Risk Management on PPP Transactions

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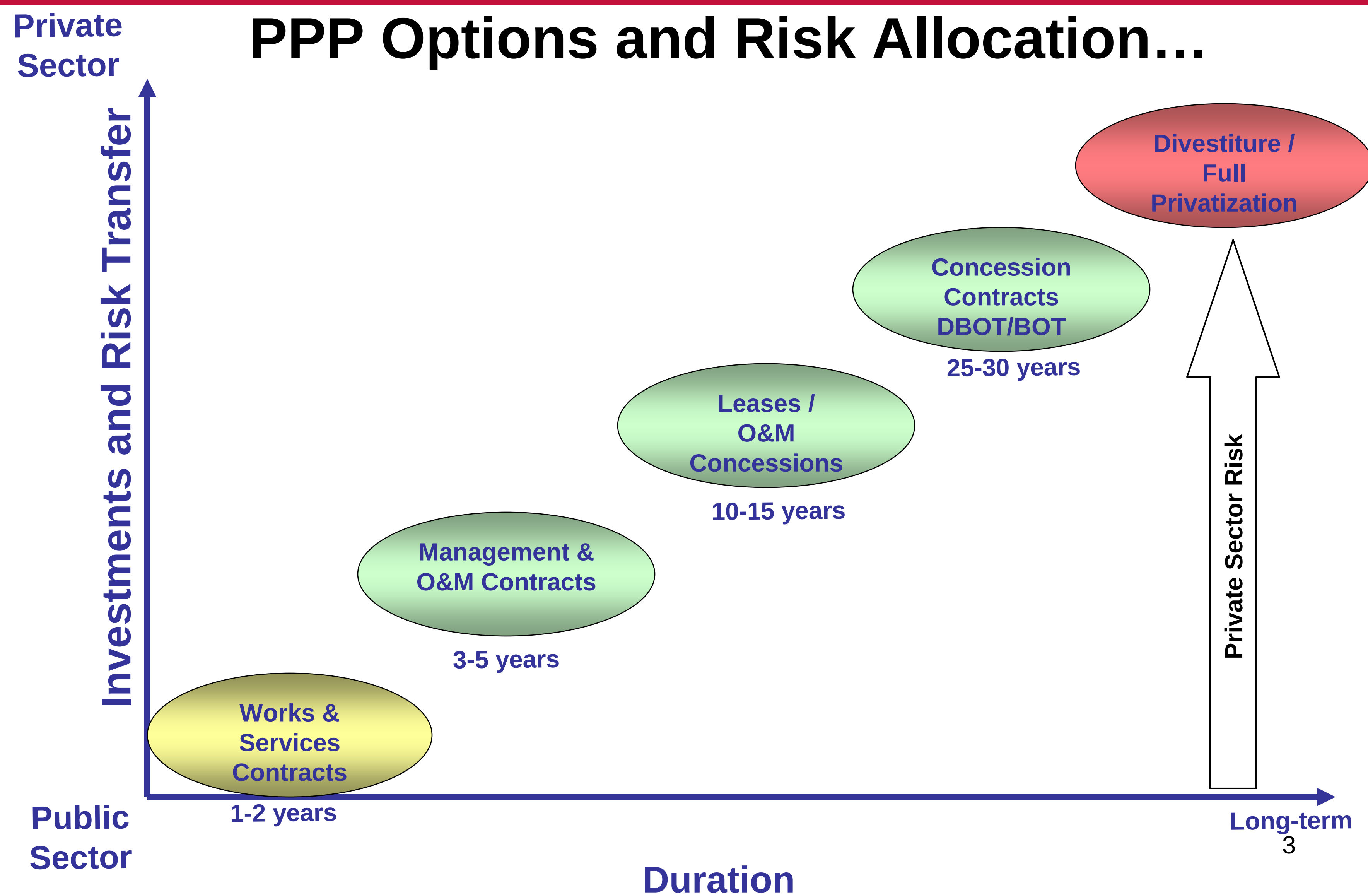
Why is Risk Management Key to Successful PPPs?

- RM: The process of systematic identification and quantification of risks; Followed by the implementation of strategies to eliminate/minimize risks and to reduce the consequence of a risk event occurring
- Fundamental to this process is the clear identification of each possible event that could result in a PPP project failing to perform to the level of initial expectation
- Efficient risk allocation and mitigation is essential to bring infrastructure PPP projects to financial closure
- Project risks & contractual framework determine financing costs
- **Risks should be allocated to the party best able to understand and manage them. If not, project may still be bankable, but at a higher cost**

