

Economic Development Board

Major Infrastructure Funding Alternatives

*Office of the Economic
Development Board –
Department of Premier
and Cabinet, South
Australia*

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Executive summary

Interpretation of this Report

This report has been prepared for the Economic Development Board (EDB) and has not been endorsed by the State government. This report does not prescribe any particular intervention and the recommendations in the report are areas for further consideration for the EDB.

The recommendations are based on PricewaterhouseCoopers' (PwC) research and insights into the approaches used by government, locally and internationally, to tackle issues related to infrastructure funding and financing. The recommendations do not need to be implemented as a package and form a menu of approaches which should be considered according to the particular specifics of the infrastructure program or project. The recommendations provide a set of tools the State may consider using to tackle some of the infrastructure funding and financing issues it faces.

Some of these recommendations will involve significant changes in policy and governance, and the feasibility of implementing these in a South Australian context requires further consideration and development to confirm the benefits and risks of implementation.

Introduction

PwC has undertaken a review of national and international trends in approaches governments have to funding and financing major infrastructure programs and projects. We have considered how these trends could be applied in a South Australian context to meet the State's infrastructure investment challenges.

The Global Financial Crisis (GFC) has had a significant impact on the provision of infrastructure. Weaker global economic conditions and continued economic uncertainty has meant many governments, including the South Australian government, have faced increasing levels of deficit and debt. Government income has been impaired by weaker economic conditions and as a result governments have alternatively looked to stimulus and austerity; to prime the economy and to reduce deficits respectively.

The impact has been felt across the economic spectrum. As a major contributor to government spending, infrastructure investment has come under increased scrutiny both as a lever for economic stimulus and a driver of key metrics such as 'net debt' and therefore as a form of discretionary spending that can be reduced. For example, the Nation Building Economic Stimulus Plan was introduced as a mechanism to stimulate the economy, while the South Australian government postponed the New Prisons and Secure Facilities PPP project in 2009 in response to concerns about the impact of the size of that investment on its own net debt position.

Many global economies are struggling to attract sufficient private capital at acceptable rates and in sufficient volumes to finance infrastructure. This has had an impact on rates of investment and the value for money of infrastructure investment. We have observed a number of projects which were intended to be fully privately financed but due to higher costs of private finance, struggled to demonstrate value for money. As a result, government has provided finance to reduce the overall costs of these projects, for example, the Victorian Comprehensive Cancer Centre included a State contribution of c.\$300m (VCCC

Project Summary – Partnerships Victoria, May 2012). Projects are now increasingly coming to market with government playing a greater role to utilise the benefit of its access to cheaper finance.

Governments are therefore faced with the challenge of delivering infrastructure projects that could relieve infrastructure bottlenecks and stimulate economic growth while dealing with significant limitations in traditional funding and financing models.

In this report we have examined the responses of governments across Australia and internationally to the challenges of sustaining infrastructure programs and projects in a constrained and challenging funding and financing environment. We have considered the extent to which the models we identified could be used by the South Australian government in meeting its infrastructure priorities.

The South Australian Infrastructure Context

The strategic direction for infrastructure development in the South Australian infrastructure landscape is defined within the 30 Year Plan for Greater Adelaide and the South Australian Infrastructure Plan. The infrastructure context of these plans is summarised as follows:

- **30 Year Plan¹** (*The 30-Year Plan for Greater Adelaide, DPLG, 2010*): To accommodate future population growth of 560,000 people over the next 30 years, the 30 Year Plan provides a strategic direction for the development of Adelaide. This covers the communities that will be needed to meet this projected growth in a way which responds to the needs of the population and environment and supports sustainable economic development in the State.

The infrastructure investment required to support the development of the city will include new public transport, schools, health facilities and civic facilities. It will also include the State developing new communities (particularly around transport hubs), infrastructure to link these communities and trunk infrastructure to meet their expanded requirements.

There are significant challenges to achieve all the goals in this plan, (for example the requirements to provide water security and affordable housing). The importance of delivering coordinated growth in Adelaide, as well as supporting growth in its industrial base is absolutely fundamental to the economic success of the region.

- **Strategic Infrastructure Plan for South Australia** (*SIPSA or the Infrastructure Plan, DTEI, Government of South Australia, 2010*): The State's Infrastructure Plan sets out the State's vision for the development of its infrastructure. We understand that the plan is currently being updated and contemplates a range of strategic investments of varying size

¹ <http://www.dplg.sa.gov.au/plan4adelaide/index.cfm>

and complexity, which are outlined below. We note that the plan previously has not integrated funding, financing and procurement alongside the establishment of the State's infrastructure priorities. Major infrastructure contemplated in the SIPSA discussion paper includes:

- Improve the north-south corridor between the Southern Expressway and the Port River Expressway: the government will be investing more than \$800 million, with support from the Australian Government, to build the South Road Superway;
- Modernisation of the metropolitan public transport network: transit oriented developments and interchanges to increase use of public transport and support development of a more compact urban form;
- Use of intelligent transport and traffic management systems: to make more effective use of existing transport infrastructure;
- A range of investments in South Australia's regional road and rail freight networks and ports: required to improve freight productivity and growth of the export industries. Priorities include redevelopment of the state's port capacity and land-side links to potential new mining developments, including Olympic Dam;
- Investment from the Commonwealth of \$610 million for a 10- year package of initiatives to reinvigorate and sustain the River Murray industries and communities;
- Ongoing support of Resources and Energy Sector Infrastructure Council (RESIC): working to determine the infrastructure requirements to support growth in the minerals and energy sector and greater economic opportunities for regional communities.

In addition to public infrastructure, the State has considerable resources potential and is rated among the top regions for mining investment globally. In 2011 RESIC engaged Parsons Brinckerhoff to undertake the 2011 Infrastructure Demand Study², the objective of which was to highlight the projected demand on the State's infrastructure by new and existing mineral and energy projects over the next 10 years.

The IDS participants identified that 42 projects, with a total budget – including capital expenditure and related infrastructure – estimated at \$59 billion (or \$35 billion on a risk adjusted basis, taking account of delays). This investment is required to satisfy the needs of existing and future projects, and does not include the expansion of Olympic Dam. Based on discussions with RESIC there are concerns that South Australia's future potential competitiveness could be impaired if it does not act now, particularly in the light of future mineral developments in other parts of the world, e.g. Africa.

While private infrastructure will typically be largely funded by the private sector, there is major role for the government to play in facilitating infrastructure investment. In some cases that support may come through the planning system, in others it is likely to come through investment or more direct support in the infrastructure which will enable the appropriate exploitation of the State's mineral resources.

² http://www.minerals.pir.sa.gov.au/home/resic/infrastructure_demand_study

Infrastructure Funding and Financing Challenges

The State currently maintains a AAA credit rating but recent ratings³ have indicated that the State has a negative outlook (in terms of maintaining its current rating). This implies there is a strong possibility that it will be downgraded in the short to medium term. The maintenance of a AAA credit rating is no longer a stated objective of the State. The consequence of this, and the State's existing level of debt and commitment – including the commitments for projects such as the New Royal Adelaide Hospital (NRAH) Project and the stadium redevelopment – is that the State's balance sheet is considered to be 'fully committed', and is therefore likely to require private finance to deliver new infrastructure.

Whilst the provision of private finance may alleviate the requirement for the State to raise capital, the State may still be required to recognise the debt commitments to projects on its balance sheet (where it continues to fund infrastructure notwithstanding that the debt required to finance infrastructure may be raised by a 3rd party).

For projects which do not have an independent revenue stream (most social infrastructure) the State's commitment to payments will be reflected in its credit rating. For example, the NRAH and prisons PPP projects would be recognised on the State's balance sheet as a commitment (though in the case of the NRAH project, initially as a contingent liability, then after completion as a lease liability).

For projects that have independent revenue streams, whether direct user payment mechanisms (e.g. tolls on roads or port access fees) or independent user payments (e.g. special levies), there is the potential for these projects to be delivered in a manner which does not utilise the State's balance sheet capacity. Historically, the private sector has delivered a range of infrastructure relying on independent revenue streams (such as roads and ports). One of the consequences of the GFC, and of commercial failures in Australian toll roads projects, is that the private sector is less willing to bear full commercial (in particular, revenue) risk for projects.

We note that capital markets are well functioning and that there is no fundamental market failure inhibiting infrastructure investment and lending. An example of this was the ability of the NRAH project to attract around \$5bn of commercial debt and equity across two consortia, demonstrating the availability of capital in the market. We note that the economic conditions in Europe have had an impact on the number of overseas investors continuing to lend in Australia – this may have an impact on the ability of very large projects to raise full private finance across a number of consortia.

A further challenge for government is how to support projects which are 'marginal', i.e., those which are close to economically viable on a standalone basis or which are potentially economically viable but which have some other impediment – such as uncertainty around traffic volumes preventing full private financing.

Similarly the lumpiness of much infrastructure investment can mean that the returns in the early years of an infrastructure project are inadequate and create a cash flow problem for private investors.

³ S&P Ratings Report October 7, 2011

In this report we have identified a range of approaches which help overcome these issues. This includes using user charging to reduce the impact on the State's balance sheet and models of investment which provide limited support for private investment from government during critical stages of projects (e.g. the ramp up phase for a road project) to mitigate the impact on State balance sheets and allow the recycling of State capital.

We have found that new Models of Funding and Financing are supporting continued investment in Infrastructure

The GFC has led to governments looking to a range of new mechanisms to continue infrastructure investment programs in a way that reduces or minimises the impact on government. In particular we observed a significant increase in the use of user charging and value capture to reduce the amount of government funding required for infrastructure projects. Our observations are outlined below.

New funding methods

Government is exploring new ways to fund projects which mitigate levels of government investment:

- **User charging** - the UK government is increasingly looking to user charging in new sectors. For example, user charging is being considered for new roads (where direct road user charging has not previously been used other than one toll road duplication)
- **Value capture** - across Australia and globally we have seen government increasingly looking to capture anticipated increases in property value, generated by investment in infrastructure, to fund new developments (value capture) – in Scotland three projects have been announced as being funded using Tax Incremental Financing (TIF). In London a 'mega' railway project is being developed under a TIF scheme.
- **Asset disposals** - government has also questioned its role as owner of assets and sought to make strategic disposals of assets; to fund new infrastructure, address balance sheet pressure and to bring private sector discipline to infrastructure service provision. The NSW government is currently 'releasing value' from both its desalination plant and Port Botany. The UK government has recently announced plans to lease its roads network to bring in private sector investment discipline and accelerate rates of investment.
- **Commercial Development** – governments are increasingly looking to use their assets to gain a commercial return. In Hong Kong, station redevelopments routinely include significant commercial development within the project scope to partially fund station infrastructure. The NSW government is also seeking to capture significant value around station redevelopments and we have seen private hospital collocations alongside public provision on State owned land.
- **Special tax incentives** – we have found examples, of government providing incentives to invest in infrastructure projects, such as in the US municipal bond market. These tax incentives are afforded in order to improve the economic viability of those projects and to stimulate market appetite

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Expanding the role of private sector finance

Government is continuing to use, and is seeking to expand the role, of private finance and is encouraging a broader private sector role:

- **Continued use of PPPs** – despite higher costs of finance, governments have continued to use PPP delivery. While many of these projects appear on the balance sheet and have an impact on debt levels, they provide a range of efficiency and value benefits, whilst allowing government to diversify some funding risk.

The NSW government is undertaking a number of projects using the PPP model, including a social housing project, a convention centre and a new hospital. The New Zealand government is using PPP delivery for prisons and schools and is considering the model to rebuild Christchurch Hospital.

The use of PPPs has also continued to drive efficiency in asset delivery. The Wirri Prisons project in New Zealand was feasible due to savings generated by transferring full prisons operational risk to the private sector. In Victoria the new men's prison project (currently at business case stage) is expected to endorse a PPP project including full custodial services.

- **Infrastructure banks** – in Europe we have observed the development of infrastructure lending institutions which provide bespoke financing solutions to infrastructure projects. A green investment bank is being developed in the UK as a 'backstop lender' for when the risk of investment in 'green' projects is too prohibitive for commercial banks to invest.
- **Superannuation funds** – Governments around the world are increasingly looking towards superannuation funds as providers of long-term, cost effective finance for new infrastructure. In Canada, an effective financing model has been developed which has attracted pension fund investment in public infrastructure.

Government Financing Support

Government has provided financing support to sustain private investment and reduce the costs of investment to government:

Financing support – a number of projects would have failed but for government support. Governments in Australia, Europe and Canada have invested in projects using capital contributions and loan financing, as well as taking on additional risks. For example, because of the high level of market risks (similar to toll roads) the Darwin Marine Supply base project has been procured with a mix of private finance and government finance, after testing the private market to establish the ability of the market to fund the project as a full economic infrastructure project based on forecast access fee revenue

The high costs and short tenors of bank debt have led to new models of Public Private Partnerships (PPPs) emerging. Some of the response has been reactionary and largely designed to mitigate high private financing costs and some has been more strategic. For example, the Karolinska Hospital in Stockholm and Sunshine Coast University Hospital in Queensland have both used government capital contributions to mitigate the impacts of high private finance costs.

The Queensland Government (supported debt model) and Canadian Government (wide equity model) have developed models of investment which include public sector finance alongside private sector finance to achieve the benefits of PPPs together with the benefit of governments access

to lower costs of capital. Other projects such as Bendigo Hospital in Victoria are being developed on a similar basis.

Enhanced capability to set an infrastructure agenda

Governments have made significant investment in developing enhanced organisational capability to set the infrastructure agenda and deliver projects:

- **Integrated infrastructure delivery organisations** – the UK, Scotland, Canada and New South Wales, have all developed broader infrastructure organisations within government to improve the way infrastructure is procured and maintained, to drive efficiency and to integrate funding, financing and delivery. For example, the Scottish Futures Trust has developed the Tax Incremental Financing model currently being used in Scotland. This included developing the concept, managing the legislative changes required, developing a procurement program and now overseeing projects during the delivery phase. The Victorian government has recently introduced a new team into Treasury’s commercial division which will be more involved and involved earlier in the procurement process for ‘high risk, high value’ projects. The aim is to ensure better procurement decisions are made (regardless of procurement model adopted).

These organisations are taking a leading role in the implementation of infrastructure plans. In particular Infrastructure UK, the Scottish Futures Trust and Infrastructure NSW are designed to better link up government, to better engage with the private sector and to provide proper integration between infrastructure programs and the myriad of activities needed to support them.

- **Improving private sector certainty** – most forms of infrastructure developed by the private sector require regulatory certainty or clarity on the infrastructure development process and operation. This can include environmental and planning regulation, procurement processes and legal and legislative hurdles. Government plays a leading role in the delivery of this platform for investment. The NSW government, for example, has introduced a new development charges regime to provide certainty to the development community around infrastructure charging to accelerate housing development while the UK government has made significant amendments to its planning system to facilitate investment.

In our view a number of the approaches outlined above could be adopted (and sometimes adapted) for use in South Australia to help deliver its infrastructure program in a fiscally responsible way. We have observed that there is no ‘silver bullet’ and governments are looking at a range of interventions and measures to address current funding and financing challenges.

The different structural, economic and financial conditions that are faced by different State’s and nations have driven their respective responses. Clearly what is right and appropriate in one context may not apply in South Australia. In our recommendations we have considered what is appropriate in South Australia’s context; in particular its infrastructure requirements, its economic backdrop and its population size.

