MOODY'S
INVESTORS SERVICE

SECTOR IN-DEPTH
2 November 2022

Send Your Feedback

TABLE OF CONTENTS

Contacts

Matthew Kuchtyak +1.212.553.6930
VP-Sustainable Finance
matthew.kuchtyak@moodys.com

Erika Bruce +1.212.553.4341
Associate Analyst
erika.bruce@moodys.com

Rahul Ghosh +44.20.7772.1059
MD-Sustainable Finance
rahul.ghosh@moodys.com

Sustainable Finance – Global

Sustainable bonds fare better than broader market, despite third quarter decline

» **Sustainable bond volumes fell in the third quarter, but signs of resilience remain.** Global issuance of green, social, sustainability and sustainability-linked (GSSS or sustainable) bonds totaled $215 billion in the third quarter of 2022, down 13% from a year earlier and down 10% from the second quarter of this year. Across the four segments, there were $119 billion of green bonds, $41 billion of social bonds, $47 billion of sustainability bonds and $8 billion of sustainability-linked bonds. Given the weaker overall environment for debt issuance, we now expect global sustainable bond volumes to total around $900 billon for full-year 2022, down from our previous forecast of $1 trillion. While the broader market is down 27% year-to-date, sustainable bonds are down a more modest 17%, increasing their share of global bond issuance. The fundamental drivers of long-term growth in sustainable bonds remain in place and we expect issuance growth to resume when market conditions become more favorable.

» **Sharp increase in financing required to enable a just transition.** An important theme at COP27 will be the continued global focus on the need for a "just transition" – that is, achieving the transition to a low-carbon economy in a socially equitable manner. Sovereign governments, particularly those in emerging markets, are at the forefront of financing initiatives that can support sustainable development while ensuring a just transition. Government policy can provide guidance, standardization and subsidization of best practices that are socially inclusive. Key levers available to governments include supporting workforce training programs, encouraging collaborative policy development across regional and local governments, and using labeled sustainable bonds to finance just transition initiatives.

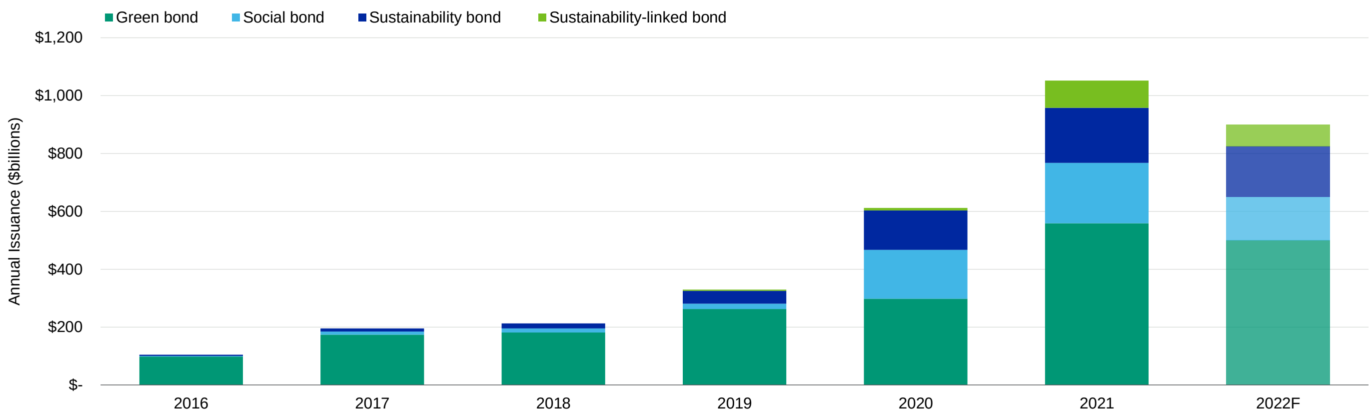
» **Rapidly evolving policy and regulatory landscape to influence trajectory of sustainable bond market.** Beyond the continued growth and diversification of sustainable bonds, there are many policy, regulatory and market-driven developments with implications for volumes. Notable developments in recent months include the publication of new reports on the EU taxonomy by the EU Platform on Sustainable Finance; the UK's Financial Conduct Authority's launch of a consultation on addressing greenwashing; the passage of the US Inflation Reduction Act of 2022; and the publication of the China Green Bond Principles.

Sustainable bond volumes fell in third quarter, but signs of resilience remain

Global issuance of green, social, sustainability and sustainability-linked (GSSS or sustainable) bonds[1] totaled $215 billion in the third quarter of 2022, down 13% from a year earlier, and down 10% from the $239 billion issued during the second quarter of this year. Across the four segments, there were $119 billion of green bonds, $41 billion of social bonds, $47 billion of sustainability bonds and $8 billion of sustainability-linked bonds. The combined $215 billion represents the lowest quarterly issuance of GSSS bonds since the fourth quarter of 2020.

GSSS bond volumes totaled $679 billion for the first nine months of 2022, down 17% from the $817 billion issued in the first three quarters of 2021. The decline in sustainable bond volumes has largely been driven by a more challenging macroeconomic and geopolitical environment that has contributed to a 27% decline in year-over-year global bond volumes through the first nine months of the year, according to data from Dealogic. Given the weaker overall environment for debt issuance, we expect full-year 2022 volumes to fall short of our previous forecast of $1 trillion, and we are now expecting around $900 billion of global sustainable bond issuance for the full year (see Exhibit 1).