PPP Options and Risk Allocation…



Common Allocation of Risk Categories

Public ⟷ **Shared** ⟷ **Private**

Public

- Right of way/site availability
- Political
- Legal framework

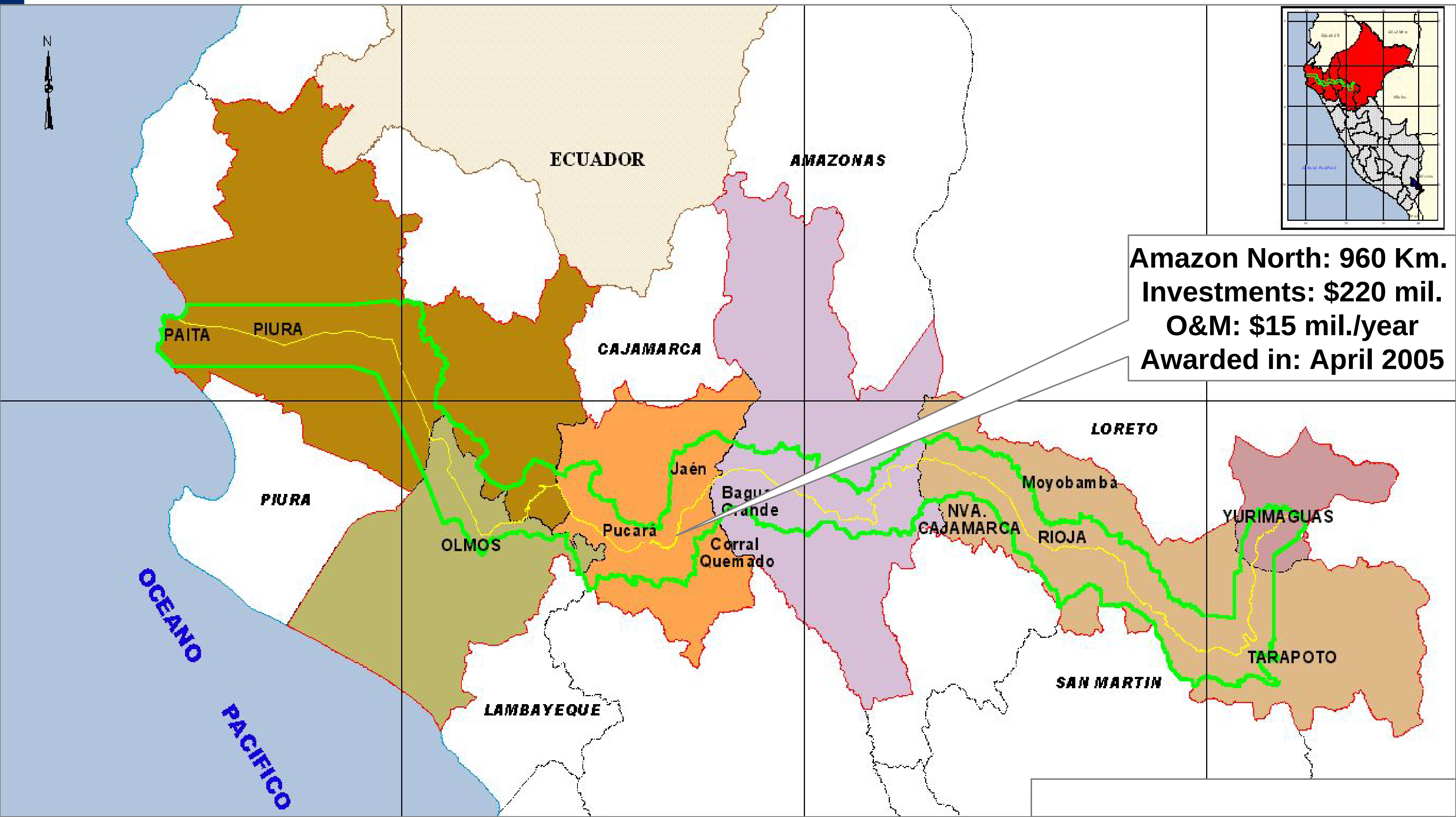
Shared

- Market / Revenue: volumes and tariff/tolls
- Regulatory: tariff regime, tax law, environmental regulations
- Exchange rate / Convertibility
- Force Majeure

Private

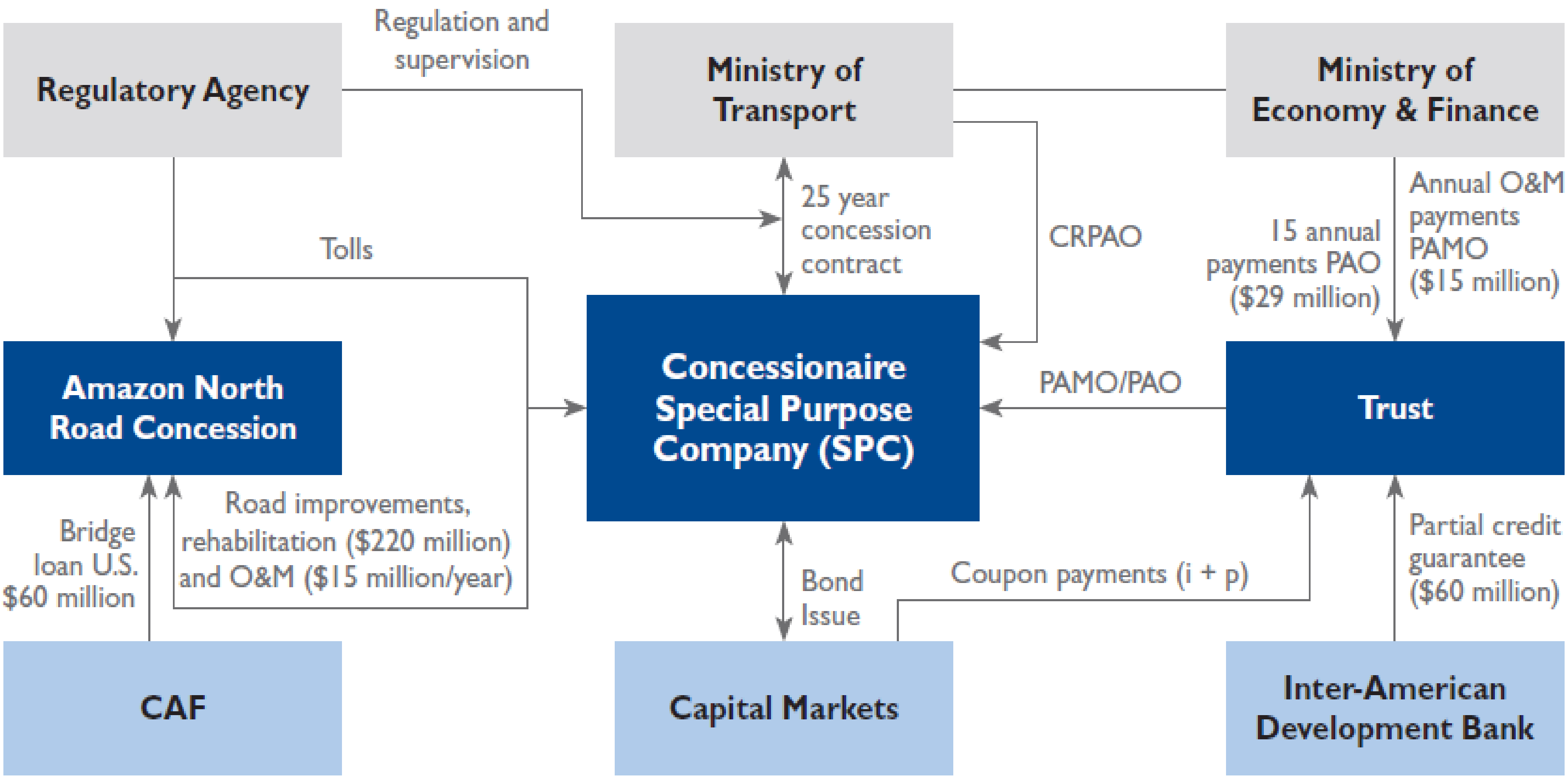
- Design/engineering
- Construction: Cost overruns / delays
- Technology
- Financial
- Operational performance
- O&M costs

