Key figures

- Combined labelled issuance of Green, Social and Sustainability (GSS), Sustainability-linked and Transition debt reached nearly half a trillion (USD496.1bn) in first half of 2021, peak in March 2021.

- Cumulative total labelled issuance stood at USD2.1tn at end H1 2021; cumulative green at USD1.3tn.

- Green bonds to reach 2021 forecast USD450bn; halfway at USD227.8bn at end of H1.

- Trillion in annual green bond issuance within reach for 2023.

The first half at a glance

Labelled issuance highlights – a record-breaking period throughout

Total volumes for the labelled sustainable debt market – including labelled Green, Social and Sustainability (GSS) bonds; Sustainability-linked bonds (SLB) and Transition bonds – reached nearly half a trillion (USD496.1bn) in the first half of 2021. This amount represents 59% year-on-year growth from the equivalent period in 2020. It also sets the market on track to reach record highs this year after a 2020 total of nearly USD700bn.¹

March sees H1 2021 issuance peak

H1 2021 labelled debt issuance reaches nearly half a trillion

Labelled issuance: Five-year growth

Sustainability-linked bonds paving the way
**Positive signals on the road to COP26**

New product development in the sustainable finance space is extensive, with Climate Bonds Partners BlackRock and State Street Global Advisors (SSGA) introducing new suites in H1 2021. BlackRock’s EM focused active BGF Emerging Markets Impact Bond Fund employs norms-based screening, along with a proprietary GSS taxonomy and ESG integration in issuer-level analysis. SSGA’s new State Street Sustainable Climate Bonds Funds range uses Climate Bonds’ data as an input into the fund methodology to scale up green bonds, along with a proprietary screening to help mitigate and adapt for climate impact and exclude controversial issuers. Examples of other recent product additions include green ETFs from Horizon ETF and L&G.

Central bank action and taxonomies are set to encourage more green investments. Bangladesh’s Central Bank started off the year with legislation mandating the nation’s banks and other financial institutions to devote a minimum of 2% of their loans towards green projects and 15% to a wider “sustainable” definition. China followed suit, announcing plans to incorporate climate change into its monetary policy framework and to encourage financial institutions to extend low-carbon credit via preferential interest rates and special lending facilities.

In the UK, the Bank of England announced a change to its mandate to include environmental sustainability and net-zero transition. Its bond-buying program is set to include green bonds by the end of the year in line with the UK’s environmental pledges. Its European counterpart ECB recently concluded its strategy review and proposed significant changes to the way monetary policy instruments are used to manage climate risks. The ECB is also taking integration of climate risk a step further by seeking to add a dedicated climate scientist to its team.

The EU Taxonomy Delegated Act and updated People’s Bank of China Green Projects Catalogue were released on the same day in April 2021, signalling increased international coordination to address climate change. In the US, the change in administration has brought about increasingly positive signals including via the Biden Summit that the President hosted in April. The country has since made progress on a firmer climate target, and towards integrating sustainability considerations into its financial regulatory framework, including through the SEC. We provided detailed analysis of recent developments in North America in our latest report. All eyes are on COP26 Stakeholders across sectors and nations are looking toward the COP26 to be held in Glasgow this November after being postponed from 2020 due to COVID-19. This year’s COP will be particularly influential as countries revise their Nationally Determined Contributions (NDC) for the first time since the 2015 Paris COP21. Some positive signals are already there, as for example the Chinese government announced its target to reduce energy consumption by 13.5% and carbon emissions by 18% (both per unit GDP) by 2025 as part of its 14th Five Year Plan (FYP) – building on its prior announcement of aiming for net neutrality by 2060. The USA also updated its NDC, which now stipulates a halving of emissions by 2030 as well as a target for a zero-carbon electricity sector by 2035 and a net-zero economy by 2050. The ongoing changes to international policies and markets has piqued great interest in the sustainable finance space, not least due to their potential to give rise to an exponential increase in sovereign GSS bond issuances.

