

# Financing Renewable Energy (“RE”) Project

Jakarta, 1 October 2014

**PT Sarana Multi Infrastruktur (Persero)**

## About PT Sarana Multi Infrastruktur (Persero)

PT Sarana Multi Infrastruktur (Persero) (“SMI”) was established on February 26, 2009 with a purpose to become a catalyst for accelerating infrastructure development in Indonesia. SMI is 100% owned by Government of Indonesia.



Telecommunications



Toll Road & Bridges



Transportation



Water Supply



Electricity



Oil & Gas



Irrigation & Waterway



Waste Water & Waste Management

“A leading catalyst in the acceleration of the National Infrastructure Development Program”



### Commercial Financing

- Promoter Funding
- Take Out Financing
- Working Capital Loan

- Senior Term Loan
- Subordinated Loan
- Mezzanine
- Equity
- Securitization
- Bridge Loan

### Advisory Services

- Financial Advisory Services
- Investment Advisory Services
- Training & Capacity Building

### PPP Project Preparation Services

- Project Development Facility (PDF)
- Advisory to Contracting/ Tendering Agencies

## Corporate Finance

Focus on corporate financial conditions and past performance

Assess liquidation value of corporate assets

Corporate risk and project risk are interrelated

Debt Capacity = Depends on financial conditions of borrower

## Project Finance

Focus on specific projects and cashflows

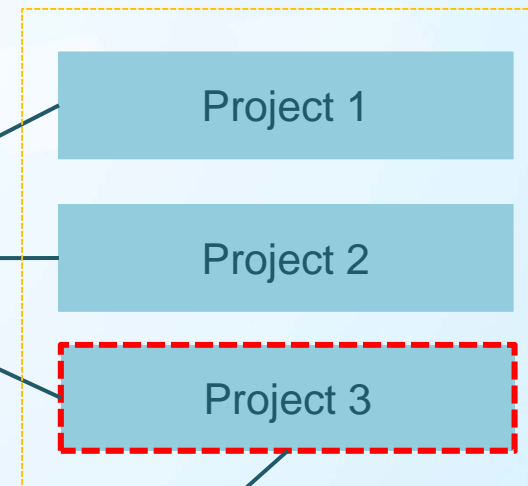
Assess project cashflows

Companies are independent from project risks

Debt Capacity<sup>(1)</sup> = Cashflow Available for Debt Service<sup>(2)</sup> (After taking the fluctuation of the project revenue and expenditure into consideration) X Loan Tenor

## 1. Corporate Finance

*Lender relies on cashflows from all corporate activities*



Share holding  
Non / Partial guarantee  
Non/ Limited recourse

## 2. Project Finance

*Lender relies on cashflows from the specific project only (Project 3)*



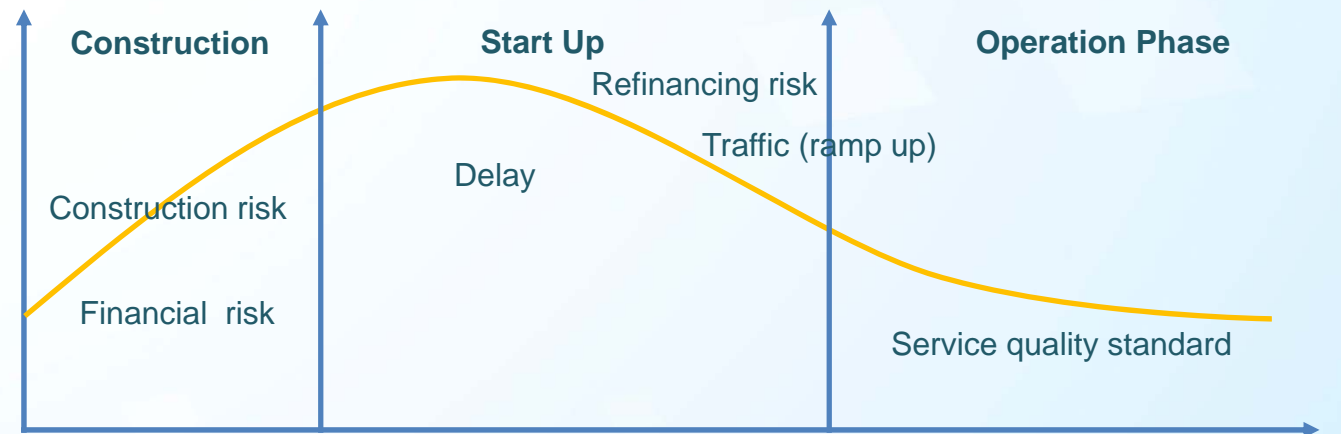
**Project Finance is relying on the project's cashflow as the principal repayment source**

