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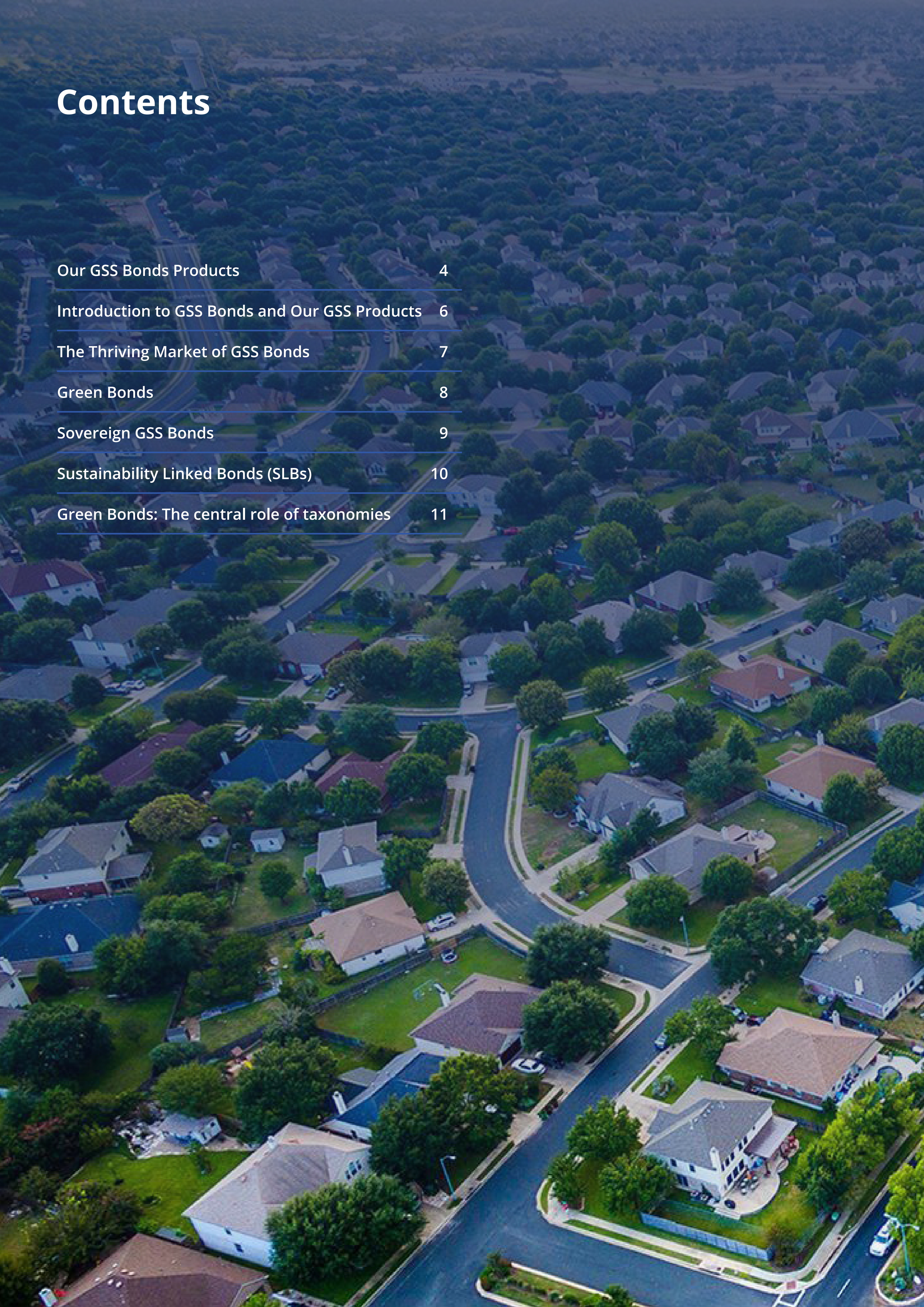
GSS Bonds Market Trends

Financing the Energy Transition with GSS Bonds

March 2022

Contents



Our GSS Bonds Products

Impact Results – We aggregate and provide the actual results of each bond extracted for specific publications of the GSS bond issuer. Data can then be aggregated at portfolio level for reporting purposes.

