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Sustainable Finance – Global

Sustainable bond issuance to rebound 10% in 2023 to $950 billion, short of record high

» **Sustainable bond issuance to rebound in 2023, but return to peak volumes unlikely.** We forecast that global issuance of green, social, sustainability and sustainability-linked (GSSS or sustainable) bonds will total around $950 billion this year – up 10% from an estimated $862 billion in 2022, but below the record volumes of $1.05 trillion recorded in 2021. Challenging macroeconomic and market conditions and greater scrutiny over perceived greenwashing will temper the overall pace of recovery.

» **Sharper focus on implementation of corporate decarbonization commitments to accelerate transition-related issuance.** Companies in sectors with heightened inherent exposure to carbon transition risk will face growing pressure this year to follow through with credible implementation plans. Strengthening policy support for green capital spending in many countries, such as the Inflation Reduction Act (IRA) in the US, will also drive clean energy investments. As more issuers aim to finance their net-zero ambitions and transform their business strategies to adapt to rising policy and market risks, labeled sustainable bond issuance from companies in sectors highly exposed to carbon transition is likely to rise this year.

» **Greater market scrutiny and heightened greenwashing fears may dampen near-term growth, especially for sustainability-linked bonds.** Prospective issuers of sustainable bonds may be reluctant to enter a market where increased scrutiny could expose them to reputational damage, potentially constraining growth in the market over the next year. This is especially a challenge for the SLB market, where issuance fell significantly in the second half of last year as investors increasingly scrutinized the relevance, ambition and rigor of issuers' targets and financial penalties. Nevertheless, we expect standardization of best practices to safeguard the long-term rigor and credibility of the market.

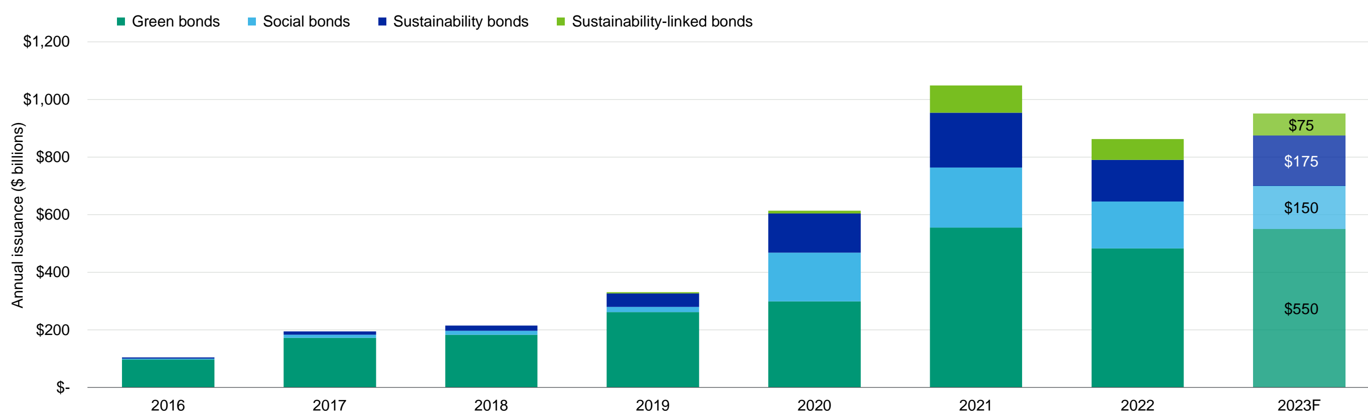
» **Public sector issuers, especially in emerging markets, will continue to expand the sustainable bond market and diversify use of proceeds.** Public sector issuers will remain of critical importance to the sustainable bond markets in 2023 and beyond. Cross-border collaboration took center stage at the 2022 United Nations Climate Change Conference (COP27) as energy security, climate adaptation, blended finance and just transition rose up the agenda. These themes have potential to continue expansion of sustainable bond issuance from sovereign and sub-sovereign issuers, not only supporting growth in volumes but also diversifying the use of proceeds of labeled bonds.

Sustainable bond issuance to rebound in 2023, but return to peak volumes unlikely

The continued maturation and diversification of the global green, social, sustainability and sustainability-linked (GSSS or sustainable) bond markets will support a modest rebound in issuance in 2023, even as rising interest rates and macroeconomic uncertainty keep broader bond volumes well short of record highs in 2020 and 2021. We forecast that global issuance of sustainable bonds will total around $950 billion this year, up 10% from an estimated $862 billion in 2022 (see Exhibit 1). Our 2023 projection comprises $550 billion of green bonds, $150 billion of social bonds, $175 billion of sustainability bonds and $75 billion of sustainability-linked bonds (SLBs). We expect growth to resume for each type of sustainable bond label except for social bonds, which will likely decline modestly from 2022 volumes now that pandemic-related financing has largely receded.

Exhibit 1

Sustainable bond volumes to rebound to $950 billion in 2023 but trail record volumes
Annual global sustainable bond issuance by label



Sources: Moody's Investors Service and Environmental Finance Data

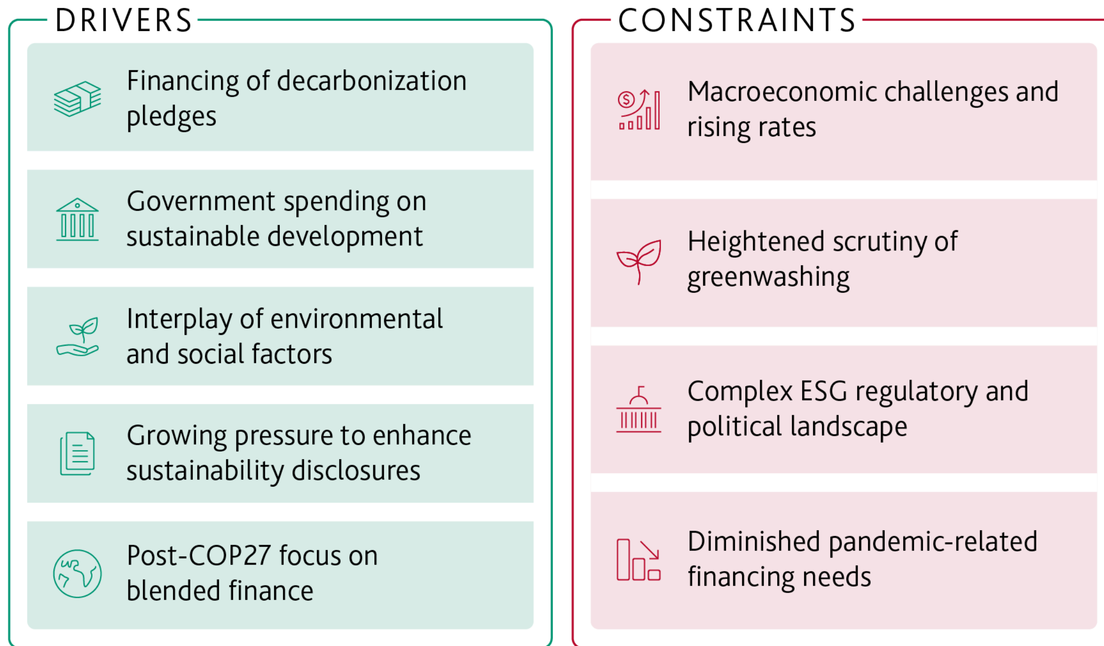
GSSS bond volumes contracted to $862 billion in 2022, about an 18% decline from the record-setting $1.05 trillion issued in 2021 and the first drop in annual volume since 2011. This came against the backdrop of a volatile market environment, where rising rates and macroeconomic and geopolitical uncertainty contributed to a dramatic year-over-year decline of around 27% in global bond volumes, according to data from Dealogic. The less severe decline in sustainable bonds reflects the relative stickiness of this segment and the continued reorientation of the capital markets toward ESG and sustainability considerations.

