

MARKET
RESEARCH

European Listed Real Estate

Special Report

Estimating a green premium in listed real estate bonds

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Table of content

Table of content	2
Introduction	3
1. Regulatory framework	4
2. Estimating a premium on green bonds issued by listed property companies	5
3. ESG perspective: Main trends in the listed RE industry	10
4. Conclusions	14
5. Appendix	15
References and Abbreviations	17

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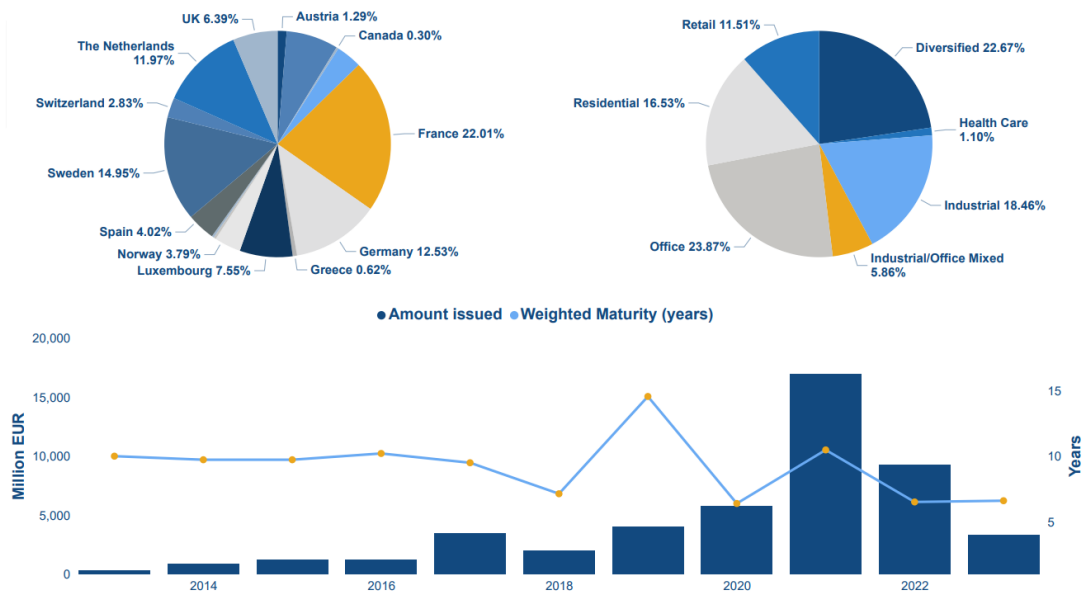
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Introduction

The importance of green bonds has raised in the last few years, supporting the expansion of sustainable investments and becoming an attractive vehicle for both issuers and investors, and the listed real estate industry has been a key player in such evolution. From December 2013 until November 2023, the constituents of the FTSE EPRA Nareit Developed Europe Index and the EPRA members issued a total amount of EUR 48,463 Million on Green Bonds, being 2021 the year with the largest amount of green bonds issued by listed property companies, still benefited by the low interest rates environment and the strong appetite for sustainable investments boosted by the pandemic. Until that year, most of the market conditions supported the expansion of this market and the existence of a green premium. In terms of geographical distribution, France was the largest issuer representing 22% of the total amount of green bonds issued, followed by Sweden, Germany, and the Netherlands. On a sector level, Office specialists, Industrial and Diversified property companies took the lead in terms of issued amount, representing 65% of the total.

Exhibit 1: Evolution and current composition of real estate green bonds



Source : EPRA Research, Data as of Nov/23.

However, the second half of 2022 brought significant changes that affected the dynamic of the green bonds market, being the rising interest rates and the discussions around the introduction of a new regulatory framework the most relevant ones. The low liquidity and uncertainty characterizing all the fixed income markets in Europe in 2022 and 2023 were also evident in this market, suggesting possible changes in the green premium of real estate green bonds. This report aims to recognize how beneficial has been for listed property companies to issue green bonds in comparison to standard corporate bonds during the last decade, identifying the presence of a green premium and analysing its evolution and main factors influencing it. The first section starts by presenting a summary of the relevant regulatory framework. Section 2 develops the methodology for estimating the green premium and presents the results. Section 3 provides a short explanation of the main trends on green bonds issued by property companies in Europe from a ESG perspective. Finally, the fourth section summarizes and concludes, and it is followed by the the appendix.

1. Regulatory framework

The 2021 EPRA Green Bonds Monitor's report highlighted the European Green Bond Standard Regulation (EUGBs) proposal as a potential catalyst capable of shaping the future of the green bonds market. Concerns about diverging rules on information disclosure, transparency and accountability of external reviewers for environmentally sustainable bonds, and eligibility criteria for environmentally sustainable projects were raised as obstacles hindering investors' ability to identify, trust, and compare environmentally sustainable bonds. Similarly, concerns existed regarding the ability of issuers to leverage environmentally sustainable bonds to transition their operations towards more environmentally sustainable business models.

