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Green Bonds

The Next Medium Term Note Program Product?

Bill Gilliland
June 2014

Introduction

- What are Green Bonds?
- Green Bond Principles
- History of Green Bonds
- New Era of Green Bonds
- Deals
- Why Issue Green Bonds?
- Assurance/Verification

Key Points

- Market evolving quickly.
- The first "labeled" green bond was issued in 2007.
- Began with multilateral agencies.
- First corporate (non-bank) bond issued in November 2013.
- Next wave was commercial banks.
- Now corporate issuers with their own green use of proceeds.

Key Points

- Corporate issues are shifting the market away from AAA rated bonds from multilateral development banks.
- Historical approach not model used by corporates.
- Terms lengthening.
- Pricing advantages? – short/longer term.
- "Green" standards developing – flexible/practical approaches taken.
- Green Bond Principles (GBP) - voluntary process guidelines.
- Dentons first Canadian law firm member.

What are Green Bonds?

Green Bond Principles.

- Green bonds enable capital-raising and investment for new and existing project with environmental benefits.
- Currently four types:
  - Green Use of Proceeds Bond.
  - Green Use of Proceeds Revenue Bond.
  - Green Project Bond.
  - Green Securitized Bond.
- Not a closed set.

What are Green Bonds?

- Green Use of Proceeds Bond:
  - A standard recourse-to-the-issuer debt obligation.
  - Proceeds moved to a sub-portfolio or otherwise tracked by the issuer.
  - Use of proceeds attested to by a formal internal process that will be linked to the issuer's lending and investment operations for projects.

What are Green Bonds? – Other Types

- Green Use of Proceeds Revenue Bond: a non-recourse-to-the-issuer debt obligation in which the credit exposure in the bond is to the pledged cash flows of the revenue streams, fees, taxes, etc., and the Use of Proceeds of the bond goes to related or unrelated Green Project(s). These proceeds shall be moved to a sub-portfolio or otherwise tracked by the issuer and attested to by a formal internal process that will be linked to the issuer's lending and investment operations for projects.

- Green Project Bond: a project bond for a single or multiple Green Project(s) for which the investor has direct exposure to the risk of the project(s) with or without potential recourse to the issuer.

- Green Securitized Bond: a bond collateralized by one or more specific projects, including but not limited to covered bonds, ABS, and other structures. The first source of repayment is generally the cash flows of the assets.

What are Green Bonds?

- Proceeds are exclusively used to finance approved environmental projects.

- Not general corporate purposes.

- Assurance/verification steps. Transparency to confirm funds are being used appropriately and that the supported projects are yielding the intended environmental benefits.

- Issuers of green bonds usually maintain this transparency through formal monitoring and verification by auditors and, where sustainability/greening is promised, environmental specialists.

- Monitoring can be conducted by the issuer of a bond, or a third-party.

What are Green Bonds? - Documentation

- General corporate obligations.
- No extra "green events of default" or covenants.
- No extra maintenance obligations.
- Standard trust indenture, prospectus supplements.
- Issued under MTN programs.
- "Green" components are outside bond documentation.
- Offering representations re: use of proceeds and reporting.

Climate Bond Initiative – A Certification Scheme

- The Climate Bonds Initiative ("CBI") is an investor-focused not-for-profit organization, promoting large-scale investments that will deliver a global low-carbon economy.
- Seeks to develop mechanisms to better align the interest of investors, industry and government so as to catalyze investments at a speed and scale sufficient to avoid dangerous climate change.
- The Certification Scheme allows investors, governments and other stakeholders to prioritize "low carbon" investments with confidence that the funds are being used to deliver a low-carbon economy.
- Pre-issue certification and verification of green criteria, rigid tracking requirements.

Green Bond Principles, 2014 – Voluntary Process Guidelines

- January 13, 2014.
- The Green Bond Principles (GBP) 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.
- No single gatekeeper.
- The GBP have four components:
  1. Use of Proceeds.
  2. Process for Project Evaluation and Selection.
  3. Management of Proceeds.
  4. Reporting.