A number of drivers and constraints will influence the trajectory of sustainable bond issuance in 2023 (see Exhibit 2). While some of these fundamental issuance drivers – such as the rise of transition finance, government financing of sustainable development and growing awareness of the interconnectedness of environmental and social factors – have underpinned sustainable bond issuance in recent years, we believe these trends will accelerate in 2023. Other emerging areas, such as growing pressure on issuers to enhance their sustainability disclosures and heightened focus on the role of blended finance in the wake of COP27, will complement these more long-standing forces.

Notwithstanding these fundamental long-term drivers, there are also some key constraints on market growth that will likely keep volumes below 2021 record highs. Macroeconomic uncertainty and rising interest rates will continue to suppress broader debt issuance this year, while heightened market scrutiny on quality and potential greenwashing may cause some issuers to pause plans to enter the market. Issuers are also navigating an increasingly complex ESG regulatory and political landscape, which may lead some issuers with global operations to consider pausing plans to issue labeled debt instruments until they gain greater clarity on how to best articulate their sustainability objectives.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

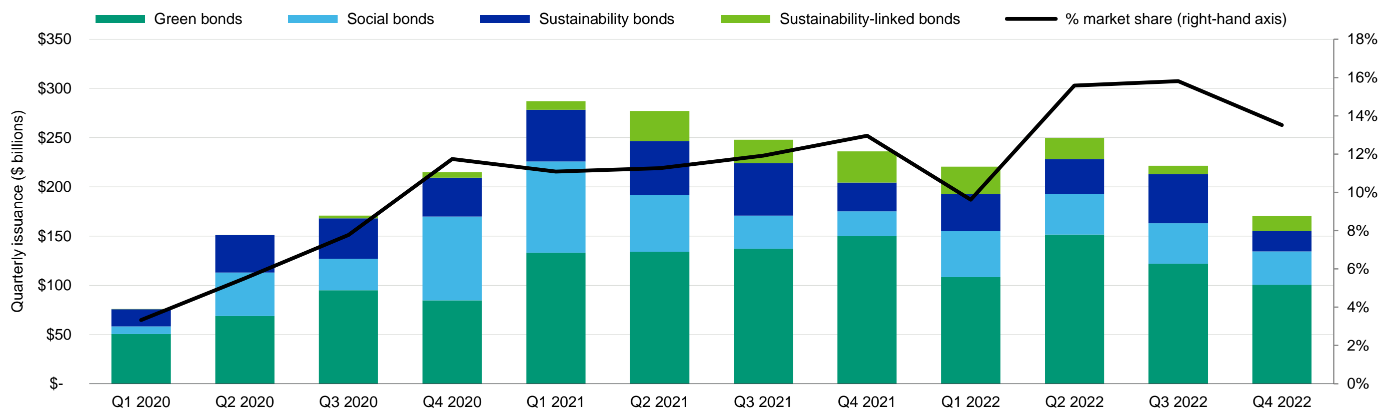
Exhibit 2
Sustainable bond market drivers and constraints in 2023



Source: Moody's Investors Service

While these drivers and constraints lead to a mixed story with respect to 2023 issuance, what remains clear is the long-term penetration and influence of sustainability in the capital markets. Sustainable bond volumes continue to reach new highs in terms of their share of the broader bond market, with a record 13% of global bonds being labeled as sustainable in 2022. Despite sustainable bond volumes totaling a two-year quarterly low of $170 billion in the fourth quarter, the share of market was still 14%, the third-highest quarterly share on record (see Exhibit 3). This represented a modest decline from the record quarterly high of 16% achieved in both the second and third quarters of 2022. We anticipate that sustainable bonds will reach an approximate 15% share of full-year global issuance in 2023 as market penetration deepens.

Exhibit 3
Issuance declined sharply in the fourth quarter of 2022 but share of market has been on an upward trajectory
Quarterly sustainable bond issuance by label and share of global bond market



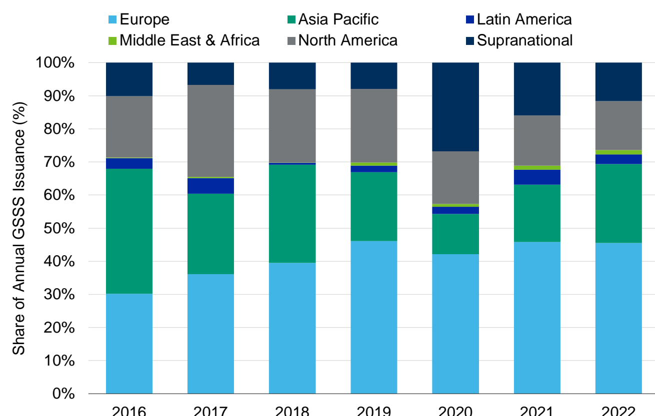
Sources: Moody's Investors Service, Environmental Finance Data and Dealogic

European issuers will continue to account for a dominant share of global GSSS bond supply in 2023, reflecting the ongoing commitment of the region to finance green and social activities. Despite acute challenges in the European bond market in the first quarter of last year following Russia's invasion of Ukraine, European issuers accounted for $392 billion in issuance in 2022, representing 46% of global volumes (see Exhibit 4). Asia-Pacific volumes totaled $205 billion last year (24% of global issuance), followed by North American issuers with $127 billion (15% of global issuance) and supranational issuers with $101 billion (12% of global issuance). Latin American issuers brought just $26 billion of sustainable bonds to market in 2022 (3% of global issuance), representing a 47% decline from 2021 volumes, while Middle East and African issuers brought $11 billion (1% of global issuance) to market, just below the $12 billion issued in 2021.

