MAINSTREET
PARTNERS

NEW QUARTERLY REPORT

GSS BONDS

Latest insights and upcoming trends

N.2

20TH JUNE 2022

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A TURBULENT START OF THE YEAR

Volatility and Uncertainty weigh on fixed income markets

Since the start of the year, a blend of issues has affected global supply chains and global economic recovery.

A new pandemic outbreak in Asia and the war in Ukraine are amongst the principle causes of uncertainty and rising prices of goods and services.

Across the globe central banks have begun tightening monetary policy, through rate rises and quantitative restriction.

Inevitably, the prospect of rising rates has adversely impacted the wider fixed income market this year, causing yields of bonds to increase, and their prices to decline.

Whilst the wider economic conditions at play have adversely impacted both the Green, Social and Sustainability Bonds market, as well as the wider fixed income market, the extent to this impact differs.

One reason the performance of green bonds differs to vanilla bonds is interest rate risk, pinned down by a bond’s duration, which measures the sensitivity of a bond’s price to changes in the benchmark interest rate.

Comparing a basket of some of the largest traditional bond funds with a basket of equally large green bond funds highlights how the former have a significantly shorter duration than green bond funds (6.5 vs 7.9).

This implies that green bond funds are particularly sensitive to changes in interest rates, and could explain their more volatile performance during their first quarter of 2022 and the slow down in bond issuances, especially of green bonds with greater maturities.

In fact, around 19% of total green bond issuance in 2021 had a tenor of over 20 years, while this has dropped to 8% in Q1 of 2022.

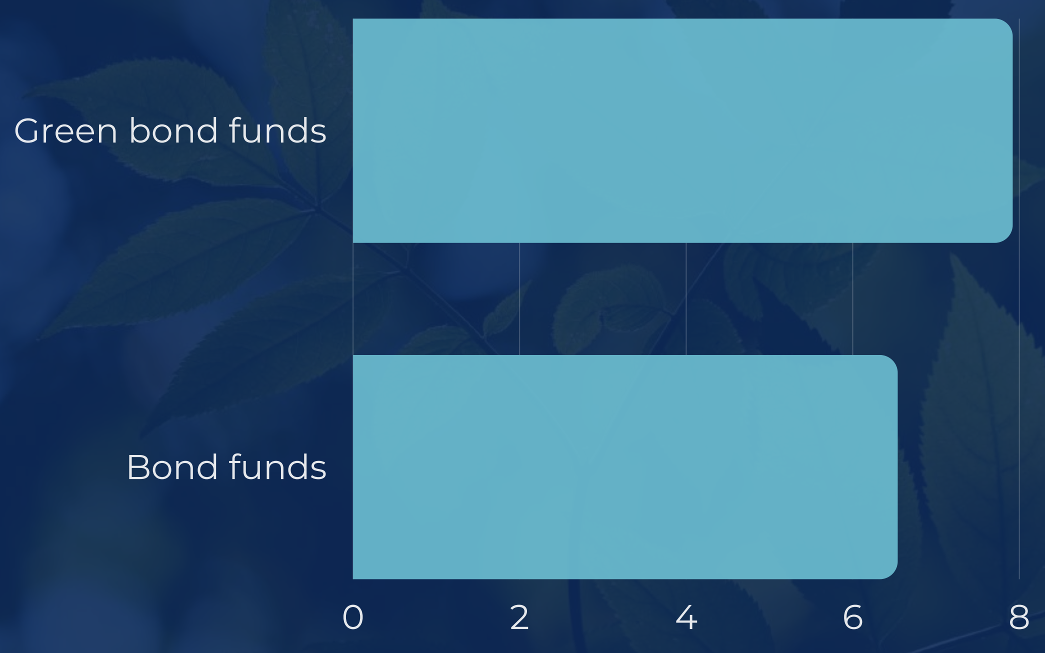
End of Q1 data for this year shows 'sustainable funds' (according to Morningstar) have experienced the sharpest quarterly inflows slowdown in the past 3 years.

The last of the list has been a notoriously large green bond ETF fund, which lost just shy of USD2 billion in assets.

Interestingly, four of the top five and seven of the top ten funds ranked by outflows were ETFs.

Periods of sustained volatility and uncertainty may indeed prompt investors to favour actively managed funds over passive funds.

WEIGHTED AVERAGE DURATION (IN YEARS)