Green Bond Principles, 2014 – Voluntary Process Guidelines

- The issuer of a Green Bond should outline the investment decision-making process it follows to determine the eligibility of an individual investment using Green Bond proceeds.
- Where applicable, the issuer should, as a first step, review the investments overall environmental profile.
- In all cases, the issuer should establish a well-defined process for determining how the investments fit within the eligible Green Project categories identified in the Use of Proceeds disclosure.
- If possible, issuer should work to establish impact objectives from the projects selected.
- The net proceeds of Green Bonds should be moved to a sub-portfolio or otherwise tracked by the issuer and Attested to by a formal internal process that will be linked to the issuer's lending and investment operations for projects.
- Depending on issuer's and investors' expectations, outside review of the internal tracking method may or may not be necessary.

Green Bond Principles - Voluntary Process Guidelines

- The GBP recognize several broad categories of potential eligible Green Projects for the Use of Proceeds including but not limited to:
  - Renewable energy.
  - Energy efficiency (including efficient buildings).
  - Sustainable waste management.
  - Sustainable land use (including sustainable forestry and agriculture).
  - Biodiversity conservation.
  - Clean transportation.
  - Clean water and/or drinking water.
- There is diversity of opinion on the definition of Green Projects; therefore it is not the intent of the GBP to opine on the eligible Green Project categories. The GBP recommend issuers communicate their Use of Proceeds categories clearly so that investors can determine the bond's consistency with their investment strategy.

Green Bond Principles, 2014 – Voluntary Process Guidelines

Reporting

- In addition to reporting on the Use of Proceeds and the eligible investments for unallocated proceeds, issuers should report at least annually, if not semi-annually, via newsletters, website updates or filed financial reports on the specific investments made from the Green Bond proceeds, detailing wherever possible the specific project and the dollars invested in the project.

- The GBP recommend the use of quantitative and/or qualitative performance indicates which measure, where feasible, the impact of the specific investments (e,g, reductions in greenhouse gas emissions, number of people provided with access to clean power or clean water, or avoided vehicle miles travelled, etc.).

Green Bond Principles, 2014 – Voluntary Process Guidelines

Assurance

- Attention will be paid to the accuracy and integrity of sustainability information and data whose disclosure is recommended by the GBP and which will be reported by issuers to stakeholders and used for strategic decision making by investors.

Green Bond Principles, 2014 – Voluntary Process Guidelines

- There are also several levels of independent assurance that can be provided to the market. Such guidance and assurance might include, in order of increasing rigor:
  - (i) Second party consultation: for example, an issuer ("first party") can hire an expert consultant ("second party") with climate expertise to help in the establishment of a Green Bond's eligible Green Project categories. The issuer may choose to keep the recommendations of the consultant private.
  - (ii) Publicly available reviews and audits: if an expert consultant or auditor and an issuer so choose, a consultant's recommendations or an auditor's evaluation may be put in the public domain by the issuer.
  - (iii) Third party, independent verification/certification: at the moment, at least one or more standards intended for use by accredited third parties to certify Green Bonds are in development. The GBP are supportive of certification of Green Bonds against fully developed and vetted standards. It is also the intention of the GB to allow for third party evaluation/audit of conformance with the guidelines recommended herein. (Further review of 2014 will refine this intended use and related communications.)

Market for Green Bonds – History – the Old Era

- To October 31, 2013, value of the markets estimated between $12 billion and $346 billion.
- $12 billion of "green labeled" bonds.

Market for Green Bonds – History – the Old Era

Issued Labeled Green Bonds (2007 – October 2013)		
Issuing Institution	**# of Issues**	**Amount Issued (US$, millions)**
World Bank	46	$3,844
European Investment Bank	12	$3,,479
International Finance Corp.	8	$2,001
Kommunalbanken AS	8	$175
African Development Bank	7	$838
European Bank for Reconstruction & Development	7	$376
Asian Development Bank	6	$794
Nordic Investment Bank	4	$412
Export-Import Bank of Korea	1	$500

Market for Green Bonds – History – the Old Era

- These bonds are primarily issued in major currencies by AAA international financing institutions.
- The majority of issuers put auditing and monitoring structures in place to ensure proceeds were ring-fenced.
- Critical in analyzing what market requires for verification/assurance.
- New "corporate" deals involve less of both.
- Labeled green bonds by multi-lateral institutions tended to have terms in the 3 – 6 year range.
- Newer corporate deals tend to have longer terms.