# Project Finance lenders' key considerations

## Key considerations

1. Optimal sharing of risks – principle is that risks should be allocated to the party best suited to manage or minimize it
2. Having a conducive regulatory environment

## Key risks across project life



### Construction Phase

Construction Delay & Cost Overrun

Constructor default and insolvency

Government approvals and land acquisitions

### Operation Phase

Demand

Offtaker risk

Tarrif adjustment and approval

Contract termination and force majeure

## Selected important features for successful Project Financing

1. Strong project sponsors

2. EPC contractor with established track record

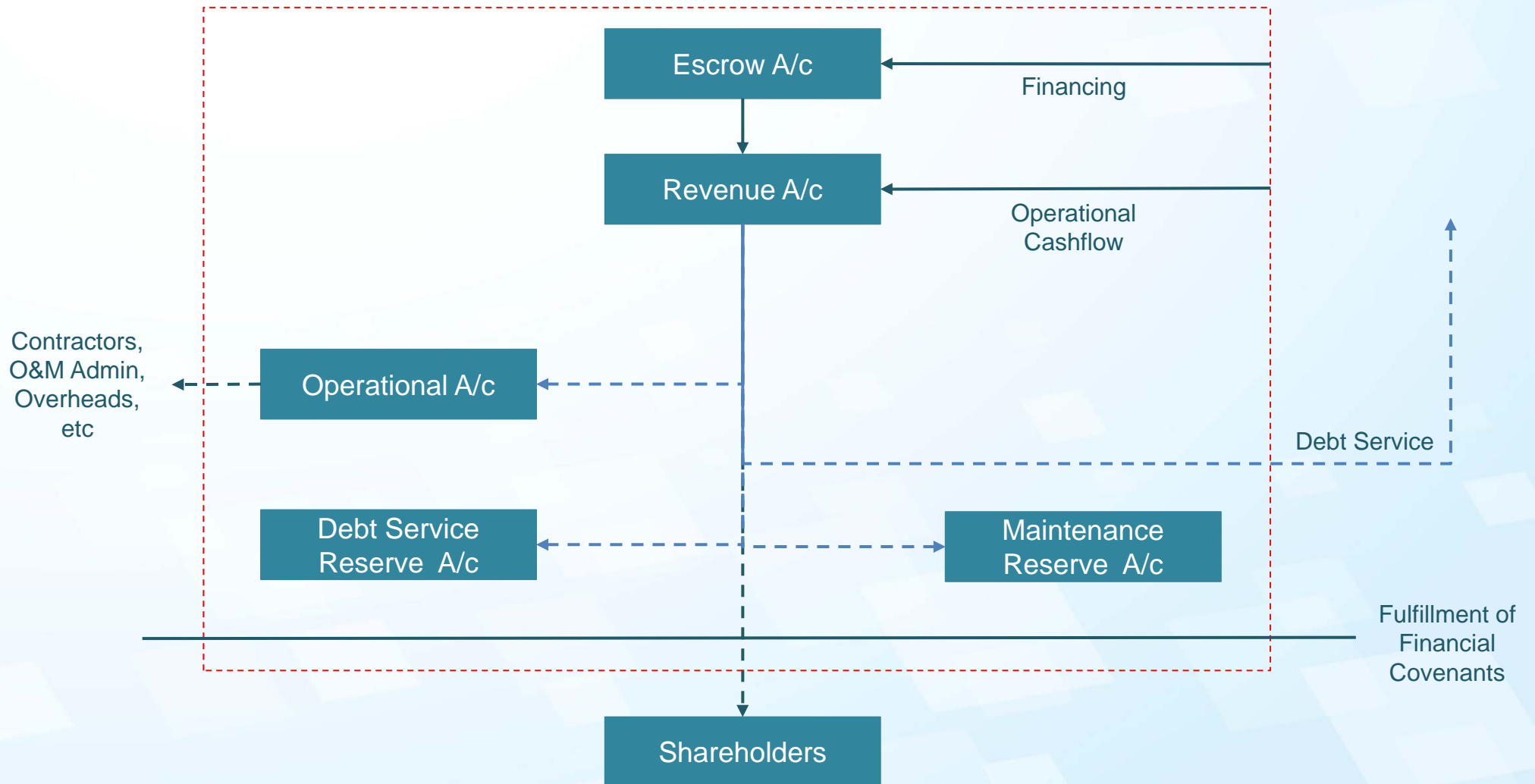
3. Stable cashflow

4. Sound project fundamentals

5. Tight financing structures

6. Knowledgeable professional parties

# Project Financing – Cashflow Ring Fencing



# Challenges and Risks for Implementing RE Project

## Challenges

- Access to site condition
- Availability of logistics facility (ports, road availability)
- On-site main resources (annual data is not available)
- Availability of local construction company and material

## Tariff

- Existing FiT does not attractive enough for the investor to cover risk and gain expected financial return (ROR > 15%)
- Technology supply rely mainly from offshore

## Risks Factors

- Land/site contractual risk
- Capital cost over-run: licenses, logistics (transport facilities), construction delay, grid interconnection. etc
- Technology: life-time and efficiency of module and equipment, grid reliability
- Financial viability of PLN (long-term PPA)
- Disasters: flood, fire, earthquake