Proposed by the European Commission in 2021, the text of the EUGBs was officially published in the Official Journal of the European Union on 30 November 2023 and will come into effect on 21 December 2024. The introduction of the EUGBs is set to create a gold standard for EU Taxonomy-aligned projects with full transparency on spending and revenue. It aims to boost investor confidence in green investments through a framework that mitigates the risks associated with greenwashing. This initiative integrates with the broader EU sustainable finance framework, reinforcing the existing regulatory landscape aimed at streamlining and expediting financial flows towards sustainable investments.

As outlined in [its first article](#), the Regulation aims to lay down uniform requirements for issuers of bonds who wish to use the designation 'European Green Bond' or 'EuGB' for their bonds that are made available to investors in the EU; establish a system to register and supervise external reviewers of European Green Bonds; and provide optional disclosure templates for bonds marketed as environmentally sustainable and for sustainability-linked bonds in the EU.

“Benefits of the EUGBs”¹

- Increase transparency to improve market efficiency and drive more investments²
- Reduce the risk of greenwashing in the green bonds market
- Help channel more money into carbon neutral and lower polluting technologies and production processes
- Oblige issuers to demonstrate the funding of green projects aligned with the EU taxonomy

Transparency objectives are set to be achieved through key documents such as the European Green Bond factsheet, the annual allocation report, the impact report, and, where applicable, the CapEx plan, as well as the reviews carried out by external reviewers. These documents should be publicly and freely available. An appropriate mechanism to achieve this objective could be the European single access point (ESAP), which will offer a single access point for public financial and sustainability-related information about EU companies and EU investment products.

With regard to the [EU Taxonomy Regulation](#), proceeds of bonds that use the designation ‘European Green Bond’ or ‘EuGB’ should be allocated to economic activities that are either environmentally

¹ <https://www.consilium.europa.eu/en/infographics/european-green-bonds/>

² [According to article 2\(5\) of the Regulation](#) “ the bond proceeds are allocated to economic activities that contribute to an environmental objective”

sustainable, and therefore aligned with the environmental objectives set out in the Regulation, or that contribute to the transformation of activities so that they can fulfil the criteria in order to become environmentally sustainable.

Issuers should in any case allocate all the proceeds of their European Green Bonds before the maturity of each bond while being allowed to deduct issuance costs that are directly related to the issuance of the bonds. Such a demonstration of taxonomy-aligned compliance must be included in the European Green Bond factsheet, which will be subject to a pre-issuance review with a positive opinion from an external reviewer. Measures aimed at removing legal uncertainty and growth constraints are also worth noting. Indeed, to enhance legal certainty and prevent amendments to the technical screen criteria³ from having a negative impact on the price of European Green Bonds that have already been issued, issuers should be able to apply those technical screening criteria that are applicable at the moment of issuance of the relevant European Green Bond when allocating the proceeds of that bond to eligible fixed assets or expenditure.⁴

MAIN TAKE AWAY

The European Green Bond Standard represents a groundbreaking initiative, introducing the world's first environmentally sustainable bonds accessible to investors worldwide. However, the discussions around this initiative created certain uncertainty in previous years that now seems to disappear. As the EUGBs come into effect, their impact will be closely monitored to evaluate their effectiveness in promoting sustainable investments and accelerating the transition towards a greener economy, particularly for the real estate sector.

2. Estimating a premium on green bonds issued by listed property companies

The global financial landscape is going through a decisive transformation, with sustainability playing a crucial role in the financial realm. As an increasing number of corporate issuers prioritize the issuance of “green” instruments, the concept of green premium, has become central when talking about investment and financing decisions. The green premium or “Greenium”, can be defined as *“the pricing benefits for sustainable debt issuer, based on the logic that investors are willing to pay extra or accept lower yields in exchange for sustainable impact”* (United Nations Development Programme) and has emerged, as mentioned, as a critical factor for companies, investors and policy makers. Because of that, in recent years, researchers have been deep diving into the intricacies of green instruments, trying to reach conclusions on the existence and consistency of green premiums through time.

Looking at some other studies out of the real estate industry, evidence from *Tang and Zhang (2018)*, analysing corporate bonds from 11 countries issued over a ten-year period (2007-2017), suggested no statistical evidence of a premium for green bonds. Similarly, the analysis conducted by *Zerbib (2019)*, on bonds from July 2013 to December 2017, highlighted a negative premium, indicating lower yields of approximately 1.8 bps in average for the 110 green bonds analysed. On the same note, the research conducted by *Gianfrate and Peri*, in 2019, analysing 121 European green bonds issued between 2013