Carbon Emissions

297'282 Kg of CO2 saved, equivalent to 4'409 trips from Milan to Rome.

Water

16'186 liters of water treated or recycled, equal to **463** showers.

Energy Efficiency

25 MWh saved thanks to energy efficiency projects, equal to **62'553** days of laptop usage.

Renewable Energy Added

0.12 MW of renewable energy capacity added, equal to **361** rooftop solar panels.

Renewable Energy Produced

309 MWh of renewable energy produced, equal to the consumption of **86** households.

Waste

70'336 kg of waste treated, equal to the annual waste produced by **140** European people.

Bond Ratings – Our ratings of GSS bonds are bond-specific. They derive from an assessment of the GSS framework of each individual bond and the ESG rating of the issuer.

Bond Ratings

Issuer — **ESG Rating**

\+

GSS Bond — **Bond Sustainability Rating**

Green, Social and Sustainability Bond Rating

Bond Sustainability Rating

Sustainability Framework

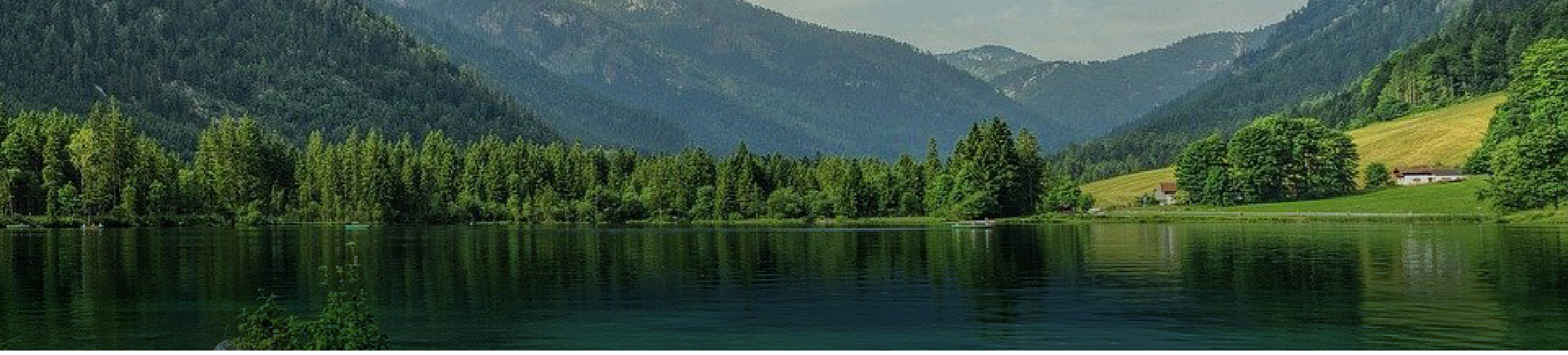
\+

Projects Additionaility

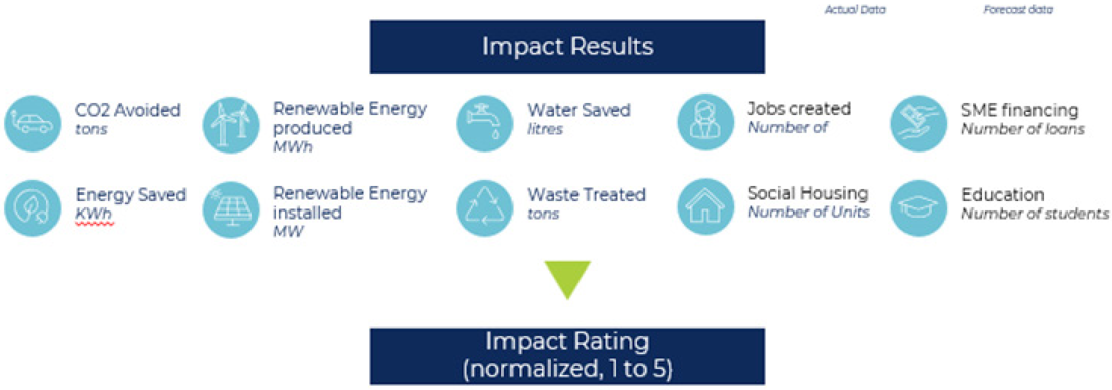
Documents timeliness	Company targets	Projects selection committee	Reporting
Projects quality	Fiacial tools	New vs Old projects	Refinancing characteristics