**Green bond issuance highlights**

Issuance of green debt instruments continued to grow in the first half of 2021, with volumes included in the Climate Bonds’ Green Bond Database in this period more than doubling to USD227.8bn compared to H1 2020 – a record for any half-year period since market inception in 2007. In the first half of this year, green issuance reached the equivalent of more than three-quarters (76%) of full-year 2020 volume, and is past halfway of our 2021 year-end baseline forecast of USD450bn. This growth rate brings cumulative green bond volume to USD3.3tn. Our analysis suggests that even with a relatively modest growth rate, the annual issuance volume of green bonds could cross USD1 trillion in 2023.

Developed markets drive growth led by the USA

Overall, DM countries contributed 76% of green bond issuance in the first half, (+1% vs H1 2020). The share of EM countries grew marginally from 18% to 19% between H1 2020 and H1 2021. SNAT issuance made up 4% of the volumes (-3% from H1 2020).

Europe was the top issuing region overall, more than doubling (107% YoY volume growth) compared to the first half of 2020. This translated to USD119.2bn of green debt (52% of the total volume) from 352 issuers. More than half of the European volume came from financial and non-financial corporates (30% and 22%, respectively). The Asia-Pacific region also showed impressive development, growing by 161% year-on-year (USD51.9bn versus USD19.9bn in H1 2020). As noted in our dedicated analysis from April, the outlook for North America green bonds is bright and the H1 trend reaffirmed this with volumes up by 83% from USD23.1bn to USD42.1bn. Green issuance from Latin America & the Caribbean remained unchanged, amounting to USD4.5bn and making up 2% of overall green debt in the H1 2021. There was no new issuance from Africa in the first half of the year.
H1 2021 green debt issuance: top 15 countries

Non-financial corporates generate over a quarter of H1 2021 green debt

In terms of countries, issuers from the USA took the largest share of volume (17% or USD37.6bn) and number of deals (495). Germany placed second with USD28.5bn (13% of issuance volume) and 302 deals. France and China took the third and fourth spots, with similar volumes (USD22.8bn and USD22bn respectively, each representing 10% of issuance) but a different number of deals (20 and 92 respectively). Spain rounded out the top 5, with USD11.7bn (5%) and 151 deals. In total, issuers from 47 countries (excluding SNAT) executed deals in H1 2021.

Corporate debt issuers continue on a green path

Green debt issuance from non-financial corporates was up 162% year-on-year to USD64.7bn (H1 2020: USD24.7bn), with American energy company NextEra Energy and digital infrastructure company Equinix issuing the largest individual deals (USD1.5bn and USD1.3bn respectively). The former funded renewable energy generation and battery storage projects in a seven-year green bond, while the allocation of proceeds for Equinix’s green bond included certified green buildings, renewable energy projects, water and waste management, and clean transportation.

With its three deals combined (USD3.1bn), Spanish CaixaBank was the largest financial corporate issuer, contributing 6% of the segment’s volume. Groupe BPCE (France) issued the largest individual deal (USD1.8bn) from this issuer segment, with proceeds solely dedicated to financing green buildings.

Green issuance from government-backed entities totalled USD35.1bn for the first half of 2021, up 31% from H1 2020, with the largest individual deals issued by Société du Grand Paris and Dutch TenneT Holdings (USD2.4bn and USD2.2bn respectively). US issuers combined constituted 13% of the segment’s volumes, closely followed by France with 12%.

The Republic of France was the top sovereign issuer, with three deals (one initial and two taps) totalling USD12.9bn and making up over half of the segment’s issuance. Germany’s green Bund issuance followed at USD7.3bn in H1 2021.

Certified Climate Bonds (CCBs) accounted for 8% of the half-year volumes (-21% year-on-year). Certification was awarded to 33 issuers from 18 countries. The largest H1 certified deal came from China Development Bank in March, amounting to USD3.1bn (16% of CCBs) with proceeds split between low-carbon transport (rail), solar and wind power generation projects. Another large CCB was the aforementioned Société du Grand Paris USD2.4bn bond from April (13% of CCBs). The third largest in this category was the USD1.8bn covered bond from DNB, issued in January.
Social and sustainability issue highlights

Whereas green bonds are classified in accordance with the Climate Bonds Taxonomy, social and sustainability (S&S) bonds raise funds for projects with broader positive impacts across the spectrum of the Sustainable Development Goals (SDGs) and beyond specifically climate-related objectives. Their use of proceeds are classified in accordance with the respective labels: variants of the sustainability label describe a combination of green and social projects, activities, or expenditures (e.g., sustainable; SDG; SRI; ESG, etc.), whereas social labels are exclusively related to social outcomes (e.g., pandemic, housing, gender, women, health, education, etc.).