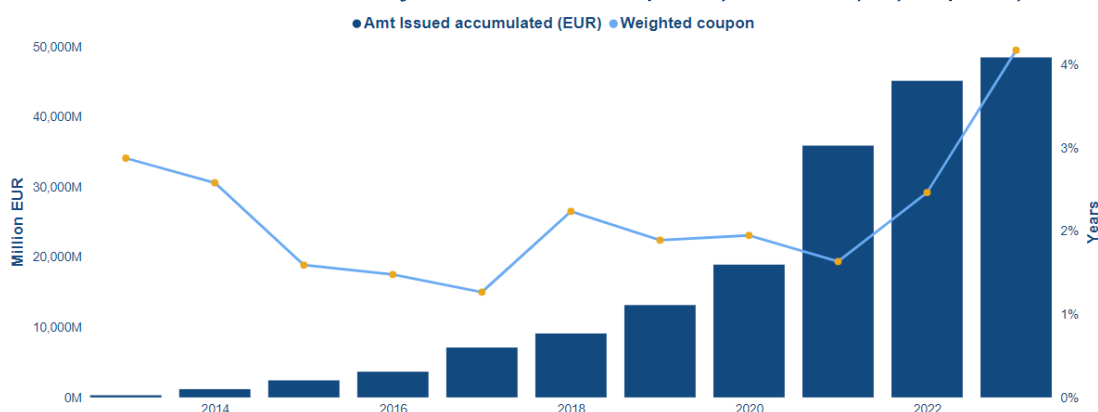
³ The technical screening criteria are a set of rules and metrics used to evaluate whether an economic activity can be considered environmentally sustainable under the EU taxonomy.

⁴ Where the applicable technical screening criteria are amended, the issuer should ensure that unallocated proceeds and proceeds covered by a CapEx plan that have not yet met the taxonomy requirements meet the amended technical screening criteria within seven years.

and 2017, resulted on an average green premium of 5bps. Lastly, the latest report by the European Securities and Markets Authority, that analysed a substantial sample of 9,000 bonds, despite an existing green premium in the past, highlighted the absence of a current green premium (greenium). The report, further indicated that corporate issuers benefitted from such premiums due to their green characteristics, and that those advantages no longer exist. Considering this evidence, and the current macro-economic environment, this analysis aims to delve into the evolution of green premiums among the major green bond issuers in the European listed real estate industry.

On a monthly basis, EPRA gathers information pertaining to the issuance of bonds by the constituents of the FTSE EPRA Nareit Developed Europe Index and other EPRA members. From 2013 to November 2023, the total debt raised by the European constituents has been of EUR 177,743 million, of which EUR 34,070 million was raised via green bonds (EPRA). When the whole universe of EPRA members and index constituents is taken into consideration, a total of EUR 48,463 million has been raised.

Exhibit 2: Historical evolution of green bonds issued by European listed property companies



Source : EPRA Research, Data as of November, 2023.

The EPRA green bonds database includes 249 green bonds issued by current and former constituents of the FTSE EPRA Nareit Developed Europe Index as well as EPRA members over the past 10 years. Out of these, 206 are active green bonds, that have collectively represent a total of EUR 44,257 million. With the purpose of comparing green bonds with corporate bonds from the same issuer where the only significant difference is the green label, a comprehensive screening has been performed in order to identify those green bonds that have direct comparable corporate bonds issued by the same property company. Using this list as a starting point, the various issuers were screened through *Bloomberg* and *Refinitiv* to explore the entire universe of active corporate bonds issued by the green bonds' issuers and identify corporate bonds to compare with the active green ones.

In order to compare the green bonds with the corporate ones, information has been collected from the above mentioned data vendors regarding the various characteristics of the bonds. This included details such as the bond type (plain vanilla, callable, etc.) and metrics such as the yield to maturity and the Macaulay duration. The information gathered, provided a comprehensive and holistic overview of the active corporate bonds issued by EPRA members. The screening results, have been then cross-checked with the active corporate bonds already present in the EPRA database to mitigate the possibility of discrepancies between the two datasets.

From the universe of bonds collected, the bonds have been selected on the basis of the following criteria:

- **Existence of a direct comparable no-green corporate bond:** Only green bonds that have a comparable no-green bond issued by the same property company with similar characteristics (coupon, currency, duration, seniority) have been included in the study.
- **Availability of data:** Only bonds for which the historical figures since the issuance date were publicly available.
- **Rating:** Only bonds with an investment-grade credit rating (AAA to BBB-). This is because investment grade bonds are generally more liquid, more stable, and more predictable than the non-investment grade ones (also called high yield).

From the cleaned sample, the bonds have been divided into two categories, based on their type:

- **Plain-vanilla corporate bonds:** those bonds characterized by a fixed maturity date (date in which the principal amount gets repaid to the bondholders), and a fixed coupon rate (the interest rate throughout the life on the bonds).
- **Callable bonds:** that differently from the plain vanilla ones, give the right to their issuers to redeem or call the bonds before their maturity dates.