Global issuance of sustainable bonds remains diverse from a sectoral perspective, with nonfinancial companies representing about one-third of issuance in 2022, followed by financial institutions with 22% and government agencies with 17% (see Exhibit 5). Although corporate issuers accounted for the largest share by sector, issuance fell to $288 billion last year from a record $391 billion in 2021. Sovereign issuance also pulled back from an all-time high of $188 billion in 2021 to $115 billion last year. Both of these trends appear to be attributable to a decline in average transaction size, with average sovereign transaction size decreasing by 36% and average corporate transaction size decreasing by 25%.

Exhibit 4

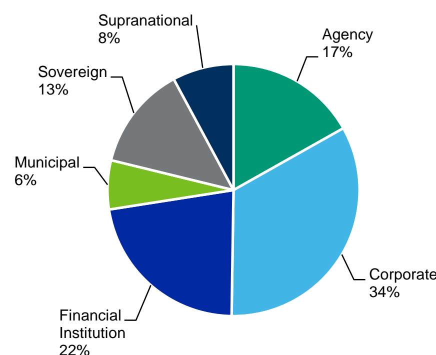
European issuers have held a resilient leading share of GSSS bond volumes in recent years



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 5

Share of 2022 global GSSS bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

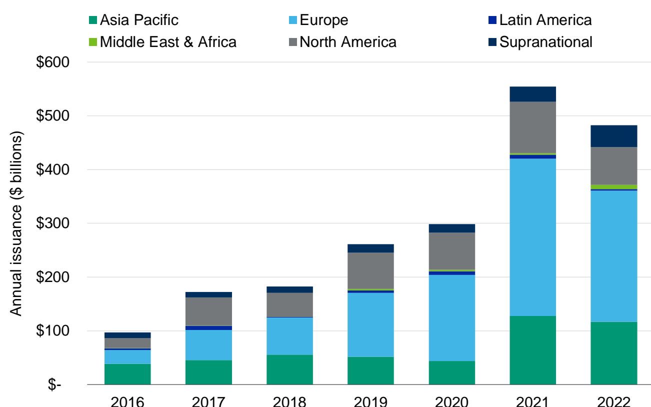
Green bond issuance to rebound to $550 billion in 2023 as leading driver of GSSS volumes

Issuance of green bonds totaled $482 billion in 2022, declining by about 13% from the record $555 billion issued in 2021, but still well above the approximately $299 billion issued in 2020 (see Exhibit 6). Steady growth in global issuance is likely to return in 2023 as an increasing number of issuers seek to finance net-zero implementation strategies and issuers explore increasingly diverse uses of proceeds, including water, adaptation, nature and biodiversity projects in addition to climate mitigation. As a result, we anticipate that green bond issuance will be around $550 billion globally in 2023, which would represent about 14% growth from 2022.

European issuers continued to dominate green bond issuance in 2022, with $244 billion accounting for 51% of the global total. We expect this trend will continue in 2023, despite a modest decrease in share from 53% in 2021. Asia-Pacific and North American issuers followed with volumes reaching $117 billion and $70 billion last year, respectively.

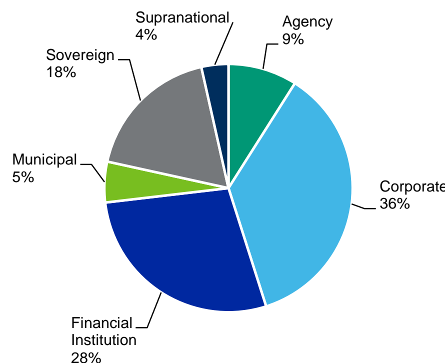
From a sectoral standpoint, green bond issuance was still led by nonfinancial companies in 2022, with $174 billion in issuance accounting for around 36% of global green bond volumes (see Exhibit 7). This represented a decline from the sector's high of $239 billion in 2021. Financial institutions, on the other hand, saw issuance climb to $135 billion in 2022 as they increased their share of market to 28% from 19% a year earlier. Notable green bond issuances in 2022 included the debut offering from General Motors Company (Baa3 stable) with a $2.25 billion dual-tranche issuance in August, indicative of the strong potential for labeled bonds from the automotive sector as carmakers ramp up investment in electric vehicles.

Exhibit 6
European issuers continued to lead green bond volumes in 2022



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 7
Share of 2022 global green bond issuance by issuer type



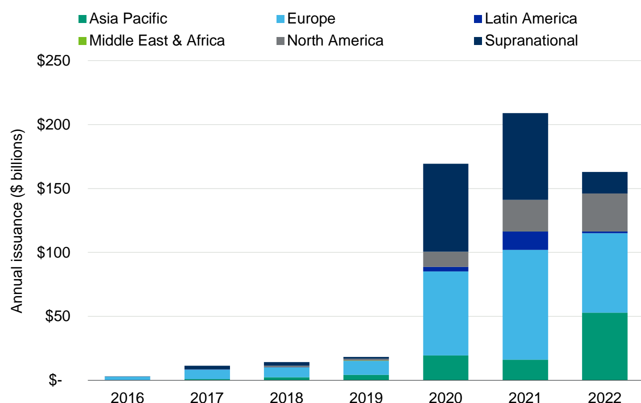
Sources: Moody's Investors Service and Environmental Finance Data

Social bond volumes to decline to $150 billion as the largest issuers continue to reduce their pandemic-related financings

Global social bond issuance fell to $163 billion in 2022, about a 22% decline from $209 billion in 2021 (see Exhibit 8). We expect social bond volumes to fall again to $150 billion in 2023, which would represent around an 8% decline from last year. While this would still represent a significant increase over pre-pandemic volumes, we expect the issuance of standalone social bonds to remain constrained by the lack of sizable social projects, especially now that pandemic-related financings are largely in the rear view mirror. Although the market will continue to prioritize social issues in 2023, as challenges such as access and affordability rise to the fore, this may not immediately translate into significant dedicated social bond issuance. While not our core scenario, a deeper and more protracted economic downturn this year would likely lead to greater counter-cyclical government spending that could provide support to social bond activity.

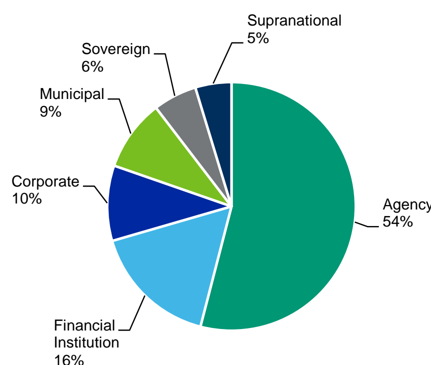
Social bonds were heavily concentrated in the agency sector in 2022 (see Exhibit 9), with one issuer – the French public finance agency Caisse d'Amortissement de la Dette Sociale (CADES) (Aa2 stable) – accounting for nearly $40 billion of issuance last year. We believe social bond volumes may diversify somewhat in 2023, although they will remain more concentrated than the green bond market. Regionally, European and Asia-Pacific issuers accounted for leading shares of issuance last year, at 38% and 33%, respectively. From a sectoral perspective, a majority of social bonds were issued by the public sector in 2022, with sovereigns, supranational and agencies representing 65% of the total.

