

2021

European Listed Real Estate

Green Bonds Monitor 2021

September
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I. Introduction

EPRA (the European Public Real Estate Association) is pleased to publish the first edition of the ‘Green Bonds Monitor’, which analyses key trends and figures related to green bonds of the listed European real estate sector, with a particular focus on EPRA member property companies. The study includes both financial and sustainability considerations.

Green bonds are part of the broader universe of ‘responsible investments’ approach, which include bonds and equities from issuers identified by environmental, social and governance (ESG) standards. Green, social and sustainable bonds have been growing exponentially in recent years. BBVA Global Markets Research estimates that the current size of the green, social and sustainable bond market is approaching USD 1 trillion, equivalent to an estimated 0.86% of the total bonds in circulation. It continued to grow, especially in 2020 and H1-2021, since the Covid-19 health crisis played a catalyst role in increasing the awareness and accelerating interest in sustainable finance instruments.

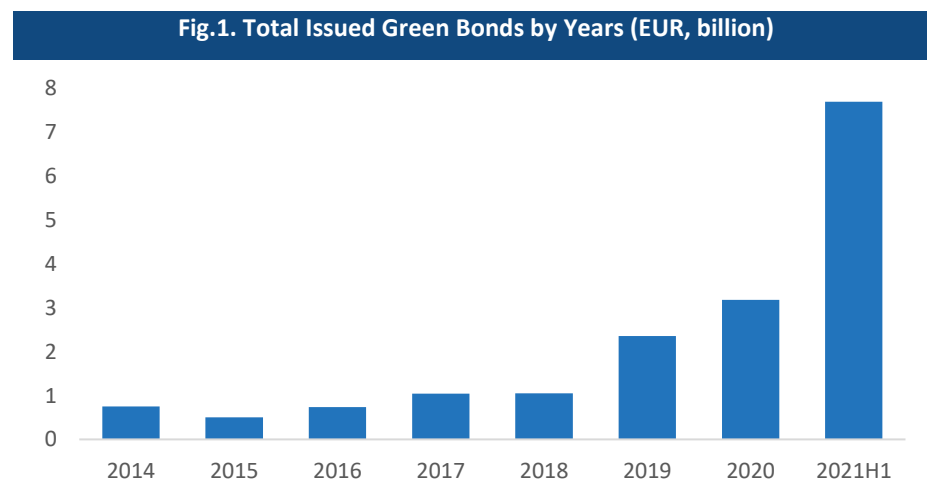
The EU is set to become the largest issuer of green bonds since it recently announced the target of raising 30% of the NextGenerationEU recovery plan, through green bonds, amounting to up to EUR 250 billion. These will mainly be allocated to projects related to renewable energy, energy efficiency, clean transportation and R&I supporting green transition. The EU Climate Taxonomy and the European Green Bond Standard are other policy initiatives which are supporting financial markets to adopt more sustainable financial products, with the aim of providing greater clarity on sustainable economic activities for investors and companies.

Within the scope of this study, green bond issuance in the listed real estate (LRE) sector has also grown rapidly in recent years, rising from EUR 0.8 billion in 2014 to close to EUR 7.7 billion - in the first half of 2021 alone. The analysis demonstrates that the main purpose of green issuance is to invest in renovation and upgrade of the existing building stock, and to achieve their target for decarbonisation. In addition, there is an increasing effort to align projects’ eligibility with the technical screening criteria set by the EU Climate Taxonomy.

II. About the analysis

The study investigates 29 European listed property companies, which are EPRA members¹, with a corresponding market capitalisation of EUR 168.2 billion (as of 30/06/2021). Our unique dataset covers only outstanding green bonds issued by EPRA members between 2004 and 2021-H1. Any green bonds having reached maturity prior to 30/06/2021 are excluded.

