

Market Innovation Case Study: Climate Finance and Green Project Bonds in Asia

“How can Green Projects be Better Financed Today in Asia?”

EuroCham Singapore

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Tiwi-MakBan Climate Project Bond - Introduction

- ▶ PHP 10.7 billion bond (equivalent to USD 225 million)
- ▶ Landmark use of project bond credit enhancement: first credit-enhanced project bond in the region since the Asian financial crisis (ex-Malaysia)
- ▶ First local-currency project bond in the Philippine power sector and first credit-enhanced project bond in the Philippines
- ▶ First Climate Bond certified in emerging markets for a single project, and first green bond in the Philippines
- ▶ Culmination of a successful turnaround story

Tiwi-MakBan Geothermal Power Plants

Project Background

The Assets:

- ▶ Two plants: Tiwi and MakBan, 1970s-era
- ▶ 14% of Luzon grid capacity

▶ Makiling-Banahaw (MakBan):

- ▶ Located at boundary of Laguna and Batangas provinces

▶ Tiwi:

- ▶ Located at Albay Province

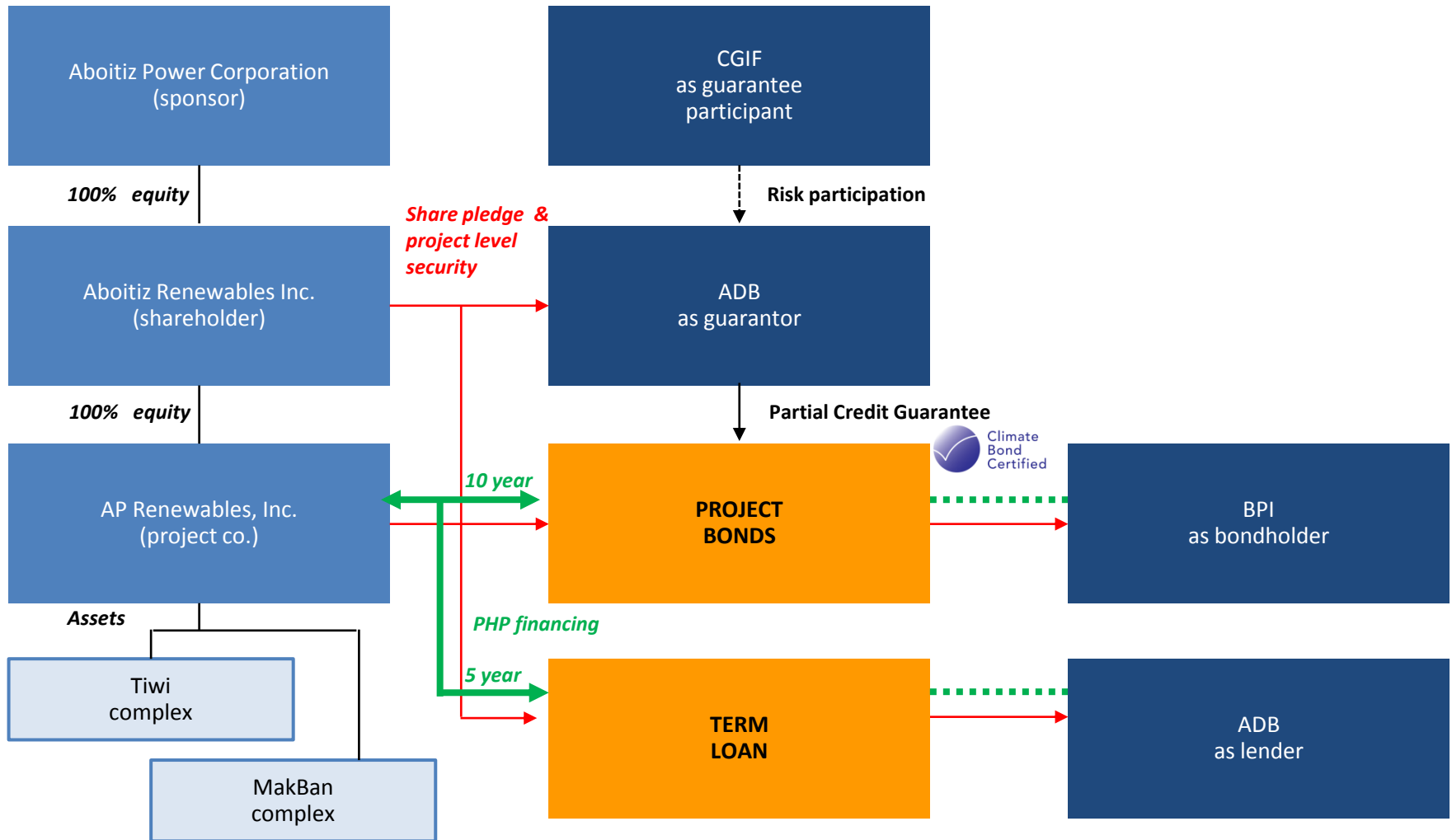


MakBan 442 MW
4th largest geothermal worldwide



Tiwi 234 MW
7th largest geothermal worldwide

Tiwi-MakBan - Financing Structure



Tiwi-MakBan - Summary of the ADB Loan and Guarantee Terms

Status:	ADB Board approval in July 2015
Borrower:	AP Renewables, Inc. (APRI), a wholly-owned subsidiary of Aboitiz Power Corp.
Amount:	Loan PHP 1.8 billion APRI bond: PHP 10.7 billion with 75% guaranteed by ADB (\$225 million USD equivalent bond with PHP 8.025 billion ADB Partial Credit Guarantee)
Tenor:	Loan : 5 years Guaranteed bond: 10 years
Loan type:	Project loan (non-recourse project finance) pari passu Project bond (non-recourse project finance) pari passu
PHP Loan:	USD-PHP cross-currency swap
Interest:	Fixed

Tiwi-MakBan - Highlighted features of the Project Bond

▶ *Revenues generated from the wholesale electricity spot market:*

- ▶ The Philippines' spot market for power, the WESM, was established in 2006 to encourage competition and reduce energy prices. The market follows a gross-offer-pool, net-settlement model, and enables the trading of electricity as a commodity in 24-hourly trading periods
- ▶ All available power in the system — including contracted capacity sold under bilateral arrangements — is delivered through WESM and prices for spot transactions are set through competitive bidding

▶ *Steam supply risk:*

- ▶ Naturally one of the key risks associated with geothermal power projects, requiring a thorough analysis of the contractual supply arrangements and the performance of the wells and steam fields
- ▶ While the Tiwi-MakBan steam fields are in a natural decline, they had long operating histories which lent confidence to APRI's revenue projections