Recommendations for South Australia – A Progressive Approach

While we have tailored our recommendations based on what is appropriate for South Australia given its infrastructure landscape, size and economic conditions, we have not been bound by the current ‘state of play’. We have taken a bottom up

view of what is appropriate for the State, for example, in the light of an expanding mining sector.

Summary of Recommendations

#	Title	Report reference
1	Amend economic appraisal and business case guidance to consider user charging and value capture as sources of project funding	3.1 and 3.2
2	Ensure commercial development opportunities are optimised for all projects	3.3
3	Utilise existing pricing structures to fund additional railway and public transport infrastructure	3.2
4	For major roads investment consider the extent to which tolls could be utilised	3.2
5	The SA Government should consider the development of a Tax Incremental Financing (TIF) program to provide funding and attendant financing capacity for a range of projects	3.4.2
6	The Productivity Incentive Payment (PIP) proposal developed by the NSW government should be supported providing the issues associated with horizontal fiscal equalisation (HFE) can be addressed	3.4.3
7	The State considers its policy on maintaining its AAA credit rating and considers further State investment and borrowing to fund infrastructure development	3.5
8	The State considers a range of strategic asset disposals to provide funding for new infrastructure investment	3.6
9	The State should consider realising value from non-core assets and property	3.6
10	The State should consider using new models of financing to improve the efficiency of delivery of investment in key assets and optimise private sector involvement in delivery	3.6
11	South Australia government continues to support PPP delivery for social infrastructure projects and develop a pipeline of PPP projects.	4.2 and 4.3
12	New models of PPP delivery should be used to support a PPP program	4.6
13	That the South Australia government investigates the development of a 'PPP Lite' model to allow PPP delivery in new social housing; schools and community development	6.3
14	Use new State support models for economic infrastructure projects that are close to economic viability but which can't be fully developed by the private sector to limit the State's exposure to risk and allow recycling of capital	4.6
15	South Australia considers securitising future mining royalties to provide funding for current infrastructure requirements	5
16	The South Australian government considers the development of an Infrastructure Fund to target investment in bottleneck infrastructure.	3.7 and 5
17	South Australia considers the development of a multidisciplinary infrastructure policy, coordination, and delivery organisation - along similar lines to the Scottish Futures Trust and, in particular, Infrastructure New South Wales.	6.2
18	South Australia supports national initiatives aimed at targeting superannuation investment in infrastructure	4.3, 4.4 and 5

Key Findings and Recommendations

Key Findings	Recommendation	South Australian Context
Recommendation 1 - Amend economic appraisal and business case guidance to consider user charging and value capture as sources of project funding (Ref 3.1 and 3.2)		
<p>Governments are increasingly looking to the beneficiaries of infrastructure investment to pay for the costs of investment. User charging and value capture have the potential to reduce the cost to government of investing in infrastructure assets. The UK government is considering, for the first time, tolling new roads and governments are increasingly allocating infrastructure costs to users: on the Gold Coast Rapid Transit project a general infrastructure levy was raised as a series of measures to recover infrastructure costs.</p> <p>A key benefit of user charging is reducing government's funding burden and the impact on its net debt and credit rating. Where user charges are used to fund infrastructure and debt is raised to invest in that infrastructure, ratings agencies have assessed ratings on a 'net' position. This approach was adopted on the Victorian Desalination Project where the costs of the project will be passed to consumers through water rates and the liability (in this case a PPP liability, similar the South Australian government's liability on NRAH) will be netted off, i.e., a neutral ratings impact.</p> <p>Where government is able to pass on 3rd party revenue risk to the private sector and where there is sufficient appetite from the market to bear that risk, this funding can be used to support project financing, in which case the call on government resources will be reduced. A major railway project in London is using a range of fares and value capture measures to provide funding for the infrastructure investment: the private sector is expected to rely on that funding to raise project financing.</p>	<p>The State should consider amending its current guidelines for investment appraisal to ensure that user charging and value capture is always considered as a primary means of recovering costs.</p> <p>Increased emphasis should be placed on the identification of beneficiaries of infrastructure and the nature and scale of the benefit within the economic appraisal and business case. Where the benefits can be identified and monetised then the State should seek to recover an appropriate portion of the cost of the infrastructure from users of the infrastructure.</p> <p>Options to capture that value should be considered before any capital funding (State or Commonwealth) is allocated to the project.</p>	<p>This recommendation could apply to all capital projects. The ability to charge users will need to be considered in the context of the project. For example, the costs of developing a user charging regime may exceed the revenues recovered for some projects. Appropriate guidelines could be developed to filter appropriate projects.</p> <p>User charging approaches could include: tolls; access fees; levies; special charges; higher fuel duty etc.</p>
Recommendation 2 - Ensure commercial development opportunities are optimised for all projects (Ref 3.2)		
<p>Infrastructure investments provide a range of opportunities for government to facilitate complimentary commercial development; examples identified in our study include residential and retail development around stations; private hospital facilities alongside public health facilities; private consulting suites within public health facilities; crèche and gymnasium facilities within schools and hospitals; and providing excess office capacity in law courts for commercial rent.</p> <p>This type of commercial innovation and value capture should be considered for each project, and in order to ensure the opportunity is optimised, the consideration should take place at the business case phase of the project.</p> <p>The State has not had a particular focus on the development of commercial opportunities from infrastructure projects and, in particular, from its large-scale projects and PPP program.</p>	<p>South Australia considers commercial opportunities for all developments, regardless of procurement route and the most appropriate structure for releasing additional value.</p> <p>These processes could be given enhanced status within the existing business case guidance (Treasury Guidelines).</p> <p>A section of each business case could be dedicated to the exploration of commercial development opportunity. This could include a review of the site/project characteristics, precedents in other states and jurisdictions, market sounding processes. It could also include a 'whole of government' view – to consider whether broader / non-project related commercial opportunities could be achieved. Each project could be considered from a 'site utilisation perspective', i.e., notwithstanding the project in hand, consider whether there are additional opportunities</p>	<p>This recommendation can be applied to all types of infrastructure, including both large and smaller scale infrastructure.</p>

Key Findings	Recommendation	South Australian Context
	<p>to use the site for infrastructure to generate additional returns for government.</p> <p>The market could be further encouraged to develop commercial opportunities for projects during the procurement process and by the State giving value to commercial development.</p> <p>The State Government could also review existing infrastructure and facilities to consider opportunities for developing and exploiting additional commercial opportunities.</p>	
Recommendation 3 - Utilise existing pricing structures to fund additional railway and public transport infrastructure (Ref 3.2)		
<p>Government is increasingly passing the cost of infrastructure to users. Where existing pricing structures exist they are being utilised. The UK government is increasing railway fares to fund the mooted High Speed Rail project.</p> <p>Where user charges are passed to end users through a user charging regime and debt is raised to finance the capital costs the ratings agencies may off-set the debt against the income, i.e. the investment could be considered to be ratings neutral. The rating agencies adopted this approach for the Victorian Desalination Project where the commitment to pass the costs of the project to consumers through the regulated pricing regime off-set the State's commitments under the PPP project it used to deliver the project.</p>	<p>Where current user charging regimes exist consider utilising those to fund infrastructure investment (recognising this as part of a potential suite of charges – perhaps alongside other methods of value capture).</p> <p>Where existing user charging regimes are in place the ability to use those to fund investment should be considered as a primary funding mechanism.</p> <p>The ability to drive substantial funding through existing charging regimes may be limited; this recommendation should be considered as one of a suite of recommendations to fund infrastructure investment, for example, user charging alongside a TIF scheme, alongside commercial property development opportunity may provide an overall 'funding package'.</p>	<p>Electrification of the railways (e.g., Gawler Line), tram line extensions (e.g., Port Adelaide) and rolling stock investments could be partially funded through fare increases. The Financial Statements of Adelaide Metro shows annual fare revenue of c.\$98m (2010). An increase in revenue of 3.0% above CPI would equate to additional revenue of c\$2.9m per annum.</p> <p>South Australia Water might be expected to pass the costs of future developments, such as Mount Barker / Murray Bridge Wastewater projects onto users through the regulatory pricing regime.</p>
Recommendation 4 - For major roads investment consider the extent to which tolls could be utilised (Ref 3.2)		
<p>Government is increasingly looking for infrastructure users to fund new infrastructure. The ability to generate 3rd party revenues may allow the private sector to fund projects using an economic infrastructure model. While traffic risk has been a barrier to investment in recent projects a number of structures exist which could facilitate private sector investment and delivery of roads (for example, government providing guarantees over traffic volumes).</p>	<p>That user charging is considered for new road developments, where appropriate.</p> <p>Where government revenue support is required to allow projects to attract private finance a number of models of government support could be used. This should be considered on a project by project basis.</p> <p>As an interim step consider first heavy vehicles charging for strategic projects.</p>	<p>Establishing new tolling arrangements is contentious even where tolling is already accepted and/or in place (Sydney and Melbourne). The South Australian government is investing significantly in its roads program and the opportunities to utilise toll arrangements across the remainder of the network may be relatively limited. None the less, future major projects, such as those which may arise from the Darlington Transport Study could be considered for their suitability for toll arrangements.</p>
Recommendation 5 - The SA Government should consider the development of a Tax Incremental Financing (TIF) program to provide funding and attendant financing		

Key Findings	Recommendation	South Australian Context
capacity for a range of projects (Ref 3.4.2)		
<p>TIF has been used successfully to relieve government of funding constraints for a range of economic and social infrastructure projects. TIF is designed to capture increases in the value of land resulting from government investment in infrastructure enhancement projects.</p> <p>The future increases in revenue from rates increases can be used to secure new borrowing to forward fund infrastructure. Because repayments on borrowing are related to the increase in land value, government may not need to utilise its own balance sheet to fund the investment.</p> <p>This approach is used extensively for urban regeneration projects in the USA and has been successfully introduced into new urban regeneration projects in Scotland. The English government is using TIF to fund a ‘mega’ transport project.</p>	<p>The viability of using TIF should be considered.</p> <p>TIF schemes typically involve legislative change, which could include the designation of ‘TIF Districts’ from within which incremental taxes would be collected. The legislative and political impact of the proposals would need to be considered.</p> <p>This model will require significant development. In particular the relationship with local government would need to be reconsidered. Local government currently operates a development charges regime and is responsible for the delivery of some of the local infrastructure that would be subject to the TIF scheme. While not insurmountable, the further development of this model will present a range of governance challenges.</p>	<p>TIF could be widely applicable in South Australia. For example, the Darlington Transport Study is investigating multiple modes of transport development (road, rail, bus, cycling and walking) and their potential to activate urban regeneration. TIF has been used to fund this type of project.</p> <p>The benefit of this model is that it provides a mechanism to forward fund the infrastructure which gives rise to growth and activates, as in the case of the Darlington Transport Study, the urban regeneration which gives rise to value uplift.</p> <p>A number of the projects contemplated under the 30 Year Plan for Greater Adelaide could be appropriate for TIF style developments. The Riverbank Redevelopment Project could also be considered suitable for TIF.</p>
Recommendation 6 - The Productivity Incentive Payment (PIP) proposal developed by the NSW government should be supported providing the issues associated with horizontal fiscal equalisation (HFE) can be addressed (Ref 3.4.3)		
<p>The PIP model developed by the NSW government seeks to capture and allocate Commonwealth funding based on the incremental revenue received by the Commonwealth government as a result of State level investment in certain productivity enhancing infrastructure investments.</p> <p>The PIP proposal is based on the notion that the Commonwealth government receives a high proportion of the benefit of infrastructure investment through additional taxes (corporate and personal) and that for certain infrastructure projects which relieve ‘bottlenecks’ and contribute directly to productivity improvements, that funding from the Commonwealth should be made available for those projects (in proportion to the additional revenue generated by those investments).</p> <p>The NSW PIP proposal deals with the question of HFE and it is intended that the proposal will only apply for those projects which would not take place without the Commonwealth funding and which lead to productivity improvements and which, as a consequence, should be outside of HFE considerations.</p> <p>The PIP proposal has a strong emphasis on the development of a robust economic case to support PIP funding proposals.</p> <p>The PIP model is desirable only to the extent it generates additional (incremental) funding and does not displace other funding sources. The intent is that PIPs work in this way and apply only to projects which would otherwise not receive guaranteed funding. The support</p>	<p>That the PIP proposal is supported as a means of securing new incremental funding from the Commonwealth for ‘bottleneck’ relieving infrastructure projects.</p> <p>That South Australia considers whether the approach to HFE proposed in the NSW approach provide sufficient protection for South Australia.</p>	<p>Infrastructure bottlenecks exist in relation to ports, ports access (road and rail) and in relation to water and power infrastructure to support mining developments. The potential to invest in projects to provide or release capacity would be expected to be within the scope of PIP.</p>

Key Findings	Recommendation	South Australian Context
<p>for this proposal is contingent on it providing additional funding.</p> <p>We understand that this proposal is being developed with the Business Council of Australia and will be one of the proposals considered by the COAG business advisory forum.</p>		
<p>Recommendation 7 - The State considers its policy on maintaining its AAA credit rating and considers further State investment and borrowing to fund infrastructure development (Ref 3.5)</p>		
<p>Governments have been required to provide finance to a number of projects which previously would have been fully privately financed. This has largely been to reduce the cost of capital in the light of more expensive private finance in the post GFC environment.</p> <p>Furthermore, some governments have utilised their own access to cheaper government debt to co-invest in projects in a way which reduces the cost of capital (compared to fully privately financed options) while still maintaining most of the benefits from using private capital (risk transfer, whole of life costing, etc).</p> <p>It has been publically stated by the Economic Development Board that the additional cost of South Australia's debt at AA would be between \$2 million and \$4 million per annum for the general government sector, 'a rise of less than 1/10th of one per cent in the cost of servicing state debt'.</p>	<p>That for priority projects with an appropriate business investment case the South Australian government considers additional borrowing to fund infrastructure investment.</p> <p>That in a managed context a down-grade in credit rating would not (based on the EDB's own estimate) materially affect the State's financial performance or financial flexibility.</p>	<p>State borrowing can (and is) used to finance many projects. Where there are projects with strong business cases which cannot or do not attract sufficient 3rd party or Commonwealth funding the State should consider utilising its own balance sheet to fund those investments.</p> <p>A managed downgrade in rating coordinated with targeted infrastructure investment could be economically beneficial and increase the State's competitiveness (with investment in the right projects). Conversely, if the State lost its rating and undertook further measures to reduce costs, then to the extent that infrastructure investment is deferred the economic development of the State may be adversely affected.</p>
<p>Recommendation 8 - The State considers a range of strategic asset disposals to provide funding for new infrastructure investment (Ref 3.6)</p>		
<p>The NSW and Queensland government are currently disposing of a range of assets to shore up their balance sheets and to provide additional funding for future infrastructure. Asset disposals typically have the benefit of transferring asset ownership risk to the private sector, where it might be better managed (at a lower whole of life cost). Disposals and privatisation have also been used to introduce competitive markets into infrastructure provision.</p> <p>In our knowledge of recent asset disposals (such as Sydney Desalination) and our most recent discussions with a ratings agency it may be possible to secure an off balance sheet treatment and ratings beneficial outcome under certain disposal scenarios. For example, the Sydney Desalination project includes a commercial mechanism that provides an incentive for the private operator to secure third party revenues in the later years of the project, and remove the sole reliance on Sydney Water as off-taker. We understand this structure may secure an off balance sheet treatment (multiple off-takers) and that in discussions with a ratings agency, they would not be adding back any residual liability, i.e. off-balance sheet and ratings positive.</p>	<p>Identify a range of strategic assets from which value could be released for further investment in State infrastructure.</p> <p>PwC is not advocating or recommending any particular disposal strategy or assets for disposal. This section is used to highlight the types of asset that may be considered appropriate for disposal and for which there is market precedent. There are clearly a range of drivers, including political, financial and operational, which may make any, or particular, asset disposals undesirable.</p> <p>Introducing private sector discipline, management skills, risk management practice, and commercial discipline could reduce the annual rate of State investment into the business, releasing the funding for other purposes over a period of time.</p> <p>Removing these assets from the State's balance sheet would transfer operating risk to the private sector</p>	<p>Disposals of 'core' assets are highly contentious and carry a high degree of political risk.</p> <p>However, the South Australia government owns or controls a number of assets which in other States and countries have been or are being considered for disposal. For example, the NSW government is issuing a long-term lease for both its desalination project and Port Botany. The Queensland government has recently sold roads, rail and ports infrastructure.</p> <p>In South Australia, major State assets which could potentially be used to release value include Adelaide Convention Centre, SA Water; SA Water's desalination project; Adelaide Metro. At face value one would</p>