Risk Management: the Amazon North Highway Concession

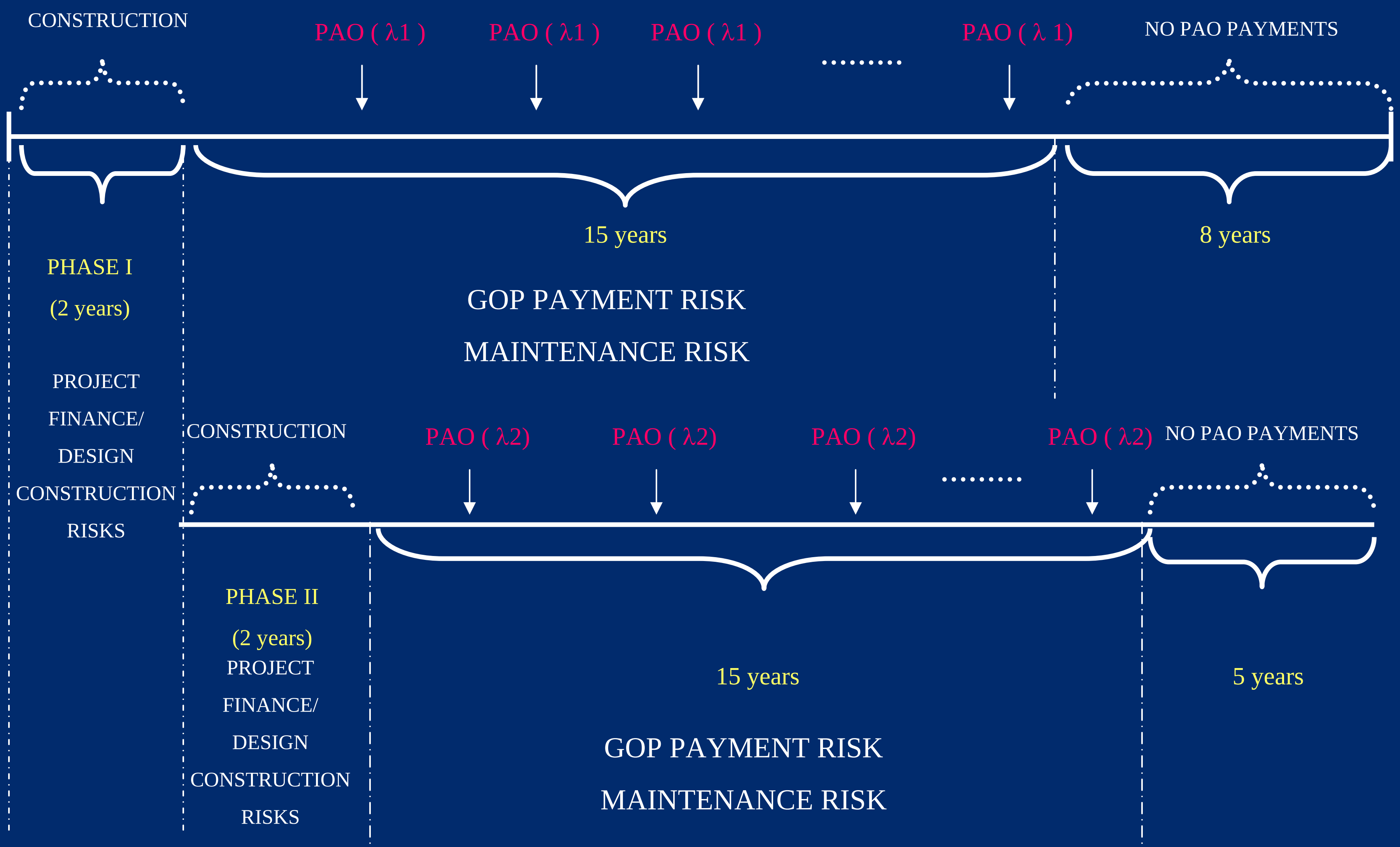


Amazon North: 960 Km.
Investments: $220 mil.
O&M: $15 mil./year
Awarded in: April 2005

THE AMAZON NORTH TRANSACTION STRUCTURE



Amazon North: Key Risks for Long-Term Financing



Design/Engineering Risk

- Allocation: Concessionaire. Except in "critical areas" with geological problems (approximately 0.5%)
- Mitigation:
  - Areas with geological problems identified in Contract
  - For proposal all bidders use same engineering design solution
  - Concessionaire given a period of 2 years to evaluate condition of "critical areas" and to propose alternative solutions
  - Contract establishes procedure to evaluate/approve alternative solutions and to compensate concessionaire if the approved solution implies additional costs

Periodic Maintenance (PM) Costs Risk

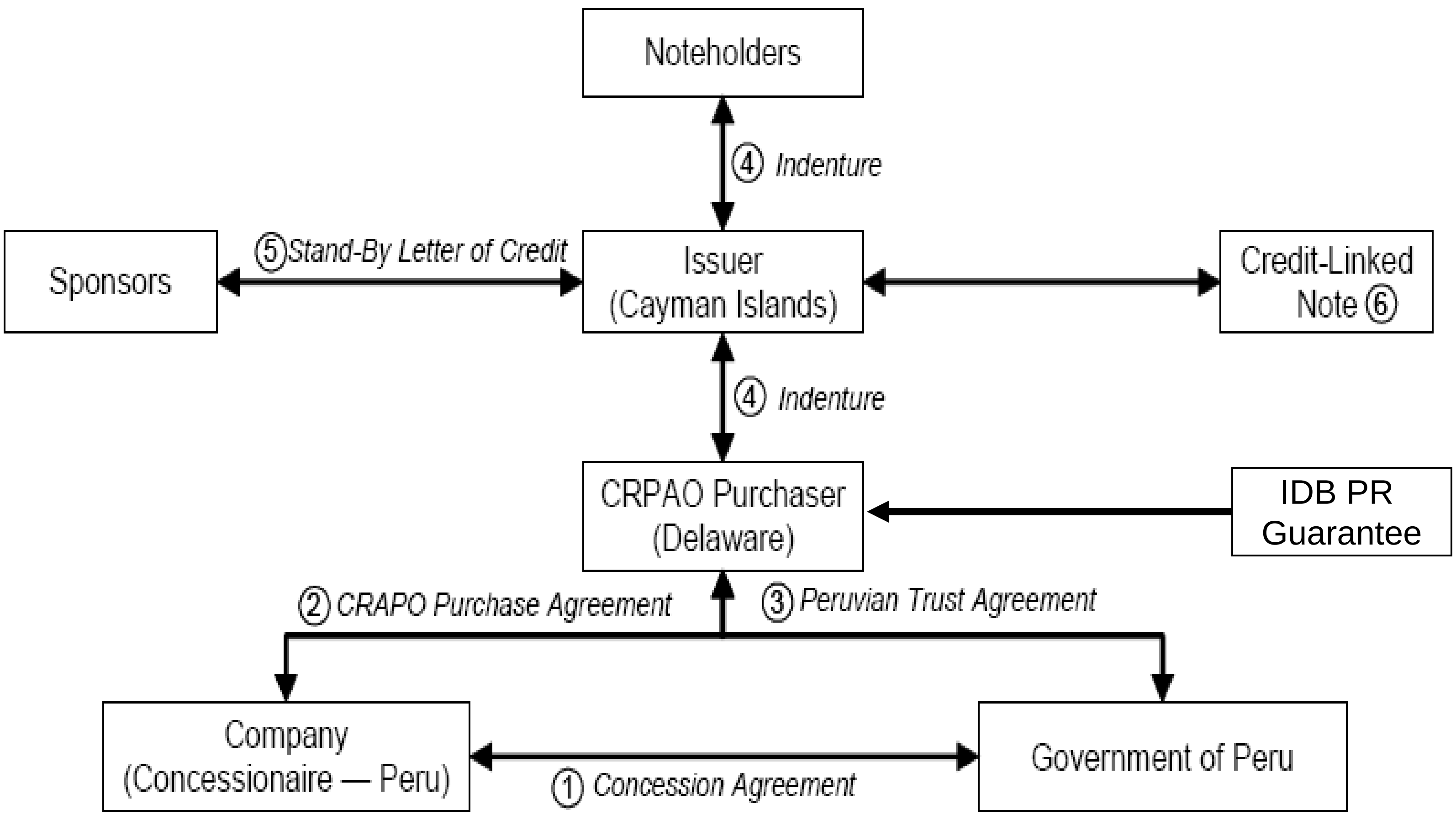
- Allocation: Routine and Emergency risk assumed by Concessionaire; PM risk is shared with GOP
- Mitigation:
  - Concessionaire establishes a Periodic Maintenance Account (CMAP) in a Trust
  - The account is funded with $3.6 million of each PAMO
  - When PM costs are established, the money is withdrawn from CMAP
  - If funds are insufficient, GOP/MTC covers the difference up to amount established contract