- ▶ The steam fields are in two locations, diversifying the supply risk to the project, and the significant spare installed capacity limits the likely impact of any failure in the generation facilities

Tiwi-MakBan - Highlighted features of the Project Bond



► *CBI Climate Bonds Certification:*

- In full support of ADB's objectives in developing the market for project bonds in renewables, as part of the financing, APRI has successfully applied for Climate Bonds Certification from the Climate Bonds Initiative, allowing the investors to assess the bonds' environmental integrity on a common set of standards based on third party certification.

Tiwi-MakBan - Highlighted features of the Project Bond

- ▶ *Security package* – the security package was devised based on a clear understanding amongst the lending group of:
 - ▶ The complexities introduced by project having been developed by the Philippine government
 - ▶ The security and enforcement options available for an entirely Philippines-based project and sponsor

- ▶ *CGIF as guarantee participant*:
 - ▶ CGIF plays an integral role in the credit enhancement for the bond issuance through its back-to-back arrangement with ADB, yet is not itself a secured party for the purpose of the financing documents
 - ▶ A solution was reached with APRI and the lender group whereby CGIF was entitled to certain rights as if it was a secured party, including direct voting rights on certain intercreditor matters for which CGIF would not need to rely solely on the terms of its risk sharing arrangement with ADB

Tiwi-MakBan - Conclusion

- ▶ The project bond model represents an exciting opportunity for 'developing Asia' issuers to access domestic debt capital markets for projects that would not otherwise qualify for financing and for a broader range of investors to gain exposure to emerging market infrastructure:
 - ▶ The Tiwi-Makban deal shows that the model can work in the context of an 'Emerging Asia'
 - ▶ The transaction had its challenges because the structure was new and untested. Establishing bankable terms required skill, innovation and understanding from all project participants

Tiwi-MakBan - Conclusion

- ▶ The hard work starts here and more such innovation is required to realise the potential that project bonds have to play a meaningful role in bridging Asia's massive infrastructure funding needs:
 - ▶ The project bond model will be used initially to recycle capital in brownfield projects and therefore free up capacity for new projects
 - ▶ In the medium term, the plan is for project bonds to be used to fund the construction phase of projects. This will require further structuring features such as deferred purchase notes and completion guarantees as has been successfully implemented in Europe
 - ▶ There is more work to be done certainly, but the foundations for the use of project bonds in Asia have been set