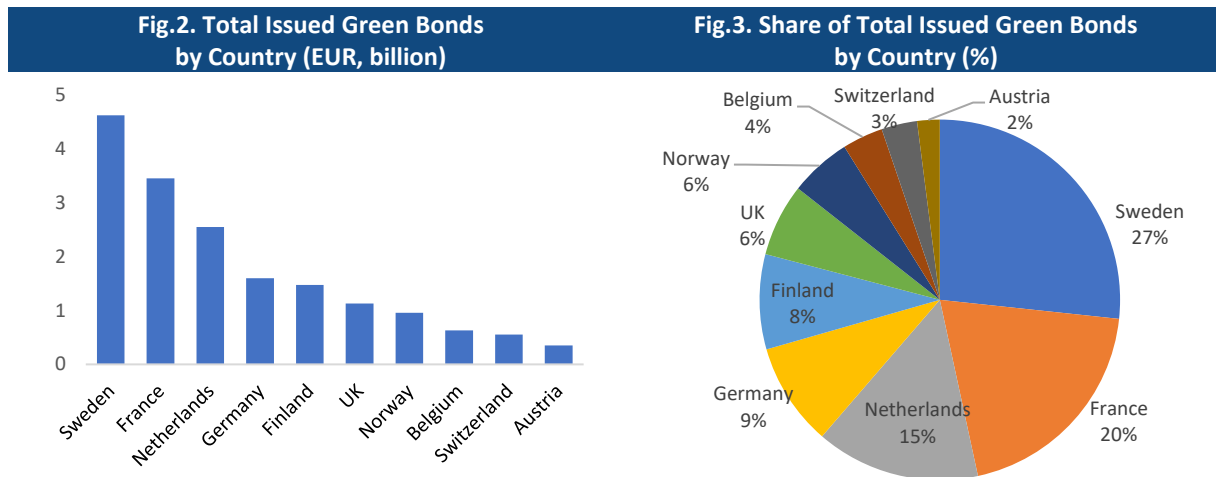
Within this scope, a total of EUR 17.3 billion of green bonds have been issued between 2014 and 2021-H1. The total amount of the issuance per annum is presented in Fig.1. It reveals an increasing trend in the last few years and an acceleration during 2021-H1.



Source: EPRA, Bloomberg, TR-Eikon and S&P.

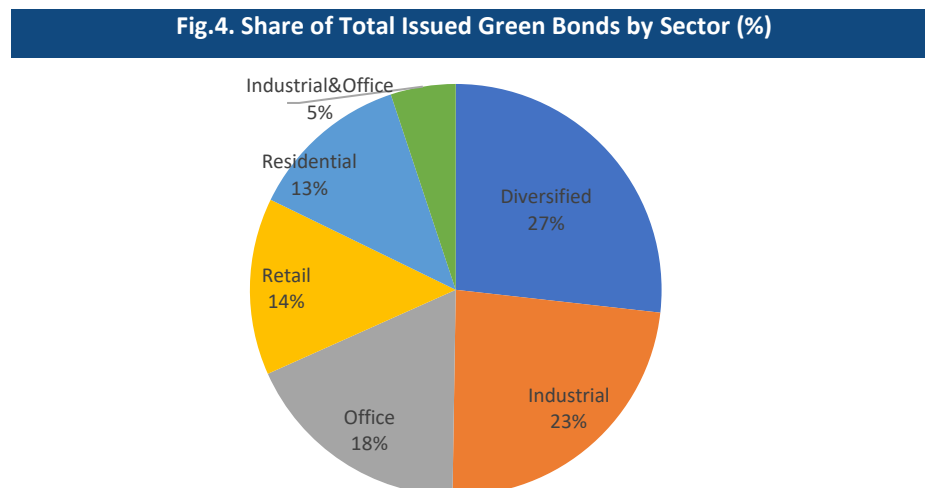
¹ FTSE EPRA Nareit Index Constituents

Focusing on specific countries, it is clear that Nordic companies are the most active in issuing green bonds as a new finance instrument, representing 41% of total issued green bonds during the scope period. Twelve Swedish companies have issued green bonds valuing EUR 4.6 billion representing 27% of the total amount of issued green bonds, followed by four French companies (EUR 3.5 billion, 20%). The other countries active in green bonds issuance (over EUR 1 billion) are the Netherlands (15%), Germany (9%), Finland (8%) and the UK (6%), as presented in Fig.2 and 3:



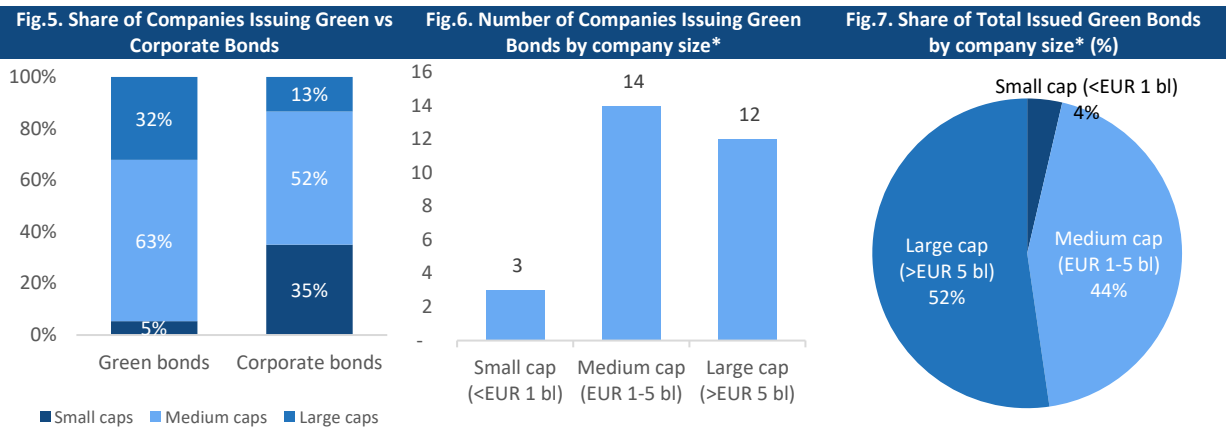
Source: EPRA. Bloomberg, TR-Eikon and S&P.
(*) Based on FTSE EPRA Nareit Ground Rules for nationality definition.

Looking at subsectors, as defined by the FTSE EPRA Nareit Developed Index sector classification, diversified companies corresponded to 27% of the overall issued green bonds, followed by industrial (23%), office (18%), retail (14%), residential (13%) and office & industrial mixed (5%) companies (Fig.4).



Source: EPRA. Compiled from Bloomberg, TR-Eikon and S&P.

In terms of issuers' profile, twelve large-cap companies represent 52% of the total issued green bonds, followed by fourteen medium-cap companies with a share of 44% and three small-cap companies have a share of only 4% in total issued green bonds (Fig.6&7). Compared with corporate bonds issuers, medium and large-cap companies dominate the green bonds market, while the share of small-cap companies (35% vs 5%) is relatively small. Only three small-cap companies issued green bonds in H1-2021. Green bonds can be seen as a new instrument that became accessible for such companies compared to traditional bonds, to finance either new acquisitions or renovations of existing buildings.



Source: EPRA. Bloomberg, TR-Eikon and S&P.
(*) Company size is based on full market cap as of 30/06/2021.

III. Strong foundations for further growth

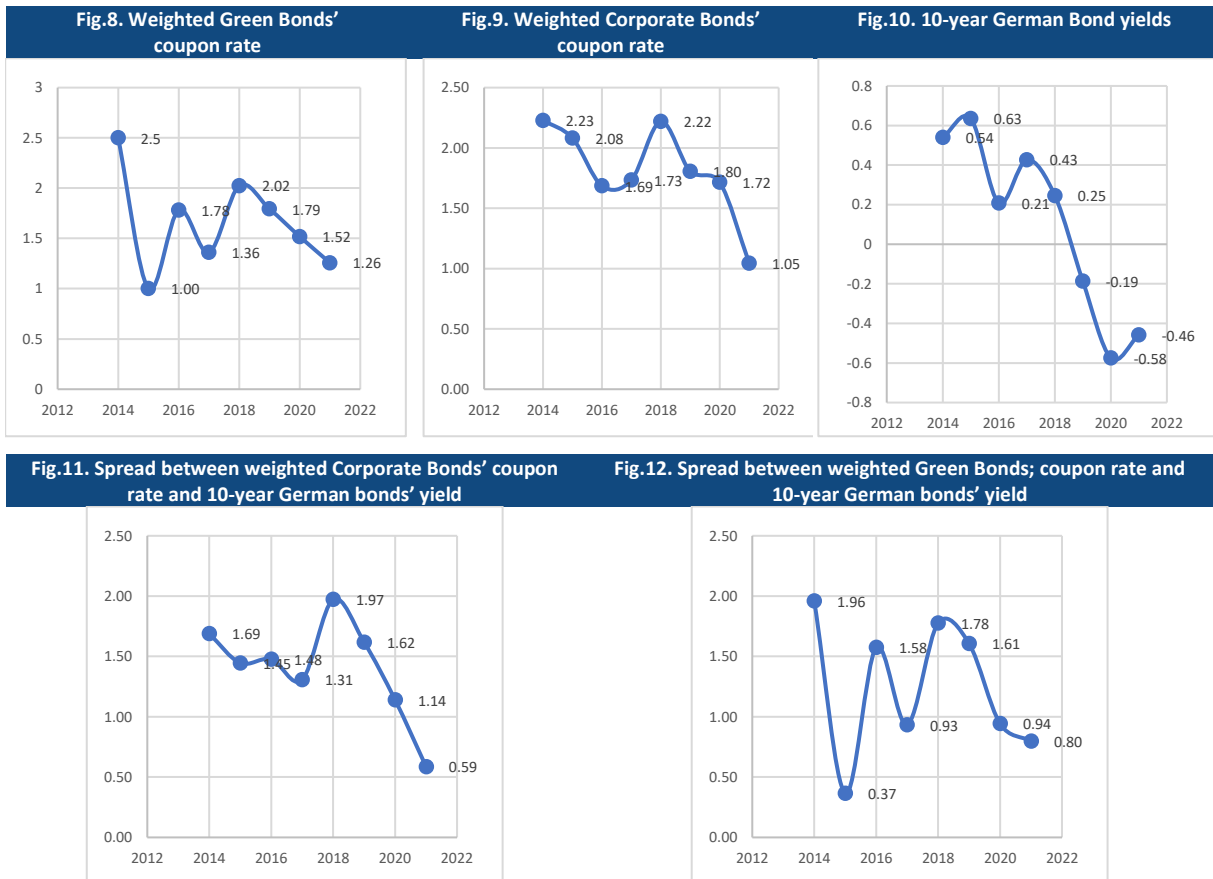
Following the growth of new green bonds issued in the last few years, some companies have noticed an increasing appetite from both international and local investors, which has gradually and positively impacted the coupon rates, reducing at the same time their cost of debt. The weighted coupon rates of the outstanding green and corporate bonds issued by listed property companies, as well as the 10-year German bonds' yields are presented in Fig.8 to 10. The spread between weighted coupon rates and the German bonds is presented in Fig.11 and 12.