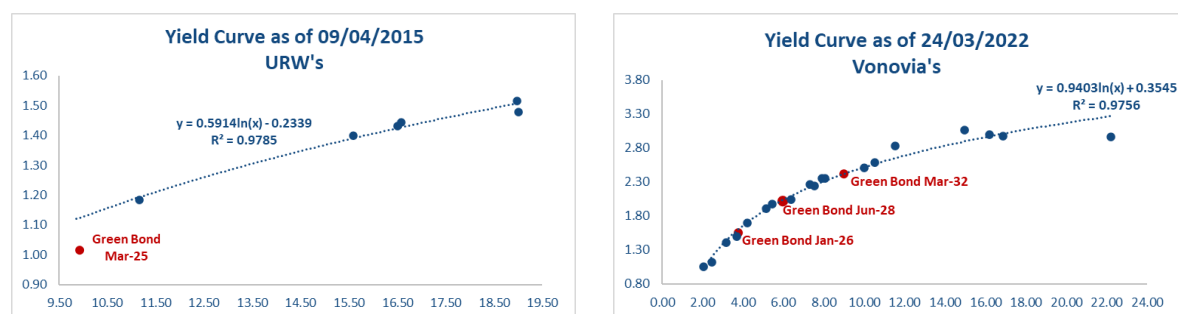
After refining the sample of initial corporate bonds, a similar cleaning process has been applied to the EPRA green bonds' database, resulting in a total of 102 active green bonds. Those green bonds for which the above-mentioned relevant information (Macaulay duration, yield to maturity etc.) was available, have been then matched with corporate bonds sharing similar characteristics (e.g. currency, rating, bond structure, seniority), and paired based on their duration. **The pairs of bonds resulting from this screening comprised of 14 pairs of bonds, all of them issued between 2020 and 2022 by 11 companies who are constituents of the FEN Developed Europe Index or EPRA members.**

This is the list of companies covered in this analysis:

1) Atrium Ljungberg, 2) Entra, 3) Hufvudstaden, 4) Vonovia, 5) Unibail-Rodamco-Westfield, 6) Aedas Homes, 7) CA Immobilien, 8) Deutsche Wohnen, 9) Dream REIT, 10) Tritax Eurobox and 11) SEGRO.

For the green bonds that could not be paired with any conventional bonds, research has been conducted pertaining to the number of bonds issued by the green bonds' issuer. The aim was to explore the possibility of plotting their yield curves and creating synthetic "conventional" bonds with the same duration as the green bonds. Among the companies screened, Vonovia and Unibail-Rodamco-Westfield had the most significant amount of active bonds. **Finally, the green bonds issued by these two companies have been incorporated to the initial list of green bonds paired, resulting in a total of 19 pairs of bonds, issued between 2014 and 2022.**

Exhibit 3: Yield Curves at green bonds issue date



Source : EPRA Research.

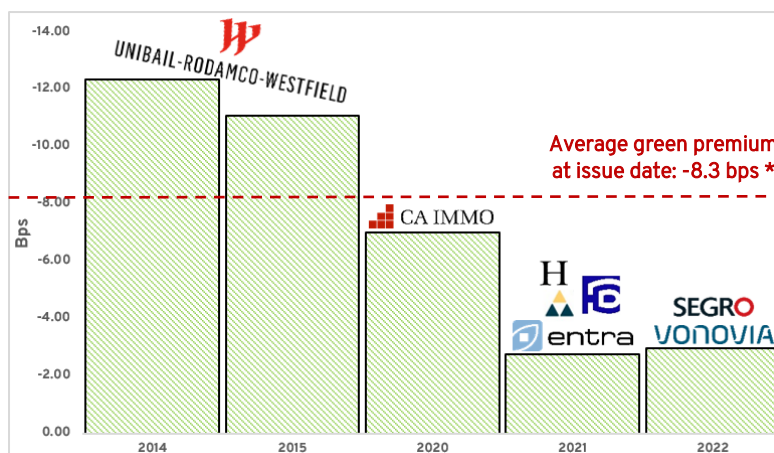
Knowing that each pair of bonds consisted from the same issuer have almost identical characteristics, we can assume that the factors influencing the yield to maturity of the two bonds were essentially the same except for the green label. Thus, in order to estimate the green premiums, the differentials of both yield to maturity and duration have been computed for every pair of bonds from their issuance dates until September 2023. To explain the relationship between the two differentials and investigate the existence of a green premium, a regression analysis has been conducted.

The linear regression equation is defined as $Y = \beta X + \beta_{green}$. Here, the dependent variable (Y), represents the yield to maturity spread between the green bonds and the corporate ones, while the independent one (X), represents the duration differential. β is the slope of the regression line and β_{green} is the regression constant. In practical terms, β_{green} represents the yield to maturity differential when the difference in duration is 0. A first regression was run using yield to maturity and duration data at the issue-date of each green bond. Hence, with all the other characteristics of the bonds paired being equal, β_{green} can be interpreted as the premium or discount that corporate issuers experienced when issuing a green bond instead of a conventional one. A second regression was run using data as of Sep/23 in order to estimate the green premium under current market conditions (see appendix).

The conducted regression analysis showed evidence of an average green premium of 8.3 bps on the issue date for plain-vanilla bonds (see appendix), although revealed a decreasing trend for such green premiums overtime for the European issuers (*Exhibit 4*). Furthermore, no statistically significant evidence of green premiums was found as of Sep/23, suggesting a similar conclusion to the above-mentioned report by the European Securities and Markets Authority.