Tiwi-MakBan – PFI Global Energy Special Report (20 April 2016)



US\$ Project Bond Credit Enhancement - Introduction

- ▶ 2015 volumes for Project Bonds remained strong at US\$35 BN and well above historical levels but came down from the all-time highs of US\$50 BN in 2013/14:
 - ▶ The reduction was primarily due to a slowdown in Oil & Gas issuance, which fell from \$20 BN in 2014 to \$3 BN in 2015
 - ▶ Institutional investor appetite has increased significantly over the past 18 months, with the entrance of many new investors, aggressively competing with bank lenders for investment opportunities (pricing and risk profile)
- ▶ Impact of International Regulations on stimulating the growth of Project Bonds:
 - ▶ Basel III for Banks: more capital (price) required for longer maturities PF Loans
 - ▶ Solvency II for Insurance Companies: capital adequacy benefits for holding long term bonds - “matching liabilities with long term assets”
 - ▶ This has led several insurers and investors to build-up teams (mostly constituted of ex-monoline insurers and PF bankers) experienced in PF structuring to invest into this new emerging asset class with or without credit enhancements

ADB Project Bond Initiative

An alternative to Bank Debt in Asia for brownfield assets

Principles

- ▶ Refinance via USD Project Bonds issued by an Asian brownfield project (senior secured, long maturity, amortizing)
- ▶ ADB provides first-loss credit enhancement in the form of an on-demand revolving letter of credit
- ▶ Ratings uplift to a target of BBB/A- so as to appeal to a wide universe of international and regional Project Bond investors
- ▶ Project Bond proceeds can be used for capex development or refinancing

Advantages

- ▶ Extension of debt tenor
- ▶ Competitive all-in cost
- ▶ Addresses Single Borrower Limit issues for major national sponsors
- ▶ Recycling bank debt and equity to finance new greenfield projects

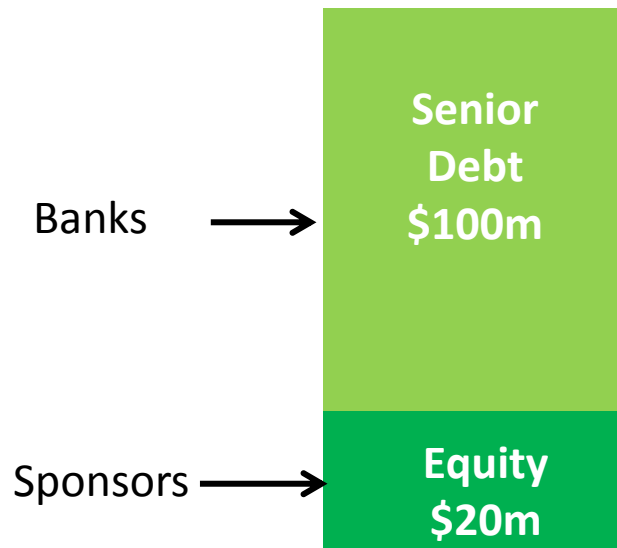
Constraints

- ▶ Excess liquidity in the bank market
- ▶ Downward price pressure
- ▶ International Banking and Insurance Regulations not fully implemented in the region

Project Bond Credit Enhancement in Action:

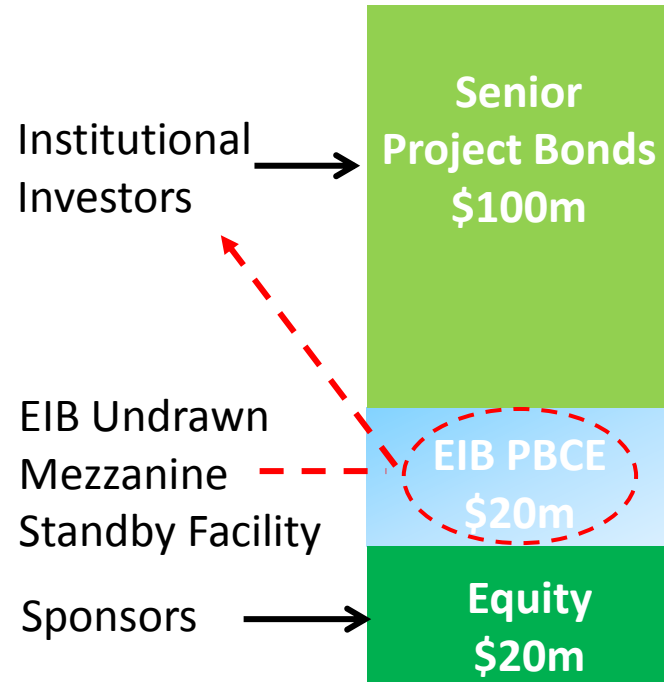
Precedent: EIB's Europe 2020 Project Bond Initiative