International Quality Standards

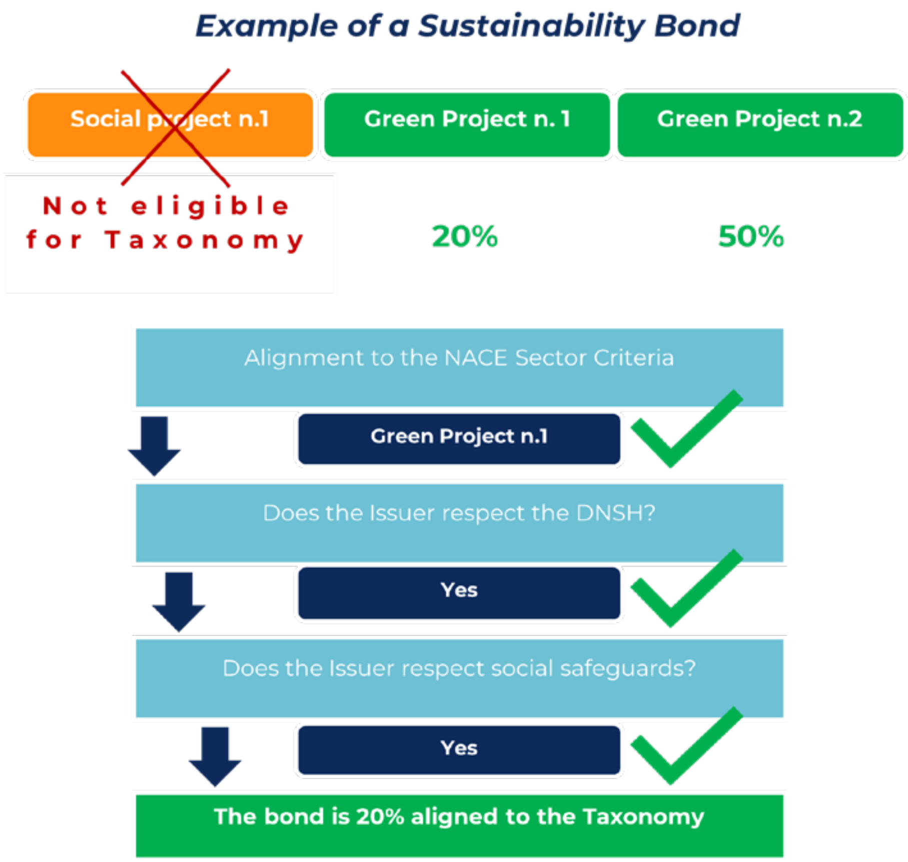
The Green Bond Principles | The Social Bond Principles | The Sustainability Bond Guidelines



Impact Ratings – Our ratings provide an assessment of the use of proceeds of each bond based on their impact results. For all bonds we conduct an ex-ante analysis and, where available, also an analysis of the ex-post impact results realised and communicated by the issuer.



EU Taxonomy Alignment – We asses each environmental project financed by a GSS bond and measure its alignment to the regulatory material. For the criteria of "Do-no-significant-harm" and of "Minimum social safeguards" we rely on issuer-level ESG analytics.



Introduction to GSS Bonds Market Trends

Since 2010, MainStreet's proprietary GSS bonds databases have provided a unique set of tools to investors to measure and manage sustainability risks and KPIs.

Our capabilities focus on 3 main products available for GSS securities:

1. **Bond Ratings –** GSS bonds are analysed according to a proprietary framework that leverages on Issuer-specific and bond-specific factors.
2. **Impact Results & Impact Ratings –** impact data reported by GSS bonds issuers is aggregated an normalized, based on a set of environmental and social variables.
3. **EU Taxonomy Alignment –** environmental projects financed by GSS bonds are measured against the regulatory criteria.

The market of green, social and sustainability (GSS) bonds market is rapidly approaching US$3 trillion with almost US$1 trillion of stock coming from 2021 alone. (Bloomberg)

Green bonds are at the centre of companies' and governments' climate change plans.