In future, Climate Bonds will seek to integrate a comprehensive social taxonomy – likely adapted from work underway via the International Platform for Sustainable Finance – to enable more robust screening and assessment of social and sustainability debt instruments.14

Social and sustainability volume on the rise

S&S bonds comprised 47% of total sustainable labelled debt issuance with USD233.3bn issued in H1 2021, bringing total S&S issuance since 2006 to USD887bn. The market is growing swiftly: issuance was up 18% year-on-year (H1 2020: USD146.6bn).

Bonds issued under the Social theme saw the sharpest increase, as their volume quadrupled in H1 2020 versus H1 2020 from USD36.8bn to USD146.6bn. Sustainability bond issuance also recorded 20% of year-on-year growth. Social bonds related specifically to funding COVID-19 mitigation and/or recovery were not issued in the first half of this year, while in the first half of 2020 they amounted to USD88bn.

Public sector issuers are active in funding the SDGs

Government-backed entities were the most common issuer type, constituting 56% of S&S issuance in H1 2021. Financial and non-financial corporates represented 14% and 13% of the segment’s volume in this time period, respectively. Development banks followed closely with 12% of issuance. The smallest shares of S&S volume in the first half of this year were reported by local governments (4%) and sovereigns (1%).

The European Union was the largest issuer of Social debt thanks to the continuation of its SURE programme, with a total of USD56.1bn representing just under one-quarter of total S&S issuance. The top Sustainability issuer was the World Bank (IBRD), with USD7.7bn contributing 3% of S&S volumes.

Transition finance highlights

Though green and sustainable bond markets continue apace, with issuers increasingly engaging in raising funds for projects that deliver environmental, climate or social benefits, the existing transition is not yet being undertaken at sufficient scale insufficient to deliver on the goals of the Paris Agreement.

Currently only a small number of economic activities are low carbon (i.e. with very low, zero, or net negative emissions).15 The majority of organisations have not yet undertaken the review and planning necessary to align their activities with a net zero economy. It is imperative that all do so now. In particular, many high emitting sectors, that form the majority of investment portfolios, will need access to substantial sums of finance to fund their transition.

Amongst investors, the mood is already shifting. A recent planned won bond sale from South Korea’s Samcheok Blue Power (which is building a new coal-fired thermal power plant in the country), received no orders.16

As investors seek to align their portfolios, investing in organisations that have a credible transition plan is becoming more attractive. Clearly then it is imperative for issuers and investors to be able to access and allocate capital in a way that leaves no sector behind, is relevant, and avoids the downside risk of green- or “transition-washing”.

Defining transition

At the heart of this is the need to standardise the definitions and ambition level for transition. To build credibility, attract investors and hence substantially expand the sustainable finance market to fund the transition of the highest emitters, ambitious and robust transition commitments and the ability to deliver on those commitments is important.

Climate Bonds has guidelines on credible transitions. A set of transition principles were featured in the 2020 discussion paper Financing Credible Transitions, and a subsequent series of blog posts.17,18 The overarching characteristics of a credible transition can be summarised as follows:

### Three Common Features for Transition

**Ambitious** – this means in line with 1.5 degree warming limits as defined by the climate science, and delivering action, not just promises

**Flexible** – applicable to whole entities, everything they do, and a range of associated financial products

**Inclusive** – allow all sectors and activities to participate as long as they demonstrate compliance with the principles and framework outline
The focus and starting point of our framework is on a ‘climate mitigation transition’, i.e. the transition that entities, activities and assets need to transform their current operations to decarbonise in alignment with a net zero economy by 2050. Our upcoming report on credible transitions, due to be released in September 2021, addresses transition finance for transforming companies, focussing on the hallmarks of a credible company-wide transition. This lays the foundations for the assessment and certification of instruments like SLBs with their forward-looking, company-wide KPIs, and more broadly for any assessment of the integrity of a company transition.