The sample analysed indicates that LRE companies have raised a significant amount of capital using green bonds in the last five years, mainly due to the growing market appetite for this type of financial product. This leads to a decreasing dispersion in the size and cost of green bonds, creating a more deep and mature market that facilitates the development of sustainable green projects. For example, in 2014 the weighted coupon rate was 2.5%, falling to 1% in 2015, showing a 150-bps change in just one year. However, the same coupon rate had an average annual reduction of 25 bps between 2018 and 2021.

The most volatile coupon rates occurred during 2014-2016, which can be explained by the emergence of green bonds in the European region, and the small number of companies issuing green bonds in this period. Since 2016, many more European property companies issued green bonds with various tenures, as it became an attractive financial instrument.

The cost of capital faced by LRE companies in Europe when issuing green bonds has decreased in the last five years, showing a similar trend as the one observed for corporate bonds and government bonds, although slightly better in terms of the aggregated coupon rate. The spread between the weighted coupon rate of green bonds and the 10-year German bonds yield showed a reduction of 124 bps between 2014 and 2021, while the same spread for corporate bonds saw a reduction 118 bps during the same period.

At this stage, this short analysis allows us to conclude that the green bonds market is becoming more mature and accessible to listed property companies, offering interesting opportunities for developing new green projects at a lower financial cost and helping the whole real estate sector to contribute to its own sustainable objectives. However, there is still a lot of work to do to guarantee that this instrument is completely efficient and accessible to all kinds of property companies across the continent.



Source: EPRA.

Methodology used for the comparison of traditional vs green bonds

The 10-year German government bond's yield, which is embedded into euro-dominated security issued by Germany's federal government, is considered a benchmark for safe investment. It is also viewed as a benchmark yield indicator for European government bonds. Since we investigated the corporate and green bonds issued by property companies in different countries of Europe, we determined that the yields of 10-year German government bonds should be the calculation benchmark for the spread of both corporate and green bonds.

IV. Projects financed by green bonds

LRE green bonds are used to finance new projects or refinance existing projects. New financing is often defined as projects that are completed after the issuance of a green bond, and refinancing is defined as the financing of projects that are completed prior to the green bond issuance.

The proceeds are allocated to different types of eligible projects, defined in the Green Bonds Framework document. The eligible projects² directly involve buildings or their value chain (i.e. energy production from renewable sources, sustainable transporting connecting buildings etc.) For each of the category types, issuers provide technical criteria that can be monitored through dedicated KPIs.

