

SUSTAINABLE DEBT MONITOR

Financing the Transition

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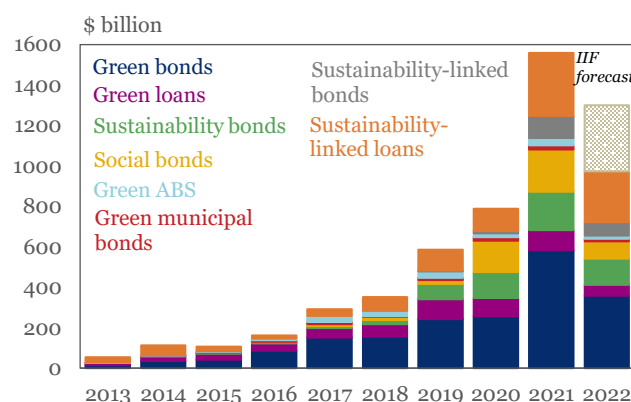
Editor: Sonja Gibbs, Managing Director, sgibbs@iif.com

- The ESG debt universe has grown rapidly, to near \$4.5tr in Q322, up from \$3tr in Q321 and \$1.5tr in Q320.
- However, overall ESG debt issuance has slowed sharply this year amid broader debt market disruption—higher borrowing costs, inflationary pressures, and heightened geopolitical tensions.
- Emerging markets are a brighter spot—ESG debt issuance has held up relatively well and is on track to reach \$230bn by end-2022 vs \$250bn in 2021.
- The sustainability-linked loan market remains the fastest growing segment in the ESG debt universe, highlighting the vital role of bank lending in transition finance.
- Looking past current market strains, the US Inflation Reduction Act is expected to galvanize U.S. ESG debt markets, with its focus on funding to support climate and energy security.

COP27 to call for urgent collaborative action: Ahead of the COP27 summit in Sharm el-Sheikh, as policymakers seek international coordination to address the urgent need for climate action, government and private sector efforts to combat climate change are gaining momentum—but are nowhere near the scale needed. The latest [UN estimates](#) underscore that current national climate pledges and policies are still not ambitious enough to limit global temperature rise to 1.5°C. With global greenhouse gas (GHG) emissions on track to increase by some 14% from 2010 levels by 2030, this highlights the need for progress in climate finance market development. While rising, and now over \$800bn per year, [climate finance flows](#) remain well short of the trillions [needed](#) to achieve [net-zero emissions](#).

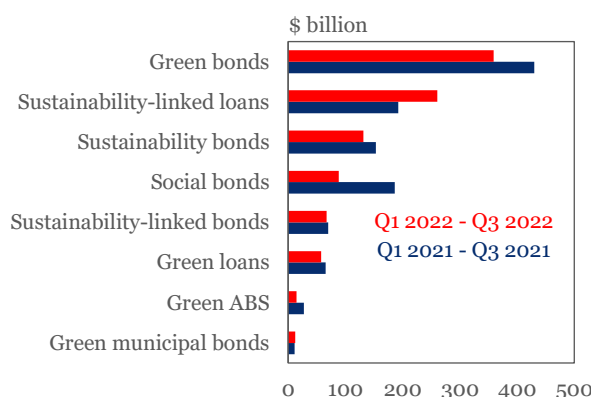
ESG debt markets still too niche: ESG debt markets have an important role to play in bridging the large funding gaps needed to achieve climate pledges and broader sustainable development goals. Indeed, albeit from a low base, the ESG debt market has been growing rapidly since COP21 in Paris. The market size reached near \$4.5 trillion in Q3 2022, up from \$3 trillion a year ago and \$1.5 trillion in Q3 2020 (Table 1). This remarkable expansion is a clear sign that many borrowers and lenders are enthusiastically seeking to realign their portfolios to mobilize private capital for climate action and broader sustainable development goals. However, there is much work ahead—ESG debt securities represent only a small fraction of the \$300 trillion [global debt market](#), highlighting substantial room for growth.