Below we summarise current examples of the different mechanisms that are already being used in the sustainable fixed income markets for transition at the entity-level (Sustainability-linked bonds) and asset and activity-level (green and transition bonds).

**Sustainability-linked bonds**

Sustainability-linked Bonds (SLB) are forward-looking, performance-based debt instruments issued with linkages to specific Key Performance Indicators (KPI) and Sustainability Performance Targets (SPT) at the entity level. The idea is for issuers to tie their cost of capital, often with a possible coupon step-up penalty mechanism, to these targets. If the targets are met, the issuer is able to obtain preferential pricing whilst demonstrating its commitment to sustainability and – ideally – verifiably improving performance. SLBs can be a useful tool for issuers on a low-carbon transition trajectory as they allow for exposure in this new market, building experience in an entity on target setting. However, issuers should be mindful of the pitfalls around setting credible targets: they should be ambitious and specific to each industry.

**SLB highlights in H1 2021**

The rapid uptake of this instrument type is the result of a broadening range of entities (in particular corporates), seeking access to sustainable finance that is not immediately tied to a specific pool of eligible projects. Indeed, the first half of 2021 saw the SLB market segment exponentially soar. SLB issuance in H1 2021 amounted to USD32.9bn, representing 6% of total labelled debt issuance of USD496.1bn. In contrast, no SLB issuance was recorded in the equivalent period of H1 2020.

### Top 5 Sustainability-linked issuers in H1 2021

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Amount issued H1 2021 (USD equivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Enel Finance International NV</td>
<td>Italy</td>
<td>3.9 Bn</td>
</tr>
<tr>
<td>2. Enbridge Inc</td>
<td>Canada</td>
<td>1.5 Bn</td>
</tr>
<tr>
<td>3. Fomento Economico Mexicano SAB de CV</td>
<td>Mexico</td>
<td>1.5 Bn</td>
</tr>
<tr>
<td>4. Eni SpA</td>
<td>Italy</td>
<td>1.2 Bn</td>
</tr>
<tr>
<td>5. China Construction Bank Corporation</td>
<td>China</td>
<td>1.2 Bn</td>
</tr>
</tbody>
</table>

**Cement**

UltraTech Cement issued India’s first SLB when it brought to market its USD400m deal in February 2021. The financing forms part of UltraTech’s multi-prong plan on climate change mitigation, aiming to reduce the Scope 1 emissions related to the production of cementitious material which accounts for almost 88% of the company’s current carbon emissions across Scopes 1 – 3. The SPT linked to this bond entails a 22.2% reduction in CO₂ intensity (kg CO₂/ton produced) compared to a 2017 baseline by 31 March 2030. The coupon will step up by 75bps if the company misses its sustainability target.

UltraTech’s reduction target and time frame yields a roughly 1.7% annual reduction target, which is comfortably in line with the IEA’s estimate of a Sustainable Development Scenario (SDS) for global cement production (0.8% reduction annually to 2030). The deal carries a SPO from ISS ESG.

In contrast, UltraTech’s Swiss peer Holcim launched its SLB in late 2020, and though the SPT in its framework – also reviewed by ISS ESG – yields a lower per-annum Scope 1 emission reduction to the same time frame vis-à-vis the pathway, its end kgCO₂-e-intensity per tonne of cement produced (t.cem) is lower than that of UltraTech (475kg vs 557kg). Holcim also started off with significantly better performance, demonstrating a 2018 baseline intensity of 576kgCO₂ e/t.cem, versus UltraTech’s 2017 baseline of 716 kg CO₂/t.cem. This disparity underscores the fact that appearances can be deceiving when it comes to SLB targets and KPIs. There is a need to examine the issuer’s historical performance to understand how additional their efforts are, and how much progress has already been made, both of which can be a sign of internal capacity to change and thus lower risk to investors in the short-term. Ultimately though, the key is that each issuer is aligning performance with the appropriate and ambitious pathway for its sector.