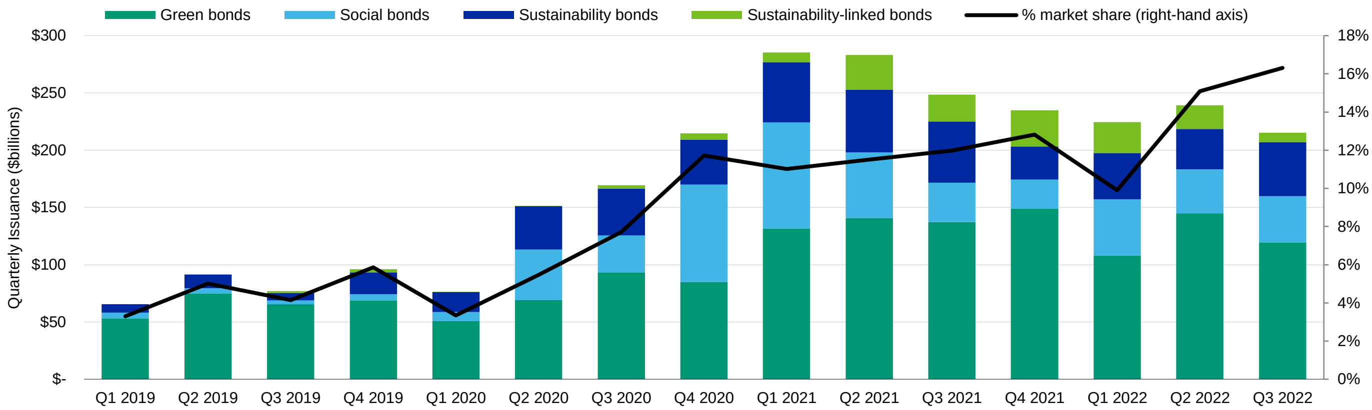
Exhibit 1
Amid challenging macroeconomic and geopolitical environment, sustainable bond issuance to decline in 2022
Annual global sustainable bond issuance by bond type



2022F represents Moody's revised 2022 full-year forecast.
Sources: Moody's Investors Service and Environmental Finance Data

Despite sustainable bond issuance being slower than anticipated so far this year, volumes in this segment have been stronger than the broader market, indicating a degree of resilience among labeled GSSS bonds. While the broader market is down 27% year-to-date, sustainable bonds are down a more modest 17%. As a result, sustainable bonds account for a larger share of the global bond market than last year, representing an average 15% of the market for the first nine months of the year, with a record 16% achieved in the third quarter (see Exhibit 2). Furthermore, issuance has already eclipsed the $612 billion in GSSS issuance for all of 2020, highlighting the market's long-term growth. The fundamental drivers of long-term growth in sustainable bonds – such as the need for climate mitigation and adaptation financing, accelerated decarbonization efforts to achieve net zero goals, growing regulatory attention on sustainability and a continued focus on the interconnectedness of environmental and social objectives – remain intact, and we expect issuance growth to resume when market conditions become more favorable.

Exhibit 2
Issuance receded in the third quarter but remained relatively resilient
Quarterly sustainable bond issuance by bond type and share of global bond market

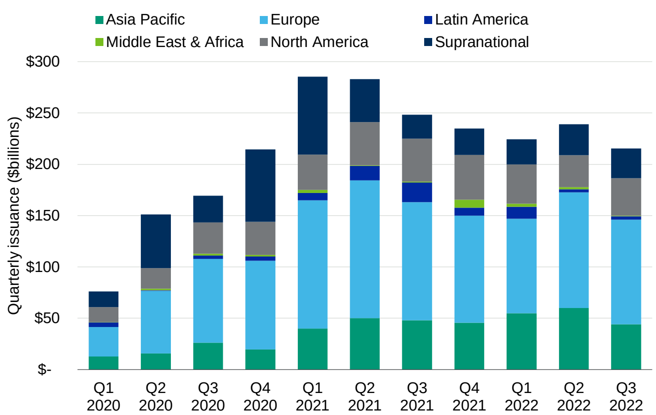


Sources: Moody's Investors Service, Environmental Finance Data and Dealogic

From a regional perspective, European issuers continue to dominate GSSS bond supply, with $102 billion in issuance in the third quarter of the year representing 47% of global issuance (see Exhibit 3). Asia Pacific volumes totaled $44 billion in the third quarter (21% of global issuance), followed by North American issuers with $37 billion (17% of global issuance) and supranational issuers with $29 billion (13% of global issuance). Latin American issuers brought just $3 billion of sustainable bonds to market in the third quarter, representing the second straight weak quarter of issuance for the region, following relatively strong issuance growth since the second half of 2020. This indicates that Latin American issuance remains relatively concentrated, with volumes from a few large issuers, and therefore subject to volatility.

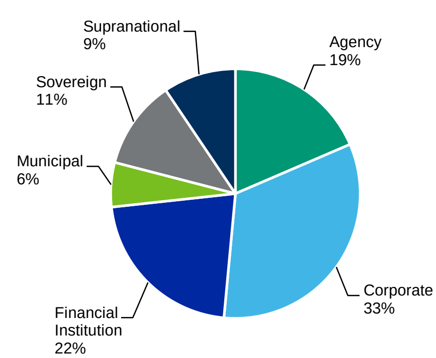
In the first nine months of the year, Asia Pacific issuers brought $159 billion in sustainable bonds to market, a 15% increase from the same period in 2021. The largest decline in year-over-year volumes was from Latin American issuers, with sustainable bond issuance at $18 billion in the first nine month of 2022, compared with $40 billion during the same period of 2021. Both European and North American volumes experienced a year-over-year decline, as issuance was down 18% and 11%, respectively, from the first nine months of 2021.