Conventional model



Senior Debt
Rating BBB-

Unfunded PBCE Enhancement Structure

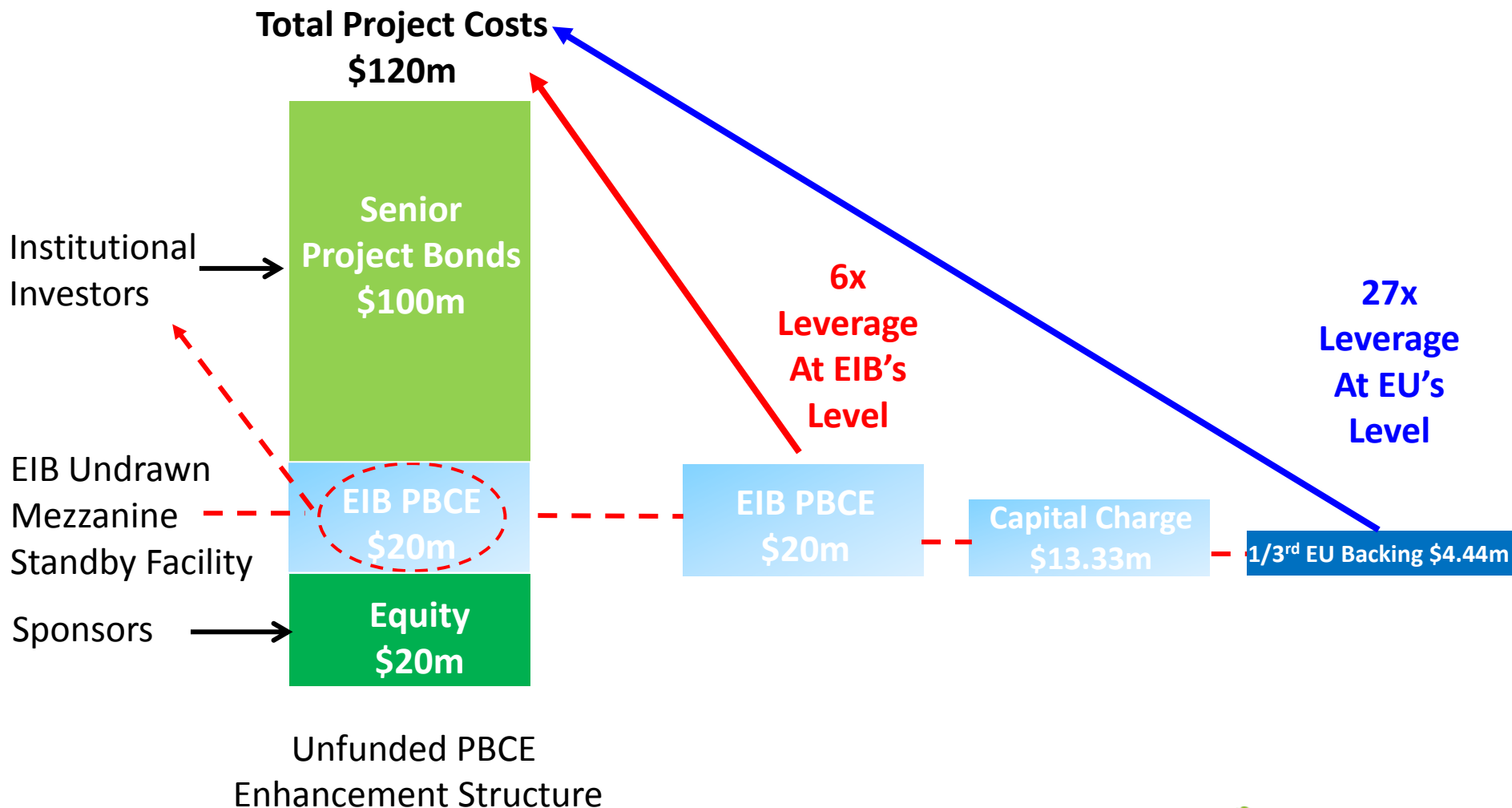


Senior Bonds
Rating BBB to A-

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Project Bond Credit Enhancement – Impact Leveraging:

Precedents: EIB's Europe 2020 Project Bond Initiative

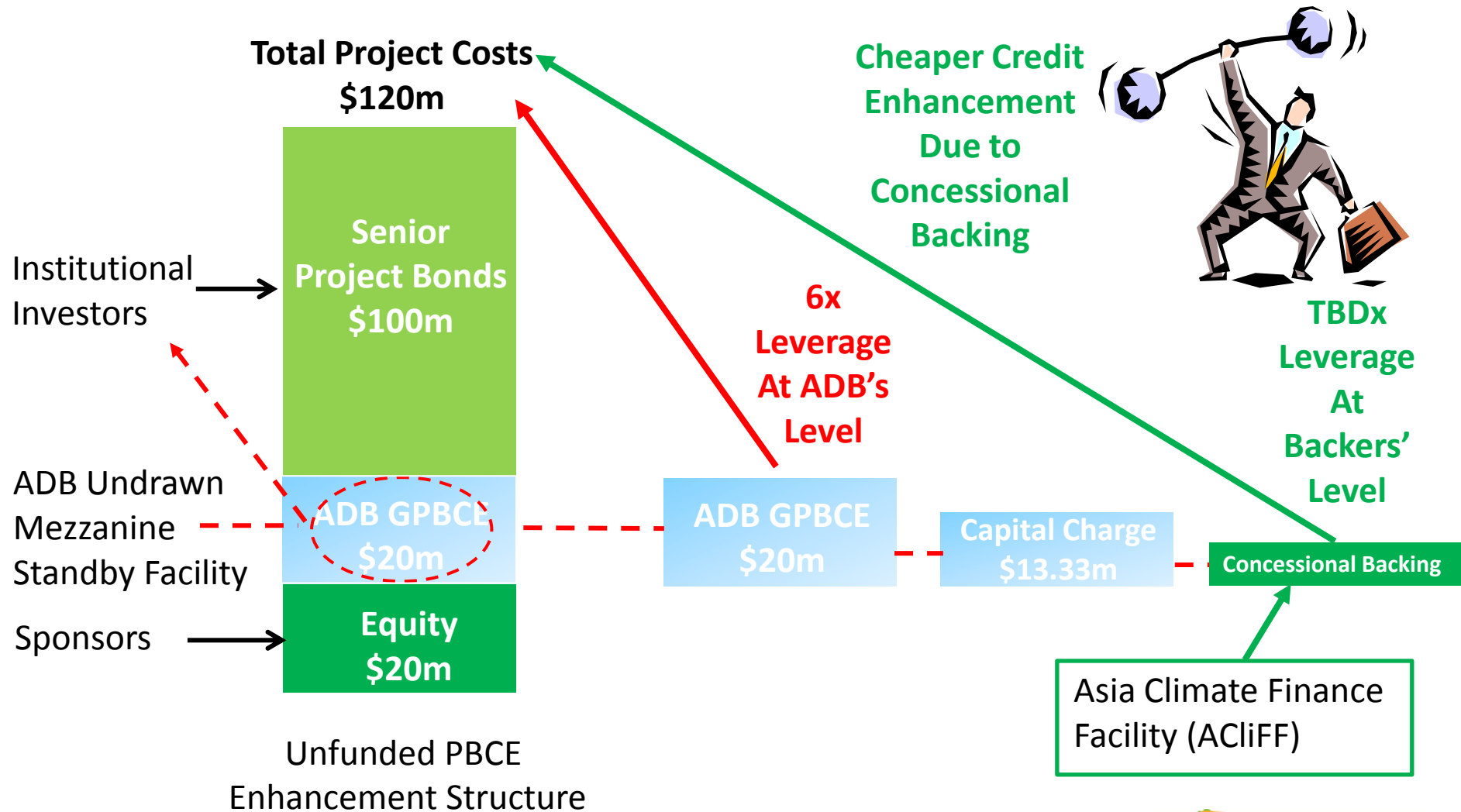


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Project Bond Credit Enhancement in Action: ADB's Asian Green Project Bond Initiative