Here it is important to note that such decreasing trend in the green premium might be directly associated with the low liquidity observed in many fixed income markets in 2022-2023. This was a direct consequence of a strongly restrictive monetary policy implemented by several central banks in the world to control the high inflation observed during the same period. In Europe, the ECB launched an aggressive series of policy rate hikes, amounting for a total of 450 bps and similar paths were followed by the Bank of England and the Riksbank in Sweden. Nevertheless, the inflation has now decreased significantly worldwide and many investors, analysts and economists expect some relaxation in the monetary policy in 2024-2025, which is already increasing the liquidity of many fixed income instruments, including green and corporate bonds.

Exhibit 4: Historical evolution of green premium in listed real estate bonds*



Source : EPRA Research, Data as of September, 25, 2023.

* Considers only green bonds issued by property companies that have direct comparable standard corporate bonds

The same exercise for callable green bonds showed evidence of a premium of 4.5 bps (see appendix) at issue date. However, there was no evidence of a green premium as of Sep/23 in a similar way than the plain-vanilla bonds, although in this case the result could be related to the impact of the implied option for such bonds that has not been captured by the methodology used in this analysis.

MAIN TAKE AWAY

The green bonds market in Europe grew and offered attractive financing alternatives for listed property companies during the last decade. Since 2013, the EPRA members and constituents of the FSTE EPRA Nareit Developed Europe index raised a total of EUR 48,463 million in green bonds, displaying an average premium compared to standard comparable corporate bonds in the range of 4.5 bps to 8.3 bps. However, this premium seems to have followed a decreasing trend and disappeared under current market conditions.

When considered the new regulatory framework, the expected changes in the economic fundamentals and the main ESG trends observed in the listed real estate industry, it is possible to think that the market conditions will be optimal again for the existence of a green premium in real estate bonds. Therefore, it is worth to turn our attention to this final point, main trends from the ESG perspective.

3. ESG perspective: Main Trends in the Listed RE Industry

Green bonds have emerged as a crucial financial instrument to channel funds into environmentally friendly projects, contributing to climate change mitigation, adaptation, and broader environmental benefits. This section provides an overview of some of the main trends influencing the green bonds issued by listed property companies in Europe, paying special attention to the same set of companies covered in the green premium analysis.

EPRA has examined data on issued green bonds from an Environmental, Social, and Governance (ESG) perspective. A comprehensive analysis was carried out on the same set of bonds used in the financial analysis (19 pairs of bonds issued by 11 Companies, details in Section 2). This holistic approach aims to evaluate the sustainable practices and responsible governance of the companies issuing the bonds. The analysis encompasses a range of ESG criteria, including environmental impact, new market practices, and the effect of new regulations. This approach helps in understanding companies' commitment to both financial and sustainable practices. EPRA investigated the ESG perspective of green bonds based on various reports published by companies, such as Impact reports, annual sustainability reports, second-party opinions, and Green bond frameworks. The main trends are summarized as below.

3.1. EU Taxonomy and other regulations

- EU Taxonomy themes

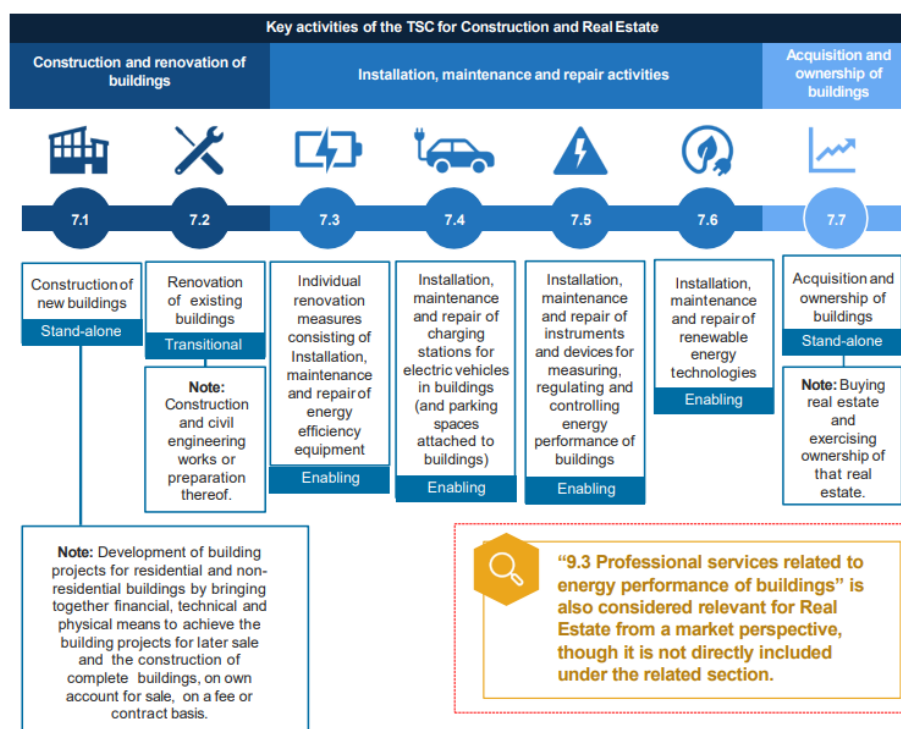
Among the companies we studied, there's a distinct emphasis on strategically issuing green bonds that align with the EU taxonomy, particularly aiming at investing in initiatives geared towards mitigating the effects of climate change. These companies prioritize efforts directed at climate change adaptation as well, considering it a secondary yet significant objective. Their focus on adaptation involves initiatives such as reinforcing infrastructure resilience and diversifying supply chains. These actions not only serve to protect these companies from the immediate impacts of climate change but also position them as frontrunners capable of