Construction/Project Completion Risks

- Allocation:
  - Construction delays and cost overruns: Concessionaire.
  - Right of way right of use is responsibility of GOP/MTC
- Mitigation:
  - Turnkey construction contract; completion bond; on time delivery guarantees;
  - Contract clearly defines right of way area and concession area
- Mitigation to facilitate project finance:
  - Annual payments PAO are prorated to the advance of works
  - The GOP issues Construction Progress Certificates (CRPAO)
  - Each certificate evidences an unconditional and irrevocable obligation of the GOP to make a fixed payment in U.S. dollars
  - The contract provides that CRPAOs are freely transferable;
  - The concessionaire could securitize CRPAOs to finance construction

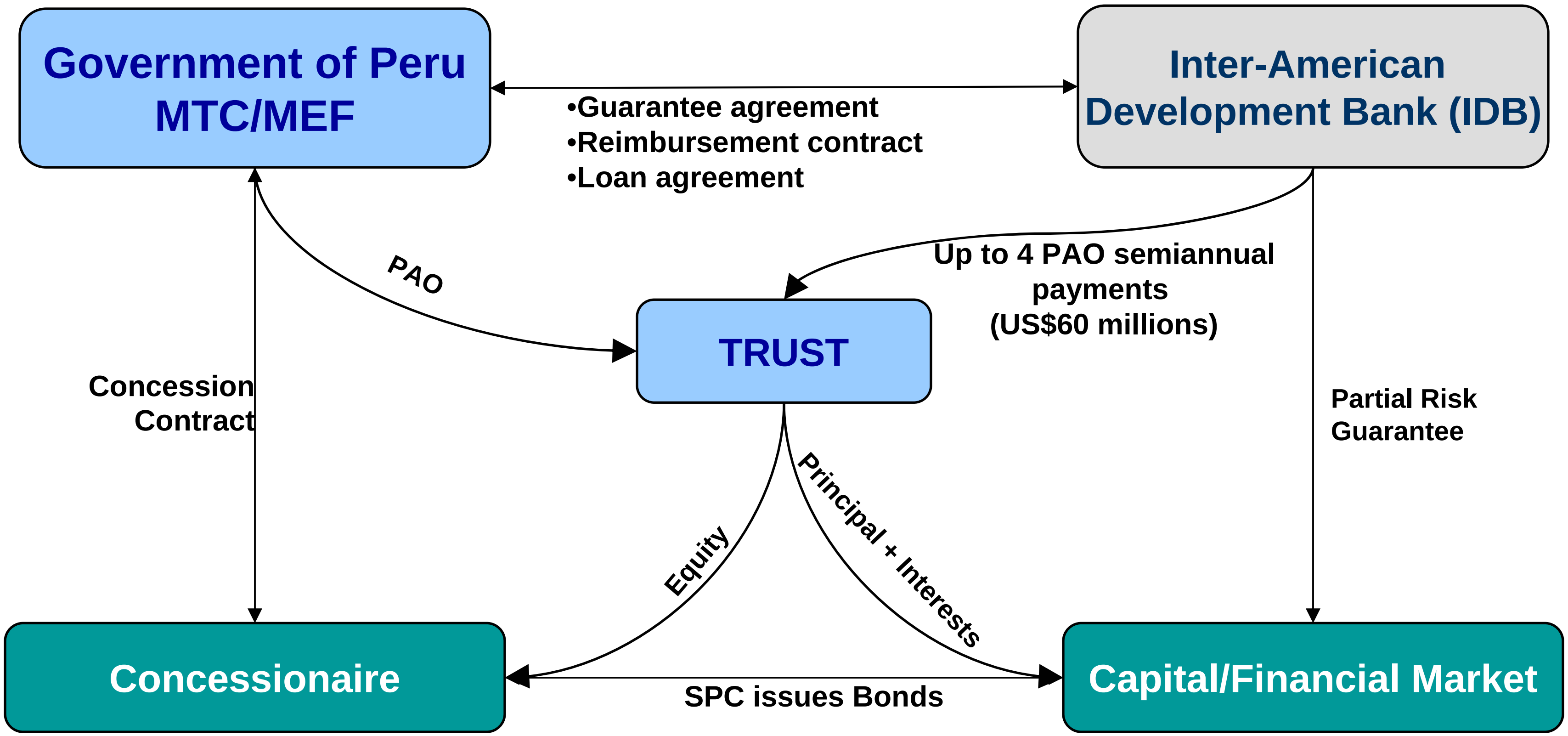
Mitigating Construction Risk: Securitization of CRPAOs