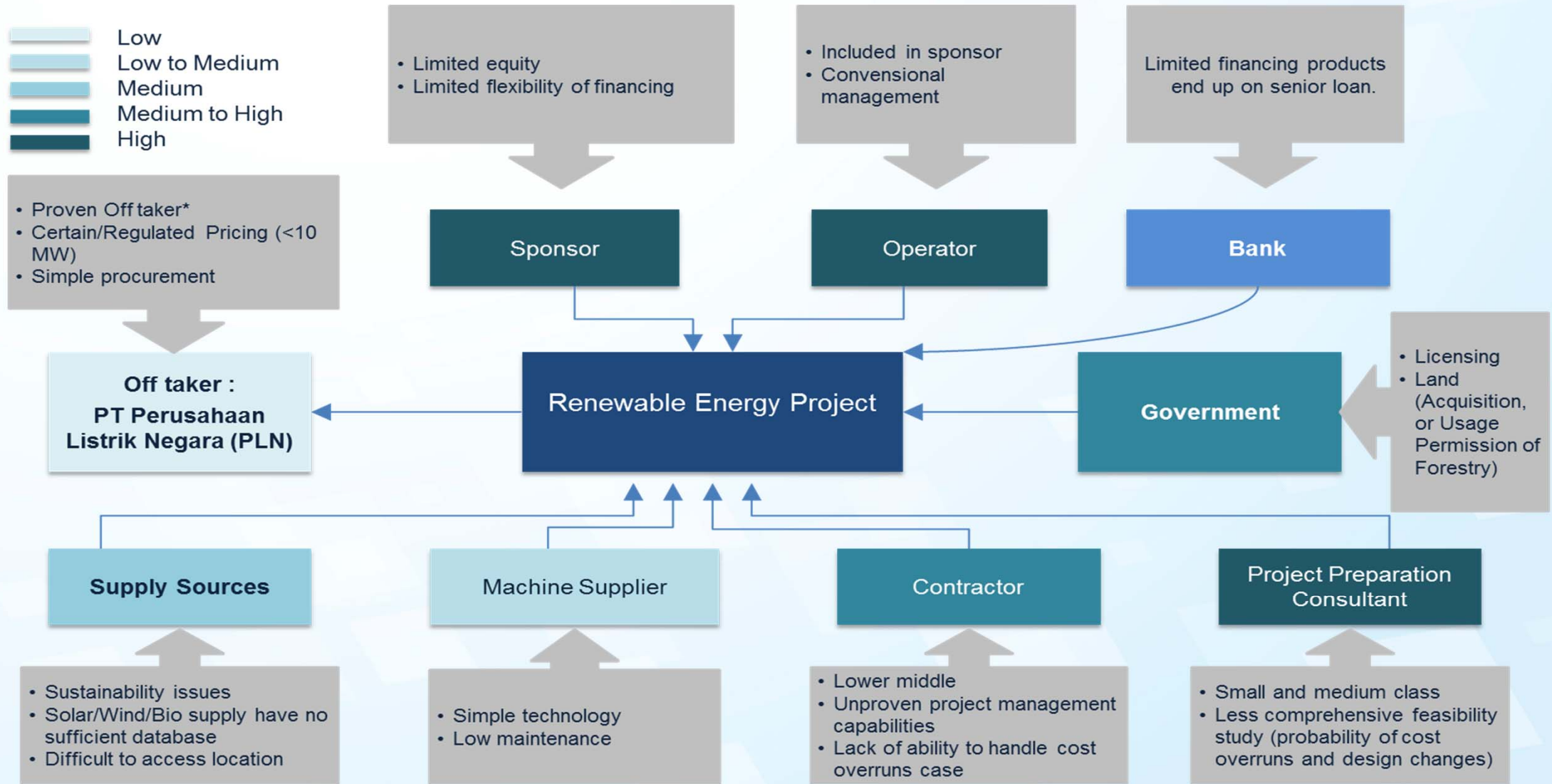
## Barier to entry

- Capacity and technology transfer: inexperience local investor to build and operate utility scale solar PV plants needs experience partner
- Low learning curve, slow market penetration
- Limited access to most efficient technologies



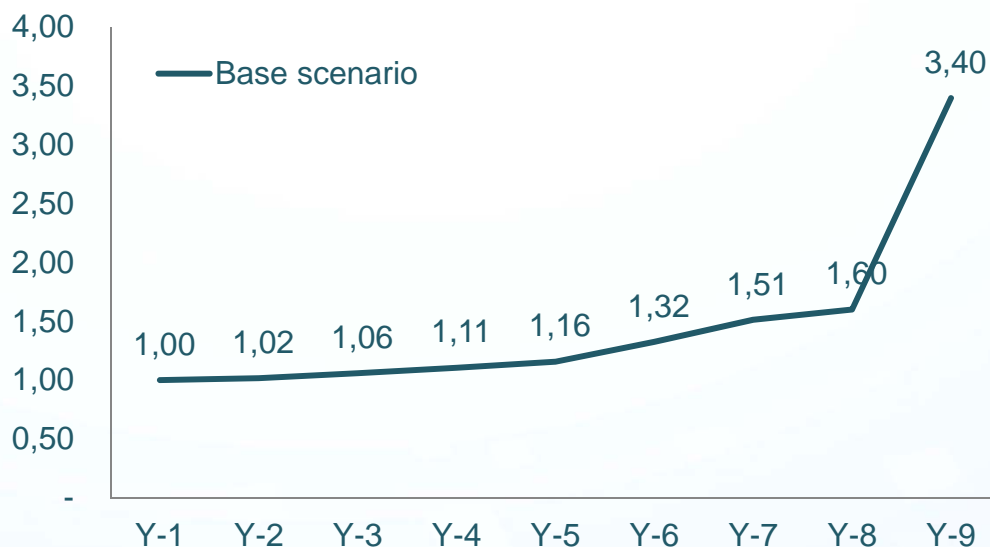
Item	Risk	Mitigation
<b>Geotechnical</b>	Rocky Soil	Review prior use
	Inadequate soil stability	Perform desktop and preliminary geotechnical analysis
	Buried obstructions	
<b>Panel/System Performance</b>	Underperformance from design conditions	Perform bankable resource modal using high-quality data set.
		Procure high quality panels from a “Tier 1” supplier with track record for quality performance.
		Perform regular maintenance
		Verify electrical loss calculations in design prior to system modeling
<b>Panel Warranty Implementation</b>	Panel underperformance or malfunction	Perform rigorous quality control at installation
		Implement a comprehensive warranty contract with vendor that includes incidental costs related to panel trouble – shooting and replacement (not just cost of new panel)
<b>Inverters and Balance of Electrical Equipment</b>	Malfunction	Procure from a Best-in-Class company.
	Underperformance	Plan for an inverter replacement
	Replacement	Regularly monitor inverter health remotely and during inspections

Item	Risk	Mitigation
<b>Security</b>	Theft or damage due to lack of security	Install perimeter fencing
		Install CCTV monitoring
<b>Revenue Generation/ Credit</b>	Accounting for electricity generated and sold	Agree on point of sale with off-taker.
		Install utility-quality metering equipment
<b>Encroachment of Vegetation and Shading</b>	Grasses and plants growing on site will shade system and otherwise interfere with system performance	Perform regular landscape maintenance
<b>Wind Load on Equipment</b>	Areas with high winds and storms can damage panels and equipment	Foundation designs must incorporate appropriate wind design criteria.
<b>Interconnection</b>	Utility-required interconnection	
	Transmission and system upgrades become excessively costly or impact system performance	Engage the utility early and identify potential costs
		Apply reasonably conservative costs to model as data becomes available



