FX Solutions in EM Infrastructure

Innovative Approaches to Mitigating Currency Risk in Emerging Markets

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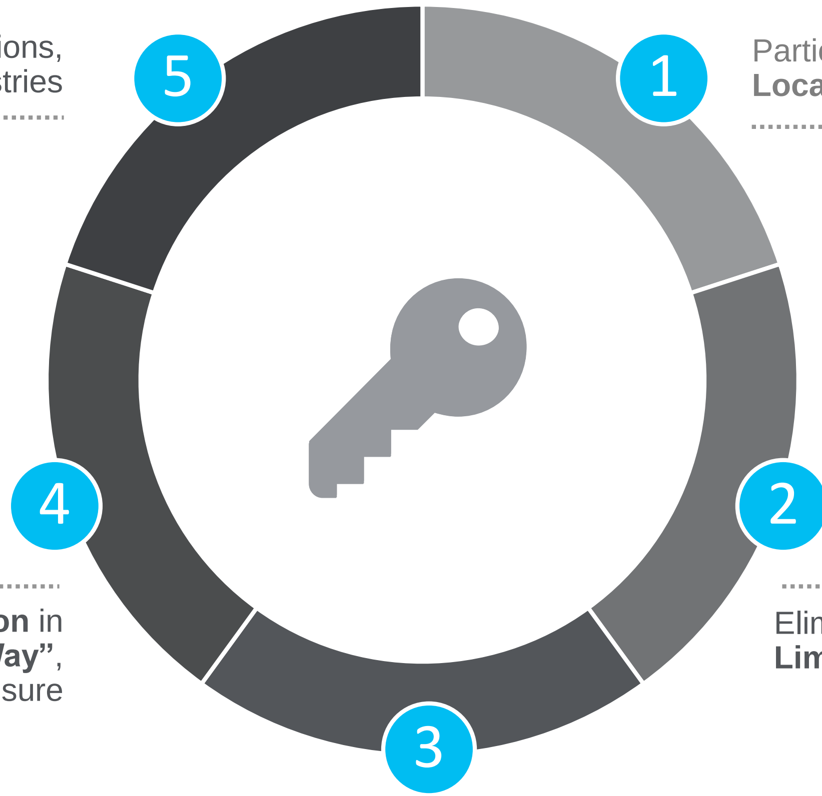
Agenda

I. Objective and Constraints

Objective: Unlock off-shore capital to EM local currency-generating infrastructure projects



1. Participation by Foreign **Investors Averse to Local Currency** Risk

2. Elimination of Currency Risk **Beyond the Limits of the Long-Term Swap** Market

3. **Avoid** Solutions Passing the Local Currency Devaluation Risk to **Local Sovereign and/or End-Users**

4. Increase Sovereign and **DFI Participation** in Risk Defeasance, but Limited to **"Right-Way"**, Residual Exposure

5. **Jurisdiction-agnostic** Conceptual Solutions, Adaptable to Specific Jurisdictions or Industries

Agenda

II. Preliminary DFI Feedback

Emphasis on simplicity, new roles of the multilaterals and needs of the most undeveloped emerging markets

- **Support** for simple solutions
  - Short-Tenor Hedges with DFI Conditional Liquidity Facility
  - Proxy-Currency Solutions - EM-to-EM (aka “South-to-South” in LATAM)
  - Local Development Bank local Currency Loans to International Investors