navigating through future environmental uncertainties. This demonstrates a comprehensive sustainability strategy that encompasses both proactive measures to combat climate change and adaptive strategies to thrive in evolving environmental conditions.

- EU taxonomy eligible economic activities

The analysis reveals that the Construction and Real Estate activities under Section 7 of the Taxonomy for Sustainable Activities (TSC) play a pivotal role in shaping environmentally sustainable practices. This section comprises seven activities intricately linked to specific environmental objectives. These activities are categorized in three types: Stand-alone, Enabling, and Transitional (EU Taxonomy Alignment in Listed Real Estate, EPRA, 2023).

Exhibit 5: Key activities EU Taxonomy related to Real Estate



Source : EU Taxonomy Alignment in Listed Real Estate. EPRA.

Companies in Europe are currently preferring to focus on below mentioned eligible activities that reflects a strategic approach by companies to align their green bond initiatives with sustainability goals and regulatory frameworks :

- 7.1 Construction of new buildings
- 7.2 Renovation of existing buildings
- 7.7 Acquisition and ownership of building

⁵ Commission Delegated Regulation (EU) 2023/2486 of 27 June 2023 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the sustainable use and protection of water and marine resources, to the transition to a circular economy, to pollution prevention and control, or to the protection and restoration of biodiversity and ecosystems and for determining whether that economic activity causes no significant harm to any of the other environmental objectives and amending Commission Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities (europa.eu)

- The Sustainable Development Goals (SDGs) or Global Goals⁶

United Nations Member States set up 17 SDGs in September 2015. These goals are designed to address a wide range of global challenges and promote sustainable development by the year 2030. Each goal is accompanied by a set of specific targets and indicators providing a framework to assess progress. The idea behind the SDGs is to encourage collaborative efforts among governments, businesses, civil society, and individuals to work towards a more sustainable and equitable future.

Some examples of adaptation measures are given below, for the most followed SDGs in reporting the impact of green bond proceeds. The examples below do not represent an exhaustive list of adaptation solutions and economic operators which might put in place several other adaptive measures.



7 Affordable and Clean energy

Examples:

1. Streamlining the use of energy,
2. Make good choices for the environment,
3. The ambitious goals for reducing energy use per square meter.



11 Sustainable cities and communities

Examples:

1. Focus on modernization of existing buildings,
2. Reduce final energy demand with the energy performance of the building before the renovation.



13 Climate energy

Examples:

1. Installation of infrastructure for electric or other zero-emission vehicles to foster the development of shared mobility and alternative modes of mobility,
2. Installation of solar photovoltaic and solar thermal panels, geothermal energy, heat pumps and, other installations as well as implementation of innovation projects.

3.2. Governance

In response to the growing global emphasis on transparency of the green bond issuance procedures and post issuance allocation of funds, including eligibility of assets, companies are implementing robust internal governance structures. Concurrently, companies are enhancing transparency by subjecting annual impact reports, voluntarily external reviews conducted by specialized entities as per below:

1. Sub-Committees for Green projects:

Green Bond/Financing Committee or Sustainability Council: Many companies are incorporating internal governance structures to oversee the selection of projects financed by green bonds.

⁶ <https://sdgs.un.org/goals>

These sub-committees, often named *Green Bond Committees* or *Sustainability Councils*, play a crucial role in ensuring that the funded projects align with environmental and sustainability criteria. These committees may consist of representatives from various departments within the company, including finance, sustainability, and risk management. Their responsibilities typically include project evaluation, approval, and monitoring to ensure compliance with green finance principles.

2. Assurance for transparency:

Voluntary External Company/Reviewer: Apart from Second party opinions that are obtained pre-issuance of green bonds. We observed a inclination of companies to engage external entities to review and assure their annual impact reports to enhance transparency and credibility in green financing. This external review is typically voluntary but increase credibility to the company's claims regarding the environmental impact of the green bond financed projects. External reviewers could be specialized in sustainability consultancy, auditing, or other entities with expertise in evaluating the environmental and social performance of the projects. The review process ensures that the information presented in the impact reports is accurate, reliable, and adheres to established sustainability standards.

