

Sustainable Water Integrated Management (SWIM)

Regional Training Event

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Day 3 – Session 4

Risk and Risk Sharing for PPPs

by

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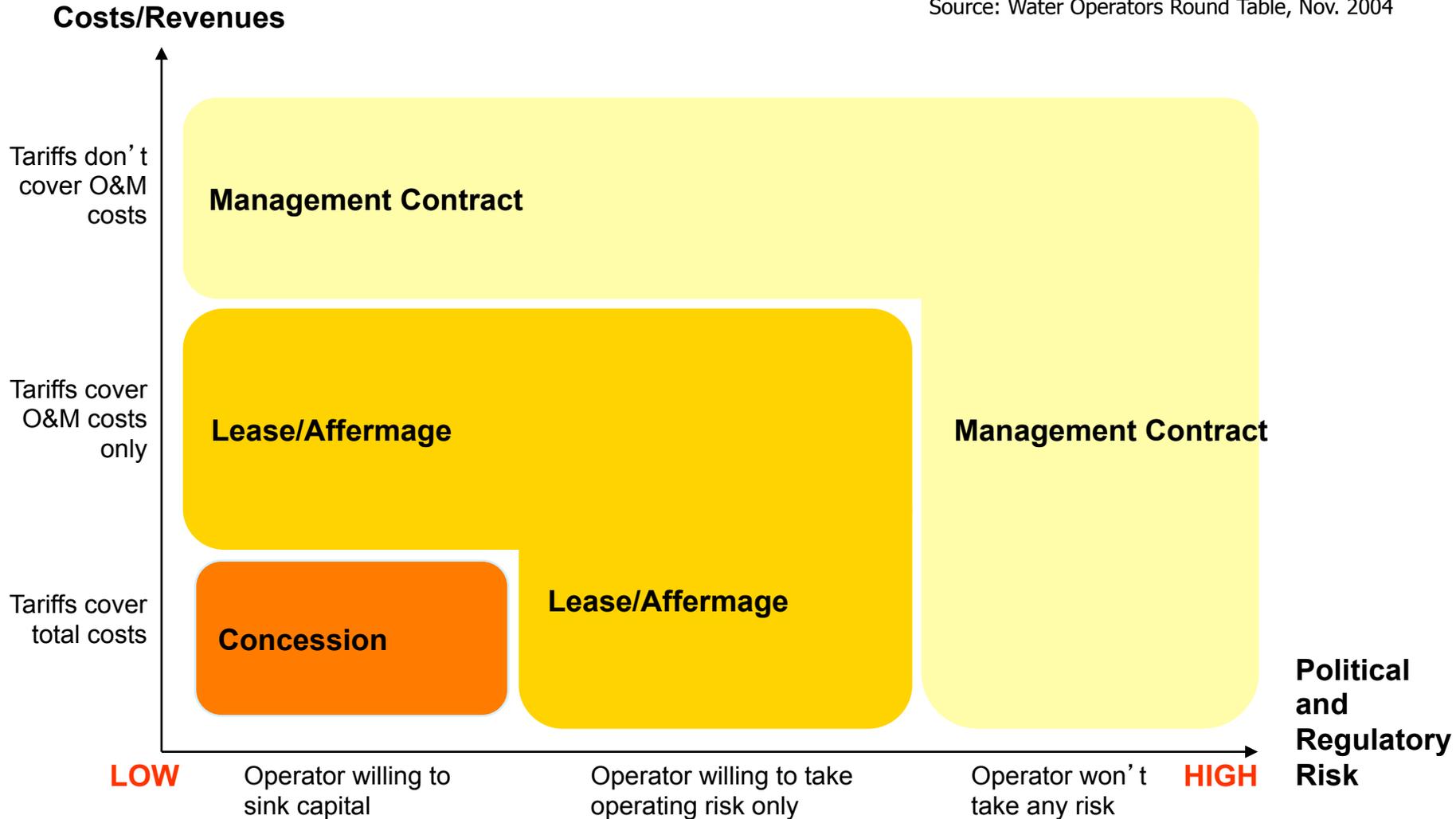
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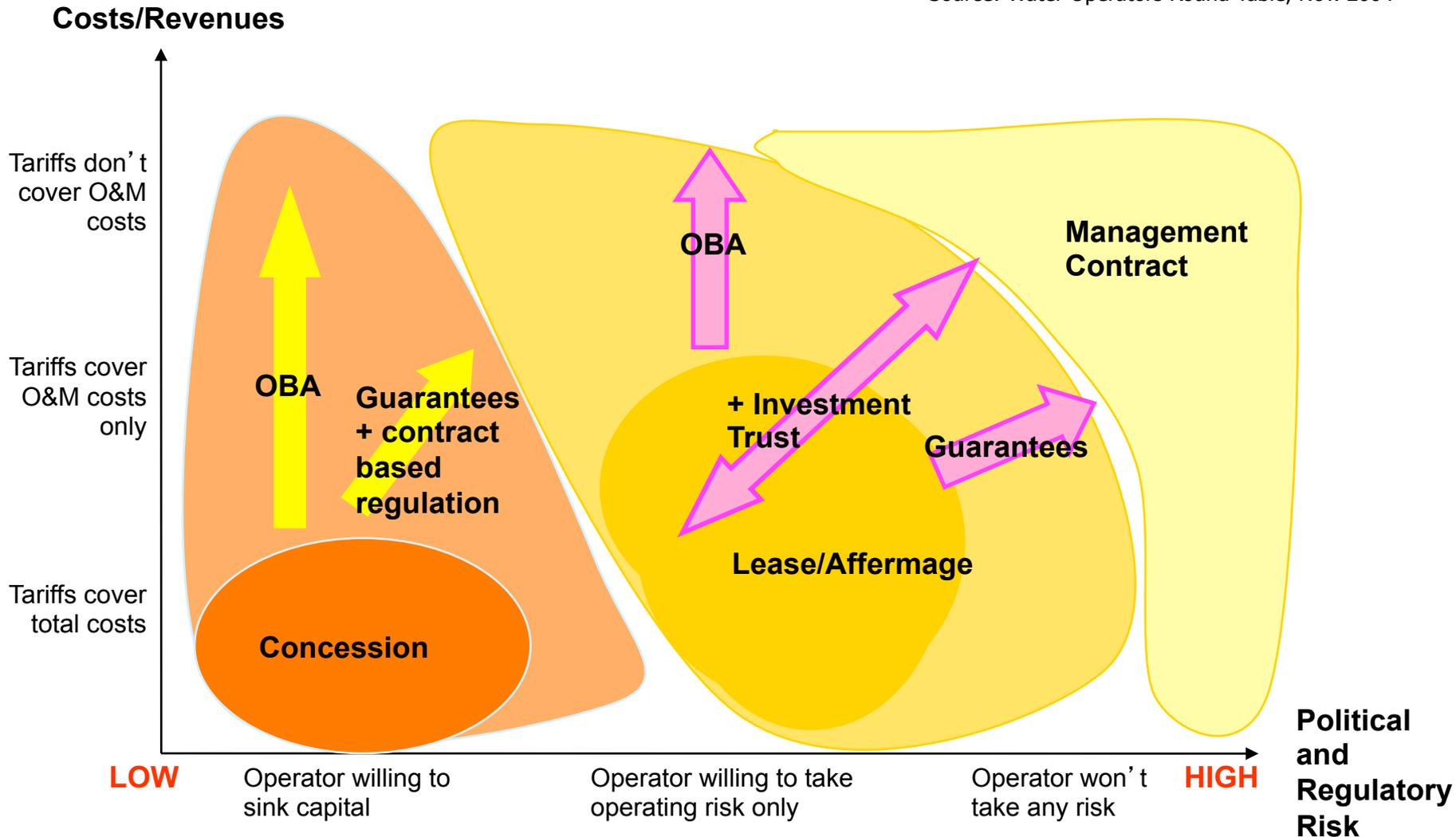
Choosing the 'best' model according to risk and tariff conditions