Exhibit 3
Europe remains dominant region for GSSS bond issuance



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 4
Sectoral share of GSSS bond issuance, Q1-Q3 2022



Sources: Moody's Investors Service and Environmental Finance Data

Global issuance of sustainable bonds is increasingly diverse from a sectoral perspective with corporates, financial institutions and government agencies each representing at least around one-fifth of market share through the first nine months of the year (see Exhibit 4). Although corporate issuers account for the largest share by sector, corporate GSSS issuance has declined in recent quarters, totaling just $53 billion in the third quarter of 2022, down from a record $115 billion in the second quarter of 2021. Meanwhile, issuance from other broad sectors has remained relatively stable, indicating that declining volumes from corporates have been the principal contributor to the overall drop in issuance this year.

Green bond issuance totaled $119 billion in third quarter, a sharp decline from the second quarter

Green bond volumes contracted in the third quarter, coming in at $119 billion, down 18% from $145 billion in the second quarter, and down 13% from the year-earlier period. Green bond issuance of $372 billion through the first three quarters of the year was down 9% from the corresponding period last year. Nonetheless, green bond volumes have continued to hold the greatest share of the labeled bond market (55% in the third quarter), despite the declines in absolute issuance. Given the subdued issuance levels observed in the first nine months of the year, we believe green bond issuance for the full year will now come in around $500 billion.

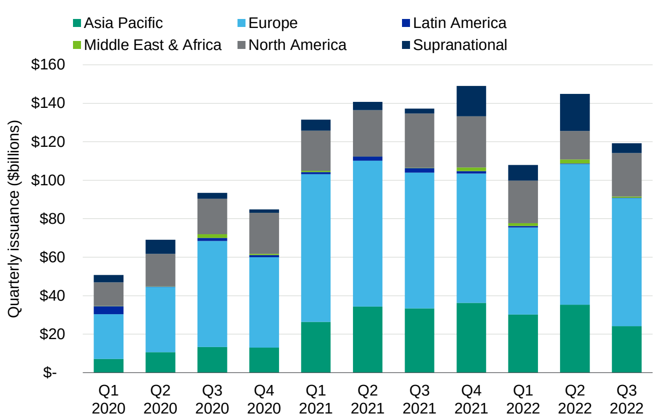
European issuers continued to dominate green bond issuance in the third quarter, with $67 billion accounting for 56% of the global total (see Exhibit 5). Through the first nine months of the year, European green bonds account for 50% of the global total, slightly lower than the region's share during all of 2021 at 54%. Asia Pacific and North American issuers followed Europe with 20% and 19% of global issuance in the third quarter and 24% and 16% of global issuance for the first three quarters of the year, respectively. The leading countries for green bond issuance through the first nine months of 2021 were the US with $51 billion (14% of the global total), Germany with $51 billion (14%), China with $41 billion (11%) and the Netherlands with $21 billion (6%).

From a sectoral standpoint, corporates held a leading share of green bond issuance in the third quarter, with issuance of $39 billion representing 32% of the global total (see Exhibit 6). Financial institutions were also significant contributors to global green bond volumes in the third quarter with $35 billion of issuance accounting for 29% of the quarterly total. Following financial institutions, sovereign issuers accounted for $23 billion, or 19%, of global green bond issuance in the third quarter, with four of the five largest transactions in the third quarter of the year belonging to sovereign issuers, including Italy (Baa3 negative) at €6 billion, the United Kingdom (Aa3 negative) at £4.5 billion, Germany (Aaa stable) at €5 billion and Belgium (Aa3 stable) at €4.5 billion.

Through the first nine months of the year, corporates have issued $139 billion of green bonds, accounting for a leading 37% share of the global total. Two of the five largest transactions from corporates in the first nine months of the year were from automotive companies: Ford Motor Co. (Ba2 stable) with a $1.75 billion issuance in August and General Motors Co. (Baa3 stable) with a $1.25 billion transaction in July.

Exhibit 5

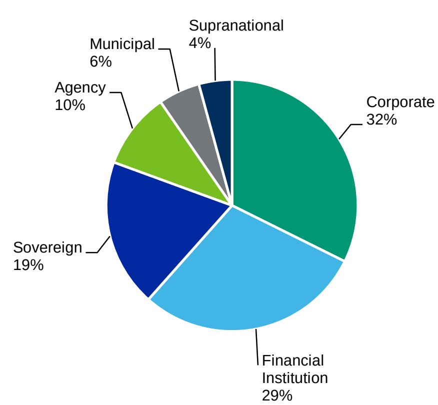
Green bond issuance declined in Q3 with broader market



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 6

Share of Q3 2022 global green bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

Social bond volumes modestly increased in the third quarter but remain below pandemic highs