Key Findings	Recommendation	South Australian Context
	operator.	<p>expect each of these entities to be capable of realising a significant value (subject to their economic viability; regulatory regime; asset condition etc).</p> <p>While we understand that Adelaide Metro incurs an operating loss the operations of the enterprise could be separated in a number of ways, which could enhance value, or could be accompanied by the ability of a new private operator to increase fares and/or achieve other operating efficiencies (such as improving revenue protection). The potential value that each disposal could realise would need to be established to confirm the scale of the opportunity (to realise funding for new projects).</p>
Recommendation 9 - The State should consider realising value from non-core assets and property (Ref 3.6)		
<p>There is significant precedent for government disposing of non-core assets to release value. Government across Australia has looked at disposing surplus property.</p>	<p>Identify and consider disposal or value release from non-core assets.</p>	<p>We are not aware of South Australia's non-core asset base but would expect that a detailed review would identify land and property surplus to requirements.</p>
Recommendation 10 - The State should consider using new models of financing to improve the efficiency of delivery of investment in key assets and optimise private sector involvement in delivery (Ref 3.6)		
<p>The UK government has announced plans to investigate disposals of its roads network. The intent is to transfer the risks of asset ownership and investment (in maintenance and upgrades) to private operators. Instead of using the PPP availability model the UK government is exploring the use of the Regulatory Asset Base (RAB) model used to derive pricing for regulated utilities. The objective of the model is to lower costs of capital and bring in private sector expertise into the long-term provision of key infrastructure.⁴</p> <p>Utilising the RAB model should allow the assets to be financed at a lower cost of capital (regulated utilities achieve high investment grade ratings). The use of the RAB model also encourages, and only allows for, the recovery of the efficient costs of investment: bringing strong private sector discipline to investment.</p> <p>This model would also allow private investors opportunities to add capacity and allow them to charge for the new capacity, e.g. through a toll road. It is also intended to transfer</p>	<p>To consider new models of charging for infrastructure to improve private sector involvement.</p>	<p>Other jurisdictions in Australia have previously considered bundling roads maintenance into PPP projects to improve the efficiency of delivery (there are a number of road maintenance PPPs in the UK). However, it would require significant scale to support the development of an entirely new sector and would involve complex governance issues depending on the parts of the network covered (State or Federal funded). As identified in the UK's proposal, the ability to flex government spend would also be more limited in an outsourced model. The use of the RAB as opposed to availability</p>

⁴ <http://www.hm-treasury.gov.uk/d/nationalinfrastructureplan251010.pdf>

Key Findings	Recommendation	South Australian Context
<p>some risk around relieving congestion to the private sector.</p> <p>While this model does not attract new funding (except for enhancements) it brings in private sector rigour into delivery and financing of projects with expected efficiency improvements. The investment opportunities in the UK's roads will be targeted at sovereign wealth funds and other institutional investors.</p>		<p>based PPP project would however improve the flexibility of the model.</p> <p>The use of a RAB model requires significant regulatory involvement. It could be argued that there is insufficient scale in the South Australia to make this model viable.</p> <p>There is merit in exploring whether there is sufficient scope in the South Australian roads sector to justify this approach.</p>
<p>Recommendation 11 - South Australia government continues to support PPP delivery for social infrastructure projects and develop a pipeline of PPP projects (Ref 4.2 and 4.3)</p>		
<p>The fundamentals of PPP procurement remain strong and it continues to be used to deliver major infrastructure projects. Some of the key benefits of PPPs include (but are not limited to) innovation through the use of output specifications, risk transfer, and whole of life costing.</p> <p>Canada, Scotland and countries across Europe continue to use PPPs as a procurement model for certain infrastructure types, including roads, rail, schools, defence contracts, hospitals, and other accommodation. In Australia, NSW is developing PPP projects for social housing and a convention centre; Victoria is procuring the Bendigo Hospital as a PPP; Western Australia's program includes a prison and a biosciences research centre.</p> <p>New models of PPPs have emerged and have successfully been used to reduce the impact of higher finance costs in a post GFC climate while retaining a majority of the benefits of private financing. Although PPPs do not provide a new source of funding they do introduce private sector discipline into project delivery and have consistently demonstrated an ability to deliver value for money.</p> <p>The State's balance sheet is considered to be 'fully committed' and the ability and appetite of the State to raise new debt is limited.</p>	<p>South Australia should continue to explore PPPs as a form of delivery for major new infrastructure projects and identify a pipe-line of projects suitable for PPP delivery.</p> <p>It is necessary to identify the right types of projects for PPP delivery and to consider those at an early stage of development of the business case to assess likelihood of delivering benefits (including value for money) and market appetite.</p>	<p>South Australia has demonstrated significant capability in delivering PPP projects. It has recently successfully completed financial closure for the largest social infrastructure project in Australia, in the New Royal Adelaide Hospital Project.</p> <p>We recommend that all projects with a capital value of over \$150m should be considered for PPP delivery. This would include roads projects which could be delivered under an availability style PPP project similar to Peninsula Link in Melbourne. PPPs have been extremely successful in the water sector and it may be suitable for the delivery of the Mount Barker and Murray Bridge wastewater projects, which we understand are of suitable scale for PPP delivery. Rolling stock (both trams and trains) have been procured under PPP arrangements (in Sydney new rolling stock is being delivered under the Reliance Rail project).</p>
<p>Recommendation 12 - New models of PPP delivery should be used to support a PPP program (Ref 4.6)</p>		
<p>New models of PPP have emerged to address issues associated with the GFC such as shorter debt tenors and higher financing costs. Governments have increasingly intervened in PPP delivery to mitigate the impacts of higher costs of private finance. The recently completed Victorian Comprehensive Cancer Centre included a \$300m government capital contribution to reduce the cost of capital in the deal. This contribution wasn't contemplated at the outset of the procurement and was introduced late into the deal to improve value for money.</p> <p>Increasingly governments are recognising that the costs of private financing is making it</p>	<p>That any new PPP projects are developed in a manner which recognises the changed dynamics in the PPP market.</p> <p>The policy developed in this area would apply to any project being procured as a PPP (both economic and social infrastructure).</p>	<p>South Australian government should consider its approach and policy for PPP investment. This could include a review of the following:</p> <ul style="list-style-type: none"> • How the State would invest funds and the conditions on which it would invest. • Types of instrument the State would

Key Findings	Recommendation	South Australian Context
<p>more difficult to achieve value for money for PPP projects and as a result are increasingly using models that leverage the benefit of the State's balance sheet and its access to cheaper debt. Sunshine Coast University Hospital has come to market contemplating a capital contribution, as did Gold Coast Rapid Transit, which was successfully completed utilising a capital contribution. The Victorian government is currently investigating new models of PPP for its next projects.</p> <p>In all of the cases above the risk allocation and other benefits of PPP delivery remain largely intact.</p> <p>From a net debt perspective PPP liabilities, like government borrowing, are 'on balance sheet' and therefore government should be relatively neutral to applying capital to projects via a contribution.</p>		<p>use: contribution; debt investment; etc.</p> <ul style="list-style-type: none"> • How the State would assess its involvement in projects. For example, would it limit its involvement to certain project types; would it limit its investment to a certain proportion of costs. • Identify the way in which the State would value and appraise its own investment in projects and assess value for money.
<p>Recommendation 13 - That the South Australia government investigates the development of a 'PPP Lite' model to allow PPP delivery in new social housing; schools and community development (Ref 6.3)</p>		
<p>PPP projects typically suit larger scale projects (generally over \$150m of capital expenditure) due to the high costs of project development and legal and financial complexity. Other states have developed a concept for a simplified form of PPP applicable to a wider range of PPP projects of a smaller capital size. The 'lite' model includes simplified procurement processes and contracts and is designed to be used on highly replicable projects such as schools and social housing. This model is considered to have strong merits but cannot at this stage comment on how it will be taken forward (if at all) into delivery.</p> <p>The law firm Maddocks is also about to launch a procurement framework for local government, including simplified approaches to PPP delivery.</p> <p>The Western Australian government has also endeavoured to use a simplified form of the PPP for its major projects to reduce complexity and drive additional value (more competition, less risk pricing and shorter and more cost effective procurement). It is using this simplified model on the Eastern Goldfields Prisons project.</p> <p>It is expected that these models will open up the PPP procurement model for a broader range of projects which would then benefit from opportunities of the model (e.g. value for money or private sector financing).</p>	<p>That South Australia considers the development of a simplified PPP model for smaller scale capital projects (>\$25m).</p> <p>Given the broad applicability of this model it should consider working through COAG to integrate with the work being undertaken, in particular, in Victoria.</p>	<p>A number of projects would be suitable including social housing and new schools. Some bundling may be required (e.g. grouping a number of schools together, for PPP Lite it might only need to be two or three schools) to achieve appropriate scale.</p>
<p>Recommendation 14 - Use new State support models for economic infrastructure projects that are close to economic viability but which can't be fully developed by the private sector to limit the State's exposure to risk and allow recycling of capital (Ref 4.6)</p>		
<p>In a post GFC environment and following the difficulties in Australia's toll roads sector, private investors are increasingly reluctant to bear full revenue risk for new projects where, at the time of financing, there is significant uncertainty in relation to the level of future revenues. Projects which may be economically viable are now increasingly difficult to deliver using a full private sector solution (in particular finance).</p> <p>An example is the Darwin Marine Supply Base project which, following testing in the market of the level of private sector funding appetite, was funded with a mix of public and private finance. New models of public support have emerged which limit the State's involvement in projects (and hence State risks) to enable economically viable projects to</p>	<p>That the State government considers supporting economic infrastructure projects in a way that limits the exposure of the State's balance sheet.</p> <p>The most appropriate model of State involvement will be determined by the characteristics of the particular project but should include the ability to: limit the State's exposure to risk; provide a return on capital (for risk borne by the State); allow the State to limit its own balance sheet</p>	<p>These models of State participation could apply to new roads (where user charging is adopted) and a range of mining related projects, including new ports and rail developments which are expected to eventually become commercially viable.</p>

Key Findings	Recommendation	South Australian Context
<p>proceed. In the case of the Darwin project the Territory has structured the project to allow the government to refinance or exit its initial funding once the demand for the project is demonstrated – allowing capital to be recycled into new projects.</p> <p>This and other forms of innovative State support could enable the delivery of a range of economic projects. Models of State participation under these models are designed to:</p> <ul style="list-style-type: none"> • Allow government to support projects and enable economic infrastructure investments to proceed (which might otherwise fail to attract private finance) • Limit government exposure to risk (mainly revenue) through timed and planned exit strategies • Allow government to limit capital exposure and recycle investment. <p>These models of State involvement include:</p> <ul style="list-style-type: none"> • Providing revenue guarantees – potentially under cap and collar arrangements • Subordinated debt investment • State development company – with ability to sell investment at a future point and recycle capital. 	<p>exposure; allow recycling of capital.</p>	
<p>Recommendation 15 - South Australia considers securitising future mining royalties to provide funding for current infrastructure requirements (Ref Section 5)</p>		
<p>Government across Australia is looking at how they can utilise their mining royalties to fund infrastructure development. In the most part government is adopting an approach where future income will be set aside for investment as it arises.</p> <p>There may be an opportunity to use future mining royalties as security for new borrowings to facilitate new investment. The future royalties in question would be purely incremental, i.e. not currently factored into the forward estimates. As a result the new funding raised against those royalties is not expected to have an adverse impact on net debt.</p> <p>Governments in Central and South America have used a model known as 'Future Flow Securitisation' to borrow at rates exceeding their sovereign rating and have securitised mineral resources.</p> <p>This might enable the State to invest in projects which would be delayed or would not progress without intervention (see also recommendation 14). The State's investment would be expected (though would not necessarily be required to) earn a return on investment and allow the recycling of capital into future projects.</p> <p>Raising capital in this manner could provide new funding for current investment without a further detrimental impact on the State's credit rating.</p> <p>This funding mechanism could be used to co-fund projects which attract Federal investment through the Regional Infrastructure Fund.</p>	<p>The State should further investigate the appropriateness and viability of utilising future mining royalties to fund current infrastructure projects.</p>	<p>South Australia has significant mining potential and some known infrastructure bottlenecks that may hinder the pace of development and competitiveness of its mining industry.</p> <p>The funds raised through this proposal would be available for investment in new mining infrastructure which would accelerate the delivery of new projects and positively contribute to State GSP, including through accelerating growth in royalties income.</p>
<p>Recommendation 16 - The South Australian government considers the development of an Infrastructure Fund to target investment in bottleneck infrastructure (Ref 3.7 and Section 5)</p>		