Contractual Agreements



Source: FITCH Ratings

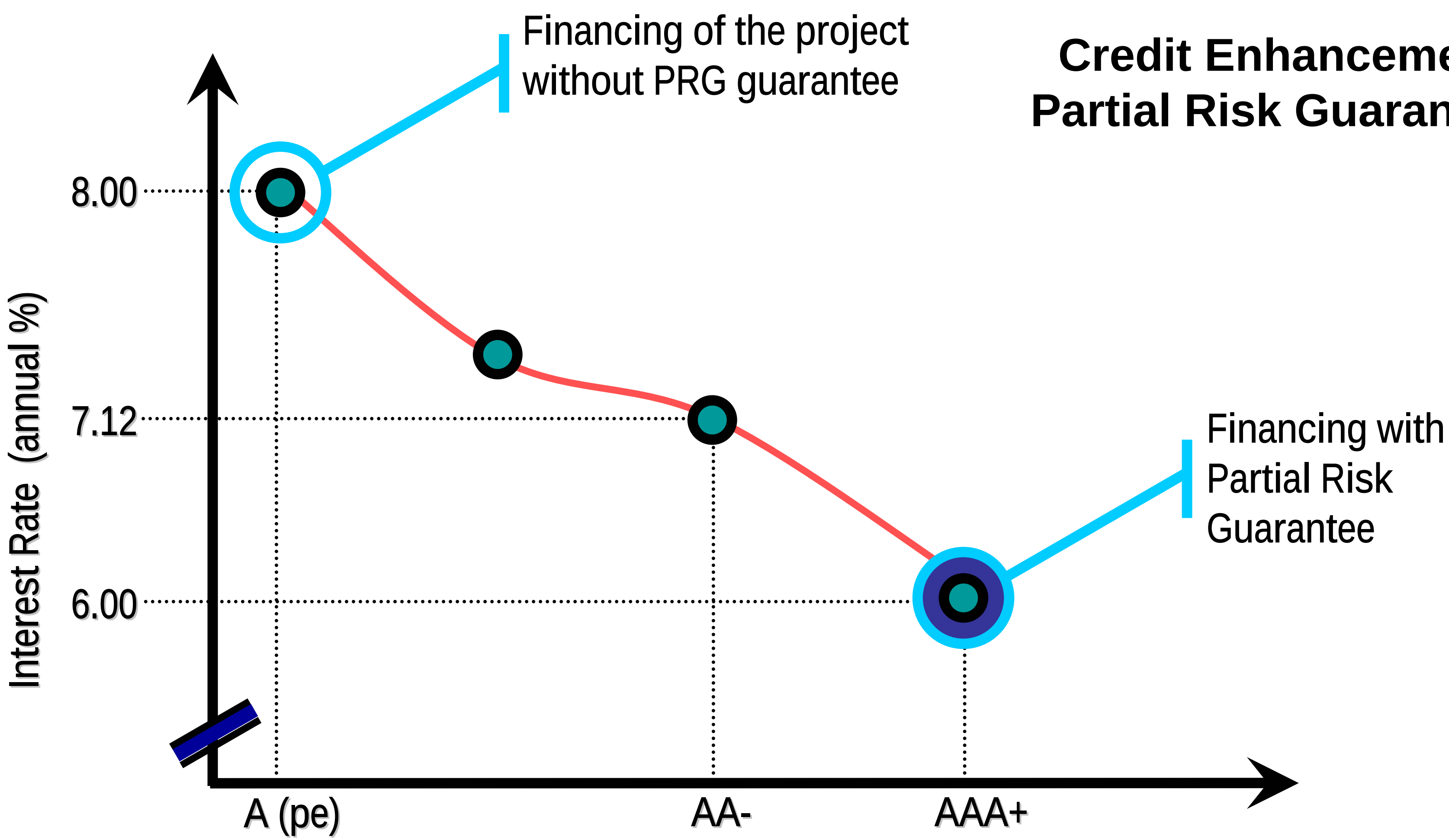
Mitigation of Government Payment Risk: MDB Partial Risk Guarantee – Rolling



The PRG improved local Shadow Credit Rating from A (pe) to AAA (pe)