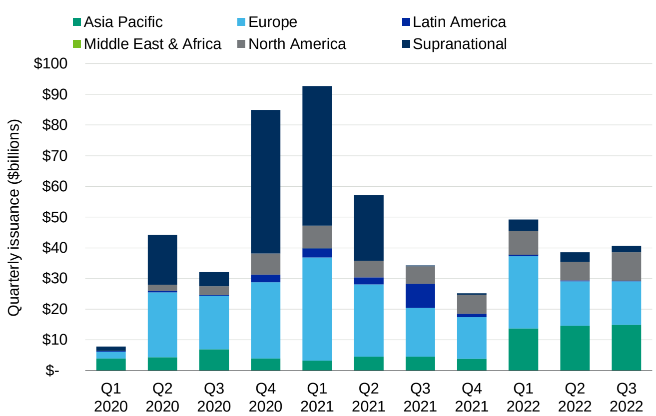
Social bond issuance increased to $41 billion during the third quarter, up a modest 5% from the second quarter of the year and up 19% compared with the $34 billion issued during the third quarter of 2021 (see Exhibit 7). But this is significantly lower than the pandemic-fueled volumes observed in the fourth quarter of 2020 and first quarter of 2021, when social bonds totaled record highs of $85 billion and $93 billion, respectively. Total social bond issuance stood at $128 billion through the first nine months of the year, significantly below the $184 billion issued in the same period in 2021. Nevertheless, social bond volumes have remained fairly stable throughout the year and full-year volumes may now eclipse $150 billion.

Regionally, Asia Pacific and European issuers accounted for a combined $29 billion, or 72% of global social bond issuance in the third quarter. Through the first nine months of the year, European social bonds accounted for a leading 41% of the global total, nearly matching the region's share in full-year 2021. North American issuers followed Europe and Asia Pacific at 23% of global issuance in the third quarter, with the region accounting for 18% of global issuance during the first three quarters of the year. The leading countries for social bond issuance through the first nine months of 2022 were France with $33 billion (26% of the global total), South Korea with $32 billion (25%), the US with $23 billion (18%) and Japan with $10 billion (7%).

From a sectoral standpoint, government agencies held a leading share of social bond issuance in the third quarter, with issuance of $24 billion representing 58% of the global total (see Exhibit 8). Financial institutions accounted for just under 19% of issuance in the third quarter with $8 billion in social bonds, followed by municipal issuers with 13%, corporates with 6% and supranationals 5%.

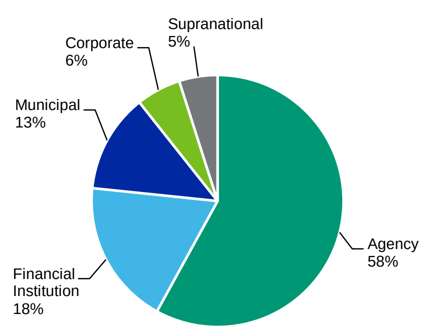
Through the first nine months of the year, government agencies have issued $72 billion of social bonds, accounting for a leading 56% share of the global total. One of the largest social bond issuers remains the French public finance agency Caisse d'Amortissement de la Dette Sociale (CADES, Aa2 stable), whose €5 billion social bond issued at the end of September bolsters its aim to raise €40 billion in 2022 to support its social debt operations.

Exhibit 7
Social bond volumes stable in 2022 but below pandemic highs



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 8
Share of Q3 2022 global social bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

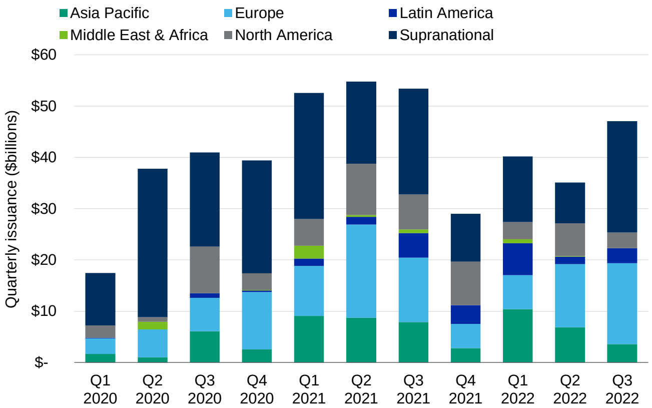
Sustainability bond volumes rebounded in the third quarter to $47 billion

Sustainability bond issuance totaled $47 billion in the third quarter, surging 34% from second-quarter issuance of $35 billion but sliding 12% from the $53 billion issued during the third quarter of 2021 (see Exhibit 9). Issuance of $122 billion through the first nine months of the year was down 24% from the comparable period last year. Markets continue to focus on combining the financing of environmental and social projects through labeled sustainability bonds, and we expect full-year sustainability bond issuance to approach $175 billion for the full year.

Supranational issuers continued to be the leading regional contributor to the sustainability bond market in the third quarter, with $22 billion of issuance accounting for 46% of the global total. European issuers brought $16 billion to market in the third quarter and accounted for 34% of the total. Volumes were far more modest among Asia Pacific, North American and Latin American issuers, which combined for less than $10 billion of issuance in the third quarter, or 20% of the global total. Through the first nine months of the year, supranational issuers led with $42 billion (35% of the global total), followed by European issuers with $35 billion (28%), Asia Pacific issuers with $21 billion (17%) and North American issuers with $13 billion (10%).

