



Strategic Alliance on Green Bond Market Development in G20 Emerging Economies

Green Bond Workshop, Mumbai



Practical Experience and Lessons Learned

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Outline of the Presentation

- A few words about Exim Bank
- Source of Foreign Currency Funds
- Exim Bank's MTN Program
- Exim Bank in the International Debt Market
- Understanding Green Bonds
- Exim Bank's Maiden Green Bond Issuance
- Green Bond - Exim's Experience
- Green Bond - Lessons Learnt
- Case Studies on hedging solutions
- Conclusion

Exim Bank - Quasi Sovereign Status

Ongoing Government Support



- 100% owned by Government of India (“Gol”), closest Proxy to the Sovereign in international debt markets.
- Board of Directors is appointed by Gol
- Independence in business and operational policies
- Instrument of the Gol for its economic diplomacy Lines of Credit extended by the Bank.
- A track record of Gol capital infusions
- Balance sheet of USD 17.39 bn as on 31.03.16.
- Foreign currency resources comprise 67% of the lendable resources on 31.03.16.

Sources of Foreign Currency Funds

Off-Shore Funds

● Medium / Long Term

- Bonds / FRNs (Under MTN Programme / Specific Documentation)
- Bilateral / Club / Syndicated Loans
- Tied Lines of Credit

● Short Term

- Bilateral / Club Loan
- Trade Finance

On-Shore Funds

- USD / INR Buy-Sell Swaps
- Reciprocal Term Deposits

MTN Program – 144A / Reg S Issuances

- In July 2016, the Bank's existing Euro Medium Term Note (EMTN) Programme was converted to a USD 10 bn Global Medium Term Note (GMTN) Program.
- 23 issuances under the MTN program till date.
- USD 6.44 bn raised under the MTN Program.
- Outstanding stands at USD 5.42 bn.
- 144A / REG S issuances under MTN, in USD and currencies like AUD, CHF, CNH, EUR, JPY, MXN, SGD, TRY, USD and ZAR.

MTN Program – Latest Issuance

- 10 year inaugural 144A / Reg S format USD 1 bn Bonds issued in July 2016.
- Pricing of 187.5 basis points over U.S. Treasuries. Coupon of 3.375%.
- Negative new issue premium and lowest yield on a benchmark deal by an Indian entity since 2000.
- U.S. institutional investor allocation of 61% was the highest ever for any Bank/FI out of India
- Awarded “Best Investment Grade Bond” by Asset Triple A Country Award 2016.

MTN Program – Other Issuances

- Uridashi Bonds - Foreign currency denominated bonds sold to Japanese household investors
 - Only Indian entity in the market, 4 issues since debut in April 2012.
 - USD 600 mn raised in various currencies viz., AUD, JPY, MXN, TRY, USD, and ZAR
- SGD denominated 5 year 250 mn bond in September 2012
- AUD denominated 5 year 200 mn bond in March 2013
- CHF denominated 5 year 175 mn bond, listed on the SIX Swiss Exchange
- CNH Bonds 600 mn in 3 and 5 year maturities in August 2015.

Exim in the International Debt Market – other issuances

- Samurai Bonds (with / without JBIC guarantee) - Yen denominated bonds issued to Japanese Investors
 - Debut Samurai issuance in February 2006, for JPY 23 billion (first in past 15 years by an Indian entity)
 - First sovereign agency and the 4th issuer to utilise JBIC's GATE programme in March 2011
 - Total 4 issuances in Samurai market aggregating JPY 89 bn
 - Last issuance of JPY 20 bn in November 2014

Loans / Standalone Issuances / Tied Lines

- Bilateral / Club Loans or syndicated loans like Ninja Loan.
- Raising USD 70 million in the form of a “Ninja Loan” in October 2010. Followed it up with loan of USD 100 mn in March 2011 and USD 120 mn in February 2016.
- Availed Loans from Multilateral agencies like ADB, EIB and IFC.
- Loans aggregating Euro 300 mn from EIB for supporting projects that contribute to climate change mitigation.

Exim Bank's Green Bond - Maiden Issuance

- 5 year RegS Green Bond issue of USD 500 million, successfully launched in March 2015.
- The 1st ever USD-denominated Green bond offering out of India and 3rd out of Asia.
- Subscription of around 3.2 times, across 140 accounts.
- 58% participation from fund managers, 20% banks, and 18% from sovereign wealth funds / insurance companies.
- Geographically, the issue was distributed 60% to Asian investors, 30% to EMEA and the balance to offshore US investors.