Market for Climate Themed Bonds - CBI

- CBI estimate $346 billion of climate themed bonds outstanding (to October 31, 2013).
- Proceeds must align with their criteria for a low carbon, climate-resilient economy, but not specifically labeled as green bonds.
- Bonds not required to be monitored, funds to be ring-fenced, or bonds to be tied to the financing of certain projects.
- Globally – 25% increase in issuances from 2011 to 2012.

Market for Green Bonds

- 70% of these explicitly or implicitly backed by government.
- Largest markets geographically – China (37%), UK, France.
- Largest market sectors – low carbon transport ($236), energy ($41), climate finance ($32).
- Others – buildings and industry, waste and pollution control, agriculture and forestry.

Market for Green Bonds – S&P

- Overall value of green bonds issued in 2013 by corporates and public banks was $11.4 billion.
- Value of corporate green bonds expected to grow to $20 billion in 2014 ($2.1 billion in 2013).
- CBI recently increased its estimate for green bonds issues in 2014 from $20 billion to $40 billion.
- 2014 Q1 - $8.997 billion.
  - Corporate issues - $4.03 billion.
  - Development banks - $4.9 billion.

Market for Climate Themed Bonds – Canada

- Canada - $5.7 billion (to October 31, 2013).
- Transport – 68%.
- Energy – 28%.
- Agriculture and forestry – 4%.

Market for Climate Themed Bonds – Canada

Sample of Canadian Issuers	Theme
Canadian National Rail	Transport
Comber Wind Project	Energy
Canadian Hydro Developers	Energy
L'Erable Wind Project	Energy
Boralex	Energy
Run of River Power	Energy
St. Clair Holding	Energy
Innergex Renewable	Energy
NGP Blue Mountain	Energy
New Flyer Industries	Transport
Sprott Power Corp.	Energy
Millar Western Forest Products	Ag & Forestry

New Era Green Bonds – Private Bank Issues

- Credit Agricole – 9 issues January 2013 – December 2013 (3 – 7 year term).
- Bank of America – November 2013 (3 year term).
- NRW Bank – November 2013 (4 year term).
- TD Bank – March 2014 (3 year term).
- Export Development Corporation – January 2014 (3 year term).
- Variety of currencies.

TD Bank – March 2014

- $500 million.
- 3 year term.
- Private placement.
- No up-front external review of green credentials, and very broad use of proceeds criteria.

TD Bank - March 2014 – Use of Proceeds

- The focus of the investments will be on projects that contribute to the low carbon economy through:

  1. Renewable and low carbon energy and related infrastructure, such as hydroelectric, wind, solar and geothermal.
  2. Energy efficiency and management, with a focus on green buildings.
  3. Green infrastructure and sustainable land use management. This category of projects will include municipal and regional infrastructure projects that contribute to energy reduction as well as projects that involve certified sustainable agricultural and forestry practices.

- The TD Green Bond will fund new projects or refinance continuing business operations.

- Pending the allocation to finance the above projects, the proceeds of the TD Green Bond will be segregated and invested in short term financial instruments. Details of the allocation of proceeds will be reported on annually and assured by an independent third party.

TD Bank – March 2014 – Use of Proceeds

- TD Bank have subsequently confirmed that gas and biofuel are not included.

- TD Bank subsequently confirmed that fossil fuels are generally not included.

Export Development Corporation – January 2014

- $300 million.
- 3 year term.
- Prospectus supplement, standard trust indenture.
- CICERO endorsed EDC's green bond framework that sets out eligible transactions and provides guidance on internal selection process.

