

Financing of Railway Infrastructure

Public-Private Partnerships Schemes and Railways Financing
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Overview



- The importance of infrastructure capital and in particular railway infrastructure capital for growth
- How is it financed?
- Commercial financing difficult, although returns are high
- PPPs as an option: VFM & affordability
 - Rigorous framework & reporting to account for fiscal risk
 - Regulatory prerequisites: India vs. China
 - PPP types

Infrastructure capital is particularly important

Compared to other type of capital

- Different economies of scale
 - Such productivity effects are found to be large for transport infrastructure
- Network externalities
- Enhances market access
- Density economies: bulk shipping, pipelines etc. related to ability to run at near full capacity
 - Increasing returns to traffic density on traffic on a specific line → sharing lines
- Economies of specialisation: reduction of transaction costs allows for division of labour & specialisation

And is financed from various sources

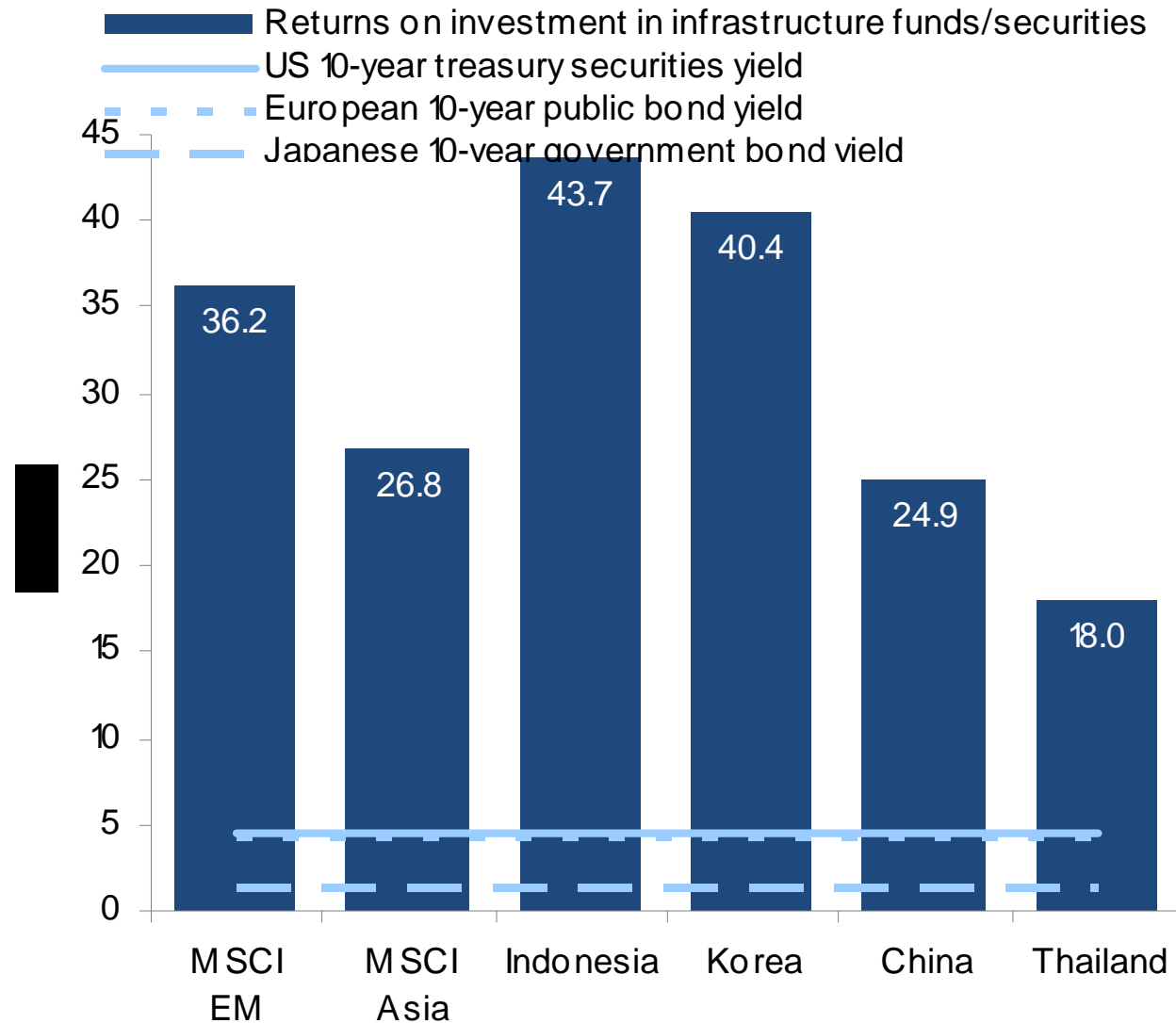
- Government budget
 - Desirable where social returns are high
 - Affordability issues in many countries
- Bi- and multilateral agencies (ADB 2010 lending \$6b cc. 10% of that by EIB and even smaller to lending by EBRD)
- Financial markets
 - Credit spreads are very large
 - Yield premia are lower but bond markets underdeveloped
 - Securitisation of infrastructure assets and listing of co-s limited
 - Globally listed AP infrastructure securities only make up 3-4% of global market capitalisation
- PPPs
 - Value for money of service delivery and affordability

Budget disbursement is limited and commercial financing difficult

- Not all benefits are reflected in price
- Sunk costs
- Some sub-sectors are more capital-intensive than other network services

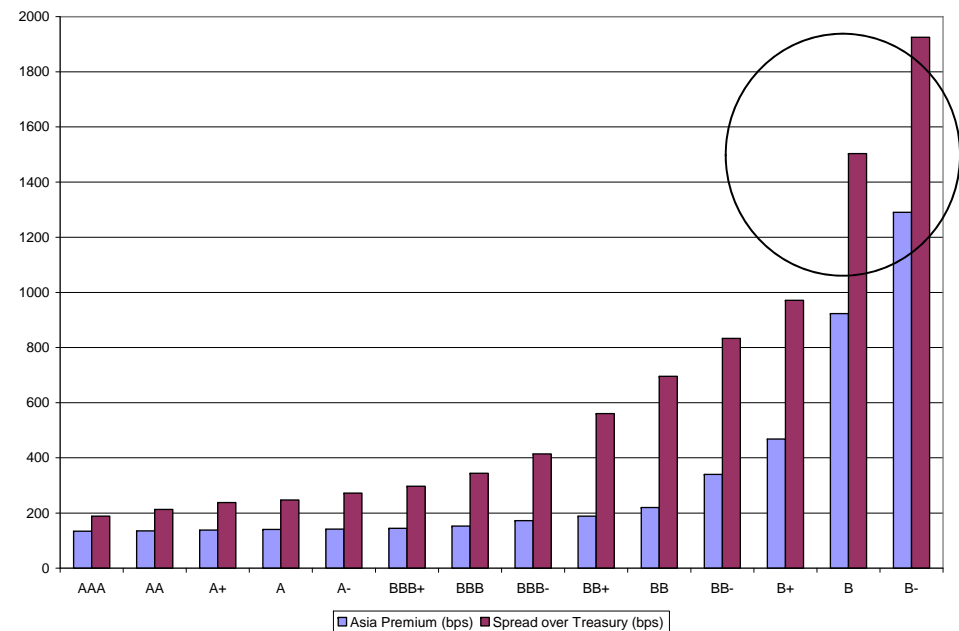
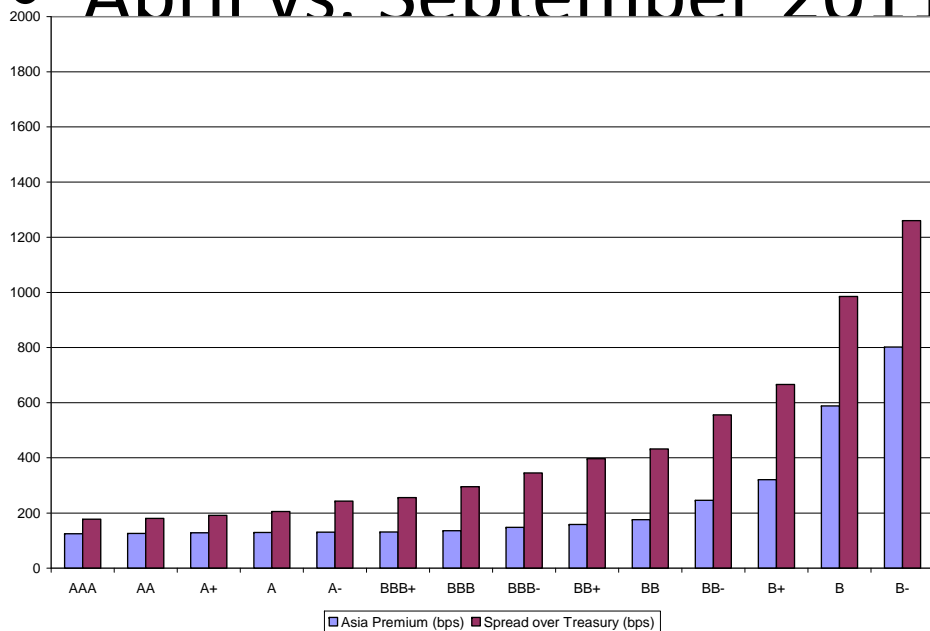
...although financial returns are attractive

Return on infrastructure funds/securities 2003-7
Diversification opportunities



Bond premia vs. credit spreads for 5-year term issues/loans from AAA to B-

- Bond premia over Treasury bills (blue bars)
- Credit spread over Treasury bills (red bars)
- April vs. September 2011

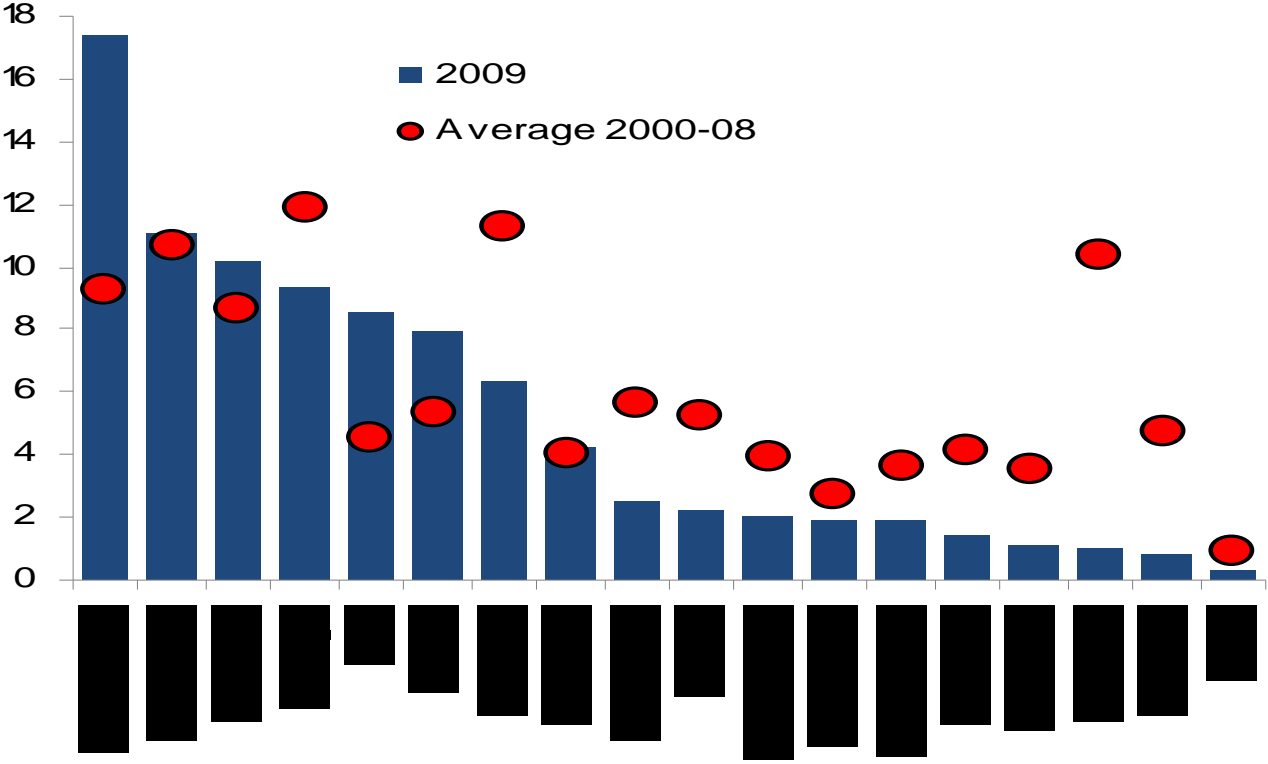


Heightened risk aversion reflected in widening spreads at lower ratings

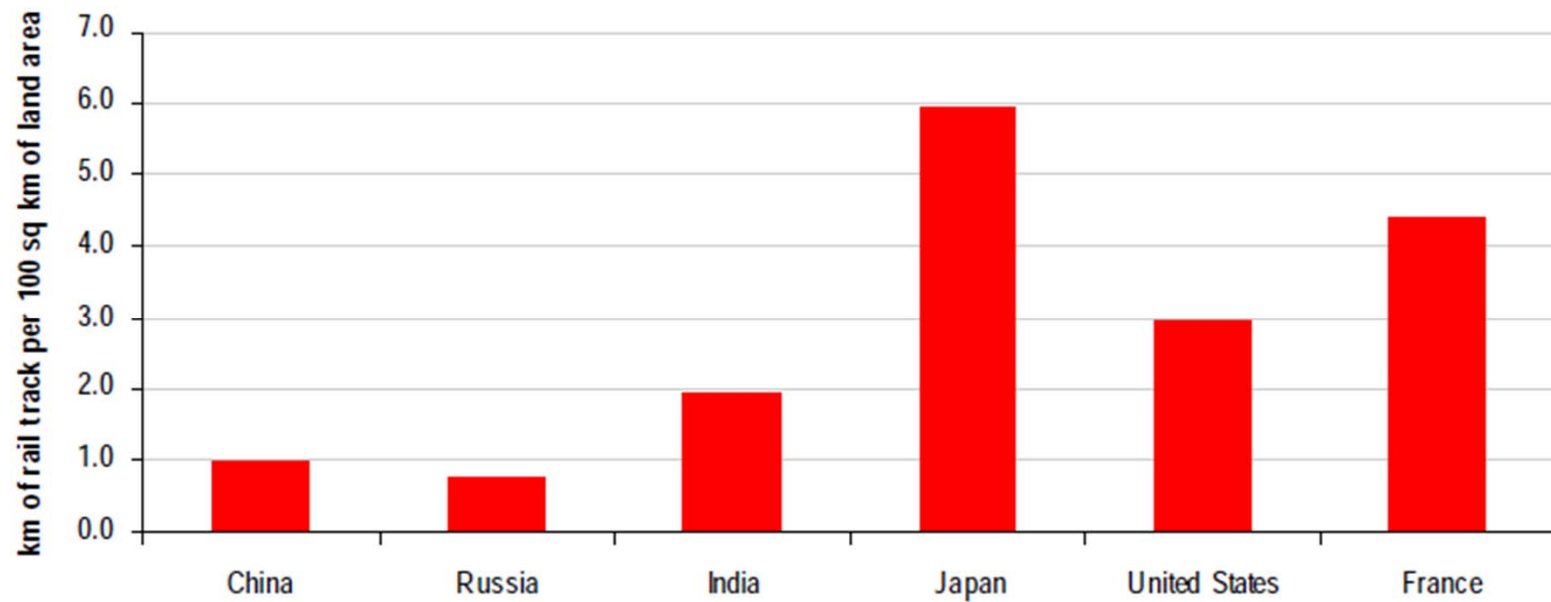
Framework for PPPs

- The public sector comparator (PSC) involves an estimate of the benefits from a hypothetical PPP (reference PPP) and is used by governments to choose between the traditional procurement process and the PPP to provide a service.
 - Germany, for instance, uses a complete cost-benefit analysis, while
 - Japan and the Netherlands use the public sector comparator prior to the bidding process: the project can only proceed to the bidding phase if the reference PPP demonstrates that a PPP can bring about better value for money than traditional procurement.
 - Australia applies a more complex method involving the use of PSC after the bidding process. This method compares the PSC to the actual PPP bids.
 - France and the United States use competitive bidding.
- PPP units are crucial for creating, managing and evaluating PPPs. They guarantee an adequate spending of budgets, avoid free riding by government departments, provide a knowledge centre, regulate the creation of PPPs and permit a separation between PPP practice and policy.
- Political support and engagement of all stakeholders is crucial for the success of PPPs owing to their long-term nature.

The share of PPP investment in Gross Fixed Capital Formation



Railway density



India: the biggest market for PPPs

- 2004 Committee on Infrastructure headed by PM → maximise role of PPPs (documentation in July 2005)
- Strengthen regulatory institutions, prepare standardised contractual documents (terms of risk allocation, contingent liabilities and guarantees, service quality and performance standards, bidding documents)
- 2005 IIFCL long-term lending up to 20% of project costs
- Infrastructure debt fund 2010 to invest in PPP projects (regulations out in June 2011)
- Selection through competitive bidding, criterion for bidding is the required Viability Gap Funding (VGF) by the central govt.
- 11th 5-year Plan (2007-12) 40% of railway inv. (Rp3b) through PPPs)

Voice of the private sector



- Bankable projects: lower user fees do not allow for commercial viability
- Project and contract design – lack of capacity
- Contract enforcement is weak
- Private partner: fund availability issue
 - Prudential limit (single/group borrower and sector) for bank borrowing
 - Long-term investors: only high-rated securities
- 12th 5-year plan: up to half of the USD1b infrastructure need by PPPs

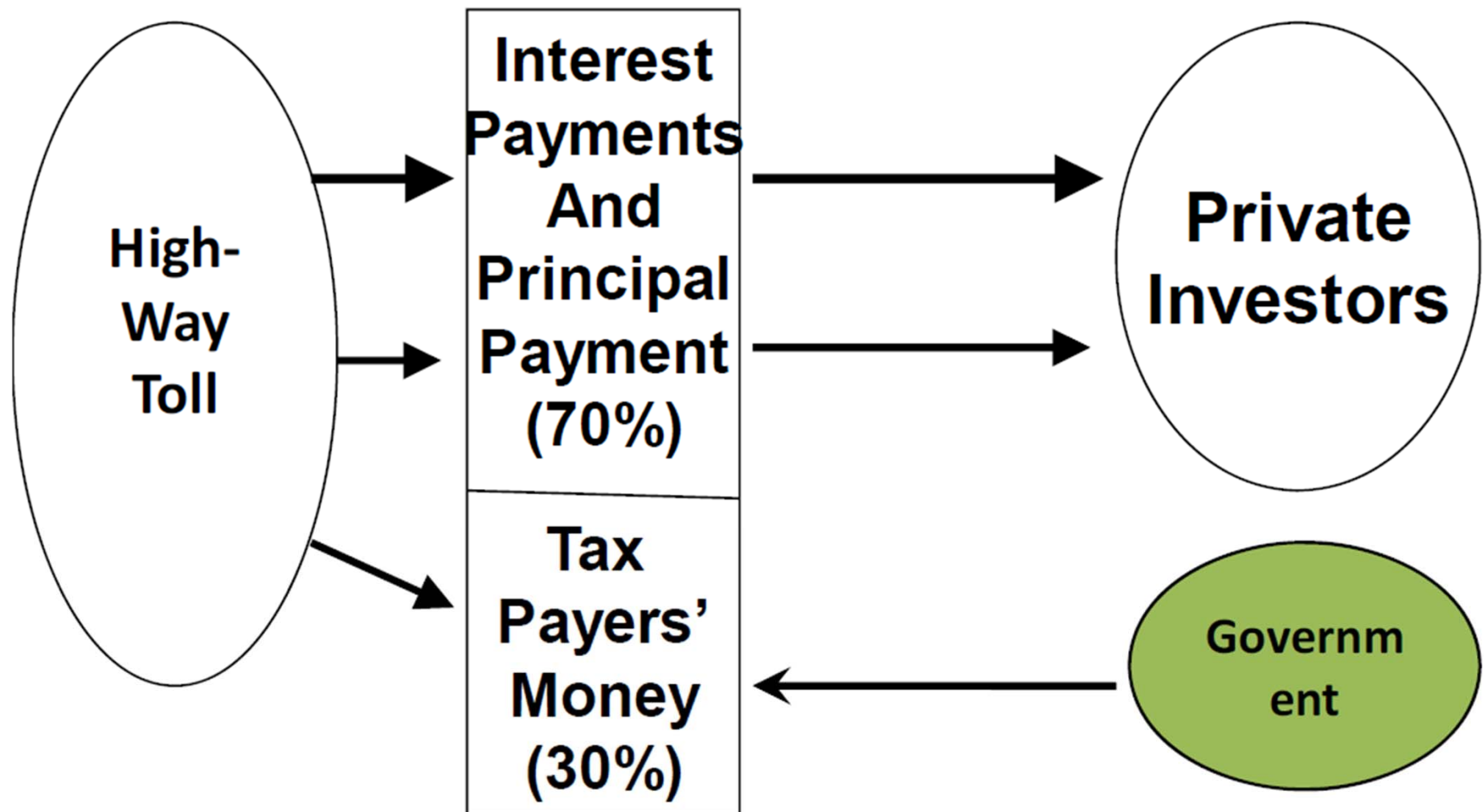
China – PPPs for the future

- Planned separation of regulatory and commercial functions of the MOR → to increase transparency, supervision and efficiency
- So far financing of railway: MOR profits 10-20%, budget 10-20%, debt 60-70%
- Acute lack of capacity especially freight (railway investment is only 3.1% of FAI, 2010). Passenger and freight volumes and turnovers highest in the world (2.9tr t km & 961b person km in 2011)
- HSR frees up capacity for freight
- First minority share investment by MOR → pave the way for private participation

REITS – a possible type of PPP

- Real estate investment trust e.g. Turkey
- well-developed capital markets facilitate the **securitisation of infrastructure assets** and direct financing by a public offering economise on credit cost and eliminate credit risk.
- Partnering between the public (mainly at the sub-national level) and private sector is crucial as public participation allows to accelerate business procedures and ensuring land that can be provided in kind, while the private sector engages in the delivery of the infrastructure.

A possible type of PPP – revenue bonds



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Source: Yoshino (2011)



Thank you!

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