Key Findings	Recommendation	South Australian Context
<p>The private sector often finds it difficult to invest in new infrastructure where risks are high and returns are uncertain (or there is a timing issue in terms of infrastructure being required ahead of full demand – e.g. stop gap measure). In the UK the government is establishing an investment bank to fill gaps in the private finance market for ‘green’ projects.</p> <p>Superannuation funds find it difficult to invest in Greenfield infrastructure. They are widely seen as natural investors in infrastructure, but rates of investment are relatively low. Government across the world are looking for new ways of accessing superannuation investment into infrastructure and the UK government is undertaking a detailed consultation to consider ways in which further investment by superannuation funds in infrastructure can be secured.</p> <p>It may be possible to develop a fund (established with seed capital from the securitising of mining royalties or from a general allocation from existing mining royalties) for investment in infrastructure projects in South Australia. Such a fund could be established with co-investment from superannuation funds to provide additional funding leverage.</p> <p>The fund would invest equity, debt and subordinated debt in infrastructure projects. It would expect to earn a commercial return and would recycle capital through interest receipts and disposals. Capital could be invested in new projects and/or returned to investors.</p>	<p>Further consider the merit of an infrastructure fund. In particular whether there is appropriate scale of projects for the development of a fund and the investment rationale for the fund.</p>	<p>While we are aware of infrastructure bottlenecks affecting productivity there may not be sufficient projects to justify the establishment of a complex investment entity. This requires further consideration.</p> <p>A simplified fund could be developed without superannuation fund investment.</p> <p>This fund could be developed in a number of ways, including at arm’s length from government (which would mean it is more difficult to control investment) or with more direction from government, to control the direction of investment into areas of State priority.</p>
<p>Recommendation 17 - South Australia considers the development of a multidisciplinary infrastructure policy, coordination, and delivery organisation - along similar lines to the Scottish Futures Trust and, in particular, Infrastructure New South Wales (Ref 6.2)</p>		
<p>Because of the high value, complexity, longevity and importance of infrastructure, governments are increasingly establishing more coordinated and integrated infrastructure policy, development and procurement capability.</p> <p>The Scottish Futures Trust is an organisation (akin to a Statutory Authority) which is responsible for the development of Scotland’s infrastructure policy; for the development and assessment of projects and programs; for developing new funding models and for advising government on all matters related to infrastructure. It has championed the Tax Incremental Financing model which is now in use in Scotland and has developed a new, not for profit, PPP model, which is being used to deliver new schools. It has a workforce comprised of senior professional staff from the infrastructure arena, including financiers, lawyers and engineers. Its CEO was formerly the CEO of a major construction company.</p> <p>Infrastructure NSW has been established to assist government in the delivery of its infrastructure program over the next 20 years. The key elements of its role are to identify major infrastructure requirements, barriers to these projects being successful, and how to activate both public and private resources to deliver them.</p> <p>The Victorian Government has recently introduced a team to deal with ‘high value, high risk’ projects. It is seeking better procurement for these projects through the involvement of the new team at an early stage in the procurement cycle.</p>	<p>South Australia should consider developing a broader, more integrated infrastructure procurement organisation.</p> <p>The new organisation could take charge of the 30 Year Plan and the State’s infrastructure plan and integrate policy, planning funding and procurement.</p> <p>The body would not be a PPP body. It would be an infrastructure organisation with broad capability and would participate regardless of the procurement approach being adopted.</p>	<p>The South Australian government has significant partnerships expertise within government but has recently scaled back its Partnerships SA unit following financial close on the NRAH project.</p> <p>There is likely to be significant scope for benefit in developing a more coordinated approach to infrastructure development, funding, policy and delivery.</p> <p>Infrastructure is a key priority for the State. Small savings in spend or efficiencies in a large program will justify investment, enable better interaction with Federal government, better engagement with private sector, and improve capability in public sector. The Scottish Futures Trust is currently examining the services specification on its existing portfolio of PPP schools projects. They are looking at whether these schools are over specified relative to the needs of the State and could be scaled back, thus saving money. The SFT states ‘it manages a portfolio of assets worth £9bn and last year</p>

Key Findings	Recommendation	South Australian Context
		it delivered £129m in savings and benefits'. By way of comparison the Scottish economy is about twice the size of South Australia's.
Recommendation 18 - South Australia supports national initiatives aimed at targeting superannuation investment in infrastructure (Ref 4.3, 4.3 and Section 5)		
<p>Superannuation funds are often held to be the 'holy grail' of infrastructure. However, they do not constitute funding and represent instead a potentially more appropriate and economic form of financing. There is limited evidence of a 'finance gap' for all but the largest of projects (the NRAH project demonstrated the market's ability to raise up to c.\$5bn – across two consortia). Superannuation investors may represent a more appropriate form of long-term finance in place of bank debt, although, superannuation funds (such as IFM or Unisuper) already invest significantly in Australia's infrastructure.</p> <p>We recommend that the South Australian government continues to support national initiatives to encourage further participation in the sector for superannuation and other institutional investors. The UK government has undertaken an initiative to increase the participation of UK superannuation funds in infrastructure. Initially targeting £20 billion of investment, the consultation has most recently led to proposals for a £4 billion fund – which will aggregate investment in infrastructure assets⁵. This fund, GBP 4, is based on the model adopted by Australia's IFM.</p>	<p>Continue to support the development of initiatives to encourage superannuation fund investment in infrastructure.</p>	<p>South Australia should support national initiatives to further the ability of superannuation fund investors to invest in infrastructure.</p>

⁵ http://www.hm-treasury.gov.uk/press_135_11.htm

Ratings and Accounting Implications of Infrastructure Investment

A key objective for Government is to fund public infrastructure while maintaining its desired credit rating. In order to achieve this, Government must find alternative funding models that can leverage private investment while minimising budget impacts and maximising value for money and proceeds to the state. The challenge is that these objectives often compete.

Credit rating agencies will also make their assessment of a project based on the commercial nature of the arrangement and the level of risk transfer. However, in some cases their assessment of who bears the financial risk may not necessarily coincide with the accounting treatment. Off-balance sheet accounting may be of little consequence to rating agencies if they assess the risks of the project haven't been adequately presented.

Rating agencies routinely look beyond the balance sheet to evaluate whether obligations and commitments disclosed in the notes to the financial statements would restrict government's capacity to incur additional debt. In some circumstances, they will evaluate the likelihood of a claim on government finances, such as a bail out, even where there is no legal obligation for government to do so. It is not a question of on or off-balance sheet but rather who bears the risks of the project. Areas where rating agencies may routinely make adjustments in relation to infrastructure projects or asset sales include operating lease arrangements, availability payments, sale and leasebacks and guarantee arrangements. For example, we understand that the Sydney Desalination project may achieve an off balance sheet treatment but the rating agencies have committed to adding back the liabilities for the project in their ratings assessment.

From this perspective the balance sheet treatment of certain assets is of less importance than the commercial impact of the particular project and which party bears the risks and rewards of asset investment. While this means the potential for innovative balance sheet structuring may be limited (though not completely eliminated), these alternative structures may provide solutions which mitigate adverse credit ratings.

There are four broad concepts that provide context to the financial reporting implications of commercial funding structures used to deliver infrastructure. These include:

- **On/off balance sheet:** A balance sheet shows the economic resources that an entity controls or owns in order to produce value (assets) and obligations of the entity based on past events (liabilities). Accounting principles are based on economic substance over form, so assets and liabilities recorded on the balance sheet represent the value of economic benefits flowing to and from the entity. For assets to be considered off balance sheet the arrangement must in substance result in the risks and benefits of the project flowing to another party.

For the public sector, the balance sheet presents the economic benefits derived by the public that the entity controls. In order for infrastructure to reside off balance sheet the public sector entity is not able to control the benefit to the public.

- **Credit rating:** An evaluation of an entity's ability to repay debts which acts as an indicator for investors. Credit ratings exhibit the trade-off of risk and reward; higher credit ratings are an indication of lower risk to investors. From the perspective of an issuer of debt such as a Government, a strong credit rating means the ability to raise capital at a lower cost and ultimately

provide greater services to the public. The ability to repay future financial obligations is a key consideration of current credit rating.

Standard & Poor's bases credit ratings on qualitative and quantitative analysis of a range of financial, economic, fiscal stability and institutional factors. These factors are analysed within a framework that establishes a quantifiable metric set specifically for each State and monitored by the rating agency over the forward estimates using the current and forecast accounting results.

- **Net debt:** A financial metric that compares specific liabilities to specific assets which is included in the determination of the State credit rating. Net debt is one of the key quantitative components of the credit rating assessment however only Non-Financial Public Sector (NFPS) entities are included in this calculation.
- **Disclosures:** Supplementary discussion and presentation of items with potential effects to the entity within the financial statements relating to specific projects. This supplementary information is considered by users of the financial statements in viewing the overall financial position of an entity and as such, commitments for future expenditure may be included in users evaluating the credit rating of the entity.

States may choose to fund projects directly and then be entitled to the external revenue streams, for example, a car park that is funded by the State in return for the rights to the car park fees. In this funding structure, the liability for the amount funded would increase the net debt. The future income streams from the project do not get recognised on balance sheet, although the revenue stream will impact the credit rating. Credit rating agencies use a ratio of Net Debt/Revenue; therefore any accretive revenue streams will mitigate the full impact of the liability. A number of factors should be considered when assessing the State's credit rating impact of these projects including, the overall State's credit rating position and the profile of revenue over the life of the asset. The Victorian Desalination Project is recognised on the State's balance sheet, however the ratings agencies have assessed that as the costs will be passed to consumers through regulated water charges, its impact on net debt will be offset to some extent by future revenue.

Generally government investment in infrastructure will be on balance sheet and will have an adverse impact on credit rating. However if there is an external user charging stream against which the State can either create a financial asset, off-set the debt liabilities, or such revenue is considered to be incremental to government, credit ratings agencies are prepared to recognise incremental income. Therefore, PPP projects and other direct investments in infrastructure are typically on balance sheet for the State and have an impact on the State's credit rating. For example, the NRAH project is recognised as a contingent liability in South Australia's financial statement and will, on commercial acceptance, convert to a liability. This treatment would have been similar were the project a design and construction project.

With State Government's desire to seek alternative structures there has been a focus on getting assets and associated debt "off balance sheet" as there is a perception that this would reduce leverage and free up debt capacity. Structuring arrangements to get this accounting outcome may not always lead to a reduction of leverage and freeing up of debt capacity. The importance of structuring requires the right balance between commercial options, delivering deal value and ensuring the focus on accounting treatment is for the right reasons.

The funding structures referenced in this report include some which mitigate the impact on the State's balance sheet and credit rating. Essentially these are those that include an element of 'user pays' revenue. Toll roads and structures involving

incremental funding, including Tax Incremental Financing and Productivity Incentive Payments, may mitigate the impact on the State's financial position by securing new and incremental revenue to offset investment. Similarly where the State is an investor in an equity or debt instrument in a project, for example if it provides pari passu debt, this investment may be considered to be a financial asset and would be netted off in the calculation of net debt (to the extent that the project serves external "funding").

Next Steps

This report sets out a number of recommendations around the State's infrastructure funding and financing environment. A number of our recommendations could be adopted as 'responses' on a project or program basis.

However, the recommendations in this report require further development before they could be confirmed as beneficial for the State and adopted. For example, developing a TIF policy and program will require extensive work on policy, governance (the relative role of State and local government), program entry criteria, organisational support, etc. In this section we outline a series of 'next steps' to provide a potential framework for the further development of the recommendations in this report.

Infrastructure Review Committee: In order to progress the recommendations in this report to deliverable outcomes for the State, an Infrastructure Review Committee (IRC) should be established. The IRC will further develop the priority recommendations, including further policy development, development of detailed governance frameworks and financial and economic assessment.

Our view is that the IRC should be cross-departmental to ensure the infrastructure agenda is considered from a cross departmental perspective and is not inappropriately constrained or influenced by any particular agenda. Ultimately the recommendations of the IRC could inform Department of the Premier and Cabinet.

The EDB's working group for this project contains cross party representation and may be an appropriate forum for the further development of the report's recommendations.

In order of priority we recommend the IRC considers the following:

- **Problem Scale Assessment:** The scale and timing of the State's infrastructure needs should be consolidated. This should be done over a short, medium and long-term basis. Infrastructure NSW has a 20 year planning horizon. This will assist the EDB in further considering the appropriateness of the recommendations in this report.
- **Establishment of a Multi-Faceted Procurement Organisation:** We recognise the progress the State has made in streamlining infrastructure delivery. However, the development of an integrated organisation, similar to Infrastructure New South Wales, should be further considered. The purpose of the organisation is to link funding, finance, procurement and efficiency in infrastructure delivery with the planning process. This organisation could itself be a powerful driver for the efficient delivery of the State's infrastructure program.
- **Consider the Role of Public Private Partnerships and the role of Partnerships SA:** Other State governments are reassessing how they deliver PPP projects in the current environment. The State's balance sheet constraints may require increased reliance on PPPs as a form of delivery. The IRC should consider the conditions under which PPP projects will be developed in the light of the new models of PPP identified in this report and the relative role of government and private sector. The role of Partnerships SA should be considered (this could be considered in the organisational review). This review would be tightly linked to the

infrastructure priority list to consider the extent to which PPPs could play a role in the delivery of the State's current program.

- **Further develop the Tax Incremental Financing approach:** The relevance of TIF for a range of projects, both current and contemplated in the 30 Year Plan, means it may have broad application in the delivery of the State's infrastructure program. The potential benefit and implementation of TIF could be developed as a stand-alone project. PwC has developed a paper on behalf of The Property Council of Australia which might be used as reference point for this further work:
http://www.infrastructureaustralia.gov.au/public_submissions/published/files/486_propertycouncilofaustralia_SUB2.pdf
- **User charging regimes:** Further development of business case guidelines for user charging and value capture for projects (including commercial opportunities). The purpose of this would be to provide a framework and policy guidance on extracting appropriate external (user) funding for projects.
- **Develop economic infrastructure 'investment platform':** The State could consider the extent to which it is prepared to invest and the model of investment in economic infrastructure projects. Development of this policy and investment criteria could inform the basis of State investments in economic infrastructure projects. This would develop recommendation 14 into a policy framework for investment.

Each of the above could be developed as a separate work-stream and it would be realistic to assume that each of these could be completed and the Infrastructure Review Committee could report back within a six month period.

The outcome of this review process would be to have a body of new policy and guidance material which would inform the delivery of the Infrastructure Plan and the 30 Year Plan for Adelaide.

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1 *Context setting*

1.1 *Introduction*

The Economic Development Board (EDB) has engaged PricewaterhouseCoopers (PwC) to undertake a study of international and domestic trends in infrastructure funding and financing. PwC has considered how those trends could be applied to the infrastructure investment challenges faced in South Australia.

In 2011, the EDB defined their areas of focus into five areas. The area of focus relevant to this study is described as follows:

Ensuring infrastructure investment is aligned with economic and social development priorities

In relation to this objective the State identified two broad categories of infrastructure for further consideration:

- Major projects that impact on state development and service delivery
- Projects where the impact is restricted to local precincts, which is referred to as ‘neighbourhood infrastructure’.

This report considers major projects. ‘Neighbourhood infrastructure’ is being considered under a separate consultancy. In relation to major infrastructure the EDB defined the following scope of work, which is the focus of this report:

‘... to provide a report that canvases all the issues regarding project funding for major infrastructure in the current environment and reviews private sector financing alternatives, with a view to identifying the most efficient funding arrangements for South Australia.’

1.2 *Scope and objectives of the Study*

PwC has undertaken a detailed study of current trends in infrastructure funding and financing. This included examining examples of current practice both domestically and internationally from which we have drawn preliminary conclusions on the applicability of these alternative models to South Australia’s infrastructure landscape.

Key considerations for the study were the implications of the global financial crisis (GFC) and the economic conditions of the past five years, including the constrained funding capacity of government. We have considered our findings in the light of the State’s fiscal and economic position. Many of the findings of this report relate to impacts from the GFC as governments have looked to more innovative ways to fund and finance infrastructure.

We have also recognised the unique resilience of the Australian economy and the opportunity that this presents. South Australia maintains its AAA credit rating and we have considered whether it should seek to maintain this rating (noting this is no longer a stated objective of the State government) or whether it could invest further in infrastructure at the expense of a potential downgrading in its rating. We have also examined whether there are opportunities to use royalties from the State’s mineral resources to fund new investment.

We have examined the role of government in supporting infrastructure. It was evident in our review that new agencies were being created across governments to drive the infrastructure agenda; both in light of more challenging conditions and because of the importance of infrastructure in economic recovery and stimulus. It has been clear in this study that governments are delivering and supporting the delivery of infrastructure in new ways and developing the new skills, expertise and policy that is required to drive and support this change.

Recognising the impact of infrastructure investment on the State’s balance sheet and credit rating we examined how ratings are impacted by alternative forms of involvement by the State in infrastructure delivery and investment.

In developing our recommendations we have not been constrained by what is easy to implement or what is politically acceptable. This study was designed to look at what is being done elsewhere and consider whether the State can learn from this practice. We recognise however that implementation issues, changes in policy, governance challenges and political acceptability will temper what is acceptable and taken forward into delivery.

