



# Forest Carbon Partnership Facility

## Options for Addressing Financing Gap of ER Programs Bond

Thirteenth Meeting of the Carbon Fund (CF13)  
Brussels, Belgium  
October 13-16, 2015

# Outline of Presentation

- The Financing Gap in REDD+ Programs
  - Investment phase
- Options for addressing financing gap of REDD+ Programs (presented at CF12)
  - Advance payment
  - Loan/credit/grant
  - Guarantee (elaborated at this CF13 meeting)
  - Bond (elaborated at this CF13 meeting)
    - Bilateral funding
    - REDD Country's own resources
    - Other

# Financing Gap in ER Programs

- Results-based finance is available downstream and is only accessible for verified emission reductions during later part of an ER program.
- Lack of finance for investments (“missing middle”) to achieve ER Program targets is a major risk to achieving the results of ER programs and consequently the objectives of the Carbon Fund.
- Available public finance (e.g., Forest Investment Program (FIP)) only meets partial investment needs of ER programs.
- Preliminary assessment of ER-PINs indicates that the majority of ER programs do not have adequate finance for implementation.
- Need to consider multiple options to address financing gap of ER Programs.
- At CF12 Participants Committee meeting, the FMT presented an overview of selected financing options for addressing the financing gap of ER Programs.
- Some options are elaborated at this CF13 meeting to share progress on the work program and to seek feedback to advance work on the identified options.



# Bond

# Bond Finance for ER programs

- Bond is a debt instrument in which an investor loans money to an entity that borrows the funds for a defined period at a variable or fixed interest rate.
- Bond pays periodic interest and redemption of principal (equal to notional) at maturity to investors for the finance raised, and can be customized to meet upfront financing requirements of the Carbon Fund ER programs.
- IBRD is a pioneer in Green Bonds and a recognized bond issuer with strong bond issuance platform. IBRD has issued \$8.5 Billion green bonds since 2008.
- The FCPF Carbon Fund can utilize IBRD's experience and expertise to explore the bond as a financing option for addressing the upfront financing needs of ER programs of the Carbon Fund Portfolio.

# Proposed Bond Structure

Under the proposed bond structure for ER programs, public and private investors could provide upfront financing to IBRD for channeling funds to ER programs of Carbon Fund.

A bond structure is influenced by several factors such as program profile, financing needs of programs, and investor appetite taking into account variables such as:

- **Bond maturity:** Aligned with duration of ERPA contracts
- **Bond coupon (interest):** As agreed with investors
- **Redemption at maturity:** An amount linked to final ERPA payment with bond investors sharing the risk/reward of ER Programs with implementing agencies of ER programs
- **Principal protection:** Redemption of a fixed amount with bond investors receiving a minimum amount of principal to avoid significant downside risk for investors

# Key Players in Bond Structure

- **Bond issuer:** IBRD issues bond on behalf of the FCPF Carbon Fund and receives and transfers a portion of bond proceeds to the Carbon Fund for distribution to ER programs for meeting their financing needs, and keeps the remaining proceeds as reserve to meet final redemption obligations of the bond. Funds transferred to the Carbon Fund and reserve kept by IBRD is influenced by the degree of principal protection desired by bond investors.
- **Bond underwriter:** Bond dealer(s) such as investment bank(s) provide(s) market intelligence, and assist(s) with the design of bond taking into account investor preferences and ER program financing needs.
- **Guarantee provider:** Entity that provides a guarantee for principal protection to investors. The guarantee provider will make payment to IBRD if program performance or repayments from ER programs at an aggregate level is less than the principal protection threshold of the bond.