# Case Study: Project DSCR vs Project Reliability

**Scenario-1: base scenario**



**Scenario-2: with 20% of cost over-run**



**Scenario-3: with 20% of cost over-run & 17,5% of CF (Year-1)**

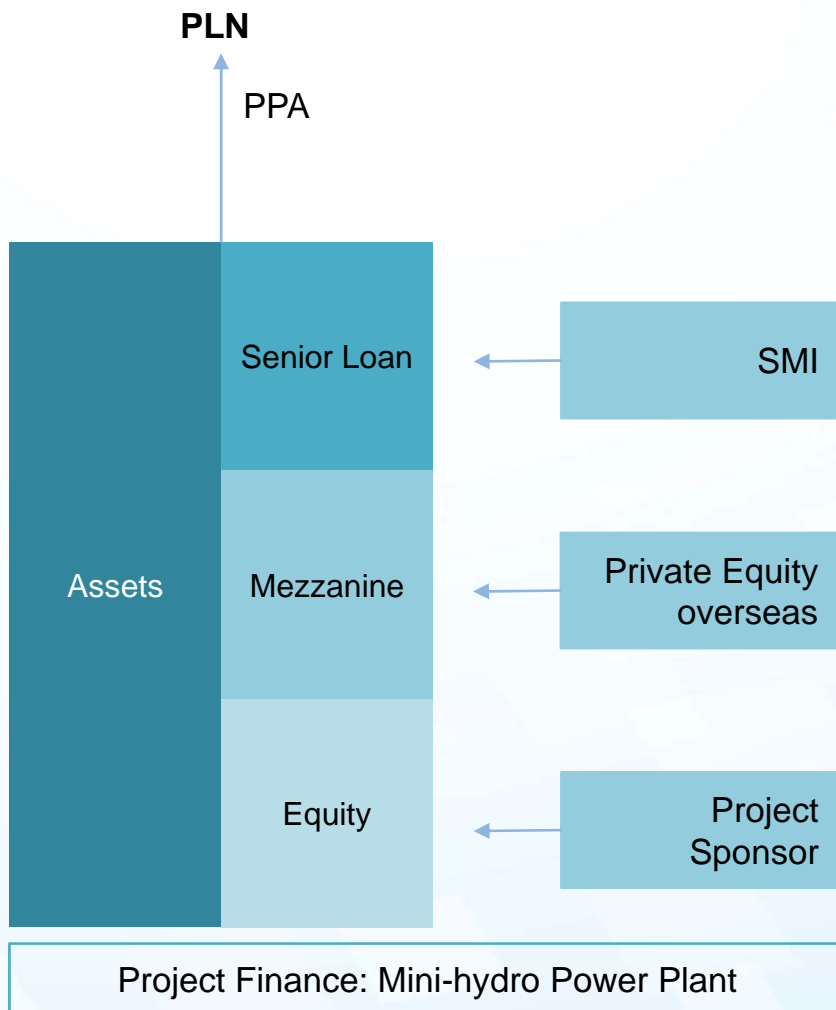


- The Debt Service Coverage Ratio (DSCR) is the ratio of cash available for debt servicing to interest, principal and lease payments.
- It is a popular benchmark used in the measurement of an entity's (person or corporation) ability to produce enough cash to cover its debt (including lease) payments. The higher this ratio is, the easier it is to obtain a loan.
- The minimum DSCR, particularly for new sector, for the banking acceptance is about 1.4-1.5 x