For the 29 EPRA members' projects that were financed by green bonds, the following main recurrent categories can be identified:

² Eligible projects represent those initiatives that meet the technical criteria set by the company and outlined in the so called 'Green Bonds Framework' document. The latter is always available publicly on the company's website.

Eligible Projects	Description
Green buildings	Financing new development, major renovation, existing and acquired properties that meet certain criteria, such as: <ol style="list-style-type: none"> 1) Certain level of voluntary sustainability certifications (LEED, BREEAM, HQE, DGNB, Minergie, SNBS, Miljøbyggnad), 2) EPC A and B, or, 3) Primary Energy reduction of 30% after renovation.
Energy efficiency	Investment in energy efficiency measures such as replacement of windows, insulation, combined heat and power (CHP) plants
Renewable energy	Installation of on-site and off-site renewable energy, such as photovoltaic panels, wind turbines etc.
Clean transportation	Financing clean transportation solutions such as EV charging stations, bicycle garages, pedestrian walkways, bicycle lanes.

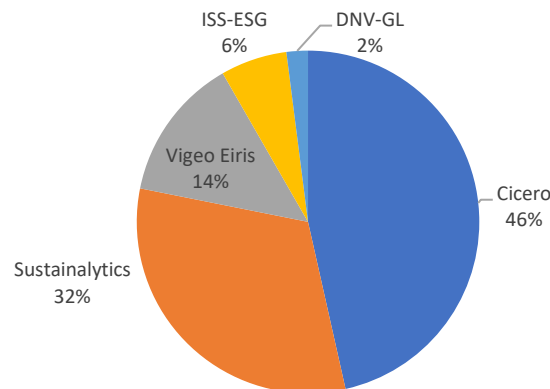
Source: EPRA. Green Bonds Framework documents published publicly by EPRA members

Based on our dataset, it became evident that companies have started to converge towards the same technical criteria over the last year, and the sector is setting its own definition for eligible projects.

All the green bonds frameworks published publicly by the issuers have been reviewed by an independent company to give a ‘second party opinion’ on the framework adopted and to verify its credibility, impact and alignment with recognised standards such as ICMA Green Bond Principles 2018³.

In the scope of this study, Cicero is the most consulted second opinion provider with a share of 43% of the total issued green bonds size, followed by Sustainalytics (35%), Vigeo Eiris (14%), ISS-ESG (6%) and DNV-GL (2%).

**Fig.13. Share of 2nd Opinion Providers
(based on total issued green bond)**



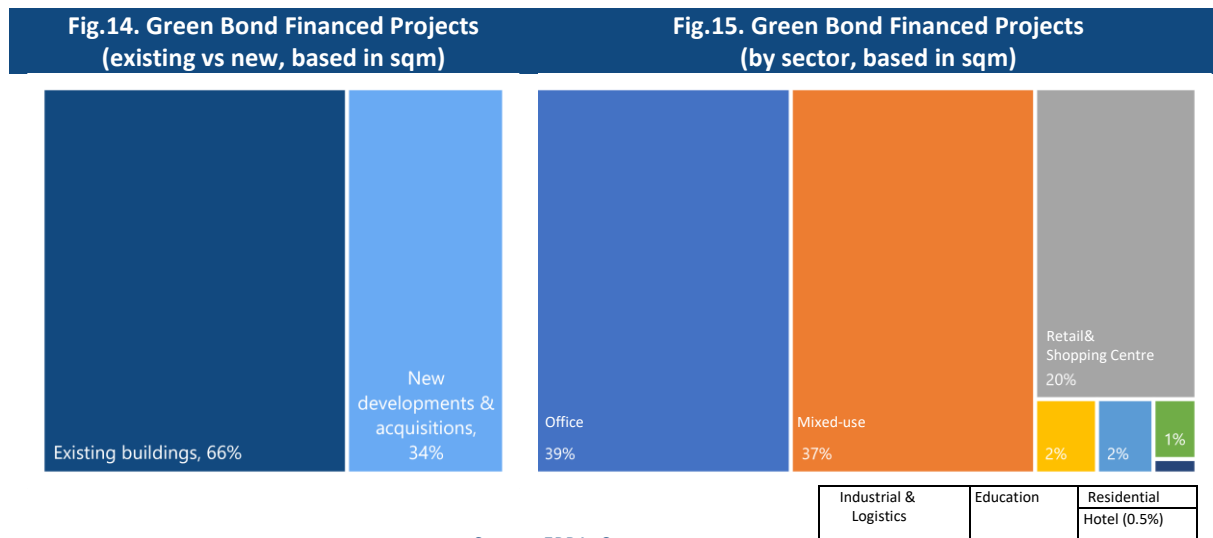
Source: EPRA. ‘Second opinion’ documents published publicly by EPRA members.