An important driver of green bond issuance will be the European Union, who in 2021 implemented a 5-year €240 billion green bond programme to finance the block's economic recovery. Their inaugural €12 billion green bond was the largest ever green bond issued, attracting the largest order book for a green bond to date.

Annual issuances of social bonds shot up by over 1000% in 2020, as the pandemic highlighted the need for large investments in healthcare and jobs support. (Environmental Finance) The social bond market has kept growing strongly since and will soon reach the level of diversification and maturity of green bonds.

Supply

Corporate commitment	Regulation	Government commitment
>20% of the largest 2,000 public companies set net-zero commitments	✔ EU Taxonomy Regulation & SFDR ✔ Reliance on non-financial data	✔ EU's Next Generation recovery plan (Green Bonds) ✔ EU's SURE unemployment plan (Social Bonds) ✔ USA infrastructure plan

Demand

Low-yield environment	Asset Managers & Institutional
The need to "tell a story" to the clients in the fixed income environments is stronger than ever	Reach sustainability objectives leveraging on GSS Bonds

The Thriving Market of GSS Bonds

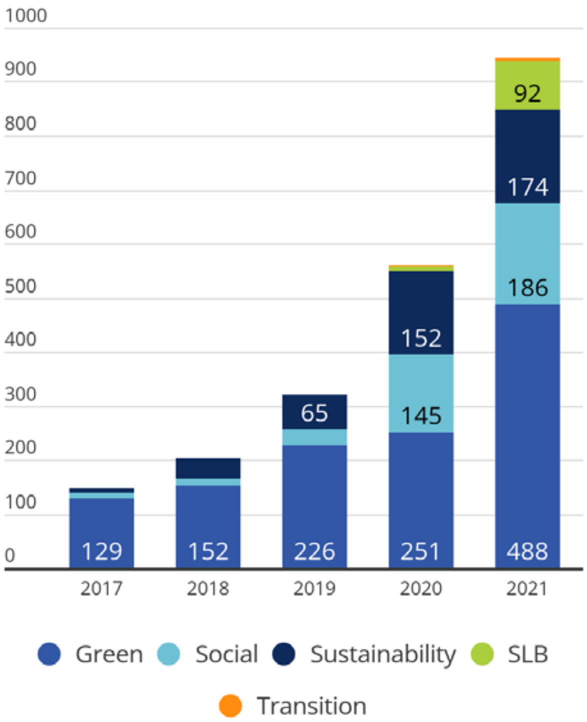
GSS bonds have seen their best year yet

Green, social and sustainability bonds are securities used for green and/or social projects.

29% of Western Europe Investment Grade credit issuance in 2021 was GSS, marking a strong increase from 8% and 9% respectively in 2019 and 2020. (Citi, Dealogic).

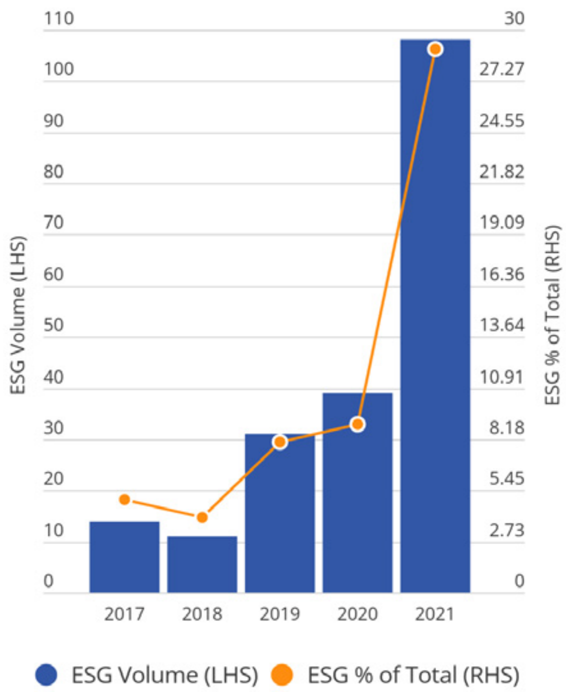
Our view: We expect to see more than US$1 trillion in GSS bonds issued in 2022 driven by momentum from the UN's COP26 summit. As the market becomes more "mainstream" scrutiny on single bonds will increase.