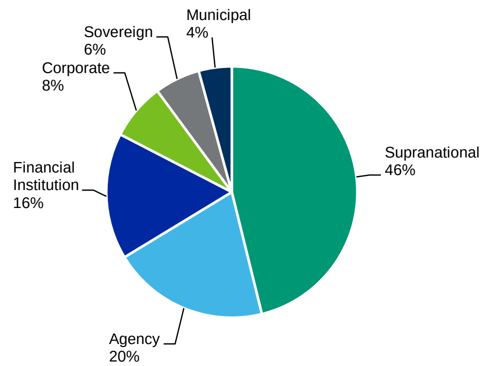
Issuance was less diverse from a sectoral perspective in the third quarter, with supranational issuers leading with $22 billion in volumes accounting for 46% of global issuance. Government agencies issued $10 billion in sustainability bonds, increasing to 20% of the global market from 9% in the previous quarter, followed by financial institutions with just under $8 billion, accounting for 16% of global issuance (see Exhibit 10). Notable transactions in the third quarter included the International Bank for Reconstruction and Development (World Bank, Aaa stable) with one of the largest sustainability bonds of the quarter at $4 billion, while the Government of Mexico (Baa2 stable) tapped the market with a $2.2 billion offering under its sustainable development goals (SDG) bond framework.

Exhibit 9
Sustainability bond volumes jumped from second quarter



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 10
Share of Q3 2022 global sustainability bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

Sustainability-linked bond volumes dropped to $8 billion in the third quarter

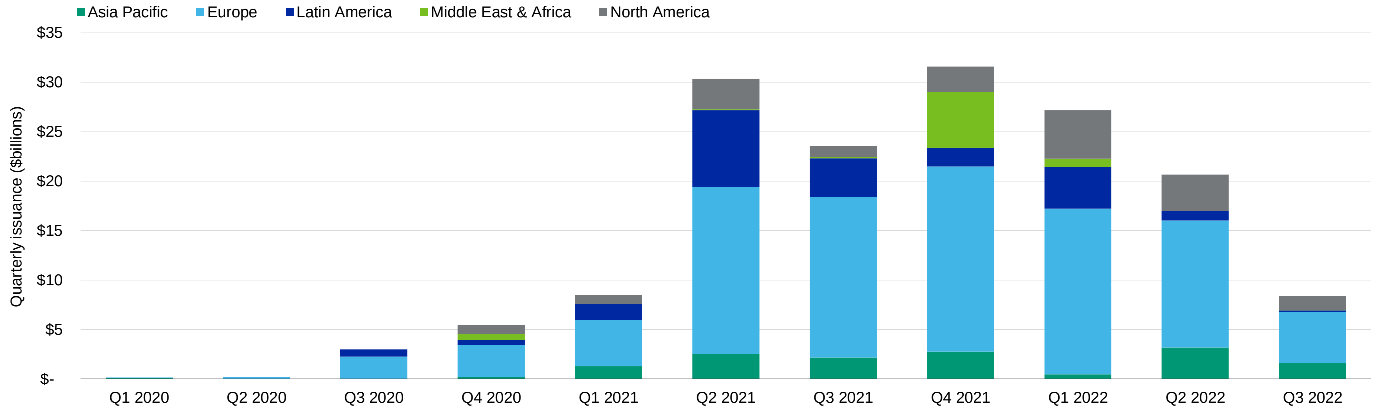
Global sustainability-linked bond (SLB) volumes totaled $8 billion in the third quarter of 2022, plunging 59% from the second quarter for the third consecutive quarterly decline (see Exhibit 11). The first nine months of the year had a combined $56 billion in issuance of SLBs, down 10% from $62 billion during the same period of 2021. The decline in issuance was the steepest quarterly drop since the inception of the SLB market, reflecting a difficult debt issuance environment and growing market scrutiny on the credibility and robustness of issuers' SLB targets. Another challenge has been the significant decline in high-yield issuance this year, as high-yield issuers have been more likely to consider SLBs in the early days of this market segment. As a result, we now expect SLB volumes to total around $75 billion for all of 2022.

The SLB segment remains less diverse than more established use-of-proceeds segments. European issuers remain the driving force behind SLB volumes, accounting for a leading 61% share of issuance in the third quarter. But the $5 billion issued by European issuers was down 60% from the $13 billion issued during the second quarter of 2021 and is 68% lower than the $16 billion issued during the third quarter of last year. Nearly all SLBs to date have been issued by corporates, with $49 billion of the $56 billion issued during the first nine months of the year attributable to a variety of corporate sectors.

Exhibit 11

Sustainability-linked bond volumes declined for the third consecutive quarter to the lowest quarterly share since the fourth quarter of 2020

Quarterly sustainability-linked bond volumes by region



Sources: Moody's Investors Service and Environmental Finance Data

Sharp increase in financing required to enable a just transition

The 2022 United Nations Climate Change Conference (COP27), which will be held in November in Sharm El Sheikh, Egypt, will focus on a number of key policy priorities. These priorities will likely include the potential adoption of more ambitious country commitments to limit global warming to 1.5 degrees Celsius; solutions to energy accessibility and affordability; scaling up climate finance for developing economies; and mobilizing capital for investing in a global just transition. Significant progress in these areas – albeit not guaranteed – would support global sustainable debt market activity, particularly with respect to sovereign issuance, transition finance, emerging market activity and adaptation-focused sustainable bonds.