Exhibit 8
Social bond volume pulled back in 2022 as pandemic-related issuance fell



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 9
Share of 2022 global social bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

Sustainability bonds to climb to $175 billion in 2023 with increased interplay between green and social objectives

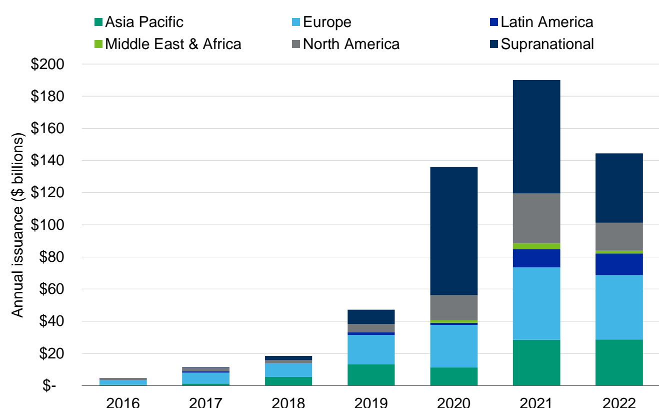
Sustainability bond volumes declined in 2022 to $144 billion, down by about 24% from the record $190 billion issued in 2021 (see Exhibit 10). But we expect issuance to rebound in 2023, amid a rise in broader issuance volumes and growing market attention on the interplay of environmental and social considerations. The heightened focus on social issues will also have an impact on the sustainability bond segment, where issuers are increasingly aiming to tie together green and social objectives in combined use-of-proceeds structures. As a result, we forecast about a 21% increase in sustainability bond issuance this year to $175 billion.

Supranational and European issuers had a leading share of issuance in 2022, with $43 billion and $40 billion, respectively. Asia-Pacific issuers followed closely with $29 billion in issuance, with nearly one-third of that from nonfinancial companies. North American issuers brought $17 billion to market, followed by Latin American issuers with $13 billion and Middle East and African issuers with $2 billion.

Supranationals had a leading share of issuance among sectors (see Exhibit 11) with $43 billion (30% of global sustainability bond issuance), followed by nonfinancial companies with $34 billion (24%), financial institutions with $25 billion (17%) and sovereigns with $15 billion (10%). Notable sovereign sustainability bonds in 2022 included the debut transactions from the Government of Philippines (Baa2 stable). Nonfinancial companies held a steady share of market in 2022 (24%), demonstrating these issuers' continued integration of both environmental and social projects into their financing strategies.

Exhibit 10

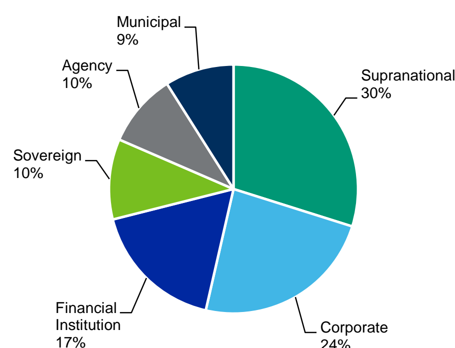
Global issuance of sustainability bonds remained regionally diverse in 2022



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 11

Share of 2022 global sustainability bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

Sustainability-linked bond volumes to remain subdued as label faces credibility challenges

Global SLB volumes totaled $72 billion for the whole of 2022, declining 23% from the record-setting $94 billion issued in 2021 (see Exhibit 12). Volumes were significantly lower in the second half of last year than the five previous quarters amid growing investor scrutiny of the credibility and robustness of the key performance indicators (KPIs) and sustainability performance targets (SPTs) embedded in SLBs. Another headwind last year was the dramatic decline in high-yield issuance, as non-investment-grade issuers have tended to be more active in the early days of the SLB market than in the use-of-proceeds markets. While we expect the still-nascent SLB market to expand to $75 billion in 2023, growth is likely to remain subdued over the next year as the market matures and takes time to establish accepted best practices.

The SLB market remains highly concentrated by region. European issuers accounted for $46 billion of issuance for 2022, accounting for nearly two-thirds of the global market. Issuance volumes among North American, Latin American and Asia-Pacific issuers were all similar last year at $10 billion, $8 billion and $7 billion, respectively. Middle East and African issuers brought $1 billion to market in 2022, down from $6 billion in 2021.

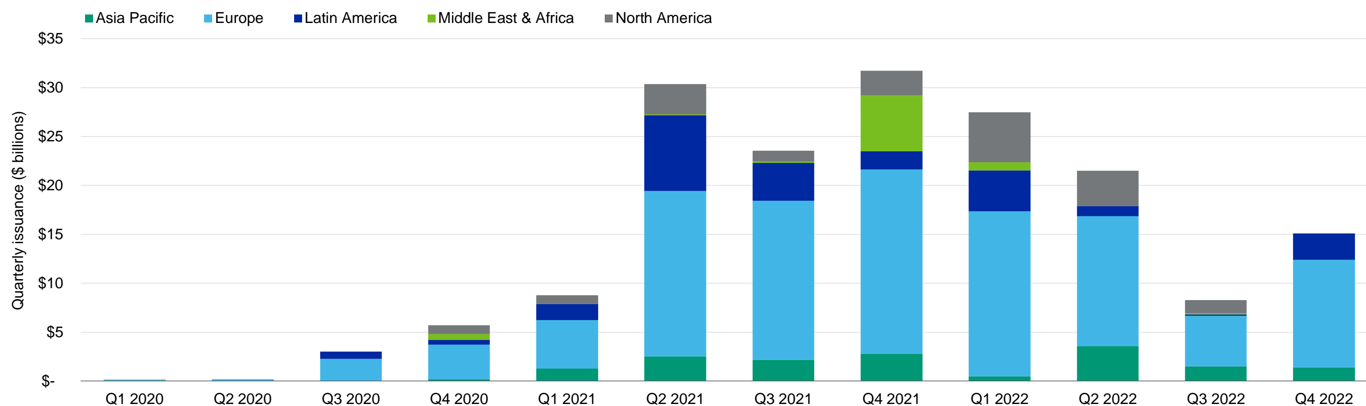
The segment remained heavily concentrated among sectors, with nonfinancial companies representing 88% of issuance by volume last year. Still, the segment became slightly more diverse from the prior year as sovereign and municipal issuers entered the market for the first time. Chile (A2 stable) issued the inaugural sovereign SLB in the first quarter of 2022 with its KPIs linked to greenhouse gas

emissions and renewable energy generation. Uruguay (Baa2 stable) followed with an issuance containing two KPIs, one linked to its greenhouse gas emissions and another tied to a nature-related target. The instrument included a step-down coupon feature, a rarity in the SLB market to date. Meanwhile, the Swedish city of Helsingborg became the first municipality to issue an SLB last year, with a target to reach net-zero emissions by 2035 at the latest.