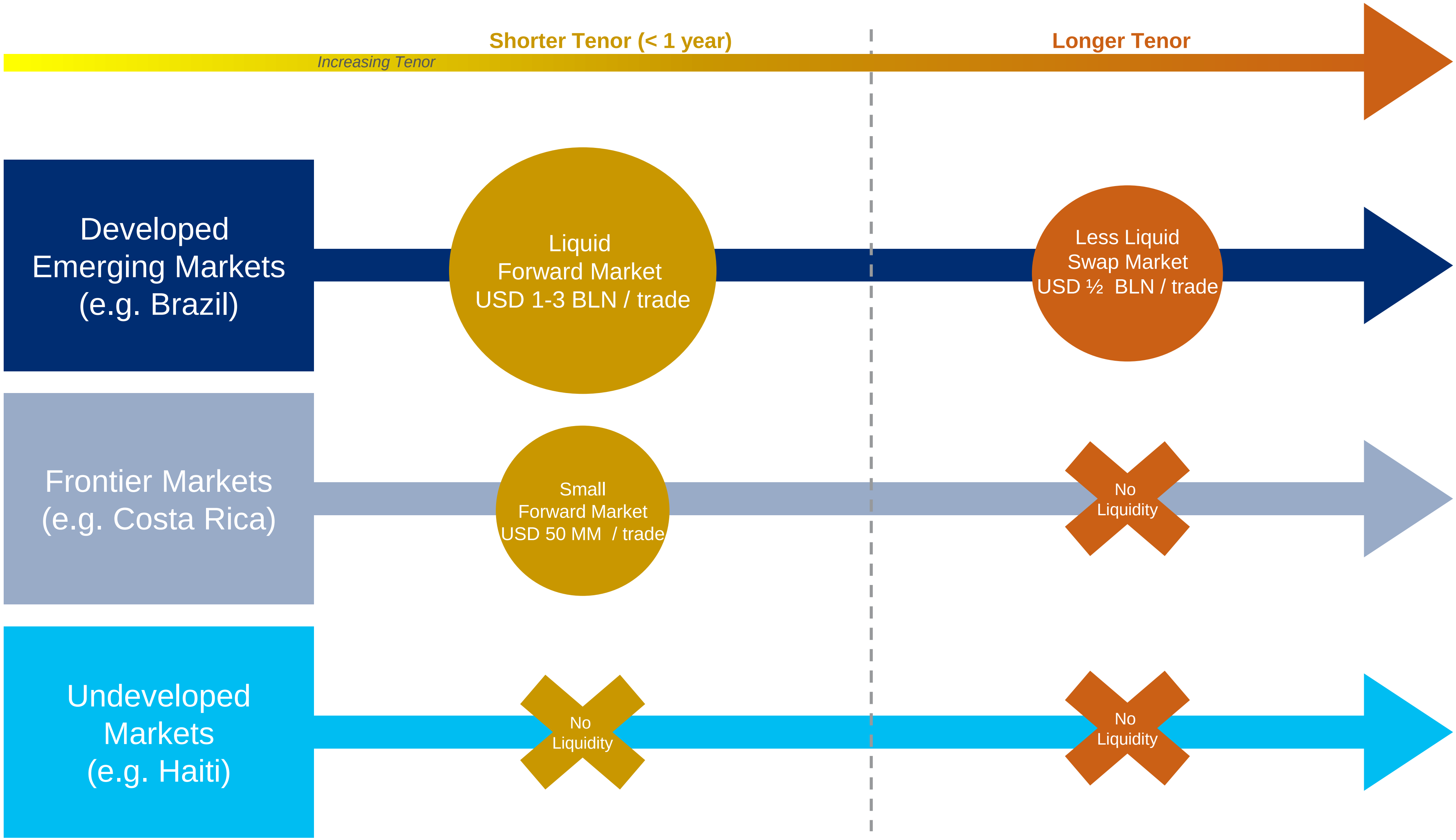
- **DFIs** play critical role in the solutions, as well as in further development of the emerging derivatives markets

- Mitigation of FX risk in the **least developed jurisdictions** – devoid of any swap market – is most pressing
  - Tripartite division of jurisdictions to: “Developed”, “Frontier” and “Undeveloped” (non-existent) Swap Markets

- Project’s **credit risk in a swap** continues as a key theme in developed EMs

II. Preliminary DFI Feedback

Three Types EM Jurisdictions – by Swap Market Liquidity



Agenda

I. Objective and Constraints

II. Preliminary DFI Feedback

III. **Solutions**

- Short-Term Hedges with DFI Conditional Liquidity Facility
- Proxy Currency (“EM to EM”) Approach
- Development Bank Local Currency Funding to Off-Shore FIs
  - Sub-Variation with Expanded Investor Base