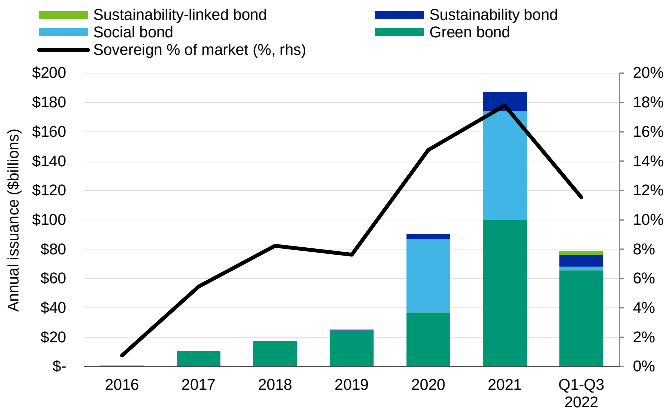
A key theme at COP27 will be the continued global focus on the need for a “just transition” – that is, achieving the transition to a low-carbon economy in a socially equitable manner. A number of efforts aimed at advancing the just transition cause were announced during last year’s COP26 conference in Glasgow, including the signing of the Just Transition Declaration by more than 30 countries, the launch of an $8.5 billion just energy transition partnership to transform South Africa’s coal-based economy and the release of a joint climate statement by 10 multilateral development banks (MDBs) that included a commitment to support communities adversely affected by the transition to a low-carbon economy. But sustainable development and just transition financing needs remain significant. The Force for Good Initiative estimates that the cost of financing efforts to achieve the UN Sustainable Development Goals by 2030 has risen to between $134-176 trillion, with the funding gap widening in recent years due to macroeconomic and geopolitical challenges.

Sovereign governments, particularly those in emerging markets, are at the forefront of financing initiatives that can support sustainable development while ensuring a just transition. Government policy can provide guidance, standardization and subsidization of best practices that are socially inclusive. Key levers available to governments include supporting workforce training programs, encouraging collaborative policy development across regional and local governments, and using labeled sustainable bonds to finance just transition initiatives.

Sovereign sustainable bond issuance has experienced robust growth ever since Poland issued the first sovereign green bond in 2016, reaching an annual record of $187 billion in 2021 (see Exhibit 12). As a result, sovereign sustainable bond issuance has become an increasingly prominent segment of the global sustainable bond market, reaching 18% share of market in 2021 from just 8% two years prior.

Exhibit 12

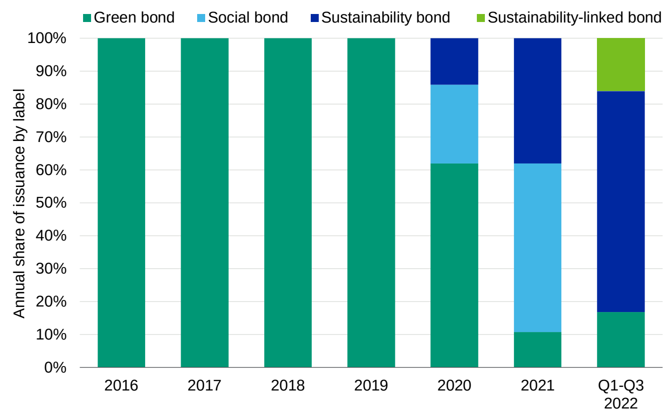
Global sovereign sustainable bond issuance surged in 2021 amid need for COVID-19 relief financing



The EU is categorized as a sovereign issuer for purposes of this report.
Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 13

EM sovereign sustainable bond labels are diversifying



Sources: Moody's Investors Service and Environmental Finance Data

Emerging market (EM) sovereigns are also playing a more significant role in the global sustainable bond market. This year they account for 16% of total labeled sovereign issuance, up from just 1% only five years earlier in 2017. They are also diversifying from purely green bonds to other labels with a social lens. This year sustainability bonds and sustainability-linked bonds represented 67% and 16%, respectively, of issuance volume, a sharp contrast from 2019 when green bonds accounted for 100% of issuance (see Exhibit 13). The diversity in sustainable bond labels demonstrates that EM policymakers are increasingly focused on projects that intertwine social and environmental goals. According to a recent UN report that highlights the shortfall in financing needed to achieve the UN Sustainable Development Goals, emerging markets require an additional annual $4.2 trillion in funding (or $33.6 trillion over the next eight years) above current budget projections. This financing gap presents the opportunity for sustainable bonds to be one of many tools leveraged by emerging market sovereigns to finance just transition initiatives.

Looking ahead, EM sovereigns will increasingly integrate sustainable development priorities into their economic and financial strategies. One area of particular focus will be the financing of projects or investments that reduce exposure to carbon transition risk. About one-fifth of Moody's-rated emerging market sovereigns have highly negative or very highly negative credit exposure to carbon transition risk. Of these sovereigns, only Ecuador (Caa3 stable) and Nigeria (B3 review for downgrade) have issued sustainable bonds to date. However, a number of other EM sovereigns with moderately negative credit exposure to carbon transition risk have already tapped the sustainable debt markets (see Exhibit 14), and we expect this number to rise over time. Furthermore, roughly 40% of this cohort have either highly negative or very highly negative exposure to social risks, highlighting the importance of managing social considerations associated with carbon transition risk.

