A Short Summary of the Green Bond Market and REITs

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Below is synthesized edit of information gathered on green bond issuance and REITs for a commentary by S&P Global Ratings – Credit Research. The parameters for the research contribution were focused largely on green building certifications schemes (i.e. BREEAM, LEEDS, HQE) and the benefits and perceptions of these certification schemes in the real estate sector. As numerous academic studies have indicated, green certification schemes and the green infrastructure associated with them bring both operational and reputation benefits to building managers while also being seen as credible green labels by the industry, regulatory bodies, and the general public. The below includes a short overview on green bonds and their growing market. It then addresses the benefits and concerns of green bond issuers and investors, especially the lack of standardization and transparency in the market. From there, the piece evaluates the growing base of global standards for green bond issuance, and the correlating rise of green real estate and its use of green bond project financing. The summary ends with an exploration of leading green certification schemes and the many benefits these yield for managers like REITS, arguing that green infrastructure and the use of green bonds are aligned with REITs' management strategies and that the green bond market within real estate, while small, has potential.

CONTENT OVERVIEW

1. Green bonds: What they are and how they're evolving

First developed in 2007 by the World Bank and European Development Bank, a green bond is like a conventional bond except the debt financing issued must be used to finance or re-finance new or existing "green" activities or projects. While what are considered eligible "green" projects in the green bond market is not yet transparent (to be discussed further), it is understood that the issuance of a green bond is dependent on borrowers following or meeting specific and veritable conditions that improve environmental outcomes and often combat climate change. Current market standards outline potential project categories to include: renewable energy; energy efficiency/building efficiency; sustainable waste management; sustainable land use; biodiversity conservation; clean transportation; sustainable water management; and climate change adaptation (Global Bond Principles, 2016; HSBC, 2016; Climate Bonds, 2016).

Despite being relatively young, the green bond market has grown exponentially in recent years, and will likely continue to do so over the next decade. The anticipated 2016 issuance is USD 55-80bn, an estimate currently on track with a 2016 Q2 total of USD 18.9bn, up 92% from the same time last year (Climate

Bonds, 2015; HSBC, 2016; Societe Generale 2016). In fact, despite being a small subset of the bond market, the green bond market is one of the fasting growing fixed-income segments, and it is only starting to tap into its growth potential (ReedSmith, 2015; McBride, 2015). In 2015 and 2016, the number of currencies entering the market grew. Big market entrances from China and India furthered the attention being focused on green bonds, and the market likewise saw a surge in numbers from corporate and financial issuers enticed partly by the market's relative stability (Societe Generale, 2016; ReedSmith, 2015; PIMCO, 2014).

2. A growing green investor base

At the 2015 COP21 in Paris, institutional investors, representing USD 11.2tn, indicated their growing preference for investments promoting ESG[1] and climate smart initiatives by pledging to increase their climate smart investments by a factor of 10 by 2020 (Climate Bonds, 2016; HSBC, 2016). Additionally, a group of investors representing USD 2.6tn AUM undertook to work with the Climate Bonds Initiative to grow the green bond market specifically (UNPRI, 2016). Add UN-PRI signatories to the list of COP21 investors interested in green investments and/or the green bond market, and the investor-base grows further. To date, UN-PRI has 1557 total signatories from 50 countries and represents over USD 60tn (UN-PRI 2016). And fortunately, the green bond market is an attractive market for such investors. The labelling of a green bond is a signal to these investors that their investments will capitalize on environmental benefits.

3. Benefits for green bond issuers and investors

Green bonds provide stable, predictable returns with the added bonus of being socially responsible and at little to no cost (Ivory 2016; KPMG, 2015). With green bonds, "investors do not have to sacrifice yield to gain green exposure, nor significantly increase their risk profile in order to invest in assets that aid environmental efforts." (Trucost, 2016). There are no specialized cash flows or financial engineering involved hence no additional risk of costs for going green. On the flipside, issuers of green bonds gain a more expansive investor base, greater transparency regarding its sustainable enterprises, and an expanded means of project and portfolio financing while their investors receive a reliable fixed-income source that encapsulates their ESG commitments (HSBC, 2016; Climate Bonds, 2016). Even so, investors need to be cognizant of the potential additional costs of "going green," and take necessary measures to avoid utilizing green bonds as vanity labels for their projects. Investors have voiced concerns over the market's current lack of transparency, largely a result of the absence of global standards, and its potential for "green-washing." Adding to the hesitation surrounding the green bond market are also the same ones facing conventional bonds- limited liquidity and potential mispricing (PIMCO, 2014).

4. Green bond market: market validity and standards

Service providers and underwriters providing second opinions, like current market participants CICERO and Vigeo, are becoming a stable component of the green bond market. Verifications from third-parties validate a bond's "green" label, and, in doing so, alleviate investor fears over greenwashing and fraud. In a

[1] ESG: a global term to describe environmental, social and corporate governance criteria that invests are considering in the context of corporate behavior. They are typically non-financial and medium & long-term focused.

vote of confidence in the market, both Moody's and S&P's have begun offering green bond accreditation services in the form of a performance rating guide and a Green Bond Index respectively (Climate Bonds, 2016). Even so, second opinions assess the potential and not the actual benefits of a green bond. The assessment of outcomes as well as the reporting of performance currently lies in the contracts shared by the issuer and borrower, and such due diligence and time can be added costs for investors.

Additionally, enterprises like the Climate Bond Standard Board and the International Capital Market's Green Bond Principles (GBP) add validation to the market by offering criteria development and certifications for labelled green bonds (HSBC, 2016; Climate Bond, 2016; Societe Generale 2016). The GBP are increasingly being accepted as the market standard, utilized by opinion providers, policymakers, issuers, and borrowers in their investment and project assessments (ReedSmith, 2016). The GBP are valued for they "recommend transparency and disclosure and promote integrity in the development of the Green Bond Market," but, as a voluntary standard, they do not offer insight into the criteria for marking a green project nor do they offer a method of enforcement; these are left once more to the due diligence and negotiating of the issuer and borrower (PIMCO, 2014; Green Bond Principles, 2016).

5. The growth of green real estate

The energy and property sectors represent a majority of green bond investments, indicating how integral the infrastructure sector is and will be in promoting sustainable development globally, particularly the development of a low carbon economy (Societe Generale, 2016; ReedSmith, 2015; UN-PRI, 2016). It is estimated that the global economy will require USD 90tn of infrastructure investments by 2030 and the International Energy Agency recommends a sustained annual investment in low carbon economy of USD 1tn (PIMCO, 2014). Current funding for the sector stands at USD 5tn with only 7-13% being invested in low-carbon projects (UN-PRI, 2016). Moreover, **buildings contribute as much as 1/3 of total global greenhouse gas emissions largely through fossil fuel use in their operational phase, and also consume 40% of global energy**. Massive development in both growing and developed economies coupled with **inefficiencies in existing buildings will lead to a doubling of greenhouse gas emissions from buildings in the next 20 years if left unchecked** (UNEP SBCI 2009).

Fortunately, efforts are being made to shift buildings towards a more sustainable future, including developing opportunities to access green bonds for development projects. In fact, green building remains a growing phenomenon. It continues to double every three years, a trend which is expected to remain as more countries adopt it. Emerging economies like India, Saudi Arabia, Brazil and South Africa are expected to become engines of green growth over the next three years with development for green buildings being twofold to sixth fold over current levels (SmartMarket Report, 2016). Green growth in developed economies, in particular the US, UK and Germany, is also anticipated to continue expanding. For developed economies like the US and Europe (especially in the Nordic area), property is and will remain to be an area of focus for green bond use as investors remain comfortable in financing property upgrades like obtaining higher levels of energy efficiency standards.

6. Green bonds & REITs

Green bonds are an attractive financing option for green infrastructure as they provide stabilized and long-term financing for low carbon infrastructure, building efficiency, low carbon energy, and adaptation, especially from private sector issuers, like REITs, that deliver a key source of capital for leveraging projects that cannot be met solely by public sector funds and bank finances (ReedSmith, 2015; UN-PRI; UNEP; others). Greening their portfolios benefits both the operational performance and reputation of REITs (SmartMoney, 2016; Fatemi, Fooladi, and Tehranian, 2015). Empirical studies have found that **the financial performance of REITS is generally stronger when ESG and sustainable characteristics are incorporated into their real estate equity investments**. These benefits include: a reduced default risk for commercial and residential properties (Pivo and An 2015; Eichholtz et al. 2015; GRESB, 2016; MSCI 2012; cheaper credit (Eichholtz et al. 2015; GRESB Insights); greater transparency (GRESB, 2016); new financing opportunities via green bonds; and new sources of capital (GRESB, 2016; SmartMoney, 2016).

Through the greening of REITs, **managers receive reduced operational costs, higher rental rates and tenancy occupancy (stakeholder loyalty and tenant contentment increase), and greater market demand, which in turn, decrease the financial risk presented to investors in their valuations** (Winters 2014; JLL 2012; Eichholtz, Kok and Yonder 2012; REW-Online, 2015). In their study on the value of green REITs, Sah et al. found that ENERGY STAR partners have a higher return on assets than their less-green peers. Likewise, LEED buildings have higher rents and occupancy rates as well as faster absorption of buildings (Miller, Spivey and Florance, 2008; Chijs, 2008; Eichholtz, Kok, and Quigley, 2008; Wiley, Benefield and Johnson, 2010). In a 2010 study covering 46 office markets with 7,308 properties, Wiley, Benefield and Johnson found that **LEED-certified buildings had a rent premium of 15.2% to 17.3% over conventional buildings after controlling for region and lease type** (Sah et al., 2014).

In fact, a few industry leaders have already begun issuing green bonds. 5 REIT/property companies are issuing green bonds in the form of general obligation bonds to up their portfolio's "greenness" (GRESB, 2016). Vasakoronan, Regency Centers, Vornado, Unibail-Rodamco issue land II, and Stockland are all current participants in the green bond market. Most of these organizations are using green bond proceeds to fund new building construction and renovations to green standards while others are also drawing upon them for "social" purposes like tenant and community engagement. Notably, each of the 5 REITs are from developed economies, mostly Western European and American, and each cite green certification schemes as being key markers in their proposed projects. What these green bond issuances from REITs indicate is that interest in sustaining green building growth and its correlating use of the green market is strong even with the growth pains of an immature market. All the REITS had bonds oversubscribed (IBID).