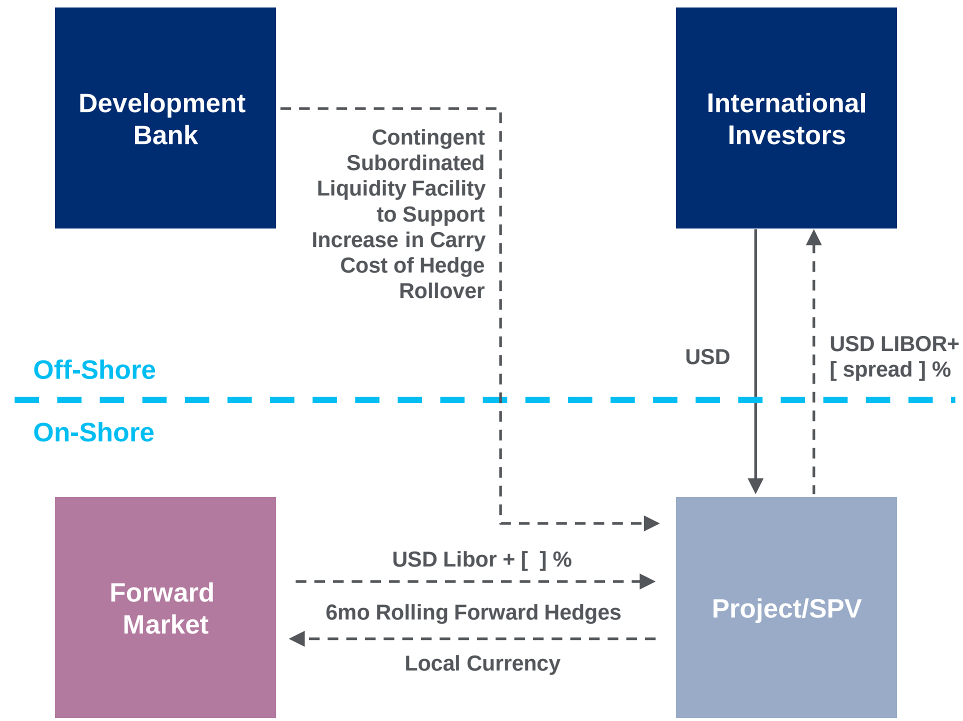
IV. Synopsis

III. FX Solutions in EM Infrastructure

1. Short-Term Hedging with DFI "Conditional Liquidity Facility"

Strategy: Hedge FX risk with short-term (forward) contracts to achieve greater amounts and engage in periodic (historical rate) rollovers.

- EM swap liquidity concentrated in short-tenors (<= 1-yr). Example - Colombia:
  - COP-USD Forward (1yr) max: USD 2 billion
  - COP-USD 10-yr Swap max: USD 0.5 billion
- Key Risk: Increase in carry cost (local currency interest rates) at each rollover
  - Risk idiosyncratic of EMs
  - Increased carry might preclude project from servicing debt
- Conditional DFI Liquidity Facility
  - Subordinated loan provided to the project, conditional upon increase in carry cost beyond certain level
  - Enables the project to roll-over the hedge and service debt
  - Repayment schedule may stretch over the project's life
  - EM carry cost inevitably reverts to pre-crisis levels – bolstering the project's debt-repayment capacity.



Developed EM | Frontier | Undeveloped

Applicable
Selective
Challenging

III. FX Solutions in EM Infrastructure

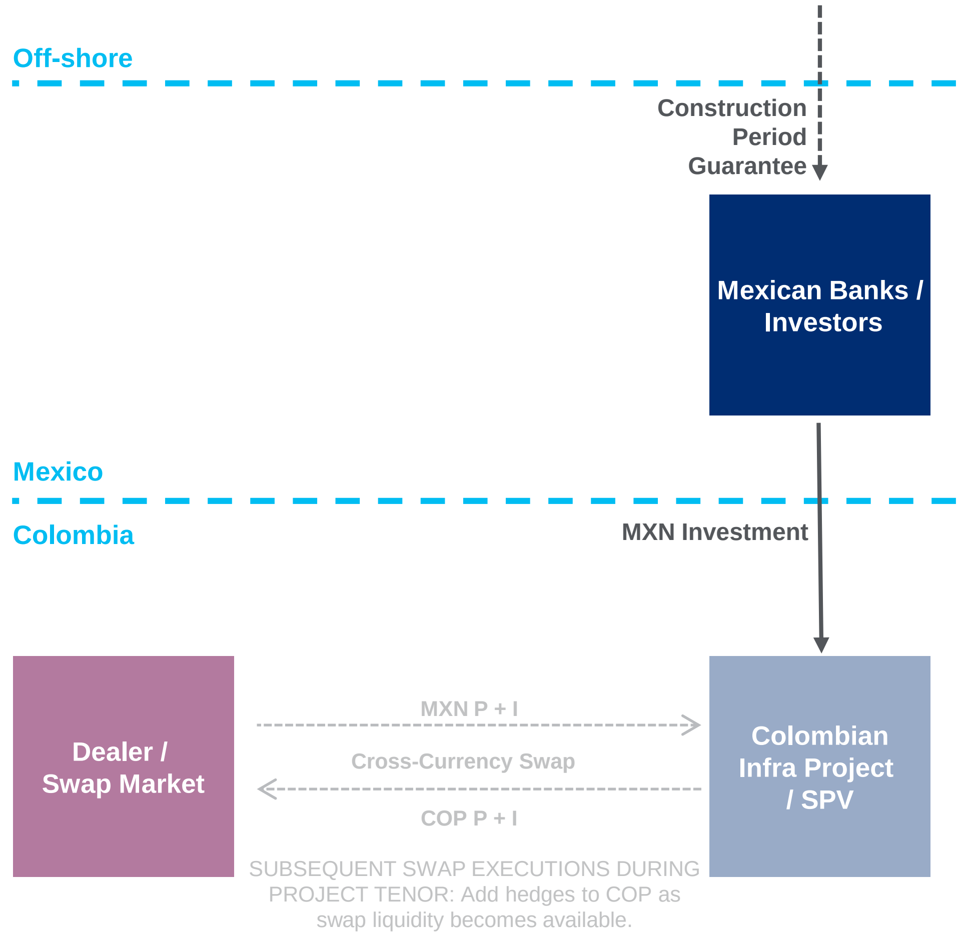
2. Proxy Currency Strategies ("EM to EM")