Exhibit 12

SLB volume fell sharply in the second half of 2022 amid greater market scrutiny

Quarterly sustainability-linked bond issuance by region



Sources: Moody's Investors Service and Environmental Finance Data

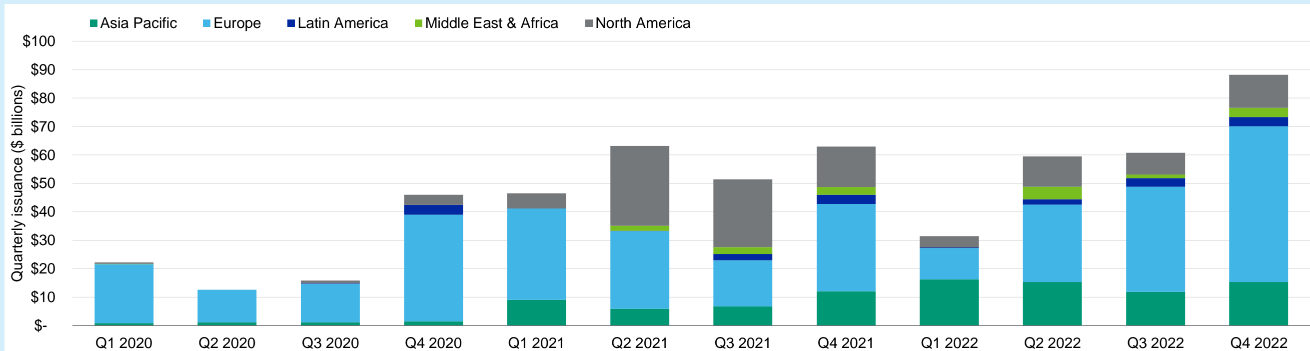
Sustainability-linked loan volumes highlight broader market's resilience

Sustainability considerations are also playing a greater role in the loan market. A particular engine of growth is the sustainability-linked loan (SLL) market, with volumes totaling $240 billion in 2022, according to Environmental Finance Data (see Exhibit 13). Modest growth of 7% in 2022 stood in contrast to the sustainable bonds market which saw an 18% decline last year. While these volumes likely overstate the actual amount of debt outstanding – given that these volumes often reflect the full potential value of a revolving credit facility for some instruments – the significant rise in market attention is clear. Companies across the globe are increasingly replacing old loan facilities with new ones linked to sustainability targets that can typically trigger an increase or decrease in interest rates based on whether these targets are achieved. The linking of loan pricing to sustainability goals will continue as lenders aim to incentivize improvements in sustainability performance and borrowers seek to highlight their sustainability goals while potentially lowering their borrowing costs. A prolonged period of subdued conditions in public bond markets could also drive additional growth in SLLs as issuers seek to secure alternative financing sources.

Exhibit 13

Sustainability-linked loans reached a quarterly record high in the fourth quarter of 2022

Quarterly sustainability-linked loan issuance by region



Sources: Moody's Investors Service and Environmental Finance Data

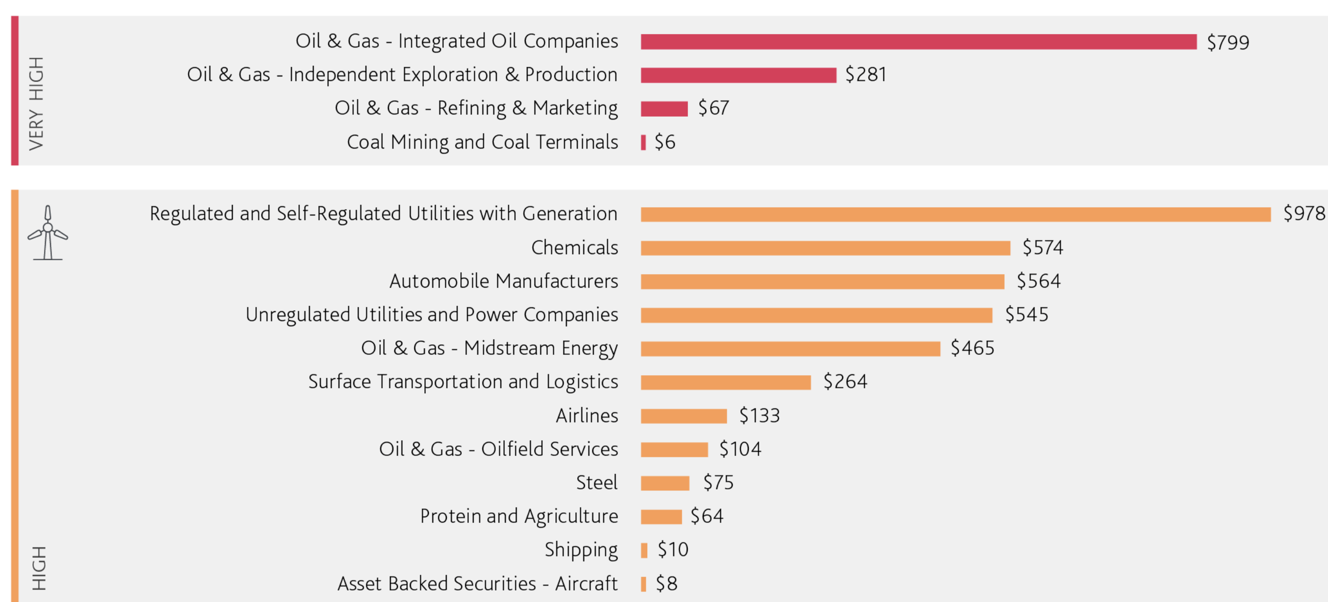
Sharper focus on implementation of corporate decarbonization commitments to accelerate transition-related issuance

As more issuers aim to finance their net-zero ambitions and transform their business strategies to adapt to growing policy and market risks, labeled sustainable bonds from issuers in sectors highly exposed to carbon transition are likely to swell this year.

Carbon-intensive sectors face rising pressure from investors and asset managers to implement decarbonization strategies and make significant progress toward net-zero targets. In our most recent environmental risk heat map, we identified 16 sectors that are exposed to very high or high inherent exposure to carbon transition risk (see Exhibit 14). As these sectors take action to decarbonize their operations, they will need to secure funding to support capital expenditure in low-carbon projects, thus providing a boon for the sustainable bond markets.