Chart 1: Despite market disruption, global ESG debt issuance should still hit \$1.3 trillion in 2022 (vs. \$1.5 trillion in 2021)



Source: Bloomberg, BNEF, IIF

Chart 2: Hot spot: sustainability-linked loan volumes have risen significantly in 2022



Source: Bloomberg, IIF

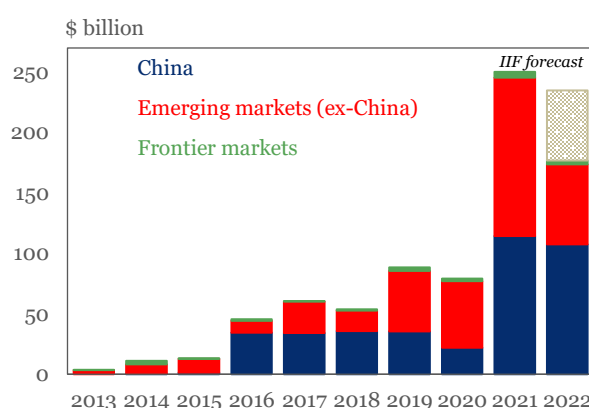
Tough markets, less activity: With rising funding costs, inflationary pressures and geopolitical tensions depressing capital markets this year, global ESG debt issuance amounted to some \$950 billion during the first three quarters of 2022—around 13% lower than the same period in 2021 (Chart 1). Green and social bond issuance was hit harder; in contrast, sustainability-linked loans were the fastest growing segment in the ESG debt market (Chart 2). Looking ahead, we expect ESG debt issuance to approach \$1.3 trillion by end-2022 vs. \$1.5 trillion in 2021, over 25% below our [baseline projections](#) at the start of the year.

EM green bond issuance on the rise: Despite significant geopolitical and economic headwinds, ESG debt issuance in emerging and frontier markets remained strong at some \$175 billion during the first three quarters of 2022 (Chart 3). With total issuance on track to reach \$230 billion by end-2022 vs. \$250 billion last year, green bond issuance in emerging and frontier markets surged to \$95 billion, led by China, UAE, and Indonesia. This was in sharp contrast to the retrenchment in green bond issuance across mature markets, particularly in the U.S. However, the U.S. Inflation Reduction Act, with its tax credits and infrastructure funding, is set to galvanize ESG debt markets going forward in sectors like power, manufacturing, transportation, and agriculture—thus spurring overall market development.

Eyes on transition finance: Volatility in global energy markets, exacerbated by the Russia-Ukraine war, has reinforced the importance of energy and food security and independence—key elements of an orderly transition to a Net Zero economy. With the food industry largely relying on fossil fuel energy (and thus accounting for [one-third of global GHG emissions](#)) greater energy and food security requires a wholesale switch towards renewables and calls for electrification of the [agriculture and food industries](#). Against this

backdrop, issuers and borrowers have shown more appetite for sustainability-linked debt instruments that offer more flexibility than use-of-proceeds debt instruments such as green bonds and loans. With year-to-date issuance of **sustainability-linked bond issuance** on par with last year, **sustainability-linked loan issuance** has surged, amounting to some \$260 billion in the first three quarters of the year—up from \$190 billion during the same period last year. In contrast, take-up of transition bonds remains largely limited, with most of the activity originating from utility firms in China and Japan (Chart 4).

Chart 3: Progress in emerging and frontier markets: ahead of COP27, ESG debt issuance remains strong



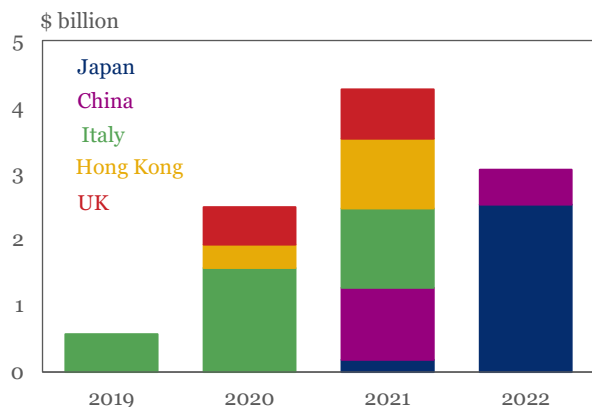
Source: Bloomberg, IIF

Table 1: Outstanding Sustainable Debt Securities, Q3 2022

| \$ billion | Debt securities | Green bonds | Green ABS | Sustainability bonds | Social bonds | Green municipal bonds | Sustainability-linked bonds | Loans | Green loans | Sustainability-linked loans | Total |
|-----------------------------|-----------------|-------------|-----------|----------------------|--------------|-----------------------|-----------------------------|-------------|-------------|-----------------------------|-------------|
| Global markets | 3061 | 1672 | 80 | 549 | 491 | 86 | 182 | 1432 | 474 | 958 | 4493 |
| Mature markets | 2115 | 1229 | 80 | 261 | 321 | 86 | 138 | 1125 | 296 | 828 | 3239 |
| Emerging & frontier markets | 421 | 287 | 0 | 68 | 24 | 0 | 42 | 204 | 131 | 73 | 624 |
| Offshore centers | 37 | 30 | 0 | 2 | 2 | 0 | 3 | 104 | 47 | 57 | 141 |
| Supranationals | 489 | 127 | 0 | 218 | 144 | 0 | 0 | 0 | 0 | 0 | 489 |
| Top 7 MMs | 1472 | 817 | 78 | 162 | 230 | 86 | 98 | 834 | 199 | 635 | 2306 |
| Top 7 EMs | 330 | 237 | 0 | 38 | 20 | 0 | 36 | 118 | 66 | 51 | 448 |
| 2 offshore centers | 36 | 29 | 0 | 2 | 2 | 0 | 3 | 99 | 47 | 52 | 135 |

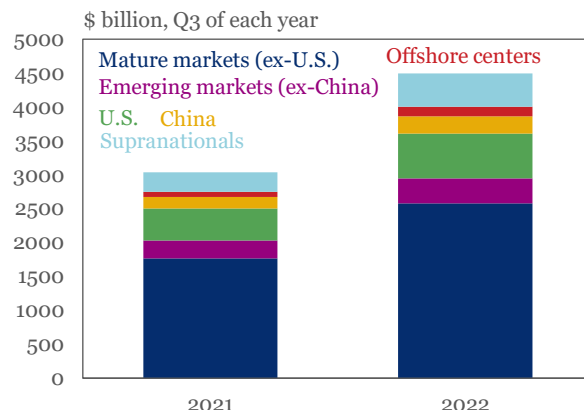
Source: Bloomberg, BNEF, IIF; top 7 mature markets by size include the U.S., France, Germany, the UK, Spain, Italy, and the Netherlands; top 7 emerging markets by size include China, Chile, India, Mexico, Brazil, Turkey, and the UAE; the 2 offshore centers by size include Singapore and Hong Kong; *compiled by country of risk

Chart 4: The transition bond market is still nascent



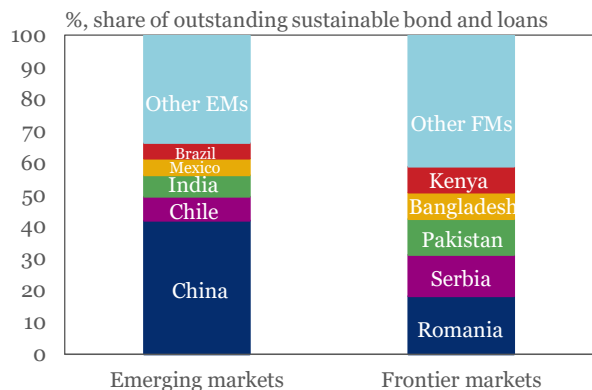
Source: Bloomberg, IIF

Chart 5: Sustainable debt universe topped \$4.4 trillion in Q3—up from \$3 trillion a year ago



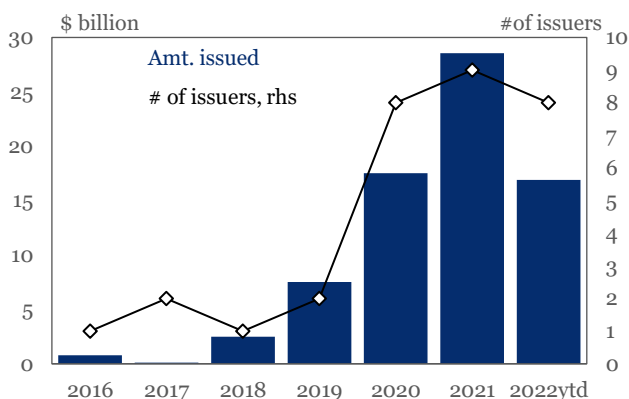
Source: Bloomberg, IIF;

Chart 6: China has the largest ESG debt market across EM/FMs



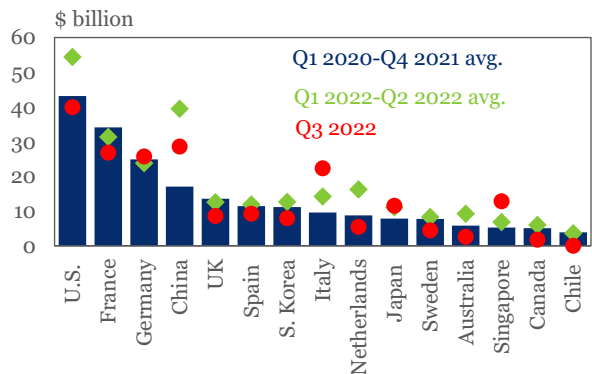
Source: Bloomberg, IIF

Chart 7: EM ESG sovereign bond issuance has weakened this year



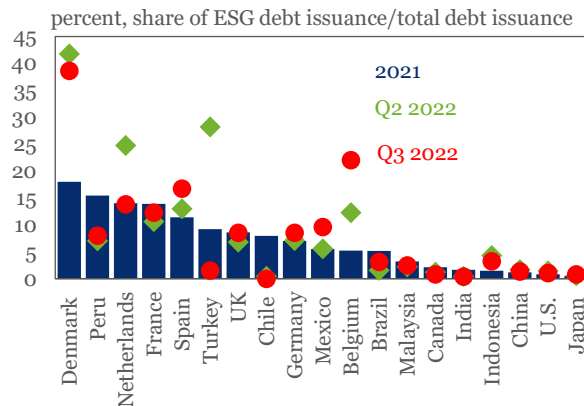
Source: Bloomberg, IIF

Chart 8: Most of the ESG debt issuance this year came from the U.S., China, France, and Germany



Source: Bloomberg, IIF

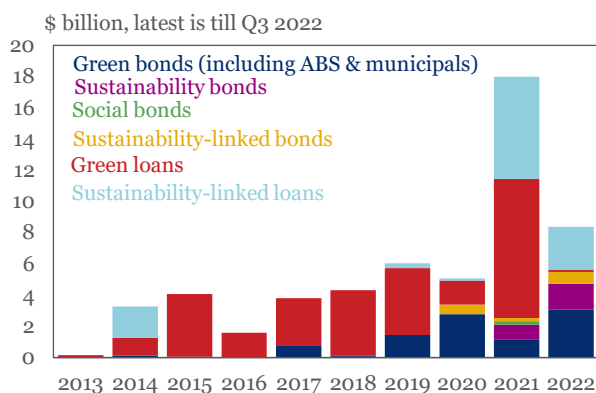
Chart 9: The share of ESG debt issuance in total debt issuance remains limited



Source: Bloomberg, IIF; includes ST & LT securities

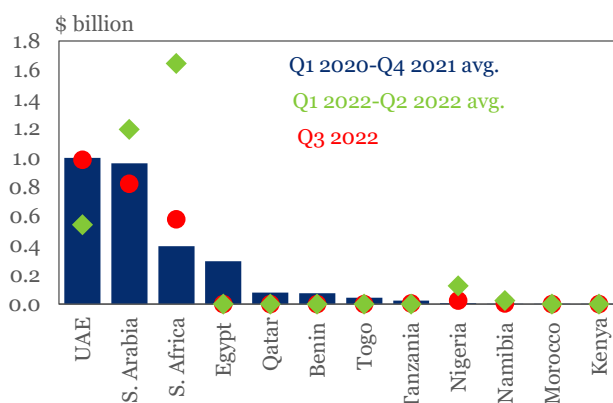
Chartbook: ESG Debt Markets in Africa and the Middle East (AFME)

Chart A: After a surge in 2021, ESG debt issuance in AFME has weakened this year



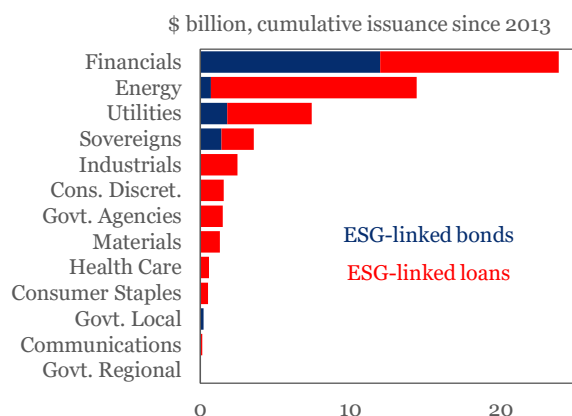
Source: Bloomberg, IIF

Chart B: In Q3 2022, UAE, Saudi Arabia and South Africa were the top ESG debt issuers in the region



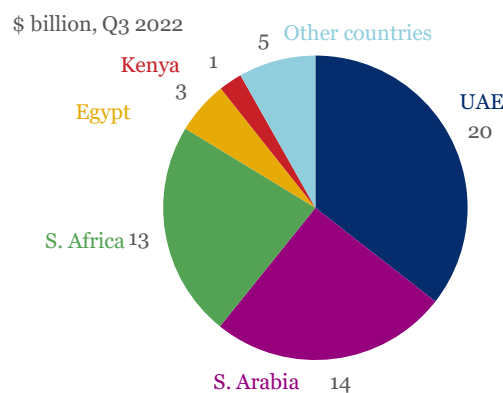
Source: Bloomberg, IIF

Chart C: Since 2013, sovereigns have accounted for only 6% of total ESG debt issuance



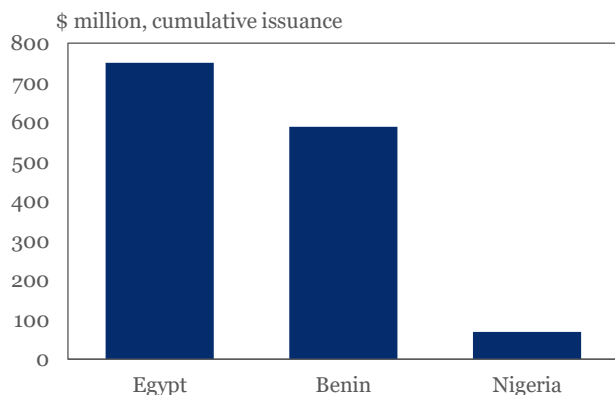
Source: Bloomberg, IIF

Chart D: UAE, S. Arabia, and S. Africa have the largest ESG debt markets in AFME—accounting for 80% of the total



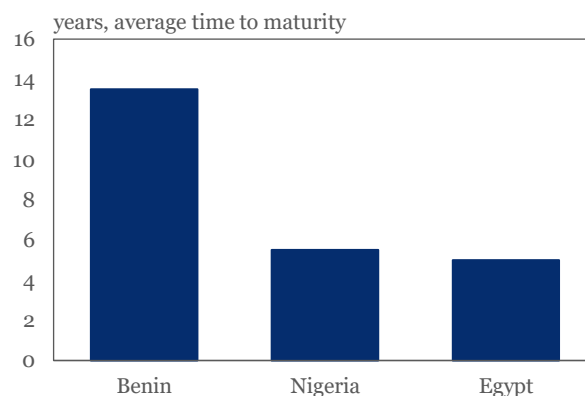
Source: Bloomberg, IIF

Chart E: Egypt is the largest sovereign ESG bond issuer



Source: Bloomberg, IIF

Chart F: The tenor of sovereign ESG bonds varies significantly across countries



Source: Bloomberg, IIF

Table 2: ESG debt issuance by country*

| | ESG 2020 | | 2020 share | | ESG 2021 | | 2021 share | | ESG Q1 '22 | | Q1 share | | ESG Q2 '22 | | Q2 share | | ESG Q3 '22 | | Q3 share | |
|----------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|------------|--------------------------|
| | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance | \$ billion | % of total debt issuance |
| U.S. | 121.1 | 0.4 | 224.4 | 0.8 | 37.0 | 0.7 | 71.8 | 1.5 | 40.0 | 1.1 | | | | | | | | | | |
| China | 22.0 | 0.2 | 114.4 | 1.2 | 33.7 | 1.3 | 45.3 | 1.7 | 28.6 | 1.3 | | | | | | | | | | |
| France | 99.3 | 7.3 | 173.5 | 13.9 | 30.9 | 9.0 | 31.8 | 10.6 | 26.9 | 12.3 | | | | | | | | | | |
| Germany | 74.8 | 3.8 | 124.0 | 7.0 | 23.1 | 4.9 | 24.5 | 7.1 | 25.7 | 8.5 | | | | | | | | | | |
| Italy | 18.0 | 1.9 | 58.4 | 7.2 | 11.3 | 7.3 | 17.1 | 9.9 | 22.3 | 20.2 | | | | | | | | | | |
| Netherlands | 22.6 | 4.5 | 47.8 | 14.0 | 14.0 | 10.7 | 18.4 | 24.8 | 5.5 | 13.8 | | | | | | | | | | |
| Japan | 23.5 | 0.3 | 39.5 | 0.5 | 13.4 | 0.8 | 8.8 | 0.6 | 11.5 | 0.8 | | | | | | | | | | |
| United Kingdom | 26.6 | 2.2 | 81.6 | 8.6 | 13.8 | 8.5 | 11.2 | 6.8 | 8.5 | 8.6 | | | | | | | | | | |
| South Korea | 24.8 | 3.4 | 64.2 | 8.6 | 12.5 | 7.0 | 12.8 | 8.0 | 7.9 | 5.4 | | | | | | | | | | |
| Spain | 36.0 | 5.3 | 55.7 | 11.4 | 13.5 | 9.4 | 10.3 | 13.0 | 9.2 | 16.8 | | | | | | | | | | |
| Australia | 9.2 | 1.8 | 37.5 | 10.3 | 10.8 | 10.4 | 7.8 | 7.0 | 2.6 | 3.9 | | | | | | | | | | |
| Sweden | 24.8 | 10.3 | 37.1 | 14.1 | 7.7 | 16.6 | 8.8 | 16.6 | 4.4 | 11.8 | | | | | | | | | | |
| Canada | 14.3 | 1.1 | 26.7 | 2.1 | 8.4 | 2.6 | 3.5 | 1.2 | 1.8 | 0.8 | | | | | | | | | | |
| Denmark | 6.8 | 8.3 | 17.7 | 18.0 | 4.4 | 28.9 | 5.4 | 41.8 | 3.7 | 38.6 | | | | | | | | | | |
| Norway | 9.9 | 6.3 | 19.2 | 11.3 | 4.8 | 10.9 | 3.7 | 12.6 | 4.5 | 20.7 | | | | | | | | | | |
| Belgium | 8.3 | 4.4 | 6.9 | 5.2 | 3.3 | 5.2 | 2.2 | 12.3 | 5.2 | 22.0 | | | | | | | | | | |
| Turkey | 3.6 | 2.6 | 11.3 | 9.2 | 3.4 | 12.5 | 6.9 | 28.3 | 0.2 | 1.5 | | | | | | | | | | |
| Austria | 1.9 | 0.8 | 7.8 | 4.7 | 0.5 | 1.5 | 7.5 | 27.1 | 1.8 | 8.2 | | | | | | | | | | |
| Mexico | 4.8 | 1.9 | 14.2 | 5.5 | 2.8 | 3.5 | 2.9 | 5.6 | 3.6 | 9.6 | | | | | | | | | | |
| Switzerland | 6.7 | 2.1 | 17.3 | 6.3 | 4.1 | 6.6 | 2.8 | 4.3 | 1.7 | 3.1 | | | | | | | | | | |
| Chile | 6.4 | 2.3 | 24.6 | 8.0 | 6.7 | 15.6 | 0.5 | 0.5 | 0.0 | 0.0 | | | | | | | | | | |
| Luxembourg | 5.5 | 5.6 | 15.4 | 11.3 | 4.3 | 16.2 | 1.1 | 5.3 | 1.8 | 11.7 | | | | | | | | | | |
| Finland | 7.6 | 6.1 | 12.7 | 11.4 | 2.5 | 6.6 | 4.1 | 10.6 | 0.3 | 0.9 | | | | | | | | | | |
| Portugal | 4.2 | 6.8 | 5.1 | 13.9 | 1.6 | 11.7 | 0.5 | 5.1 | 3.8 | 62.3 | | | | | | | | | | |
| Brazil | 2.9 | 1.1 | 10.4 | 5.2 | 2.2 | 2.1 | 1.2 | 1.6 | 1.9 | 3.1 | | | | | | | | | | |
| India | 5.1 | 0.6 | 13.8 | 1.7 | 2.2 | 1.3 | 0.9 | 0.5 | 1.1 | 0.4 | | | | | | | | | | |
| Ireland | 1.8 | 2.4 | 7.2 | 4.6 | 0.6 | 4.4 | 1.1 | 9.3 | 2.4 | 30.8 | | | | | | | | | | |
| Indonesia | 2.3 | 1.2 | 3.4 | 1.5 | 0.2 | 0.4 | 2.1 | 4.3 | 1.5 | 3.2 | | | | | | | | | | |

Source: Bloomberg, IIF; ordered by the largest ESG debt issuers in 2022ytd

Table 3: List of Countries in the Sustainable Debt Monitor Database

| Emerging and frontier markets (141) | | | | Mature markets (35) | Offshore centers (24) |
|-------------------------------------|-------------------|---------------------|-------------------|---------------------|------------------------------|
| Afghanistan | Egypt | Malaysia | Saudi Arabia | Australia | Anguilla |
| Albania | El Salvador | Maldives | Senegal | Austria | Antigua & Barbuda |
| Algeria | Equatorial Guinea | Mali | Serbia | Belgium | Aruba |
| Angola | Eritrea | Marshall Islands | Seychelles | Canada | Bahamas |
| Argentina | Eswatini | Mauritania | Sierra Leone | Cyprus | Bahrain |
| Armenia | Ethiopia | Mexico | Solomon Islands | Czech Republic | Barbados |
| Azerbaijan | Fiji | Micronesia | Somalia | Denmark | Belize |
| Bangladesh | Gabon | Moldova | South Africa | Estonia | Bermuda |
| Belarus | Georgia | Mongolia | Sri Lanka | Finland | British Virgin Islands |
| Benin | Ghana | Montenegro | Sudan | France | Cayman Islands |
| Bhutan | Guatemala | Morocco | Suriname | Germany | Curacao |
| Bolivia | Guinea | Mozambique | Syria | Greece | Dominica |
| Bosnia & Herzegovina | Guinea-Bissau | Myanmar | Taiwan (China) | Iceland | Gibraltar |
| Botswana | Guyana | Namibia | Tajikistan | Ireland | Grenada |
| Brazil | Haiti | Nauru | Tanzania | Israel | Hong Kong |
| Brunei Darussalam | Honduras | Nepal | Thailand | Italy | Lebanon |
| Bulgaria | Hungary | Nicaragua | The Gambia | Japan | Mauritius |
| Burkina Faso | India | Niger | Timor Leste | Latvia | Montserrat |
| Burundi | Indonesia | Nigeria | Togo | Lithuania | Panama |
| Cabo Verde | Iran | North Macedonia | Tonga | Luxembourg | St. Kitts & Nevis |
| Cambodia | Iraq | Oman | Trinidad & Tobago | Malta | St. Lucia |
| Cameroon | Jamaica | Pakistan | Tunisia | Netherlands | St. Vincent & the Grenadines |
| Central African Republic | Jordan | Palau | Turkey | New Zealand | Singapore |
| Chad | Kazakhstan | Papua New Guinea | Turkmenistan | Norway | Turks & Caicos Islands |
| Chile | Kenya | Paraguay | Tuvalu | Portugal | |
| China | Kiribati | Peru | Uganda | Puerto Rico | |
| Colombia | Kuwait | Philippines | Ukraine | San Marino | |
| Comoros | Kyrgyz Republic | Poland | UAE | Slovakia | |
| Costa Rica | Lao P.D.R. | Qatar | Uruguay | Slovenia | |
| Cote d'Ivoire | Lesotho | Republic of Congo | Uzbekistan | South Korea | |
| Croatia | Liberia | Romania | Vanuatu | Spain | |
| Dem. Rep. of the Congo | Libya | Russia | Venezuela | Sweden | |
| Djibouti | Macao | Rwanda | Vietnam | Switzerland | |
| Dominican Republic | Madagascar | Samoa | Yemen | U.S. | |
| Ecuador | Malawi | Sao Tome & Principe | Zambia | United Kingdom | |
| | | | Zimbabwe | | |

Appendix A: Definitions of Sustainable Debt Instruments

- *Green Bond/Loan*: proceeds from this fixed income security are applied for climate and environmental projects
- *Green Asset-Backed Securities*: instrument's cash flows relate to low-carbon assets or where the proceeds are used in low-carbon asset investments
- *Sustainability Bond*: bond proceeds are applied to environmentally sustainable outcome, a combination of both green and social projects
- *Social Bond*: bond proceeds are applied towards social projects, like promoting social welfare and creating a positive impact within communities
- *Green municipal bond*: bond proceeds enable local government to finance infrastructure projects that help the environment
- *Sustainability-linked bond/loan*: the terms of these fixed income security are aligned with the issuer/borrower's sustainability performance targets with the aim of improving the sustainability profile

Appendix B: Country coverage

Mature markets cover 35 countries, emerging and frontier markets cover 141 countries and offshore centers include 24 countries. See Table 3 for the complete list.