Export Development Corporation – January 2014

Use of Proceeds:

- Upon issuance, an amount equal to the net proceeds of this inaugural issue of the bonds (which proceeds may be converted into other currencies) will be credited by EDC to an account that will support EDC's existing and future lending operations for Eligible Transactions (as defined below). After issuance of the inaugural bonds, the net proceeds will be deducted from the account and added to EDC's lending pool for disbursements made from that pool in respect of Eligible Transactions.
- "Eligible Transactions" means all transactions (loans) funded in whole or in part by EDC in support of goods, services or projects that are beneficial to the environment, as determined by EDC.

Export Development Corporation – January 2014

- Eligible Transactions will include, without limitation, those that are aimed at the preservation, protection or remediation of air, water or soil or the mitigation of climate change. For example:
  1. Water Management.
  2. Remediation & Soil Treatment.
  3. Recycling & Recovery.
  4. Water Management.
  5. Sustainable Forests Management.
  6. Sustainable Agriculture Management.
  7. Renewable Energy.
  8. Biofuel & Bioenergy.
  9. Smart Grid Energy Infrastructure.
  10. Alternative Energy Transportation and Public Ground Transport.
  11. Industrial Process Improvements.

Green Bonds – New Era - Corporate (non-bank) Issues since November 1, 2013

- Electricite de France (November 2013).
- Vasakronan AB (November 2013).
- Unibail-Rodamco SE (February 2014).
- Vasakronan AB (March 2014).
- Svenska Cellulosa AB (March 2014).
- Unilever (March 2014).
- Toyota (March 2014).
- Skanska (April 2014).
- Iberdrola (April 2014).
- GDF Suez (May 2014).
- Regency Centers, L.P. (May 2014).
- Vornado Realty L.P. (June 2014).
- Variety of local government agencies.

Electricite de France (EDF) – November 2013

- €1.4 billion (Euros).
- 7 year term.
- Issued under EDF's MTN program.
- Net proceeds to a sub-portfolio of issuer to be used for financing green projects – renewable energy power plants in Europe and North America - either its own or third parties'.

Vasakronan AB – November 2013

- 200 million SEK.
- 3 year term.
- Issued under Vasakronan's MTN program.
- Use of proceeds for construction and renovation of real estate portfolio with high environmental certification requirements.
- CICERO provided framework for selection of green projects.

Unibail – Rodamco SE – February 2014

- 1.025 billion Euros.
- 10 year term.
- Energy efficient real estate portfolio.

Vasakronan AB – March 2014

- 160 million SEK.
- 5 year term.
- Use of proceeds to green its property portfolio.

Svenska Cellulosa AB - March, 2014

- 1.5 billion SEK.
- 5 year term.
- MTN program.
- Use of proceeds – renewable energy and energy efficiency as determined by SCA.
- List of Eligible Projects sectors:
  - Renewable energy.
    - Wind power.
    - Geothermal.
    - Biomass boilers, sludge incinerators and combined heat and power production (CHP).
  - Fuel-switching from carbon-intensive fuels to biofuels.
  - Biofuel from forest waste.
  - Energy efficiency.
    - Energy savings according to SCA ESAVE programme (including replacements of pumps, compressors, fans or lighting).
    - Investments in production technologies and manufacturing process.
  - Water and waste management.
  - Sustainable forestry.
  - CICERO second opinion.

Unilever – March 2014

- £250 million (pounds).
- 5 year term.
- Use of Proceeds - to fund a number of new factories.
- DNV GL, an environmental consultancy, developed green bond sustainability framework based on Green Bond Principles.
- Capital expenditures to cut in half the amount of waste, water usage and greenhouse gas emissions of existing factories.
- DNV GL is to vet the projects annually against the pledged criteria.
- Reportedly 3 times over-subscribed.

Toyota - March, 2014

- $1.75 billion.
- 1 – 6 year terms.
- Prospectus supplement to base prospectus.
- Toyota used securitizations of car leases to finance new Toyota and Lexus gas, electric, hybrid or alternative fuel power train vehicles (low emission vehicles).

Skanska – April 2014

- $130.6 million.
- 5 year bond.
- Fund green commercial property portfolio in Sweden – existing and under construction LEED (minimum certification "gold") and 25% less energy usage than required by applicable codes and regulations.
- Skanska has devised a Green Bond Framework, endorsed by the Centre of International Climate and Environmental Research (CICERO), an independent research centre associated with the University of Oslo, Norway.