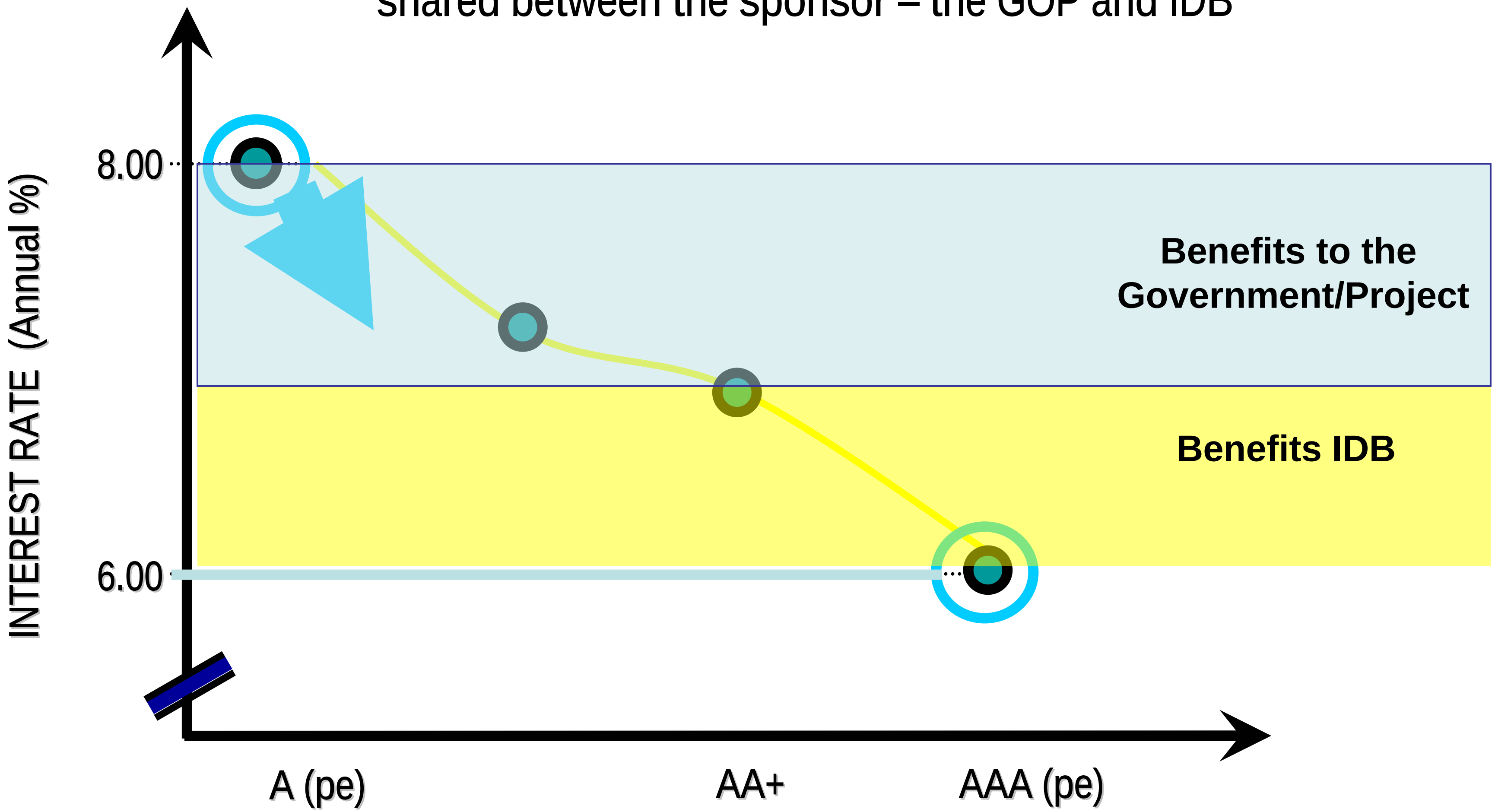
FitchRatings

Credit Enhancement: Partial Risk Guarantee

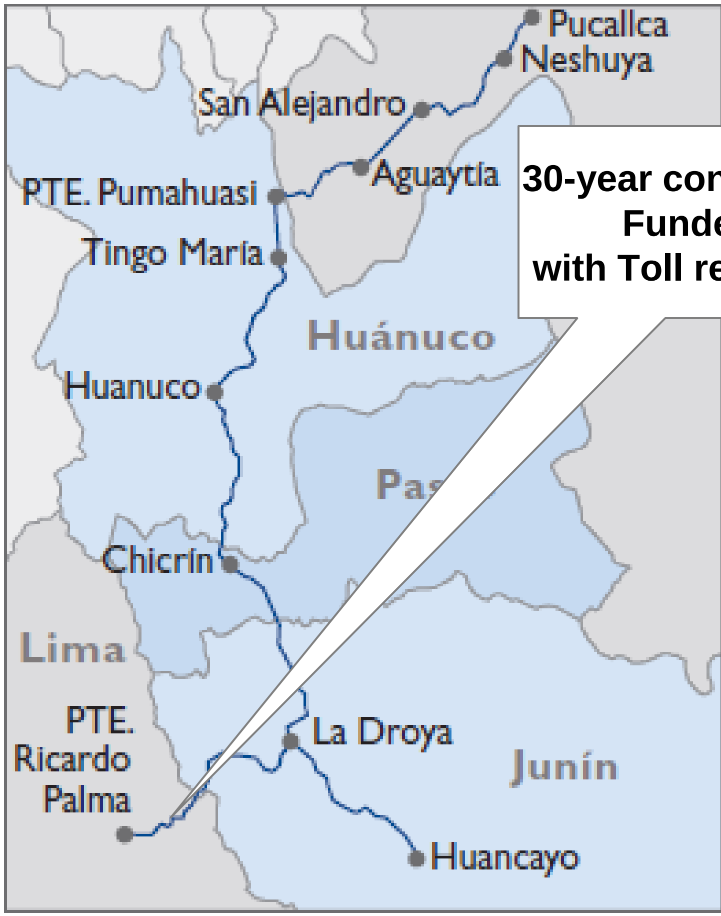


- With local investment grade, the risk premium is lower and consequently the financial cost decreases
- Credit enhancement not only provides better overall financing conditions, but may even mean the difference between having the funds for the transaction and ***NO FINANCING AT ALL...***

The benefits of the PRG (lower cost of debt) are shared between the sponsor – the GOP and IDB



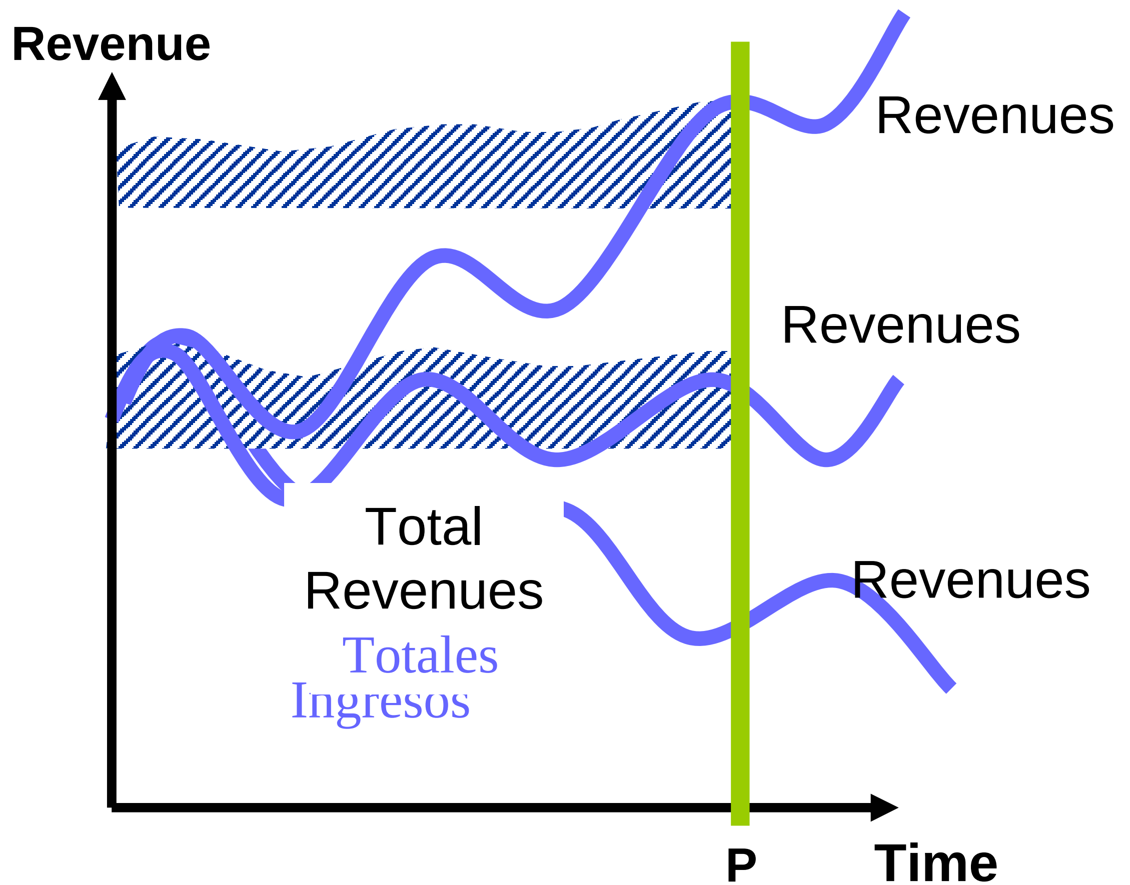
AMAZON CENTRAL HIGHWAY CONCESSION



Mitigating Demand/Revenue Risk

- Cause:
  - Unrealistic demand projections
  - Change in in tariff/toll regime; unwillingness to pay
  - Change in consumption patterns / disruption of service
- Mitigation:
  - Traffic demand projections / willingness and capacity to pay studies
  - Variable term concession / Present Value of Revenues
  - Minimum revenue guarantees
  - Guarantee facility