Exim Bank's Green Bond: Use of Proceeds

- Funding of new and existing Eligible Green Projects in countries including but not limited to Bangladesh and Sri Lanka.
- Eligible Green Projects include mass transportation and renewable energy projects
- Annual update on allocation of funds for Green Projects, by way of certification from the statutory auditor and disclosed on the Bank's website.
- Done as a refinance deal so funds could be immediately deployed in eligible assets with no carry.

Exim Green Bond: Projects Supported

Illustration

- ❑ **Borrower: Government of Sri Lanka**
- ❑ **Sector: Public Transport**
- ❑ **Track laying on Omanthai to Pallai sector in Sri Lanka⁽¹⁾**



- ❑ **Borrower: Government of Sri Lanka**
- ❑ **Sector: Public Transport**
- ❑ **Track laying on the Pallai-Kankesanthurai Railway Line in Sri Lanka⁽²⁾**



- ❑ **Borrower: Government of Sri Lanka**
- ❑ **Sector: Public Transport**
- ❑ **Track laying on the Madhu Church- Tallaimannar sector in Sri Lanka⁽³⁾**



- ❑ **Borrower: Government of Bangladesh**
- ❑ **Sector: Public Transport**
- ❑ **For construction of Khulna-Mongla Port Rail Line - detailed feasibility study and safeguard policy study, engineering design and bidding services, and Construction supervision services.**



(1) Reserve Bank of India and Ircon Website: <http://www.ircon.org/content.aspx?Title=57>

(2) Reserve Bank of India and http://www.priu.gov.lk/news_update/Current_Affairs/ca201111/20111118indian_assistance_pallai_kankesanthurai_railway_line.htm

(3) Reserve Bank of India and Ircon Website: <http://www.ircon.org/content.aspx?Title=57>

**Railway
Construction /
Reconstruction**

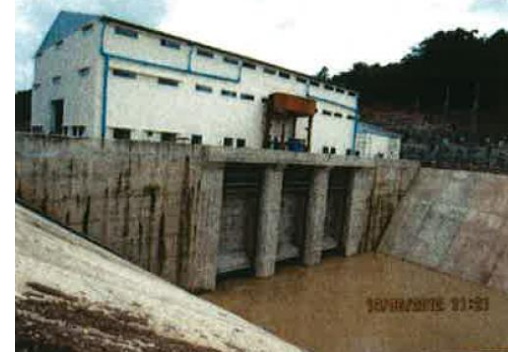
Other Green Projects



Solar Electrification in Sudan



Mass Transportation in Sri Lanka



Small Hydro Project in Lao PDR



Mass Transportation in Bangladesh



Wind turbines at Cookhouse, Eastern Cape Province, South Africa



Solar Photo Voltaic Modules Manufacturing Plant in Mozambique

Green Bond : What we did

- **Green Bond Framework was clearly communicated to investors:**
 - **Use of Proceeds**
 - Declaration of eligible Green Projects was done.
 - Auditor certification for existing eligible projects was assured.
 - Opted not to avail of third party certification services.
 - **Process for Project Evaluation and Selection**
 - Outlined the selection / decision-making process.
 - Briefly discussed tracking environmental benefit of green projects.
 - **Management of Proceeds**
 - Assurance on tracking proceeds and usage certification.
 - Agreement on means of deployment of unallocated proceeds.

Green Bond : What we should have done

- Expectations of international green investors much higher in terms of level of disclosure and data. Investor presentation could have been sharper on data and process.
- Issuers require to spend additional time / resources in establishing compliance with the framework required for issuance of green bonds. Green investors wary of greenwashing as they are answerable to their investors.
- Given the state of the market and issuers, an independent third party certification is required to buttress credibility.
- While the vanilla investor presentation focuses on macro-issues and micro-numbers, a supplement needs to be in place for specialised green investors who participate in green bond transactions. A balance needs to be struck.

Concerns of an Indian Green Bond issuer

- Typical Indian green bonds would be based on underlying green projects like solar energy, wind energy, mass transportation.
- Fundamentally, long duration projects requiring long duration credits.
- Appetite in India for long duration risk is limited and the pricing of such risk is expensive.
- Global appetite for duration is strong, deep pools of capital are available, pricing is attractive.
- This ideal marriage is however impacted by the risk of Rupee depreciation, that could transform a dream into a nightmare.

