Green Bonds

January 2017
Introduction to Green Bonds

IFC’s Green Bonds Experience

Investment Partnership Proposal

Q&A
Green Bonds are a subcategory of Socially Responsible (SRI) Bonds

- Proceeds from SRI bonds are tied to "socially responsible" investments such as social, development, environment and governance needs

- Proceeds raised from Green Bonds target climate friendly projects and environmental sustainability purposes
Types of Green Bonds

Green Use of Proceeds Bond

Green Use of Proceeds Revenue Bond

Green Project Bond

Green Securitized Bond
Why Green Bonds are needed?

- To meet investor demand
- To diversify issuer investor base
- To finance climate needs
- To enhance awareness of environmental challenges
Volume in 2016 was $88 billion
Almost $50 billion of green bonds were issued in 2015, up from $39 billion in 2014

Source: Bloomberg, J.P. Morgan as of December 31, 2016. JPM data includes Green, Social, and Sustainable Bonds
What can Green Bonds finance?

There are several sets of criteria defining eligible Green Projects in the market that can be used as a guide.

The Green Bond Principles explicitly recognize several broad categories of potential eligible Green Projects including:

- Renewable energy
- Energy efficiency (including efficient buildings)
- Sustainable waste management
- Sustainable land use (including sustainable forestry and agriculture)
- Biodiversity conservation
- Clean transportation
- Sustainable water management (including clean and/or drinking water)
- Climate change adaptation
Who issues Green Bonds?

- Multilateral development banks
- Municipalities
- Corporates
- Utility providers
- Financial institutions
Who buys Green Bonds?

- Fixed income investors who have a dedicated SRI/Green Portfolio or others with an interest in environmental sustainability purchase the bonds from a general investment fund.

- An increasing number of investors have begun to embed ESG (Environmental Social Governance) into their investment decisions.
Other important players

- **The Green Bond Principles (GBP):** are voluntary process guidelines that call for transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond in four components:
  1. Use of Proceeds
  2. Process for Project Evaluation and Selection
  3. Management of Proceeds
  4. Reporting

  *As of June 2016, the GBP Executive Committee has a total of 24 members reflecting a representative group of: 8 Investors, 8 Issuers including IFC and 8 Underwriters*

- **3rd Party Opinion providers:** Agencies that verify the eligible projects criteria and assist in setting up a project selection and reporting process or audit the program
IFC’S GREEN BOND EXPERIENCE
Set up of IFC’s Green Bond program

1. Established a criteria for use of proceeds
2. Consulted a third party for an opinion/verification of criteria
3. Outlined an internal process for project selection
4. Set up a system to segregate and manage the proceeds separate from the liquidity pool
5. Created controls for transparency and assurance
6. Reporting the impact of projects funded to investors
IFC’s Segregation of Green Bond Proceeds

IFC’s Green Bond Experience
**Context**: IFC has played a pioneering role in creating investment opportunities which support climate change-related projects.

**Objective**: The Green Bond program of IFC supports private sector investments in transition to low-carbon and climate resilient development and growth in client countries.

All eligible IFC investments meet the Green Bond Principles criteria and are consistent with IFC’s Sustainability Framework (1). All projects have undergone a rigorous ESG due diligence process and are subject to ongoing monitoring and supervision.

**Issuance**: IFC’s Green Bond program was launched in 2010 and has raised about USD 5.6 billion to date, including:

- the market’s first benchmark-sized green bonds issued in 2013 and a recent 10-year benchmark
- the first US focused retail green bond program
- issues in EM currencies such as CNH, ZAR, INR

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(1) This includes the Performance Standards and World Bank Group EHS Guidelines, IFC’s Corporate Governance Framework and disclosure requirements of the IFC Access to Information Policy.
• **Balance**: IFC enjoyed record issuance in FY16. The total outstanding Green Bond volume was approximately USD 3.0 billion as of FY16 end (June 30, 2016)

• **Debuts**: For the first time, IFC issued Green Bonds denominated in Indian rupee and Mexican peso. Also, IFC debuted with its first domestic green bond issuance in South Africa

• **Recent updates**: In March 2016, IFC issued its longest 10-year green benchmark raising USD 700 million, which was subsequently upsized to USD 1.2 billion in July 2016. The bond enjoyed very strong investor interest

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**Green Bond issuance in FY16**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Volume</strong></td>
<td>USD 1.4 billion</td>
</tr>
<tr>
<td><strong>No. of issues</strong></td>
<td>23</td>
</tr>
<tr>
<td><strong>Weighted average life</strong></td>
<td>6.9 years</td>
</tr>
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</table>

**Green Bond currencies in FY16**

- USD 87%
- ZAR 5%
- INR 4%
- MXN 2%
- BRL 0.1%
- TRY 1%
- NZD 1%
IFC issues green bonds in both public and private placement formats

<table>
<thead>
<tr>
<th>Public Transactions</th>
<th>Private Placements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Issuing public deals create a <strong>crowding in</strong> effect and heightened socially responsible investing (“SRI”) awareness</td>
<td>• Private placements allow for <strong>customization</strong></td>
</tr>
<tr>
<td>• Eligible for investors with large minimum deal sizes</td>
<td>• Currencies</td>
</tr>
<tr>
<td>• Index eligible</td>
<td>• Tenor flexibility</td>
</tr>
<tr>
<td>• Large liquid transactions facilitate secondary trading</td>
<td>• Floating rate index flexibility</td>
</tr>
<tr>
<td></td>
<td>• Potential for structure</td>
</tr>
<tr>
<td></td>
<td>• Buy and hold investments</td>
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</tbody>
</table>
IFC issued the first green offshore rupee bond ("Green Masala Bond") in August 2015 for INR 3.15Bn ($50mm equiv.) with a tenor of five years and a coupon 6.45%.

