

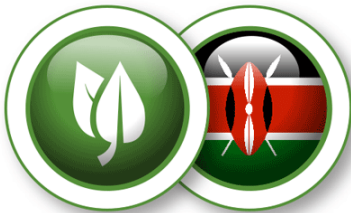
Green Bond Markets

Financing
Environmental Solutions for Sustainable
Development



Green Bonds
Programme
— KENYA —

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**Green Bonds
Programme**

— KENYA —

Green Bonds Market

**Financing Environmental
Solutions for Sustainable
Development**



Topics covered in this webinar

1. OVERVIEW

2. SESSION ONE: INTRODUCTION TO GREEN BONDS
3. SESSION TWO: THE GLOBAL GREEN BONDS MARKET
4. SESSION THREE: CHALLENGES & BENEFITS OF GREEN BONDS
5. SESSION FOUR: STANDARDS & CERTIFICATION
6. SESSION FIVE: KENYA GREEN BONDS RULES & GUIDELINES – NSE AND CMA
7. SESSION SIX: GREEN BOND ISSUANCE MODELS
8. SESSION SEVEN: THE KENYA GREEN BOND PROGRAMME
9. SUMMARY
10. SESSION EIGHT: CASE STUDIES
11. RESOURCES



Overview

Kenya, like most developing countries is facing an urgent development challenge, driven by a high demand for infrastructure as well as economic challenges posed by social, environmental and climate changes. Integrating sustainability into its development agenda is key, if Kenya is to meet its economic growth, employment, poverty alleviation and health improvement targets.

The 2030 Agenda for Sustainable Development has set out ambitious development goals for the global community. The Paris Agreement, in turn, has called for urgent climate action to stabilise global average temperatures.

Advancing these agendas will require unprecedented financing needs, together with the development of new and innovative sources of finance.

In energy for example, Kenya is experiencing rapidly increasing energy demand and, in many cases, energy access shortfalls. The energy sector is highly dependent on hydro energy and Kenya has witnessed increased periods of extreme drought.

There is an urgent need to increase energy access, targeting a large percentage of the population who lack electricity to light their homes or run their businesses. Energy poverty further disproportionately affects women.

Tackling energy demand through renewable energy development can therefore improve access to energy and equality and control for temperature rises and pollution, while creating jobs and new skills.



Overview

The Green Bond market has taken off in recent years, with over USD 80 billion issued in 2016 and more than 120 billion issued in 2017. The momentum has continued strong, with over **Half Trillion USD** in Green Bonds currently outstanding.

The primary intent of this module is to introduce you to the Green Bond markets and to how debt capital markets can be used to finance environmental solutions to meet sustainable development goals.

Specifically, the modules will cover:

- What is a Green Bond
- The growth of the Green Bond markets
- How Green Bonds can be used to fund infrastructure development
- How to issue Green Bonds
- Benefits of Green Bonds to Issuers and Investors
- Green Bond Standards and Certification process



Overview

- Green bonds are financial tools that can help address the risks posed by the country's exposure to climate change, environmental degradation and associated social impacts. They can be used to mobilise private sector capital towards sustainable and resilient infrastructure and achieve the policy goals set in Kenya's long-term growth and development vision
- Kenya's economy is highly dependent on its natural resources base - more than 50% of the country's GDP comes from agriculture, mining, forestry, fishing. As of 2016, these sectors accounted for over 26% of the total GDP, 20% of employment and over 50% of revenue from exports.
- This exposure reflects the importance of investments in climate mitigation and adaptation that help preserve and develop the sector's activities. The GDP growth in the first quarter of 2017 was negatively impacted by droughts - Kenya National Bureau of Statistics (2017): "Quarterly Gross Domestic Product Report First Quarter 2017". <https://www.knbs.or.ke/quarterly-gross-domestic-product-report-first-quarter-2017/>
- According to the Kenya National Climate Change Action Plan 2013-2017, extreme weather events could cost the economy as much as USD 500 million per year. Aggregate models project these results will increase, rising to as high as 7% of GDP by 2020



The challenge



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The opportunity



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Overview

- Mitigation and resilience strategies are crucial for Kenya's development and growth, to protect the most vulnerable members of society and create jobs as well as improve health and decrease the risk of epidemics through addressing environmental pollution.
- Green bonds can help investors allocate financing to projects with positive climate change mitigation and adaptation/resilience, and other related environmental and social impacts.
- World Bank (2010): "The Cost to Developing Countries of Adapting to Climate Change. New Methods and Estimates". The Global Report of the Economics of Adaption to Climate Change Study, Consultation Draft.
<http://siteresources.worldbank.org/EXTCC/Resources/EACC-june2010.pdf>



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11. QUESTIONS & ANSWERS



Introduction:

In this section, the reader would learn about the following:

- Differences between a Vanilla (regular) Bond and a Green Bond
- The various uses of Bonds
- Definition and Terminology of Bonds
- Guidelines for issuing Green Bonds



What is a Bond

- A bond is a debt instrument (a type of loan), which entities such as companies, governments, and banks borrow to finance projects
- The issuer of the bond (the borrower) owes the holder (the creditor) a debt and depending on the terms they agreed, is obliged to pay back the amount lent within a certain period of time (tenor) and with a certain interest (coupon)
- Unlike a loan, the bond is a transferable instrument
- Transferability of the bond depends on its liquidity (whether it is a public issue or a private placement)

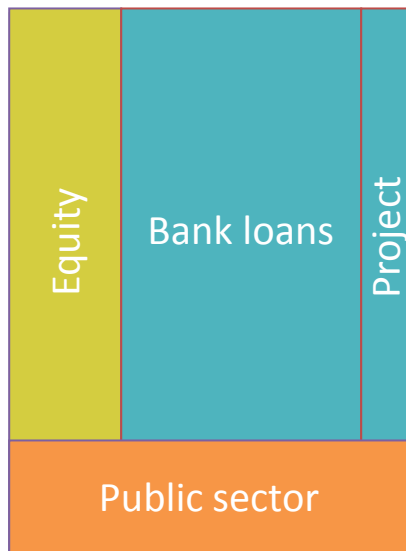
Bonds are (primarily) about *re-financing*

Companies typically raise short term bank lending for the construction (origination) phase of a project. Refinancing through bond issuance allows companies to pay back the loan once the construction phase is over. As construction is usually the highest risk part of a project, bond issuance post-construction can provide a cheaper form of longer-term capital to replace the more expensive short term bank lending