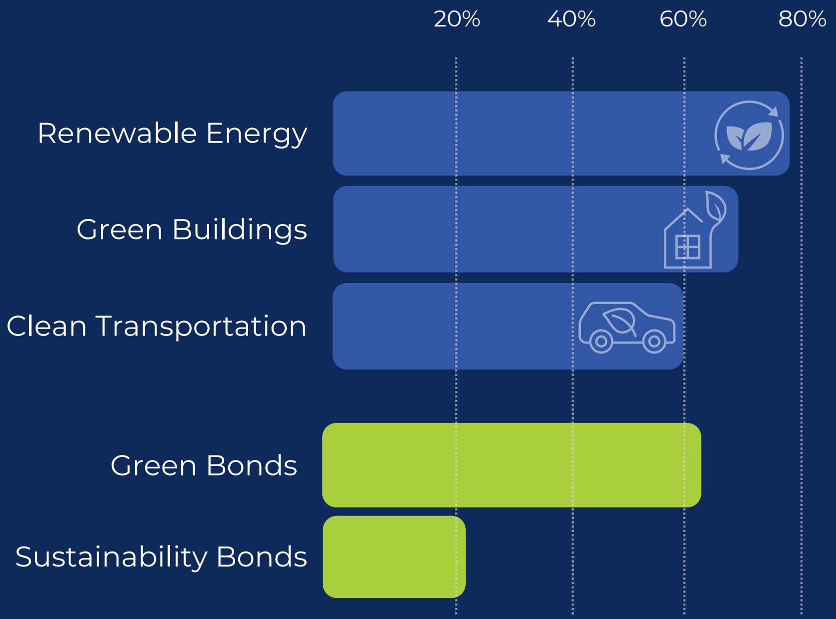
Selected green bond funds: Eurizon Absolute Green Bonds. IShares Green Bond Index Fund (IE), NN (L) Green Bond;
Selected bond funds: Vanguard Total Bond, Fidelity US Bond Index, BNY Mellon Bond Market Index; Holdings as of 31/12/2021

GSS BONDS SCREENED

European Taxonomy

Based on our analysis on USD2 trillion worth of GSS bonds outstanding against the Climate Mitigation Technical Screening Criteria, we have found the following results:

- **Green bonds, on average, display an alignment to the EU Taxonomy of 64%**
- **Sustainability bonds stand at 23%, given that they also allocate proceeds to social projects, not currently covered by the regulation**
- **Renewable Energy projects show the highest activity-level alignment (77%), followed by Green buildings and Clean transportation (68% and 55%, respectively)**



Data displayed doesn't account for the 'DNSH' and Minimum Social Safeguards criteria.

GSS BONDS TAXONOMY ALIGNMENT

Methodology in brief

With current GSS bond disclosures being insufficient, MainStreet Partners has developed a framework to analyse each bond against the Taxonomy Technical Screening criteria, the 'DNSH' and the Minimum Social Safeguards (MSS) criteria.
The Taxonomy Alignment analysis is performed both at issuer and at bond level:

BOND LEVEL

We look at each project financed by a GSS bond, and assess whether it meets the Climate Change Mitigation Technical Screening criteria.

ISSUER LEVEL

We focus on the 'DNSH' and MSS criteria by assessing selected issuers' ESG practices and non-financial performance indicators.

CASE STUDY - ANALYSIS OF A CORPORATE GREEN BOND

ERG SpA - ISIN XS1981060624 | **Alignment = 100%**

TECHNICAL SCREENING CRITERIA

Electricity generation using solar photovoltaic technology (n. 4.1)		Electricity generation from Wind Power (n. 4.3)	
Activity derogated from assessment		Activity derogated from assessment	
Alignment	*Project Weight*	*Alignment*	*Project Weight*
100%	49%	100%	51%

DNSH
Raw ESG + News Based ESG

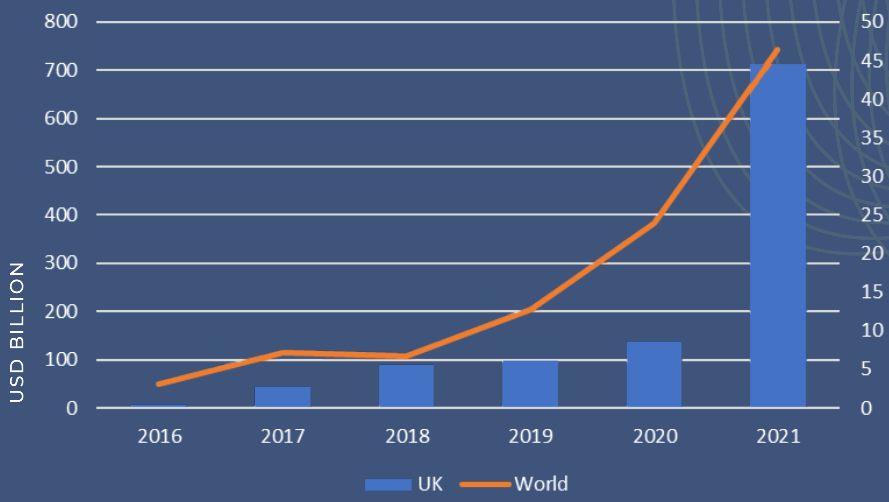
- Biodiversity programs
- Greenhouse gas emissions
- UN Global Compact Signatory