7. The role of green certifications schemes for REIT green bond issuance

Contributing largely to the benefits discussed above is the well-established spectrum of green building certification and rating schemes like LEEDS, BREEAM, and HQE. These leading green building certification processes address the building sector's extensive direct and indirect environmental externalities and are seen as trusted leaders in green building and construction by not only industry but also

government policies and the general public as being indicators of a safer, green investment (WBDG, 2014). Because of their centrality within the real estate sector, green building certification schemes are an important tool for REITs looking to use green bonds for their projects/portfolios (GRESB, 2016).

GRESB's Green Bond Guidelines for the Real Estate Sector, which helps the real estate sector identify green project eligibility; the managing and implementing of investment proceeds; and the communicating of Green Property Bond outcomes, relies on certification schemes as the basis for their eligible projects (GRESB, 2016). GRESB **sees LEEDS, BREEAM and HQE as being integral to green labeling as the certifications provide rigorous documentation for performance-based measurements, take into account a multiplicity of project categories, and require third party reviews** (GRESB, 2016). Their specificity, transparency, disclosure requirements, and third-party validation processes bring assurance and security to the issuance of green bonds by REITs and the green bond market in general (GRESB; Winters 2014).

8. Conclusion

Green bond project financing aligns well with REITs facing climate risk as it attracts a broader range of investors, enables meeting changing regulatory requirements, and increases their financial performance as well as their public image. Likewise, because of the operational and reputation benefits of greening portfolios (i.e. decreased credit risk, higher occupancy, increased energy efficiency), the adoption of green building principles and non-financial performance metrics are a better value proposition for managers like REITs and green bonds offer them a more secure, diversified debt portfolio for project financing. While "greenwashing" and a lack of global standards remain the biggest obstacles faced by investors and issuers of corporate green bonds, the global promotion of guidelines and standards like the GBP and the Climate Bond Standards as well as adherence to credible green certifications schemes like LEEDS are helping to alleviate such fears and give investors and managers greater market validity and security.

Even so, the green bond market needs to develop further before it can become a mainstream fixed-income investment option for managers like REITs. Further market and regulatory encouragement, like tax incentives, is required and would add attractiveness to green bonds from a cost-efficiency perspective. Examples of incentives include the European Investment Bank's Bonds Initiative which offers credit enhancements for green issuance that address the policy objectives of the EU's Connect Europe Program. Within the US, policymakers could advance and encourage the offering of incentives like it had for the oil and gas industry through 1) tax credit bonds (i.e. US federal government Clean Renewable Energy Bonds), 2) direct subsidy bonds, or 3) tax-exempt bonds (Climate Bonds). Although largely tied to municipal bonds, incentives like the above could help increase corporate green bond use but, to do so, policymakers need to generate flexible, creative policies that encourage innovation and embrace climate finance.

Should you have any questions or would like any additional information regarding the above information or additional information from my research contribution, please do not hesitate to contact me at lhypes@greenleafadvisors.net or on my cellular at 847-445-5281. Thank you for reading. I hope you enjoyed it.

Building Rating or Certification System	Type of Standard or Certification	Managing Organization	Issues/Areas of Focus
ENERGY STAR (USA)	Government certification using a benchmarking method	U.S. EPA and U.S. DoE	Building energy and water use
LEED (NA, EU, UK, Asia)	Green building rating and certification system through independent third-party verification for: • New Construction (NC) • Existing Buildings, Operations & Maintenance (EB O&M) • Commercial Interiors (CI) • Core & Shell (CS) • Schools • Retail • Healthcare (HC) • Homes • Neighborhood Development (ND)	U.S. Green Building Council	Performance in: • Sustainable Sites • Water Efficiency • Energy & Atmosphere • Materials & Resources • Indoor Environmental Quality • Locations & Linkages • Awareness & Education • Innovation in Design • Regional Priority through a set of prerequisites and credits
HQE (UK, EU)	Green building rating and certification system through third-party verification for: • New Building • Renovation • Design & Construction • Non-residential • Residential • Detached House	Certivéa	Performance in: • Energy • Site • Components • Worksite • Water • Waste • Upkeep- Maintenance • Comfort (acoustic, visual, olfactory, hygrothermal) • Health (Quality of Spaces, Air Quality, Health quality of water)
BREEAM (UK, EU, EFTA member states, EU candidates, as well as the Persian Gulf and starting in the US/Canada)	Certification system is a multi-tiered process with pre-assessment, third-party consultant guidance through an assessment organization for: • New Construction • Communities • In Use Buildings • EcoHomes	BRE Global	Assessment uses recognized measures of performance, which are set against established benchmarks in: • Energy and water use • Internal environment (health & well-being) • Pollution • Transport • Materials • Waste • Ecology • Management processes

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