- ▶ Asia faces huge infrastructure investment needs: ADB and ADBI (*Infrastructure for a Seamless Asia, 2009*) estimated that in 2010–2020, Asia needs to invest approximately \$8 trillion in national infrastructure, approximately \$290 billion on regional infrastructure projects in transport and energy that are in the pipeline, amounting to about \$750 billion per year.
- ▶ Climate Bonds Certification is backed by the Climate Bond Standards Board, with \$34 trillion assets under management represented. It is the only organisation in the world focusing on mobilizing the \$100 trillion bond market for climate change solutions. 2015 target: \$100 Bn up from 2014 total: \$36.59 Bn.
- ▶ ADB's credit enhancement product: subordinated all-purpose liquidity facility (i.e. for construction delays, cash flow shortfall, etc.).
- ▶ Rating agencies have given credit rating uplifts of one-notch to a multi-notch.
- ▶ Support project bonds for sustainable, climate change and green projects.

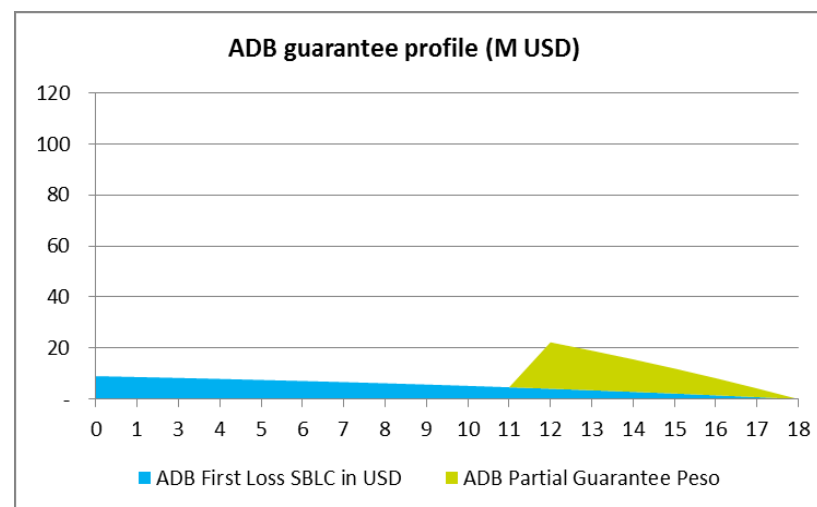
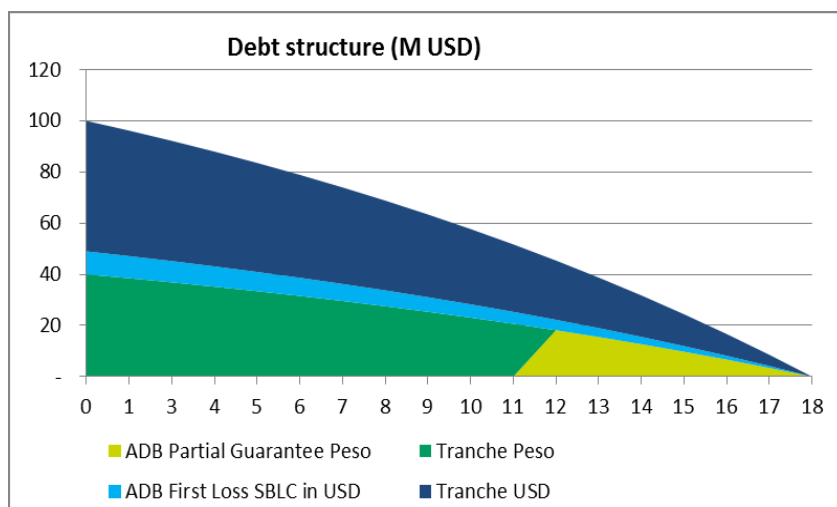
Proposed ADB's Green Project Bond Credit Enhancement – Impact Leveraging + Competitive Pricing All-In One



US\$ Project Bond Credit Enhancement – Wind Farms Example

► In Philippines, 20 year FIT 60% indexed to US\$

	PHP Tranche	USD Tranche
Amount	40% of total debt	60% of total debt
Final Maturity	18 Year fully amortizing	18 Year fully amortizing
Ranking	Pari Passu	Pari Passu
ADB's enhancement	Partial Credit Guarantee for maturities beyond 12 years of the PHP Tranche	First Loss - Stand By Letter of Credit for an amount of [15-20%] of the USD Tranche
Expected Rating	No rating	Baa2 – consistent with the Philippines Sovereign Rating



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