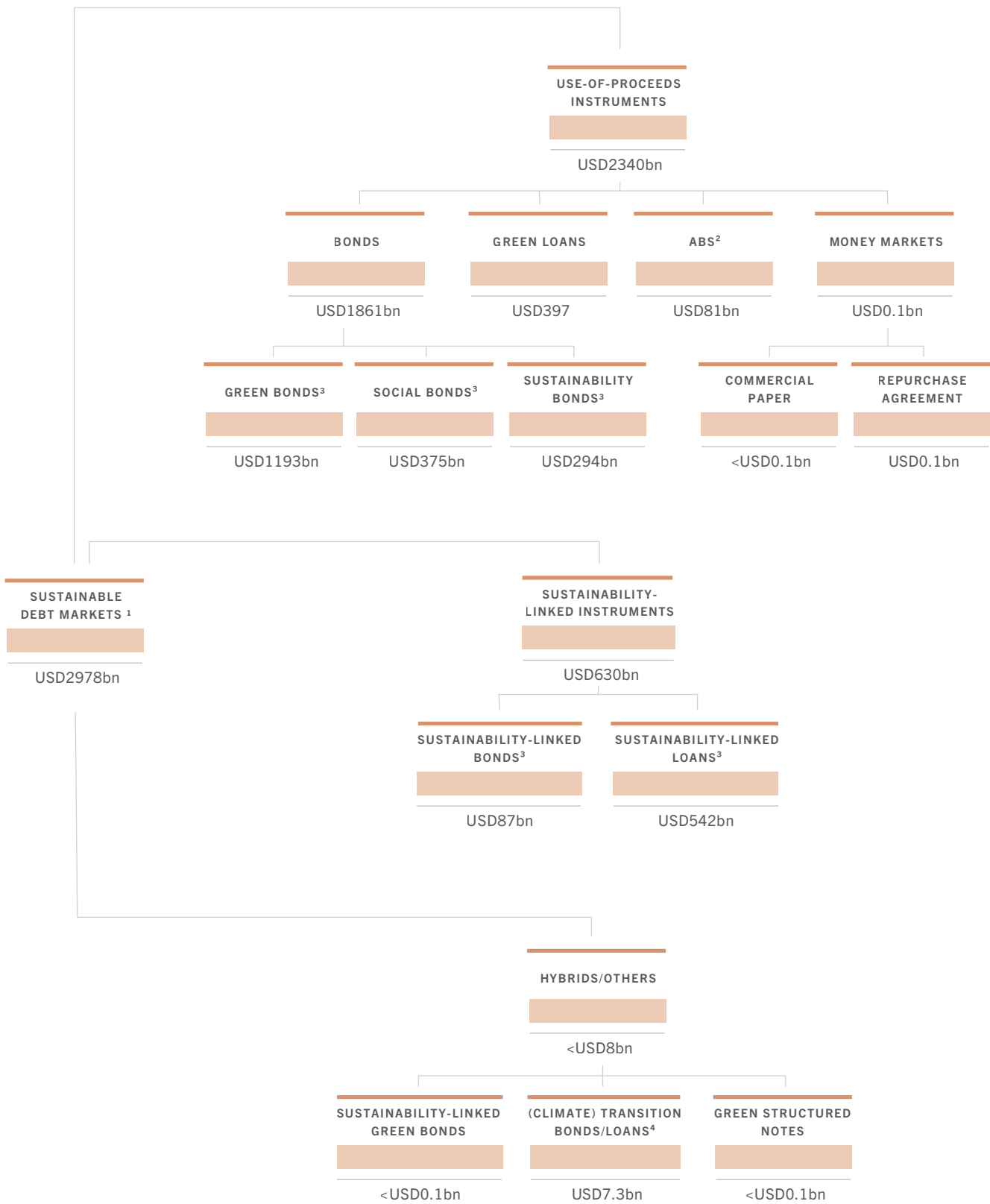
Once aggregate issuance is calculated for each type of ESG bond, sectoral breakdown is computed using the distribution of cumulative issuance volumes since 2016.

Our bear scenario follows one-half of the growth assumption in the base scenario.

Our bull scenarios assume a growth rate that is double the baseline growth assumption.

FIG.35

THE ESG BOND UNIVERSE



Source: IIF, data as of 31.10.2021

1 Also called as SDG-aligned debt markets. 2 Includes CDO, CLO, MBS and others
 3 Supported by principles and guidelines. 4 Applicable at activity-level and entity-level

FIG.36

ESG BOND CHARACTERISTICS												
	MARKET SIZE (\$BN, AS OF H1 2021)			TRADING VOLUME (\$BN, AVG. DAILY)			AVERAGE TENOR (YRS, ALL ISSUES SINCE 2015)			AVERAGE ISSUANCE SIZE (YRS, ALL ISSUES SINCE 2015)		
	EUR	USD	OTHER CURR	EUR	USD	OTHER CURR	EUR	USD	OTHER CURR	EUR	USD	OTHER CURR
GREEN BONDS	542	225	283	2	1	0	14	9	7	563	387	148
SOCIAL BONDS	235	47	56	1	0	0	11	7	7	1700	543	152
SUSTAINABILITY BONDS	91	95	51	0	0	0	12	8	7	792	647	174
SUSTAINABILITY- LINKED BONDS	30	21	7	0	0	0	8	8	6	523	600	192

Source: IIF, Bloomberg;
*these include both government and corporate bonds



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