Strategy: Hedge EM currency risk via funding or hedging in more liquid correlated EM currency(s).

- Rationale
  - mitigate exchange rate risk, when choice is between funding in USD or a correlated local currency
  - EM currencies moving in tandem
    - Regional benchmarks (e.g. COP and MXN)
    - Trading partners (e.g. NPR and INR)
    - Commodity-exporters (e.g. KZT and RUB)
  - if eventually swapping proxy currency to local currency - lower credit risk on the swap

- "Alianza del Pacifico" (Chile, Colombia, Mexico, Peru)

- DFI wrap of the construction risk might be critical to bring local investors to infrastructure projects.



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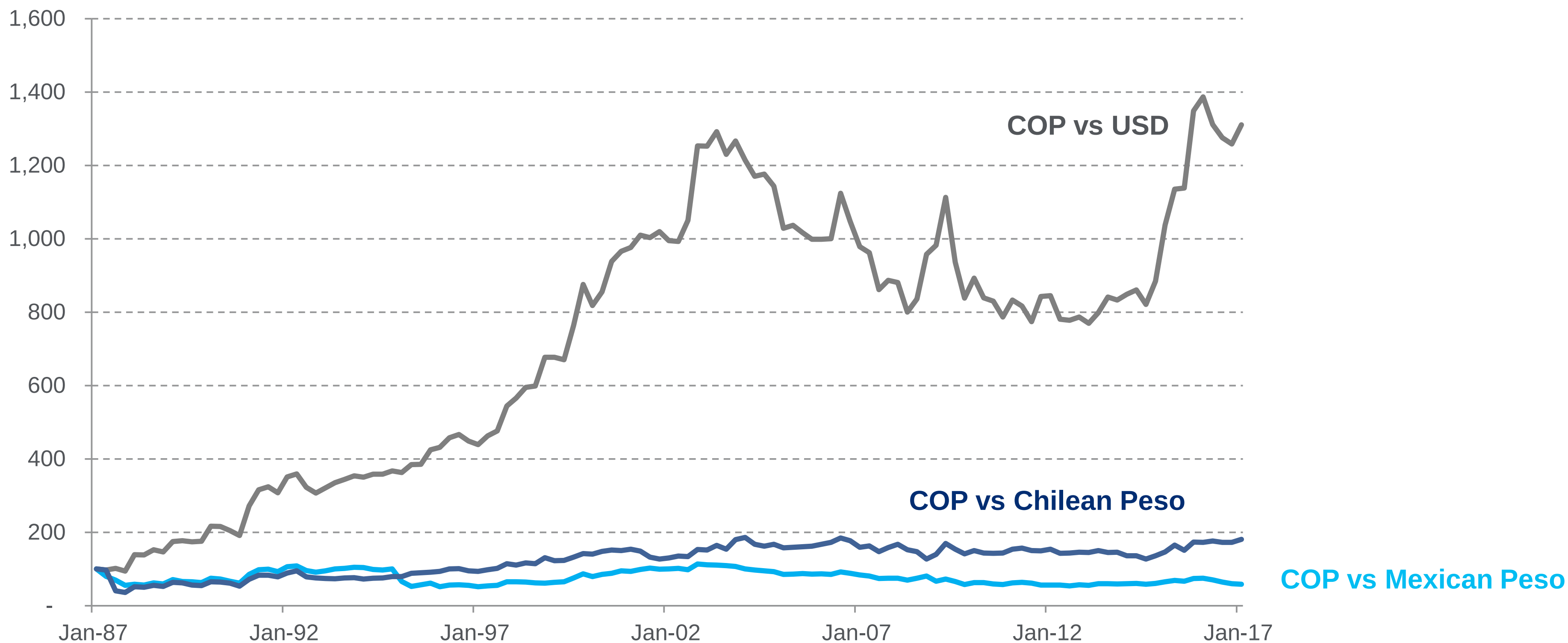
III. FX Solutions in EM Infrastructure