The recommendations we make in this report do not need to be adopted in full to provide improvements in infrastructure delivery and rates of investment. A recurring theme of this report is that there is no one answer to the issues faced in delivering infrastructure; hence our recommendations provide a series of options which, in the most part are not interdependent and which provide the State with a series of potential interventions.

We recognise that in order to move from preliminary recommendation to action will involve additional work which is beyond the scope of this study. However, we believe that there is strong merit and evidence to support the contention that the funding and financing models recommended in this report are capable of contributing to the range of models the State can utilise to deliver its infrastructure program. Additional work may be required to validate a move from recommendation to policy and we have identified a series of 'next steps' for consideration.

1.3 The Structure of this Report

Section	Content
Section 2 – The Funding and Financing Challenge	<p>This section describes the different characteristics of infrastructure funding and financing, including:</p> <ul style="list-style-type: none"> • Current challenges faced by government in the constrained economic and fiscal environment in funding infrastructure projects and programs. • Sources of funding for projects; including State and Federal taxation and forms of direct and indirect user charging. In this section the scene is set to examine, in subsequent sections, how limited funding sources can be optimised to drive higher rates of infrastructure investment. • The role of private sector investment in funding and financing of infrastructure and the role government can play in supporting private sector investment; which is also constrained by current conditions. • The difficulties of raising capital (finance) in current economic conditions and identify the problems this has caused in terms of availability and cost of capital and the terms on which it is provided. • The role of finance in supporting the efficient development of infrastructure and the role of government in supporting infrastructure financing.
Section 3 – Funding Infrastructure	<p>This section identifies the alternative ways in which infrastructure is funded: variously through tax raising; direct user charging and indirect user charging, including:</p> <ul style="list-style-type: none"> • A review of international practice and a number of models of infrastructure funding. Increasingly government is seeking to recover costs from users or beneficiaries of infrastructure to reduce the extent of government funding required for projects. • A number of case studies that demonstrate how alternative funding models are used and have considered the relevance and applicability of these in a South Australian context. • An investigation of a number of funding models, including user charging, value capture, the development of commercial opportunities, developer charges, special levies, Tax Incremental Financing; and Productivity Improvement Payments. • Consideration of whether government should borrow more to invest today and the implications of doing so, including on its credit rating. • Asset disposals to fund investment are being used in both NSW and Queensland (a potential funding model for infrastructure investment). • The role that infrastructure funds and a State Infrastructure Fund, could play in leveraging new funding for infrastructure development.
Section 4 – Financing Infrastructure	<p>This section identifies the different sources of financing available for projects, including:</p> <ul style="list-style-type: none"> • Whether government can make strategic interventions to improve the capacity of the private sector to finance infrastructure and allow investments which would otherwise fail to proceed. • A review of a range of financing models which could be used to improve the value for money and, more generally, the terms and conditions on which infrastructure finance is made available. • For economic infrastructure there are a number of models which allow government to support projects in a manner that allows projects to proceed which might not otherwise take place, while at the same time limiting government exposure to the risks associated with that investment and support.

Context setting

Section 5 – An Integrated Investment Model for Mining Infrastructure Development

This section develops an approach to **using future mining royalties to fund current infrastructure projects**. The approach seeks to lessen the impact on the State's balance sheet and credit rating relative to other forms of borrowing and to allow earlier investment in projects that support economic growth.

This proposal has been linked to the development of a **State Infrastructure Funding model** which would seek to invest efficiently in infrastructure and leverage **superannuation fund investment**.

Section 6 – Other Mechanisms to Improve the Rate and Efficiency of Infrastructure Investment

This section considers the **role of government in driving the infrastructure agenda** – including as policy setter, regulator, promoter, funder and procurement authority.

We investigate the increasingly integrated approach government is taking to infrastructure delivery and **whether an integrated infrastructure delivery organisation would be of benefit in South Australia**.

Section 7 - Accounting and Credit Rating Considerations

This section outlines **the impact of infrastructure investment** and new models of investment **on the State's balance sheet and credit rating**, and examines the principles which determine credit ratings and how alternative structures influence the rating.

Section 8 – Case Studies

This section details two simplified case studies to illustrate the range of funding, financing and procurement options that may be relevant to two local projects:

- Adelaide Riverbank Redevelopment; and
- Mynopie Point Port Development

2 The funding and financing challenge

2.1 The Funding and Financing Challenge

South Australia is facing unprecedented challenges in the delivery of its infrastructure. On one hand it has an ambitious vision for the future of the State and of Adelaide which will require significant investment to build the new and sustainable communities envisaged in the 30 Year Plan for Greater Adelaide; on the other the State is constrained by large unfunded superannuation liabilities and deteriorating levels of net debt.

Like other governments across Australia and the globe, South Australia is considering how best to fund its infrastructure against the backdrop of these budgetary constraints and a commitment to reducing net debt levels and returning to surplus.

Governments have been increasingly focused on measures to maximise the value derived from their infrastructure investments. This has included identifying new sources of funding by leveraging government funds with private sector investment and seeking efficiency improvements through the private sector involvement (for example, better asset utilisation and maximising commercial revenue opportunities). Governments are seeking an ability to earn a return on investment or a return of their investment, to allow capital to be recycled into projects. Governments are also looking to their infrastructure portfolio's to pay for itself, whether by user charging or value capture.

2.2 The Nature of the Funding Challenge

2.2.1 Economic Infrastructure

Both the private sector and government have critical roles to play in infrastructure funding. Where infrastructure projects are financially viable (with acceptable risk returns) and do not require a government concession to grant the necessary rights to undertake the project, the private sector will invest with minimal government involvement. The resources sector and its ability to self fund mines, rail and ports is an obvious example.

However, because of external benefits and costs, which cannot be captured commercially, most public infrastructure is not expected to be fully self-funding. It is then the responsibility of government, more often the States, to invest in the infrastructure needed for them to fulfil their fundamental service delivery obligations. From transport to health care, schools to stadia; the States' responsibilities in this respect affects all aspects of our day to day lives. The investment has to happen, but with limited government funds the issue becomes one of prioritisation and innovative structuring to provide the optimal mix of public and private finance to maximise leverage from the States' investment in order to fund more of its infrastructure priorities.

In addition to the States, and notwithstanding its own budgetary constraints, the Commonwealth Government is focussed on helping address the funding gap for infrastructure projects of national significance with strong economic viability. Through Infrastructure Australia and the Department of Infrastructure, the Commonwealth has identified national priorities centred on networked infrastructure, improving the competitiveness and enhancing the liveability of Australia's cities.

Unlike many other government sponsored projects, economic infrastructure projects often provide scope to access independent revenues from the imposition of user charges (road tolls, rail access charges, ticketing revenues, port access fees, etc). Such third party revenues can greatly assist with long term project affordability and the ability to leverage private sector investment. In addition, transport projects often give rise to indirect revenue benefits, which can include rent streams from retail or selling airspace above stations, increased land transfer duty and land tax due to higher density residential and retail developments, and increases in council rates through increased property values in the corridor serviced by the project.

When considering how best to fund these projects, government is focussed on optimising the commercial and financial structure to strike the right balance between government and private sector funding, and how each shares in the project's revenues and risks. This results in a number of challenges:

- Many of the infrastructure projects are of a very large scale and need to be retro-fitted into developed urban environments. The absence of existing land reservations often necessitates use of high capital cost solutions.
- For other projects, capital costs are so great or revenue potential so inherently limited that they will never be financially viable on a stand-alone basis. This may well be the case even though the investment rationale remains sound, with clear (albeit non-financial) economic benefits.
- Because of the prevalence of external economic benefits that do not translate to financial benefits – such as relief of congestion on competing transport routes and environmental gains – reliance solely on direct third party revenue potential may likely lead to systematic underinvestment and failure to achieve the public policy purpose.
- Even where projects at bid stage are viewed as financially viable and perform well operationally, recent high profile financial failures in the toll road sector (including Cross City Tunnel, the Lane Cove Tunnel and most recently Clem7) have severely undermined private sector appetite for demand risk in Greenfield projects. This aversion for demand risk effectively extends to any project where the private sector is required to develop and obtain bank debt based on its own long term patronage forecasts, without the benefit of a proven track record of usage.
- Finance costs and availability of finance remain significantly worse than in a pre-GFC environment. The absence of monoline insurance has led to inability to access the capital markets and the gap left has been (to a large extent) filled by banks. The limited availability, high cost and short tenor of bank finance is a further constraint on the viability and value for money of private sector finance. This issue impacts both economic infrastructure and social infrastructure projects, making the recent requirement for the Victorian government to invest \$300m of state funds in the Victorian Comprehensive Cancer Centre project.

2.2.2 The economic viability of infrastructure projects

Some projects will never be financially viable on a standalone basis without government funding or contribution. Some project benefits cannot be monetised by the proponent or developer and are not directly attributable to a defined set of users or beneficiaries. For such projects, government funding may be required and provided as an upfront amount to the point at which a project becomes financially viable, or may require revenue support to bridge the gap between commencement and financial viability.

2.2.3 *The sources of infrastructure funding are limited*

The range of funding sources for infrastructure is normally limited to government, infrastructure users or other beneficiaries of the infrastructure development (or a combination of the three). The challenge for Governments is often how best to link funding sources to the user and beneficiaries of projects that are likely to derive gain over the useful life of the asset.

A number of sources of infrastructure are outlined below:

Funder	Revenue Sources	Common Infrastructure Types
Federal Government	Raises taxes, personal, corporate and GST, to fund range of social and economic infrastructure projects.	Hospitals; Roads.
State Government	Receives contributions from Commonwealth Government and raises own taxes (property taxes, development contributions, payroll taxes, etc) to fund infrastructure programs.	Schools; Hospitals; Roads, Rail, Other Transport.
Users – Direct user pays	Aims to connect direct beneficiaries to financial revenues. This may take the form of charging of public transport patrons, freight infrastructure users, businesses and land owners who benefit through time and cost savings due to more productive infrastructure. Advertising and leasing revenue from commercial enterprise.	Roads, Rail and other public transport, air transport, freight facilities (including Ports), etc. Many transport modes that deliver users with improved cost and time efficiencies are typically user pay.
Users – Indirect user pays	Often more challenging to implement and directly link benefits to beneficiaries. Some examples include vehicle registration payments, fuel excise taxes, local resident taxes, developer payments and general system wide increases in fares (on for examples, public transport ticketing).	Roads and roads maintenance, public transport, real estate development projects.

2.2.4 *Social Infrastructure*

Challenges in delivering social infrastructure are perhaps even harder in the current environment. Government funds most social infrastructure through taxes or borrowing and as a result most social infrastructure investment has a detrimental impact on the net debt. The opportunities to diversify the sources of funding for social infrastructure investment are more limited.

2.2.5 *Timing of benefits*

While there are a range of benefits from infrastructure investments that may have the potential to be converted into commercial revenue streams, the potential timing of these with project funding requirements is rarely aligned. While funding for large scale developments is generally required upfront in the design and construct phases, many benefits will not be experienced until the operations phase, leading to a funding gap or 'liquidity squeeze' on project in the early construction and project 'ramp-up' phases.

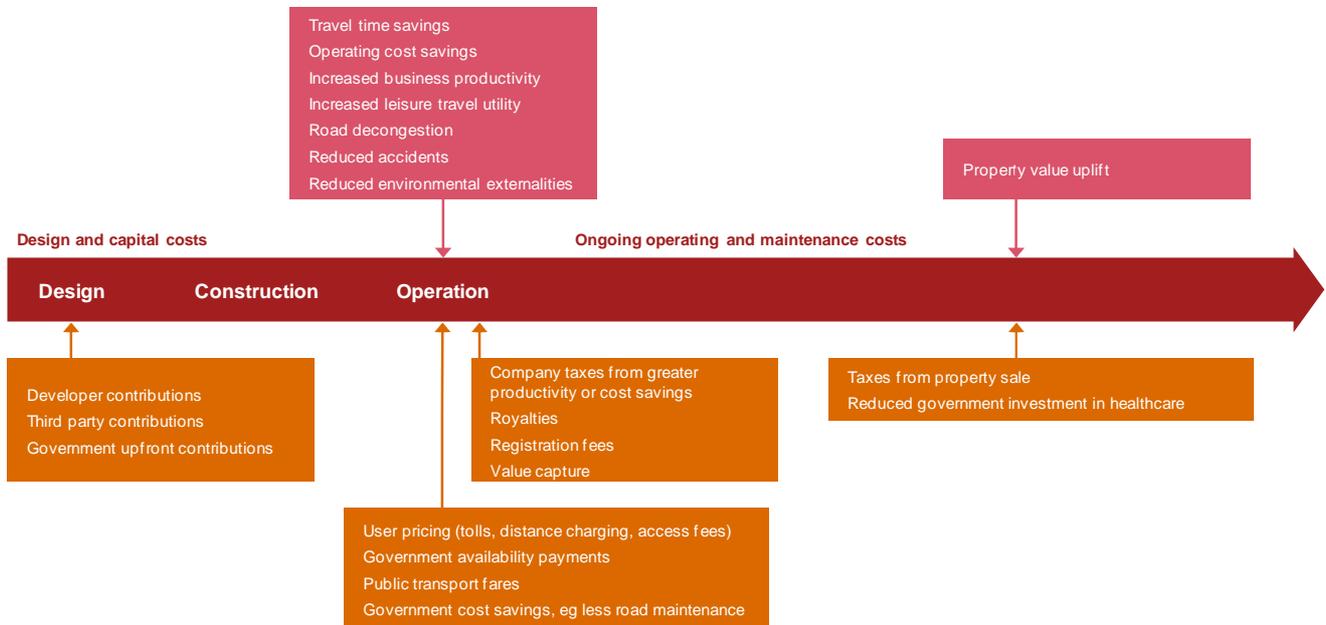
There may be potential to obtain some funding sources upfront in the design and construct phase of a project's development (e.g. developer contributions are generally required prior to construction). However, it may not be possible to capture a large proportion of the commercial revenue streams until the operating phase commences (e.g. user charges or registration fees would largely be payable once the infrastructure is constructed and operational). Some models, such as Tax Incremental Financing, look to securitise future uplifts in income and allow borrowing against future revenue streams to achieve better alignment between expenditure and project funding.

The implication of this mismatch in timing is that there may continue to be a funding requirement in the period between construction and receiving cash flows from beneficiaries. This is common for most infrastructure projects.

The figure below provides a representation of the timings of costs relative to the potential timings of infrastructure benefits and related revenue streams.