Source: Water Operators Round Table, Nov. 2004



Choosing enhanced models

Source: Water Operators Round Table, Nov. 2004



Allocation of Risk

- Operational
- Commercial
- Technical
- Financial
- Foreign exchange
- Regulatory

The Basic Process for Allocating Responsibilities

- ◆ Identify the main areas of **Responsibility** involved in delivering the services and the **Risks** associated with each Responsibility
- ◆ Allocate each area of Responsibility and Risk to the party best able to undertake and manage it, taking into account of the parties' ability to:
 - ✓ Predict changes in the relevant factors
 - ✓ Influence or control the risk factor
 - ✓ Control the impact of the risk on the value of the business
 - ✓ Diversify or absorb the risk
- ◆ Design the Arrangement to achieve the best allocation of risks and responsibilities

Checklist - 1

1. Define the major areas of responsibility (management, operations & maintenance, new investment)
2. Define specific responsibilities for each area
3. Identify the risks that are associated with each responsibility
4. Note the direct and indirect relationships between risks and responsibilities
5. Establish how the risks are interrelated

Checklist - 2

6. For each risk, identify which party (the operator, contracting authority or customers) is best able to bear the risk , and in particular who can:
 - ✓ Predict the risk
 - ✓ Influence the risk
 - ✓ Control the impact of the risk
 - ✓ Diversify or absorb residual risk

7. Decide whether the risk should be fully allocated to one party or shared

Checklist - 3

8. Check for any constraints on the ability of the parties to bear risk (e.g. information problems; unwillingness of any of the participants to bear risk they appear best able to manage, etc.)