Exhibit 14

Sixteen sectors have very high or high inherent exposure to carbon transition risk in our latest environmental heat map



Figures represent Moody's-rated debt in $ billions as of June 2022. See Moody's latest environmental heat map publication.
Source: Moody's Investors Service

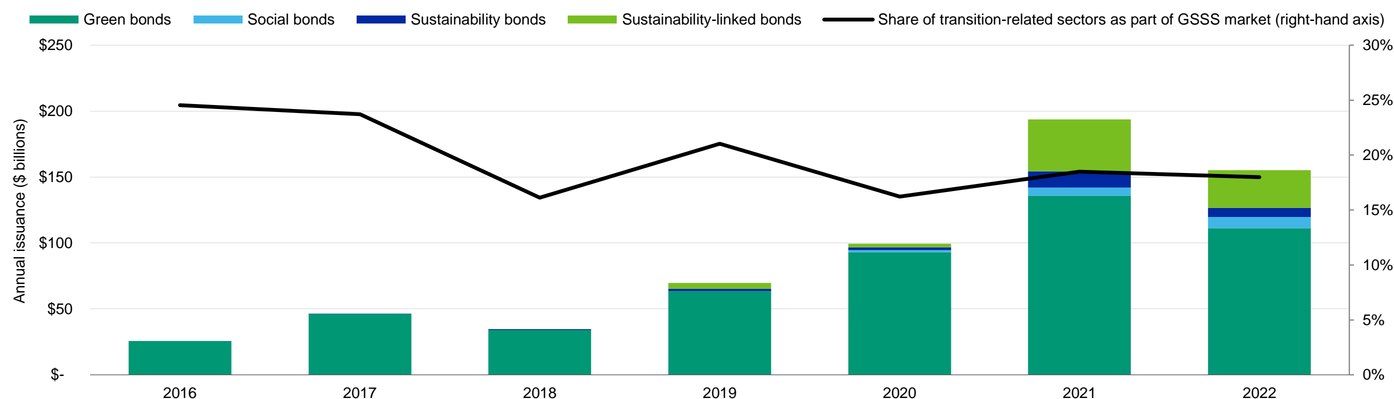
In fact, labeled bond issuance from sectors with significant exposure to carbon transition risk has already been growing in recent years, in line with the broader growth in sustainable bond volumes. In 2022, we estimate that sustainable bond issuance from sectors with heightened inherent exposure to carbon transition risk totaled $155 billion and accounted for about 18% of the total labeled bond market (see Exhibit 15). Although sustainable bonds from these sectors tend to account for about one-fifth of issuance, we expect this share could grow as more issuers put their ambitious decarbonization strategies into action. To put this into context, sectors with elevated transition risk carried a total of $4.9 trillion of outstanding Moody's-rated debt as of June 2022.

Strengthening policy support for green capital spending in many countries, particularly in the US (Aaa stable) with the passage of the Inflation Reduction Act (IRA), will also drive clean energy investments (see Inflation Reduction Act will build economic resilience, but its costs and benefits vary by sector). Among the provisions in the IRA are tax incentives to spur significant investment in energy storage, clean hydrogen and carbon capture and sequestration, including a 10-year extension of investment tax credits and production tax credits. Such tax credits may make certain emerging technology investments more economically viable, thus resulting in a greater pool of projects that will likely support labeled bonds. In Europe, the REPowerEU plan may also spur additional sustainable bond issuance in coming years as the continent aims to finance projects to save energy, produce clean energy and diversify energy supply with the aim of ending the EU's reliance on Russian fossil fuels.

Another potential trend we expect is the use of different labels to finance decarbonization. Although the vast majority of labeled issuance from these sectors still comes in the form of green bonds (72% in 2022), there has been an uptick in other labels and structures over the past two years, such as SLBs which accounted for $28 billion of issuance from these sectors last year. Although SLBs have faced growing market scrutiny in recent months, first-time sustainable bond issuers with longer-term transition ambitions may look to these structures as a transition financing vehicle, especially when they do not have a critical mass of eligible projects for a benchmark-sized use-of-proceeds issuance.

Exhibit 15

Sectors with very high or high inherent exposure to carbon transition risk accounted for nearly one-fifth of sustainable bond volumes in 2022



Sources: Moody's Investors Service and Environmental Finance Data

While green bonds and SLBs will likely remain the largest drivers of transition-related finance in most markets, there is also potential for the standalone transition label to find its feet in some jurisdictions. In Japan, the government's focus on green transition is the main driver of sustainable bond issuance, as illustrated by the Ministry of Economy, Trade and Industry's (METI) publication of the Basic Guidelines on Climate Transition Finance in May 2021 and a sector-specific technology roadmap that supports climate transition finance for nine hard-to-abate sectors in March 2022. This is further supported by METI's subsidies for third-party evaluations of sustainable financing programs.

Greater market scrutiny and heightened greenwashing fears may dampen near-term growth, especially for SLBs

As the sustainable debt market has matured, scrutiny from investors, regulators and other market participants is heightening reputational risks for issuers claiming sustainability benefits associated with their activities. This scrutiny has intensified in recent years as the labeled bond market continues to account for a growing share of the overall capital markets. While greater attention on greenwashing risks has not derailed growth, some issuers have paused plans to bring sustainable bonds to market as concerns around quality have increased.

Growing scrutiny of sustainable bonds comes against the backdrop of heightened focus on the credentials of sustainable investments more generally. With more jurisdictions proposing or enforcing ESG-related disclosure requirements in 2023, legal, regulatory and reputational risks stemming from ESG positioning and potential misrepresentation will rise (see 2023 Outlook – Macroeconomic challenges to exacerbate ESG credit risks).

Prospective issuers of sustainable bonds may be reluctant to enter a market where heightened scrutiny could expose them to reputational damage, potentially constraining growth in the market over the next year. This may be a particular challenge for the SLB market, where issuance fell dramatically in the second half of 2022 as investors increasingly scrutinized the relevance, ambition and rigor of issuers' targets, as well as the materiality of financial penalties associated with these structures. Enthusiasm around SLBs has cooled somewhat as the nascent market struggled with differentiating the strongest from weakest targets and structures. For example, an increasing area of focus among decarbonization targets has been whether an issuer's targets incorporate material scope 3 emissions.

Details on the SLB market's likely growth trajectory will come into sharper relief in 2023 as early SLB issuers approach their first target measurement dates and new developments, such as coupon step-down provisions and innovative KPIs, increasingly take hold.

Despite the challenges this heightened scrutiny may cause for near-term growth in sustainable bonds, we expect greater standardization of best practices to safeguard the long-term rigor and credibility of the market. Initiatives such as the publication of the China Green Bond Principles and potential implementation of an EU Green Bond Standard in 2023 have the potential to drive such standardization over time. In addition, expansion of ESG-related disclosure practices may encourage more companies to heighten their focus on incorporating sustainability into their corporate strategies. This could gradually expand the pipeline of green and social projects, which will subsequently lead to a growing number of issuers making their sustainable bond market debuts.

Complex ESG regulatory and political landscape may lead to conflicting incentives for sustainable debt issuers

Although the growing scrutiny of sustainability credentials and potential greenwashing is a largely global trend, there are differences in how ESG regulation and sentiment are evolving in different regions. As such, issuers will need to navigate an increasingly complicated, and sometimes conflicting, patchwork of regulations and views related to ESG disclosures and investing practices.