Development

High risk, project
finance, first 2-5 years



Mature asset

Low risk, long-term holdings for 15-25 years

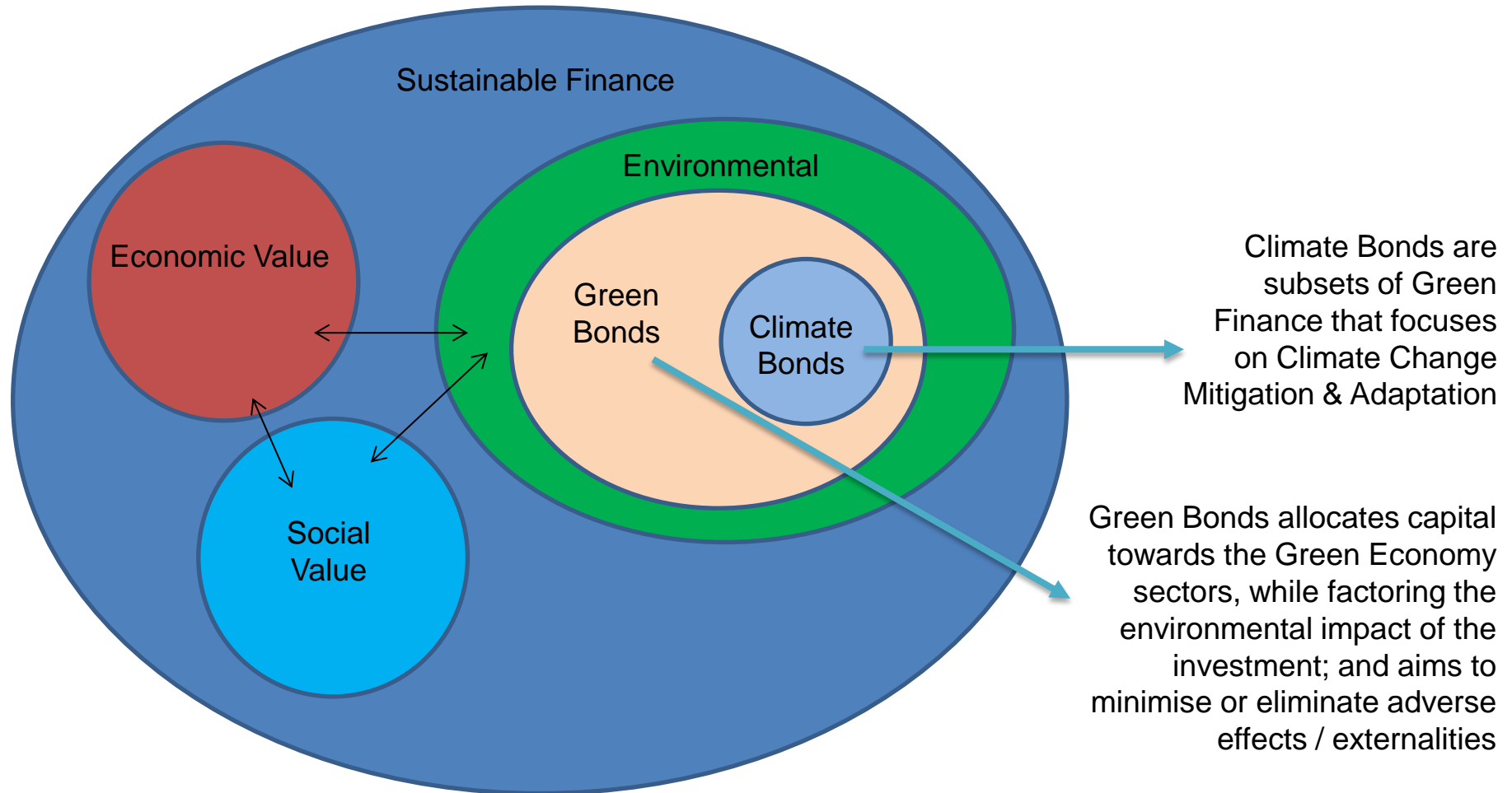


Key Terms for Bond

- *Principal* – the amount that the issuer agrees to repay the bond holders (face value or par value)
 - **Face value**, also known as par value, is equal to a **bond's** price when it is first issued, but thereafter the price of the **bond** fluctuates in the market in accordance with changes in interest rates while the **face value** remains fixed
- *Coupon* – interest rate that the borrower pays the bond holder each quarter, half-year or year
- *Term to Maturity* – the number of years it takes to pay back the principal and coupon
- *Bond yield* - the amount of return an investor realizes on a **bond**. Several types of **bond yields** exist, including
 - **Nominal yield** is the interest paid divided by the face value of the **bond**
 - **Current yield** equals annual earnings of the **bond** divided by its current market price



What are Green Bonds?



Just like regular vanilla bonds, “**green**” is a bonus feature to the bond

Its about the projects and assets, not the issuer

What is a Green Bond?

- Green bonds are bonds with **proceeds earmarked for projects with positive environmental benefits.**
- Climate bonds refer to projects concerned with climate change adaptation and mitigation, which form the bulk of the green bond market.
- Financially, green bonds are the same as vanilla bonds, offering comparable risk/reward profiles and following the same issuance procedures.
- Green Bonds proceeds can be used for a wide variety of environmental projects, from renewable energy plants to communal parks threatened by droughts, wind farms and solar and hydropower plants, rail transport and building sea walls in cities threatened by rising sea levels .



Definitions and terminology

Green bond	A bond labelled as 'green', 'climate', 'environmental' or similar where bond proceeds are directed to projects or assets with environmental benefits.
Climate bond	The term 'climate bond' is used interchangeably with the term 'green bond'. A subset of green bonds where proceeds are directed to projects/assets that have specific climate benefits.
Certified Climate Bond	A green bond where the use of proceeds has been certified by the Climate Bonds Initiative (CBI) as being in line with a low carbon climate resilient economy.
Labelled green	The term 'labelled green' is a universe of all bonds that have gone through a second party verification process or certified against the Climate Bonds Standards
Unlabelled climate-aligned bond	A bond that is financing green/climate assets but has <u>not</u> been labelled as 'green' by the issuer. These are also referred to as climate-aligned bonds.
ESG/Sustainability bond	A bond that is financing a range of both social and environmental projects/assets.



Kenya Green Bond Rules & Guidelines

The Kenya Green Bonds Guidelines have been developed using the four pillars of the Green Bond Principles (GBP) and the guidance of the Climate Bonds Standard. The Guidelines are aligned with international practices to attract local as well as foreign investor demand for green.

Below are some of the principles that underline guidelines.

Use of Proceeds

- Proceeds are used for the financing or re-financing of green projects (and their related expenditures, such as R&D. Eligible projects fall under the categories identified in the international Climate Bonds Taxonomy and the National Policy on Climate Finance.
- The two classifications are mostly aligned. The Climate Bonds Taxonomy includes the additional sector of Information, Communications and Technology. The National Policy on Climate Finance lists trade, tourism and disaster risk management as separate categories, although these are mostly aligned with the Climate Bonds Taxonomy buildings, energy efficiency and adaptation categories

Kenya Green Bond Rules & Guidelines

- The National Policy on Climate Finance identifies research and innovation around green technologies and climate change as a priority sector; these are types of expenditures that have been included in green bonds issued by the public sector, such as sovereigns and sub-sovereigns and can be considered eligible if they relate to the Taxonomy areas

EXCLUDED PROJECTS - All fossil-fuel related projects are excluded.

- Whereas oil and gas company can issue a green bond to finance green projects, energy efficiency improvements in oil and gas production or related supply chain, such as refineries, do not achieve enough impact to offset the industry-related emissions to put us on a sub-2 degree pathway, making them ineligible. Foreign investors are particularly careful not to invest in fossil-fuel based assets when they are selecting green-labelled investments

Kenya Green Bond Rules & Guidelines

Selection of Projects

- The issuer establishes, documents and maintain a decision-making process to determine the eligibility of the assets as part of its Green Bond Framework

Management of Proceeds

- The systems, policies and processes to be used for the management of the bond funds and investments are documented and disclosed by the issuers as part of its Green Bond Framework, including arrangements for tracking of proceeds and managing unallocated proceeds

Kenya Green Bond Rules & Guidelines

Reporting Requirements

- The issuer provides to bondholders, at least annually, a Green Bond Report containing the list of the projects and assets to which proceeds have been allocated, for the duration of the bond. The reporting process and authority shall be documented and maintained as part of the issuer's Green Bond Framework
- The Report shall include expected impacts of projects and assets such as energy capacity installed, electricity generated, greenhouse gas emission performance of buildings, numbers of passengers carried by public transport, number of electric vehicles manufactured, volume of wastewater treated. Where feasible, quantitative performance measures of the impact of the projects and assets may also be included
- Where confidentiality agreements or competition considerations limit the amount of detail that can be disclosed, the GBP recommends that the information may be presented in generic terms

Kenya Green Bond Rules & Guidelines

External Review

- An external review, such as a second party opinion or third party certification, is mandatory

It's about mitigation *and* adaptation/resilience

- **Climate change mitigation** - refers to efforts to reduce or prevent emission of greenhouse gases. Mitigation can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behavior
- **Climate adaptation** - is a response to global warming and climate change, that seeks to reduce the vulnerability of social and biological systems to relatively sudden change and thus offset the effects of global warming. Even if emissions are stabilized relatively soon, global warming and its effects should last many
- **Climate resilience** - can be generally defined as the capacity for a socio-ecological system to:
 - absorb stresses and maintain function in the face of external stresses imposed upon it by climate change
 - adapt, reorganize, and evolve into more desirable configurations that improve the sustainability of the system, leaving it better prepared for future climate change impacts



“The emergence of green bonds represents one of the most significant developments in the financing of low-carbon, climate-resilient investment opportunities.”

Ban Ki Moon, UN Secretary-General



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Introduction:

In this section, the reader would learn about the following:

- Global trends and development in the global Green Bond Market
- Who buys Green Bonds and why
- How Green Bonds are used as tools to manage long-term risks
- Green Bonds as a bridge to the Sustainable Development Goals (SDG) of the country
- Explores whether Green Bonds are cheaper than Vanilla (regular) Bonds

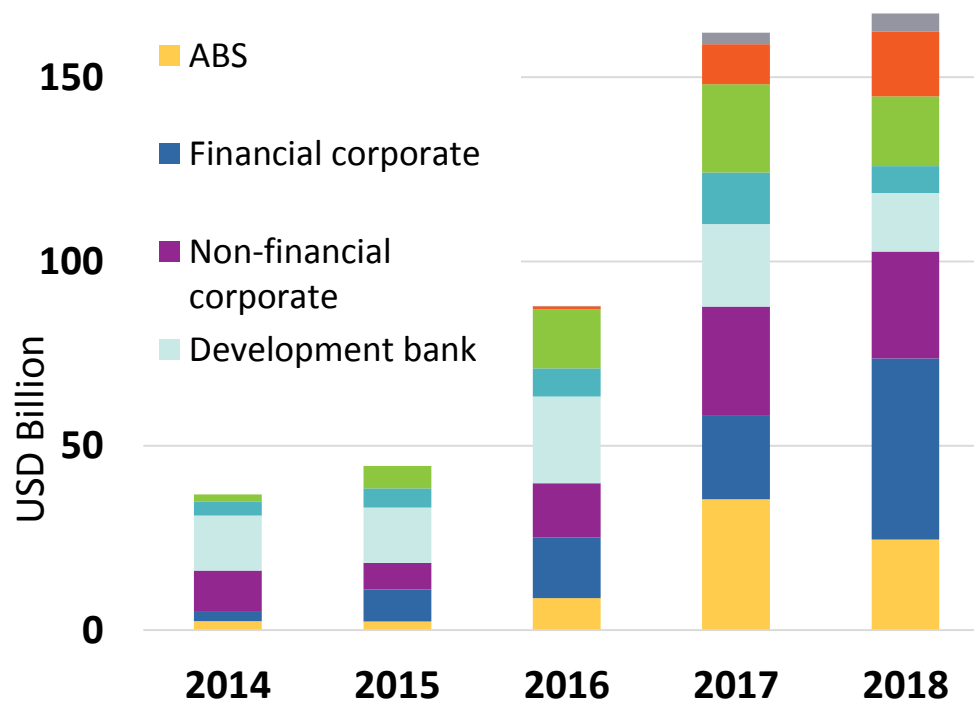


Global Trends

- Green bonds has proven to be one financial instrument that is already enabling billions of dollars to flow into sustainable infrastructure
- Green bonds serve to meet infrastructure, climate and broader economy challenges.
- They deliver comparable risk-adjusted returns for infrastructure investments and they allow investors to attach purpose to their investments, reconnecting finance to hard assets in the economy
- The largest share of bond issuance is used to refinance debt rather than providing initial debt to a project. This is the role of bonds in the capital pipeline generally, and will therefore also be the main role of bonds in financing green projects.