9. Based on the risk analysis, assign a party to :
 - Assume each responsibility
 - Bear each risk

Operator willing to take Operational Risk if...

- Existing assets are in good shape or rehabilitated
- Supply conditions (power, chemical) are acceptable
- Contractual performance targets are compatible with assets and supply conditions

Operator willing to take Commercial Risk if...

- Coercive measures for non payment are enforceable
- Tariff level and structure are adequate
- Substitutes (e.g. ground water) are regulated
- Proper budgeting and payments of Government water bills exist

Operator willing to take Financial Risk if...

- No or limited equity to be brought in
- Commercial debt can be mobilized on the merits of the Project
- Strong reliance on cash generated by operations
 - ✓ adequate tariff level
 - ✓ low operating costs

Operator willing to take Regulatory Risk if...

Confidence in Regulatory Framework

- Transparency
- Competence
- Independence
- Predictability
- Arbitration

Operator willing to take Foreign Exchange Risk if...

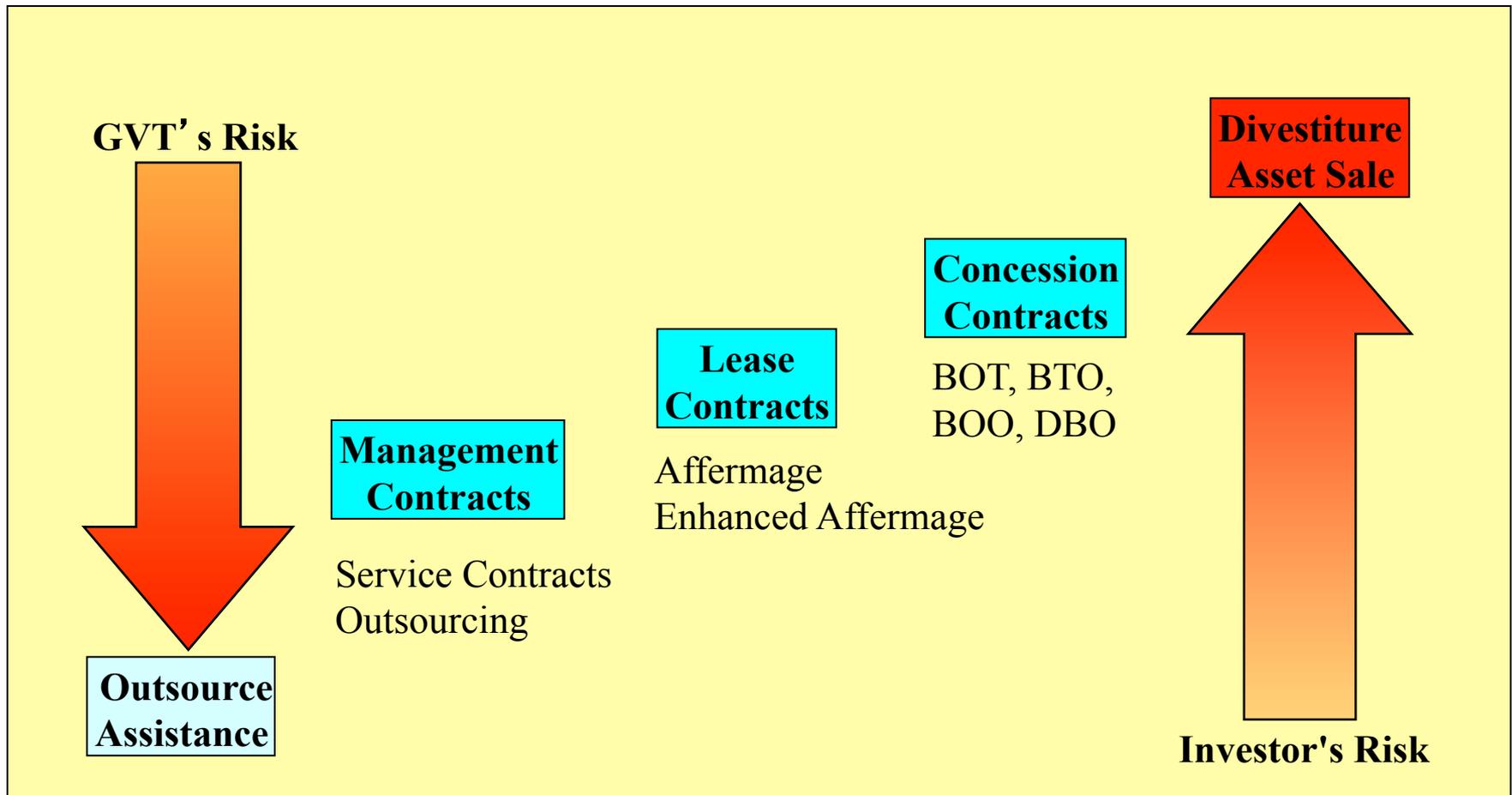
- Most expenses are in local currency
- Tariff is (partially) indexed on exchange rates variation