Exhibit 14

Emerging market sovereign sustainable bond issuers have diverse exposure to environmental and social risks

EM sovereign issuer	Credit impact score (CIS)	Social issuer profile score	Environmental issuer profile score	Carbon transition category score	Sustainable bond labels issued	Total issuance ($ billions)
Benin	CIS-4	4	3	2	Sustainability	$ 0.6
Chile	CIS-3	3	3	2	Green, social, sustainability and sustainability-linked	$ 29.1
Colombia	CIS-3	3	3	3	Green	$ 0.2
Ecuador	CIS-4	4	4	5	Social	$ 0.3
Egypt	CIS-4	4	4	3	Green	$ 0.8
Fiji	CIS-3	3	4	2	Green	$ 0.1
Guatemala	CIS-4	4	3	2	Social	$ 0.5
Hungary	CIS-3	3	2	2	Green	$ 2.9
Indonesia	CIS-3	3	3	3	Green, sustainability	$ 6.3
Malaysia	CIS-2	2	3	3	Sustainability	$ 1.3
Mexico	CIS-3	3	3	3	Sustainability	$ 5.1
Nigeria	CIS-5	5	5	5	Green	$ 0.1
Peru	CIS-3	3	3	3	Social, sustainability	$ 4.4
Philippines	CIS-3	4	4	2	Sustainability	$ 1.6
Poland	CIS-2	3	3	3	Green	$ 4.3
Serbia	CIS-3	3	3	2	Green	$ 1.2
Thailand	CIS-3	4	3	2	Sustainability	$ 1.6
Uzbekistan	CIS-4	3	3	3	Sustainability	$ 0.9

Credit impact scores (CIS) communicate the impact of ESG considerations on the rating of an issuer or transaction. Issuer profile scores (IPS) and category scores indicate credit exposure to environmental, social and governance considerations. These scores run on an asymmetric five-point scale whereby 1 is positive, 2 is neutral to low, 3 is moderately negative, 4 is highly negative and 5 is very highly negative.

Sources: Moody's Investors Service and Environmental Finance Data

The recent growth in social and sustainability bond issuance by EM sovereigns also reflects the sizeable social needs of sustainable development, including employment generation and access to essential services. By combining social and green projects through a sustainable financing framework, sovereigns can tap into a larger swathe of benchmark-sized projects and amplify the potential impact from sustainable investments.

Sustainability-linked bonds present another potential area for innovation that can facilitate just transition spending. A recent novel structure from Chile (A2 stable) links the coupon step-up to the sovereign's climate mitigation strategy to reduce GHG emissions. Innovations such as this can be mirrored by other EM sovereigns to intertwine financing goals with just transition themes drawing on work by the World Bank to highlight relevant key performance indicators and financing themes for sovereigns – such as supporting scale-up of renewable energy generation and the incentivizing of microfinance lending.

Although EM sovereigns will continue to issue sustainable bonds to support just transition efforts and other environmental and social goals, many EM sovereigns face fiscal constraints. This points to the need for support from external parties, such as MDBs with expertise in specific regions and the ability to allocate public and private capital efficiently. MDBs' experience in channeling climate financing to low-income and middle income economies, topping $50 billion in 2021, highlights their ability to spur investments and encourage market best practices in delivering climate finance in emerging market countries. Given the complexity of just transition policies and the importance of facilitating cooperation and accountability among a wide range of stakeholders, MDB's regional and local expertise will be essential to promote innovative just transition financing.

Rapidly evolving policy and regulatory landscape to influence trajectory of sustainable bond market

Beyond the continued growth and diversification of sustainable bonds, there are a plethora of policy, regulatory and market-driven developments with implications for issuance volumes. Some notable developments in recent months include:

Reports on the EU taxonomy published by the EU Platform on Sustainable Finance: In October, the Platform on Sustainable Finance, an advisory body for the European Commission assisting in developing its sustainable finance policies, published two notable reports: a report on data and usability of the EU Taxonomy and a report on minimum safeguards. As an increasing number of issuers aim to integrate the specifics of the taxonomy regulation into their sustainable bond frameworks, such reports will be essential in supporting the market's common understanding of key aspects of the taxonomy. Also last month, the Commission launched a call for applications for members for the next term of the Platform on Sustainable Finance, which will run from 2023-24.

UK's Financial Conduct Authority (FCA) consultation on addressing greenwashing: In late October, the UK's FCA launched a consultation on proposed measures to tackle the greenwashing of investment products. The measures include sustainable investment labels, disclosure requirements, and naming and marketing rules. The initiative will create a more robust labeling and disclosure framework for UK asset managers and boost consumer confidence in sustainable investing, supporting the industry's growth and revenue expansion. The initiative follows efforts by other regulators – including the European Securities and Markets Authority – to address greenwashing, which is an increasing risk for asset managers because of the pace of growth in sustainable investing. Regulatory scrutiny continues to grow globally; in late October, an energy company became the target of the Australian Securities and Investments Commission's first greenwashing fine.

Passage of the US Inflation Reduction Act of 2022: In early August, the US Senate passed the Inflation Reduction Act of 2022 (IRA), a spending package that contains roughly $485 billion in tax credits and infrastructure funding to achieve a multitude of purposes such as reducing health costs, cutting carbon emissions and supporting economic and climate resilience. Combined with the $1 trillion Infrastructure Investment and Jobs Act enacted in late 2021, the IRA has the potential to support carbon transition efforts by directing funds and savings towards energy security and innovation in clean technology. Although sustainable bond issuance has continued to grow in the US and its green bond market is the largest by volume globally, there remains significant untapped growth potential given the size of the US capital markets. Funds provided under the legislation can help support further issuance growth in areas such as green buildings, renewable energy, clean transportation and climate-resilient infrastructure. Other recent developments signaling the heightened focus on climate risk and sustainable development in the US include the Federal Reserve's plans to launch its first climate scenario analysis exercise in early 2023, the US Environmental Protection Agency's work on a proposed $27 billion green bank and the Municipal Securities Rulemaking Board's release of responses to its request for information on ESG practices in the US municipal market.