2. Proxy Strategies: Funding or Hedging in more a liquid and correlated local currency (cont'd)

Historical FX volatility when funding a Colombian Peso Project in: USD vs Chilean Pesos vs Mexican Pesos

Jan 93 – Present, Daily COP/USD, COP/MXN and COP/CLP Exchange Rates, Daily Series

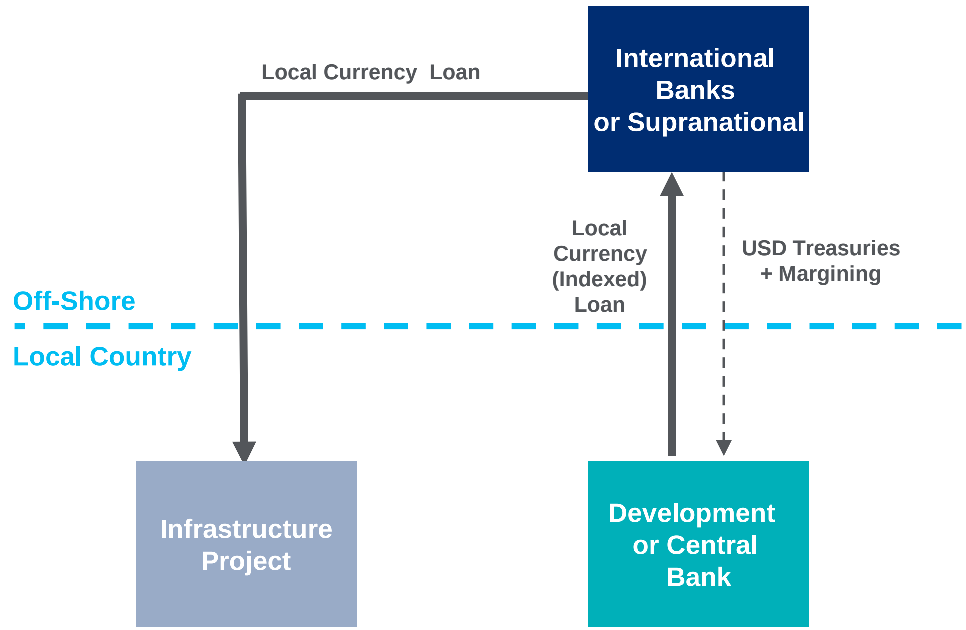


III. FX Solutions in EM Infrastructure

3. Development Bank Providing Local Currency to International Investors

Strategy: Local development bank provides local currency liquidity to international banks, who on-lend it to the project.

- Compact and elegant solution - for elimination of both currency and cross-border risk
- No derivative execution at project level
- Relevant for undeveloped markets
- Executed in Kazakhstan, with variations promoted in Colombia, Paraguay
- Proxy currency should be liquid and with expanded yield curve
- Variations
  - **local currency loan** by local development bank to international banks
    - Development Bank has exposure to the bank lenders
  - **local currency repo** on G-10 treasuries
    - Reduced Development Bank's exposure to the international bank lenders, yet bank lenders face "wrong way" credit exposure to CB

