Innovative Financing Models

RE-INVEST
1st RENEWABLE ENERGY GLOBAL INVESTORS MEET & EXPO
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International Finance Corporation
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Debt Financing for RE target could prove challenging without the domestic Bond Market…

2022 RE objective = 160 GW vs ~25 GW today

Borrowing needs are ~ US$ 105 billion total
(US$1.1 per watt x 135 GW x 70%)
equivalent to ~ US$ 15 billion per year

? Green bonds

<u>Domestic sources</u>: Banks + NBFC
Loan Book ~ US$ 1 trillion, including ~ US$ 85b in energy (8%)
(source: RBI, as of Oct. 2014)

<u>External sources</u>:
Room to lend but hedging costs and tenor constraints for most commercial banks

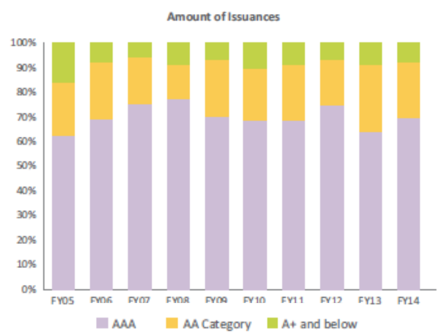
<u>Domestic bond market</u>
Outstanding bonds ~ US$ 1 trillion, including
~ US$ 240b in corporate bonds
~ US$ 50 b corporate bond issued in 2014
(source: CRISIL, as of March 2014)

But RE projects have not been able to tap the bond market

- **Issue # 1 is risk appetite from institutional investors**
  - Operating RE projects' credit risk is typically within the BBB rating band
  - Most of the bond issuances are rated AA or higher

Need for Credit Enhancement

Can be achieved through combination of portfolio diversification and guarantee or subordinated bonds



Source: CRISIL

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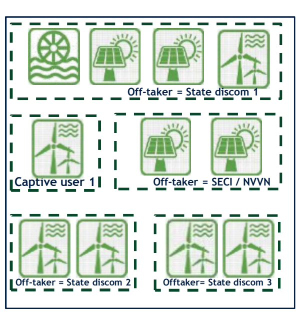
A possible solution could be the Securitization of Project Finance Loans – GREEN BOND

Investors		The Issuer		Loan portfolio
Class A bonds Class B bonds - - Junior bonds	Bond proceed → ← Debt service		Bond proceed → ← Debt service	Project Finance 1 Project Finance 2 Project Finance 3 - - Project Finance n

1. The issuer will issue multiple classes of notes. Credit profile of the senior tranches is enhanced through the provision of a guarantee or creation of subordinated tranche(s). The junior tranches sustain the risk of payment delays and credit losses first in order to make debt tranches less credit-risky. It receives whatever cash flows are left after the satisfaction of senior tranche claims
2. Issuer provides or acquire debt of operating renewable energy projects. Ideally, the project portfolio is diversified in terms of geography, technology, off-taker and company

Assets



Liabilities

Liabilities	
AAA Rated Bonds	Coupon rate < 9%
AA Rated Bonds	Coupon rate < 10%
Mezzanine Bonds	
Junior Bonds / Equity	

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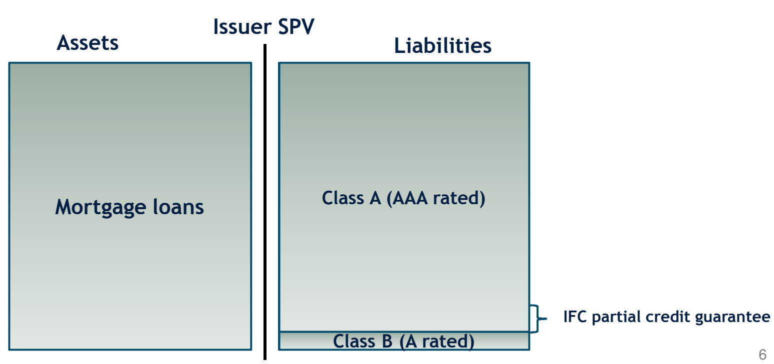
Alternative identified Green Bond models

	1	2	3
Type of issuer	**Issuer owned by a RE Developer**	**Infrastructure Debt Fund – Non-Banking Financial Company (IDF-NBFC)**	**Trust**
Main characteristics	• One of the group companies issues the bonds and on-lend to the project SPVs via NCD or shareholder loans	• Infrastructure Finance Companies (IFCs) needed as sponsor • Invest in projects with at least one year of satisfactory commercial operation	• Trust issues various classes of Pass Through Certificates to acquires loan portfolio from bank / NBFC • Often used for securitization of mortgages /
Concerns	• Limited to large players • Reduced portfolio diversification / granularity • Insurance companies are not allowed to invest in Private Limited Companies (conversion to Public Limited Companies requires important changes in corporate governance) • Existence of legacy liabilities (ej: EPC warranties) might affect rating of bonds • Could be considered as Non Bank Financial Institution ("NBFC") if issuer has no operating assets	• IDF-NBFCs need to enter into Tripartite Agreements between the Concessionaire, the Project Authority and IDF-NBFC in which the Project Authority guarantees the bond in case of termination of the concession => Not applicable to RE projects • Regulated as NBFC with capital adequacy requirements, maximum group exposure, etc.	• Loans must have been booked first by a bank / NBFC and be held for a minimum amount of time • Each loans might have a different structure and usually have floating rates • Foreign investors not allowed to invest in Trusts
Potential improvement?	• IRDA and PFRDA to authorize investment in Pvt Ltd Cie • Allow pure Infra Holdco to issue bond without NBFC tag	• Remove need for Tripartite agreement • Relax equity and group exposure requirements	• FPI & others allowed to invest in trust • Allow trusts to replace existing loans with new debt instruments

Example – Mortgage Securitization in Colombia

- ✓ Titularizadora Colombiana was incorporated in 2001 with the objective of promoting mortgage assets securitizations.
- ✓ IFC had a 21.25% stake in the company. IFC also provided a US$100mn local currency facility to support the purchase of mortgage backed securities arranged by the company
- ✓ The first issue amounted to US$210mn, including 97% of AAA rated bond and 3% of A rated subordinated bonds. IFC's credit enhancement was in the form of a US$2.2mn partial credit guarantee. Six additional issues were later made with a similar structure and IFC support.
- ✓ Titularizadora has since arranged a total of 42 securitizations for about US$10 billion



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