Publication of the China Green Bond Principles: In late July, the China Green Bond Standards Committee officially published the China Green Bond Principles (CGBP) with the consent of the People's Bank of China (PBOC) and the China Securities Regulatory Commission. The CGBP will help facilitate the advancement of the sustainable finance market in China by setting a nationally unified standard, while adhering to the International Capital Market Association's Green Bond Principles. The green bond market in China was previously governed by different guidelines or notices issued by the PBOC, the National Development and Reform Commission, and the National Association of Financial Market Institutional Investors. The CGBP aims to unify and clarify these guidelines. Overall, the CGBP will attract more international players to the Chinese green bond market by requiring issuers to align with international standards, thus expanding the reach of this market.

Publication of MIS Second Party Opinion (SPO) assessment framework

In October, Moody's Investors Service (MIS) published a new assessment framework for providing Second Party Opinions (SPOs) on sustainable debt. The publication of the new framework follows the transfer of Moody's SPO business, including analytical staff, to MIS from Moody's ESG Solutions Group.

This assessment framework describes how MIS provides SPOs on green-, social- and sustainability-labeled financial instruments (e.g., bonds or loans) or financing frameworks that follow either a use-of-proceeds or sustainability-linked approach.

The key components of MIS's SPO assessment framework are:

» **Alignment with principles score:** Indicates MIS's opinion of the extent to which a financial instrument or financing framework aligns with green, social or sustainability principles, as applicable, and with MIS-identified best practices. The extent of alignment is typically driven by the level of transparency and accountability identified in the financial instrument or financing framework documentation for sustainability matters. This score is expressed on a four-point scale.

» **Contribution to sustainability score:** Indicates MIS's opinion of the expected contribution of projects or assets financed by the proceeds, or key performance targets, to the issuer's advancement of long-term sustainable development. It takes into account environmental, social and governance (ESG) externalities related to projects or activities to be financed and the coherence of the financial instrument or financing framework's objectives with the sustainability characteristics of the issuer. This score is expressed on a five-point scale.

» **Overall sustainability quality score:** Combines the alignment with principles score and the contribution to sustainability score to indicate MIS's opinion of the overall sustainability quality of a financial instrument or financing framework. This overall score is expressed on a five-point scale ranging from SQS1 (excellent) to SQS5 (weak).

MIS SPOs and their underlying scores reflect point-in-time analyses which can be updated upon request by the issuer. They are not credit ratings. They are intended to provide an additional tool for market participants to use in conducting their own analysis.

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 14 October 2022.

Moody's related publications

Topic page

» ESG Credit and Sustainable Finance

Assessment framework

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

Sector research

» Carbon Transition – Governments have made policy progress toward net zero, but energy crisis will complicate implementation (Slides), 1 November 2022

» Sovereign – Global: FAQ on debt-for-climate/nature swaps, 31 October 2022

» Environmental Risks – Global: Sectors with heightened credit risk account for twice as much debt as in 2015, 31 October 2022

» Asset Management – UK: Proposed rules to tackle "greenwashing" are credit positive for asset managers, 27 October 2022

» Auto ABS – China: Green auto loan ABS subject to higher performance volatility than traditional deals, 25 October 2022

» Emerging Markets – Global: Sovereigns' readiness for a "just transition" varies, as does associated credit impact, 20 October 2022

» Environmental Risks – Global: Climate-adaptation plans are critical, but demonstrating effectiveness and accessing funding are key barriers, 20 October 2022

» ESG Focus: October 2022, 10 October 2022

» Carbon Transition – Global: Green hydrogen may help carbon transition, but implementation risks are high, 10 October 2022

» ESG – Global: FAQ on the credit implications of natural capital, 22 September 2022

» Banking – Korea: FAQ on Korean banks' sustainable capital securities, 22 September 2022

» Environmental Risks – Global: Physical climate risk assessment: so much more than geographic location, 13 September 2022

» China Green Bond Principles will support the domestic sustainable finance market's development and align with international standards, 30 August 2022

» Government Policy – US: Inflation Reduction Act will build economic resilience, but its costs and benefits vary by sector, 10 August 2022

» Green and transition financing in APAC resilient despite market headwinds, 2 August 2022

» ESG - Global: Most 2021 credit rating actions cited ESG factors, as issuers adapted to the long-term impact of COVID-19 (slides), 29 July 2022

» Sustainable bond volumes resilient in Q2 despite tighter financial conditions, 28 July 2022

» Banking – Europe: ECB climate stress test underlines scale of risk management challenge for banks, 14 July 2022

» Covenants – EMEA: Speculative-grade sustainable bonds flourish in 2021, to the detriment of covenants, 18 June 2022

» Emerging market sustainable bond outlook remains constructive despite market headwinds, 8 June 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.

Endnotes

1 Please see Appendix for definitions of the sustainable debt instruments referenced throughout this report, as well as a note on our data sources.

REPORT NUMBER 1344807

Moody's
INVESTORS SERVICE