

Green Bonds 002°C

A guide to scale up climate finance



WBCSD Leadership Program 2015



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Introduction

In its Green Investment Report, the World Economic Forum estimates that at least US\$ 700 billion has to be invested every year to ensure that the global average temperature rise remains within the 2°C limit¹. This is over and above the normal investments that need to be made in order to meet the world's growing need for infrastructure and energy, estimated at US\$ 5 trillion per year.

A green bond is like a normal bond (fixed-income financial instrument), with an additional commitment to deploy its funds in climate change adaptation or mitigation solutions.

Both private and public sector organizations are expected to contribute to such a large capital deployment in climate adaptation and mitigation projects, though the private sector is expected to contribute the majority of this.

Raising such large funds presents its own set of challenges and opportunities in the development of innovative climate finance solutions. One such climate finance product, the green bond, intends to raise capital for projects or activities with high environmental benefits. It helps organizations raise money from more progressive investors and at the same time strengthen their credentials as a sustainable and responsible organization.

The green bond category is also one of the fastest growing bond categories: since its inception in 2007, the green bond market has grown to be worth over US\$ 66 billion (June 2015). The past few years have seen particularly strong growth, tripling each year between 2011 and 2014.

Why do you need to read this document?

Climate change is taking center stage everywhere—be it in policy-making board room discussions asset allocation or citizen activism. Many business leaders consider climate change to be one of the greatest risks facing business while others are looking at it as an opportunity.

Hence we see that public support and rapid technological advancements are making investments in climate friendly business very attractive.

So how can we all participate in this accelerating market? This document will explain what a green bond is how it works and what benefits it can provide to drive the global transformation to a low-carbon society.

1. Why are green bonds important?

Climate change affects all of us. Its effects on temperatures, precipitation patterns, sea levels and the frequency of weather-related disasters pose potential risks for agriculture, food and water supplies. By the end of this century, we need to have a global economy that meets the needs of humanity and that is in balance with Earth’s resources. All of this means we need to find innovative solutions to address this challenge.

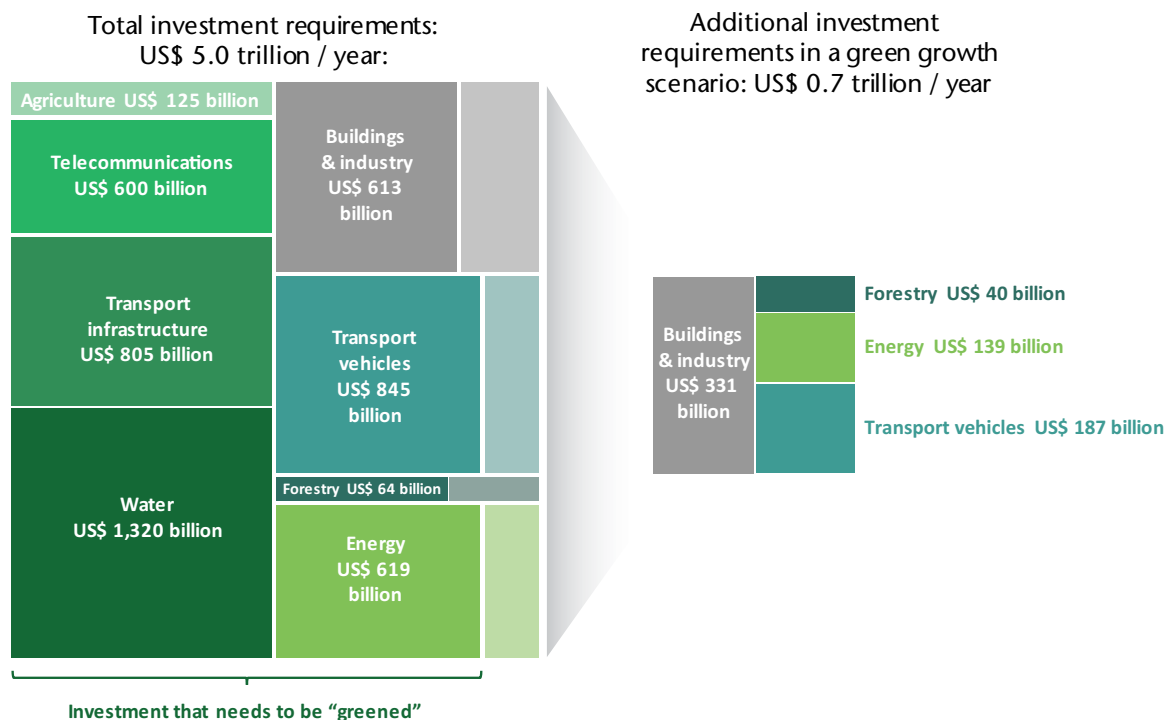
Global bond markets are worth an estimated US\$100 trillion—about twice as much as the world’s equity markets. An innovation such as green bonds would enable vast amounts of

capital to be directed from the bond markets towards the development of a low-carbon and resilient economy. The benefits are two-fold since green bonds aid both climate change mitigation and adaptation projects.

Energy, energy efficiency, transport, water, agriculture and forestry, and waste are the key focus areas for the use of green bond proceeds

The breakdown of the total estimated investment required under business as usual scenarios and the estimated additional costs to keep global warming under 2°C is shown in Figure 1:

Figure 1: Investment required to keep global warming under 2°C



Sources: Organisation for Economic Co-operation and Development (OECD), International Energy Agency (IEA), Food and Agriculture Organization of the United Nations (FAO), United Nations Environment Programme (UNEP)

Note: All data converted to US\$ 2010 equivalents



2. What is a green bond and how does it become “green”?

A green bond is a normal bond but with a commitment that the money raised through such bonds will be used for environmentally beneficial projects or activities. Thus, as a traditional bond, the issuer raises the capital from the investors at a particular rate of interest (coupon rate) for a fixed period (tenure) which is paid back at predefined intervals. All regulatory, financial and market activities related to a green bond are identical to that of a normal bond.

Since a green bond is a voluntary commitment regarding the usage of proceeds, there are no additional government standards or regulations that govern it. There are certain voluntary standards or principles (see table below) that issuers can comply with in issuing and reporting a *labeled green bond*, so that there is a standard and investors are assured about the deployment of green bond funds. There are also *unlabeled green bonds*. These are bonds that raise funds for projects and activities that are environmentally beneficial but do not communicate their alignment with any particular voluntary green bond principles or standards.

Table 1: Leading standards and guidelines for labelled green bonds

Leading standards and guidelines for labeled green bonds	
Standards/guidelines	Issuing organization
Green Bond Principles (GBP)	International Capital Market Association
Climate Bond Standard (CBS)	Climate Bonds Initiative
Green Bond Guidelines (GBG) –under development	People’s Bank of China China Banking Regulatory Commission

Does a green bond reduce the cost of a fund?

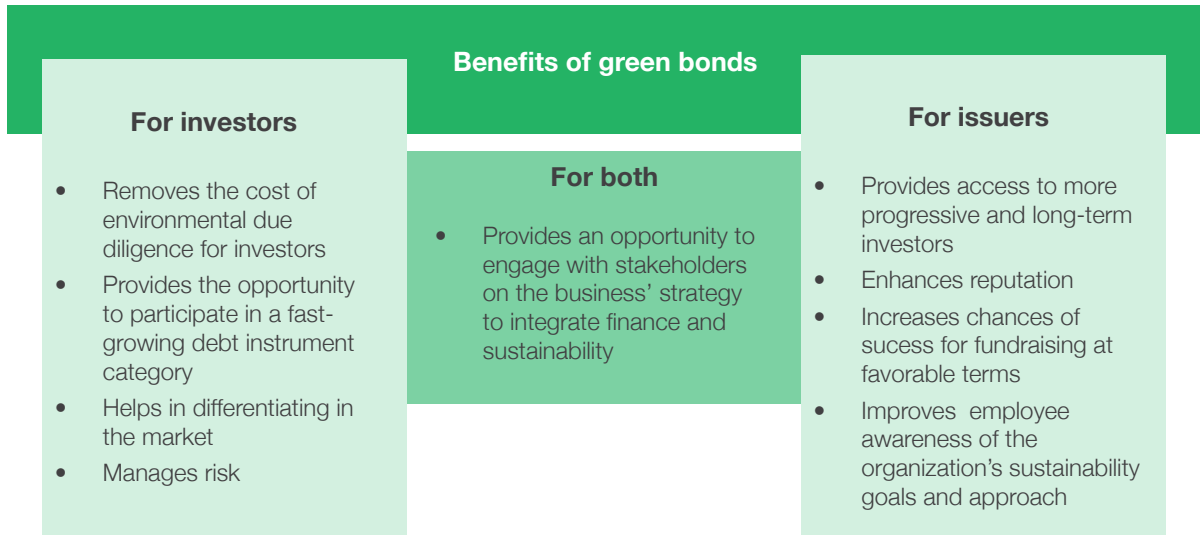
Not yet. A green bond does not change the risk profile of an investment, thus it generally does not result in a lower coupon value.

However, it helps in differentiating and improving demand and liquidity and in mobilizing funds from climate-conscious or responsible investors.

Currently, green bonds provide additional media coverage and publicity opportunities. Many progressive companies value this benefit and use the opportunity provided by green bonds to communicate their sustainability performance to their investors and the larger stakeholder base and to strengthen their image as responsible businesses.

However, improving awareness levels and demand for green bonds is likely to result in more favorable terms, including a lower coupon rate for the issuer.

Figure 2: Benefits of green bonds



Curious fact: Using bonds to finance a major social cause is not a new concept

Historically, bonds have been used by several countries to raise money for major causes such as support for wars and post-war rebuilding. World War II is a great example where people joined forces to raise a substantial amount of funds for what societies believed was an important cause (e.g. US war bonds supporting the war effort and the German reconstruction bonds after the end of the war), allowing citizens to support these causes and invest in their own future.

Green bonds could be considered a modern version of the same concept. If war bonds helped the United States raise about \$4 trillion in today's money to support World War II (leading to a substantial boost in the American economy), then it is not unreasonable to believe that green bonds could do the same for overall common climate challenges that affect the whole of humanity.





3. How are green bonds issued?

The issuing of a *labeled green bond* follows four major steps, as detailed below. The issuing of an *unlabeled green bond* is more issuer-specific and the next section illustrates the same through a case study.

1. Identification of use of proceeds

As a first step, a bond issuer needs to identify what kind of “green” projects or activities the proceeds of the bond will be used for. Projects in renewable energy, energy efficiency, sustainable transportation, water management and various other climate mitigation and adaptation projects qualify as “green projects”. The Climate Bond Standard provides a list of activities that qualify for the use of green bond proceeds.

2. Project evaluation and selection process

The second step is to formulate the project selection procedure and the criteria which will be used to evaluate the project. In addition to a financial evaluation, the criteria must include environmental and sustainability key performance indicators (KPIs).

3. Management of proceeds

After the issuance of the green bond, the proceeds have to be deployed by the management for the end-use stated at the time of issuance. The issuer needs to clearly define what type of processes and controls it will have in order to achieve this objective.

4. Reporting

The Green Bond Principles (GBP) and the Climate Bond Standard (CBS) suggest that the issuer should report the list of projects where proceeds are deployed, providing a brief description and expected environmentally sustainable impact to investors at least once a year. This will likely require most organizations to introduce appropriate systems and resources for data monitoring and control. The use of assurance providers would enable these processes to be overseen by a third-party and this is a route that many labeled green bond issuers adopt.

The National Australia Bank (NAB) climate bond, the country's first certified climate bond under the Climate Bonds Standard, is a good example of a labeled green bond. For more information see www.climatebonds.net/2014/12/nab-issues-first-australian-climate-bond-certified-under-climate-bonds-standard

4. Case study – CLP Wind Farms

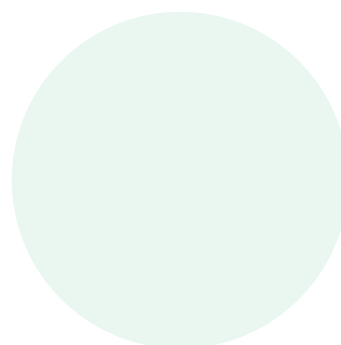
CLP Wind Farms (India) Private Limited, a wholly owned subsidiary of CLP Holdings Limited and one of the largest wind power producers in India, raised INR 6 billion (US\$90 million) through issuance of a green bond in September 2015. This was the first green bond issuance by any company in the power sector out of India, South Asia and Southeast Asia.

India Ratings and Research (a FITCH Group company) assigned an 'AA' rating to this green bond. Instruments with this rating are considered to have high degree of safety regarding timely servicing of financial obligations and very low credit risk. CLP issued this secured, unlisted green bond with a coupon rate of 9.15%. The bond is issued in three series of equal amounts maturing in April 2018, 2019 and 2020.

With an existing portfolio of more than 1,000 MW of wind projects and plans to further expand its renewable energy portfolio, securing long term and efficient financing is an important element of CLP's growth plans.

This green bond achieves the twin objectives of accessing long term funds at competitive rates for CLP and an attractive long term investment opportunity for the investors. It is also beneficial from the company's perspective to keep its interest cost in check as the interest remains fixed over the term of the bond, unlike bank borrowing. CLP will be using the bond proceeds from this issuance to fund the expenditure of new projects in the renewable energy space and thereby supporting its growth plans in India.

Since CLP Wind Farms (issuer) is a renewable energy company and its proceeds will only fund its renewable energy projects, it is easier for the company to demonstrate the implementation of Green Bond Principles such as Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting. Thus, CLP chose to issue a self-certified green bond over the option of third party certification.





5. Expert opinion

Interviews with² green bond market stakeholders yielded a lot of insights. Some of the main findings are shown in Table 2 below.

In general there is a common understanding that green bonds constitute a new marketplace that is garnering a lot of demand from fixed-income investors seeking environmentally beneficial investments and wishing to deploy capital in a responsible way.

Table 2: Findings from interviews with green bond market stakeholders

Who are you?	Issuer	Underwriter	Investor
Why a green bond?	<ul style="list-style-type: none"> Funds sustainability projects while raising awareness of environmental & social issues Is a tangible commitment to sustainability Helps to expand and diversify the investor base 	<ul style="list-style-type: none"> Is a growing market and business opportunity 	<ul style="list-style-type: none"> For a socially responsible investor, offer a business opportunity that meets investment requirements Is an opportunity to diversify the portfolio
What are the main challenges of the market?	<ul style="list-style-type: none"> Issuance process takes more time than a regular bond 	<ul style="list-style-type: none"> Consensus that transparency is key to market growth, especially ensuring that green bond proceeds are directed to approved projects that have real environmental impact 	<ul style="list-style-type: none"> Investors are not willing to pay a premium for green bonds and new issue yields are typically in line with an issuer's regular bond curve
Wish for future	<ul style="list-style-type: none"> Simplification of reporting requirement to avoid duplication, reduction of cost and effort for reporting 	<ul style="list-style-type: none"> Recent green bonds issuances are significantly oversubscribed, which shows huge demand for green bonds, thus wish for more issues 	<ul style="list-style-type: none"> Wish more corporates with good credit ratings come up with green bonds

6. Challenges

Despite the rapidly growing market and the various advantages green bonds represent, many organizations are still not open to them. Based on interactions and interviews with various stakeholders, some of the major risks and challenges that are preventing such organizations from opting for green bonds are explained below.

a. Cost of fund/coupon rate

The value of green bonds has increased at an annual rate of 300% over the last three years. This clearly shows increasing interest from the investor community. However, this increase in demand is not resulting in a material reduction in the coupon rate for green bonds.

This could be associated with a lack of historical data. Right now, green bonds are rated at the same level as traditional bonds because the credit risk is determined by the underlying company and not by the underlying projects. To achieve such reductions, rating agencies need to ensure that the assets and associated risks are well understood and methods to assess the reduced risk of environment friendly projects need to be further refined. This is crucial to ensuring that the green bond market has a significant boost in liquidity, issuances and investment.

b. Cost of certification and associated activities

Labeled green bonds require organizations to develop and implement activities like proceeds management and project monitoring and reporting. Since it is a relatively new concept, many corporations also need to hire advisors to implement these requirements. The cost

and effort required for these activities is often not justifiable in terms of fundraising. When this fact is compounded with the lower liquidity that green bonds have since they are not traded as much as regular bonds, the incentive to invest in labeled green bonds is that much lower.

The Climate Bond Initiative has launched a support service team to help educate probable issuers on how to go about issuing a green bond, aiming to illustrate that the process need not be particularly time consuming or expensive.

c. Reputational risk

Due to a lack of unified green bond standards and regulations and relatively low awareness, some organizations also feel that they might be charged with “green washing” if there are inconsistencies between standards and stakeholder expectations.

A welcome step towards solving this issue is version 2.0 of the Climate Bond Standard, which has been developed in order to provide alignment with the Green Bond Principles. This should help reduce the lack of unified standards in the green bond market.

d. Transparency

As the green bond market grows, investors are demanding more transparency—particularly with regards to impact reporting and assurance. Initiatives working towards the development of a harmonized framework for impact reporting for green bonds aim to ensure that impact reporting ceases to be a burden for all issuers. For example, a group of four multilateral development banks active in the green bond market—the African Development Bank, the



European Investment Bank, the International Finance Corporation, and the International Bank for Reconstruction and Development—have developed some suggestions to harmonize the impact reporting of green bonds:

- Green bond issuers are encouraged to report on both the use of green bond proceeds and the expected climate and/or environmental impacts of eligible projects on at least an annual basis. The use of proceeds reporting would provide a list of the projects to which green bond proceeds have been allocated, indicating the total amount signed and the amount of green bond proceeds allocated.
- Impact reporting should be based on ex-ante estimates of expected annual results for a representative year once a project is completed and operating at normal capacity. The impact report would illustrate expected climate results that would be made possible as a result of projects to which green bond proceeds have been allocated.
- Issuers should aim to report on a limited number of core indicators for projects included in their green bond programs: (1) annual energy savings (energy efficiency—EE), (2) annual reductions or avoidance of greenhouse gas (GHG) emissions (EE and renewable energy—RE), (3) annual renewable energy produced (RE), and (4) capacity of renewable energy plant(s) constructed or rehabilitated (RE).

In the case of assurance, investors are increasingly recognizing that they require independent assurance to satisfy their own governance and risk management policies when investing in green bonds. This will create a natural market for assurance services. The issuers, however, would decide whether they would want to have their green bond assured, based upon their goals and positioning. Of course, doing so would increase the level of confidence investors would have in the use of proceeds.

e. New issuers and tradability

A report from Barclays³ suggests that a disconnect between green bond issuances and investor demand is affecting its pricing in the secondary market. The study uses the fact that green bonds have a premium in the secondary market to explain excess investor demand and the lack of supply of the same in the primary market.

To boost supply in the primary market, it is important to continue promoting the green bond market in emerging economies (China, India, Brazil) and also to motivate corporations to continue issuing green bonds, by illustrating this as a way to deploy funds to mitigate and adapt to climate change.

“If we are to succeed in Paris [COP21], it will require not only political commitment, but also financing.”

French President Francois Hollande

7. Recommendations for decision-makers

a. Public sector

Countries are facing the political issue of how to mobilize US\$100 billion per year by 2020 to transition to low-carbon and resilient development. One alternative agreed at the United Nations 16th Conference of the Parties in Cancun, Mexico in November 2010 was the creation of a Green Climate Fund that would be established to scale up new and additional climate financing to developing countries.⁴

Considering that the new climate deal requires a clear financial commitment, green bonds can be used as a vehicle to provide further support to mobilize the money necessary to transition to a low-carbon and resilient economy.

Major stakeholders in the public sector can support green bond markets⁵ in the following ways:

Ministries of finance: Provide green bond tax incentives, implement carbon taxes, develop a robust pipeline of specific investable projects, issue sovereign green bonds.

Central banks: Explore allocating reserves to green bonds, explore preferential treatment of green bonds in their asset purchasing programs and the collateral that they are receiving.

Financial regulators: Offer capacity building for investors, on both general bond aspects and green aspects, strengthen disclosure requirements on environmental performance for all bonds.

Municipalities: Demonstrate the issuance of green municipal bonds or encourage utilities and associated companies to issue; municipal bond agencies and municipality-affiliated entities, such as utilities and transport providers, can also issue green bonds.

b. Companies

The green bond market is a great avenue enabling companies to scale up climate change actions. It can provide financing for efficiency improvement projects in industry as well as the build-up of renewable energy projects. This will strengthen both the top line and bottom line in a sustainable manner. It will show the capital markets the financial commitment that a company is interested in making to enable a transition towards low-carbon and resilient development.

Companies need to continue engaging investors around their sustainability strategy and a green bond is the perfect way to go. Green bonds have a higher rate of success (many more times oversubscribed than conventional bonds) and open additional sources of financing and access to a wider pool of capital. This means green bonds are a win-win opportunity for companies.



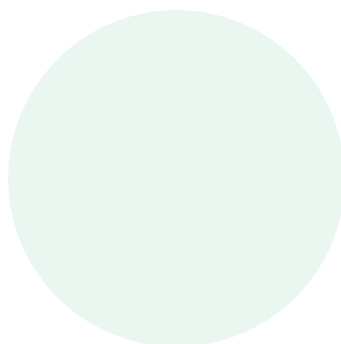
c. Capital markets

Stranded assets and fossil fuel divestment campaigns are important challenges for the capital markets as they change the landscape of investment allocations, especially for long-term investments. The funds that are divested out of fossil fuels will potentially need comparable “green” assets to invest in—green bonds are perfect for this.

Investors have a fiduciary duty to their beneficiaries, meaning that they seek to maximize long-term, risk-adjusted returns from a diversified portfolio of investments. Through green bonds, investors can build their green credentials without being exposed to project risk so that they can continue seeking optimum returns.

d. Civil society

Green bonds can provide a solution to the climate-friendly infrastructure investment challenge faced by society today. Civil society thus needs to know more about this alternative so that green bonds gain center-stage as a good alternative in the transformation to a low-carbon and resilient economy. The change starts with each individual aiming to buy products from companies with a green footprint.



8. What's next for green bonds?

What are some of the next steps green bonds need to take to continue opening the avenues of opportunity or investment in clean growth and resilient development that are necessary to mitigate climate change? Solutions include making direct green project finance and the securitizing of climate-friendly assets a significant part of the green bond market, escalating the market to new currencies, and expanding the green bond concept to resilient infrastructure.⁶

a. Direct green project finance

In terms of direct green project finance, the green bonds market needs investors to take appropriately mitigated project-level risk rather than simply relying on the balance sheets of big issuers that issue green bonds. Another alternative afforded by direct green project finance is more investors looking for diversity in credit ratings and duration. For it to happen, an open green project database for interested parties would need to be built to enable more competitive financing of these projects.

b. Securitization

As the concept of green bonds becomes more familiar, interest in green bonds can spread to lower ratings and different structures, such as asset-backed securities and covered bonds⁷. An important component for green securitization is the standardization of contracts and project evaluation structures. The rationale for this is that without standardization, there is a high cost for structuring and due diligence when including low-carbon assets in securitization pools.⁸

However, there are already some examples that this can be done without standardization. For example: Solar City and Sun Run have highly streamlined procedures for securitization; Toyota's standard auto loans back their securitized issuance with proceeds to be used for electric and hybrid car loans.

c. New currencies

The potential for green bonds is global—they are suited both to developed countries and emerging markets. 2015 has seen a highly diverse set of issuers coming from emerging markets. Some examples are shown in table 3.

Table 3: Green bonds issued in emerging markets

Green bonds issued in emerging markets (2015)	
Yes Bank (India)	\$158million
BRF(Brazil)	\$549million
Xinjiang Goldwin (China)	\$300million

In India, the government has announced that it will add 175 GW of renewable energy capacity by 2022. It has also indicated that there is a need for a low-risk, low-cost option to raise the funds needed to finance green projects. However, legislation is still lagging behind and has to take the important role of setting the stage for green bonds with a clear policy framework.

In China, People's Bank of China and the China Banking Regulatory Commission have developed policy proposals, guidelines and an evaluation system defining what is "green" in order to provide impetus to the green bonds market. In Brazil, Febraban, the Brazilian association of banks, has established a Green Bond Market Development Committee.

d. Resilient infrastructure

As big and more destructive natural disasters are the new normal for a lot of countries, green bonds can play an important role in helping finance resilient infrastructure.



Conclusion

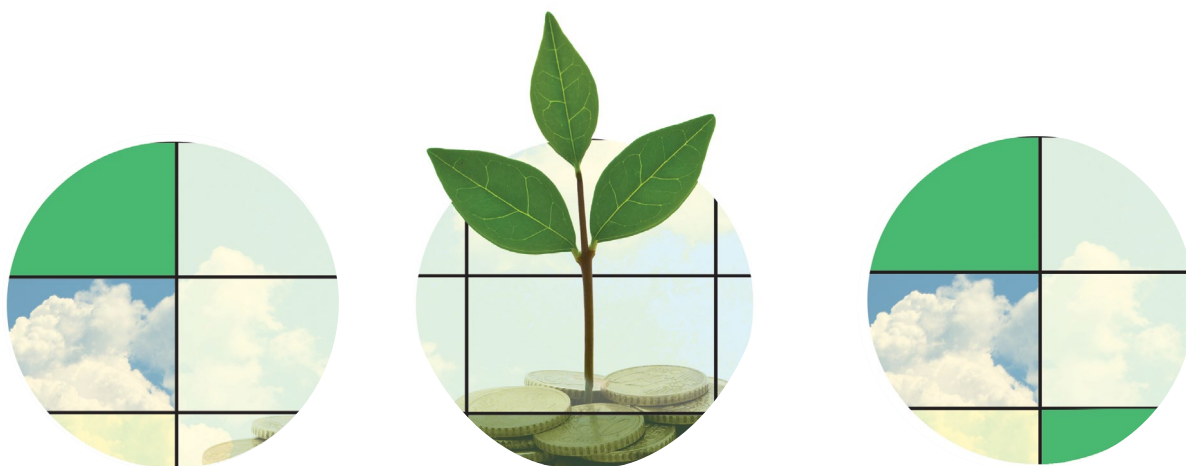
By creating a powerful positive narrative around investing in profitable, environmentally friendly solutions, the green bond market can help develop broad momentum for environmental action among companies, investors and the public sector. Investor demand for green bonds indicates that, over time, the market could be a significant contributor to closing the investment gap for climate-friendly projects. However, the green bond market needs to scale up more quickly than current trends to keep pace with the climate challenge.

Green bonds can offer a fiscally efficient way of financing measures to meet climate change targets, without sacrificing general development, including improving infrastructure, public services and financial systems. In addition to market mechanics, governments have to move towards becoming an active player by enforcing regulations and legislation in order to create a clear framework for both issuers and investors. The green bonds market needs to continue on its journey to increase transparency in what is defined as “green” and how processes work.

Many revolutions and innovations spread over the centuries have led us to both increased prosperity and to a changing climate. The challenge now is to remain on the path of combating climate change—and we do not have centuries to succeed. Therefore, innovations and revolutions need to be swiftly conceptualized and adopted. Green bonds are one of many innovations that humanity must adopt widely to successfully combat climate change.

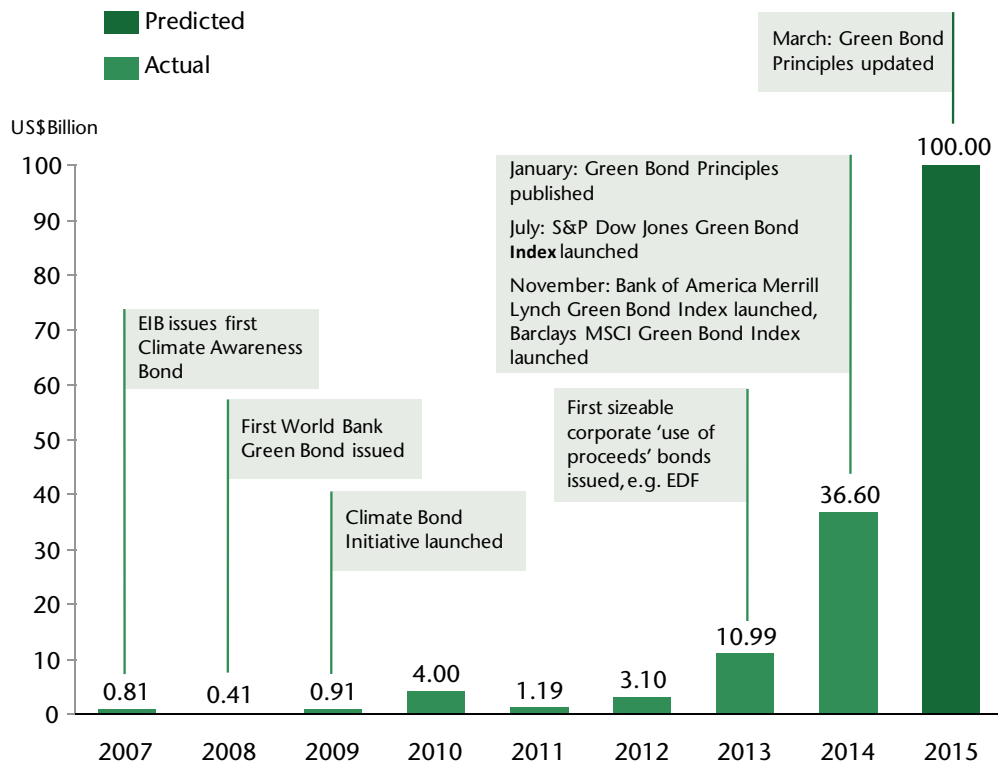
“[The green bond market] is a market with momentum and great potential to help build a better world.”

Rachel Kyte,
World Bank Group Vice-President and Special Envoy
for Climate Change



Annex 1: Overview of the green bond market

Figure 3: Overview of the green bond market



A brief history

Green bonds were pioneered by the European Investment Bank in 2007. The World Bank followed in 2008 as part of its Strategic Framework for Development and Climate Change. The product was designed in partnership with Skandinaviska Enskilda Banken (SEB). By 2013, utility companies, banks and government agencies had joined the mix, and the total amount of green bonds issued reached almost US\$37 billion in 2014.

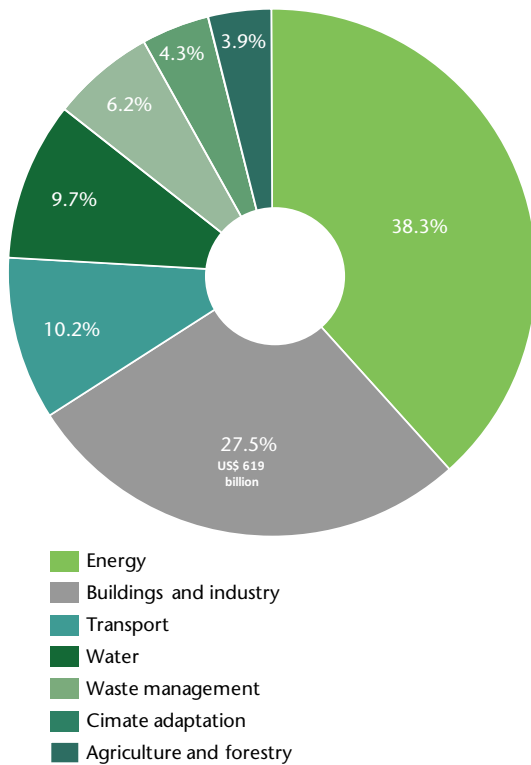
The green bond market has continued to rise in 2015, although not as fast as forecasted. The cumulative issuance of green bonds for the first half of 2015 closed at US\$ 19.3 billion. This has led to a realigning of the issuances forecast to US\$ 50-70 billion.



Use of green bond proceeds

The Climate Bond Initiative and HSBC conducted a study that concluded that over a third of labeled green bonds proceeds are financing renewable energy. A snapshot of the same is in Figure 4.

Figure 4: Green bond use of proceeds



Source: HSBC & CBI Study

Energy

Despite improvements, global CO₂ emissions from energy generation remain high due to the use of fossil fuels, making the transition to a more sustainable energy mix key to addressing climate change. The main renewable energy developments supported are hydropower, solar

and wind. Investments in energy efficiency are a low-cost option to reduce emissions and thus an important solution by offering many opportunities to help organizations achieve energy security and energy savings.

Transport

With urbanization on the rise, transportation is a critical sector to reform in order to address climate change. Financing low-emission modes of transportation will also have an important impact in terms of reducing congestion, local air pollution, oil dependency and transport safety risks.

Water

Water stress driven by population and economic growth, land-use change, increased climate variability and change, and declining groundwater supplies and water quality is a challenge the world is increasingly facing. Improved water resource management and climate-smart water infrastructure help manage water stress risks.

Agriculture

Agriculture is vulnerable to climate change and it is, with associated deforestation, the largest contributor to greenhouse gases. Agriculture has the potential to deliver increased productivity, enhanced resilience and carbon sequestration.

Waste

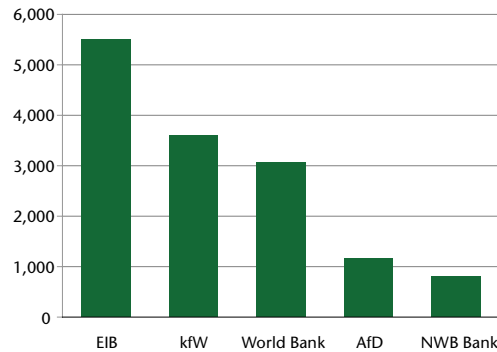
Raw materials are becoming scarcer and energy more expensive. Waste management is closely associated with both these problems. Waste is increasingly being used to produce both materials and energy; and recycling now saves more greenhouse gases than it generates. However, many developing and emerging countries are faced with the major challenge of improving their inadequate and unsustainable waste management systems.

Annex 2: Types of issuers

Development bank green bonds

Development banks are the largest issuers of green bonds. They foster a financial product to mobilize new capital flows to invest in clean, sustainable growth that addresses climate change.

Figure 5: Top 5 development bank issuers

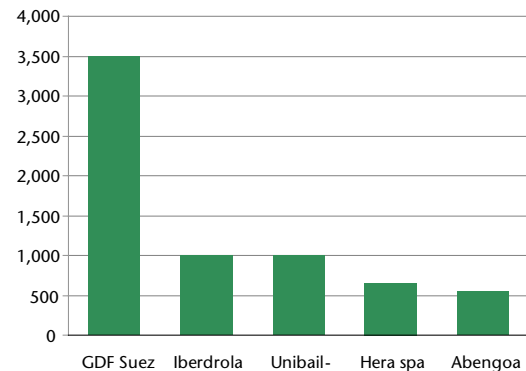


Source: CBI "YEAR 2014 GREEN BONDS FINAL REPORT"

Corporate green bonds

This type of bond has grown since 2013, with issuances led by utilities. This has now expanded to transport, food, waste, real estate and commercial banks.

Figure 6: Top 5 corporate issuers

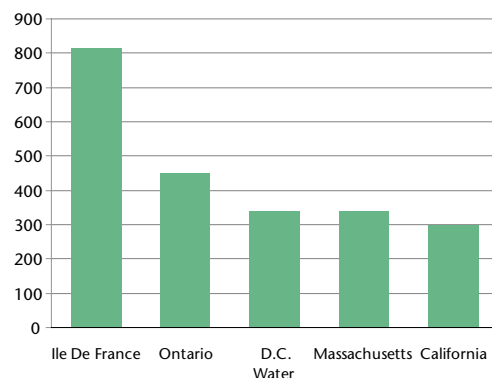


Source: CBI "YEAR 2014 GREEN BONDS FINAL REPORT"

Municipal green bonds

The green bond market offers cities and municipalities around the world the opportunity to meet infrastructure and climate investment needs. Early leadership can be found in the US municipal market and some cities and regions in Europe.

Figure 7: Top 5 municipal issuers



Source: CBI "YEAR 2014 GREEN BONDS FINAL REPORT"



Commercial bank green bonds

In the last two years, commercial banks from different countries have issued green bonds for the first time—ANZ, ABN AMRO, Morgan Stanley, Bank of America, Berlin Hyp, NRW, TD Bank and NAB. The majority of proceeds are used to finance renewable energy and energy-efficiency projects and buildings.

Figure 8: Green bond issuances by commercial banks

A Deep Dive into Bank Green Bonds

Issue Date	Issuer	Amount (€mm)	Currency	Coupon (%)	Maturity	Proceeds
From 25-Feb-13 to 26-Feb-15	Credit Agricole	331	18 issuances with various currencies, coupons and maturities			Buildings, Renewable Energy, Transit, Water, Energy Efficiency, Sustainable Agriculture and Forestry
18-Nov-13	BAML	455	USD	1.35	16-Nov-16	Solar and Wind Financing, Energy Efficiency Lighting
28-Nov-13	NRW	250	EUR	0.75	28-Nov-17	Water, Wind, Energy Efficiency
23-Dec-13	Hannon Armstrong ("Sustainable Yield" ABS)	91	USD	2.79	23-Dec-19	Renewable Energy, Energy Efficiency
2-Apr-14	TD Bank	501	CAD	1.824	3-Apr-17	Climate Projects Financing
9-Jul-14	Lloyds Bank (ESG Bond)	250	GBP	2.75	9-Dec-18	ESG – Solar Loans for SME in Disadvantage Areas
17-Sep-14	Münchener Hyp (ESG Bond)	300	EUR	0.375	17-Sep-19	Cooperative Housing Schemes
4-Nov-14	NRW Bank	500	EUR	0.25	5-Nov-18	Water, Wind, Energy Efficiency
16-Dec-14	National Australia Bank	300	AUD	4	16-Dec-21	Wind, Solar
17-Feb-15	DNB	120	NOK	1.92	17-Feb-20	Wind
24-Feb-15	Yes Bank	147	INR	8.85	24-Feb-25	Renewable Energy
5-May-15	Berlin Hyp	500	EUR	0.125	5-May-22	Energy efficient mortgages
7-May-15	Rikshem	37	SEK	0.25	7-May-18	Real Estate
12-May-15	BAML	545	USD	1.95	12-May-18	Solar and Wind Financing, Energy Efficiency Lighting
1-Jun-15	Lloyds Bank (ESG Bond)	352	GBP	2.5	1-Jun-22	ESG – Solar Loans and Loans for SME in Disadvantaged Areas
3-Jun-15	ANZ Bank	424	AUD	3.25	3-Jun-20	Buildings, Wind, Solar
8-Jun-15	Morgan Stanley	450	USD	2.2	7-Dec-18	Renewable Energy, Energy Efficiency
9-Jun-15	ABN AMRO Bank	500	EUR	0.77	9-Jun-20	Renewable Energy, Energy Efficiency

Source: JP Morgan

Annex 3: Other bonds (climate bonds/social impact bonds)

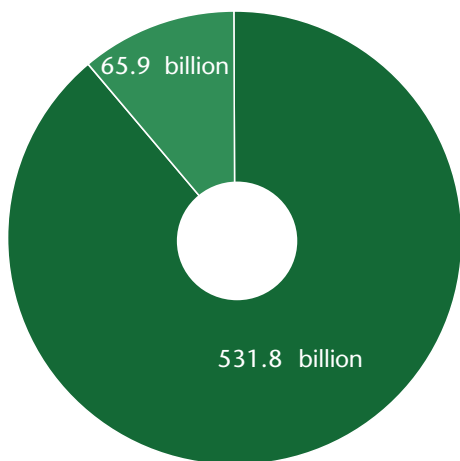
Unlabeled climate-aligned bonds

The term unlabeled climate-aligned bonds refers to bonds with proceeds financing climate-aligned assets.

In the document “Bonds and Climate Change, the state of the market 2015”, the Climate Bond Initiative screens and reviews approximately 1,400 companies to identify those with over 95% of revenues from climate-aligned assets. To provide a snapshot of the market, they gathered all outstanding bonds (as of 10 June 2015) issued after 1 January 2005, and also identified unlabeled project bonds and asset-backed securities supported by climate-aligned assets.

Figure 9: Green bond issuances by commercial banks

Climate-aligned bond universe \$597.7 billion



- Unlabelled climate - aligned bond universe
- Labelled green bond universe

Source: CBI

Social impact bonds

A social impact bond is any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance in part or in full for new and/or existing social projects. Social projects are activities that will directly address a specific social issue for a specific target population and/or through a specific delivery model for positive social outcomes, as defined by the issuer.

A recent example is Spain’s Instituto de Crédito Oficial (ICO) Social Bond issuance to fund small and medium-sized enterprises (SMEs) in order to create and maintain employment in regions in Spain with an employment rate higher than 19%.



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Class of 2015 project team members



Alexandre Grassiotto
InterCement



Dipjay Sanchania
CLP Holdings



Eduardo Atehortua
Deloitte



Erich Labuda
ABB



Mohamed Irfan
Aditya Birla Group



Regina Monteiro
DuPont

Designer:
Sukie Procter



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World Business Council for Sustainable Development

Maison de la Paix, Chemin Eugene-Rigot 2, CP 246,1211 Geneve 21, Switzerland.Tel: +41 (0)22 839 31 00, E-mail: info@wbcsd.org

www.wbcsd.org