Figure ES.1: Indicative timing of benefits, revenue streams and funding requirements

Timing of economic benefits



2.2.6 Ability to generate commercial revenue streams

Another important factor in considering the potential to convert key economic benefit streams into commercial revenues is the ease of implementing possible revenue mechanisms. The following factors may impact on the ability to generate commercial revenue streams, despite related economic benefit streams being identified:

- If a project has the opportunity to generate commercial revenues, it is possible the market has a low appetite to pursue these (based on implementation, financing and feasibility constraints). In the cases where there are challenges in generating revenues, the role for public sector funding may become more important in order to implement a project (especially if the project is to be established as a ‘Greenfield’ asset)
- The scale of economic benefit streams may be reduced as a result of new or increased charges for public infrastructure. Such charges may impact on demand for new or expanded infrastructure, and hence economic viability may reduce dependence on additional charges. For example, applying a toll to a particular road may encourage road users to use non-tolled roads to avoid additional costs, and thus reducing demand for the new/upgraded toll road and increasing the need for maintenance and other investment on surrounding roads
- New revenue capture mechanisms may themselves generate costs including regulatory, legislative and infrastructure costs, which must be considered. There is potential that these could result in a net cost for particular revenue capture options. In particular, there are a range of revenue capture mechanisms already in place in states and territories of Australia (including vehicle registration fees, public transport revenues and heavy vehicle pricing), and it may be more cost effective to increase existing charges as opposed to developing and implementing a new revenue mechanism (for example new value capture charges/taxes). It may therefore be necessary to consider whether revenue capture approaches may require a separate economic appraisal prior to committing to a particular measure

- Not all benefits are directly transferrable into monetised values, making it challenging to place a value on these items. Non market benefits, including increased safety, lower noise, and reduced air pollution, are by definition non-excludable and non-rival (e.g. there are a range of beneficiaries from reduced noise that cannot be easily identified). As a result there is little incentive for people to pay for such improvements.
- Equity issues may be created, for example some people could be charged multiple times for the same infrastructure through tolls, property rates and broad based taxes. In addition, some revenue mechanisms (e.g. property rates) could result in some people in the vicinity of the new/expanded infrastructure contributing to fund the development but not receiving any benefit from the use of the infrastructure once it's completed.

These issues raise the question as to how to determine the appropriate level of government funding for a project. One approach could be to undertake a process similar to that of some regulators, whereby the share of revenue requirement appropriate for taxpayers to fund is estimated based on the proportion of user to external benefit streams.

2.3 The Financing Challenge

During the GFC, private finance for PPP projects became more expensive and availability of finance was significantly curtailed, with reductions in availability of both debt and equity finance. It became increasingly challenging for PPP projects to deliver value for money in the light of higher finance costs and lower levels of risk acceptance by financiers. Since the start of the GFC there has been a significant deterioration in the terms under which a project could obtain debt financing. Debt tenors are significantly curtailed as lenders take an increasingly conservative long-term view and loans to projects were reduced from full-term (up to 25 years) to less than 10 years (more typically 7 years). This led to both financiers and government bearing refinancing risks which didn't previously exist in most PPP projects.

A number of projects which faced demand risks, such as toll roads, were affected by the consequences of the economic down-turn which adversely affected their revenues. Economic infrastructure projects, which contain demand risk in relation to new or expansion demand, be it traffic or ports or rail demand, are expected to face continued challenges in raising private finance.

One of the most significant and enduring impacts of the GFC has been the impact it has had on the bond market. The collapse of the mono-line insurance market meant that capital market finance for PPP projects was eliminated as a competitive source of financing. Capital markets had previously been a primary source of long-term finance for Australian PPP projects (in particular larger PPP projects). Bond finance remains largely unavailable, although we have identified the first 'green shoots' of a renewed bond market in Europe. The European Investment Bank is considering mechanisms to support an infrastructure bond market.

The GFC has meant the terms on which projects are financed are significantly inferior to pre-GFC terms, including the increased reliance on government support.

In the post GFC environment most long-dated project finance has been organised via bank 'club' arrangements. This involves a number of banks partnering together to offer and set the funding terms. This type of arrangement is as a result of a more risk-averse credit environment. Lenders are only prepared to expose their loan books to a limited degree, which requires a number of banks to come together to secure the finance for a project. All recent Australian PPP projects have been financed in this manner. There is a concern, and evidence that, this leads to "lowest common denominator" investment.

Three years after the worst of the GFC, margins and the terms on which debt finance for PPPs is offered are improving. Debt terms however remain relatively high at approximately 2.50% - 3.0% for a 'typical' availability style infrastructure transaction, while pre GFC debt margins were less than 1.00%.

Loan tenors in Australia remain short. Typically 5-10 years, although the recent Gold Coast Rapid Transit (GCRT) achieved a 15 year debt term (this deal was fully debt financed by overseas lenders). The key constraints remain the requirements of lenders to protect the adequacy of their capital underlying. Overseas investors may have more appetite and capacity for longer dated debt than Australian lenders.

Scarcity of long-term debt has not prevented deals being done, but it introduces a level of refinancing risk when short term 5-7 year dated debt is utilised and this adds to overall costs. In response to the issue of high

The funding and financing challenge

financing costs and short term debt tenors and generally less appetite for risk, governments across Australia and the world have looked to new models of participation in projects to reduce the impact of high private sector lending margins. These models include government co-lending, government capital contributions and government guaranteeing revenue.

3 Funding infrastructure

3.1 Infrastructure funding and investment recovery models

In the light of constrained economic and fiscal conditions and deteriorating government balance sheets, government have been increasingly focussed on diversifying funding sources for infrastructure programs and projects.

This section examines the national and international trends in project funding and considers how these lessons could be applied in South Australia.

In this section we review.

- Direct Beneficiary Models i.e., user charging
- Capturing Commercial Value from projects
- Indirect Beneficiary Modes, i.e., charging those who benefit from but don't necessarily use the infrastructure
- Asset disposals to fund investment and drive efficient infrastructure delivery
- The development of a State infrastructure fund.

3.2 Direct beneficiary models

The scale of the infrastructure requirements makes it unlikely that these requirements can be addressed solely from current levels of funding. Government funds for infrastructure projects are limited, and taxation levels are not set to fund all projects with positive economic results.

User charging is widely accepted in a range of sectors, such as ports, electricity, water and gas, public transport and for other infrastructure such as stadia. While there is a propensity and acceptance for user pays models in some sectors, in others there is reluctance, based on the perception that users are unwilling to accept user charging in areas in which such charging has no previous precedent.

In this section we consider the potential scale and scope of alternative user charging in a South Australian context and consider the mechanisms used to facilitate charging in other jurisdictions.

3.2.1.1 Models of User Charging

Generally we have observed that governments are increasingly looking for new sources of funding for projects. In this section we have identified how regulators and government are seeking to recoup investment from infrastructure users directly.

Increasing Regulated Prices to Fund Infrastructure: UK Comprehensive Spending Review

The UK government announced in its comprehensive spending review an increase in the cost of rail services. Under the UK model, in which commuter services are operated under a series of franchises, rail prices are regulated. The railway franchises pay track access fees to Network Rail for the use of railway infrastructure. The Comprehensive Spending Review increased the rate at which regulated fares would increase in order to compensate for the additional costs of investing in infrastructure, in particular the Crossrail project and the High Speed Rail project. Prices will now increase from RPI + 1% (RPI is equivalent to CPI) to RPI + 3%.

Clearly, in any pricing determination the ability of users to bear costs needs to be considered. The approach used in NSW to fund new public transport infrastructure is insightful in showing how such determinations can be made in an economically rational way:

Targeted Pricing for External Benefit Streams: Independent Pricing and Regulatory Tribunal of NSW (IPART): Rail and Bus Pricing

IPART makes decisions on the approach to fare setting for CityRail's rail network, and bus passenger services. This includes establishing the share of the revenue requirement to be recovered from passengers and from taxpayers by estimating the value of the external benefits generated by CityRail services. External benefits measured in such assessments for bus or passenger rail include: avoided road congestion, avoided environmental externalities, avoided road accidents, and avoided road damage. These are all factors that tend to be measured and monetised in an economic appraisal.

External benefits are then funded by State or Commonwealth government and direct user benefits are recovered from users.

Increasingly projects are seeking multiple layers of project funding, where each of the beneficiaries of the project are expected to contribute. This is reflected in government seeking to utilise a blend of user contributions (direct and indirect) and other sources of revenue.

The UK government is exploring road charging. Tolling of roads has not been used previously in the UK with the exception of the M6 toll road, which is duplication alongside an existing free to use motorway. The UK government is currently reviewing its position in relation to roads tolling. In its National Infrastructure Plan the UK government has committed to:

'... exploring new sources of revenue to support investment. The Government is committing to increase capacity and improve performance on the A14, which will support proposed housing

developments.... It will explore innovative ways of financing this work, including tolls, which will also be investigated for other new capacity proposals.'

A recurring theme in this paper, and in the research we have conducted, is that in a mixed economy of funding, user charging should be included in the mix. More often than not, user charging is now considered within a mixed pricing economy, to provide a holistic approach to infrastructure investment and funding:

Confidential Project Australia: PwC Roads Business Case

PwC is currently advising on a major road investment – including road, tunnel and bridges. In order to develop the project in the current financial climate a number of mechanisms are being considered side-by-side. These include taking a 'harder look' at the technical solution to determine whether there are more efficient methods of delivery, e.g. an elevated road instead of a tunnel, as well as a range of charging mechanisms. Options being considered include recovery from business users which benefit from the new project (value capture) as well as direct user charging.

Recognising that a full economic infrastructure project is challenging in the current climate new models of financing are being considered to support the project; these will potentially include new methods of support by the State, e.g. bearing a level of traffic risk to support private financing.

Other projects in this study have shown how user charging is increasingly developed in a mixed economy of funding sources. For example, the tram extension project in the UK includes a funding contribution from a car parking levy alongside new fares from tram users.

Differential pricing has also been adopted, in part to reflect the varying impacts on infrastructure of different users and also based on tolerance to pay. There may be opportunities to consider the development of, for example, truck only tolls. This has been considered in the USA.

Dedicated truck lanes as a solution to capacity and safety issues on interstate highway corridors

To relieve congestion on interstate highways and in the light of high levels of truck related fatalities, dedicated truck only lanes are being developed. These projects are using user pays PPP models to fund the investment in new infrastructure.

\$4.3bn in funding was allocated for the development of truck lanes on State Highway 60 in Southern California for the 2001 Regional Transportation Plan. Of the \$4.3bn, 70% of the funding was derived from public support, and the remaining 30% coming from toll revenue.

3.2.1.2 Congestion Charging

Congestion charging is increasingly being considered to manage congestion in inner city areas and can be used to fund infrastructure investment; in particular public transport investment. City car parking levies could be considered to be a 'quasi congestion tax' and are already in use throughout Australia but do not have the sophistication of a more integrated congestion scheme which would allow time of day charging to allow peak load spreading.

Case study – Nottingham Express Transit – Workplace Parking Levy

An express transit project in the UK is being developed under a design, build, finance and operate two tram network. Under this deal, the concessionaire was expected to take full patronage risk, with an additional availability payment from the council based on performance against a series of detailed service and performance standards.

One of the unique aspects of this project was that the department of treasury and finance would only fund 75% of the overall scheme costs. The council spent a number of years developing a Workplace Parking Levy scheme. The levy is a charge on employers in the city region that provide workplace parking, as a new source of income. Charging will be used to finance the remaining scheme costs.

Alternatively more comprehensive charging schemes could be developed, such as those in use in London and Milan. Greater Manchester Council considered a congestion scheme in 2007/08. Under its proposal to introduce a congestion scheme, which included multiple charging zones, the Council developed business cases for more than 25 supporting projects to allow the development of appropriate public transport alternatives alongside the proposed scheme. This was in addition to an already extensive bus, tram and train network. The scheme itself would have partly funded the projects but required a significant central government contribution. The scheme sought in excess of \$1bn of grant funding from the central government's Transport Innovation Fund, plus additional loans. While the scheme was approved by the Transport Innovation Fund it required Council approval, which was rejected. Edinburgh residents rejected a similar scheme.

It is unlikely that Adelaide is of sufficient scale and has sufficient public transport alternatives to develop a congestion scheme of its own at this point, nor is it likely that a scheme would be self funding – in the case of the Manchester scheme more than 1/3 of the budget was proposed to be grant funded.

3.2.1.3 Direct User Charging in South Australia

Direct user charging through fares and tolls is an effective way of funding new infrastructure. It provides a nexus between funding and utilisation and can be (depending on scheme design) used to effectively manage demand and impact, as well as proving funding. We recommend that user charging is considered in South Australia. A key benefit of user charging is that where the revenues are new and incremental and off-set the costs of investment, rating agencies may “net off” the impact of debt (whether under a design and build project or a PPP) against the future income. This was the approach adopted by ratings agencies for the Victorian Desalination Project.

Regardless of whether a PPP model is used user charging can be an efficient way in which to manage demand and achieve broader outcomes in terms of congestion and integrated traffic planning (moving flows to different points in the day and/or other models of transport). Combining user charging with a PPP model can also lead to additional benefits including private finance risk transfer, asset utilisation and leverage.

A number of projects and project types may be suitable for user charging in South Australia including new roads, ports and additional public transport fees. For example additional fares could be used to recover the cost of the electrification of the State's railway network (similar to rail investments in the UK). The economic rationale will need to be tested in the light of potentially adverse impacts on user demand.

We recommend that if benefits are shared by a large number of people (in an extreme case, the whole of society) then general taxation may be the most effective measure to fund the infrastructure. However, in many cases beneficiaries can be targeted and mechanisms should be used to extract commercial revenue directly from them. The view could be taken that if significant economic benefits cannot reasonably be captured by commercial mechanisms that this suggests that those economic benefits may be overstated or that they may principally relate to externalities and can be difficult to monetise. It can be argued there that forcing the discipline of examining the extent to which benefits can be recouped from users will require the development of more robust business cases, acting as a rational filter on which projects progress.

Our recommendation with respect to user charging is that the business case process is structured to ensure that all projects fully consider the extent to which user charging can be adopted. We expect Infrastructure Australia to increasingly look for projects to utilise and fully explore user pays models and may extend their requirements in this regard before committing to funding.

3.3 Other Forms of Capturing Commercial Value

3.3.1.1 Overview of commercial development models

Capturing commercial value can reduce government's investment requirements in a project. Recently the State procured the New Royal Adelaide Hospital project using a PPP and included in the winning consortium's proposals were commercial development opportunities (such as a gymnasium and childcare facilities), the revenue from which was off-set against the cost of the project. A number of models exist to capture the value which sits in, around and is associated with infrastructure development. In this section we explore how this value can be captured to fund projects.

Commercial development refers to complementing core infrastructure facilities (in order to progress the State’s policy objectives) with commercial development of adjacent real estate or the development of private sector opportunities, such as the co-location of a private hospital with a public hospital on State surplus land.

This commercial arrangement would typically involve the private sector funding or underwriting a proportion of the core infrastructure costs of the project, often under the terms of a commercial development agreement.

Corporate sponsorships or naming rights are an alternate form of value capture that involve the procuring authority selling or leasing naming rights in order to ease funding pressures. Naming rights have been utilised extensively in relation to sports and recreational facilities, but have also been used in other sectors. In the UK the ability of franchise operators to ‘brand’, has been used to raise additional income (or off-set costs). Furthermore, the potential to utilise naming rights could be extended into social infrastructure, naming rights could be included within hospitals. Under this type of arrangement sponsorship or airspace leasing would supplement any additional development potential of sites in close proximity to infrastructure projects (e.g. railway stations).

3.3.1.2 *Joint commercial development in practice*

Joint commercial development could involve exploiting the development rights to mixed-use facilities such as residential apartments, retail outlets, hotels, commercial and office space, utilising existing state assets.