- **First green offshore INR bond** issuance to fund an investment in a corporate green bond.
- **Proceeds** of the Green Masala Bond were invested in a green onshore INR bond issued by Yes Bank.
- A strong signal of **support by potential investors** who are looking for diversification into emerging markets.
- IFC also **shared its experience and expertise** in the Green Bond market, reviewing Yes bank’s pipeline of green investment, IFC’s climate definitions and helping draft “Use of Proceeds Language” and providing impact reporting tool and training.
- The eventual deployment was utilized in **renewable energy and energy efficiency** projects mainly in solar and wind sector.
- The bond was subscribed to by **8 Asian and European investors**.
- The green Masala bonds were **listed** on the London Stock Exchange.
- Green Masala bond demonstrates the powerful role of capital markets in **mobilizing** savings for climate finance.
Scaling solar capacity in India

- India has an ambitious goal to reach 200 GW of solar capacity by 2022, requiring $100 billion in new investments. Azure Power, the leading provider of solar photovoltaic energy technology in India, is actively contributing to this goal by scaling solar capacity at three of its plants by up to 225 GWh per year.

- The increase in production capacity is estimated to cost around $147 million, $31 million of which derives from an IFC senior loan and syndication of parallel loans of up to $80 million. The long-term nature of IFC’s financing package matches the Azure solar plants’ longevity, ensuring proper financing for years to come.

- As a result, the project will help avoid greenhouse gas emissions, reducing approximately 181,895 tons of carbon dioxide per year.

Improving urban mobility in Turkey

- Istanbul, the largest municipality in Turkey, has thriving transport needs and is looking to expand its vital public transport system. The Metropolitan Municipality of Istanbul will construct the 5.3 kilometer Kabatas-Mediciyekoy metro line and three additional stations, establishing a vital east-west public transit axis.

- With the total estimated cost of EUR 369 million, finding the necessary long-term financing to complete the investment was key. IFC is providing considerable financial support, contributing up to EUR 110 million.

- The project will improve urban mobility and connectivity for the city’s 15 million population, providing an attractive alternative to the congested urban road network. Furthermore, the project will achieve significant reductions in carbon dioxide emissions.
Distribution: IFC Green Bond vs IFC Classic Bond

USD 3.0 billion 5-year
(issued July 2014)

- EMEA 47%
- Americas 21%
- Asia 32%
- AM's 22%
- CB/OI 36%
- Banks / corporates 43%

Combined USD 2 billion 3-year Green Bonds
(issued 2013)

- EMEA 37%
- Americas 57%
- Banks 10%
- AM's 26%
- CB 24%
- Official Institution 22%
- Corporate 12%
- Insurance 6%
- Asia 6%
Spread Comparison: IFC Green Bond vs Classic Bond
FY16 Green Bond Eligible Projects:

- Commitments to 35 new projects across 22 countries for close to USD 1 billion
- Disbursements of USD 754 million

Green Bond Eligible Portfolio Committed in FY16 and FY15: Impact Indicators

<table>
<thead>
<tr>
<th>Sector</th>
<th>No. of projects</th>
<th>Climate Loan Committed</th>
<th>Annual energy produced</th>
<th>Annual energy savings</th>
<th>Renewable energy capacity constructed/rehabilitated</th>
<th>Annual GHG emissions reduced/ Avoided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar Energy</td>
<td>21</td>
<td>394</td>
<td>1,925,596</td>
<td>N/A</td>
<td>855</td>
<td>1,180,683</td>
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<tr>
<td>Wind Energy</td>
<td>8</td>
<td>264</td>
<td>1,911,076</td>
<td>N/A</td>
<td>823</td>
<td>1,112,877</td>
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<tr>
<td>Hydro Energy</td>
<td>3</td>
<td>82</td>
<td>665,333</td>
<td>N/A</td>
<td>156</td>
<td>345,129</td>
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<td>Green Buildings</td>
<td>16</td>
<td>500</td>
<td>4,809</td>
<td>72,467,798</td>
<td>4</td>
<td>45,843</td>
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<tr>
<td>Green Banking</td>
<td>15</td>
<td>592</td>
<td>IFC methodology is only for GHG calculation</td>
<td>829,384</td>
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<tr>
<td>Agribusiness</td>
<td>4</td>
<td>63</td>
<td>IFC methodology is only for GHG calculation</td>
<td>81,305</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>3</td>
<td>91</td>
<td></td>
<td></td>
<td>No IFC methodology exists for such impact calculation</td>
<td>155,317</td>
</tr>
<tr>
<td>Industrial Energy</td>
<td>3</td>
<td>118</td>
<td>N/A</td>
<td>450,238,615</td>
<td>N/A</td>
<td>155,317</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>73</strong></td>
<td><strong>2,103</strong></td>
<td><strong>4,506,814</strong></td>
<td><strong>522,706,413</strong></td>
<td><strong>1,838</strong></td>
<td><strong>3,750,538</strong></td>
</tr>
</tbody>
</table>
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