Iberdrola - April, 2014

- €750 million (Euros).
- 8 year term.
- Use of Proceeds – renewable energy production, electric power distribution and transmission networks that contribute to connect renewable energy production to network and improve networks in terms of energy demand-side management, energy efficiency and access to electricity.

GDF Suez – May 2014

- €2.5 billion.
- 6 – 12 years term.
- Use of Proceeds - "projects that contribute to fighting climate change".
- Renewable non-fossil energy technologies, mainly wind and solar but also including geothermal and biomass and energy efficiency projects – projects that contribute to a reduction of energy consumption per unit of output, e.g. heating and cooling network, optimization of building or plant efficiency, systems for energy management (smart monitoring), co-generation, combined heat and power production.

GDF Suez – May 2014

- Does not include fossil fuel or nuclear facilities.
- Vigeo, the ethical rating agency based in Paris, has validated the criteria GDF uses to select eligible projects.
- Entire proceeds will be held in its treasury in money market investments until they can be disbursed on green projects.
- The use of proceeds is checked by GDF's auditor, but the actual compliance with environmental targets is up to GDF and will be reported on by itself.

Regency Centers, L.P. – May 2014

- $250 million.
- 10 year term.
- Prospectus supplement, standard trust indenture.
- The net proceeds of the sale of the notes will be used to fund, in whole or in part, Eligible Green Projects (as defined herein), including the acquisition, construction, development or re-development of such projects.
- "Eligible Green Projects" means (i) new or ongoing projects (including new development, expansions and/or property renovations) and/or (ii) existing assets under management by Regency Centers or any of its subsidiaries, which have received, or are expected to receive, any LEED (described below) certification rating level (Certified, Silver, Gold or Platinum) or LEED equivalent certification.
- Leadership in Energy and Environmental Design, or LEED, is a voluntary, third party building certification process developed by the U.S. Green Building Council.
- No significant up front verification efforts.

Regency Centers, L.P. – May 2014

- Pending the allocation of the net proceeds to Eligible Green Projects, the net proceeds will be used to repay amounts outstanding under our line of credit.
- During the term of the notes, we will publish periodic updates on a dedicated page of Regency Centers website (www.regencycenters.com) (which will be available to investors within one year from the date of issuance of the notes) detailing, at a minimum, the allocation of the net proceeds of the notes to Eligible Green Projects, together with key features and the current LEED certification status or LEED equivalent certification status of the Eligible Green Projects funded.
- Our updates will be accompanied by (i) an assertion by management that the net proceeds of this offering are invested in qualifying Eligible Green Projects, and (ii) a report from an independent accountant in respect of the independent accountant's examination of management's assertion conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants.

Vornado Realty L.P. – June 2014

- $450 million.
- 5 year term.
- Prospectus supplement, standard indenture.
- The net proceeds of this offering of the notes will be used to fund, in whole or in part, Eligible Green Projects, including the development and redevelopment of such projects.
- "Eligible Green Projects" means (i) all new building developments which have received, or are expected to receive, a LEED Silver, Gold or Platinum certification; (ii) all existing building redevelopments which have received, or are expected to receive, any LEED certification level (Certified, Silver, Gold or Platinum); (iii) all tenant improvement projects funded by us that receive, or are expected to receive, any LEED certification level (Certified, Silver, Gold or Platinum); (iv) all capital projects, executed in a manner which is consistent with Vornado's sustainability policies and which enhance energy efficiency, at buildings which currently are LEED certified at any level; and (v) all capital projects at buildings which are not yet certified by LEED but which improve, based on a third-party engineering study, the operating and energy efficiency of a building by a meaningful amount.

Vornado Realty L.P. – June 2014

- As long as the notes are outstanding, our internal records will show the allocation of the net proceeds of this offering to Eligible Green Projects.
- During the term of the notes, we will publish annual updates on a dedicated page of the website of Vornado Realty Trust (which will be available to investors within one year from the date of issuance of the notes) detailing, at a minimum, the allocation of the net proceeds of the notes to Eligible Green Projects together with key features and the current LEED certification status or LEED equivalent certification status of the eligible Green Projects funded. Our updates will be accompanied by (i) an assertion by management that the net proceeds of this offering were invested in qualifying Eligible Green Projects, and (ii) a report from an independent accountant in respect of the independent accountant's examination of management's assertion conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants.
- No significant party up front verification.
- Note removal of simple LEED certification on new buildings from use of proceeds.

Announced Planned Issues

- Government of Ontario.
- Pemex.

Why Issue Green Bonds? – Enhance Environmental Brand

- GDF Suez - "Is that it is equally a tool to complement our strategy, which includes being the leader for Europe in the energy transition, and will be done through this type of projects."
- Green ROI.
- Environmental opinions or third party verification.

Why Issue Green Bonds? – Attract New Investors

- TD Bank - Attract new investors - long term this will lower prices - either by bigger demand or same amount for lower price.
- TD Bank had 40 purchasers, 12 new to TD. Of the 12 one would not have invested if not a green bid, other 11 tucked investment into sub portfolios devoted to sustainable in investments.
- GDF Suez – "We noticed clearly that there is more and more appetite for this type of transaction, so we are diversifying our investor base."
- Vasakronan – Diversify borrowings "which over time, will result in lower borrowing costs".

Why Issue Green Bonds? - Pricing

- TD Bank does not think pricing of its green bonds influenced by being "green".
- TD Bank looking for longer term pricing advantage in green market from broader investor base.
- Observers looking at Regency and Vornado deals and seeing price advantage.
- Vornado – negative new issue premium – 10bps – 15 bps.
- Global Capital – "a degree of negative new issue premium that is hard to imagine being possible without the deal's green allure".
- Fitch – Regency REIT – issue had more favorable pricing from new investors.

Why Issue Green Bonds? – Pricing

- Maintain pricing as defensive measure in sectors facing environmental challenges.
- e.g. Barclays downgrade of US power utility bonds due to solar generation.
- e.g. US GHG emissions reduction requirements for coal power producers.

Why Issue Green Bonds? – Other Reasons

- Green bonds can fit into existing investor portfolios due to their similarity to existing bonds.
- Green attributes – slight competitive advantage most investors will choose.
- Driving management improvement, a green "rating", operating efficiencies, reducing contingent liabilities.

Verification/Assurance

- CBI vs. GBP evolution.
- Current man environmental consultancies:
  - CICERO.
  - Vigeo.
  - DNV GL.

Verification/Assurance

What do they do?

- Advice re: developing criteria for use of proceeds – are they green? Or issuer can do it itself?
- Initial verification of the bond issue – confirm that assets or projects meet criteria established for use of proceeds.
- Tracing use of proceeds – ensure a process is in place.
- Annual verification – reporting to ensure that the projects comply with criteria.
- Road show attendance by verifiers.
- Pricing/time a function of criteria, number of projects, road show attendance, sustainability.
- Role of auditors.
- Alternative standards. e.g. LEED, others?

Verification/Assurance

- There are two types of assurance available in the green bond space:
  - Third-party verification against the Climate Bonds Standard.
  - Second-party opinions that do not involve a standard and instead rely on the credentials of the institution issuing the opinion to provide integrity to the opinion.

Verification/Assurance

- Recently the market has become less focused on the third-party approach and more on bespoke second-party opinions, which can go beyond "green" and into sustainability more broadly.
- The publication of the GBPs has helped provide a more robust assurance environment by defining a set of guidelines for issuers and investors which, while not being a standard, nonetheless provide guidance for giving an "opinion".
- The second-party opinion is especially important to socially responsible investors:
  - When the bond issuer is not a large well-known institution with transparent environmental, social and governance credentials;
  - When the activities being financed are not obviously "green" and, hence, require additional scrutiny and performance indicators; and
  - When the issuer is pureplay "green" but is issuing a corporate bond and investors would like to know that their funds are deployed in projects and not for general corporate purposes.
  - Not always significant assurance requirements.

Questions and Answers

Bill Gilliland

bill.gilliland@dentons.com
403.268.6826