V. EPRA members’ financing in action

Based on the monitoring reports*, provided by the issuers on an annual or biannual basis, 66% of the financed projects are represented by existing buildings already owned by property companies, and the remaining 34% are new developments or acquisitions. These figures demonstrate that for the investments made by EPRA members, the focus is on renovation and upgrade of the existing building stock and achieving their targets for decarbonisation.

³ The ICMA Green Bond Principles: Main recognised standard/ voluntary process guideline for green bonds which promotes integrity in the green bonds market through guidelines that recommend transparency, disclosure and reporting.

Focusing on sectors, most of the green bonds financed projects are comprised of office (38.8%), mixed-use (36.9%) and retail (19.7%) assets.



Source: EPRA. Company reports.

(*) Based on the available information which covers EUR 3.9 billion issued green bonds for 5.5 million sqm assets.

VI. Green bonds' positive impact in numbers

Looking at the large amount of green bonds issued in H1-2021, there are many companies that have not yet published any monitoring report; it should be noted that preliminary details will be delivered at the earliest by the end of 2021/beginning of 2022. Therefore, a more comprehensive analysis on ESG corresponding impacts will be only possible in the coming year.

Based on the available monitoring reports, the overall capital already allocated to eligible projects via green bonds issuance is over EUR 7 billion, corresponding to 41% of the total amount of issued green bonds, as of 30 June 2021. The amount generated the following impacts*:

Sustainability categories	ESG corresponding impacts
Certified buildings according to LEED, BREEAM, HQE, DGNB, Minergie, SNBS, Miljöbyggnad, etc	3,620,109 sqm
Energy efficiency - Associated avoided emissions per year	19,377 tCO₂ avoided /year
Renewable energies (wind and solar power plant) - Associated avoided emissions per year	22,648 tCO₂ avoided/year
Clean transportation	58 tCO₂ avoided/year

Source: EPRA. Compiled from company reports.

(*) The impacts' calculation is limited by the availability of the monitoring reports which for some companies were not available publicly. We do estimate that the overall impact is much higher, but it is not possible to quantify exactly due to this limitation.

VII. Towards a more robust regulatory regime

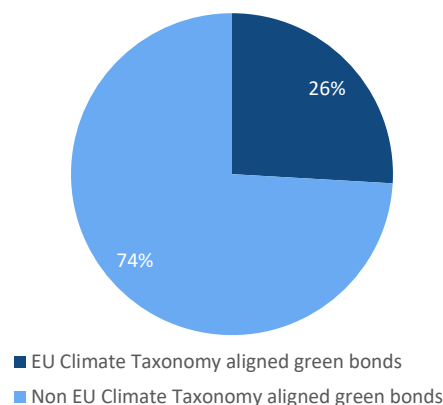
Based on our database, starting from the end of 2020, EPRA members have worked to align projects' eligibility with the technical screening criteria set by EU Climate Taxonomy for the construction of new buildings, renovation of existing buildings, acquisition and ownership of buildings, and individual energy efficiency and renewable energy intervention.

This input has been given by the European Commission's publication of the first EU Climate Taxonomy draft in November 2020. The EU Taxonomy aims to provide clarity on sustainable economic activities for investors, companies and issuers of bonds; and to detail technical thresholds defining which economic activity can be considered as a "sustainable" investment.

In light of this EU policy development, we have analysed the green bonds issued since November 2020, and the companies' willingness to align with the EU Climate Taxonomy. Accordingly, the data shows that 25.9% of the total issued green bonds are aligned with the EU Climate Taxonomy.

Given that the final EU Climate Taxonomy has been adopted in April 2021 and will be fully effective in October 2021, we do expect upcoming issuers to further align their eligible projects criteria with those set by the European Commission, and an increase in size of 'Taxonomy-aligned' green bonds.

Fig.16. Share of green bonds aligned with the EU Climate Taxonomy*



Source: EPRA. Green Bonds Framework documents published publicly by EPRA members.
 (*) Based on the total amount of issued Green Bonds between November 2020 and June 2021.