# Example of Bond Structure

## Assumptions:

ER Programs that signed ERPAs require [\$100m] in upfront financing, out of which financing gap is [\$20m]

[40m] REDD credits are contracted under ERPA for [\$5] per credit

## Bond terms:

**Bond Notional:** [\$21m] , out of which [\$20m] will be provided to ER programs as upfront financing. IBRD will keep the remaining [\$1m] for coupon payments

**Maturity:** [5yr]

**Coupon:** [1%] per annum

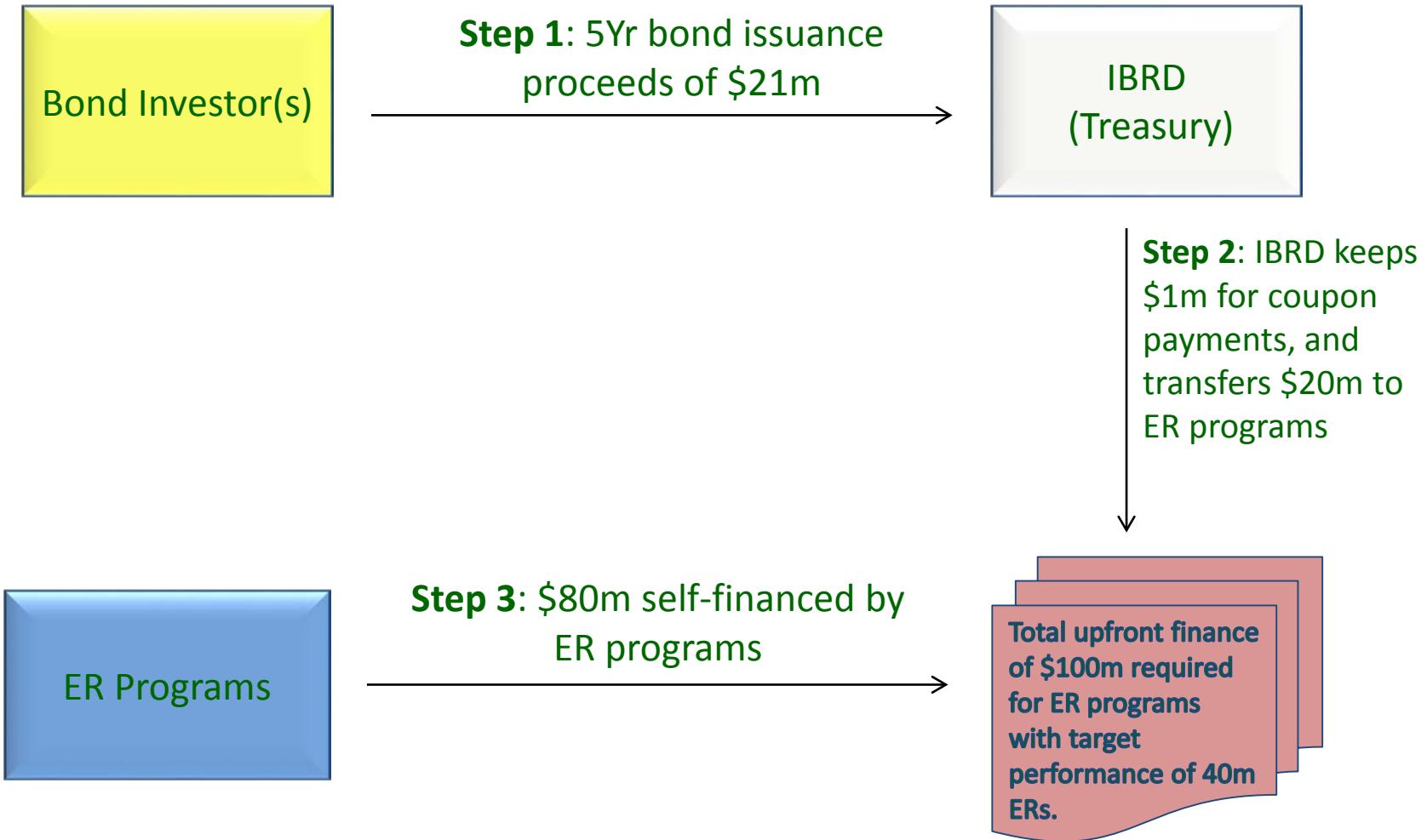
**Redemption at maturity:** [\$3] x total project performance x 20%. E.g., if ER programs deliver 32m REDD credits at the end, bond investors will receive  $\$3 \times 32m \times 20\% = \$19.2m$

**Principal protection:** Redemption amount to be floored at [\$19m] regardless of ER program performance

**Disclaimer:** The example is for illustration only. Feasibility of the bond and determination of actual bond terms require information on program finance needs and consultations with potential investors.