Risk Acceptability

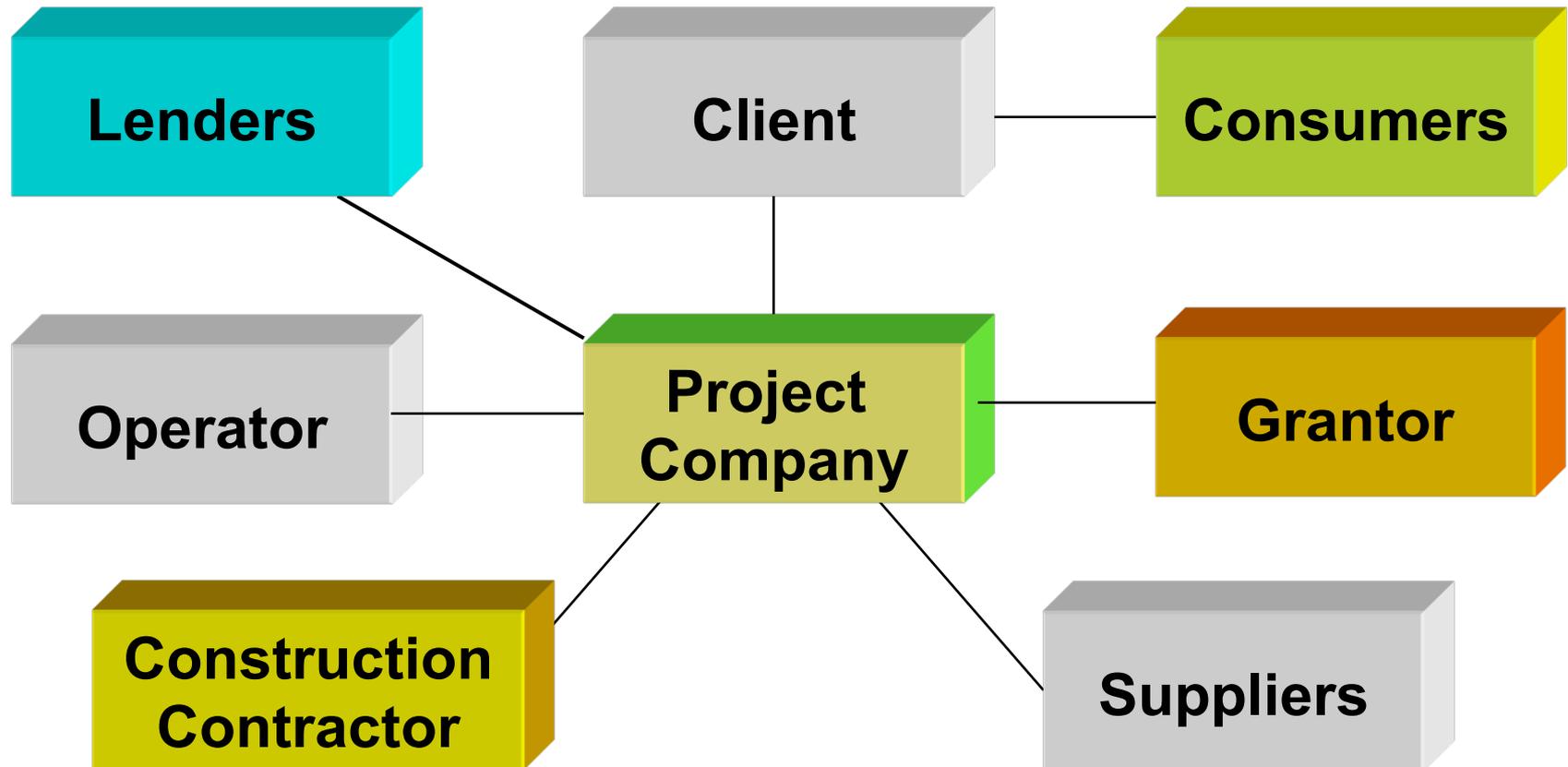
Concessions, Leases, Operating and Management Contracts

	Concession	Affermage / Lease	Operating Contract	Management Contract
Operational	◆◆◆	◆◆◆	◆◆	◆
Commercial	◆◆◆	◆◆	◆	◆
Technical	◆◆◆	◆		
Financial	◆◆◆	◆		
Forex	◆◆	◆		
Regulatory	◆◆◆	◆◆	◆	◆

Choice of Contract for a Balanced Risk Allocation



BOT – Simplified Diagram



Typical scenario for a BOT

- ✓ Bulk water supply can not meet demand, new capacity is needed
- ✓ Distribution system is functioning well, low Non-Revenue Water (NRW)
- ✓ Tariffs allow full cost recovery or can be raised to do so
- ✓ Sector conducive to private sector participation, with political support

Recent new models for public service infrastructure

Types:

- ❖ **DBO** – Design Build Operate
- ❖ **DBF** – Design Build Finance
- ❖ **DBFO** – Design Build Finance Operate

Generic Term: **DB[X]**

The DB[X] Scheme

- BOT's differ from Design, Build and Operate (DBO) contracts in that financing and asset carrying is provided.
- DBO's aim at guaranteeing BOT advantages with limited risk and complexity.
- Successful cases include North America (DBO), China (DBO), Senegal (DBF)

BOT Major Risks

💧 Construction risks

Delay, costs overruns, penalties

Non-acceptance of the plant by the Client

💧 Operation risks

Non-performance of the plant,

Penalties, costs overruns

💧 Financial risks

Non-achieved equity returns expectations,

Financial support to the Lenders in case of SPC default

Risks on which the Project Company has little leverage

- Revenue - Demand Curves = Revenue sufficient to cover costs
- Exchange - Revenue in Local Currency - Costs in Foreign Currency
- Interest Rate - Variations impact costs
- Financing - Availability of Finance when needed
- Floods, Earthquakes etc.
- Political - Changes in laws etc
- Regulatory – tariffs or standards

Managing uncontrollable risks (1)

Risk	Strategy	Party
Force Majeure	Monetizing	Third party
Forced buyouts	Monetizing	Third party
Regulatory changes	Transfer to local parties	Grantor/Client
Interest rate changes	Mitigation	Project Company

Managing uncontrollable risks (2)

Risk	Strategy	Party
Price movements	Mitigation	Project Company
Inflation	Mitigation	Grantor/Client
Currency risks	Monetizing	Third party
Raw water supply	Transfer to local parties	Grantor

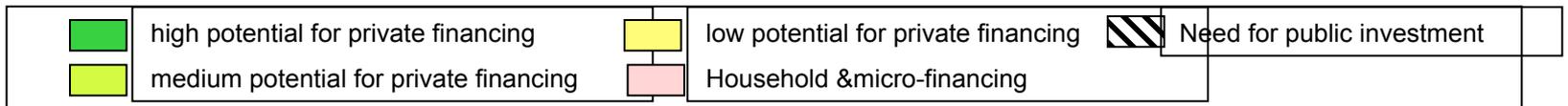
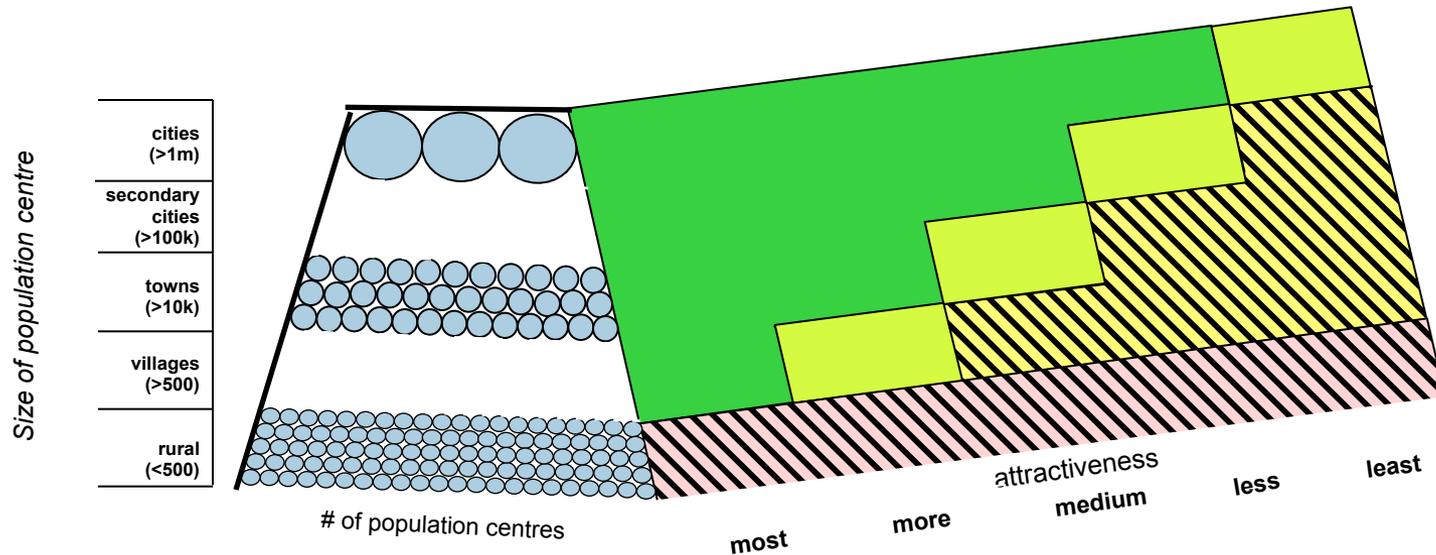
Managing controllable risks (1)

Risk	Strategy	Party
Market demand	Mitigation	Client
Willingness to pay	Mitigation	Client
Delay in approvals	Mitigation	Grantor
Construction delays	Mitigation	Contractor

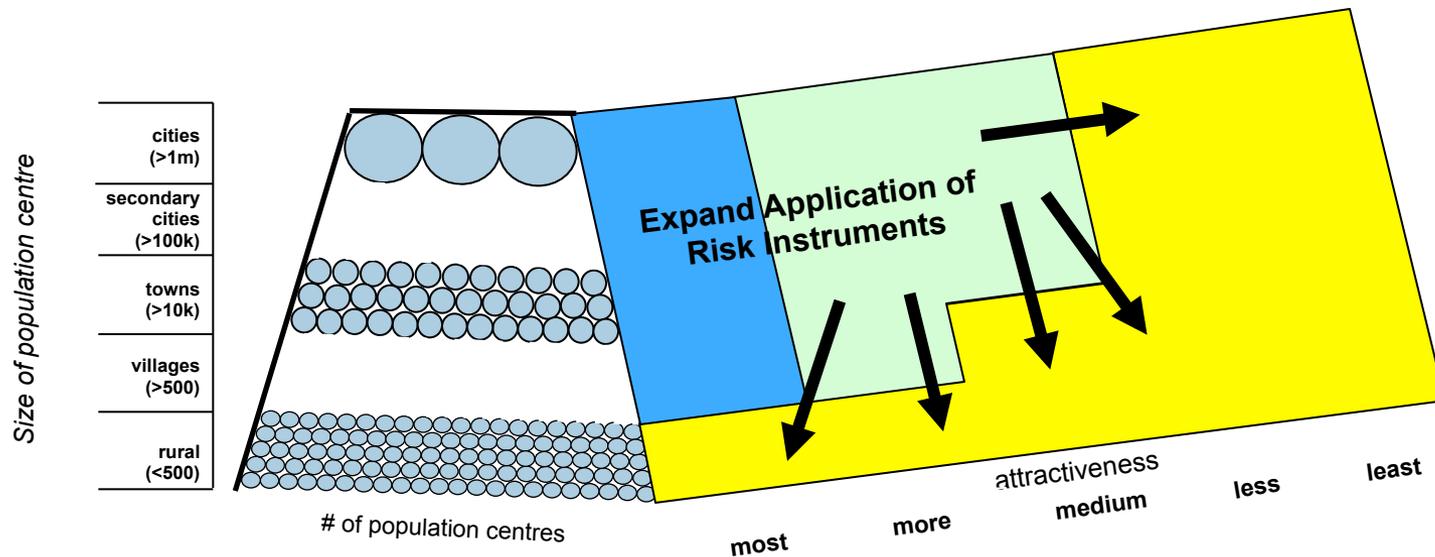
Managing controllable risks (2)

Risk	Strategy	Party
Cost overrun	Mitigation	Contractors
Technical failure of facility	Mitigation	Project company

The market poses special challenges



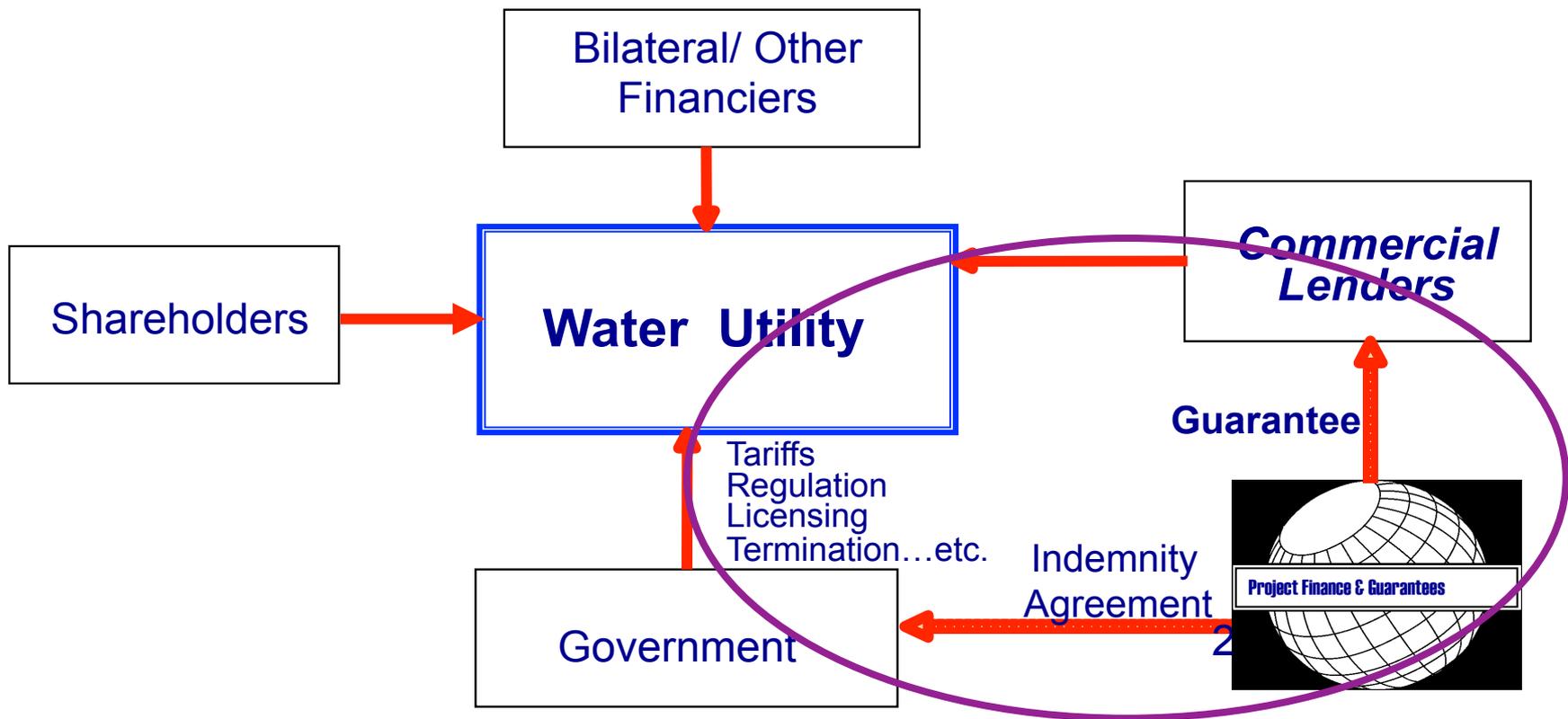
The Risk Mitigation Instruments: Needed, Available ? Used?



	Do not require risk mitigation, Adequately credit worthy		Risk mitigation instruments could be effective: Nearly/marginally creditworthy & reforming
	Risk mitigation instruments will be ineffective: Non-creditworthy and low performing or instruments too expensive		

Partial Risk Guarantee (PRG)

A PRG will cover lenders in case of a default on a covered contractual obligation to a project company leading to a Debt Service Default



Deployment of the PRG

PRGs should be considered in the following situations:

- ❖ Early stages of reform
- ❖ Larger size/riskier operations
- ❖ Operations highly dependent on support/undertakings of weaker governments/municipalities

Where risk mitigation can make a difference

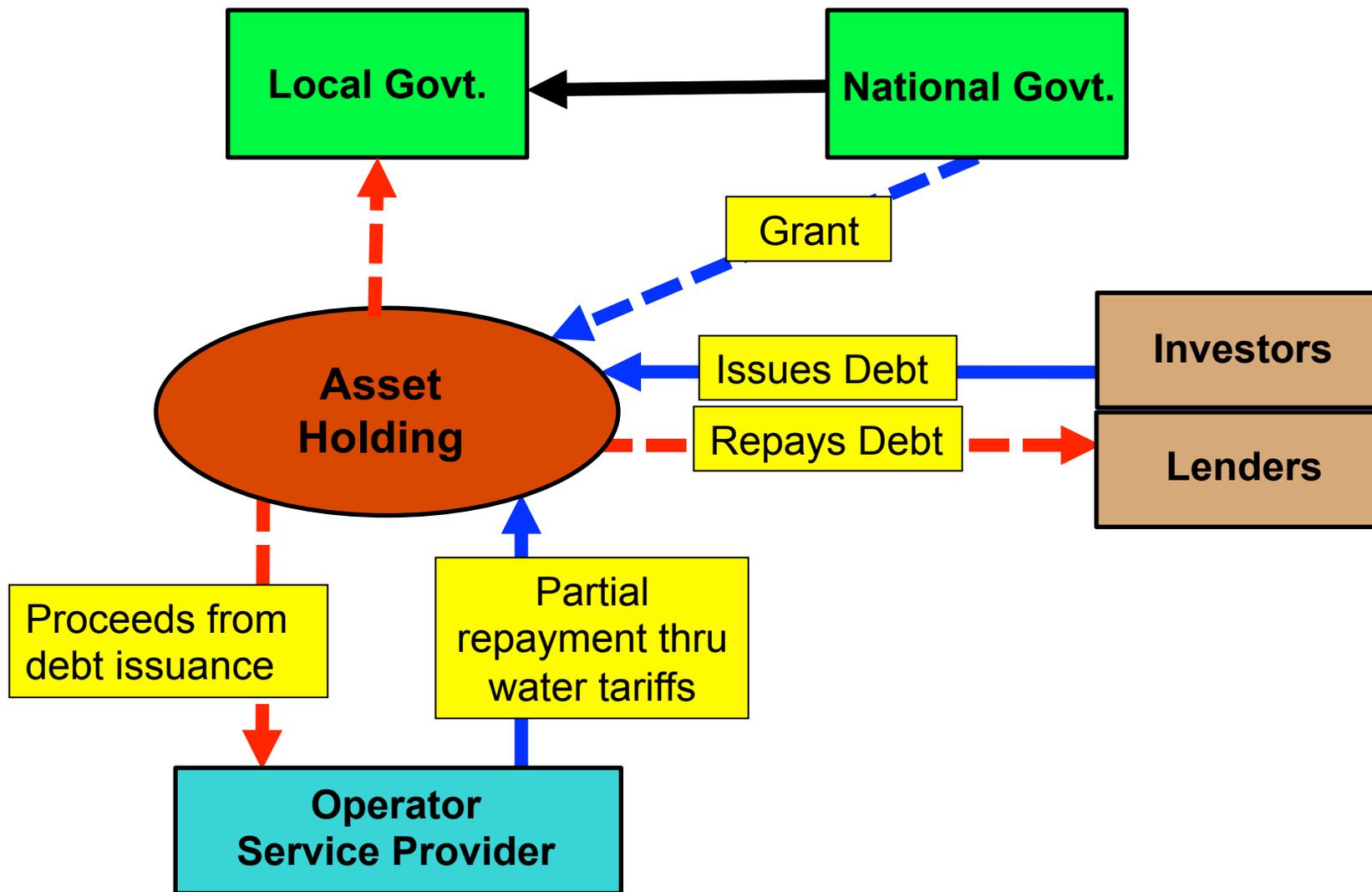
- Adequately Creditworthy – Do Not Require Risk Mitigation
- Near Creditworthiness
- Marginally Creditworthy, but Reforming
- Non Creditworthy and Low Performing

Risk Mitigation Instruments Could Be Effective

Key Questions

- How to **structure** the PPP to create comfort for private investors to take equity?
- How to **create** conditions to attract private sector (debt)finance?
- How to **design** the PPP transaction linking finance to achieving predetermined performance targets?

Financing—Using the Trust / Asset Holding Structure



(Innovative) Instruments to Attract Financing in the WSS Sector

The Trust Structure Concept

◆ Reasons for interest

- ✓ The strongly expressed position of major private international water operators that their interests are fundamentally as operators of such systems, not investors.
- ✓ The need to mobilize capital for rational investment in specific opportunities.
- ✓ The need to improve operations and maintenance of existing facilities and to efficiently manage new and expanded facilities.
- ✓ The inability in many cases of tariffs to cover capital investment, operating costs and return on capital (debt and equity).
- ✓ The weak contractual, legal and regulatory environment for WSS investments, particularly at the sub-sovereign level.

(Innovative) Instruments to Attract Financing in the WSS Sector

The Trust Structure Concept

◆ Key attributes

- ✓ A financing and contractual structure, which is ring-fenced and insured against political manipulation and at least partially guaranteed against default.
- ✓ A combination of tariff and public sector financing sources including as appropriate, transfers, local taxes, donor institution grants and loans, output based aid and other possible sources.
- ✓ High participation from the private sector in the provision of services to design, build, operate, maintain, rehabilitate, and arrange financing for the facilities.

◆ Pros and Cons

- + Local capital markets stimulation.
- + Potentially greater local currency financing.
- + Potential to convert the Trust into an equity investment vehicle.
- Establishment of Trust structure can involve high transaction cost.
- ~ *Concept is mostly applicable in middle-income countries.*



Thank you