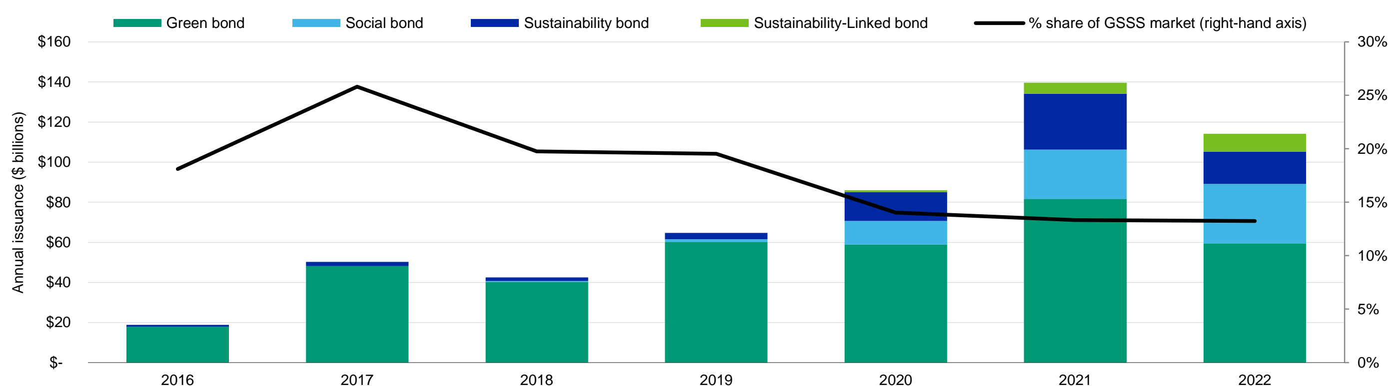
On the one hand, more jurisdictions will propose or start to enforce ESG-related disclosure requirements, raising regulatory and market scrutiny of companies' practices. On the other hand, companies in the US in particular will face growing pressure to exclude or minimize the integration of ESG considerations in business and investment decisions if they are perceived to come at the expense of shareholder returns.

This patchwork of regulations and views may have implications for potential sustainable bond issuers contemplating entry into the market, especially those operating at a global level. As issuers navigate expectations from their various stakeholders, they may pause or cancel plans to issue a labeled debt instrument until they gain greater clarity on how to best articulate their sustainability objectives through their capital markets strategy. This may already be happening to a degree in some markets in the US, for example, where the country's share of sustainable bonds has been falling in recent years despite the significant size of the US capital markets (see Exhibit 16). While year-over-year volumes from US municipal issuers and financial institutions rose modestly last year, issuances from US nonfinancial companies fell 32%.

Exhibit 16

US market share of sustainable bond issuance has stagnated in recent years despite growing volumes

US sustainable bond issuance by label since 2016, $ billions



Sources: Moody's Investors Service and Environmental Finance Data

Public sector issuers, especially in emerging markets, will continue to expand the sustainable bond market and diversify use of proceeds

The role of public sector issuers will remain of critical importance to the sustainable bond markets in 2023 and beyond. Cross-border collaboration took center stage at COP27 as energy security, climate adaptation financing, multilateral development banks' role in blended finance and just transition rose up the agenda (see Climate finance tops COP27 agenda as talks focus on implementation of pledges). These themes have the potential to continue expansion of sustainable bond issuance from sovereign and sub-sovereign issuers, not only supporting growth in volumes but also driving diversification in the use of proceeds of labeled bonds.

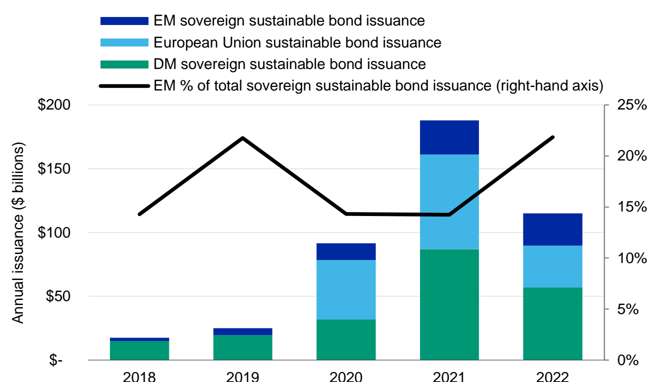
As the physical impact of climate change remains top of mind with over $165 billion in damage in 2022 from weather and climate-related disasters in the US alone, financing of adaptation and mitigation policies will rise in prominence as an investment theme, with public sector issuers playing a prominent role given that governments are typically the first line of defense in dealing with extreme weather events. Without significant and effective adaptation capacity building, emerging market (EM) sovereigns in particular will face significant economic and societal challenges stemming from climate change. EM sovereigns tend to be more exposed to physical climate risks than advanced economies and face greater challenges in developing effective plans and securing funding.

Sovereign sustainable bond issuance has steadily expanded in recent years as more sovereigns have entered the market (see Exhibit 17). Global issuance totaled $115 billion in 2022, the second-highest annual tally on record, trailing only 2021 when pandemic-related financings – especially those from the EU – helped bolster issuance. EM sovereign volumes have also been on the rise on both an absolute and relative basis, with $25 billion of EM sovereign sustainable bond issuance in 2022 accounting for 22% of all sovereign sustainable bonds globally, the highest share in the past five years.

For emerging-market sovereigns in particular, climate-related use of proceeds are rising up the agenda with issuance growing by 56% in 2022. Climate adaptation and mitigation accounted for 27% and 39% of EM sovereign use of proceeds issuance, respectively, in 2022 (see Exhibit 18). Adaptation-related financing has been of particular importance for EM sovereigns in recent years, averaging an approximate 28% share of proceeds since 2018. We expect this continued focus on climate financing in emerging markets, and adaptation financing in particular, to grow as risks evolve and governments increasingly focus on financing resilience projects.

Exhibit 17

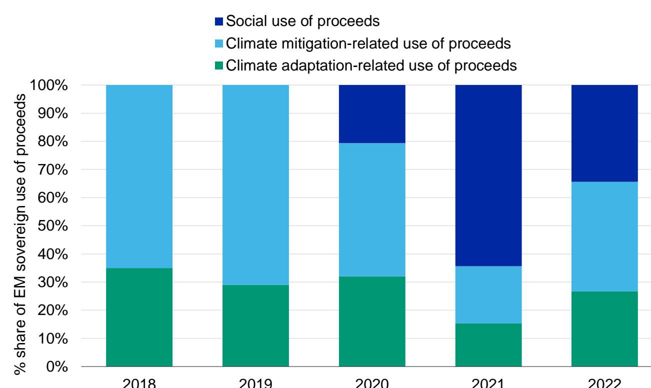
Emerging market sovereigns modestly increased market share in 2022



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 18

Emerging market sovereigns' use of proceeds bonds have diversified to support broader climate-related and social needs



Climate mitigation-related use of proceeds include: clean transportation, eco-efficient products, energy efficiency, green buildings and renewable energy. Climate adaptation-related use of proceeds include: climate change adaptation, pollution prevention and control, sustainable management of living natural resources, sustainable water management and terrestrial and aquatic biodiversity conservation.
Sources: Moody's Investors Service and Environmental Finance Data

Despite the growth in labeled bond volumes from EM sovereigns in recent years, significant sustainable financing needs remain. For example, the Climate Policy Initiative estimates that only about 25% of the annual spending on adaptation projects needed to reduce the associated economic and social risks globally is currently being met. Multilateral development banks will likely play an important role in drawing private investment to emerging markets for climate adaptation and resilience financing. New initiatives announced at COP27 to scale up blended finance include the World Bank Group's new trust aimed at catalyzing climate action.