A proposed solution is a fully matched swap.

Swap : Hedging Forex Risk for Issuer

Step 1: Conversion of USD Funds to INR



Step 2: Interim Cashflows during the tenor of Swap



Step 3: Cashflows on Maturity of Swap / Bond



Swap Case Study 1 : Issuer initiates

- An Indian Issuer issues USD 600 mn, 10 year USD denominated bonds at fixed coupon of 4.37% p.a.
- Issuer swaps USD 600 mn for INR 40.89 bn with Exim, on terms that mirror the terms of bond issuance (Spot INR 68.15 per USD).
- The issuer receives 4.37% p.a. in USD from Exim and pays 9.22% p.a. in INR to Exim.
- On maturity, the Issuer receives USD 600 mn and pays INR 40.89 bn to Exim (Same exchange rate of INR 68.15 per USD).
- Ultimate cost of 10 year funds for Exim is 4.37%
- Ultimate cost of 10 year INR fund for issuer is 9.22% p.a., cheaper than long term Bank borrowing (varies as per market).

Case Study 1 : Cashflows

On Issuance : Bond Issuance USD 600 mn, 10 year. Fixed coupon of 4.37% p.a.

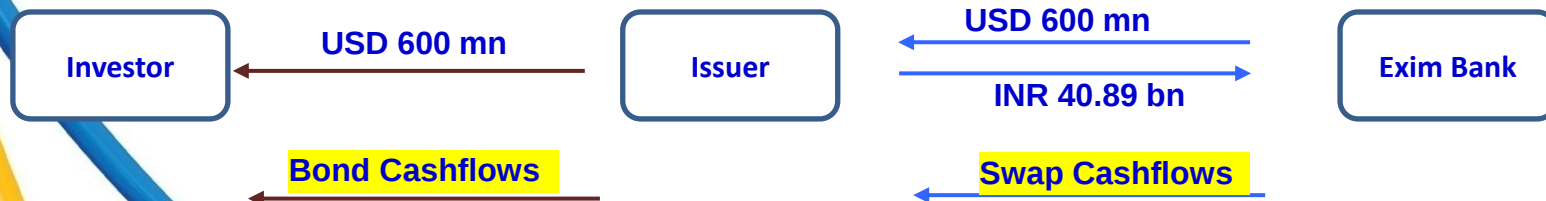
Swap USD 600 mn for INR 40.89 bn with Exim at interest rate of 9.22% p.a.



Interim Cashflows: Periodic Interest Servicing



On Maturity: Issuer pays INR 40.89 bn to Exim, receives USD 600 mn, for payment to Investors



91) Actions	92) Products	93) Views	94) Info	95) Settings	Swap Manager
Solver (Leg 2: Coup	31) Load	32) Save	33) Trade	34) CCP	43) Send to EMIR
3 Main	4 Details	5 Curves	6 Cashflow	9 Scenario	10 Risk
11 CVA	12 Matrix				
Deal	XCCY Fix Fix Swap	Counterparty	SWAP CNTRPARTY	+ Ticker / SWAP	20) Properties
Leg 1: Fixed Pay Notional Currency Effective Maturity Coupon Pay Freq Day Count Calc Basis 600MM USD 0D 01/17/2017 10Y 01/17/2027 4.375000 % SemiAnnual 30/360 Money Mkt Leg 2: Fixed Receive Notional Currency Effective Maturity Coupon Pay Freq Day Count Calc Basis 40,893,750,000 INR 0D 01/17/2017 10Y 01/17/2027 9.217943 % Annual ACT/365 Money Mkt					

Valuation Settings

Curve Date

Valuation

Valuation Ccy

FX Rate

OIS DC Stripping

01/14/2017

01/17/2017

USD

0.014672

Market

Leg 1: NPV

Accrued

Premium

DV01

Leg 2: NPV

Accrued

Premium

DV01

-713,134,487.82

0.00

-118.86

-614,712.53

713,134,487.82

0.00

118.86

483,282.57

Valuation Results

Principal

Accrued

NPV

Premium

BP Value

DV01

Gamma (1bp)