Overall, these mechanisms help align financial activities with environmental and social objectives, contributing to the broader goals of sustainable development.

3.3. Energy performance indicators

The analysis displayed that companies measure the impact for energy performance of the specific projects covering three main indicators:

1. Green Building Certifications: the companies investigated in this study state that 70% or more of their portfolios are certified under one or more green certifications mentioned below:

- LEED: Certified, Silver, Gold and Platinum levels.
- BREEAM: Different certification for In-use, New construction and Refurbishment & fit-out, with levels of Pass, Good, Very Good, Excellent and Outstanding.
- DGBC: The German certification, levels of Pass, Good, Very Good, Excellent and Outstanding.
- Miljöbyggnad – Nordic based certification - levels of Bronze, Silver, Gold, and Platinum.

2. Energy efficiency savings in tonne CO₂ or reduction in percentage: EPC ratings- Under the Energy Performance of Buildings Directive (EPBD), Energy Performance Certificates (EPC) and inspections of heating and cooling systems play crucial roles in improving a building's energy performance. The EPC rated buildings on a reference grid from A to F, with C is the minimum level. The energy efficient green buildings are also designed to achieve a minimum 20% energy efficiency improvement.

Additionally, The Nearly Zero Energy Buildings (NZEBs) standard mandates energy-efficient features in new constructions, covering insulation, lighting, heating. The EU Taxonomy uses NZEB-10% as a benchmark, requiring new buildings to have a primary energy demand at least 10% lower than NZEB standards. For existing buildings, they should meet EPC level A or NZEB-10% based on local building stock, aligning with EU sustainability goals. Ultimately, success in the realm of energy performance is multifaceted and can be defined based on a combination of

factors, including regulatory compliance, environmental impact, cost-effectiveness, and user satisfaction.

3. Renewable Energy sources: the Renewable Energy Directive (RED) is a legislative framework established by the European Union (EU) to promote the use of renewable energy sources and enhance the sustainability of energy production within the member states. The directive sets targets and guidelines to increase the share of renewable energy in the EU's overall energy consumption. Property companies are reporting the sub setting the non-renewable sources through increased usage of the following renewable energy sources via investment of green bond proceeds: Solar, Hydropower and Geo-thermal energy.

MAIN TAKE AWAY

As observed in the three points mentioned above, the 11 companies covered in this analysis have made great efforts to guarantee that their green bonds are aligned with the EU Taxonomy and make clear contributions on the SDG front. In addition they have strengthened their governance and clarity on energy performance in order to provide all the stakeholders with a clear understanding of how the green bonds support the evolution of their operations and projects. Therefore, these efforts might lead investors to accept lower yields in these green bonds in exchange for greener and more transparent investments, supporting the case for the existence of a green premium in the near future.

4. Conclusions

Issuing green bonds has been beneficial for listed property companies in Europe. During the last ten years, the EPRA members and constituents of the FSTE EPRA Nareit Developed Europe index raised a total of EUR 48,463 million in green bonds, displaying an average premium compared to standard comparable corporate bonds in the range of 4.5 bps to 8.3 bps.

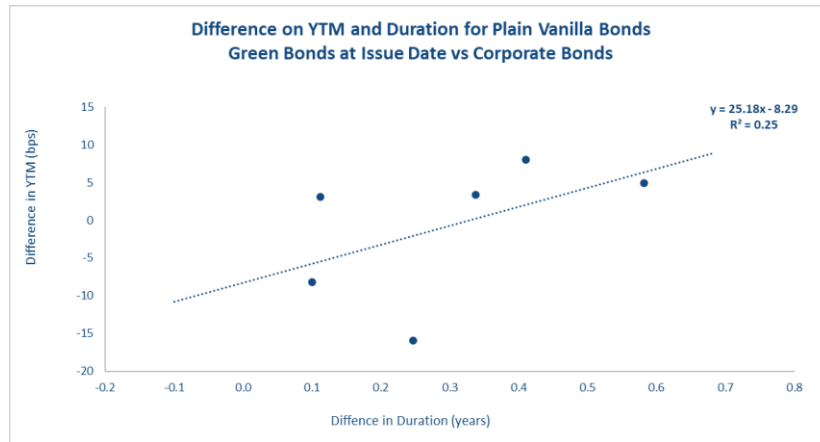
Such green premium has evolved, changing from 11 bps in 2014-2015 until almost 0 bps in 2023 since there is now evidence of green premium under current market conditions.

The changing macroeconomic conditions and regulatory uncertainty could have affected the evolution of the green premium. In particular, the upcoming regulatory changes (EUGBs) and the low liquidity observed in 2022-2023, mainly as a result of the increasing interest rates and a more restrictive monetary policy, played a key role in the dynamics of the green bonds market, reducing the number of property companies issuing new bonds and affecting the premium.

However, such conditions are starting to change now, opening new opportunities for REITs and property companies to raise capital under reasonable cost and finance new sustainable projects, what eventually could create the conditions for green bonds to recover the premium observed in the past.

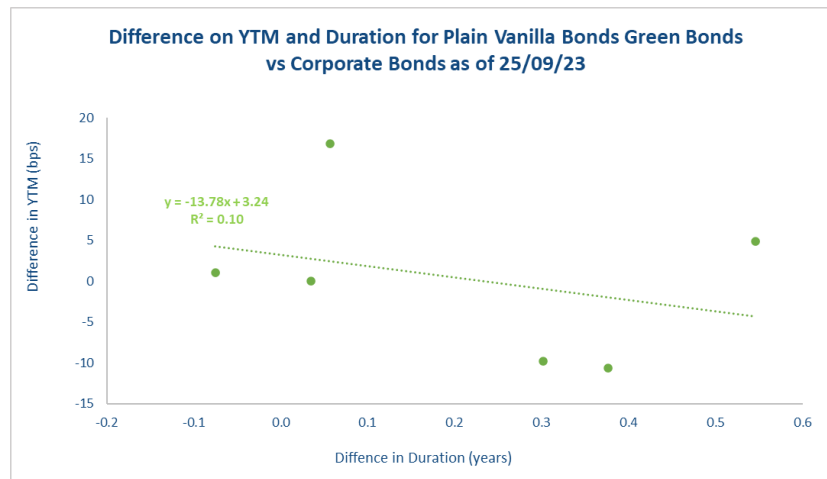
5. Appendix

Exhibit 6:



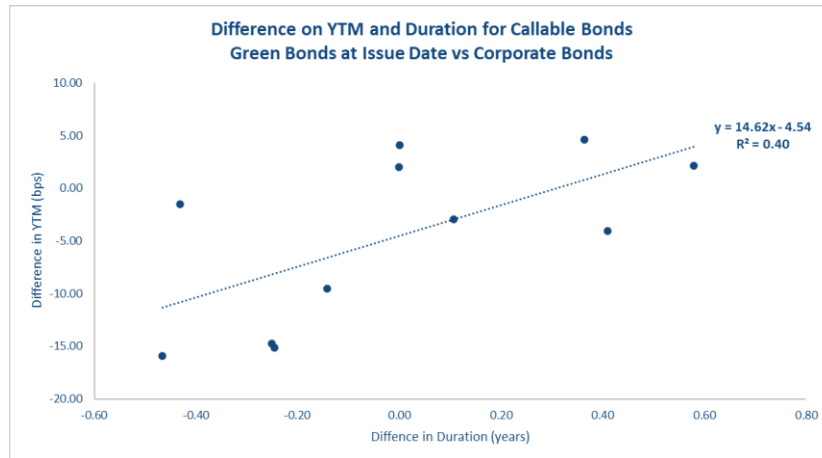
Source : EPRA Research.

Exhibit 7:



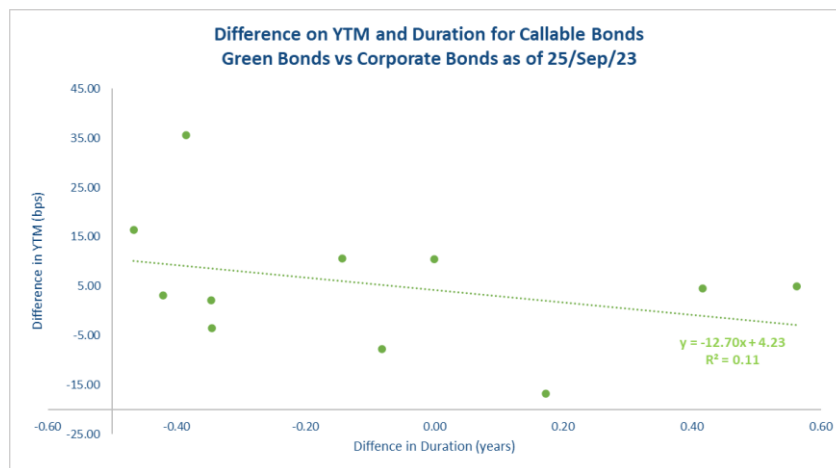
Source : EPRA Research.

Exhibit 8:



Source : EPRA Research.

Exhibit 9:



Source : EPRA Research.

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Abbreviations

- BREEAM: Building Research Establishment Environmental Assessment Method
- CBI: Climate Bonds Initiative
- CCA: Climate Change Adaptation
- CCM: Climate Change Mitigation
- CSRD: Corporate Sustainability Reporting Directive
- DGBC: Dutch Green Building Council
- EPBD: Energy Performance of Buildings Directive
- EPC: Energy Performance Certificate
- EPRA: European Public Real Estate Association
- ESG: Environmental, Social, and Governance
- EU: European Union
- GBP: Green Bond Principles
- GHG: Greenhouse Gas
- ICMA: International Capital Market Association
- LEED: Leadership in Energy and Environmental Design
- NZEB: Nearly Zero Energy Buildings
- RED: Renewable Energy Directive
- SDGs: Sustainable Development Goals
- TSC: Taxonomy for Sustainable Activities