In the case of cement, it is worth noting that the IEA SDS would only yield a 24% GHG reduction to 2050. It is thus likely that the scenario – and thus any SLB targets relying on it – will need to be updated with a new pathway to reflect the requisite ambition to get to 50% emission reduction by 2030 and net zero by 2050. The recent launch of the Concrete Action for Climate initiative (C4C), part of the Mission Possible Partnership, will provide a springboard for efforts to create a global market for carbon-neutral concrete by 2050.
Sustainable Debt Market Summary H1 2021  Climate Bonds Initiative

Oil and gas

Canadian multinational oil & gas pipeline operator Enbridge’s issuance of a three-tranche SLB totalling USD3.9bn in June 2021 demonstrates that this funding mechanism is attractive across industries. Enbridge is targeting a 35% Scope 1 & 2 GHG emission intensity reduction to 2030 versus a 2018 baseline, which does not show sufficient ambition to transform the company. The issuer has already achieved nearly 70% of the targeted GHG reduction goal, and most importantly, this target does not extend to Scope 3 emissions. This enables Enbridge to increase production volume in a sector that needs to quickly wind down to limit warming to a maximum 1.5 degrees. The allocation to R&D activities is welcome, but in the absence of any strategy to phase out or retrofit its fossil fuel pipelines – its main asset base – this SLB seems to continue a trend seen for many years from companies in the energy sector where core business activities remain unchanged and new innovations happen at the edges, mainly to improve efficiency of existing operations. Enbridge need to show real ambition to reshape its business model. The SPO for this deal was provided by ISS ESG.

Elsewhere, Italian oil and gas major Eni issued a SLB reviewed by V.E (formerly Vigeo Eiris). Of the four SPTs featured in the framework, perhaps the most crucial is Eni’s commitment to bring its lifecycle GHG emissions (Scopes 1 – 3) to zero by 2050 from a 2018 baseline. This clearly demonstrates higher ambition than the Enbridge framework, and is encouraging to see. Two possible caveats stand out:

- Though the aim is to deliver deep reductions to 2050, Eni is not targeting a halving of its emissions by 2030: the absolute reduction pathway corresponds to -25% by 2030 and -65% by 2050. The residual jump between 2040 and 2050 may need to rely on carbon offsetting.
- Eni notes that it expects the share of natural gas to increase to 90% of upstream revenues by 2050 (from the current 50% of production) to “support the energy transition as a back-up of intermittent sources”. Depending on Eni’s overall revenue mix in 2050, this may also mean that offsets are required to reach the above lifecycle net zero target in this time frame. Additional detail on this is needed as Eni implements its strategy.

Overall the framework appears ambitious and inclusive – two of the three key features of transition that we highlight in our framework below. We will observe Eni’s post-issuance reporting to understand its progress and future direction in detail.

Apparel

Swedish fashion retailer H&M issued a EUR500m (USD606m) SLB in February, the coupon rate of which is tied to the achievement of SPTs based on KPIs that apply to the company’s entire business operations: to increase the share of recycled materials as inputs to 30% by 2025, and to reduce Scope 1 and 2 emissions by 20% by 2025 and Scope 3 emissions by 10% by the same year from a 2017 baseline. H&M’s framework was reviewed by Sustainalytics.

H&M’s intent to reduce virgin material inputs is commendable: this is an important mechanism for reducing the currently unsustainably high life-cycle impacts of its products. However, it is worrying that the company has not attempted to identify an appropriate industry-wide trajectory for recycled inputs despite pledging to become a fully circular business by 2040.

Transition bonds

Transition bonds are designed to allow high emitters to fund their shift towards cleaner, more sustainable operations and strategies on the way to net zero. When thoughtfully constructed, these debt instruments can be pivotal in supporting a global, economy-wide transition to the Paris Agreement targets.

Transition issuance highlights in H1 2021

The transition bond segment remains nascent: we found that only five transition bonds (USD2.2bn) were issued in the first half of this year, and 18 altogether (USD6.4bn).

The most prolific corporate issuer was the Italian energy infrastructure company Snam, whose dual-tranche bond issued for a total of EUR750m (USD909m). The proceeds of the deal will be used to fund emission reductions, renewable energy, energy efficiency, green construction projects and the retrofit of gas transmission network to make it ready for lower-emission alternatives, including hydrogen. All of these activities will contribute to the company’s 2040 carbon neutrality goal. The issuance follows a similar approach to Snam’s UK counterpart Cadent, which we have previously featured.