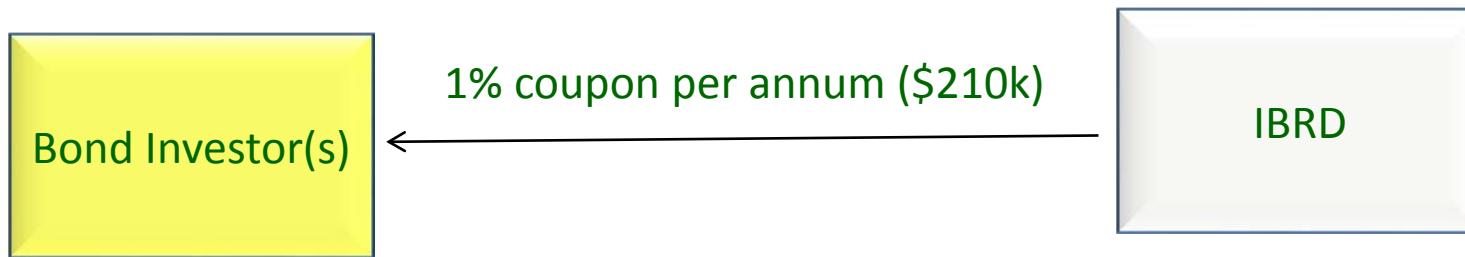
# Bond Example

## Year 0 – Inception Date



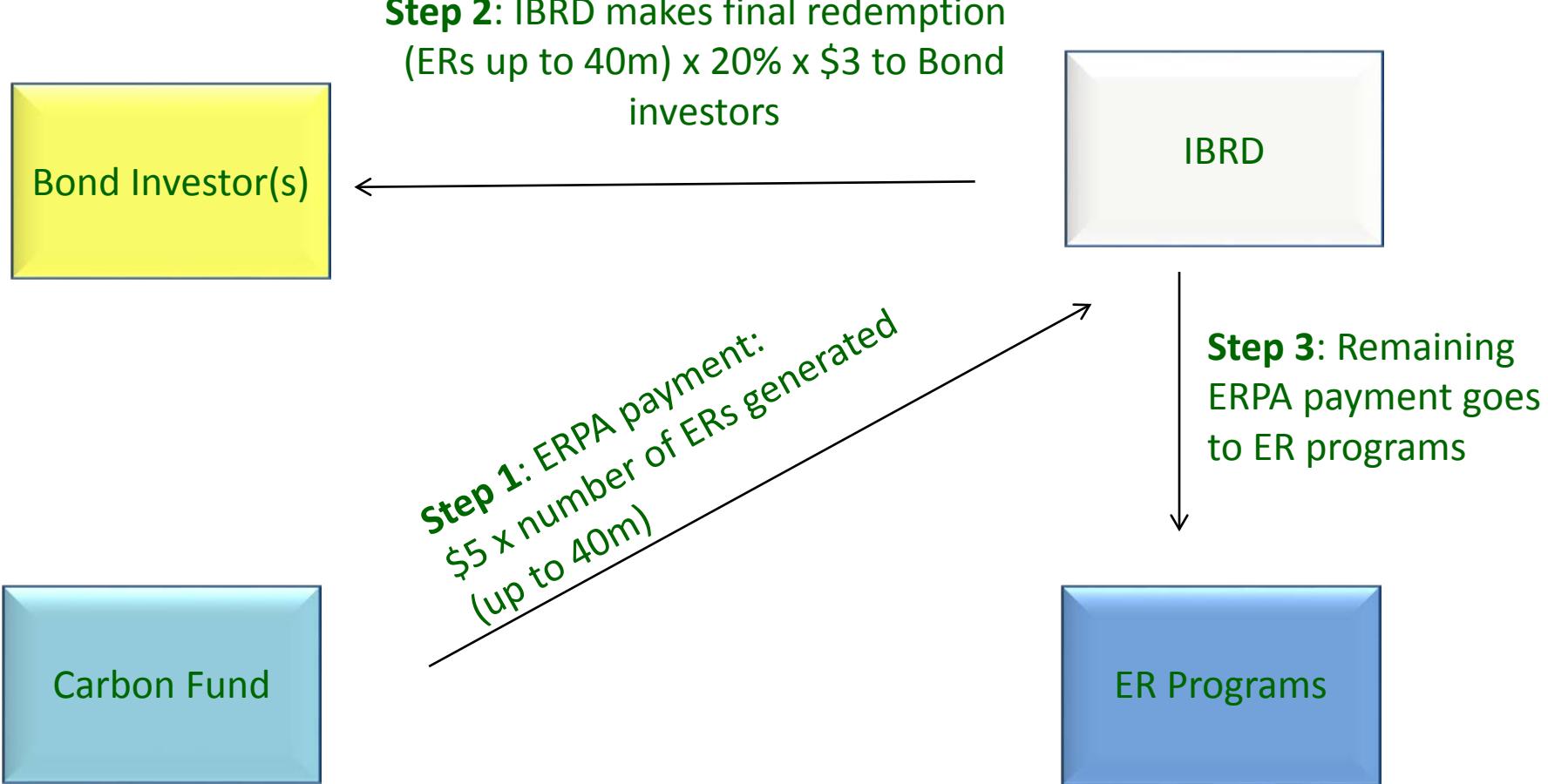
# Bond Example

## Year 1-5: Bond Coupon Payments



# Bond Example

## Year 5 - Bond Final Redemption/ERPA payoff



# Bond Example

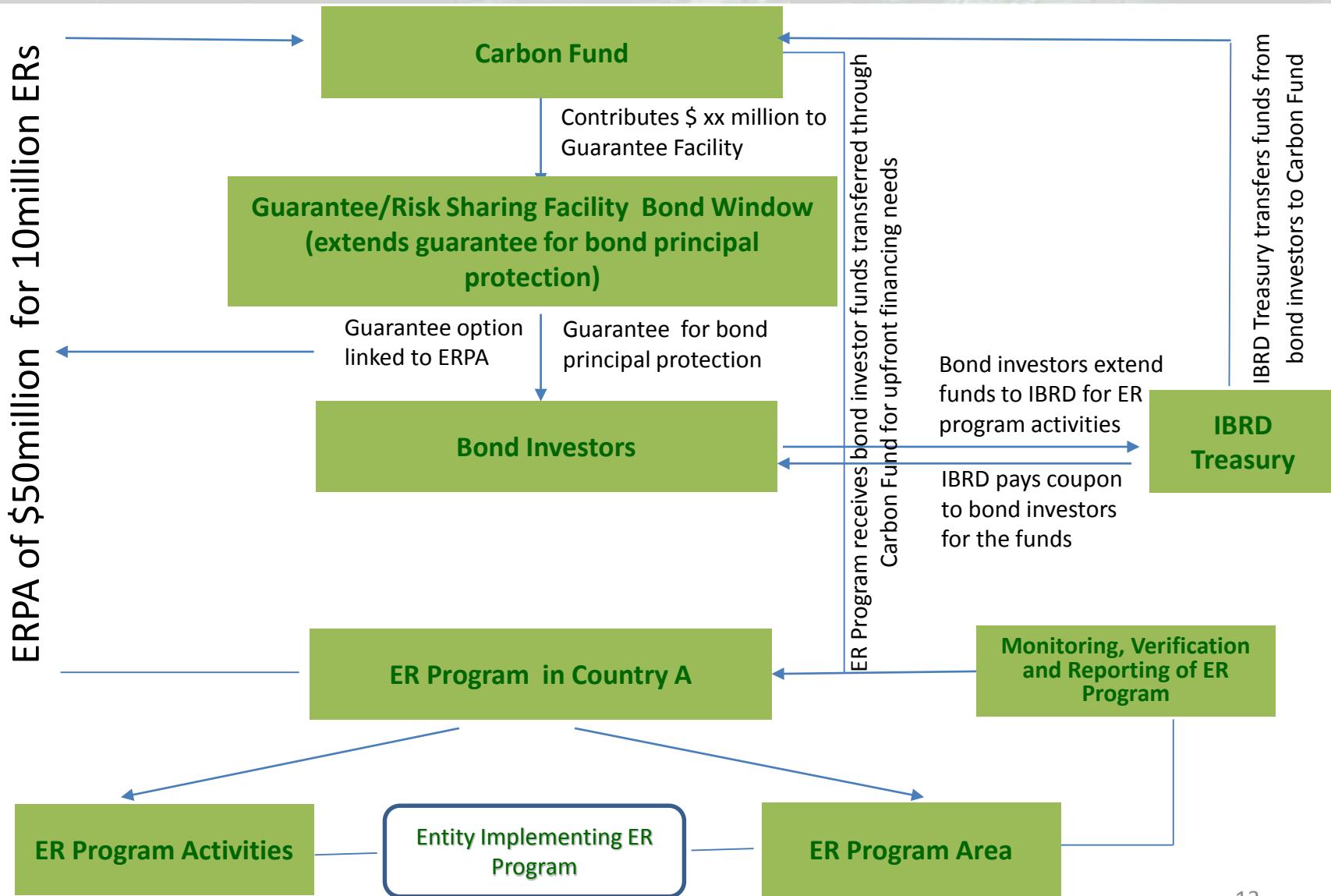
## Summary

ER Program Performance	Emission Reductions generated (millions)	ERPA payment (\$ million)	ERPA payment to		Average price per ER paid to	
			Bond investors (\$ million)	ER Programs (\$ million)	Bond investors (\$)	ER programs (\$)
60%	24	120	14.4	105.6	0.60	4.40
70%	28	140	16.8	123.2	0.60	4.40
80%	32	160	19.2	140.8	0.60	4.40
90%	36	180	21.6	158.4	0.60	4.40
100%	40	200	24.0	176.0	0.60	4.40

- 20% upfront financing is provided through the bond