The EU Taxonomy⁴ is a common classification system of economic activities that substantially contribute to environmental objectives. It contains the performance thresholds to help companies, project promoters and issuers of bonds to access financing to improve their environmental performance, as well as helping to identify which activities are already environmentally friendly. In doing so, it is aiming to re-orient capital towards more sustainable businesses and help decarbonise high-carbon sectors, such as real estate.

European green bonds are designed to support any kind of issuer in their transition towards greater alignment of their economic activities with the EU Taxonomy.

Another important policy initiative that will surely shape and impact the green bonds market going forward is the European Green Bond Standard (EUGBS).

⁴[EU taxonomy for sustainable activities: What the EU is doing to create an EU-wide classification system for sustainable activities](#)
[Commission Delegated Regulation Supplementing Regulation \(EU\) 2020/852 by establishing the technical screening criteria](#)
[FAQ: What is the EU Taxonomy and how will it work in practice?](#)

Despite the recent steady growth in the green bonds market, it still suffers from a lack of clear definition of green projects, creating uncertainty and added costs for issuers and investors alike. There is also insufficient standardisation, transparency and supervision of external reviewers that provide assurances to issuers and investors on the greenness of their investments. In July 2021, the European Commission proposed a new standard for European green bonds⁵ to fix the above by requiring close alignment with the 2015 Paris Agreement and sectoral criteria of the EU Taxonomy, and by creating a regime for registering and supervising external reviewers.

Key features of the European Green Bond Standard (EUGBS):

- ✓ **Inclusive:** It will be open to all EU and non-EU issuers, including corporates, sovereigns, financial institutions, and issuers of covered bonds and asset-backed securities.
- ✓ **Voluntary:** It will be a voluntary standard setting out uniform requirements for any bond issuers that wish to call their bond a “European green bond” or “EuGB”.
- ✓ **Aligned with the EU Taxonomy:** Issuers must allocate 100% of the funds raised by their bond to economic activities that meet the EU Taxonomy requirements, by the time the bond matures.
- ✓ **Supporting issuers in transitions:** European green bonds can be used to fund long-term projects (up to 10 years) that make an economic activity aligned with the EU Taxonomy.
- ✓ **External review:** European green bonds will be checked by an external reviewer (registered with ESMA) to ensure that the bonds are compliant with the Regulation.
- ✓ **Grandfathering:** In the event of a change in the EU Taxonomy Technical Screening Criteria after bond issuance, issuers can make use of pre-existing criteria for five more years.

The EUGBS proposal has to go through the legislative process in the European Parliament and Council, which may change the final text. The legislative process lasts on average around 18 months. However, the EU will start issuing NextGenerationEU (NGEU) green bonds as early as possible this year. The robust NGEU framework used is expected to be aligned, to the greatest possible extent, with the future EUGBS.

VIII. Best practices of green and sustainability bonds in European LRE

Green bonds have become arguably some of the most popular financing instrument in the last two years. The trend is set to continue, and we will doubtlessly see more evolved variations of the product with the emergence of social bonds. The Covid-19 pandemic has contributed to a growing investor appetite as well as sustainability-linked bonds which go beyond the traditional use of proceeds model.

These trends are confirmed by the LRE actors and their best practices.

Gecina transformed 100% of its bonds into green bonds, positioning itself as the first company in the LRE sector to have a fully green euro bond financing programme.

In June 2021, Gecina transformed all of its outstanding issues into green bonds, corresponding to EUR 500 million. The green bonds will be used to finance or refinance of eligible buildings and associated criteria that will be reviewed every year to ensure alignment with the company’s target to be carbon neutral by 2030. The company will invest them in continued improvements related to carbon and energy performance of the existing portfolio, both offices and residential assets.

“Thanks to the support of our bond holders, we have requalified 100% of our EUR 5.6 billion existing bonds into green bonds within a global, dynamic and innovative approach. This transformation allows our financing structure to be fully aligned with our CANOP-2030 plan, targeting net zero carbon emissions for our operational portfolio. In addition, it gives us access to the strong demand from investors for green bonds as shown by our EUR 500 million June issuance with a 15-year maturity at 0.875% coupon rate.”

- Nicolas Dutreuil, Deputy CEO in charge of Finance, Gecina

⁵ More information: [European green bond standard: How an EU-wide standard could encourage market participants to issue & invest in EU green bonds and improve the effectiveness, transparency, comparability & credibility of the market](#)

Hammerson issued the very first Sustainability-Linked Bond (SLB) in European LRE

In May 2021, Hammerson announced the successful completion of a EUR 700 million Sustainability Linked Bond with a 6-year maturity period and a 1.75% coupon rate. The SLB will contribute to ensure that the net positive targets set by the company by 2030 will be successfully achieved.

