Key figures

- **H1 2022 volumes:** cumulative green, social, sustainability, sustainability-linked, and transition (GSS+) labelled debt reached USD417.8bn, peak in January 2022 (USD108.4bn).

- Cumulative total labelled (GSS+) issuance stood at USD3.3tn at the end of H1 2022; green cumulative at USD1.9tn.

- Q1 was the most prolific quarter for GSS+ volumes in 2022, but green and transition labelled issuance was largest in Q2.

The first half at a glance

Half-yearly GSS+ volumes reached USD417.8bn, which represents a year-on-year (YoY) decrease of 27% against H1 2021. The Russian invasion of Ukraine in February and subsequent European energy crisis exacerbated post COVID-19 inflation impacting bond market dynamics. Rising interest rates and high volatility resulted in decreased bond issuance, including GSS+ volumes.

January 2022 was the most prolific month (USD108.4bn) in H1, representing a 74% YoY increase. The International Bank for Reconstruction & Development issued the largest deal: a sustainability Use of Proceeds (UoP) bond worth just below USD7.2bn. Caisse d’Amortissement de la Dette Sociale issued the largest cumulative volume, with eight social UoP bonds worth USD27.9bn.

In H1, green-themed issuance accounted for 52% of the H1 GSS+ labelled debt with sustainability and social UoP bonds at 21% and 15%, respectively. Transition instruments were less frequent: sustainability-linked bonds took 11% of the H1 GSS+ volumes, while transition UoP bonds represented less than 1%. Transition instruments are gaining traction despite being less well-established than green, social and sustainability bonds. The development of common ground definitions and guidelines for transition finance will play a key role in strengthening the integrity and transparency of the transition bond and SLB markets, paving the way for rapid scaling.
The Sovereign GSS+ Bond Club continued to expand in H1: twelve countries added volumes of USD42.8bn with new bonds or taps. A successful repeat issuer, France, priced the first inflation-linked sovereign green bond. The EUR4bn bond attracted an order book of EUR27.5bn thanks to growing investor concerns over green transition and rising inflation. The bond is indexed to the European consumer price index. This means coupon payments offer investors protection from rising inflation. Hong Kong followed suit in May with a HKD20bn (USD2.55bn), 3-year tenor green retail bond, with a coupon linked to the HKCPI index.

The Philippines and Mexico issued debut sustainability bonds. Denmark was the 15th member of the EU27 to issue a sovereign GSS bond with its 2031 green bond priced in January.

GSS+ volumes were larger in Q1 2022 at USD225.5bn, while issuance in Q2 accounted for USD192.4bn. Green volumes picked up in Q2 reaching USD121.3bn, a 25% increase from Q1. Transition UoP issuance experienced the largest growth in the GSS+ universe, with a 2.5-fold increase on Q1. Substantial issuance of UoP transition bonds came from Japan, which contributed USD1.3bn in H1 2022. This follows the publication of the Basic Guidelines on Climate Transition Finance from the Ministry of the Economy, Trade, and Industry (METI) in May 2021.

Issuance contracted in social (-59%) and sustainability (-50%) themes compared to Q1 while SLB issuance was down by 12% on the quarter.

**H1 2022: Debut sovereign issuers**

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Amount issued (USD)</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippine Government International Bond</td>
<td>1.5 bn</td>
<td>Sustainability</td>
</tr>
<tr>
<td>(United Mexican States) Bonos de Desarrollo del Gobierno Federal</td>
<td>982 m</td>
<td>Sustainability</td>
</tr>
<tr>
<td>Kingdom of Denmark</td>
<td>762 m</td>
<td>Green</td>
</tr>
</tbody>
</table>

**H1 2022: Issuer highlightd**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Largest deal issuer</th>
<th>Amount issued (USD)</th>
<th>Top issuer for cumulative volume</th>
<th>Amount issued (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>Caisse d’Amortissement de la Dette Sociale</td>
<td>6.8bn</td>
<td>Caisse d’Amortissement de la Dette Sociale</td>
<td>28.0bn</td>
</tr>
<tr>
<td>Sustainability</td>
<td>International Bank for Reconstruction &amp; Development</td>
<td>7.2bn</td>
<td>International Bank for Reconstruction &amp; Development</td>
<td>21.0bn</td>
</tr>
<tr>
<td>Green</td>
<td>European Union</td>
<td>6.5bn</td>
<td>European Union</td>
<td>11.8bn</td>
</tr>
<tr>
<td>SLB</td>
<td>Chile Government International Bond</td>
<td>2.0bn</td>
<td>Enel Finance International NV</td>
<td>7.6bn</td>
</tr>
<tr>
<td>Transition</td>
<td>Kyushu Electric Power Co Inc</td>
<td>234m</td>
<td>Kyushu Electric Power Co Inc</td>
<td>429m</td>
</tr>
</tbody>
</table>

**Q1&2 2021 vs. Q1&2 2022**

<table>
<thead>
<tr>
<th>USD Billions</th>
<th>Q1 2021</th>
<th>Q2 2021</th>
<th>Q1 2022</th>
<th>Q2 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>150</td>
<td>100</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Social</td>
<td>250</td>
<td>200</td>
<td>200</td>
<td>150</td>
</tr>
<tr>
<td>Sustainability</td>
<td>200</td>
<td>150</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>SLB</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Transition</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: Climate Bonds Initiative
China, Germany, and the USA were the largest sources of green bonds in H1.

The Commission has made it clear that it does not see fossil gas as green but decided to include it in the CDA because it believes it is needed for the energy transition.

Climate Bonds does not support the use of fossil gas as a transition fuel.

Central banks took further steps to incorporate climate considerations into policy in H1 2022. The European Central Bank (ECB) announced measures to incorporate climate change into monetary policy, including tilting corporate bond holdings. This provides a strong signal to the market and will encourage green bond issuance.

Hong Kong Monetary Authority (HKMA) will also integrate climate risk management into its prudential supervision. With the introduction of principles for the effective management and supervision of climate-related financial risks by the Basel Committee, such action is expected to increase soon.

Green bond issuance highlights

In H1 2022, new green debt instruments recorded in the Climate Bonds Green Bond Database (GBDB) totalled USD218.1bn, a 21% drop compared to the record H1 volumes of USD277.5bn in 2021. This was not unexpected, given post COVID-19 inflation concerns and broader market volatility following the Russian invasion of Ukraine.

While Q1 saw the lowest volumes since Q4 2020, green issuance picked up in Q2, with USD121.3bn, a 25% increase on the quarter. June was the busiest month of the year, closing the first half at almost USD47bn, or 22% of the H1 green-themed volume. This brings cumulative green labelled issuance closer to the USD2tn milestone, at just under USD1.9tn.

Europe continues to lead issuance, China tops country rankings

In H1 2022, Developed markets (DM) continued to generate the largest share of green debt, with over 60% of total issuance. Emerging markets (EM) accounted for a larger share of green-themed issuance in the first half of 2022 (29%) vis-à-vis H1 2021 (20%). Issuance from supranationals (SNAT) at USD19.6bn registered the most impressive increase (up 75% from H1 2021), with extraordinary growth from supranational government-backed entities (1867%).

Volumes from Europe exhibited a 31% decline from H1 2021, but nonetheless constituted almost half of the green segment (USD101.5bn or 47%). Asia-Pacific confirmed second place, with USD74.3bn and a third of the total. North America and SNAT took third and fourth spots with an almost equal share of the market (10% and 9%). LAC and Africa each contributed under 1%.

Issuers from 40 countries (excluding SNAT) priced green bonds in H1 2022. China was the most prolific country by volume (USD48.2bn, or 22% of the total), deal count (190 deals) and number of issuers (116). All three indicators soared YoY, with total amount issued up by 63%, number of green bond issuers up by 59% and deal count by 64%.

This growth rate was largely driven by financial corporates, responsible for USD26.4bn or a 55% share of the Chinese market.

H1 green bond volumes came largely from the private sector.
**Sovereigns maintain momentum**

In the first half of this year, volumes of USD27.4bn in new sovereign bonds or taps were added to the Climate Bonds GBDB. Germany made the largest contribution with USD7.8bn, reopening its 2030 (EUR1.5bn/USD1.7bn), 2031 (EUR1.5bn/USD1.6bn), and 2050 (EUR4.0bn/USD4.5bn) deals. By the end of H1 2022, Germany had raised over EUR36.3bn (USD36.3bn) since initiating its green bond programme in 2020. The German government is planning to issue a new green federal bond in Q3 as part of its strategy to give investors worldwide access to green benchmark bonds and establish a green yield curve.

France followed closely, with its new 2040 inflation linked deal (EUR4.0bn/USD4.2bn) and reopening of its 2039 bullet bond (EUR2.8bn/USD3.2bn). Denmark priced its debut green bond in January (DKK5bn/USD20m), a 2031 maturity. Hong Kong, the Netherlands, Indonesia, and Hungary returned to the market, the latter increasing its presence in JPY with four new tranches worth a combined total of JPY59.3bn (USD581m). Hungary is the only sovereign to have issued green bonds in JPY.

**Social and sustainability bond highlights**

Social and sustainability bonds comprised 15% and 21% of total GSS+ debt captured by Climate Bonds in H1 2022, with USD63.8bn and USD87.2bn respectively. Issuance was down 57% and 13% YoY. Unlike green volumes, social and sustainability issuance registered a decline in Q2, down 59% and 50% from the previous quarter. Newly issued bonds bring cumulative social and sustainability volumes to USD583.9bn and USD622.4bn.

In the second half of this year, Climate Bonds will publish its social and sustainability methodology, which will enable more robust screening and assessment of social and sustainability debt instruments.

**Social**

Europe continues to lead the social theme, generating almost two-thirds of the volumes in H1 2022 (USD41.3bn). Caisse d’Amortissement de la Dette Sociale was the source of 68% of the issuance from the region spread over eight bonds. A decline in social bond issuance was registered in almost all regions, the only exception being Africa, with 3 deals from NMB Bank and Bayport Management, worth 310.8m (<1% of the segment’s volumes).

France was the country that made the largest contribution, with three issuers responsible for USD29.1bn. With less than a third of France’s volumes (USD8.9bn) but the largest number of issuers (37), the USA placed second, largely driven by local government issuance. SNAT took the third spot, with USD7.1bn generated by eight issuers.

Non-financial corporates demonstrated exceptional growth, their volumes almost doubling from the first half of 2021 to USD4.3bn (7% of social volumes and nine issuers).

Development banks’ volumes exhibited a slight increase, up 10% to USD4.7bn, while issuance from local governments remained broadly flat YoY, with USD6.2bn. Government-backed entities and financial corporates held the largest share of issuance, with USD37.3bn and USD11.3bn (respectively 58% and 18% of the total). Volumes from both issuer types were down YoY.

The number of currencies rose to 18, versus 17 during the same period a year earlier. Hard currencies represent 98% of the market, EUR and USD being the currencies of choice for social issuers (46% and 38% of volumes). There was only one change from H1 2021 to the composition of the top three currencies: KRW was replaced by AUD, with 12 bonds worth USD2.4bn.

**Sustainability**

In the first half of this year, Climate Bonds identified a total of 110 issuers of sustainability bonds spread over 30 countries. SNAT, USA and South Korea continue to hold on to the top three positions. Their share of volumes was slightly more concentrated, at 55% against 52% in H1 2021. Saudi Arabia was a newcomer to the sustainability market, with the kingdom’s largest lender Saudi National Bank’s debut sustainability sukuk worth USD750m, the first sustainability bond from the Middle East.
SNAT tops regional rankings as well, with one-third of social-themed issuance (USD29bn). The largest single deal was AUD-denominated sustainability bond issued by the World Bank (IBRD), amounting to USD7.2bn.

Despite only experiencing a marginal increase in volume YoY to USD33bn, development banks continued to be the leading issuer type. While government-backed entities saw the largest decline (42%), with USD2.5bn worth of volumes sourced from eight issuers, the largest growth was registered by sovereign issuers (32%). Four countries contributed to the segment’s growing volumes: Chile and Andorra, which returned to the market with USD4bn and USD567m respectively, and Philippines and Mexico, which debut sustainability bonds worth USD1.56bn and USD981m.

**Transition and sustainability-linked bond highlights**

**Policy measures in China and Japan support growth of transition bond market**

The SLB market continued to grow in H1 2022, with new issuers and repeat issuers using the format to define and signal to investors their transition pathways.

The SLB segment saw rapid YoY growth in Q1 and a more muted Q2 bringing H1 2022 cumulative issuance to USD46.6bn, still an increase of 5.2% YoY. H1 2022 also saw 23 transition bonds from 17 issuers, worth USD2.1bn. All but one of which are first-time issuers under the transition label. Except for long-time issuer EBRD’s SEK1.9bn (USD209m) issuance in January, all 2022 deals originated from Japan and China’s transition finance programmes, targeting hard-to-abate sectors like steel, chemicals, aviation, as well as some issuance from utilities.

Climate Bonds has completed the public consultation on its Cement and Basic Chemicals criteria, and its Steel criteria is open for public consultation until 22 August 2022.

**SLB issuers favour GHG emission targets**

While issuers have the freedom to decide which Key Performance Indicators (KPIs) to tie their SLBs to, most issuers choose GHG emission targets to demonstrate their commitment to transitioning towards net zero.

H1 2022 saw 58% of SLB volumes tied to GHG emission targets up from 52% during the same period in 2021. Q1 2022 marked the highest share of such SLBs, with 61% tied to GHG targets. An increasing number of GHG targets cover all three scopes of emissions with 26.7% of H1 2022 SLB GHG targets including Scope 1, 2, and 3, just below the historical average of 28.2%.

This commitment varies among industries with 61% of communications SLBs covering all three scopes, as well as 44-4% of real estate ones, 47.6% of financials, but worryingly, only 27.9% of oil and gas and 15.2% of gas utility SLBs. Climate Bonds urges SLB issuers of all sectors, including fossil fuel-reliant sectors such as oil and gas utilities to include Scope 3 emissions in their SLB targets, to clearly demonstrate to investors the ambition and credibility of their transition plans.
USD27.2bn of SLB debt was tied to GHG emissions in H1 2022

SLB GHG emission scope coverage varies significantly across industries

Sustainability-linked bonds

Transition bonds

Policy lends clarity on transition bonds

The use of the transition label to identify financing to help decarbonise hard-to-abate sectors is appropriate and useful – however some of the definitions of hard to abate has not been standardised internationally. Climate Bonds has identified and developed criteria for the Steel, Chemicals, and Cement sectors. Financing required to transition utility companies is well suited to green UoP bonds, and thus its role in the transition finance market is debatable. Coal decommissioning or retrofitting transmission and distribution networks for hydrogen for example, could be powerful applications of the transition label, while financing to develop clean coal or to reduce emissions from the production of oil and gas, are not suitable, as they lock-in assets that are not compatible with the IEA’s NZE2050 vision.
Taxonomies around the world

The success of the taxonomy is reflected in the increasing number of countries and regions following the Climate Bonds Initiative, China and EU footsteps and developing a framework for the classification of sustainable investments. Currently, over 20 jurisdictions have or are in the process of establishing a sustainable finance taxonomy. Although there are differences in the taxonomy development processes, the common aim is to provide transparency and clarity for the financial market with regards to investments that support the achievement of the goals set by the Paris Agreement as well as broader, global sustainability agenda.

Notable developments in H1 2022

**Colombia** – Colombia became the first LATAM country to publish a green taxonomy in April 2022. The taxonomy excludes all fossil fuels, including natural gas in the energy sector. The sectors of land use (Agriculture, Forestry and Livestock) incorporate multiple environmental objectives simultaneously to ensure a holistic approach.

**EU** – following the adoption of the Delegated Act that outlined technical screening criteria for activities that contribute to climate change mitigation and adaptation, at the beginning of 2022 the EU has adopted the Common Delegated Act that determined the place of nuclear energy and fossil gas in the energy sector. The sectors of all fossil fuels, including natural gas in the energy sector. The sectors of transition or specific sectors (e.g., electricity generation from gas).