Rapid growth continues – 3% up on 2017

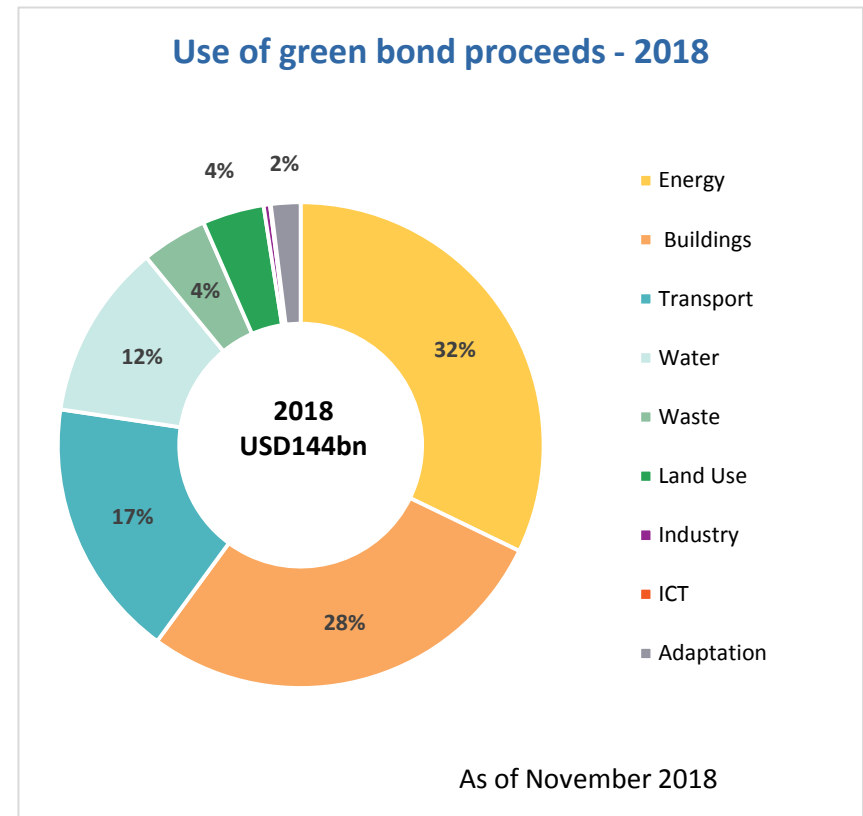
- *USD167.3bn total issuance*
- *Over 1,500 green bond issues from 320 issuers*
- **44** countries, of which **8** new countries
- *204 new issuers (total 625 issuers)*
- **EUR4.5bn (USD5.5bn)** – largest single green bond, issued by the Kingdom of Belgium
- **New sovereign green bonds** from Belgium, Indonesia, Ireland, Lithuania, Poland and the Seychelles, and **two taps** of France's GrOAT



4 sovereign GBS:
France, Fiji, Nigeria,
Poland

Renewable energy, green buildings, transport dominate allocation of proceeds

- **Renewable energy** has diversified from solar and wind to include power grids, geothermal, offshore wind
- **Property** related issuance is growing with covered bonds, green MBS and funding deals by European banks
- **Transport** is on the rise, mainly due to public rail transport investments
- **Water** issuance features many US Munis and UK's Bazalgette Finance & Anglian
- **Land use** deals now include a forestry covered bond and a sustainable plantation with afforestation and wildlife protection corridors



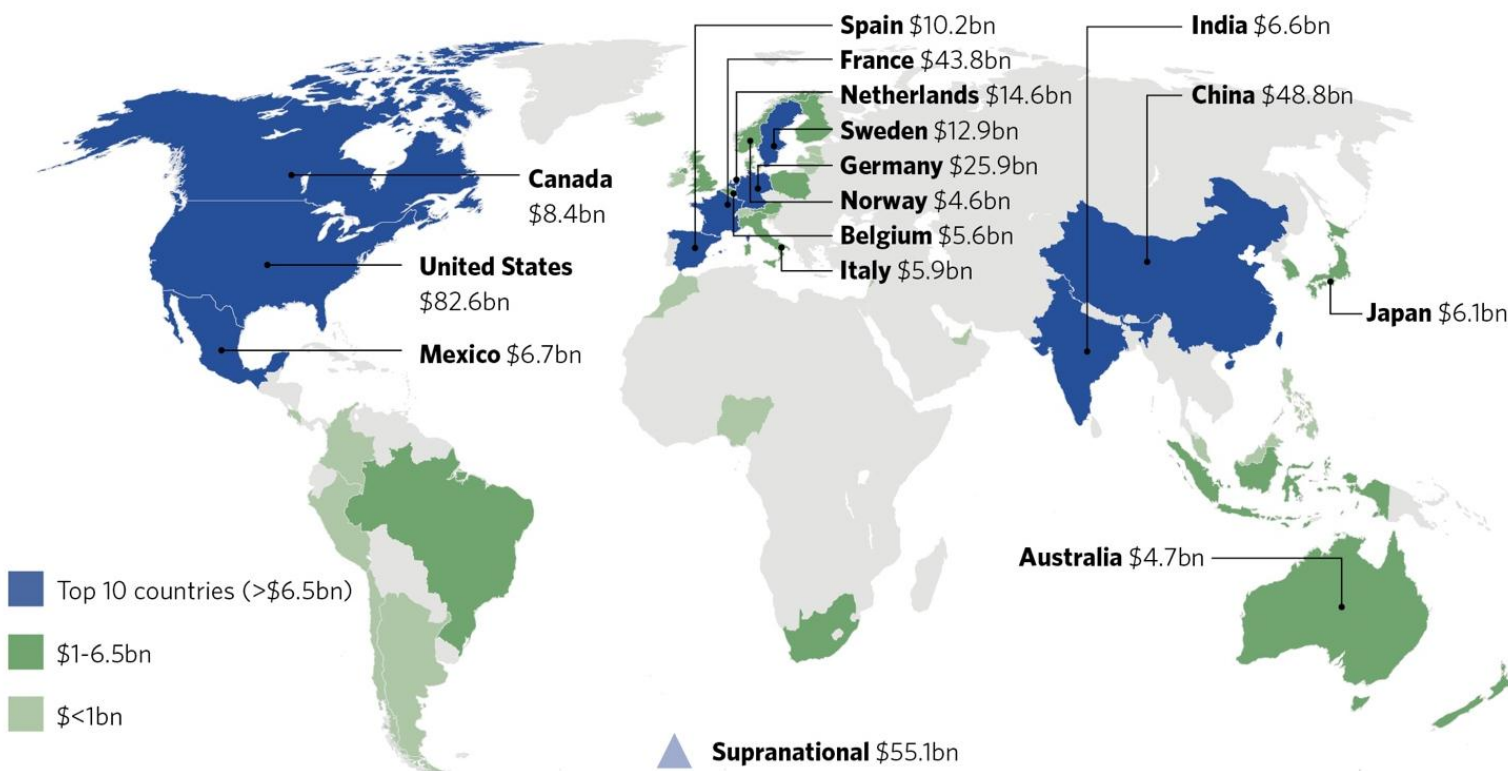
Who buys Green Bonds?