GSS Bonds issued to date (2017-2021)



Source: Citi, Dealogic

EUR Corporate Sustainable Bonds issued (2017-2021)



Source: Citi, Dealogic

Green Bonds

Green bond issuance is beating all expectations, once again

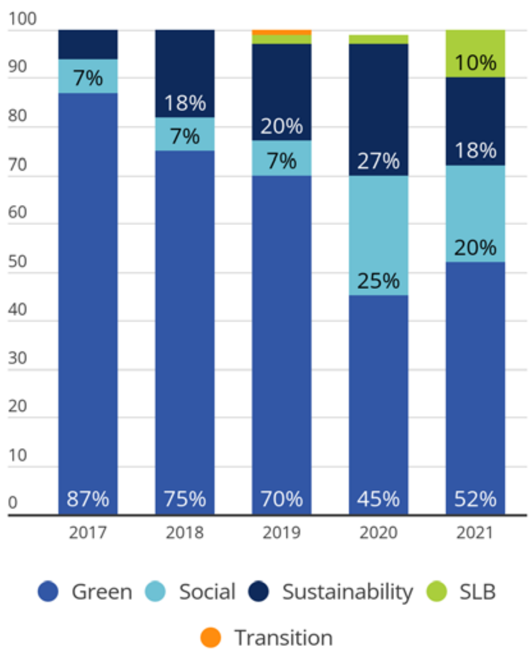
After disappointing single digit growth in 2020, yearly issuances of green bonds increased 94% in 2021, reaching US$490 billion. The total of new green, social and sustainability (GSS) bonds in 2021 was US$945 billion (+69% vs 2020). (Climate Bonds Initiative)

Our view: We expect an uptake in new launches of fixed income funds dedicated to GSS bonds on the back of strong issuances and of higher yields. EU Taxonomy and SFDR are also driving such growth, as these spur the ever-increasing demand for non-financial data.

Trends

Government schemes to support infrastructure investments are likely to drive further growth. The EU's first green bond, with a face value of €12 billion, is specifically applied to the "Next Generation" program. (Read more about the EU Commission recovery plan for Europe here).

Breakdown of GSS Bonds issued by bond type



Source: Citi, Dealogic

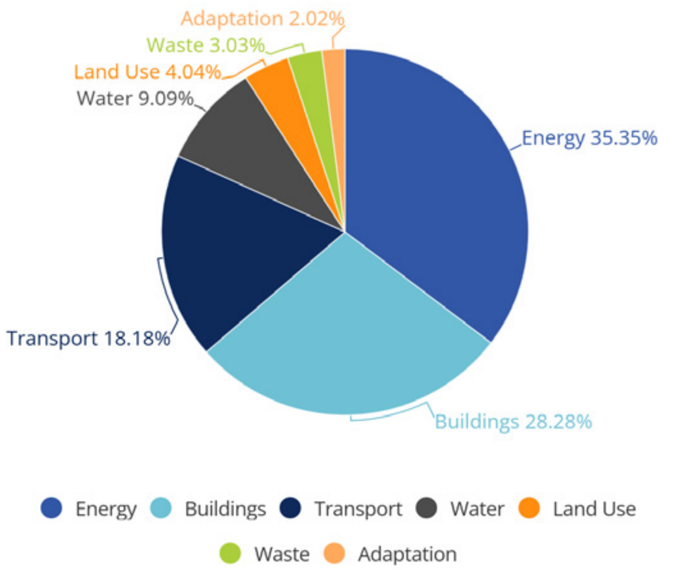
Case studies

Real estate: in 2021, the real estate sector was one of the fastest growing segments among corporate green bond issuers. According to MainStreet Partners internal analysis, total issuance reached US$ 30bn, up 100% from 2020. Equinix, CTP and Boston Properties increased their green bonds outstanding by US$ 1.6bn, US$2.1bn and US$1.7bn respectively.