In social infrastructure projects we have observed a number of recent cases in which commercial opportunities have been included to reduce the funding cost to government (noting many of these projects would be expected to be largely funded by government):

Commercial Opportunity	Description and examples of use
Private Hospital on Government Land	Sunshine Coast Private Hospital is being developed alongside the new University Hospital. The private hospital is being developed on State land and a ground rent is payable to the State.
Private Facilities within Public Facilities	A number of projects have been developed with private consulting rooms included in public facilities with the state (or department) receiving a rent.
Gyms / Childcare / Retail	Schools projects in the UK have been developed with childcare facilities included. Bidders pay for the right to provide childcare services and rents on associated space. Most health PPP projects in Australia have been developed to include retail opportunities, including the New Royal Adelaide Hospital project.
Car Parking	Private car park provision can be offered as a commercial development opportunity. Sunshine Coast University Hospital is being developed with a private car park operated by the services provider.
Out of hours use of assets / asset optimisation	Dalkeith Schools in Edinburgh allowed schools facilities to be rented out by a private provider for profit to generate 3 rd party income; for example the space could be rented to community education groups.
Excess commercial ‘space’	The county courts project in Victoria includes the private sector building additional space which can be commercially let.

In our experience it is critical that these opportunities are explored at the outset of a project in the business case, to ensure that the opportunity is structured in a way which is acceptable to the State and which ensures the opportunity is properly developed to allow value to be optimised. Often opportunities are not considered at the right stage and value is lost.

Larger scale commercial opportunities were delivered on both Melbourne’s Southern Cross Railway station, which include a large retail opportunity and the Melbourne Convention Centre, which included a hotel. To drive the type of value that these opportunities can bring, the procurement process needs to anticipate them so that the parameters within which the State would find them acceptable can be agreed and the market can size, and drive the opportunity. The following case studies provide examples of recent large scale development opportunities alongside public infrastructure:

Case study: Portland Cascade Station

Cascade Station is a mixed-used shopping centre with office buildings and hotels located in Portland along Airport Way and Interstate 205. It features a light rail train station along with 123,100 m² of office space, 1,200 hotel rooms, 37,000 m² of retail space and a 24-screen cinema on 0.5 km² lands.

The development of Cascade Station was proposed in 2001 by Bechtel, a private US property developer. The company approached the City of Portland, the Port of Portland, which oversees the Portland International Airport, and TriMet, Portland region's transit agency. It proposed to assist in financing and building of a planned airport extension.

In exchange, Bechtel was granted:

- 1 the sole right to design and build the project
- 2 the right to develop a 0.5 km² land in the Portland International Centre near a new transit station. This parcel would come to be called Cascade Station.

The development risks were effectively 'offset' against project costs.

Case study: Chatswood Transport Interchange

The Chatswood Transport Interchange was part of the overall construction of the Chatswood to Epping Rail Link. The development was required to integrate the eastern end of the new railway line from Epping with the existing North Shore Rail Line. This necessitated the demolition and re-construction of the Chatswood Railway Station to incorporate an inter-modal public transport interchange including new platforms, concourses, lifts and escalators, a new bus interchange, taxi ranks, improved pedestrian access and connections to adjoining properties and public spaces, along with the incorporation of a multi-level car-park underneath the new platforms.

The project also included commercial development including a large pedestrian mall running underneath the railway easement and a new 10,000m² retail level above the train platforms. A residential development including 3 residential towers above the retail level is planned.

The NSW Government approved the procurement of the Chatswood Transport Interchange development through a PPP process. The evaluation criteria for the proposals included a significant weighting on the proposed commercial arrangements.

The NSW Government and the selected proponent entered in September 2005 into call option deeds with respect to the sale of the retail complex lot and the lease of the retail space, along with the sale of residential lots and the car park. The value of the contract value was \$157 million (estimated capital cost at the time of the contract award) including the government contribution of \$64 million.

A further example of how development and commercial opportunities can drive value is by allowing developers master planning control such that they can optimise the use of the new infrastructure and the development opportunity. An example of this was provided on Delhi International Airport, (see below).

Case study: Delhi International Airport

In 2006, following a competitive bidding process, the Government of India awarded the Delhi International Airport concession to the Delhi International Airport Private Limited (DIAL) with a mandate to operate, maintain, develop, design, construct, finance, upgrade, and modernize the India Gandhi International Airport in Delhi, for a period of 30 years until 2036, with a further option to extend the concession by 30 years.

DIAL is responsible for developing the airport as per the concession master plan. The first phase required the upgrade of two existing terminals and the construction of a new runway (and associated infrastructure), followed by the completion of a new third terminal, cargo facilities, and airport access.

The Government of India had two main aims in wanting to modernize the airport and improve the efficiency of its operations and financing while retaining some influence in the project. By choosing a PPP, the Indian government retained influence on the operation of DIAL through a 26 percent shareholding but does not have control. DIAL has arranged external financing to fund a major program to upgrade the airport, and DIAL's

Case study: Delhi International Airport

private-sector shareholders include specialist airport operators.

DIAL's revenue is made up of two main elements⁶:

- **Aeronautical charges:** Existing charges remain unchanged until the completion of capital upgrades, when a 10 per cent increase will be permitted. Thereafter, these charges are capped by CPI-X increase to achieve target revenue for a five-year regulated period. The CPI used will be the All India CPI.
- **Non-aeronautical charges:** These are the revenues from non-aeronautical activities, such as advertising, duty-free retail sales, car parking facilities, and food and beverages.

DIAL leases the site from the Government of India for a nominal rent. The concession also allows DIAL to develop 5 per cent of the total airport size for commercial property development; including hotel and retail space. The income secured from this commercial development is contributed as quasi-equity for the airport's development.

3.3.1.3 Potential South Australian scope

There is considerable scope in South Australia to consider commercial development opportunities within its portfolio of future projects. We recommend every project at business case stage is fully assessed to consider the scope (blue sky thinking) for ancillary commercial development.

While in most cases commercial developments do not drive the projects or act as a key factor, careful structuring of any opportunities that do exist can be brought forward in a way which optimises their balance within the primary development.

3.4 Indirect beneficiary models

In this section we consider indirect beneficiary models. In these models beneficiaries of the infrastructure, who may not be direct users of the infrastructure, are charged based on the benefit they receive. These models are not considered to be a pure tax on the basis of the nexus between benefit and infrastructure. We have observed an increased use in this model of investment recovery, both in Australia and internationally.

The model is predicated on the benefit that property owners and developers derive from increased property values generated by infrastructure improvements. For example, for a local business owner, the government provision of improved transport links, parking or local amenity is likely to increase the value of the core business. Such benefits create a rationale for the use of value capture mechanisms such as tax increment financing (TIF), special levies and charges and joint commercial developments, which will be discussed in this section.

3.4.1 The use of special levies and taxes

Special levies and charges, also known as special levies and charges tax, local improvement district or special levies and charges district, are a type of value capture mechanism that impose special charges on property owners based on geographic proximity to new infrastructure investment.

Special levies and charges are often administered through the designation of formal districts and can be developed for a variety of purposes related to infrastructure provision, including sewer and water districts, road construction and improvement districts, and public transit benefit districts.

The rationale underlying special levies and charges districts is that owners of property near a major infrastructure improvement receive a disproportionate benefit in the form of property value appreciation and should accordingly be charged for this benefit.

⁶ http://www3.weforum.org/docs/WEF_IV_PavingTheWay_Report_2010.pdf

Special levies are particularly relevant for the development of economic infrastructure and infrastructure related to the development of housing, where initial infrastructure leads to an uplift in property values. We expect that special levies related to housing development will be within the scope of the Neighbourhood Infrastructure Project and have excluded that from this analysis and have focused on the broader application of special levies to infrastructure development.

3.4.1.1 An overview of special development levies

The use of special levies and charges allows local governments and property owners to distribute the costs of infrastructure improvements more efficiently, based upon the proportionate level of benefit realised by each party. Ideally, those who disproportionately benefit pay more through special charges while those who do not benefit do not pay.

Depending on the type of mechanism that is used to set the charge (land, frontage, distance, etc.), the use of special levies and charges to apportion cost of an infrastructure improvement among its more direct beneficiaries can enhance economic efficiency. While special levies and charges provide few price signals to users of infrastructure facilities directly, they do provide signals to landowners. This pricing should align with the costs of an infrastructure improvement and ensure that not all of the additional value created by the improvement is absorbed as windfalls by local landowners.

As with other types of project or location-specific value capture policies, special levies and charges typically have a narrow base and raise only a limited amount of revenue. Hence, they are not likely to be a large-scale replacement for more conventional revenue sources such as State or Federal funding. However, for specific projects they may provide a small, yet important, source of revenue (perhaps with the exception of TIF which is explored in more detail below).

We would expect special levies and charges to contribute to a mixed economy of funding sources for infrastructure.

3.4.1.2 Benefits and efficiencies of special levies regimes efficiencies of the regime

Special levies and charges have a number of benefits, including:

- Up front funding for government infrastructure: allows development to be pump-primed and provides both government and development community certainty (we note the issues faced in South Australia regarding its existing development charges regime and expect that mechanisms to address these issues will be covered in the Neighbourhood Infrastructure project)
- Can be set in an equitable manner: related to land or property value (which increases certainty over the recovery of infrastructure costs)
- Improve benefit equity to the extent that they assign costs for an infrastructure improvement to local property owners in proportion to benefits received: In doing so, special levies and charges can aid in rectifying geographic inequities that exist under general revenue forms of funding. However, the equity implications of special levies and charges are highly dependent upon how they are structured. In some cases, entire classes of properties (such as residential) are exempted from charges under special levies and charges districts. While this might be an expedient way of mitigating potential opposition, it does allow some potential beneficiaries to free-ride on the contributions of other non-exempt property owners

Modifications to the provisions of special levies and charges may be required to tailor the charges to fit ability-to-pay criteria if this is desired. To the extent that they are tied to some level of benefit received, special levies and charges may be slightly regressive, in terms of placing a greater effective tax burden on lower-income households. However, modifications can be made to the provisions of special levies and charges legislation to allow for discounts, tax credits, exemptions, or other forms of relief to be provided to the elderly, low-income, or other vulnerable groups.

3.4.1.3 *Special levies and charges in practice*

Special Levies have been used extensively both in Australia and internationally to fund the delivery of infrastructure. With increased emphasis on securing non-government finance for projects and passing the cost of infrastructure provision onto the beneficiaries of infrastructure there is increased focus on the use of special levies and taxes. We have identified a range of schemes and have identified those below:

Case study – Special Assessment Districts (SADs) – USA⁷

All fifty states authorise local governments to create SADs to finance local improvement projects.

SAD's primary uses include the construction of sewer and water infrastructure, road and highway construction and maintenance, and transit construction. A few states such as California allow the use of special assessment districts to finance ongoing public services such as neighbourhood policing, graffiti removal and street sweeping.

Special assessments comprise 0.26% of total state and local government revenues in the United States, and 0.44% of total local government revenues.

SADs are also commonly used to finance road construction and improvement. Road construction and improvement is a universally-authorized use of SAD financing in the US. Initially used to finance transportation infrastructure in growing metropolitan areas, SADs are now used to compensate for increasingly constrained state and local transportation maintenance budgets.

Similarly in the UK a Community Infrastructure Levy has been introduced to recover charges for designated infrastructure investments.

Case study – Community Infrastructure Levy UK

The Community Infrastructure Levy (CIL) is a new charge which local authorities in England and Wales will be empowered, but not required, to charge on most types of new development in their area. CIL charges will be based on simple formulae which relate the size of the charge to the size and character of the development paying for it. The proceeds of the levy will be spent on local and sub-regional infrastructure to support the development of the area.

The charges are decided by designated charging authorities and levied by them on new development to ensure that developers contribute to the infrastructure improvements required to make new communities economically viable.

CIL is expected to improve predictability and certainty for developers as to what they will be asked to contribute; will increase fairness by broadening the range of developments asked to contribute; will allow the cumulative impact of small developments to be better addressed; and will enable important sub-regional infrastructure to be funded.

While Special Levies are used extensively across a range of similar types of project in the USA and UK, in Australia there are examples of them being used in a bespoke way to fund particular infrastructure projects, in the case of Gold Coast Rapid Transit, an infrastructure levy was charged across the city, reflecting the city wide benefit:

Case study: Gold Coast Rapid Transit Project⁸

The Gold Coast Rapid Transit (GCRT) project is an 18 year A\$1 billion Operator Franchise Public Private Partnership (PPP) to design, build, finance, operate and maintain the new light rail system. The GCRT system will service a 13 kilometre route with 16 stations, connecting Broadbeach to Gold Coast University Hospital. The project reached contractual close on 5 May 2011 and will commence operations in June 2014.

The project was adopted by Infrastructure Australia as a priority project and the Federal Government

⁷ Value Capture for Transportation Finance report by the Centre for Transportation Studies University of Minnesota

⁸ PwC sourced

committed funding of \$365m, alongside the Queensland Government's \$464m and the Gold Coast City Council (GCCC) \$120m. This was the first Infrastructure Australia (IA) priority project to be procured as a PPP.

The GCCC is raising a significant portion of its contribution through the City Transport Improvement Charge which is incurred by all ratepayers. The charge assists Council to fund improvements to local roads and to partner with public and private organisations across the GCCC jurisdiction. This form of incremental charging (as part of a Tax Incremental Financing or TIF mechanism) for the GCRT project will be used to repay the Councils ongoing funding commitment to the project. Furthermore increased density and property values bolstered by the implementation of the GCRT project will further contribute to rate revenues for the Council.

As an alternate form of levy, streetcar and light rail transit projects in cities including Seattle and Portland have involved the authorisation and formation of "local improvements districts," within which special levies and charges were levied to finance a portion of the capital costs of these projects.

As a separate type of development levy the Victorian Government has in place a special property development charge associated with newly designated real estate within the urban growth boundary (at Melbourne's urban fringe):

Case study: Victoria Growth Areas Infrastructure Contribution⁹

The Planning and Environment Amendment Act came into force on 1 July 2010. The Act introduces a new Growth Areas Infrastructure Contribution (GAIC) in Victoria which:

- is used to fund State infrastructure and associated costs in growth areas
- is payable by developers and purchasers of land (or interests in land rich entities) in Victorian growth areas.

The GAIC is levied on land which has been or will be included within the Urban Growth Boundary or is zoned residential, industrial, business, comprehensive development, priority development or urban growth. It is charged on a per hectare basis (\$82,550 to \$98,030 per hectare depending on type of land in 2011/12) and is incurred on the first property transaction on either the sale or subdivision of the land. The GAIC is payable only once – all subsequent sales of the land do not attract a further contribution. The rates are indexed annually to a published Construction Cost Index approved by the Treasurer.

All funds raised by the GAIC are to be used to provide necessary State infrastructure and to assist development in the growth areas of Melbourne. The GAIC is collected by the State Revenue Office and decisions about the use of the revenue are made as part of the State Government's annual budget process.

The GAIC has been estimated to contribute approximately 15 percent of the cost of providing State infrastructure and services in the growth areas. The revenue collected from the GAIC is held in two separate funds, the Growth Areas Public Transport Fund and the Building New Communities Fund.

NSW and Queensland have also introduced fixed development charges to provide certainty to both developers and government in regard to infrastructure provision and funding.

3.4.1.4 *Feasibility in South Australia*

The EDB is considering alternative development charging regimes under a separate consultancy. South Australia has an existing development charges regime, though its scope is, at least in formal terms, less encompassing than in other Australian jurisdictions, with a greater reliance on negotiated arrangements.

We believe there is clear potential to utilise development charges for a range of infrastructure developments. Furthermore, in our view the new Transport Oriented Developments in the 30-Year Plan for Greater Adelaide could be structured as special charging districts in their own rights, with infrastructure recovery subject to a bespoke governance regime for those developments.