Profile of investors

- As the Green Bond markets have grown and attracted increasing attention, there is more mainstreaming of investors which buy into these instruments.
- Whilst a certain group of investors are those with green mandates and ESG related investing activities, there is also increasing uptake by “vanilla investors”.
- Large pension funds, largest asset managers are increasingly looking for sustainability and low carbon related investments and often, these green bonds fit exactly what they are looking for
- There are substantial climate change risks to insurers and insurers are becoming increasingly aware of this. Increasing the amount of low carbon investments in their portfolio is part of that long term risk mitigation

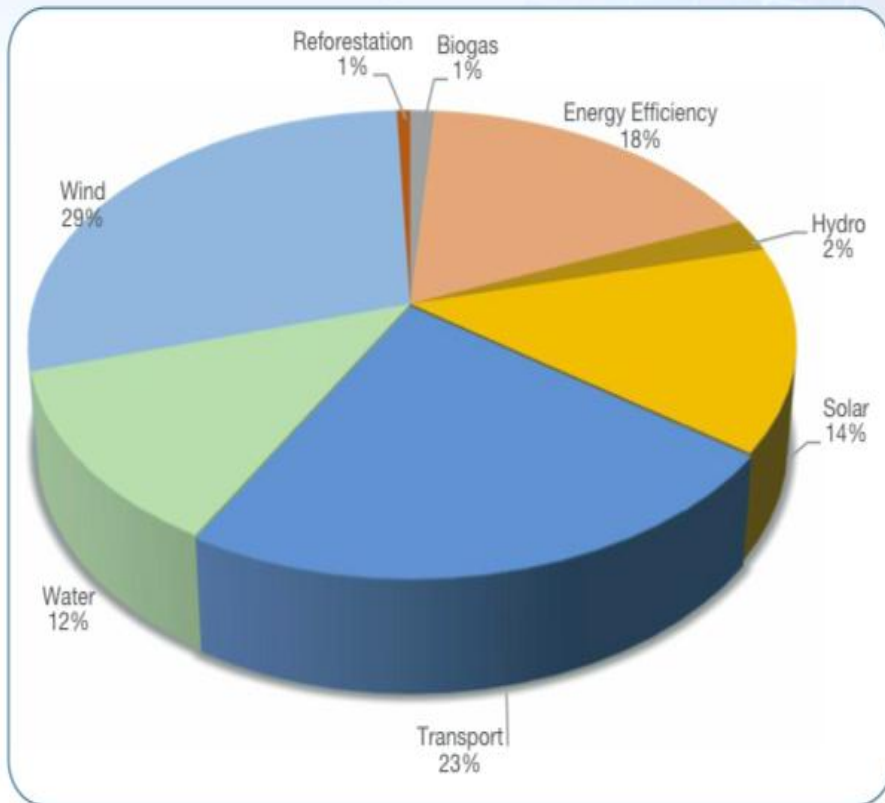


Global development

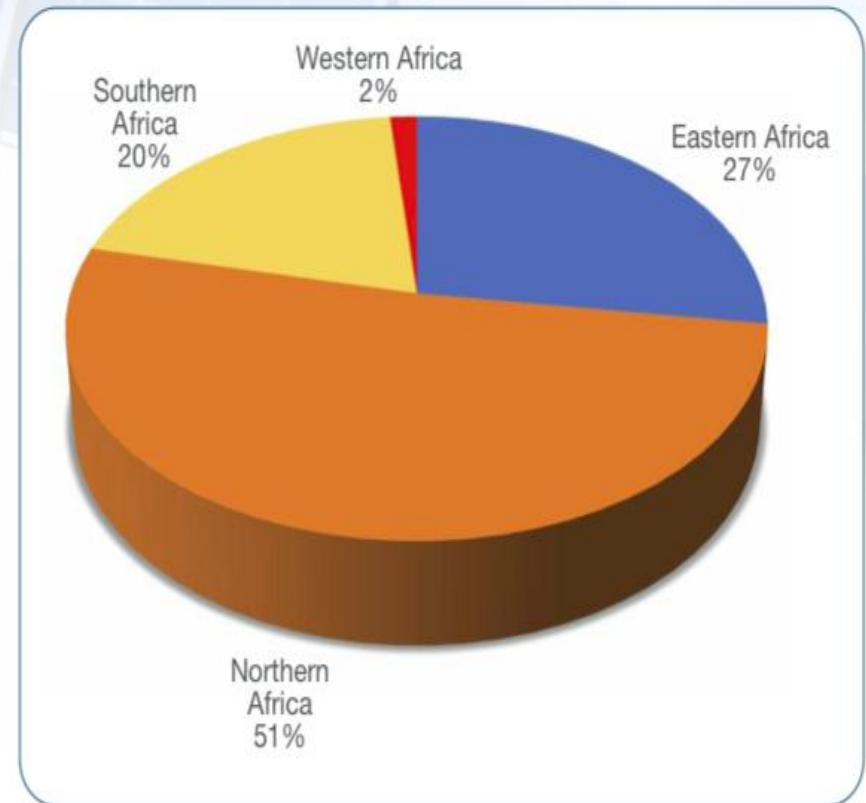


Outstanding Green Projects Portfolio of African Development Bank 2018

By sector



By region



Green bond as a tool to manage long-term risks

Green bonds can help mitigate climate change-related risks as they:

- finance climate friendly assets
- finance assets that are 'future-proof' in terms of decarbonisation policies
- finance assets that bear a lower credit risk, such as mortgages for energy efficient homes

Green Bonds as a bridge to the Sustainable Development Goals (SDGs)

Sustainable Development Goals	Example	% of Issuance	Use of Green Proceeds
Clean water and sanitation (SDG6)	Cape Town's green bond	11	Low-carbon and climate resilient
Clean energy (SDG7)	Nigeria's sovereign green bond	40	Renewable energy expansion
	Latvian power utility (Latvenergo)		Flood protection, renewable energy and grid efficiency
Sustainable industry, innovation and infrastructure (SDG9)	Lithuania's sovereign green bond	24	Low-carbon buildings
	India Railways Finance Corporation	15	Low-carbon transport
Sustainable cities and communities (SDG11)	New Jersey Environmental Infrastructure Trust		Flood protection, improving drinking water supply, and ecosystem restoration
	San Diego Unified School District,		
Life on land - Agriculture & Forestry (SDG15)	Poland's sovereign green bond, Landshypotek bank issued the first green covered bond from Sweden in 2018	3	Sustainable agriculture, afforestation and conservation and restoration of natural habitat

The opportunity: \$1 Trillion per annum by 2020

- Investor demand for Green Bonds & Climate Bonds is strong, and will increase in line with the delivery of *credible, quality* products into the market
- Standards, assurance & certification have been identified as key to improved confidence and transparency, and further strong growth within the mainstream debt capital markets
- There is risk that if robust standards and independent verification are not used then green bond labelling may lose its impact
- Governments have a key role to play in developing and rolling out mandatory green bond regulations as well as encouraging market development
- Critical to success will be harmonisation of cross-territory standards with national regulations



Are Green Bonds Cheaper than Conventional Bonds?

- Green bonds attract a **broader range of investors**
- **Over-subscription and tight pricing** is the norm
 - If there is strong demand, the size of a bond can be increased at issue (upsized), taking advantage of cheaper capital
 - Before a bond is issued, underwriters estimate a selling price; this process is called "Initial Price Talk" (IPT). On average green bonds price tighter than IPT due to over subscription of the bond
- Some green bonds show **no c**(or "greenium")
 - Some bonds display a "greenium", which means cheaper cost of funding for the issuer
- Green bonds **tighten in the immediate secondary market** and on average outperform benchmarks in the first month
- ❖ **"new issue premiums"** – a bond trades at a premium when it offers a coupon rate higher than prevailing interest rates. It is said to trade above its **"par value"**
- ❖ **"Par Value"** – is the face value of a bond. The face value determines the the maturity value and the actual value of the coupon payments of the bond



“To investors, green bonds offer a stable, rated and liquid investment with long duration. To issuers, they could tap the US\$100 trillion global institutional fixed income investor base. Moreover, the shift to the capital markets from banks will free up limited bank balance sheet capacity for early-stage project financing and other important infrastructure lending .”

Mark Carney, Governor of the Bank of England and Chair of the (international) Financial Stability Board



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10. SESSION EIGHT: CASE STUDIES
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Introduction:

In this section, the reader would learn about the following:

- The challenges to scaling the Green Bonds Market
- The benefits of issuing and labelling to issuers
- The benefits of labelling to investors



Challenges to scale the Green Bond Market

Several challenges are impacting on the growth of the global green bond market

- Volume of bankable projects and robust project pipelines
- Maturity of bond markets in certain countries
- Preparedness for bond financing
- Commonly acceptable green standards
- Risk-averse investors with limited capacity to analyze green investments
- Small investments that would not be attractive to large institutional investors
- Involvement of many stakeholders that lack coordination



Green Bonds for Sustainable Development

The development of this new asset class is an opportunity to advance a low-carbon and climate-resilient future while raising global investment and spurring growth.

Green finance's meteoric rise has been a remarkable feature of the contemporary global financial landscape. From London to Nairobi, and Sao Paulo to Singapore, green finance has become the currency of high profile advocacy, policy and regulatory developments and increasingly market practice.

The logic of green finance's rise is undeniable. Environmental challenges have impacted markets and returns, through droughts and other natural disasters, volatility in food and other commodity prices, and growing liability risks as the more stringent enforcement of environmental and climate-related regulations become a global norm.

Integrating environmental considerations in new infrastructure development is key to ensure countries embark on sustainable growth pathways to achieve economic growth, poverty alleviation and health improvements.