**Singapore** – In May 2022, the Green Finance Industry Taskforce, convened by the Monetary Authority of Singapore, published detailed thresholds and criteria for economic activities in the energy, transport, and real estate sectors for public consultation. The taxonomy applies a traffic-lights system approach aiming to put forward a methodology to classify green, transition, and harmful activities. Criteria for remaining sectors including industry and agriculture will be presented soon.

**South Africa** – in April 2022 South Africa concluded its two-year-long taxonomy development process by publishing the first edition of Green Finance Taxonomy. Further work will be carried out to address outstanding issues such as these related to transition or specific sectors (e.g., electricity generation from gas).

**Interoperability – the challenge for global climate finance flows**

Taxonomies around the world are tailored to match national priorities while sharing common features such as goals, science-based targets, or dynamic nature. Local taxonomies reconcile the net-zero pathways and economic objectives of each of the countries. While such differentiation is necessary for the taxonomies to offer the actionable guidance for the decarbonisation process, the emergence of national and regional taxonomies may lead to market fragmentation that can hinder cross-border flows of green and sustainable capital. Such risk requires solutions aimed at increasing interoperability of taxonomies and thus at enhancing their usability for international investors. This issue has been identified as one of the priority focus areas for the EU’s International Platform on Sustainable Finance, resulting in the presentation of the Common Ground Taxonomy and further work on harmonisation approaches.

**Transition taxonomy – the next milestone for sustainable finance**

Given the scale of the decarbonisation challenge, there is an ongoing debate on how to use and design taxonomies for them to support not only activities that are at the outset green, but also to guide the transition of carbon-intensive activities. Although, following the EU’s approach, several taxonomies (e.g. South Korea, Vietnam) include transitional activities in sustainable finance taxonomies (e.g., manufacturing of cement), to date, none of the approaches have allowed for taxonomy development to fully encompass all the opportunities offered by the mainstreaming of transition finance. Currently, a traffic-lights approach is the most broadly applied solution (e.g. Singapore, Indonesia, ASEAN), however there is no global consensus as to how to define different performance tiers. Green, amber, and red definitions in the Indonesian taxonomy are defined through compliance of the do no significant harm principle, while in Singaporean taxonomy through the level of contribution to climate change mitigation objective.
JERA’s JPY2bn (USD15.7m) transition bond

JERA is a joint venture between Japan’s first and third largest energy companies, and collectively counts as the country’s leading corporate CO₂ emitter, responsible for about 15% (169 MtCO₂e) of Japan’s total annual emissions. The UoP of this bond was earmarked for two purposes:

1. Decommission of inefficient thermal power plants, with the aim of replacement with high efficiency power plants
2. Demonstration of fossil fuel and ammonia/hydrogen co-firing projects.

Climate Bonds encourages JERA and other potential utility-sector transition bond issuers to raise their level of ambition: while the decommissioning of coal plants by 2030 is worth support and excitement, we strongly oppose the use of combustion plants, as well as the continuation of ultra-supercritical (USC) coal plants, neither of which aligns with a net zero future. To meet its decarbonisation pledges and commitments, JERA needs to urgently re-frame its transition plans around net-zero targets, as well as to increase its share of power generation from renewables.

JERA’s thermal plants make up some 15% of Japan’s total GHG emissions, and their transition plans currently rely on the use of ammonia and hydrogen co-firing thermal plants. This is not in line with a net-zero transition, as while a 100% ammonia or hydrogen thermal plant could produce no carbon emissions, it does release large amounts of nitrous oxide (NOₓ), a greenhouse gas 298 times more potent. Furthermore, the production of ammonia and hydrogen both require high levels of energy and release CO₂, all while there is no commitment from JERA to only use green ammonia or hydrogen.

Climate Bonds recognises that Japanese geographical challenges make ammonia and hydrogen attractive alternatives, but JERA should not rely on ammonia and hydrogen co-firing for the core of its power generation to meet its net zero targets. We encourage JERA to instead invest its and the Japanese government’s capital in renewable energy sources, such as offshore wind. Currently, renewable energy counts for about 1% of JERA’s total installed capacity.

Endnotes
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