Another key area of focus given the rising attention on both climate mitigation and adaptation risks is ensuring a just transition – one that seeks to maximize the socioeconomic benefits of decarbonization, while minimizing the impact on those negatively affected. Two new just energy transition partnerships (JETPs) were announced at the end of 2022 for Indonesia (Baa2 stable) and Vietnam (Ba2 stable), following the launch of the first JETP for South Africa (Ba2 stable) during COP26 in Glasgow in 2021. These initiatives provide an innovative, yet nascent, approach to supporting an inclusive energy transition in economies with high reliance on coal, and opportunity for countries to integrate such considerations into sustainable bond frameworks with both transition and social features

(see JETP provides framework to kick-start decarbonization, but hurdles abound). This is a trend we expect to continue into 2023 and beyond as transition remains top of mind for EM sovereign issuers.

We anticipate that public sector issuers will also be at the forefront of other developing areas in the sustainable bond market, such as the financing of nature and biodiversity. Nature has come to the fore as an emerging risk for governments to consider in their adaptation and conservation strategies, thus expanding the potential pipeline of projects for use-of-proceeds sustainable bonds. At the 2022 UN Biodiversity Conference (COP 15), over 190 countries agreed to a global biodiversity framework that aims to put biodiversity on a path to recovery by 2030. Signatories agreed to protect and restore at least 30% of the Earth's land and water, and halt human-caused extinctions of species as well as promote their recovery. Another trend to watch moving forward is sovereign issuers incorporating nature-related KPIs in their SLBs, such as Uruguay's first SLB which included a target related to the protection of native forests in the country.

Appendix

Sustainable debt instruments defined

Throughout this report, we refer to a variety of sustainable debt instruments. These include: use-of-proceeds green bonds, social bonds and sustainability bonds, whose proceeds are typically earmarked to finance specific eligible environmental and/or social projects; and sustainability-linked bonds, whose proceeds can typically be used for general corporate purposes but whose interest rates are tied to the achievement of various sustainability targets. These instruments include:

» **Green bonds:** Bonds where the proceeds will be exclusively applied to finance or refinance new and/or existing eligible green projects, such as renewable energy, energy efficiency, clean transportation, sustainable water management and green buildings. Typically issued in accordance with the Green Bond Principles.

» **Social bonds:** Bonds where the proceeds will be exclusively applied to finance or refinance new and/or existing eligible social projects, such as affordable basic infrastructure, access to essential services, affordable housing and food security. Typically issued in accordance with the Social Bond Principles.

» **Sustainability bonds:** Bonds where the proceeds will be exclusively applied to finance or refinance a combination of new and/or existing eligible green and social projects. Typically issued in accordance with the Sustainability Bond Guidelines.

» **Sustainability-linked bonds:** Bonds that incentivize the issuer's achievement of material, quantitative, predetermined, ambitious, regularly monitored and externally verified sustainability objectives through Key Performance Indicators and Sustainability Performance Targets. Typically issued in accordance with the Sustainability-Linked Bond Principles.

Note on our sources

Our primary source for sustainable debt data throughout this report is Environmental Finance Data, with such data referenced in this report downloaded as of 17 January 2023. Under the Environmental Finance Data methodology, all issuers are tagged as one of six types of issuer: corporate, financial institutions, sovereign, government agency and supranational. Financial institutions include all forms of banks and asset managers; agency refers to all government agency-affiliated companies; and sovereign issuers are sovereign governments.

Moody's related publications

Topic page

» ESG Credit and Sustainable Finance

Second Party Opinions

» SK hynix Inc.: Sustainability-Linked Financing Framework Assigned SQS2 Sustainability Quality Score, 2 January 2023

» Los Portales SA: Sustainable Financing Framework Assigned SQS3 Sustainability Quality Score, 27 December 2022

» Japan Financing Organization for Municipalities: Green Bond Framework Assigned SQS2 Sustainability Quality Score, 27 December 2022

» National Bank of Canada: Sustainability Bond Framework Assigned SQS2 Sustainability Quality Score, 22 December 2022

» U.E. S.p.A.: Framework for Green Financing Assigned SQS2 Sustainability Quality Score, 22 December 2022

» Air France–KLM Group: Sustainability-Linked Financing Framework Assigned SQS2 Sustainability Quality Score, 20 December 2022

» Alpen Glasfaser GmbH: Green Loan Assigned SQS2 Sustainability Quality Score, 20 December 2022

» District of Columbia Water & Sewer Authority: Series 2022B Green Bonds Assigned SQS2 Sustainability Quality Score, 16 December 2022

» First Finance Plc: Social Financing Framework Assigned SQS2 Sustainability Quality Score, 14 December 2022

» Japan Student Services Organization: Social Bond (70th) Assigned SQS2 Sustainability Quality Score, 29 November 2022

» Government of Egypt: Sustainable Financing Framework Assigned SQS2 Sustainability Quality Score, 9 November 2022

» Iberdrola S.A.: Framework for Green Financing Assigned SQS1 Sustainability Quality Score, 7 November 2022

» Kunming Rail Transit Group Co., Ltd.: Green Finance Framework Assigned SQS2 Sustainability Quality Score, 1 November 2022

» Framework to Provide Second Party Opinions on Sustainable Debt, 3 October 2022

Sector research

» ESG – Global: 2023 Outlook – Macroeconomic challenges to exacerbate ESG credit risks, 9 January 2023

» Carbon Transition – Indonesia: JETP provides framework to kick-start decarbonization, but hurdles abound, 15 December 2022

» ESG – Global: ESG considerations have significant credit impact on large number of debt issuers, 23 November 2022

» Carbon Transition – Global: Climate finance tops COP27 agenda as talks focus on implementation of pledges, 20 November 2022

» Banks – Cross-Region: Net zero financed emissions plans show progress but underscore challenges, 10 November 2022

» Carbon Transition – Global: Decarbonization plans mitigate transition risk; limited disclosures inhibit assessment, 8 November 2022

» Sustainable Finance – Global: Sustainable bonds fare better than broader market, despite third quarter decline, 2 November 2022

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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