

Green Bonds

Exploring opportunities for investment

March 2015

Introduction

ShareAction's Green Light programme encourages pension providers to embed climate-awareness into investment decisions, to engage with companies, and play a role in policy advocacy supporting an orderly transition to a low carbon economy. As part of this programme, we encourage exploration of the opportunities available to allocate more investment to initiatives that support this transition. Green investments often face barriers such as an uncertain policy environment, limited certified products and limited scale. Pension funds can help to overcome these barriers by signalling their demand for these investment opportunities.

The green bond market has taken off in the past year with \$36bn issued in 2014; triple the amount issued in 2013 (\$11bn). A number of large investors, including Aviva Investors, Natixis Asset Managers and Zurich Re-insurance have signed an Investor Statement¹ that acknowledges the significant risk posed by climate change and welcomes the growth of green bonds as a mechanism to finance climate solutions.

ShareAction and the Climate Bonds Initiative (CBI) have prepared this joint briefing to provide information on green bonds and examine opportunities for investment in this area. This briefing provides information on: the key features of green bonds, recent developments in the green bonds market, benefits to investors, and concludes with questions pension funds may wish to ask their fund managers and investment consultants regarding green bond opportunities.

What are Green Bonds?

Green Bonds are standard bonds with green feature as a bonus

Green bonds fund projects that have positive environmental and/or climate benefits. The key difference between conventional and green bonds is the specified use of proceeds from the bond sale. Proceeds from green bonds are earmarked for green projects.

However, the debt recourse, or financial backing, of the bond is not necessarily linked to the green projects. In fact, the majority of green bonds are green "use of proceeds" bonds meaning they are backed by the issuer's entire balance sheet. "Use of proceeds" structured green bonds therefore allow investors to benefit from investing in green initiatives without taking on additional risk of the specific green projects.

For investors willing to gain exposure to green project risk, there have also been green project bonds and green securitized bonds issued. Table 1 below illustrates the different types of green bonds available.

INVESTOR BRIEFING

Table 1: Types of Green Bonds

Type	Proceeds raised by bond sale	Debt recourse	Example
Green “Use of Proceeds” Bond	Earmarked for green projects	Standard/full recourse to the issuer; therefore same credit rating applies as to the issuer’s other bonds	European Investment Bank (EIB) “Climate Awareness Bond” (backed by EIB)
Green “Use of Proceeds” Revenue Bond	Earmarked for green projects	Revenue streams from the issuers though fees, taxes etc. are the collateral for the debt	Hawaii State (backed by fees on electricity bills of state utilities)
Green Project Bond	Ring-fenced for the specific underlying green project(s)	Recourse is only to the project’s assets and balance sheet	Alta Wind Holdings LLC (backed by the Alta Wind project)
Green Securitized Bond	Either earmarked for (1) a group of green projects or (2) specific green projects within the group	Recourse is to a group of projects that have been grouped together (i.e. covered bond or other structures)	(1) Northland Power (backed by solar farms) or (2) Solar City (backed by residential solar leases)

The green “use of proceeds” bond markets has developed around the idea of flat pricing, where the bond price is the same as for ordinary bonds. Prices are flat because the credit profile of green bonds is the same as other [vanilla bonds](#) from the same issuer. Therefore green bonds are [pari passu](#)² to vanilla issuances.

Standard bonds vs. green “use of proceeds” bonds

- Flat pricing of green bonds to conventional bonds
- Same recourse to issuer
- Pari passu applies
- Bonus feature of “green” – positive environmental outcomes

Green bonds are funding a variety of green projects

So far green bonds are funding renewable energy, energy efficiency, low carbon buildings and transport, water, waste management and climate adaptation projects.

Some green bonds, particularly those issued by development banks, fund a mixture of green projects within portfolios. This allows the issuer to be flexible in allocating proceeds to different projects that fit into a range of green criteria. The World Bank, for example, [allocates 77% of green project funds to climate mitigation and 23% to climate adaptation](#). The main project types funded by green bonds are renewable energy, low carbon buildings and increasingly – water.

Key trends

- Renewable energy projects, such as wind, solar and hydropower projects have been funded by green bonds issued by GDF Suez, EDF, Verbund and Arise.
- Low carbon buildings, such as buildings that meet energy efficiency standards LEED and BREEAM have been issued by Vasakronan, Development Bank of Japan and Massachusetts Institute of Technology.
- Water and wastewater projects have been a focus of many US Municipal green bonds. District of Columbia, Connecticut, Chicago and Florida have all issued green bonds for water projects.

Best practice guidelines and growing need for universal definitions of ‘green’

In January 2014, voluntary best practice guidelines called the “[Green Bond Principles](#)” were established by a consortium of investment banks. Ongoing monitoring and development of the guidelines has since moved to an independent secretariat hosted by the [International Capital Market Association \(ICMA\)](#). These principles highlight the importance of tracking proceeds, allocating funds to eligible projects and providing periodic reports on use of proceeds.

Broad green project and asset categories suggested by the principles include:

- Renewable energy
- Energy efficiency (including efficient buildings)
- Sustainable waste management
- Sustainable land use (including sustainable forestry and agriculture)
- Biodiversity conservation
- Clean transportation
- Clean water and/or drinking water

The Green Bond Principles do not provide definitions of “green” projects. Green definitions are left to the issuer to determine.

World Bank and International Finance Corporation (IFC) have their own definitions of green projects. The Climate Bonds Initiative (CBI) is also helping to fill this gap by providing green standards that are sector specific, developed by scientists and industry experts, and available to the public on the [Climate Bond Initiative website](#). So far, CBI has launched standards for solar energy, wind energy, low-carbon buildings and ‘bus rapid transit’.

The Investment Case for Green Bonds

Investors are increasingly focused on integrating Environment, Social and Governance (ESG) factors into their investment processes. Investors managing \$45trn³ have publicly declared climate and responsible investment commitments, including being a signatory of the PRI. Green bonds can help meet these investors’ ESG objectives.

Investors in green bonds benefit from:

- Funding green projects without taking on additional risk, making green bonds relatively easy to place within pension funds’ existing asset allocations;
- Greater transparency into a bond’s use of proceeds;
- Meeting commitments as signatories of [PRI](#)⁴ and [IIGCC](#)⁵;
- Reporting on climate impact of fixed income investments to asset owners;
- Highlighting green assets/business.

A wide range of investors are buying green bonds

The majority of green bonds have so far been oversubscribed due to the huge demand from a wide variety of investors. Some examples include:

- Mainstream Institutional investors: Aviva, BlackRock and State Street.
- Pension funds: Swedish national pension funds AP2 and AP4, the Dutch pension provider APG, the California State Teachers’ Retirement System and the UN’s Joint Staff Pension Fund.
- Insurance companies: Zurich Insurance, SEB Trygg Liv and QBE Insurance Group.
- ESG / RI specialist investors: Natixis, Mirova and ACTIAM.
- Corporate Treasury: Barclays and Apple.
- Sovereign and municipal governments: Central Bank of Peru and California State Treasurer.
- Retail investors: World Bank issuances for retail investors through Merrill Lynch Wealth Managers and Morgan Stanley Wealth Managers.

Risk to Green Bonds

One non-financial risk for investors in green bonds is that proceeds from the bond sale may not be directed to genuinely green projects or assets. This can be split into two problem areas: how the proceeds being managed are then allocated to projects; and how green the designated projects are. Issuers can mitigate these concerns by commissioning an independent second opinion that comments on both the management of proceeds and the green credentials of the projects or assets. The major second opinion providers are a mixture of ESG research houses and scientific standards groups including: [CICERO](#) – Center for International Climate and Environmental Research – Oslo, [Vigeo Rating](#), [DNV GL](#), [Oekom Research](#), [KPMG](#), [Sustainalytics](#) and [Trucost](#).

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We expect to invest in more green bonds as an instrument to meet the global need for investments in sustainable energy and increased energy efficiency.
”

- Peter Damgaard Jensen,
Managing Director
at Danish Pensions
Administrator, PKA⁶

Liquidity

The secondary market for green bonds is thin, mainly because green bond investors tend to be buy-and-hold investors, but this is changing as the market continues to grow and mature.

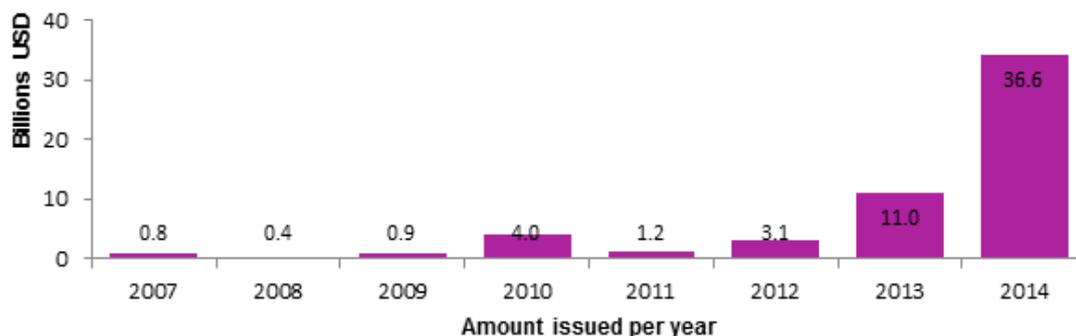
Additional costs for issuers

Green bonds have some additional transaction costs because issuers must track, monitor and report on use of proceeds. However, many issuers, especially repeat green bond issuers, have not been passing on this cost into the pricing of green bonds because the expense is offset by benefits such as:

- Highlighting their green assets/business
- Providing a positive marketing story
- Diversifying their investor base (as they can now attract ESG/RI specialist investors)
- Improving internal collaboration of teams across different departments, such as sustainability, finance and operations

Recent Market Developments

Explosive growth in green bonds market



In 2007, the green bond market kicked off with an AAA investment grade issuance from the European Investment Bank (EIB) and the following year from the World Bank. In March 2013, the wider bond market started to react after the first \$1bn green bond, issued by IFC, sold within an hour of issue. In November 2013, there was a turning point in the market as the first corporate green bonds were issued by EDF, Bank of America and Vasakronan. This pushed the market size to \$11bn. Between 2012 and 2013, the market grew by 350%. Corporate issuance continued to flow in 2014 with the largest to date from GDF Suez at EUR2.5bn (\$3.44bn) in March 2014. Also in March 2014, Unilever issued the first Sterling green bond quickly followed by EIB who launched their Sterling Climate Bond a week later.

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By issuing our first Green Sustainability Bond, our intention is to invite investors to support our vision for sustainable growth, while investing in the Unilever credit.

Table 2: Top 10 Green Bond issuers by Amount Issued

ISSUERS	TOTAL ISSUED (\$)
European Investment Bank	9,601,611,446
International Bank for Reconstruction and Development	6,629,205,766
KFW	3,535,200,000
GDF Suez	3,439,250,000
International Finance Corporation	3,397,392,824
Électricité de France (EDF)	1,901,060,000
Toyota	1,750,000,000
Île-de-France	1,295,215,000
Agence Française de Développement	1,292,700,000
African Development Bank	1,172,315,160

*As of 27th November 2014

By the end of 2014, the green bond market had grown to \$36.6bn.

Indices

Green bond indices have been launched in anticipation of continued market growth by [S&P Dow Jones](#), [Barclays](#) and [MSCI](#), [Bank of America Merrill Lynch](#) and [Solactive](#). Barclays and MSCI took extra steps with their green bond index by adding environmental inclusion criteria.

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- Jean Marc Huet
Unilever's
Chief Financial Officer⁷

Issuers

In terms of types of issuer, there is a growing trend for municipal and local government to issue green bonds. In Q3 2014, the state of California issued its first green bond. Massachusetts, Province of Ontario, New York, City of Johannesburg and City of Gothenburg have already begun issuing green bonds.

Ratings

High yield green bonds are starting to be developed. Renewable energy companies NRG Yield and Abengoa Greenfield successfully issued the first high yield green bonds in 2014. We expect to see more issuances from companies with diverse credit stories as the market develops.

Recommendations for Pension Funds

Pension funds should signal to fund managers and consultants their interest in reducing climate risk in their portfolios and gaining more exposure to green investments. Without these explicit signals, most fund managers and consultants will fail to provide clients with information about opportunities in this asset class.

Questions for pension funds to ask fund managers and investment consultants:

- Are you investing in green bonds as a firm and are there any in our portfolio?
- Do you have or know of any products or funds where I can obtain exposure to green bonds?
- What kind of reporting will be available on the environmental impacts/outcomes of investment in green bonds?

Learn more about green bonds in the Climate Bonds Initiative state of the market report at: <http://www.climatebonds.net/resources/publications/bonds-climate-change-2014>

Learn more about ShareAction's Green Light Project which aims to assist pension funds by providing guidance on the financial implications of climate change and the associated risks and opportunities. <http://www.shareaction.org/greenlightreport>

"The market is at a critical juncture, and it is important that certain standards and certain definitions are maintained... there's definitely a risk that the green bond label is being misused"

Manuel Lewin
Head of Responsible Investment at Zurich Insurance Group⁸

"Landmark green issuances from triple-A issuers such as the World Bank further enhance the appeal of the green bond market, promoting investment in sustainable projects that mitigate the effects of climate change at commercially appealing returns"

Alex von zur Muehlen
Group Treasurer of Deutsche Bank⁹

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About ShareAction

ShareAction (Fairshare Educational Foundation) is a registered charity that promotes responsible investment practices by pension providers and fund managers. ShareAction believes that responsible investment helps to safeguard investments as well as securing environmental and social benefits.

About the Climate Bonds Initiative

The Climate Bonds Initiative is an investor focused not-for-profit mobilising debt capital markets for a rapid transition to a low-carbon and climate resilient economy.

Disclaimer

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