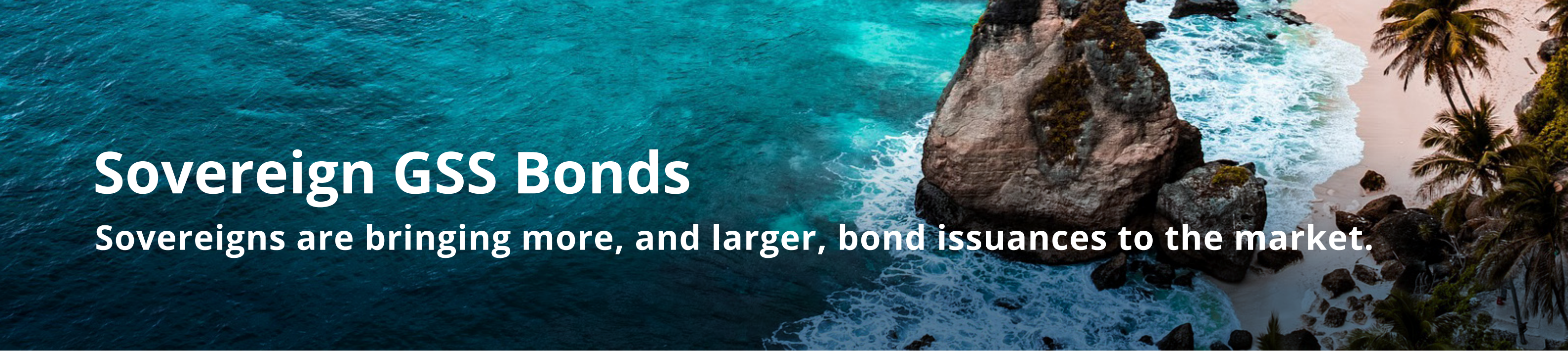
Transport: Daimler AG, Toyota Motor and Ford Motor issued inaugural green bonds in 2021, with proceeds being allocated to the development of electric vehicles and related infrastructure (e.g., EV charging points). Ford issued the largest green bond by a US corporation (US$2.5 billion).

In 2021 AP Moller Maersk issued a EUR 500mln bond to fund the construction of container vessels able to operate on carbon neutral methanol by 2023.

Breakdown of GSS Bonds issued by project category (2014-H1 2021)



Source: Citi, Dealogic



Sovereign GSS Bonds

Sovereigns are bringing more, and larger, bond issuances to the market.

Green, social and sustainability bonds issued by several governments, including large economies such as Spain, UK or Italy.

While the process to bring sovereign GSS bonds to the market is slower than for corporates, governments move at a much higher scale. In 2021 alone the UK, Germany, Italy, and Spain issued €50 billion in green bonds. Given the larger size of sovereign compared to corporates, governments can play a major role in shaping the energy transition through GSS bonds.

Our view: We expect political support and national climate targets to support "greener" budgets and drive sovereign issuances, especially in Europe.

Case studies

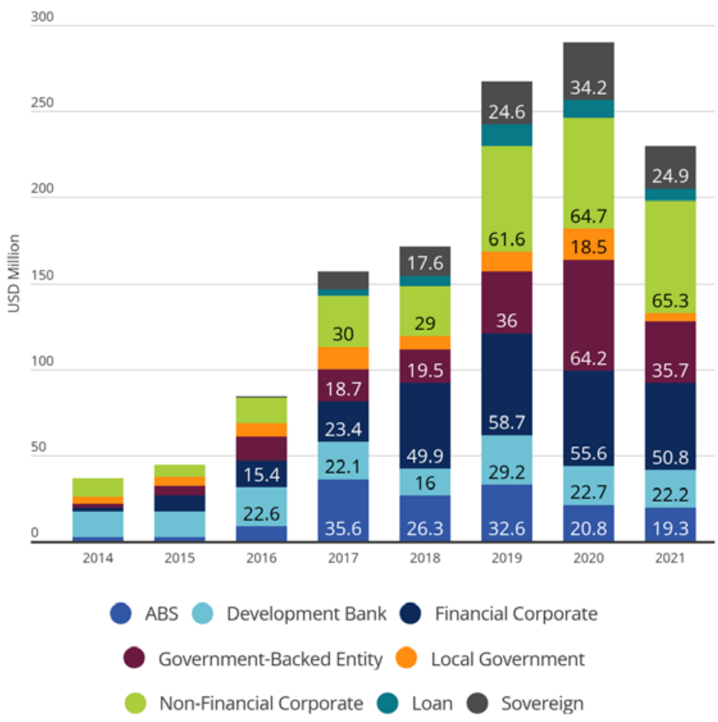
The United Kingdom, Spain and the European Union were highlights of the sovereign GSS bond market in 2021. All three inaugural green bonds attracted record demand, with the European Union green bond's orderbook reaching a €135 billion, making it the largest ever orderbook for a green bond. (European Commission)

Peru and Mexico issued inaugural sustainability bonds in the second half of 2021. Peru used proceeds to implement an ambitious recovery plan following the COVID-19 health crisis.

Trends

Out of the 22 governments who issued GSS Bonds in 2021, 11 were new to the market. Emerging market issuers are the majority (14) and prefer social bonds (50% of their GSS bonds). Developed markets have only been using green bonds. (Citi)

Breakdown of GSS Bonds issued by issuer type (2014-H1 2021)



Source: Climate Bonds Initiative

Sustainability Linked Bonds (SLBs)

SLBs are displaying their potential and disrupting the sustainable debt market

A debt instrument that links its payoff structure to specific sustainability objectives.

Yearly issuance of SLBs in 2020 was shy of US$9 billion. The market saw US$90 billion worth of new bonds in 2021.

Our view: We see increased interest from issuers in "hard-to-abate" sectors, hoping to be labelled as "greenest" among their "brown" peers. In the coming months, the market of SLBs is poised for a steep increase in diversification across sectors, regions, and other characteristics.

Trends

Around 95% of total sustainability-linked bond issuance comes from corporate issuers, most of which are still in Europe. These are either:

Financing their energy transition plans – Sectors that find it hard to access green projects can more easily issue SLBs. 2021 was the time of oil & gas, with bonds coming from Repsol, Eni and Enbridge.

Established green bond issuers – Some experienced green bond issuers are switching to SLBs formats as they have proven their "greenness" to the market. Enel SpA has been a pioneer in both markets. Berlin Hyp was the first financial institution to issue an SLB and has been one of the most active European green bond issuers to date.

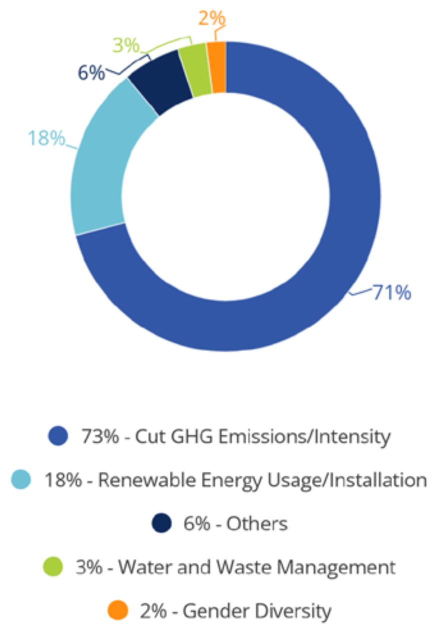
Case studies

There have been two clear trends in the SLB market this year:

Reinforcing of targets from existing issuers – Enel and Tesco both strengthened their SLBs, presenting more stringent sustainability targets: Enel now targets a 64% reduction in direct CO2 emissions per kWh of energy produced by 2023.

Increasing variety of targets – For example, the Irish food company Kerry Group issued an SLB tied to the reduction of food waste across their operations. Similarly, the Italian clothing retailer OVS SpA linked their sustainability performance targets to the sustainability accreditations of their clothing suppliers. Also, Gasunie, a Dutch gas infrastructure company, focused not only on reducing CO2, but also its methane emissions.

Breakdown of SLBs by Sustainability performance targets



Source: Pictet

Green Bonds: The central role of taxonomies

Interest in green bonds has gone from strength to strength in the past couple of years and 2022 looks set to be another strong year of issuance, as inter-regional cooperation aims for consistent interpretation of what is green.

Green bonds had another record-breaking year in 2021, with close to US$500 bn in issuance – almost double the amount raised in the previous year.

That strength is expected to continue in 2022, with green bonds playing a central role in the post-pandemic path back to prosperity – underpinned by the likes of the EU's green investment plan and Build Back Better programmes from the UK and US governments.

Although the sustainable bond arena has diversified dramatically over the past four years – with growth in social, sustainability-linked debt too – green bonds still dominate the market, which tipped $945 billion in total last year.

A virtuous circle for green bonds?

Beyond political commitments towards a clean transition, there are other key factors coming into play that are likely to help boost transparency and further growth in the green bond market.

Central is the role of taxonomies, or rulebooks, springing up across countries and regions worldwide to try and define unambiguously what does and doesn't count as green economic activity. These taxonomies are there to guide companies in making their non-financial disclosures, allowing specialists like MainStreet Partners to assess even more granularly companies' green credentials.

The UK taxonomy, which is well underway and likely to become law at the end of this year, follows much of the structure and approach of the EU's version. But such alignment is not a given.

The difficulty is in the different standpoints taken between regions with regards to issues: for instance, China, the first major economic power to produce a taxonomy back in 2015, includes nuclear power generation as a green activity, while the EU currently does not.

EU-China 'green' cooperation

In a ground-breaking example of climate-focused co-operation, the EU and China started officially working together on the development of a Common Ground Taxonomy (CGT) in April 2021. The CGT will cover 80 activities, focusing on those activities that help mitigate climate change most.

Greater cross-border alignment through the CGT will make it easier for global investors to be clear and consistent in their assessment of green activities in different regions, in turn encouraging green bond issuance.

But the vexed question of nuclear and gas power, and whether the EU should include them in its taxonomy is yet to be resolved. Up until 2021, only one green bond has been issued for nuclear energy (in December 2021), reflecting the continued controversy around the idea that nuclear activities could be considered 'green'. Endorsement from the EU could shift such negative perceptions drastically though, opening a large and untapped market for green bond issuance.

Green Bonds: The central role of taxonomies

Continued

How asset managers are affected

In a further link in this potentially virtuous circle, greater transparency and clarity in green definitions would also impact fund managers.

There has been enormous growth in the range of sustainable/ESG-focused funds in the market, with numbers up an astonishing 51% over Q3 2021 alone, according to Morningstar.

But while it has been easy for managers to make claims about the sustainable credentials of the equities and bonds they invest in, it has been much more difficult for fund investors to be clear on exactly how green a particular holding is.

That is set to change in January 2023. From then on, under the Sustainable Finance Disclosure Regulation (SFDR), Article 9 funds (those with a specific sustainable objective) will have to report on how each of their holdings measures up against the relevant taxonomy.

It is a development that should provide a massive boost to transparency for investors, who will then have reassurance that their alleged green investments are genuinely helping in the fight against global warming.
In time that is likely to stimulate further demand for green bonds.

Our preliminary Taxonomy Alignment results

MainStreet Partners analyses all the green and sustainability bonds in its 2000 securities-strong database against the environmental criteria published over the summer by the EU Taxonomy. This analysis is highly effective in proving the “sustainability” of a portfolio.

Current data produced by MainStreet Partners on over 1000 single bonds shows that, on average, green and sustainability bonds display over 50% of alignment with the EU Taxonomy (objective: Climate Change Mitigation). When you focus specifically on green bonds, which have solely “green” projects, they are the most aligned. For bonds issued for renewable energy projects, for example, average alignment shoots above 60%. Sustainability bonds, on the contrary, display a lower average alignment of 23%. This is inevitable since some of their proceeds are dedicated to social projects, which are not covered by the environmental taxonomy.

This is a fast-moving and exciting phase in the journey towards a world of mainstream sustainable investment and there is much to keep track of. It is clear though, that the scope for growth in the green bond arena is immense in 2022 and beyond.

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All the presented analysis refers to MainStreet Partner's database.

Portfolio ratings consider proprietary security ESG rating by MainStreet Partners.

Outliers have been excluded in all the graphs except in the intro and social thematics sections.

Funds for which it was not possible to verify the alignment with a specific article of the Sustainable Finance Disclosure Regulation (SFDR) were considered as funds that do not integrate any kind of sustainability into the investment process and grouped under Article 6.

Main Street Partners adopts a bonus/malus system that is applied to the weighted average ESG rating of the fund's pillars, which could boost/decrease the final ESG rating of the fund. This explains why on specific graphs there are funds with the top ESG rating without having reached the maximum rating in each pillar.

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