WG on Private Investment in Infrastructure:
RAB as an alternative to PPP

June 2018, Paris

Stephen Alchin, Strategic Advisor, Infrastructure Australia
This presentation

• Basic comparison of PPP v. RAB

• The role of user charging

• The potential of hybrids

• The example of introducing RAB on a road network
## PPPs v. RAB - basic differences revisited

<table>
<thead>
<tr>
<th></th>
<th>PPP</th>
<th>RAB Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typical Form</strong></td>
<td>Legally binding long-term contract</td>
<td>Legally binding licence with regular regulatory reviews</td>
</tr>
<tr>
<td><strong>Key elements</strong></td>
<td>Required Outputs&lt;br&gt;Risk transfer&lt;br&gt;Remuneration</td>
<td>Required Outputs&lt;br&gt;Service quality&lt;br&gt;Price limits</td>
</tr>
<tr>
<td><strong>Productive (cost) efficiency achieved by</strong></td>
<td>Contractual allocation of risk</td>
<td>Fixed prices periodically, renegotiated</td>
</tr>
<tr>
<td><strong>Allocative (price) efficiency achieved by:</strong></td>
<td>Initial competition for the contract</td>
<td>Periodic benchmarking</td>
</tr>
<tr>
<td><strong>Weakness</strong></td>
<td>High financing cost</td>
<td>Capex bias or incentive to under-invest - depending on the commentator</td>
</tr>
<tr>
<td><strong>Issues</strong></td>
<td>Inadequate process for intertemporal adjustment</td>
<td>Institutional requirements around management of RAB and price determinations</td>
</tr>
</tbody>
</table>
Critical factors in applying a RAB

• Well-functioning and **reliable regulatory structures**:
  o an established institutional framework
  o a track record of agencies operating without political interference
  o a credible appeals process
  o a commitment to ongoing use of the model to promote good behaviours.

• **Credible funding commitment**: user charges & government.
Does RAB depend on user charges?

• Ability to levy user charges ≠ independence:
  o Overriding objective of RAB licensing is consumer protection
  o The independent regulatory authority sets maximum charges and change cost-pass-through regime
  o Level of user charge drops out at the end of process, as the ratio of the funding requirement to the charging base
  o In practice, public authorities still subject to incentive to withhold funds
  o Incentive possibly worse, as level and change in user charges becomes political issue => similar issues in PPP.
Two main issues commonly raised with RAB

• CAPEX bias:
  o Reasons may exist, but available evidence does not confirm it
  o Top-down benchmarks & bottom-up engineering studies important alongside regulatory discretion / judgment. Can be considered generally successful in managing CAPEX bias
  o Moves to focus on TOTEX.

• Financial engineering:
  o An issue in both PPPs and RAB
  o PPP has a partial solution (refinancing), RAB could apply a similar one until a better solution is available.
Hybrids? The Thames Tideway Tunnel

The solution in brief

Now:
The low level interceptor sewers fill up and overflow into the River Thames.

After:
The overflow will be diverted into the tunnel instead of going into the river.

Source: Bazalgette 2016.
Elements of the hybrid approach

- Funding through regulated charges
- Detailed plans for the builders
- Adapted incentive regulatory framework/Revenue reviews
- Government support package (GSP) for tail risk
- Separate competitions for construction and finance
Australia’s interest in investigating RAB

• Assess the prospects for corporatising the delivery of roads (including introduction of a regulated asset base - RAB) in Australia

• The Australian experience illustrates issues that other countries will also need to address.
Why consider pursuing corporatisation and a RAB for roads?

1. Nations need investment in efficient road transport to support economic growth and social objectives.
2. Governments need to support private investment in road – their budgets are under pressure.
3. Issues with PPPs, including: inefficient risk transfer.
4. A RAB model has worked in other sectors (including rail), and might in road transport (and beyond).
Australian experience with PI in infrastructure

• Private investment in Australia’s infrastructure networks is well-accepted.

• Significant private investment in non-transport sectors:
  o Telecoms
  o Energy
    o Electricity – generation and networks
    o Gas – extraction and networks
  o Water – irrigation and potable water (desalination plants)
But what about transport?

• Significant private investment in larger airports and ports, following privatisation of assets – sale or long-term lease

• Less private investment in land transport infrastructure:
  o Rail – a few light rail, some stations, some private lines supporting mineral exports, and
  o Road – sixteen PPPs + three contracts under delivery

• Freight transport – extensive private investment in truck fleets, rail rolling stock, and some intermodal facilities.

• Passenger transport – buses and some rail rolling stock.
Australian context (1)

- A large road network – 874,000km
- Depreciated replacement cost - approximately $470B AUD
- Government spending on roads about 1.4% of GDP – higher than OECD average
- Evidence of underspending on maintenance.
- Almost 30 years’ experience with road PPPs – but still small compared to size of network (260km or about 0.03% of the network)
Australian context (2)

• Financial failures with three PPPs in period 2005-2010 have changed investors’ risk appetite

• Complex financial relationships between three levels of government – **vertical fiscal imbalance**

• Per capita road use peaked in early 2000s, and has since fallen by about 5% – now stable at @10,500 VKT per capita

• **Rapid population growth** – especially in the capital cities – is expected to drive demand for road transport – cars and buses.
So why is corporatisation and a RAB important for the Australian road network?

• Need to improve the efficiency of road investment:
  o Capital investment priorities
  o Maintenance outlays

• Need to create a platform to move from government funding to broader road user charging to address looming revenue and funding issues

• Need a more transparent governance framework to address priorities and policy trade-offs.
The state of play - building blocks

- Efforts to move heavy vehicle charging from recovery of past expenditure to a ‘forward looking cost base’
- Initial asset registers for the main road networks
- Discussions re a road data standard
- Discussions within government to establish an economic regulator for the road network
- Proposed inquiry into charging of light vehicles, although decisions are at least 10 years away (and probably longer).
Key issues (1)

- Need for an overall architecture that allows evolution from initial steps to a broader system
- What road network to regulate?
- Hypothecation of road-related revenues
- Setting of service levels and payment of associated Community Service Obligations (CSOs) by governments
- Maturity in dealing with inter-governmental issues
Key issues (2)

- Bundling of the road network – benchmarking
- Incorporating existing (and prospective) PPPs into the RAB, with or without reform of their tolling regimes
- Role of regulator versus government agencies – especially since, for some time to come, governments are likely to contribute the main share of funding
- Learning from experience in other regulated sectors
- Pace of reform.
Uncertainties

• Factors that bear on demand/revenues:
  o Technological change – impact of AVs and ride-sharing – no clear view
  o Economic change – future of work – trip rates and affordability
  o Changing housing preferences/needs – higher density cities

• Factors that bear on costs:
  o Climate change assets at risk
  o Changing road forms – more expensive tunnel
  o Relative lack of knowledge of the roads themselves and internal capability to manage the assets

• Stability of governments – contested policy, populism.
How might the private sector invest in such a network?

• Role of private sector needs to be clarified – governments and the Australian public are not prepared to entertain widespread private ownership of the road network

• So it is likely that the private sector would be involved as:
  o suppliers of services to government-owned road corporations under long-term maintenance/small-scale capital contracts – private sector to invest in productivity enhancing equipment
  o developers of new tollways within a broader system of road governance overseen by an economic regulator.
Conclusion - corporatisation and creation of a RAB (even without charging) are ‘no regrets’ reforms

- Australia has a long history of PI in regulated infrastructure networks
- Like other countries, we need to reform the governance and funding of our road networks
- Reform has been (and will be) slow in coming, and needs reflection
- One of the most significant and complex public policy reforms Australia will undertake – both because of its scale/impact on society but also because of the range and depth of uncertainties
- Need to consider evolution from PPPs to RABs, including frameworks to enable PPP-type project investment in a broader RAB framework.
Thank you!

Strategic Advisor to the CEO
Infrastructure Australia

stephen.alchin@infrastructure.gov.au or +61 408 668 614