Scaling Green Deal Flow – Fundamental Actions

- **Collaboration:** Roundtables and Stakeholder Ownership - bringing primary in-country actors together
- **Develop green project pipeline:** Translate INDCs into green project pipelines and communicate it to investors e.g. through Green Infrastructure Investment Coalition.
- **Strategic public green bond demonstration issuance** from development banks, municipalities/cities – NAFIN (a leading Mexican development bank), New York's MTA (Metropolitan Transport Authority) green bond issuance, African Development Bank underwriting, is an example of other public-sector entities that can replicate
- **Support development of green/climate bond standards:** reduces investors' transaction costs, but also a foundation for policymakers to identify green bonds that have sufficiently robust environmental credentials to qualify for further policy support. Possibly to leverage international Climate Bond Standard



Benefits of Green labelling to Issuers

- Investor diversification across regions and types - environmentally green / low-carbon integrity of the bond enable issuers to diversify their investor base, thus enabling them raise capital from a much broader base of investors
- Strong oversubscription – demand for green bonds generally outstripped supply and investors acquiring green bonds often held them to maturity
- Lower cost of capital – green bonds enable issuers to raise large amounts on the capital markets; Refinancing through green bonds and obtaining lower-cost debt is particularly attractive for low-carbon infrastructure assets as they have a particularly low operating risk post-construction compared to the construction phase.
- Tighter yields – given the demand for green bonds, there has been strong pricing achieved by recent green bond issuance in 2016. Some corporate issuers claimed to have achieved a lower cost of capital by up to 15bps in some instance
- Stickier Pool of Investors – typically green bond Investors invest to the long term, which is a major benefit to infrastructure projects seeking longer term investments



Benefits of Green labelling to Investors

- Asset allocation thresholds – investments in green bonds have enabled institutional investors exceed asset allocation thresholds especially when investing in emerging markets
- Strengthened reputation and assurance – growing the formal certified green bond market, with high quality information about the green impact and use of proceeds, provide assurance to portfolio investors that their funds would not be misallocated to assets with false green credentials
- Alignment of CSR (or core business when pure play) with funding scheme – some investors make the case that the intrinsic risk and return for most green bonds was usually the same as any conventional bond with the same rating and hence the benefits were for “purpose based investing” only
- Well-managed projects reduce risk exposure. They offer the same returns as other bonds, but with the added benefit that funds are only going to climate change solutions
- They give investors a chance to direct capital to climate change solutions, where at the moment there is little opportunity (“lack of deal-flow”)
 - like the \$22 trillion of investors who are members of the Global Investor Coalition on Climate Change – this is important



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Introduction:

In this section, the reader would learn about the following:

- The NSE Green Bonds listing rules and the CMA Guidelines for non-listed Green Bonds



Kenya Green Bond Rules & Guidelines

The NSE Green Bond Listing Rules and the CMA Guidelines for non-listed bonds, have been developed using the four pillars of the Green Bond Principles and the guidance of the Climate Bonds Standard as well as National green economy priorities. The Rules & Guidelines are aligned with international practices to attract foreign investor demand for green.

Below are some of the principles that underline Kenya's green bond rules and guidelines issued by the Nairobi Securities Exchange and the Capital Markets Authority.

Use of Proceeds

- Proceeds are used for the financing or re-financing of green projects (and their related expenditures, such as R&D. Eligible projects fall under the categories identified in the international Green Bond Principles, the Climate Bonds Taxonomy and National Guidance documents such as the National Policy on Climate Finance and the Green Economy Strategy and Implementation Plan.
- The international and the national green sector classifications are mostly aligned. For example, the Climate Bonds Taxonomy includes the additional sector of Information, Communications and Technology. The National Policy on Climate Finance lists trade, tourism and disaster risk management as

Kenya Green Bonds Rules & Guidelines

- The National Policy on Climate Finance identifies research and innovation around green technologies and climate change as a priority sector; these are types of expenditures that have been included in green bonds issued by the public sector, such as sovereigns and sub-sovereigns and can be considered eligible if they relate to the Taxonomy areas

EXCLUDED PROJECTS - All fossil-fuel related projects are excluded.

- Whereas oil and gas company can issue a green bond to finance green projects, energy efficiency improvements in oil and gas production or related supply chain, such as refineries, do not achieve enough impact to offset the industry-related emissions to put us on a sub-2 degree pathway, making them ineligible. Foreign investors are particularly careful not to invest in fossil-fuel based assets when they are selecting green-labelled investments

Kenya Green Bonds Rules & Guidelines

Selection of Projects

- The issuer establishes, documents and maintain a decision-making process to determine the eligibility of the assets as part of its Green Bond Framework

Management of Proceeds

- The systems, policies and processes to be used for the management of the bond funds and investments are documented and disclosed by the issuers as part of its Green Bond Framework, including arrangements for tracking of proceeds and managing unallocated proceeds

Kenya Green Bonds Rules & Guidelines

Reporting Requirements

- The issuer provides to bondholders, at least annually, a Green Bond Report containing the list of the projects and assets to which proceeds have been allocated, for the duration of the bond. The reporting process and authority shall be documented and maintained as part of the issuer's Green Bond Framework
- The Report shall include expected impacts of projects and assets such as energy capacity installed, electricity generated, greenhouse gas emission performance of buildings, numbers of passengers carried by public transport, number of electric vehicles manufactured, volume of wastewater treated. Where feasible, quantitative performance measures of the impact of the projects and assets may also be included
- Where confidentiality agreements or competition considerations limit the amount of detail that can be disclosed, the GBP recommends that the information may be presented in generic terms

Kenya Green Bond Rules & Guidelines

External Review

- An external review, such as a second party opinion or third party certification, is mandatory

The NSE Listing Rules with provisions for Green Bonds can be found at:

<https://www.nse.co.ke/products-services/debt-securities/the-green-bond.html>

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Introduction:

In this section, the reader would learn about the following:

- The Green Bond Market Certification process
- The Green Bond Principles (Second Party Opinion)
- The Climate Bonds Standards (Thirds Party Verification)
- The key differences between the two



Importance of Credibility

External reviews have become common practice to provide investor assurance as to the green credentials of the bond. They are mostly used to assess alignment with the Green Bond Principles or verify compliance against the Climate Bonds Standard.

Over-arching market guidelines

- Climate Bonds Standard
- Green Bond Principles
- Country-specific guidelines

Best practice: external review

Poor practice: No external review

Climate Bonds
Certification

Second party
opinion

Green Bond
rating

Issuer disclosure



Building a credible market

How do we know it is environmentally green / climate-friendly?

Market integrity is governed in the following ways. The most common form of external reviews are:

- **Consultant review**: a ‘second party opinion’ on the Green Bond issuance, which may include the establishment and/or review of the issuer’s Green Bond Framework.
- **Certification**: a third-party verification by an expert reviewer of the issuer’s Green Bond Framework against a publicly available green standard, such as the Climate Bonds Standard.
- **Green rating**: an evaluation of the green bond or related framework against a third-party rating methodology, to further qualify the environmental impact of the investments.

Guidelines and Reviews

Using frameworks that are in line with international good practice, as provided by the Green Bond Principles and Climate Bonds Standard, can help attract more investors with an environmental or socially responsible mandate, who have familiarity and confidence in these frameworks

Green Bond Principles – ICMA



Proceeds must go to green / Explain process for project selection; use 2nd party review / Track proceeds; use auditor to verify / Report each year on details

Climate Bonds Standard & Certification: incorporates GBPs into a standardized framework with green definitions



National Green Bond Guidelines: Brazil, China, India, Kenya, Nigeria, South Africa

ASEAN Green Bond Framework

Moody's/ S&P green assessment tools: quality of review & reporting



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The Green Bond Principles (GBP)

The Green Bond Principles (GBPs) are a set of underlying principles for the green bond issuance and disclosure process. They are an industry-led initiative convened by the International Capital Market Association (ICMA), promoting the idea that green bonds are about the use of proceeds for green assets rather than green issuers.

The Green Bond Principles were launched in 2014 and updated as of June 2017, are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond.

They cover the establishment of sound management processes for the use of proceeds and the use of independent reviewers for both environmental credentials and reporting practices.

The Green Bond Principles (GBP)

The GBPs are based on four pillars, outlining disclosure and guiding the issuer in four areas:

- **Use of proceeds:** which projects and assets the bond proceeds can finance
- **Process for project evaluation and selection:** how the eligible projects are selected
- **Management of proceeds:** how the proceeds are tracked and spent
- **Reporting:** how often and what information the issuer will disclose to investors

The GBP are intended for broad use by the market:

- they provide issuers guidance on the key components involved in launching a credible Green Bond
- they aid investors by ensuring availability of information necessary to evaluate the environmental impact of their Green Bond investments
- they assist underwriters by moving the market towards standard disclosures which will facilitate transactions

The Climate Bond Standards (CBI)

The Climate Bonds Initiative has developed environmental standards with which projects must comply in order to achieve the corresponding Certification mark:

<https://www.climatebonds.net/projects/taxonomy/>

The Climate Bonds Standard is NOT a financial standard. Investors must do their own credit analysis.

Key features of the Climate Bonds Standard are:

- A robust and effective Certification scheme
 - Clear, objective, sector-specific, climate **eligibility criteria for projects & assets**
 - Clear **mandatory requirements** regarding use of proceeds, tracking & reporting (including an assurance framework with independent verifiers)
 - **Certification** by an independent Climate Bond Standards Board made up of investors and NGOs with US\$36 trillion AUM
- **Green Bond Principles are fully integrated**



Climate Bonds Standard

A standard for green bonds that includes the Green Bonds Principles and adds a definition of green assets, which is consistent with the COP21 Paris Climate Agreement, advocating for *limiting global warming by well below 2 degrees* by the end of the century

The Climate Bonds Taxonomy sets out which sectors are compliant with a 2-degree world; sector-specific science-based criteria are developed to ensure the level of ambition is met and consistent through the application of the taxonomy. more detailed version of the Taxonomy can be found at...
<https://www.climatebonds.net/standards/taxonomy>

The Climate Bonds Initiative acts as a Secretariat convening Technical Working Groups of experts to develop the criteria, Industry working groups of business leaders to test their feasibility.

The Climate Bonds Standard Board is made up of investors with green mandates who approves them Available sector-specific criteria can be found at
<https://www.climatebonds.net/standard/sector>

Approved verifiers can evaluate the compliance of a Green Bond against the Standard and report back to the Board

Climate Bonds Standard

Certified bonds are present in countries throughout all continents; the largest market in terms of size is the US. Certified climate bonds currently account for more than 14% of the market globally but certification is the dominant practice in some markets such as the Australian and Indian ones

If issuers are claiming benefits from green aspects of the bond, they need to protect the investor from greenwashing

There is a need to put in place a system of “environmental due diligence” to review key environmental attributes and complement existing financial due diligence

Investors will need specialist expertise to help determine which projects count as green.













































The Climate Bonds Standard is a screening tool for investors and governments which allows them to easily prioritize climate and green bonds with confidence that the funds are being used to deliver climate change solutions.

Principles for a good system of environmental due diligence:

- Scientifically robust
- Transparent

Climate Bonds Taxonomy

Climate Bonds INITIATIVE

ENERGY	TRANSPORT	WATER	LOW CARBON BUILDINGS	INFORMATION TECHNOLOGY & COMMUNICATIONS	WASTE & POLLUTION CONTROL	NATURE BASED ASSETS	INDUSTRY & ENERGY-INTENSIVE COMMERCIAL
Solar 	Rail 	Built (grey) infrastructure 	Residential 	Power management 	Recycling facilities 	Agricultural land 	Manufacturing 
Wind 	Vehicles 	Green and hybrid infrastructure 	Commercial 	Broadband 	Recycled products & circular economy 	Forests (managed and unmanaged) 	Energy efficiency processes 
Geothermal 	Mass transit 		Retrofit 	Resource efficiency 	Waste to energy 	Wetlands 	Energy efficiency products 
Hydropower 	Bus rapid transport 		Products for building carbon efficiency 	Teleconferencing 	Methane management 	Degraded Lands 	Retail and wholesale 
Bioenergy 	Water-borne transport 				Geosequestration 	Other land uses (managed and unmanaged) 	Data centres 
Marine Renewable Energy 	Alternative fuel Infrastructure 					Fisheries and aquaculture 	Process & fugitive emissions 
Energy distribution & management 						Coastal infrastructure 	Energy efficient appliances 
Dedicated transmission 							Combined heat & power 



Climate
Bond
Certified

Certification Criteria approved 

Criteria under development 

Due to commence 

Green Bonds
Programme
KENYA

Key Differences Between GBP & CBI

	Green Bond Principles	Climate Standard
The Objective?	Support standardisation and best practices in the green bond market	An international investor-focused not-for-profit organisation
What is it?	A set of principles that outlines good practice for the process of issuing a green bond, including: <ol style="list-style-type: none"> 1. Use of proceeds 2. Project evaluation and selection 3. Management of proceeds 4. Reporting 	The standard has set of prescriptive definitions and specifications that the issuer needs to follow to get the certification The standard encompass the GBP - effectively a CBI certification should also technically be GBP compliant, but not vice-versa
Project Categories	Climate bonds and other environmental projects. Also includes social projects	Climate change mitigation and adaption projects. Do not include social projects
Is it Voluntary?	Yes	Yes
Is third-party assurance required?	Recommended, can adopt Second opinion	Yes- The CBI Board certifies the external verification report
Any penalty involved if violation of green criteria	Issuers are exempted from liability if there is a violation of GBP	Climate Bonds Standards Board will withdraw the certification and make announcement if there is any violation

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5. SESSION FOUR: STANDARDS & CERTIFICATION
6. SESSION FIVE: KENYA GREEN BONDS GUIDELINES – NSE
- 7. SESSION SIX: GREEN BOND ISSUANCE MODELS**
8. SESSION SEVEN: THE KENYA GREEN BOND PROGRAMME
9. SUMMARY
10. SESSION EIGHT: CASE STUDIES
11. RESOURCES



Introduction:

In this section, the reader would learn about the following:

- Financing Green Bond projects
- Difference Green Bond Issuance models
- Seven Steps to issuing a Sovereign Green Bond
- The role of Government and Regulators in the Green Bond Market



Financing Green Projects

- Access to finance has been identified as one of the key challenges to achieving the green transition.
- Green bonds are a tool to mobilise private capital towards financing the transition, tapping into the demand for low-carbon and climate-resilient investments.
- Green bonds can also be a source of funding to complement other sources, such as bank funding or the issuer's own resources.

Green Bonds Issuance Models

Corporate Issuance – Specific Projects

Companies raising capital to finance their own green projects must identify the green projects or ensemble of green projects to be financed or refinanced.

Issuance Process

The company seeking to raise capital may establish one or more Special Purpose Vehicle (SPV) to host the green projects and the issuance green bonds for their respective financing. It is necessary to specify the requirements and procedures adopted for the issuance and post-issuance for each SPV.



Green Bonds Issuance Models

Corporate Issuance – Green Investment Program

Companies may choose to issue green bonds to finance a program of green investments without specifying the respective projects at the moment of issuance. In this case, the Issuer indicates only the categories of projects to which the proceeds will be allocated (e.g. energy efficiency, renewable energy generation, etc.) and specification can be made post-issuance.

Issuance Process

As the green projects will not be specified at the time of the Bond issuance, the eligibility definition can be based on the following:

- Social and Environmental Policy of the Issuer, validated by the Senior Management
- Strategy defined by the Issuer to implement the policy
- Environmental goals and/or objectives of the Issuer
- Action plan to plans to meet the strategies and goals
- Reference guidelines to issue green bonds (e.g. Green Bond Principles and Taxonomy of Climate Bonds Standards)



Green Bonds Issuance Models

Corporate Issuance – Exclusively Green Business (pure play)

Where a company with exclusively green business (pure play) raises green bonds, the proceeds can be used for general purposes without specifying any of the projects that will be financed with the proceeds. However, if the company starts new activities or enters into new businesses, it is recommended that the company specified which projects will be financed.

Issuance Process

The most recent update of the Green Bond Principle (GBP) recommend this type of company follow the guidelines valid for all green bond issuers, so that there will be no different levels of transparency regarding the use of the proceed, environmental performance indicators and report to investors and the market.

Green Bonds Issuance Models

Financial Institutions

Financial Institutions (commercial, development banks, etc.) play a distinctive role in the green bond market, since they can act as Issuers, Underwriters and Investors.

Financial institutions can issue bonds to finance or refinance their own green projects or finance their clients' green project portfolios (green lending or green financing).

Issuance Process

It is imperative for the credibility of the issuance that the social and environmental responsibility policies and practices established by the financial institution are consistent with:

- The evaluation of the eligibility criteria for selecting the green loan portfolio
- The decision-making process adopted by the financial institution to select and evaluate the green project that will receive the finance

Green Bonds Issuance Models

Financial Institutions

Development banks can leverage the growth of the green bond market in several ways, regardless of the issuance model. They may act in the following ways:

- Promotion of the market being first movers and currently the largest issuers
- Enhancement of the Issuer credit profile by giving guarantees, which can significantly increase the rating and attract more conservative investors
- Advisory to the issuers in the process of structuring and issuance of green bonds. The IFC (International Finance Corporation), for instance, encourages Issuers to define the eligibility criteria for their green projects based on their guidelines for Green Bonds and on their performance standards, which include a certification program for sustainable buildings developed by the bank

Green Bonds Issuance Models

Sovereign / Public Sector

The Public Sector (Government and Sub-nationals) play a distinctive role in the green bond market, since they can act as Issuers, Underwriters and Investors.

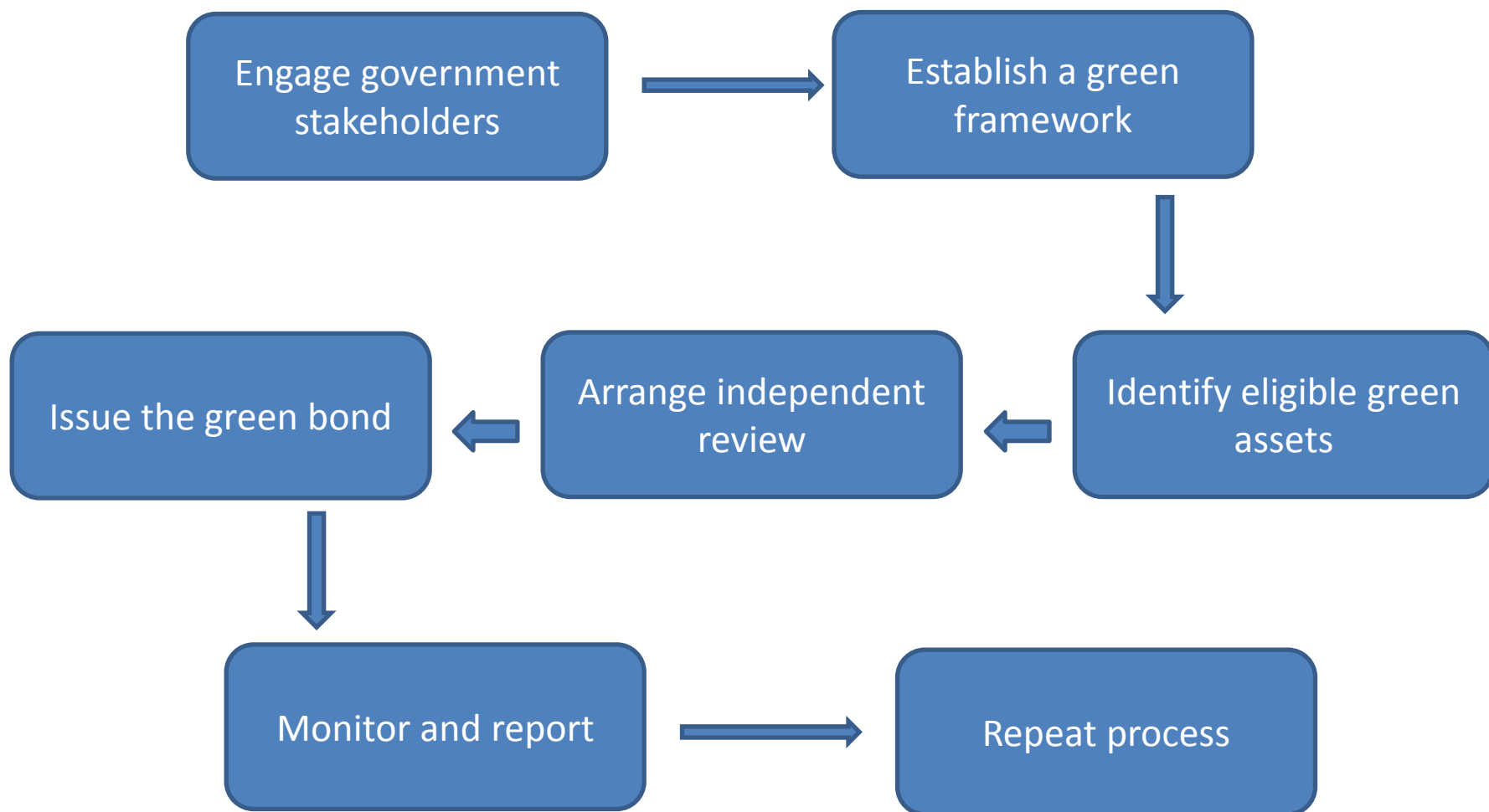
The Government can issue bonds to finance or refinance their own green projects or finance their clients' green project portfolios (green lending or green financing).

The process of issuing a sovereign green bond is similar to that of issuing a standard green bond. However, there are some additional steps to consider, given the more complex organisational nature of governments, the type of expenditures they can entail and their debt's benchmark role in domestic capital markets.

- Promotion of the market being first movers and currently the largest issuers
- Enhancement of the Issuer credit profile by giving guarantees, which can significantly increase the rating and attract more conservative investors



Sovereign Green Bond Issuance – Seven Steps



Sovereign Green Bond Issuance – Seven Steps

1. Engage government stakeholder

- a) Set the goals for the green bond issue - this may come from the Ministry of Finance or other relevant ministries, such as the Ministry for Environment or Development
- b) Early engagement with the Ministry of Finance is essential given their budgetary and debt management responsibilities
- c) It may be useful to expand the engagement to external stakeholders to include other capital market players (including stock exchanges, banks, investors, pension fund regulators). Establishing a Public-Private Green Bond Advisory Council⁶ is one way of organising the stakeholder engagement

2. Establish a green bond framework

- a) Determine eligible sectors:
 - In determining eligible green sectors, it is helpful to refer to existing science-based categorisations such as the Paris- compliant Climate Bonds Taxonomy and Standard
 - It is recommended to consider how the selected sectors align with the country's wider climate policies, in particular Nationally Determined Contributions (NDCs)



Sovereign Green Bond Issuance – Seven Steps

b) Determine eligible types of expenditures in budget:

- These could include direct investments or potentially intangible assets such as tax exemptions, subsidies, etc.
- Both new projects and refinancing of past projects as well as direct or indirect expenditures can be included

c) Decide on reporting practice:

- Set up a tracking and reporting procedure. Yearly reporting and ensuring current information is publicly available on the allocation of proceeds, including project sectors, geographies and whether they are new or operational is current best market practice

d) Amend existing legislation if needed (including transparency and traceability of proceeds)

Sovereign Green Bond Issuance – Seven Steps

3. Identify eligible green budget items

- a) The assets identified must be equal to or greater than the size of the bond. Identifying more eligible assets than the planned bond size enables to upsize the issuance as well as prepare for future issuances
- b) Green assets and projects financed by green bonds can occur also outside the country of issuance,⁸ to include cooperation and development projects overseas

4. Arrange independent review

A credible independent review and verification provides investors with assurance of the green credentials of the bond. An external advisor can also support the identification of the green portfolio.

- a) Options include a third-party certification against the science-based Climate Bonds Standard or a bespoke second-party opinion. The review/verification is carried out by a reputable science organisation/qualified consultancy firm

Sovereign Green Bond Issuance – Seven Steps

5. Issue the green bond

The usual steps for a conventional issuance will apply.

- a) Supporting materials to promote the transaction can include a green bond prospectus, an investor presentation and an FAQ on green bonds
- b) Additional marketing material can be developed to promote the issuance, showcasing the projects to be financed, the main elements of the green bond framework (eligible sectors, the guidelines/standards of reference, management of proceeds, reporting), and the alignment with the government strategy
- c) Follow the issuance process

6. Monitor and report

Reporting typically occurs at a minimum on an annual basis and includes a statement that the proceeds are being used for the eligible projects and assets identified.

- a) The reporting should occur based on what is stated in the green bond framework. It is an important part of the transparency and investor confidence of the green bond market



Sovereign Green Bond Issuance – Seven Steps

5. Repeat the process

Not all eligible expenditures may be included in a first green bond issuance. Once a green bond framework is setup, most issuers return to the market, revealing the benefits of labelling the issuance as 'Green'

- a) Some issuer opt for a programmatic approach, i.e. Issue green bonds on a periodic basis. The Climate Bonds Standard & Certification Scheme provides for programmatic certification, requiring one pre-issuance review and one annual post-issuance review for all bonds issued during the year.

Role of governments and regulators: global developments



- **Issue Sovereign green bonds**

- Already issued: France, Poland, Fiji, Nigeria
- Planned: Kenya, Sweden, Belgium, Luxembourg



- **Publish green bond guidelines or regulations**

- Regulations: CMA has adopted the Green Bonds Guidelines
- Guidelines: the Kenya Green Bond Guidelines have been incorporated into the NSE Listing Rules
- Listing requirements (Nairobi Stock Exchange): listing requirements for green bonds are aligned with CBI standards and Green Bond Principles



- **Strategic issuance from sub-sovereigns and development finance institutions**

- Cities/Municipalities/States: New York MTA, La Rioja (Argentina), Queensland (Australia), Cape Town (South Africa)
- Municipal banks: MuniFin (Finland), KommunInvest (Sweden)
- Development finance institutions: Korea Development Bank, Export Development Canada, BNDES (Brazil)



- **Incentives from central banks**

- Singapore, Malaysia



- **Collaboration across countries and regions**

- EU High-level Expert Group, Brazil & UK Green finance Initiatives, China & UK green finance initiatives



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- 8. SESSION SEVEN: THE KENYA GREEN BOND PROGRAMME**
9. SUMMARY
10. SESSION EIGHT: CASE STUDIES

Introduction:

In this section, the reader would learn about the following:

- The Kenya Green Bond Programme

The Kenya Green Bond Programme

- The Green Bonds Programme is a joint initiative of the Kenya Bankers Association, Nairobi Securities Exchange and Climate Bonds Initiative, supported by the FSD-A, FMO and IFC.
- The project aims to accelerate through the private sector the take-up of green bonds as a tool for Kenya to tap into international and domestic capital markets to finance green infrastructure projects
- The programme will support potential Kenyan green bond issuers to come to market, engage the institutional investment community, and develop cooperative mechanisms to support access to the green bond market for smaller banks and corporates that don't currently have access
- It will further support a national agenda that seeks to reinforce Kenya's role as a regional leader in the area of financial services as articulated in the Kenya Vision 2030 strategic plan and Kenya Green Economy Strategy and Implementation Plan (GESIP)

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Module Summary

With global Green Bonds issuance exceeding the half Trillion-Dollar mark at the end of 2018, Green Bonds as tool for financing infrastructure projects have definitely moved into the mainstream. It is worth noting that a large percentage of the issuance has been to refinance existing projects that have hitherto been reclassified as “Green” or eligible for green finance under the Green Bonds Principles or the Climate Bonds Standard.

However, the transition to a climate aligned economy, which will result in a more fundamental systemic impact, would require the development of a shared scientific understanding of what assets and projects qualify as green across all sectors.

Unlike regular bonds, Green Bonds and Green Labelling of assets, offer investors transparency which obliges issuers to disclose precisely what assets and projects will be financed with the proceeds from the Bond.

A further source of confidence for Green Bonds investors is the post-issuance requirements obliging issuer to report on how proceeds were allocated and the investment’s environmental impact enabling investors to evaluate the green performance of the bond.

Module Summary

Sector specific definition has also been helped by demonstration issuance and standards. With specific reference to the Kenya market, opportunities for green investments can be found across all sectors, including in low-carbon transportation solutions such as rail and metros; in the building sector, where the emphasis for energy efficiency must be more radical rather than incremental improvements, in the agriculture and in the water sector, with a focus being on climate adaptation.

The ultimate goal for Green Bonds is the rapid shift in capital flows and investments to projects that would not have happened in the absence of a green bond market. Whilst the large share of issuance to date has been in creating visibility of green, the next phase will be to impact the cost of capital and increase access to capital for issuers in emerging markets such as Kenya to facilitate a rapid increase in the volume of green assets and projects on the ground.

Given the urgency of addressing climate change, the public sector could reduce the cost of and improve access to capital for green to incentivise capital shifts to occur within investor's current financial model.

The Green Bonds market has created the foundations for both public and private sector to work together to shift capital at scale. However, the capital



Module Summary

The Green Bonds market has created the foundations for both public and private sector to work together to shift capital at scale. However, the capital shift will not occur through Green Bonds on its own but through being a catalyst for a wider green finance expansion.



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African Development Bank Case Study



AfDB's long-awaited AAA \$500m inaugural green bond is sold out

The African Development Bank (AfDB) issued a 3 year, USD500 million green bond in October 2013. The bond 10% over-subscribed by the close of the half-day sales window. Coupon was 0.75% - Yes, interest rates really are that low for AAA bonds

Proceeds of the bond went to finance low-carbon and climate resilient projects. These included "renewable energy generation, energy efficiency, vehicle energy efficiency fleet retrofit or urban transport modal change, biosphere conservation projects, solid waste management, fugitive emissions and carbon capture, urban development, and water supply and access

Social responsible investors bought 84% of the bonds. Buyers were 43% asset managers, 28% central banks and official institutions, 28% insurance companies and pension funds, and 1% retail and private banks. 52% went to the Americas, 39% to Europe, the Middle East & Africa (mainly Europe), and 9% to Asia

The 36 investors included the Third Swedish National Pension Fund, AP4, BlackRock, Calvert Investments, Nordea IM, Pictet AM, Praxis Intermediate Income Fund, State Street Global Advisors for their 'High Quality Green Bond



African Development Bank Case Study



AfDB issues SEK1bn (\$153m) green bond - 5yr, AAA - for African renewables, water, etc.

In February 2014, the African Development Bank tapped its Green Bond Framework to place SEK1 billion (\$153m) of five year, floating rate bonds with SPP, the wholly-owned Swedish Life Insurance and Asset Management company of Storebrand

Bond Proceeds went to eligible projects under to AfDB's Green Bond Framework: renewable energy power, biosphere conservation projects, water supply and access, solid waste management as well as energy efficiency projects.

They included:

- Africa's largest 160 MW Solar Power Plant, Ouarzate I, in Morocco
- Itezhi Tezhi 120MW Hydro Generation Project in Zambia
- ONEE Integrated 1100MW Wind/Hydro power plant in Morocco
- Eskom Sere 100 MW Wind Farm in South Africa
- Cabeólica 25.5 MW Wind power plant in Cape Verde



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TSKB Case Study



TSKB as a pioneering bank in sustainability, executed a land marking “Green / Sustainable Bond” issuance in the international capital markets

The deal is the first ever public benchmark Green / Sustainable Bond out of Turkey and CEEMEA region.

With the 300 million dollars of a size and 5 year tenor REGS/S only transaction

TSKB attracted 13 times demand than the issue size and received the largest ever order book for a RegS only transaction out of Turkey.

The proceeds is been used for private sector investments in renewable energy, energy efficiency, and other areas that reduce greenhouse gas emissions, as well as socially responsible investments such as healthcare, education, electricity transmission lines and ports

The investor base was 44% from UK, 39; 9% US; 8% Asia & Middle East

The capital was fully allocated in 7 months



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Axis Case Study



AXIS Bank: India's third largest commercial bank has issued its inaugural Climate Bonds certified green bond

Axis Bank issued USD 500m green bond in May 2016 (tenor 5 years) to fund renewable projects

The issuance is the biggest green bond issued by an Indian commercial bank to date and the first Indian green bond to be listed on the London Stock Exchange

The proceed was used to fund renewable projects:

- Renewable energy projects: solar, wind, small hydro
- Low carbon transport: electrified public transport and BRT systems
- Low carbon buildings: commercial buildings

Unilever Case Study



Unilever opens up Sterling green bonds with 4 Year, £250m (\$411m) "sustainability" bond for CO2 & water improvements in manufacturing plants

In March 2014, Unilever joined the green bonds market with a landmark Sterling 'Green Sustainability Bond linked to its "Sustainable Living Plan". The 4 year corporate bond, £250 million, 2% fixed rate.

There were more than 100 investors, mainly fund managers, pension funds and insurers, with a number of first-time buyers of Unilever bonds, attracted by the green aspect.

It's linked to projects that improve the energy and water efficiency in the company's internal operations, where the threshold for each project to be included is that it must reduce CO2 emissions or water use by 50% if a new project, or 30% if a retrofit, against a 2008 company baseline.

The bond was more than 3 times oversubscribed within 3 hours.



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Renovate America Case Study

Renovate America issues second green ABS (Asset Backed Security) with second review (\$217.5m, 25.5 yrs, 4.05%, AA

Renovate America tapped into the green market again, via a special purpose vehicle called Hero Funding Trust, with a second labeled green ABS of \$217.5m. The issue has a tenor of 25.5 years, fixed coupon of 4.05% and is rated AA by both Kroll and DBRS.

The deal is secured by 9,252 PACE loans levied against residential properties in 27 California counties. The PACE loans have on average around \$24,236 outstanding, pay a weighted-average annual interest rate of 7.94%, and at issuance had a weighted-average maturity is 184 months.

This gives you a flavor of these relatively small but long-term loans provided to residential property owners to improve the greenness of their homes.

Proceeds used to finance home improvement projects through the Home Energy Renovation Opportunity (HERO) program. These are either renewable energy or energy efficient projects

Renovate America also commits to impact reporting under various metrics including water savings, energy savings, GHG emission reduction, and



Apple Case Study



Apple Issues largest certified US corporate Green Bond (\$1.5bn, 7 yrs, 2.85% S/A, Aa1)

Apple dropped into the green bond market for the first time, as part of a larger \$12bn bond sale, the second largest bond market deal so far in 2016. The inaugural green bond of \$1.5bn has a 7-year tenor, semi-annual coupon of 2.85% and is rated Aa1 by Moody's.

Use of Proceeds: 'Reduce Impact on Climate Change' by financing projects that fall under Apple's eligibility criteria for renewable energy, green buildings and waste management.

Renewable energy projects include small scale solar and wind projects to power its main offices in Cupertino. Proceeds may also be used to finance energy storage for these renewable energy power sources to help provide a constant energy supply.

Green building projects span both building new green buildings and projects to improve energy efficiency or water efficiency in existing buildings.



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Apple Case Study



Apple Issues largest certified US corporate Green Bond (\$1.5bn, 7 yrs, 2.85% S/A, Aa1)

Apple leveraged both the LEED and BREEAM for the standard on its green buildings.

Projects to improve the energy efficiency of existing buildings include heating, ventilation, and air conditioning system upgrades, lighting retrofits (switching to LED lights for example), and the installation of energy monitors and controls to better manage energy use.

Waste and pollution management projects financed by the bond is to improve recycling and reduce landfill waste from its Cupertino head office operations. Apple also planned to use proceeds to change the materials in products from natural resource intensive to bio-based materials and recyclable materials.

Apple also committed to deliver updates on the allocation of proceeds and environmental impact of selected projects via the annual green bond report.



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10. RESOURCES

Resource

- **Aligning Kenya's Financial System with Inclusive Green Investment -**
https://wedocs.unep.org/bitstream/handle/20.500.11822/9858/-Aligning_Kenya's_Financial_System_with_Inclusive_Green_Growth-2015Aligning_Kenyas_Financial_System_with_Inclusive_Green_Growth.pdf?sequence=4&isAllowed=y
- **The Green Economy Strategy and Implementation Plan (GESIP -**
<https://www.kenyacic.org/news/green-economy-strategy-and-implementation-plan-gesip>
- **Aligning Kenya's Financial System with Sustainable Development -**
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Resource

- **Transitioning towards Green Growth -**
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- **The 7 Steps to Sovereign Issuance -**
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- **Green Bonds Super 7 Trends for 2018 -**
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