REGULATING FOR INVESTMENT

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Drivers of infrastructure reforms

Questions about efficacy of governance of state-owned vertically integrated monopoly

- Inefficiency of operations
- Excessive influence of strong unions/political groupings
- Questionable investment decisions: risk/cost borne by consumer due to guaranteed tariffs
- Slow to innovate

Developing country context

- Lack of investment for system expansion – generation capacity, network , access rates
- High system losses, (especially commercial)
- Poor billing and low collection rates
- Poor financial performance: artificially low tariffs, and hence low reliability of supply

Purpose of Reforms

Enhance viability and expansion of services

- Address governance issues: policy, management and regulation
- Commercialize operations: cost recovery, **service quality**, return on investment
- Ring-fence non-core activities: reduce market power and abuse by monopoly

Grow the system

- Exploit energy resources for economic growth and **service expansion**
- Maximize gains from regional endowments and markets

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Rationale for Attracting Private Investment

Augment Public Finance

- Transfer burden of financing to private sector

Improve Project Development

- Better project identification
- Better skills/experience
- More commercial focus
- Reduced vested Interests

Improve Infrastructure Management

- Project execution
- Operation and Maintenance

The State of Reforms

Regulation

- Most countries have established autonomous regulatory bodies: mandate and scope vary

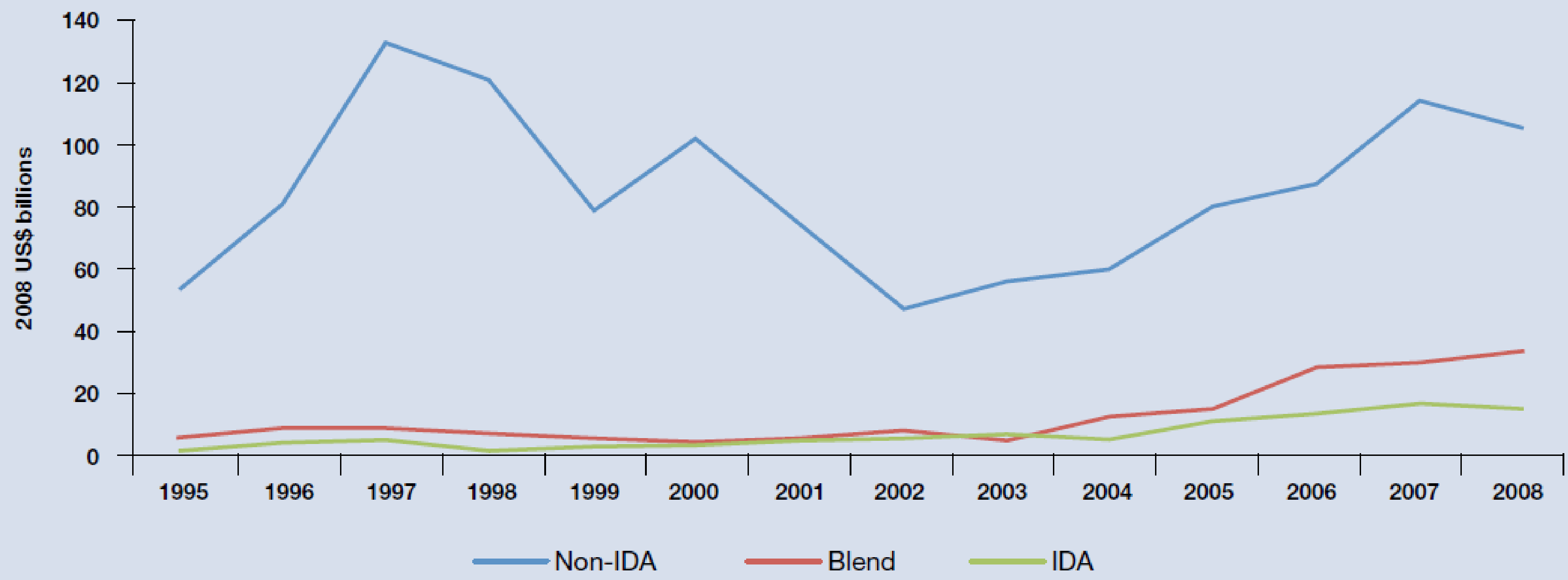
Industry Structure

- Considerable movement towards unbundling
- Generation companies and regional distributors established

Ownership structure

- State ownership dominant, states slow to divest ‘national strategic’ assets
- IPPs mostly on the margins

Infrastructure investment in PPI projects, 1995-2008



Source: World Bank and PPIAF, PPI Project Database.

<u>International Development Association</u>:

In IDA Countries the contribution of private participation to infrastructure is small (IDA countries are those that had a per capita income in 2009 of less than $1,165 and lack the financial ability to borrow from IBRD

Types of Private Participation

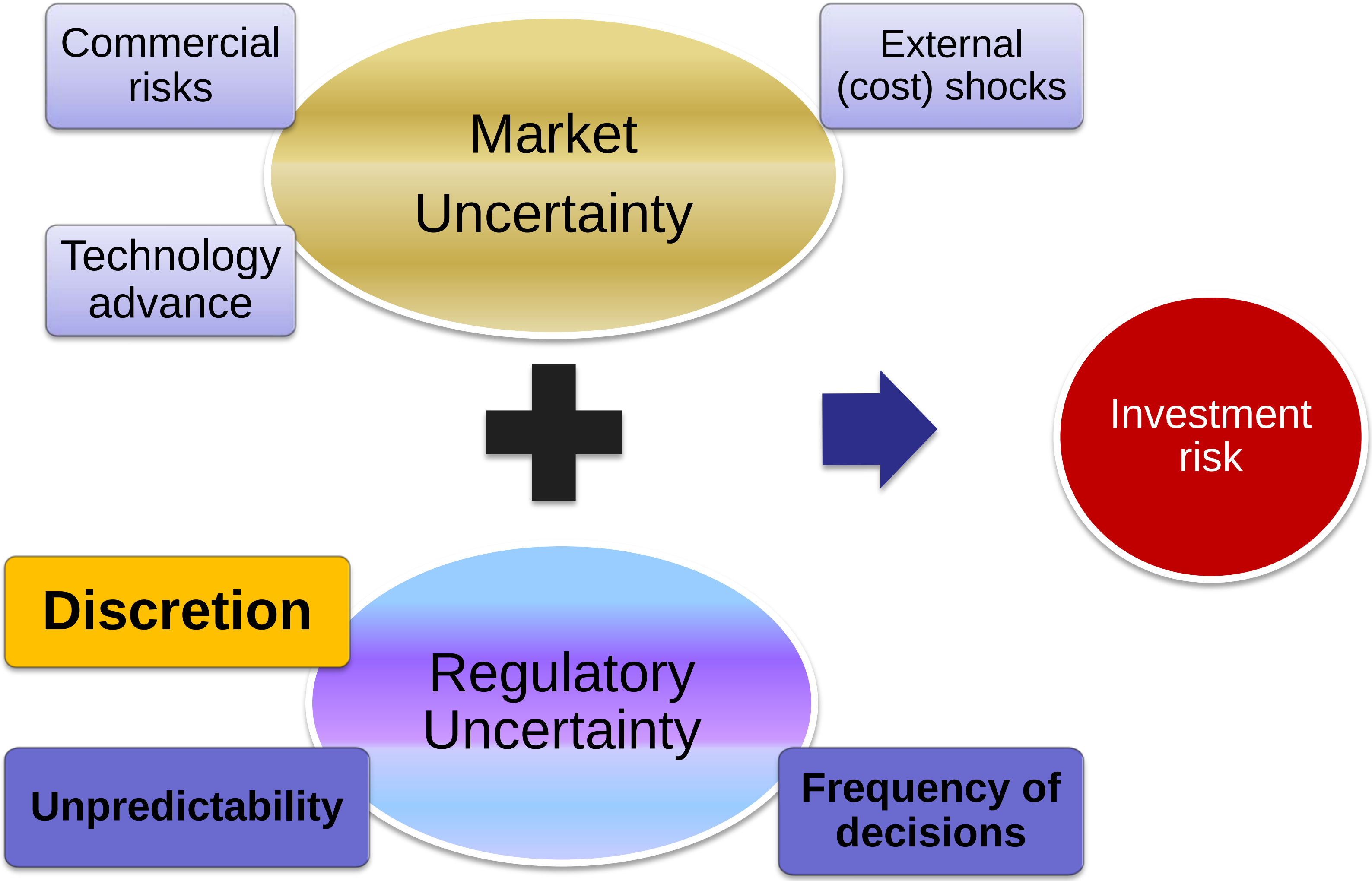
Independent Power Producers to achieve objectives of:	Increase system capacity: shortfalls constrain economic growth
	Diversify energy sources: enhances security of supplies
	Enable choice of supplier: could promote competition, further growth of industry
Distribution concessions to address ills such as:	Poor revenue collection
	High commercial losses
	Over-employment, high labour costs
	Uneconomic, non-cost recovery tariffs
	Poor customer relations
	Slowness to innovate

Impact of stalled or slow reform process

Effectiveness of regulation:	
	State ownership places the regulator in an invidious position: e.g. political resistance to cost recovery measures
	Reluctance and/or impracticality of enforcement of some measures, e.g. revocation of licenses removal of management
	Strong axis between senior management and state apparatus: weakens clout of regulator
	Gives opportunity for entrenchment of status quo by management: vested interests
	Dominant v.i. utility may stifle market development

Erodes confidence in fledgling regulator and in stability of regulatory framework (perceptions of political interference)

Market and Regulatory Uncertainties



Convergence of Uncertainties

Market Uncertainty: Affects all business, regulated or unregulated

- External shocks: international prices, macroeconomic conditions
- Commercial risks: collapse of demand, shifts in preferences
- Unanticipated technological advances

Investment risk

Regulatory Uncertainty: a consequence of regulatory discretion

- Comprehensive laws and rules are impractical
- Competition preferred, but is not an option in many infrastructure sectors

Regulatory Risk

Frequency of decisions:

- Risks arise from sunk costs in long-lived assets
- Life of assets exceeds duration of regulatory contracts or control periods
- Risk increases with frequency of re-sets

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Level of Discretion:

- Firm need to form expectations about the outcome of future regulatory decisions
- Regulatory uncertainty, hence risk, is highest early in the tenure of a new regulator

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Regulatory Risk

Attributes of Regulatory Signals?

Consistency of signals:

- If regulator has a history of random signals, firm cannot make reliable predictions about future decisions: discretionary risk

Credibility of Signals:

- If regulator signals a fair return on sunk costs, but has a reputation for expropriation of surplus in other sunk costs, firm calculates that history will repeat itself

Related factors:

- Firm likely to remember recent actions by regulator
- If regulator has wide regulatory scope firm will remember decisions in related industries
- Tenure of regulators: long tenure makes regulators more accountable for their decisions

Which signals are important?

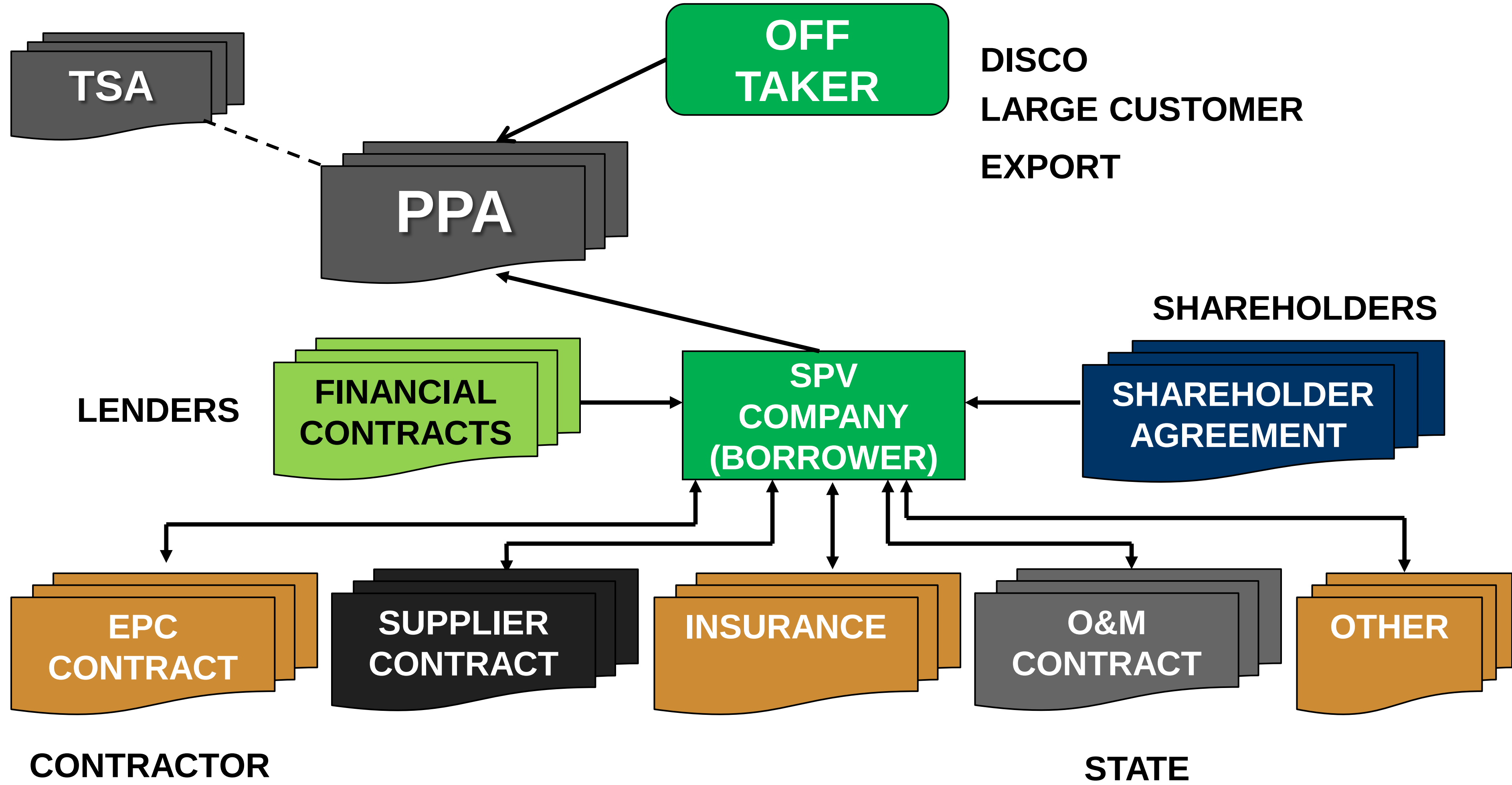
For bidding processes: information

- Bidding rules and success criteria
- Duration of contract (in distribution concessions)
- Scope of the contract (operational and/or investment requirements)
- The regulatory principles that will apply
- Information required from bidders

The regulatory framework: clarity

- Cost of capital: complete measure of regulatory risk
- Asset valuation and depreciation: clear, transparent rules
- Process for adjusting prices
- Set reasonable price control periods, do not intervene before the end.

THE POWER PURCHASE AGREEMENT



Elements of the Power Purchase Agreement

Entered into by the developer **(SPV)** and the **off-taker**

SPV usually includes lenders and shareholders

The off-taker may be:

- A distribution company
- A large (industrial) consumer
- Export (to specific consumers)

Usually there are restrictions on the mix of loans and equity

- Equity is expensive: high risks to shareholders
- Usually up to 30% of equity permitted by investment regulations

The supplier contract may be for fuel: has great impact on price

State (regulator) has an interest in the O&M during period of concession

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