- In this example, \$0.60 out of the \$5 ERPA price goes to bond investors as they help finance the projects upfront
- Bond investors and project developers share risk/return of the projects
- In the case where the final bond redemption is less than \$19.2m, principal protection will be triggered where the guarantee provider will cover the deficit
- In this example, a guarantee is required for \$2.4m (\$19.2m – \$16.8m) for 70% performance; and \$4.8m (\$19.2m – \$14.4m) for 60% performance in ER programs for meeting the gap in bond redemption of \$19.2 million (highlighted in the above table).

**Disclaimer:** The example is for illustration only. Feasibility of the bond and determination of actual bond parameters require consultations with ER programs on upfront financing needs and with potential investors on the bond terms.

# Guarantee for Bond Principal Protection



# Questions

- Should FMT prepare a proposal on the **bond** option for consideration at CF14/CF15?

## Next Steps

- In case of CFP consent for the proposal on bond option, FMT will initiate the following steps.
  - Preparation of concept note on the bond instrument, peer review and internal consultations with relevant World Bank units
  - Consultations with ER program countries on the potential use of bond finance for meeting upfront ER program financing needs
  - Design of bond structure taking into account the CF charter and WB operational policies
  - Presentation of proposal on the bond at CF14/CF15



# THANK YOU!

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