“The new Sustainability-Linked bond presents an innovative approach to supporting Hammerson’s ambitious net positive vision and reducing our carbon footprint. In 2017, Hammerson was the first real estate company globally to launch a comprehensive strategy to be net positive across key environmental and socio-economic impacts. The new Sustainability-Linked Financing Framework aligns our existing net positive strategy with our financing strategy. In addition to supporting our sustainability objectives, the bond enabled us to proactively manage our debt maturity profile and to capitalise on attractive conditions in the public bond markets. The Sustainability-Linked features widened the potential investor base, and we were pleased to receive a high level of demand, demonstrating the investor community’s commitment for tackling climate change.”

- Himanshu Raja, CFO, Hammerson

IX. Conclusion

The green bonds market in the European LRE sector has grown rapidly in recent years and increased awareness on climate change and provided alternative financing for property companies to achieve Sustainable Development Goals.

Beyond environment and climate-related benefits, the green bonds market is becoming more mature and accessible to listed property companies with a lower financial cost.

From a policy perspective, the EU Taxonomy provides clarity on requirements for ‘sustainable investments’ for investors, companies and issuers of bonds. At the same time, the European Green Bond Standard aims to provide a framework aligned with the Taxonomy. The EU has already announced NextGenerationEU green bond issuances of EUR 250 billion which will give a boost to the expansion of the green bonds market.

Investors’ interest in green bonds reflects a fundamental shift in addressing ESG awareness. They are able to mitigate credit risks related to environmental change, but also, they can contribute to creating social value. In other words, green bonds offer opportunities to achieve both financial and social returns.

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- Sustainable finance: The EU is examining how to make sustainability considerations an integral part of its financial policy in order to support the European green deal https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

ABBREVIATIONS

- CHP (Combined Heat and Power)
- EuGB (European Green Bond)
- EUGBS (EU Green Bonds Standard)
- EPC (Energy Performance Certificate)
- ESG (Environment, Social, Governance)
- EV (Electrical Vehicles)
- KPIs (Key Performance Indicators)
- LRE (Listed Real Estate)
- NGEU (Next Generation EU)
- SDGs (Sustainable Development Goals)
- SLB (Sustainability-Linked Bond)
- tCO₂ (Tons of Carbon Dioxide)

APPENDIX

Company Name	Country	Market Cap, EUR, million (30/06/2021)	Index classification	Total amount of issued Green Bonds (EUR, million)
Atrium Ljungberg AB	SE	2,560	Diversified	834.8
CA Immobilien Anlagen AG	AT	3,741	Office	350.0
Castellum AB	SE	5,954	Industrial&Office	103.9
Catena AB	SE	1,862	Industrial	138.1
Citycon Oyj	FI	1,279	Retail	1,125.4
Covivio	FR	6,821	Diversified	1,100.0
CTP NV	NL	6,749	Industrial	2,550.0
Deutsche Wohnen SE	DE	18,511	Residential	1,000.0
Dios Fastigheter AB	SE	1,176	Diversified	49.2
Entra ASA	NO	3,511	Office	957.4
Fabege AB	SE	4,478	Office	970.4
Fastighets AB Balder	SE	9,874	Diversified	481.1
Gecina SA	FR	9,887	Office	500.0
ICADE	FR	5,550	Diversified	600.0
Klovern AB	SE	1,898	Diversified	683.2
Kojamo Oyj	FI	4,762	Residential	350.0
Kungsliden AB	SE	2,231	Industrial&Office	709.4
Nyfosa AB	SE	634	Diversified	98.3
Sagax AB	SE	8,438	Industrial&Office	71.9
SBB	SE	5,502	Residential	246.2
Swiss Prime Site Finance AG	CH	6,360	Diversified	554.8
Tritax Big Box REIT PLC	GB	3,932	Industrial	278.4
Tritax EuroBox PLC	GB	773	Industrial	500.0
Unibail-Rodamco-Westfield SE	FR	10,116	Retail	1,250.0
VGP NV	BE	3,425	Industrial	600.0
Vonovia SE	DE	31,455	Residential	600.0
Wallenstam AB	SE	4,405	Diversified	235.3
Wereldhave Belgium SA	BE	579	Retail	32.0
Workspace Group PLC	GB	1,759	Office	350.1
Total		168,223		17,320.0

Source: EPRA.