0.00

0.00

0.00

0.00000

0.00000

-131,429.96

-186.97

Swap Case Study 2 : Exim initiates

- Exim Bank issued INR 15 year Bonds with 7.02% Coupon, raised on November 25, 2016, amounting to INR 3.50 billion.
- INR 3.50 billion raised at 7.02% p.a. swapped to USD (INR 68.51 per USD).
 - Exim lent INR 3.50 bn and borrowed USD 51.09 million
 - Swap counterparty pays Interest Rate of 7.02% on INR borrowed.
 - Exim pays 6 month USD Libor plus 49.75 bps on USD borrowed.
- Exim gets 15 year funds at 6 month USD Libor plus 49.75 bps.
- Can be a partial coupon swap and part open position.
- Cost of swapped funds more competitive than raising funds through offshore bonds – AAA domestic rating.

10 Year MIFOR



Case Study 2 : Cashflows

Initial : Exim 15 year INR 3.50 bn domestic bond at 7.02%.

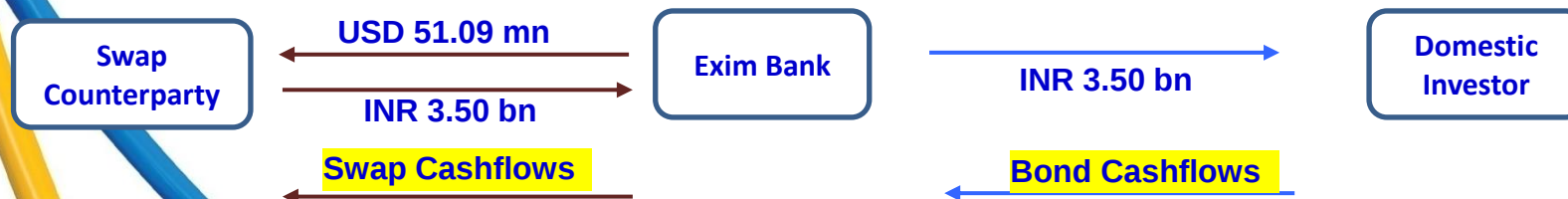
Swap INR 3.50 bn with USD 51.09 mn for 15 years. At 6L+49.75 bps p.a.



Interim Cashflows: Periodic Interest Servicing

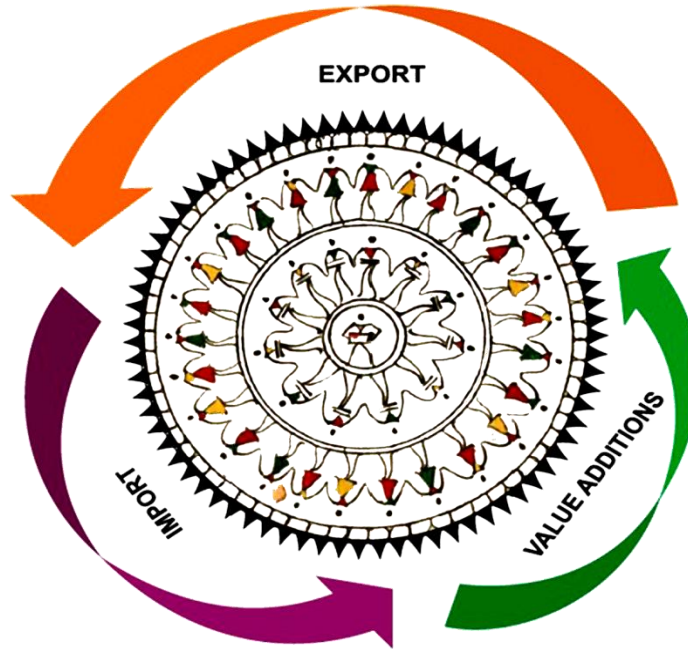


On Maturity: Swap counterparty pays INR 3.50 bn to Exim and receives USD 51.09 mn



Conclusion and Takeaways

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- Green Bonds enable diversification and wider investor interest.
 - Access to deep pools of overseas capital, further enhanced by green interest.
 - Participation from Green-only investors as well as green units of general investors helps generate pricing tension.
 - Detailed disclosure is expected by green investors.
 - Third party certification adds credibility and comfort for investors.
 - Forex risk can be addressed by swapping with Exim Bank
 - Intangibles by way of brand image and reputation.



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