26 This framework is a great example of a mix of transition activities in a crucial sector, and we welcome it as a valuable addition to this emerging segment of the sustainable fixed income market.

With the issuance of their first transition bond in January, the Bank of China (Hong Kong Branch) demonstrated their commitment to moving the transition agenda forward as the definition of credible transition continues to evolve. Along with financing waste heat recovery and power generation at cement plants, funding to existing natural gas projects was included as part of the offering. Climate Bonds does not consider gas without carbon capture and storage (CCS) aligned with the 1.5°C Paris Agreement trajectory. Previous green bonds issued by BoC have targeted renewable energy, low-carbon transportation, and green buildings, while also being up to 4.5 times oversubscribed, underscoring investor demand. We would therefore encourage BoC to raise its level of ambition for any subsequent issuances carrying the transition label and ensure focus is on eligible projects, for example by funding low-carbon alternatives to gas and/or CCS.

On the heels of Eni’s SLB, the launch of Repsol’s transition financing framework in June was another significant development in this space. The framework incorporated the company’s roadmap to sustainability and its commitment to net-zero by 2050 into its financing strategy.

H&M’s commitment to reduce Scope 1&2 emissions by 20% 2025 is a good start, but it leaves a much larger proportion of reductions to be achieved in the five years after that if halving emissions by 2030 is to be achieved in line with the Paris Agreement. Part of the difficulty here may rest on the lack of an apparel industry transition pathway, but it would nonetheless be good to see further detail on the company’s post-2025 plans. This would allow linking them with the corporate “climate positivity” by 2040 target and help shed light on how much rests on carbon offsetting, which H&M feature as part of their climate strategy. Climate Bonds maintains that credible net zero transition pathways should not rely on offsetting of any kind, and that real reductions in emissions are required and should be prioritised.
This framework is a good starting point: the management can be seen taking direct responsibility for its decarbonisation and sustainability targets through the meaningful integration of climate metrics into executive compensation. The inclusion of Scope 3 emissions is another important element of the framework and positions Repsol as a market leader. We hope to see greater ambition in the next version of the framework, particularly a shift to aligning with 1.5°C (not just 2°C), as well as further detail on how Repsol plans to shift their strategy from an existing oil focus to being a diversified renewable energy producer and provider. Further information on their role in delivering CCS solutions to build on the sector’s deep understanding of the subsurface geology would also be welcomed.

Green bonds as a mechanism for transition

For those activities that are needed beyond 2050 and either already at net zero or on a Paris-aligned pathway to get there, green bonds can be a great way to finance the low-carbon transition. Below are some examples of green labelled bonds financing transition activities to facilitate corporate transformations.

Recent examples of this include Finnish debut issuer: oil company Neste, which completed its benchmark-sized EUR500m (US$590m) green debut in March 2021. The deal represented a litmus test for investor demand with respect to green bond offers from a fossil fuel business in transition, with reportedly positive results as the 7-year bond saw orders from some 120 investors. Neste first tapped into sustainable finance with a EUR1.2bn ESGLinked revolving credit facility in late 2019. The new green bond was the first under the company’s Green Finance Framework, which channels investment into the development and expansion of renewable and circular solutions. The proceeds from the first issuance will go to fund sustainable aviation fuel (SAF) and related R&D, which the company is ramping up production for whilst phasing out its petrochemical production facilities.

This framework is a positive example of how a fossil fuel company can leverage green bonds in transforming into a diversified producer of renewable solutions to multiple industries. Neste’s green bond is included in the Climate Bonds Green Bond Database.

German car manufacturer Daimler issued a second green bond (EUR1bn/US$1.2bn) in March 2021, continuing from a successful debut in September of the previous year. Its green finance framework is heavily geared towards electric vehicle development and production. To complement these efforts, Daimler recently announced its acquisition of an equity stake in green steel manufacturer H2 Green Steel (H2GS), providing an exemplar for what a whole supply chain transition can look like. Daimler’s approach also helps underscore the diversity of funding mechanisms and labels that are available for issuers embarking on credible transition pathways.