+

MINIMUM SOCIAL SAFEGUARDS
Controversies

- Labour Rights
- Human Rights
- Corruption & Bribery

COUNTRY HIGHLIGHTS UNITED KINGDOM

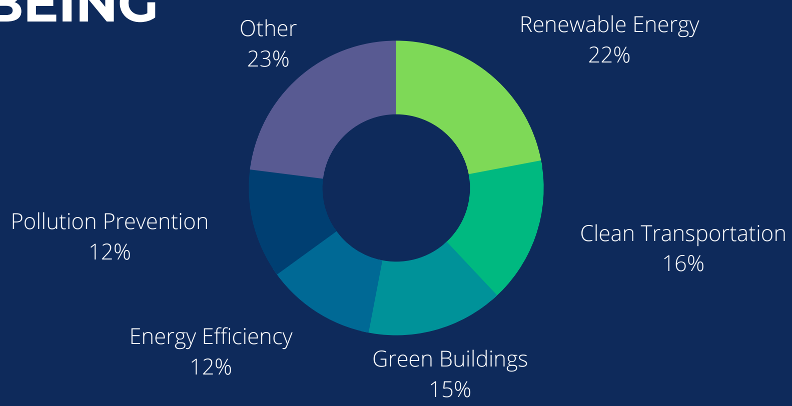


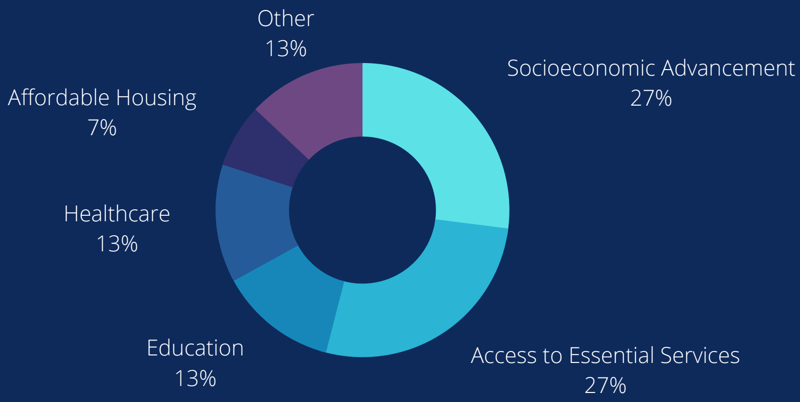
The United Kingdom is the country that has shown the greatest year-on-year growth in annual issuances of GSS Bonds in 2021.

Not only it has seen a 400% increase in amount issued, but it also witnessed 40 new issuers entering the market.
The UK's first sovereign bond attracted a book of over GBP100 billion and was the largest inaugural green issuance ever.

WHERE THE MONEY IS BEING SPENT

Renewable energy is the the most prominent use of proceeds (21% of all green projects), followed by clean transport (16%) and green buildings (15%).



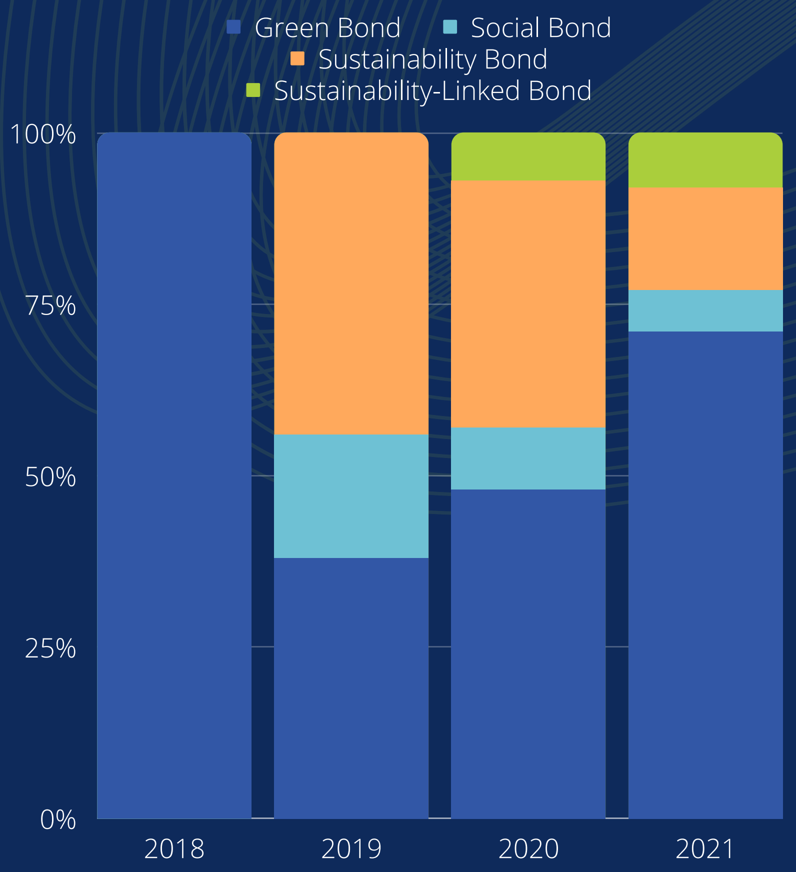


With projects linked to 'real economy' only accounting for 30% of all social projects financed, a strong focus rests upon affordable Education and Healthcare (which are also the main components of Access to essential services). These categories, jointly, account for 53% of all social projects.