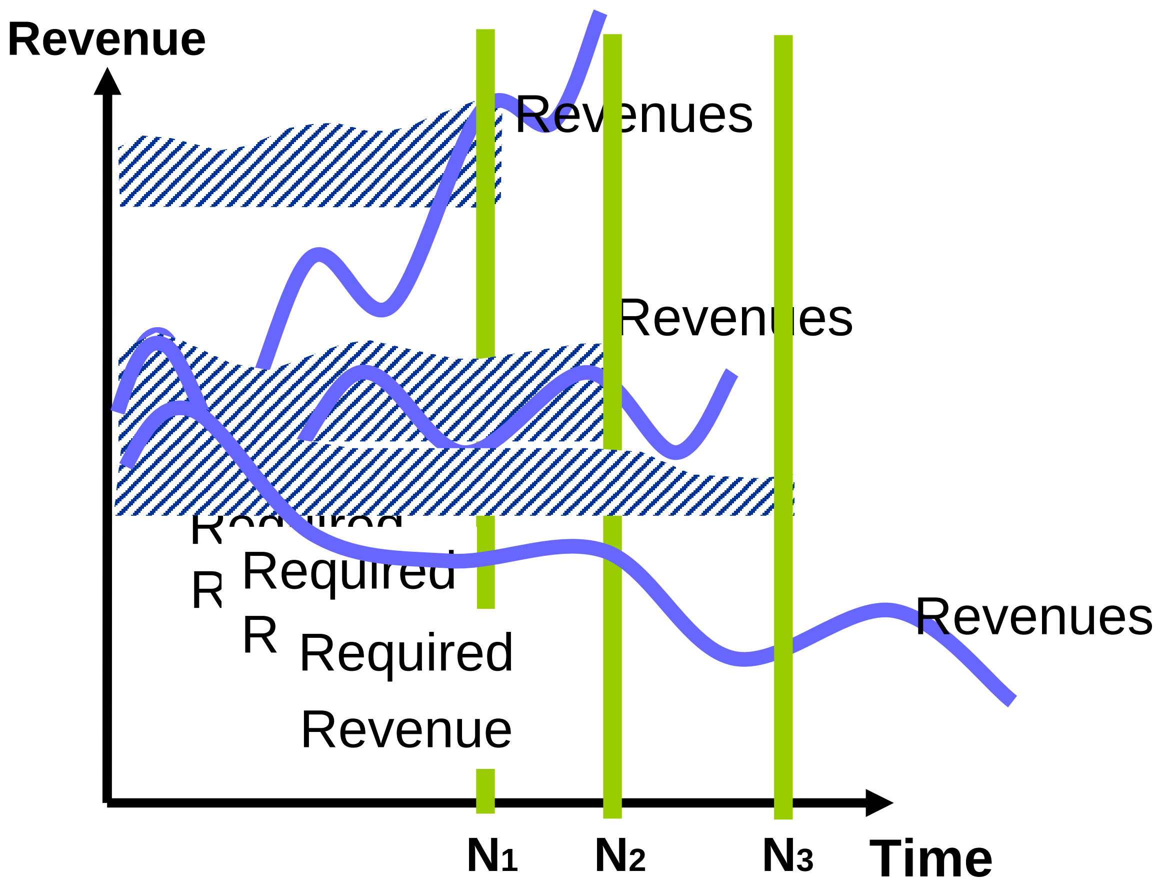
Mitigating Demand Risk: Fixed Term Concession

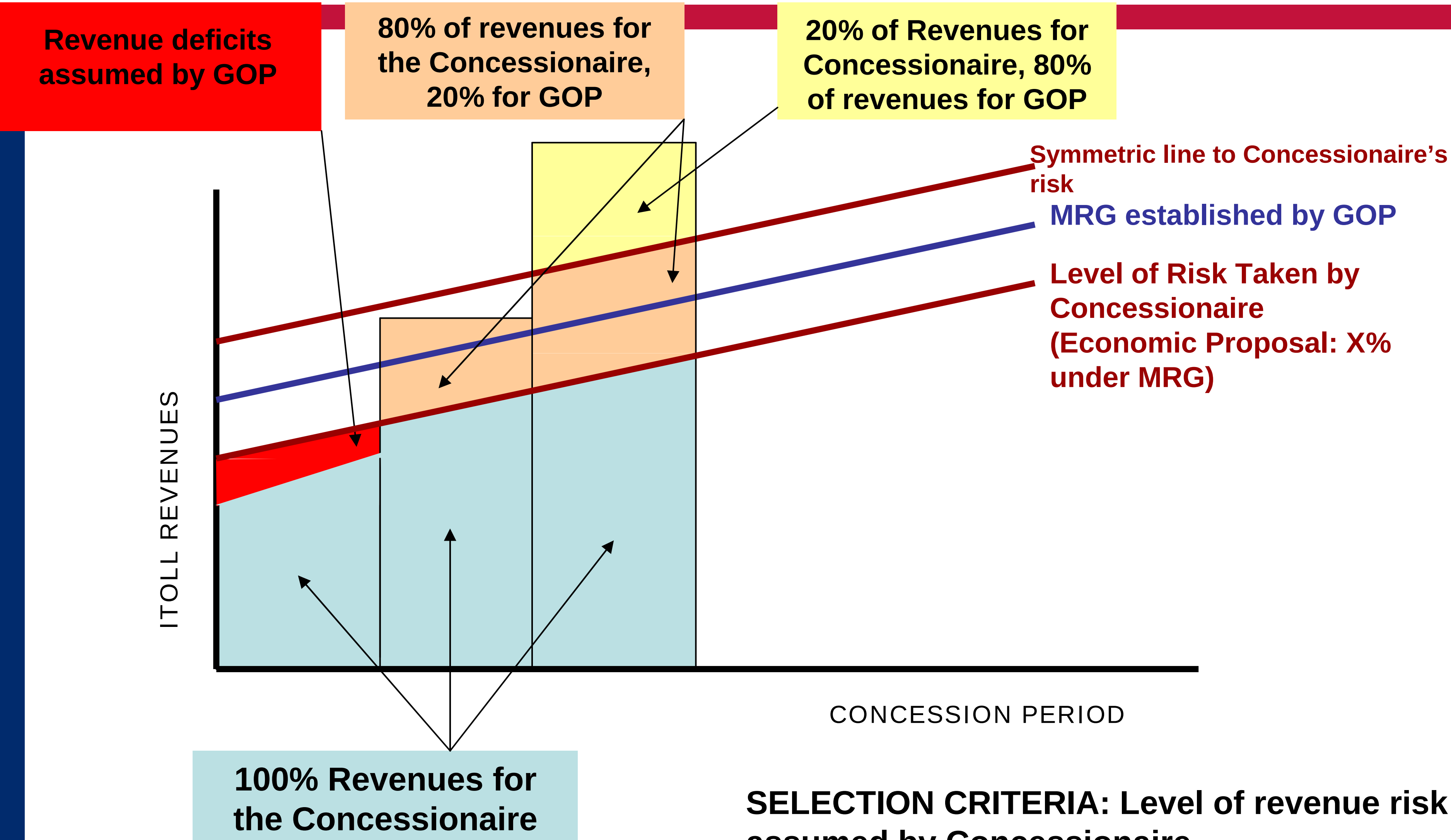


Mitigating Demand Risk: Variable Term Concession

Selection criteria:

Present Value of Revenues required to comply with contractual obligations





SELECTION CRITERIA: Level of revenue risk assumed by Concessionaire

Allocating Demand Risk in Water PPP Projects

- Operators are normally reluctant to accept full demand risk and will seek to pass it onto customers through Tariffs
- The extent to which Demand Risk is shared between public and private actors depends on availability of good information on demand and economic stability
- Rules for adjusting tariffs are a key mechanism for allocating risk among users, the operator and the contracting authority. Tariff adjustment mechanisms:
  - Cost pass-through
  - Tariff Indexation Formulas
  - Tariff Resets

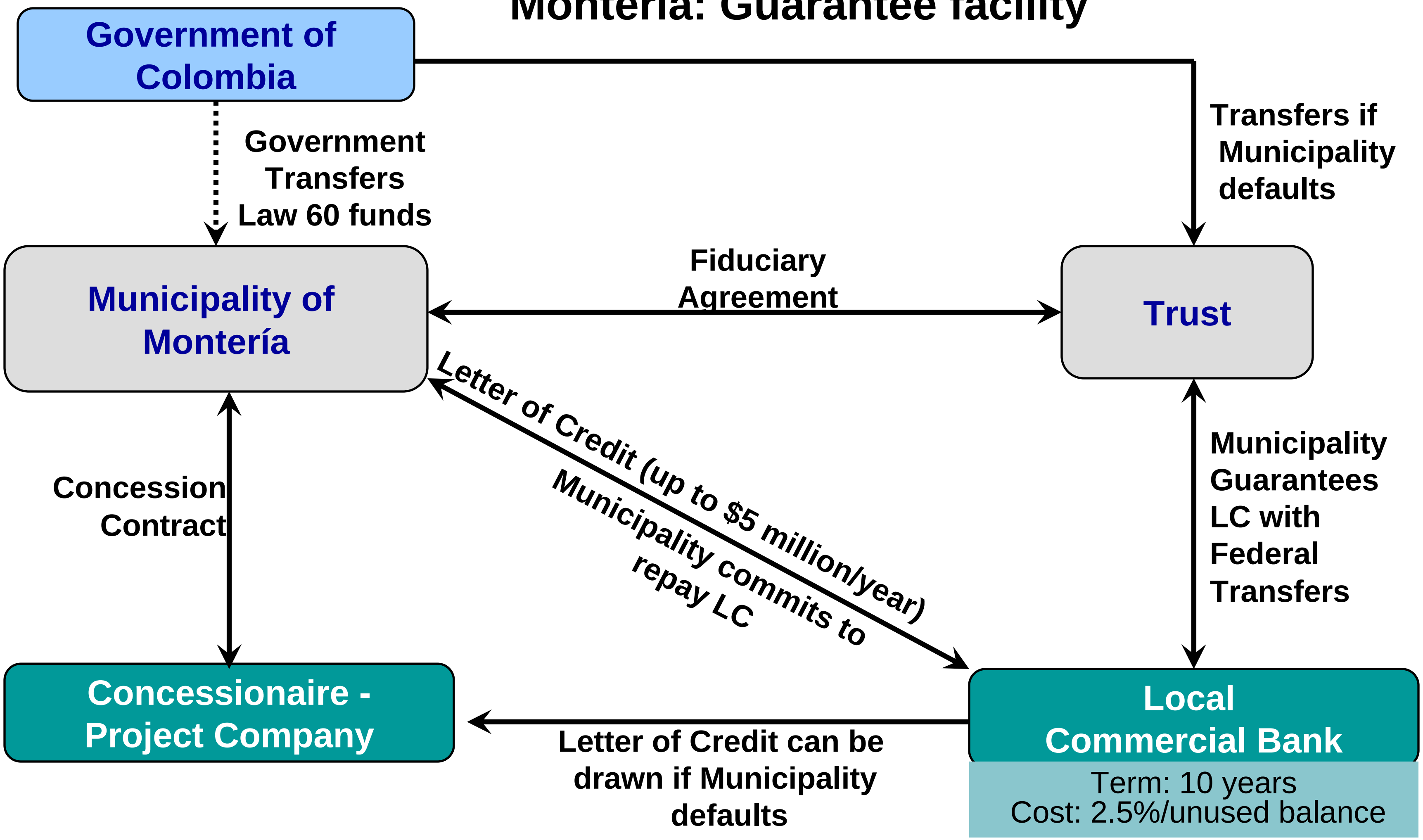
Morocco - Tangiers Water & Electricity Concession: Allocating risk through tariff adjustments

- 25-year concession contract to provide water, sanitation, and electricity services. Coverage: 1.2 million
- Risk allocation: mainly through tariff adjustment formula – tariffs are evaluated annually
- Tariff adjustments in contract allow changes in certain costs to be passed-through customers…
- Bulk water is supplied to the concessionaire by a Government owned body. Bulk water prices not in the control of the Operator
- If the price of bulk water goes up, then the tariffs are increased by the same amount, and the operator neither loses or gains from the change
- Customers bear the risk of bulk water costs

Montería Water Concession: Mitigating Demand Risk

- Allocation:
  - Concessionaire assumes demand risk: acceptability of tariff increases (300% increase)
  - But not political/regulatory risk: unwillingness on the part of the municipality to increase tariffs to the levels established in the contract
- Mitigation:
  - Willingness/capacity to pay survey
  - Gradual increase in a period of 5 years
  - Tariff structure and adjustments for variations in inflation are established in the agreement
  - Tariff Guarantee Facility to protect the concessionaire against revenue shortfalls that might arise from political/regulatory risk. Trigger: refusal, on the part of the local government, or regulatory body, to increase tariffs to the levels established in the contract

Montería: Guarantee facility



Efficient Risk Management is Key to Successful PPPs

- Efficient risk allocation and mitigation is essential to bring infrastructure PPP projects to financial closure
- A low risk situation will result in the highest proportion of private financing at the most favorable financing terms…as risk increases, private lenders and investors are become less willing to commit their funds...
- Risks should be allocated to the party best able to understand and manage them. If not, project may still be bankable, but at a higher cost