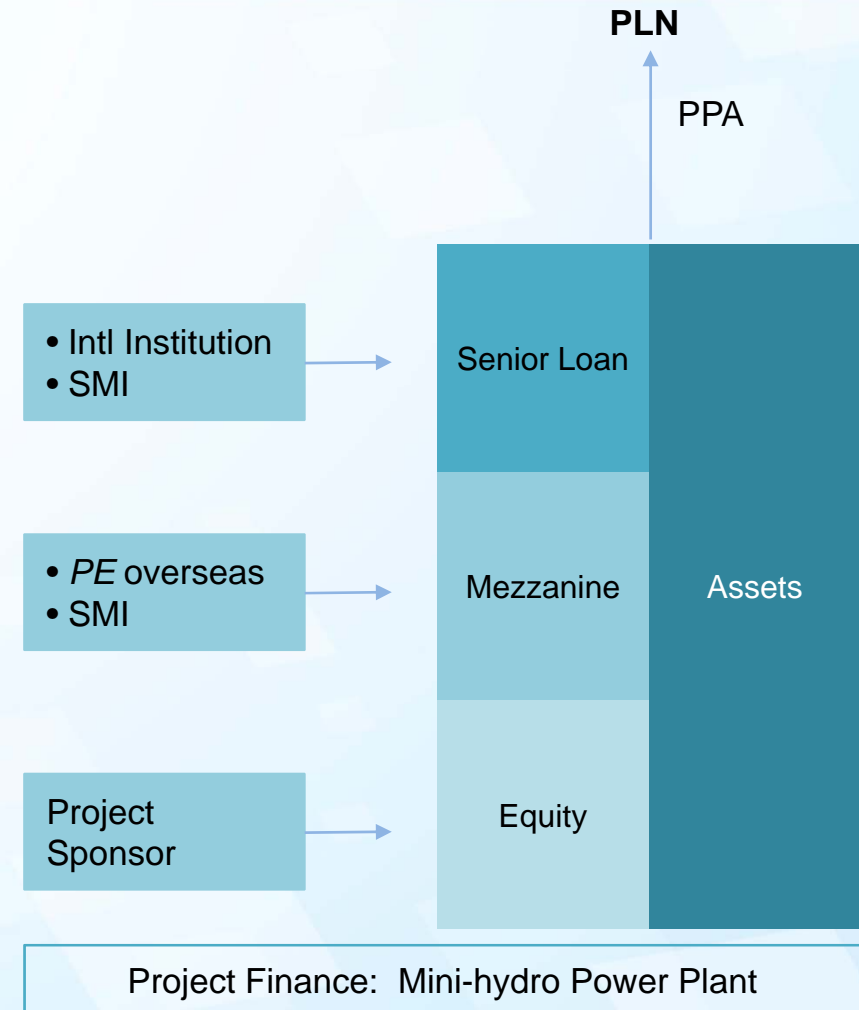
## Case Study: Improving Project Bankability

	Indicative Ratio	Remarks
Senior debt	<ul style="list-style-type: none"> <li>Financing size = 30%</li> </ul>	<ul style="list-style-type: none"> <li>Indicator of project's bankability</li> <li>With mezzanine portion, senior lenders will more secure or comfortable to finance the project</li> <li>Limitation of senior debt portion due to new sector</li> <li>Using cash waterfall mechanism</li> </ul>
Mezzanine	<ul style="list-style-type: none"> <li>Financing size = 40%</li> </ul>	<ul style="list-style-type: none"> <li>Using bullet payment mechanism for principal</li> <li>Reduce cash flow's burden during senior debt's tenor</li> <li>Using cash waterfall mechanism</li> </ul>
Equity	<ul style="list-style-type: none"> <li>Equity size = 30%</li> </ul>	<ul style="list-style-type: none"> <li>Equity sponsor still has room for excess cash</li> <li>Using cash waterfall mechanism</li> </ul>

# Case Study: Financing Structure in RE project



- SMI as a Senior Lender
- PE as a Mezzanine Lender



- SMI and International Institution (Co-financier) as a Senior Lender
- On the next stage: PE overseas & SMI as a Mezzanine Lender

# THANK YOU FOR YOUR KIND ATTENTION

## Disclaimer

All information presented were taken from multiple sources and considered as true by the time they were written to the knowledge of PT Sarana Multi Infrastruktur (Persero). PT Sarana Multi Infrastruktur (Persero) can not be held responsible from any inaccuracy contained in the material. PT SMI follows all internal and external guidelines and regulations that govern the evaluation process on determining the financing feasibility of an infrastructure project. Every decision to finance or not to finance a project is therefore based on a responsible and thorough due diligence process.

Any complaint in the process of financing irregularities can be submitted to:

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Corporate Secretary PT SMI

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Fax : +62 21 5785 4298

Email : [corporatesecretary@ptsmi.co.id](mailto:corporatesecretary@ptsmi.co.id)

Public complaints on PT SMI service will be kept strictly confidential and handled by a special committee to ensure that complaints are addressed appropriately.