SECTORS ISSUING THE MOST GSS BONDS

Commercial banks issued 22 bonds in 2021, up from just 9 in 2020. Utilities and Real Estate are the second, and third, most active sectors. The government sector only accounts for 3, albeit large, bond issuances, which make up 26% of total UK issuance.

The market remains very diversified in terms of issuers, with the most prolific issuers, SSE plc and NatWest, having issued 'just' 5 and 4 bonds in total.



MARKET HIGHLIGHTS

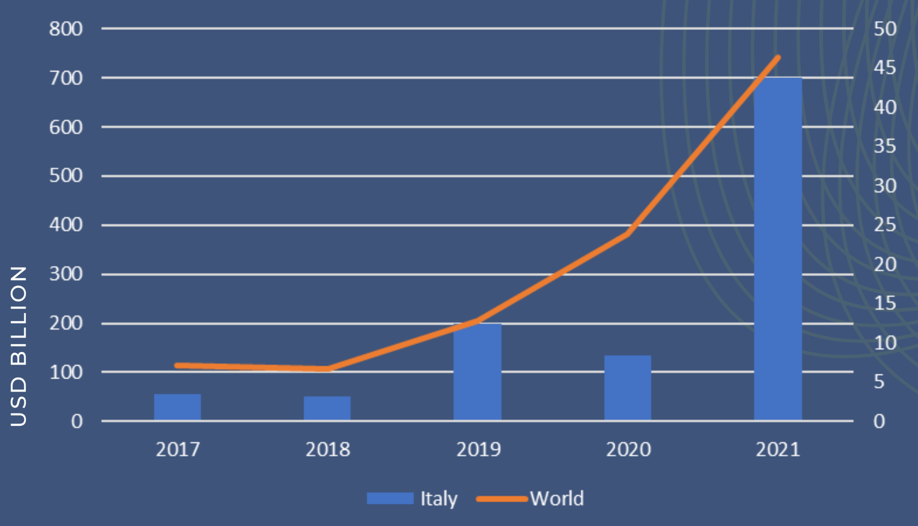
With a Social Bond market that struggles to kick start, green bonds remain the most dominant label. In 2021, 70% of bonds were directed towards environmental projects, up from 48% in 2020. In the same year, SLBs were by far more popular than social bonds (8% vs. 6%, in terms of issuance).

WHAT TO EXPECT

REAL ESTATE COULD SLOW DOWN UK GSS ISSUANCES
Real Estate is an important sector for the UK, even more so with low interest rates. In total, the sector accounted for 7% of all GSS Bonds in the country, almost double what it represents in the global market (4%). A tightening monetary policy environment could weigh on the sector, and the GSS market.

UK SUSTAINABLE FINANCE REGULATION TO SUPPORT GREEN BONDS
Investors will be demanding green debt instruments and issuers will be able to better frame their sustainability strategies in the context of obtaining capital.

COUNTRY HIGHLIGHTS ITALY

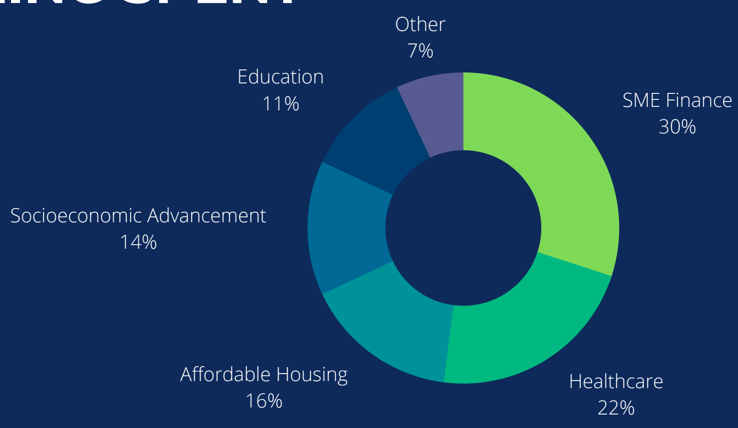


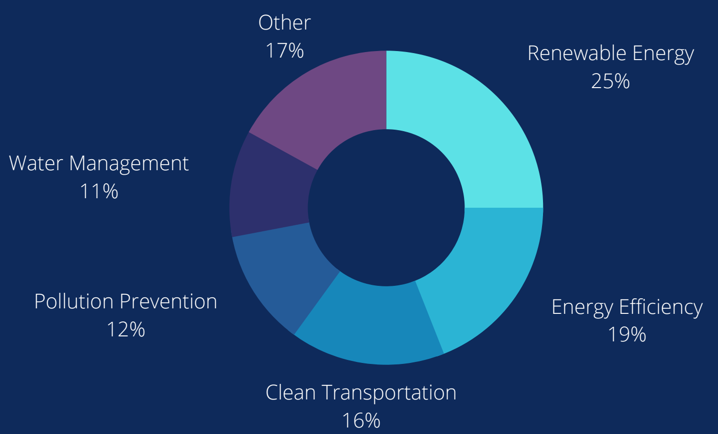
Annual issuance of GSS Bonds jumped from USD8 billion in 2020 to USD44 billion in 2021.

The pace of growth (+400%) has been much stronger than the global market (+90%).

WHERE THE MONEY IS BEING SPENT

Amongst the green projects financed, Renewable Energy is the category that covers by far the largest share (25%). This is likely to be connected to the wider use of green bonds by Italian utilities.
Energy Efficiency and Clean Transportation are also very common project types, at 19% and 15% respectively.





Social projects categories are mostly related to the 'real economy'. SME finance and Socioeconomic Advancement represent together 43% of all social proceeds financed.
Healthcare and Affordable Housing are also top priorities in issuer's financing books. These categories cover respectively 21% and 16%.

SECTORS ISSUING THE MOST GSS BONDS

Government-related entities made up a very large share of Italian GSS Bonds in 2021. Their presence in the country's GSS debt market doubled from 17% in 2020 to 33% to 2021.

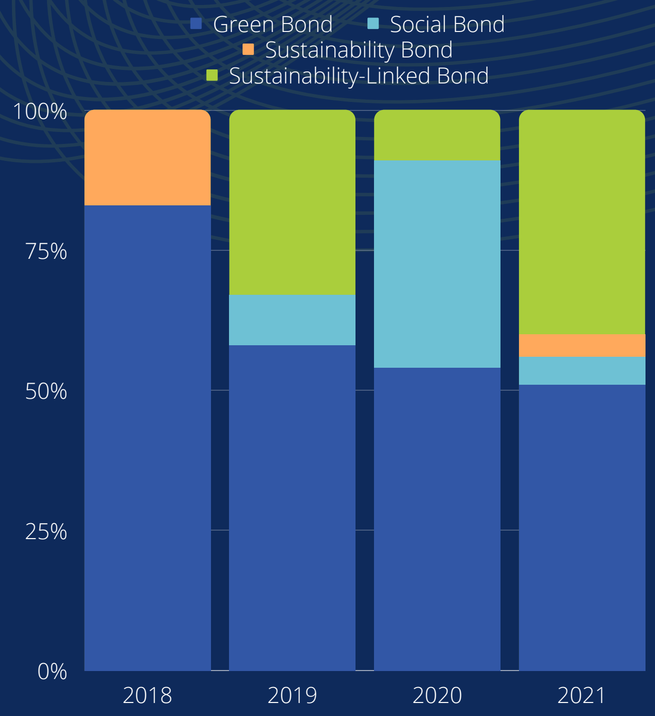
The largest single issuer type last year was, however, Electric Utilities with a 35% share. Diversification is improving, with Utilities actually making 41% of all-time issuances in Italy. This data is in contrast with the much more limited presence of Electric Utilities in the global GSS Bond market (~10%).

MARKET HIGHLIGHTS

Italy is the country with most Sustainability-Linked Bonds.

Since Enel SpA started the market with the first SLB in 2019, several other Electric Utilities followed suit and such development is welcome given the high environmental footprint of the sector.

Italy is also ranked as the 5th largest market for GSS bond, with 4% of total issuances.



WHAT TO EXPECT

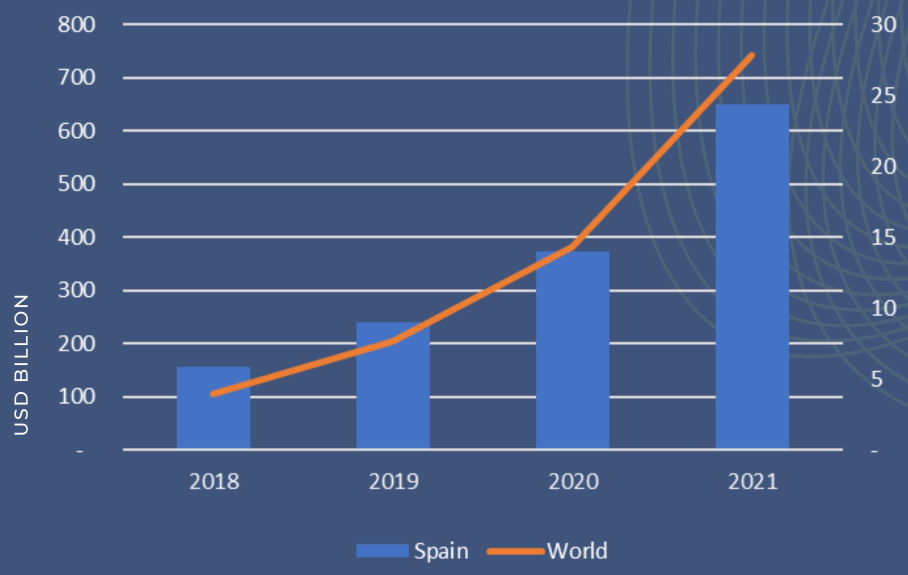
MORE BONDS FROM INDUSTRIALS AND GOVERNMENT ENTITIES

A progressive sectoral diversification would be welcomed by investors. The current stock, however, already promises high alignment to the European Taxonomy given the high number of renewable energy projects funded by Electric Utilities.

SLBs STIMULATE A CROSS-INDSUTRY 'GREENIFYING' COMPETITION

With risks of greenwashing high since all claims are made in the future, lower disclosure demands could be attracting issuers with uncertain ESG credentials. ESG analysis and monitoring of controversies is paramount.

COUNTRY HIGHLIGHTS SPAIN

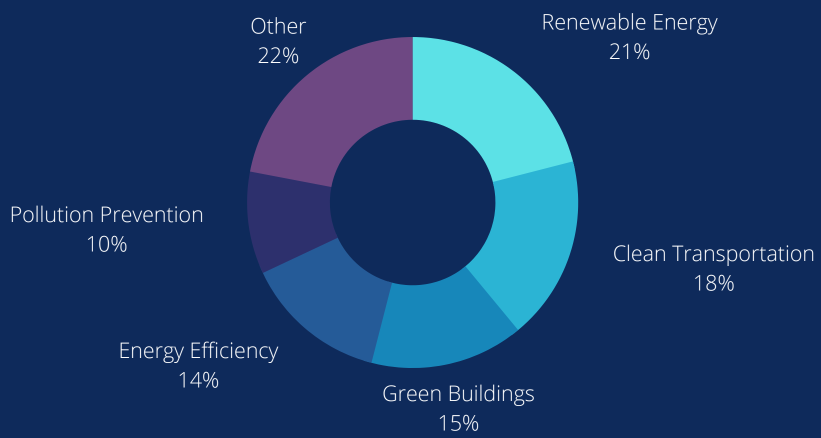


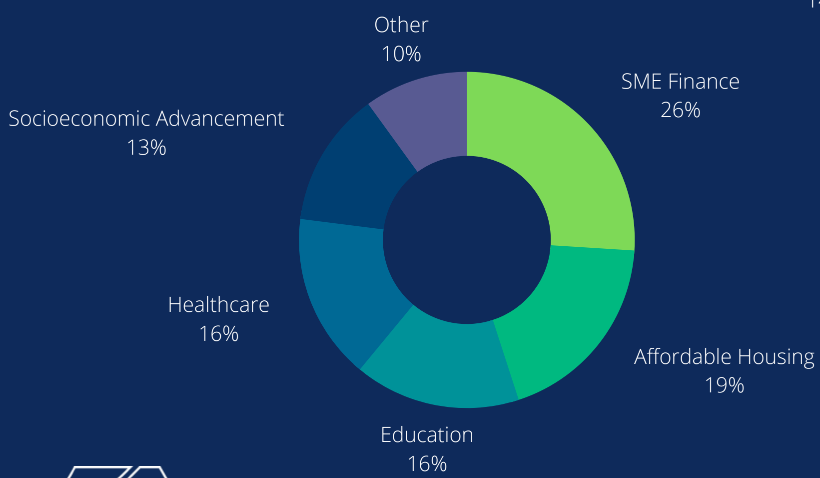
Annual issuances of GSS bonds in Spain in 2021 grew in line with the global market (+90%), just shy of USD30 billion.

Spain's government issued its first green bond in October 2021 and the country now represents the 8th largest region globally.

WHERE THE MONEY IS BEING SPENT

The large majority of green projects are catalogued as Renewable Energy (21%), Energy Efficiency (14%) and Green Buildings (15%).



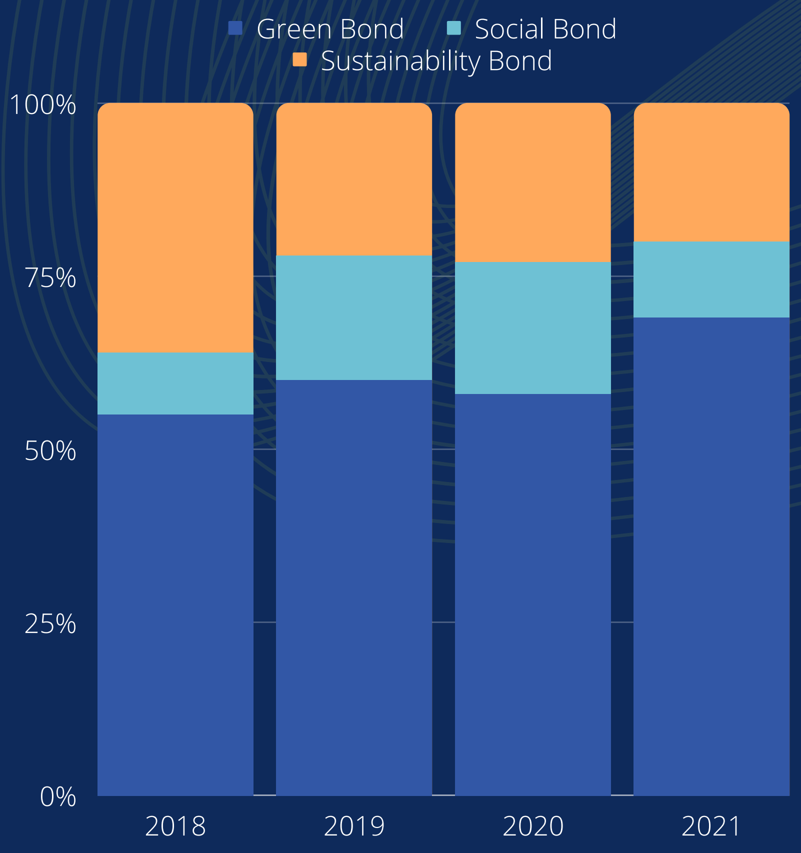


Approximately 40% of social projects, instead, fall within 'real economy' categories, such as SME Finance and Socioeconomic Advancement.

SECTORS ISSUING THE MOST GSS BONDS

A peculiar aspect of the Spanish GSS bond market is that amongst its strongest issuers are commercial banks. As of June 2022, ten banks have already issued a GSS bond.

Aside from the sovereign state, local governments and autonomous communities are very important for the growth of the Spanish GSS market. Among these, the most prolific issuer is no doubt Comunidad de Madrid. It issued its first GSS Bond in 2017 and has now more than EUR7 billion outstanding.



MARKET HIGHLIGHTS

Spanish issuers tend to prefer Green bonds over other GSS labels. In 2021, 70% of new issuances were green.

Sustainability-linked bonds are also starting to build up in the country, with Repsol being the first to come to market in 2021.

WHAT TO EXPECT

A STRONG BASELOAD OF BONDS FROM LOCAL GOVERNMENTS

Five have already started their GSS issuance programmes and are benefitting from a wider and more diversified investor base to reach their climate goals.

MORE CORPORATES TO JOIN THE MARKET

With 73% of GSS bonds coming from either government-related issuers or commercial banks, the corporate sector is expected to play a greater role in the country's decarbonisation efforts.

OPINION ARTICLE

5 considerations for investors enticed by the 'greenium'

The term 'greenium' refers to the instance when investors pay more in exchange for green or sustainable credentials of a bond, compared to a similar, non-green, equivalent debt instrument by the same issuer.

Over the past three full calendar years (2019-2021), this phenomenon has been evident in the fixed income market, with more than one in every two bonds analysed by Climate Bonds Initiative (CBI) displaying lower yields (higher prices) at issuance on their green bonds, compared with their regular equivalents.

At first glance, then, it might seem as simple as "green = lower-cost financing for companies and higher price for investors".
However, there is growing nuance to the 'greenium', which bears examining.

1. The appetite for green bonds does not appear to be slowing. In 2021 sustainable UCITS bond funds attracted €102bn of net new assets, a third more than traditional UCITS bond funds, which saw flows of €69bn. Sustained green bond demand could drive the persistence of the 'greenium' in the market.

2. The supply of green bonds is also likely to follow a similar path. Global issuance of green bonds reached $140 billion in the first five months of 2022, following a record 2021 where almost $500 billion in green bonds were issued (double the amount in 2020). Research from CBI shows a consistent pattern of larger order books for green bonds compared to their non-green counterparts since 2019. In the past three full calendar years (2019-2021) the order books (i.e. demand) for EUR-denominated green bonds was 3.4 times the amount issued (i.e. supply), compared to 2.7x for traditional bonds.

3. Green bonds remain a 'high-demand' instrument in the fixed income universe. CBI's research highlights that 'green' investors are hungrier than ever for green bonds. The average percentage of newly issued bonds allocated to Green Funds investors rose to 66% in the last six months of 2021, up from 50% in 2020. Green Funds investors tend to hold-on more to their positions since they are required by prospectus to maintain a minimum percentage of green debt in their funds.

4. There are disparities across sectors and geographies. For example, for sectors that have an abundance of green bonds, such as utilities and banks, the 'greenium' tends to be less visible as demand reaches a balance.

Other new sectors, or governments, which may have not issued green bonds previously, may receive larger-than-average demand for their green bonds. Perhaps one of the most notable 'greenium' examples in the past year came from Denmark's recent inaugural green bond. Denmark issued its debut green bond with the same maturity and coupon as a non-green conventional bond, it's so-called twin bond. Pricing data shows that the green bond priced at a 5-basis points premium compared to its twin bond.

5. The 'greenium' has also been virtually non-existent in the Chinese onshore green bond market, even though China was the second-largest issuer of green debt in 2021. Compared with traditional green bond guidelines, Chinese green bond issuers can use up to 50% of the proceeds raised to finance non-green activities, compared to the 5% recommended by the International Capital Market Association's Green Bond Principles. The transparency and impact of environmental projects are therefore key credentials for the success of green bonds.

These statistics demonstrate the increasing discernment of investors when it comes to green bonds – the 'greenium' is not a foregone conclusion.

As scrutiny of the asset class builds – strengthened by a growing regulatory presence requiring clear evidence of green and sustainable criteria – bond investors will favour greener projects and greener issuers. This should, in turn, further incentivise less-green issuers to transition more quickly.

In the meantime, careful evaluation of green bonds and their use of proceeds will help investors determine if they are paying a 'greenium' for good reason.

It is worth noting that the Green Bond market that the Green Bond market has yet to face an environment of rising interest rates, as the wider fixed income market does.

The effect of tightening global monetary policy and of global geopolitical instability has already been hostile to fixed income deal-making and could also hinder the 'greenium' phenomenon.

In the first 4 months of 2022 global issuance of Green, Social, Sustainability and Sustainability-Linked Bonds is 41% lower than in 2021. Green bonds are down by a similar percentage, while Sustainability-Linked bonds are the only bond label that has seen more issuances in 2022 that in the same period last year (+35%).

OPINION NOTE
SLBs, a maturing market with unmatured reporting

Sustainability-linked bonds are quickly becoming a major segment in the sustainable debt market, growing an impressive 941% year-on-year in 2021, and the only segment to see growth in the first quarter of 2022. These types of bonds are attractive for corporate issuers, given that they are less restrictive than adopting a 'use of proceeds' approach, such as with green bonds, and avoid the reputational risk associated with transitional bonds. However, being such a nascent part of the wider GSSS market, this segment is not without its issues.

Firstly, there are vast discrepancies in the strength of the KPI's selected. An Indonesian food producer tied the coupon to constructing 8 water recycling facilities across its operations. This commitment was estimated to constitute around USD1 million in equipment spending over 3+ years and did not cover usage of the facilities, only that they were constructed. For a company with annual capital expenditures of around USD150 million, this commitment doesn't seem strong. An Indian steel company, that was constructing a 12 million tonne per year coal terminal, tied the penalty to reducing its scope 1 and 2 emissions. This ignores the source of most emissions that would come from a coal terminal developer, chiefly scope 3 emissions. This bond was 3.4 times oversubscribed.

Even if the KPI's are well-selected, there is a lack of consistency in the market over how the financial penalties (the coupon step-ups) materialise. Whilst market best practice is a 25bps step up, there is a lot of variance around this. To complicate matters further, there is no industry standard for the frequency of the penalties, as the Sustainability-Linked Bond Principles doesn't specify the best practice for coupon step-ups, only that they are meaningful to the issuer's original bond characteristics.

This significantly impacts the pay-out to investors, as illustrated below.

Then, even if the KPI's are core and relevant and the financial penalty is financially material, there is a lack of clarity when assessing progress data related to the KPI's of these bonds. Rebasing and restating data is one component of this. Rebasing occurs when the baseline and subsequent data is changed to reflect changes in company structure or methodology to maintain consistency between datasets over time. This happens a significant amount, potentially because disclosure around this area is new, which reduces the usefulness of historical progress data for investors, making it difficult for investors to track the performance of a company and the bond.

There are also discrepancies between reported impact data units and required KPI units and metrics, leaving it to an investor calculate the progress themselves. On top of this, there is the lack of uniformity of how this information is disclosed. In some cases, this can be found in the annual report, in others there is a sustainability report, and in others still there are standalone 'Greenhouse Gas' reports. The list goes on, as the Sustainability-Linked Bond Principles only go so far as to specify that this information is required in a post-issuance document, without giving the specific type of document to be used.

There is no doubt that the market for SLBs is maturing rapidly and has a lot of room to grow. With it, investors are starting to develop proprietary frameworks of analysis based on the criteria they value the most. Here at MainStreet Partners, we see a strong potential in this market, and we believe we are uniquely positioned to provide investors with a robust evaluation of these innovative, yet complex, instruments.

STEP-UP: ONE YEAR BEFORE MATURITY

Year	1	2	3	4	5	6	7	8	9	10
Coupon	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.25%
Average coupon:	5.02%									

STEP-UP: EVERY YEAR UNTIL MATURITY

Year	1	2	3	4	5	6	7	8	9	10
Coupon	5.00%	5.00%	5.00%	5.00%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%
Average coupon:	5.15%									

MAINSTREET PARTNERS

About MainStreet Partners

MainStreet Partners was founded in 2008 with a big dream in mind: to help investors achieve consistent financial returns while improving people's lives and protecting our planet. After 13 years we have become the trusted ESG partner of top tier investors for a simple reason: we provide a one-stop-shop for their Sustainability requirements at portfolio level. Our clients are some of the most sophisticated and leading Wealth Managers, Asset Managers, Investment Banks, and Institutional Investors in the financial industry.

We have two main divisions: Investment Advisory and Portfolio Analytics.

We are an independent and dedicated Sustainable Investment Advisor:

- We have over a decade of experience creating ESG multi-asset and multi-manager portfolios.
- We design investment solutions with mutual funds, single stocks and bonds using traditional or absolute return benchmarks.

We deliver a holistic Portfolio Analytics offering:

- We provide transparent and detailed Fund Sustainability Ratings.
- We offer bespoke sustainability intelligence aligned with new "green" regulations.
- We assess and enhance the ESG evaluation of our partners' portfolios.

Learn more at https://www.mspartners.org/
Contact us at info@mspartners.org

THANK YOU FOR READING OUR GSS BONDS REPORT!

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All the presented analysis refers to MainStreet Partner's database. Portfolio ratings consider proprietary security ESG rating by MSP. 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, and that could boost/decrease the final ESG rating of the fund. This explains why on the graphs above there are funds with the top ESG rating without having reached the maximum rating in each pillar.