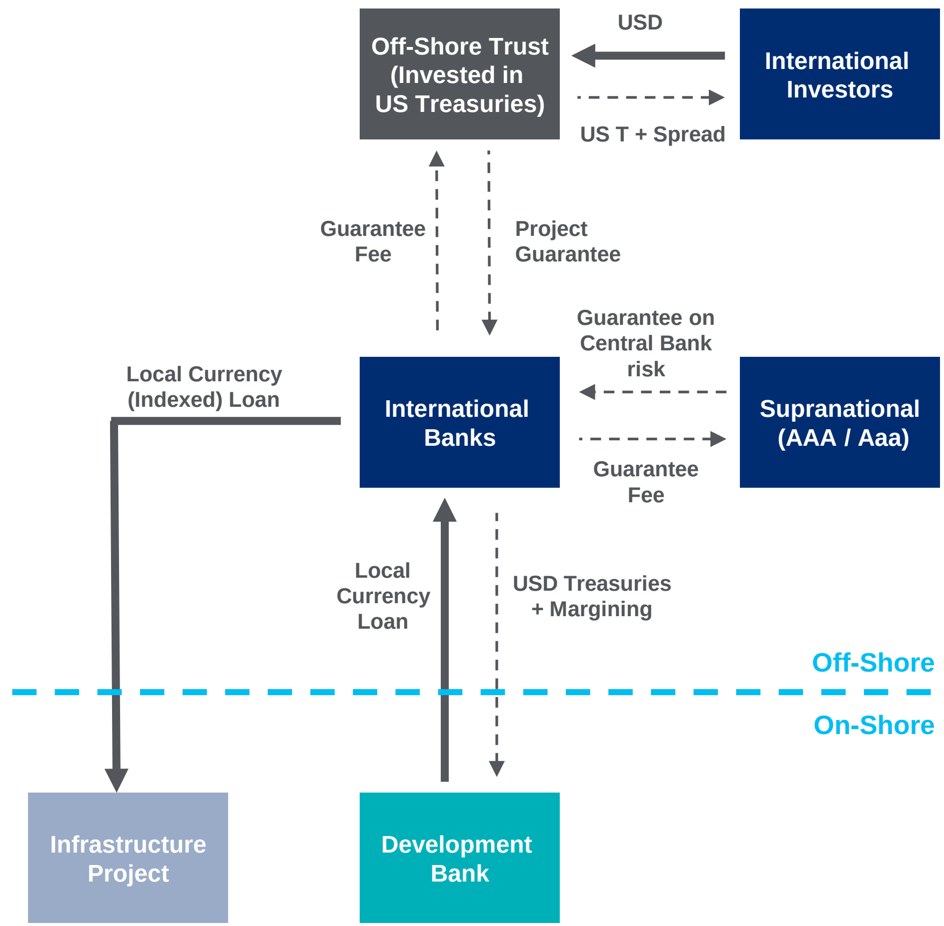


III. FX Solutions in EM Infrastructure

3. Development Bank Providing Local Currency to International Investors (cont'd)

Strategy: Development Bank provides local currency liquidity to international banks, who on-lend it to the project. Banks buy protection from international investors.

- Dynamics
  - International investors' hard currency kept off-shore (in a trust), providing USD return;
  - Project funded locally in local currency.
- Benefits
  - Access to investors unwilling to run FX risk
  - No exchange rate risk (as project is funded locally)
  - Cross-border risk isolated to an event of default
  - No swap involved
- Challenges
  - Residual local currency appreciation risk in project EOD ("right-way" risk)
  - Reliance on local currency funding sources.



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IV. Synopsis

Solutions - Jurisdictions Matrix

Solution	Developed	Frontier	Undeveloped	Residual Risk	Potential Risk-Absorbers...?
Short-Term Forward with DFI Liquidity Facility	Applicable	Applicable	Challenging	Increase in Carry (LCY interest rates)	Supranational, Sovereign, TCX, Dealers
Proxy Currency Strategies	Applicable	Selective	Challenging	• Basis Risk (between 2 EM currencies) • *Construction Risk*	• Basis Risk – Sovereign • *Construction Risk – Supranational*
Development Bank Local Currency Funding or Repo	Applicable	Applicable	Applicable	• Development Bank (Repo) Credit Risk • Floating Rate Risk	• Supranational, Dealers • TCX
Development Bank Local Currency Funding w Expanded Intl Investor Base	Applicable	Selective	Selective	• DB (Repo) Credit Risk • Local currency appreciation in project EOD • Floating Rate Risk	• CB credit risk – Supranational, Dealers • LCY Appreciation – Sovereign, Dealers • Floating Rate - TCX

Applicable
Selective
Challenging

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