Finally, applying the principle that if the beneficiary can pay it should pay, we recommend each major beneficiary is identified in every business case for State infrastructure and where it is economically efficient to do so, recover benefits through an appropriate charging regime.

⁹ <http://www.gaa.vic.gov.au/gaic/>

3.4.2 Tax increment financing

Tax Increment Financing (TIF) is a value capture mechanism that uses taxes levied on the incremental increase in property value within a development (or redevelopment) project to finance construction costs. The infrastructure improvements generate uplift in property values that are then captured as a dedicated funding source for the project. By capturing (or even securitising) this future uplift in value it is possible to raise finance against the revenue stream. It is therefore a funding model that can be used to support the upfront project financing of infrastructure.

TIF has been used extensively in other jurisdictions, most notably in the USA, though is being used increasingly in other developed infrastructure markets as a mechanism to diversify funding sources, including in the UK (particularly Scotland) which is developing major infrastructure projects using TIF.

TIF has a background in the development of urban regeneration infrastructure in particular in the development of projects in the USA. However, in Scotland and in England it is being used to develop major economic infrastructure projects, for example it is being considered for a major rail extension project in London.

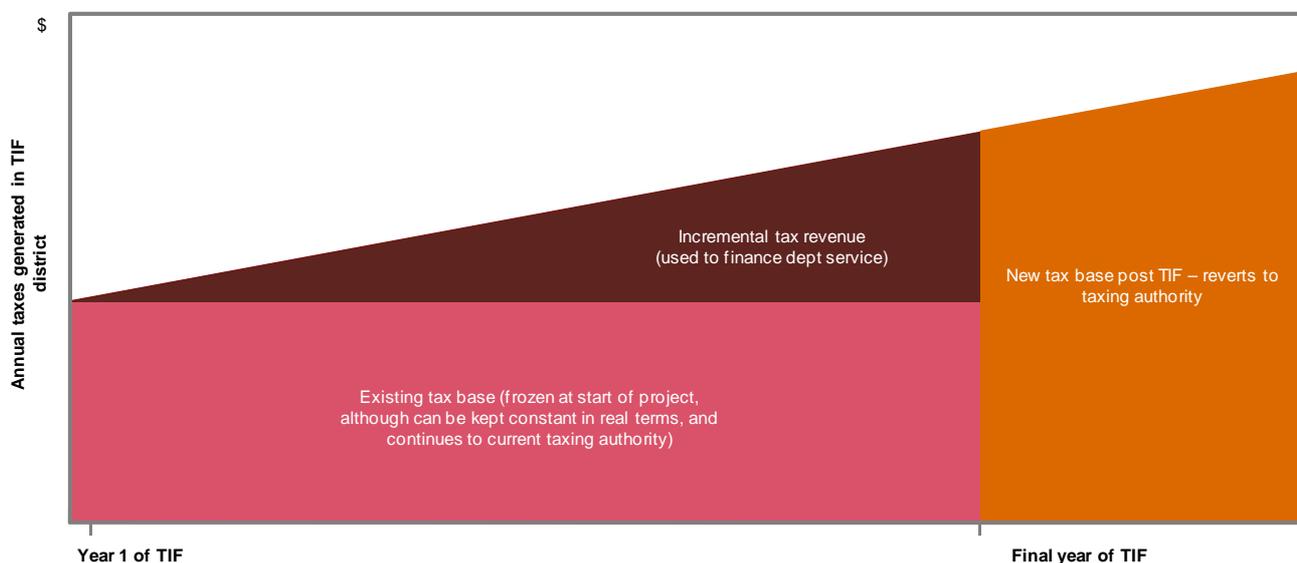
3.4.2.1 An overview of the TIF model

In general terms, TIF allows a government jurisdiction (usually local government in the US or a local council in the UK) to take tax revenues derived from increases in property values within a prescribed development area (the ‘TIF District’) and use those ‘incremental’ tax revenues to fund the infrastructure and renewal projects that led to (or at least significantly contributed to) this property appreciation. For the property owner, there is no new tax or rise in property tax. A TIF represents a reallocation of part of the growth in property taxes from State Treasuries to the TIF authority. TIF districts are sometimes also referred to as Tax Allocation Districts or Revenue Allocation Districts.

Under a TIF system, the relevant government authority or jurisdiction first assesses the suitability of an area for TIF. It then defines the TIF district and produces a TIF development plan – which, amongst other information, outlines the infrastructure and development needs of the district and provides cost estimates for these works. The sponsoring government then usually issues bonds to provide the funds necessary for the large upfront urban renewal and infrastructure costs. Over time, as these works improve the amenity and liveability of the TIF district and/or they result in more property development in the area; property values (and hence property tax revenues) rise. The additional tax revenue (above the pre-TIF tax revenue ‘base’) resulting from the TIF infrastructure is then used to service and repay the TIF bonds (or other forms of debt).

The diagram below outlines the basic TIF model, with the tax increment (above the tax base) used to repay the debt incurred in providing the infrastructure that generated this increment in the first place. At the end of the TIF term, the total tax revenue for the area reverts to the original taxing authority. TIF terms typically range from 5 years to 25 years, depending on the nature and scale of development.

The TIF Model



3.4.2.2 Governance and financing considerations

We envisage that TIF would primarily be administered via specially established TIF development authorities, with higher level supervision and governance from state governments and newly enacted supporting legislation. In consultation with state government, local government, community groups, developers and other stakeholders, these authorities would produce TIF development plans, outlining the public infrastructure needs of a ‘TIF district’. These TIF development plans would be consistent with state planning strategies and local council planning instruments. They would include infrastructure cost estimates and outline governance and reporting regimes to keep stakeholders informed.

Finance could then be administered and arranged through either of the following mechanisms:

Finance mechanism	Detail	Benefit
State financing body, i.e. SAFA	<p>This could involve the issuing of generic state government backed bonds (particularly in the early days of TIF, to build up investor confidence).</p> <p>Alternatively, it could involve the issuance of special ‘TIF’ or ‘infrastructure’ revenue bonds, tied to the future TIF revenue stream of particular TIF districts or infrastructure projects.</p> <p>Each type of bond has particular advantages and disadvantages, which may need to be considered on a case by case basis – although experience from the US shows that TIFs can be re-financed at different stages of the process, to optimise the risk/cost of capital trade-off to the TIF authorities and government in general.</p>	<p>Beyond any short-term fluctuations or volatility in the market, indications are that demand for infrastructure and government bonds is generally strong. Institutional investors, such as superannuation funds, are likely to be particularly interested in bonds indexed to CPI. Therefore, there is a potential market for TIF debt instruments.</p> <p>Possible netting off, from a ratings perspective, of debt finance and future revenue.</p>
Private Finance	<p>TIF revenue streams may be capable of providing sufficient security to facilitate full private financing.</p> <p>By way of example, a railway project in London is securing TIF revenues into a single account (from several layers of government) and those payments will fund an ‘availability’ style payment stream to a private sector development company which will design, build, finance and maintain the new infrastructure.</p>	<p>Potentially supports an off-balance sheet structure and may be ‘ratings neutral’.</p>

We note that demand for TIF bonds and any TIF debt and their rates will depend on the precise nature of each TIF project (particularly potential TIF revenue volatility) and the type of bond issued, as noted above, government cognisant of this in London is considering mechanisms to provide a guarantee around revenue.

Given the strong governance and eligibility requirements that would be imposed on TIF infrastructure and Australia’s need for investment in such infrastructure, there could also be merit in considering tax incentives (e.g. to TIF bond purchasers) to enhance investor support/demand for TIF programs. Tax incentives have been used to increase investor appetite for project bonds in the USA but we understand that tax incentives are not a driver of the schemes used in Scotland and England. In our view, if the infrastructure is capable of generating a return sufficient to cover costs, including financing costs, tax incentives may not be required to improve the economic viability of the scheme. This report is not intended to determine whether there is demand, or the nature of that demand, for Australian TIF schemes and whether tax incentives might be required to assist in developing market appetite. These issues would need to be resolved as TIF is further developed as a model for funding and financing infrastructure in Australia. In developing such tax arrangements, State and Federal Government cooperation would be required, and governments could draw on the experience (and any perceived weaknesses or flaws) of previous infrastructure incentive schemes.

We envisage that TIF revenues would be incremental to state property related taxes (primarily land tax and stamp duty) within the TIF district, and that this revenue would predominantly be used to fund infrastructure otherwise funded via state governments (through the current system of state development charges, for example). Examples from the US, however, show that TIF can draw on a range of different types of government taxes (including those related directly to business activity).

3.4.2.3 TIF case studies

The following case studies show the scope of TIF as used in both the USA and in the UK. TIF is a versatile mechanism which provides broad scope to leverage private finance alongside public funding and financing and is compatible with a range of procurement models.

Case Study: Chicago's CBD, theatre district and riverfront¹⁰

Since the late 1990s, Chicago has used TIF to subsidise the redevelopment and rejuvenation of parts of its CBD, including the theatre district and riverfront area. The public infrastructure provided via TIF has helped encourage mixed use development in the previously neglected area, including the establishment of retail, residential, commercial, entertainment, hotel, and educational facilities. In the theatre district (the State Street area), for example, TIF has been used to fund vintage style streetlights with space for banners that announce the latest theatre shows, old-fashioned kiosks with maps indicating theatre locations, newly planted trees, sidewalk planters and new sidewalk treatments, including granite and slate theatre district logos set into the pavement. Approximately \$7 million of this \$7.7 million project cost was funded by the Central Loop TIF District. The remaining \$700,000 was financed by the city's general obligation bonds. Since rejuvenation of this area commenced, it has been reported that hotel operators are returning to State street and developers have converted empty or underused buildings into residential, retail and office space.

In previous decades, the Chicago River, which runs from Lake Michigan through the 'Loop' (in the CBD) and into various neighbourhoods, has been polluted and relatively inaccessible. In the late 1990s, the city initiated a program to transform the Chicago River into an asset for the city and a much-used public space, with pedestrian and bicycle paths along the water's edge, parks, restaurants, and docks for boaters. To implement this program, the city drew on funding from federal and state grants, the sale of city owned riverfront real estate and TIF.

The City of Chicago has also used TIF to improve infrastructure and amenity at street level throughout the CBD, via investment in bus shelters, subway entrances, landscaping (including trees, flower beds and planters) and street lighting. This investment has attracted people and commercial activity back into the CBD. As one commentator has noted, "by making judicious investments in newly designed streets, open spaces, and civic places, Chicago is not only attempting to create a more attractive and liveable environment but also is trying to attract the influx of private investment essential for its future prosperity."

Case Study: Rail Extension – London

This project is planned to provide an extension of a major railway line. The Opportunity Area covers some 196 hectares and is the largest development opportunity close to the centre of London and the largest remaining industrial area in central London.

The project involves an incremental revenue model that will be used to fund availability payments under a PPP project. The PPP project will be design, build, finance and operate the infrastructure.

During the early years of the concession the Project Revenues are lower than the required availability payment, creating a funding shortfall ('gap'). A Gap Facility is expected to be used to fund the shortfall during the early periods of the concession where the Project Revenues generated are lower than the required availability payment. We have assumed that, in later years, the facility will be repaid from the excess of Project Revenues over the availability payment and other Project Costs (such as administration costs, fees associated with potential guarantees in place over the Project Revenues and interest and fees incurred in relation to the Gap Facility).

¹⁰ http://www.infrastructureaustralia.gov.au/public_submissions/published/files/486_propertycouncilofaustralia_SUB2.pdf

3.4.2.4 *Considering the Benefits of TIF*

TIF is essentially a tool for harnessing future revenues to pay for current capital expenditure and ongoing management and maintenance of an asset. This funding mechanism can help alleviate some of the financial burdens associated with development for the public and private sector alike. Government officials avoid adverse issues associated with imposing a new indirect tax (which may potentially be inequitable and politically unpopular). Since TIF uses future revenues generated by the project to cover the cost of the project itself it is often considered a self-financing method.

Another advantage is that TIF enables local governments to strategically prioritise growth in areas where they feel most appropriate. Growth can be directed to ensure economic development in places where it is needed the most as the prices of wages, goods and services may be positively affected by increases in the price of land and additional jobs may be created in the area.

On the other hand, because TIF may depend on the aggregate increase in property values within a zone, the tax revenue growth is often uncertain and dependent on a number of factors: size of the TIF zone, potential for new development, rate of new development, tax rate limitations, and regional context. The cycle of the larger regional economy and the real estate market highly impact the potential of revenue generation through TIF.

The efficacy of TIF is largely dependent on its ability to support projects that deliver large, local benefits typically in the form of property value appreciation. The evidence from Chicago's use of TIF districts to support the development of infrastructure projects suggests that in certain cases the increment in land value within a TIF district may be large.

The following provides a summary of the key benefits and risks of TIF.

- **Self-funding mechanism for infrastructure:** TIF is an infrastructure funding mechanism that provides its own source of revenue – generated from infrastructure and development that would not have occurred or not have occurred at the same rate or to the same extent but for TIF scheme. It is funded by owners of newly created wealth inside the TIF district, but in proportion to the increase in their asset value that the TIF facilitates.
- **Provides market test and market discipline around infrastructure selection:** TIF ensures that infrastructure is subject to a 'market test' – i.e. to receive adequate TIF revenue, development must produce a proportional benefit to the local community, as measured via property value/tax appreciation. This focuses the attention of TIF administrators and other decision-makers on ensuring that they select infrastructure that will deliver genuine benefits to the community. Furthermore, once TIF expires, the entire tax increment returns to the general tax base, providing it with a windfall gain.
- **A more equitable means of infrastructure funding:** TIF is an equitable means of funding public infrastructure, particularly compared to development levies. It is funded by owners of newly created wealth inside the TIF district, but in proportion to the increase in their asset value that the TIF facilitates. Via property value appreciation, TIF uses the market to measure the benefit accruing to individual's lots from infrastructure provision. This avoids any uncertainty and inequities associated with the current system of development charges, where charges are attributed to lots based on forecasts of how these lots may benefit from or draw on the infrastructure in question. TIF also applies to all properties benefiting from infrastructure provision in a given area- not just new development (which is currently a weakness of applying development levies to infrastructure provision in established areas).
- **Facilities large, upfront infrastructure, without compromising housing affordability or take-up rates:** As mentioned above, via increased property related taxes, TIF imposes a cost on property owners/purchasers in the TIF district, but only in proportion to the increase in their asset value and only after infrastructure services (or their affect on property value) have been provided.
- **Provides Investment Leverage:** TIF is able to be developed as a highly leveraged model. The initial enabling investment would normally be expected to facilitate a range of private investment opportunities, again, from the Scottish Futures Trust: *It is estimated that the first three pilots will bring c.£250m of public sector investment and further unlock more than £1.5bn of private sector investment.*

- **The TIF process ensures appropriate planning, commitment and transparency around infrastructure provision:** The TIF process ensures that:
 - there is a significant degree of transparency and rigour applied to the kind of infrastructure developed, its spatial allocation and the decisions behind the process
 - Sponsoring government commit to revitalisation/development periods for meaningful and clear periods of time
 - planned infrastructure funding is not withdrawn or stalled due to competing interests (which can happen when infrastructure is funded from consolidated revenue)
 - the development/redevelopment occurs in a co-ordinated and planned manner.
- **TIF provides an incentive for timely effective provision of infrastructure:** TIF provides an incentive for the timely and effective provision of infrastructure, as TIF revenue is linked to the delivery of this infrastructure and the development having effect (uplift) on property values.
- **TIF can be used in a selective way for the infrastructure that needs it:** