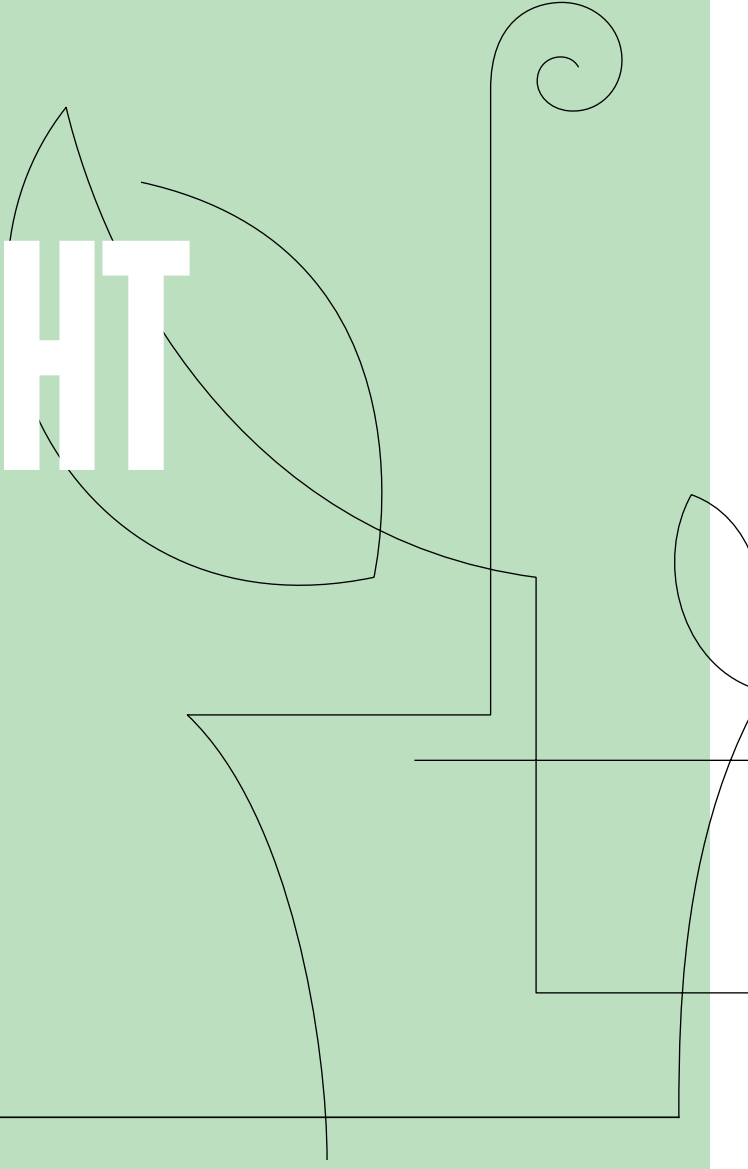


GREEN BONDS GET THE GREEN LIGHT



*By Christopher McKnett, Head of ESG Investments,
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The green bond market more than tripled in 2014 to reach a record \$36.6 billion in new issuance,¹ with new issues appearing almost weekly. As corporate and municipal bond issuers join existing multilateral development banks, there has never been a better time for investors to examine this emerging new space in fixed income.



The State Street Global Green Bond Index Fund

The State Street Global Green Bond Index Fund is the first UCITS fund to offer passive exposure to the green bond universe. But how “green” is green? And how should investors position the exposure in their portfolio? In this paper, we examine the opportunity presented by green bonds and take a closer look at how these securities are classified.


In 2009, the governments of nearly 200 nations agreed to limit global mean temperature from rising to no more than 2 degrees Celsius above pre-industrial levels. To meet this, the International Energy Agency estimates that \$1.2 trillion of incremental annual investment in low carbon energy is required up to 2050.²

The global fixed income market is a potentially enormous source of capital to address this need. Green bonds are poised to play a powerful role in delivering the low carbon economy while fulfilling the financial targets that bond investors expect and require. Issuance is driven both by the financing needs of issuers and a groundswell of investor interest in gaining exposure to the environmental theme at comparable credit quality to a typical bond issue.

WHAT IS A GREEN BOND?

A green bond is a debt instrument with similar characteristics to a traditional bond, with the condition that the proceeds are exclusively used for projects or activities that promote climate or other environmental sustainability purposes.

Traditionally, ESG fixed income has involved investing in the debt of issuers who pass certain screens but where the bond proceeds may not be allocated to environmental solutions. Green bond investing, however, facilitates visibility into the use of proceeds for environmentally beneficial projects. The Green Bond Principles – guidelines developed by a consortium of banks, issuers, investors and environmental groups and administered by ICMA – have helped to define the essential elements of a green bond.



“Green bonds are fixed income instruments for which the proceeds will be applied towards projects or activities that promote climate change mitigation or adaptation or other environmental sustainability purposes.”

— Green Bond Principles Definition

RAPID MARKET GROWTH

Several drivers are generating tail winds for green bonds. Chief among them are:

- The steady maturation of the market, as demonstrated by a broader array of issuers, structures and themes
- The creation of the Green Bond Principles. The numbers of issuers, underwriters and investors who endorse the Principles grew from 55 to 75 in Q4 2014
- The development of green bond indices, a major step in the evolution of the market in terms of standardisation and scalability
- Seasoning of outstanding issues that boost investor confidence and support the claim that green bonds function just like standard vanilla bonds
- Increased competition by underwriters, facilitating price efficiency
- High levels of media attention
- Growing recognition of the bond markets' potential to mobilise private capital for climate investment.

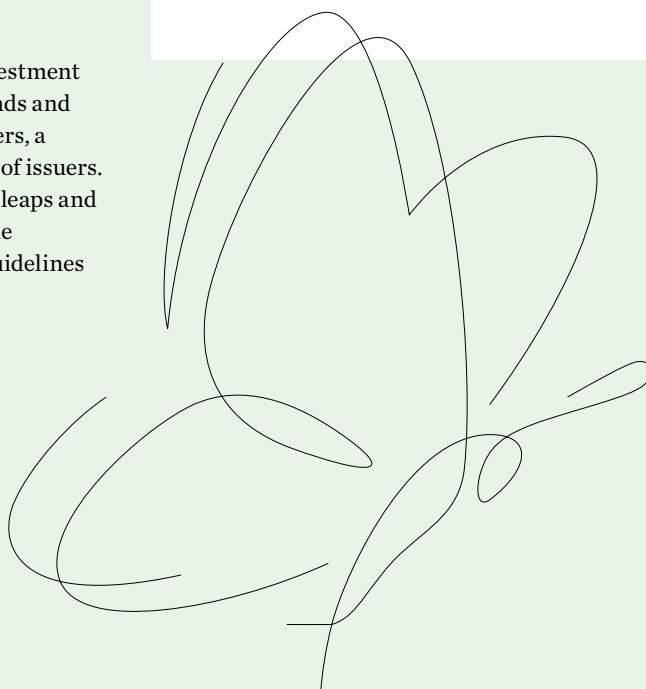
Six years on from the first issue by the European Investment Bank in 2007, 2013 was a breakout year for green bonds and included a number of firsts, including corporate issuers, a securitised issue, and a US state entering the market of issuers. Over 2014, the market continued to move forward in leaps and bounds, with a three-fold increase in issuance and the development of the Green Bond Principles, a set of guidelines for issuing green bonds.

The Green Bond Principles

The Green Bond Principles were launched in January 2014 by Bank of America Merrill Lynch, Credit Agricole, Citibank and JP Morgan, and have since been endorsed by over 70 investors, underwriters and issuers, including State Street Global Advisors.

The Principles are voluntary process guidelines to ensure the integrity of the green bond market. They recommend a process for designating, disclosing, managing and reporting on the proceeds of a bond. The Principles are intended for broad use by the market and aim to:

- Provide issuers with guidance on the key components involved in a green bond
- Aid investors by ensuring the availability of information necessary to evaluate the environmental impact of their green bond investments
- Assist underwriters by moving the market towards standard disclosures which facilitate transactions.





\$36.6 BILLION

**Total issuance of 2014 from
35 different issuers³**

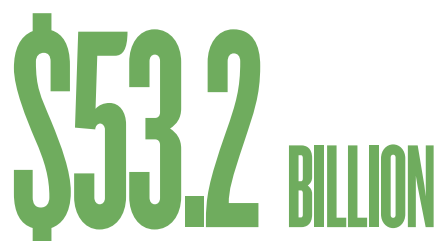
The total issuance of 2014 was \$36.6 billion from 35 different issuers.³ The Climate Bonds Initiative have put the total amount of green bonds outstanding to \$53.2 billion at the end of 2014, and have projected a forecast of \$100 billion of green bond issuance in 2015 (based on extrapolating year-over-year growth).³ 2015 has seen a modest start, however, with \$7.78 billion issued year to date through April.⁴

While development banks dominated the space by issuing 44% (\$16 billion)¹ of all deals, corporate issuers were a significant element of the market explosion in 2014, demonstrating the maturity of the market and helping to improve depth and liquidity by offering greater scale and a range of currencies. The largest corporate deal of the year was GDF Suez's \$3.45 billion green bond (split into two tranches)¹ with proceeds going towards renewable energy and energy efficiency projects.

The types of bonds issued also diversified, signalling the start of a new stage of maturity in the green bonds market. The World Bank issued a series of retail investor focused green bonds, as well as those across six different currencies, while Toyota brought the first green asset-backed security to market with a \$1.75 billion green bond in Q1 2014, backed by electric and hybrid vehicle loans.³

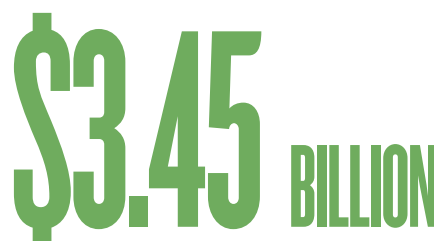
In addition, there was a broadening of themes beyond clean energy (for example building energy efficiency, water, and land conservation) as well as a mix between financing new assets and refinancing. Most issues were oversubscribed, underscoring strong investor demand.

The European Investment Bank issued a €400 million tap⁵ to its five year Climate Awareness Bond – the largest green bond outstanding – in February 2015. This took the total issued to €3 billion, regarded by the EIB as benchmark size for traditional bonds.⁶ The World Bank also launched its largest US dollar green bond in February, raising \$600 million¹ and March saw the Asian Development Bank issue its first labelled green bond and also the first pure-play clean energy company to label a corporate bond green, a €500 million seven year bond from Vestas.⁷



\$53.2 BILLION

**Green bonds outstanding
at the end of 2014**



\$3.45 BILLION

**Largest corporate green bond
issued to date, by GDF Suez**

Looking ahead, 2015 will see many issuers arrive at their first year anniversary and investors will be expecting reports on the use of proceeds from the bonds, both of which will be closely watched by the market.

Top 10 Green Bond Issuers in 2014 (USD)

Issuer	Amount Issued*	Credit Rating (S&P/Moody's)	Type
European Investment Bank	\$5.6 billion	AAA/Aaa	Development bank
KfW	\$3.5 billion	AAA/Aaa	Development bank
GDF Suez	\$3.4 billion	A/A1	Corporate
World Bank	\$3.1 billion	AAA/Aaa	Development bank
Toyota	\$1.75 billion	AAA/Aaa to AA+/Aa2	Asset Backed
AfD	\$1.3 billion	AA/NR	Development bank
Iberdrola	\$1 billion	BBB/Baa1	Corporate
Unibail-Rodamco	\$1 billion	A/A+	Corporate
Ile de France	\$829 million	AA/NR	Municipal
Hera SPA	\$680 million	BBB/Baa1	Corporate

Source: Climate Bonds Initiative, March 2015.

*The amount issued is shown in US dollars but the actual bonds were issued in a range of currencies.

Annual Labelled Green Bond Issuance (US\$ bn)

Issuance	2007	2008	2009	2010	2011	2012	2013	2014
	0.81	0.41	0.96	3.96	1.19	3.14	11.64	36.6
Outstanding	2007	2008	2009	2010	2011	2012	2013	2014
	-	-	2.0	3.75	4.0	6.5	17.0	53.2

Source: Climate Bonds Initiative, State Street Global Advisors, as of 31 December 2014.

HOW GREEN IS GREEN?

One aspect of the market growth dynamic warrants scrutiny. As the market grows and proves its mettle as an attractive financing option, new issuers will come to market that may not have the institutional rigour – in terms of selecting genuine low carbon projects and ring-fencing proceeds – compared to incumbent issuers. Issuers with questionable procedures could lay the market bare to claims of “green washing”, which, rather than creating a race to the top, can impair the credibility of the market through one or two bad deals and stunt the growth of the market as a whole. While the advent of the Green Bond Principles protects against this, it is not as rigorous as a standard, and if more exotic structures or esoteric low carbon themes (e.g. biomass, coal-to-gas, etc) enter the fray, investors will need to be on guard with respect to the environmental integrity of their fixed income investments.

One of the most important aspects of the threat of “green washing” is the need for investors to understand exactly how the bonds are classified, who classifies them and what ongoing checks are made to ensure ongoing compliance. The robustness (or lack thereof) of this approach is key to investor confidence and, consequently, the continued healthy growth of the market. It is for this reason, that State Street Global Advisors selected the Barclays MSCI Green Bond index, with its robust and independent assessment criteria, as the benchmark for their fund.

All new bonds
are assessed and
must pass all four
of the eligibility
criteria before
they are allowed
into the index.

The Barclays MSCI Green Bond Index

While the Green Bond Principles is an important milestone in the development of the market, they are voluntary and the market still lacks an enforceable green bond standard. Bloomberg currently has green bond “flags” which are relied upon by much of the market, but these are largely based on self-labelled bonds that have not benefited from independent scrutiny. However, a number of third party indices were developed last year, marking a new turning point in establishing clear and broadly accepted benchmarks for new issuers entering the market. Following the first green bond index launched by the German company Solactive in March 2014, Barclays/MSCI, Bank of America Merrill Lynch and Standard & Poor’s have all followed suit.

We have identified that the high quality screens of the Barclays MSCI Green Bond Index provide investors with the most rigorous, diversified and transparent representation of the green bond universe out of the available benchmarks. The methodology balances a rules-based approach whilst retaining enough flexibility to adapt to the green bond market as it develops. All new bonds are assessed and must pass all four of the eligibility criteria before they are allowed into the index.

The assessment is made solely by MSCI’s ESG analysts who employ a company-by-company, prospectus-by-prospectus research process. Importantly, the fixed income rules are equally standardised, with the Barclays Capital Global Aggregate Bond Index fixed income criteria applied to the screened universe of bonds to ensure representativeness, predictability, and investability.⁸

This extensive screening process means a high degree of scrutiny on new constituents, which may mean bonds take longer to be added to the index compared to a standard fixed income index.

We believe that indices such as the Barclays MSCI Green Bond Index mark an important evolutionary step in the growth of the green bond market, and provide both dedicated “green” investors and broad-based investors with the transparency to consider these new bonds as part of their expanding investment tool kit.

PASSING THE ELIGIBILITY CRITERIA



☐ **Use of proceeds**

Proceeds must be used for one of five defined eligible environmental categories. These are: alternative energy, energy efficiency, pollution prevention and control, sustainable water and green building.

☐ **Process for green project selection**

The bond prospectus or supporting documents must clearly identify the criteria and process for determining eligible projects or investments.

☐ **Management of process**

A process to ring-fence proceeds must be disclosed in the bond prospectus or supporting documents.

☐ **Ongoing reporting**

The issuer must report at least annually on eligible projects and this will be monitored. Bonds can be removed from the index if the issuer fails to comply.

Where do Green Bonds fit in a fixed income portfolio?

As shown in the table below, the Barclays MSCI Green Bond Index provides lower duration and higher yield than the Barclays Global Treasury, leading to a better breakeven yield. The index has a similar credit quality to both the Global Treasury and the Global Aggregate universe but, as would be expected, a much smaller number of issuers and lower market capitalisation. With a markedly different investment universe to both the Global Treasury and the Global Aggregate, the Barclays MSCI Green Bond Index could be a useful portfolio diversifier within a broad fixed income allocation.

Overview of Index Characteristics

	Barclays MSCI Green Bond Index	Barclays Capital Global Treasury Bond Index	Barclays Capital Global Aggregate Bond Index
Number of Issues	58	1,341	16,578
Number of Issuers	36	54	2,266
Average Quality	AA2/AA3	AA2/AA3	AA2/AA3
Average Option Adjusted Duration (years)	6.01	7.49	6.56
Average Life (years)	7.46	9.14	8.45
Yield to Maturity (%)	1.22	0.96	1.45
Market Value	\$37.12 billion	\$21.47 trillion	\$40.0 trillion

Source: State Street Global Advisors, Barclays, as of 31 March 2015.

Index Characteristics are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.

Past performance is not a guarantee of future results.

Conclusion

THE EVOLUTION OF THE GREEN BOND MARKET SHOWS NO SIGNS OF SLOWING

Issuers are seeing that green bonds are diversifying their investor base to include ESG specialist investors, while also highlighting and funding their green projects and improving public perception of their overall business. Meanwhile, investors may benefit from the greater transparency of the bond's use of proceeds and the potential to make a positive impact on climate change via their bond portfolio, without compromised performance.

Key Facts

First UCITS bond fund to offer passive exposure to the green bond universe.



Fund Name

State Street Global Green Bond Index Fund



Investment Objective

The Fund aims to track as closely as reasonably possible the performance of the Barclays MSCI Green Bond Index over the long term.



Domicile & Structure

Luxembourg UCITS SICAV



Base Currency

Euro



Benchmark

Barclays MSCI Green Bond Index



Asset Composition

- Bond eligibility determined by MSCI ESG Research and four cumulative tests
- Investment grade fixed income securities, including supnationals, municipals and corporates
- Minimum issue size by currency includes USD 250m, EUR 300m, GBP 200m and JPY 35bn



Fees

- **I Share Class:** 0.25% IM Fee / 0.35% TER (max) / Minimum Investment (€3m)
- **A Share Class:** 0.35% IM Fee / 0.45% TER (max) / Minimum Investment (€250k)
- **P Share Class:** 0.50% IM Fee / 0.60% TER (max) / Minimum Investment (€50)

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State Street Global Advisors is the investment management arm of State Street Corporation.

*Assets under management were \$2.42 trillion as of 31 December 2014.

¹ Source: Environmental Finance, January 2015.

² Source: International Energy Agency, May 2014: <http://www.iea.org/newsroomandevents/pressreleases/2014/may/name,51005,en.html>

³ Source: Climate Bonds Initiative, January 2015.

⁴ Source: Climate Bonds Initiative, retrieved 20 April, 2015

⁵ A tap issue, or tap stock, is a procedure that allows borrowers to sell bonds from past issues. The bonds are issued at their original face value, maturity and coupon rate, but sold at the current market price.

⁶ Source: European Investment Bank, May 2014.

⁷ Source: Climate Bonds Initiative, March 2015 <http://www.climatebonds.net/2015/03/wkly-update-1st-labelled-gb-adb-500m-10yr-hit-asian-investors-1st-gb-firm-pure-play-wind-co>

⁸ You can discover more about the index at:

<https://live.barcap.com/PRC/servlets/dv.search?contentPubID=CL2099408&bclink=decode>

<https://live.barcap.com/PRC/servlets/dv.search?contentPubID=CL2088497&bclink=decode>

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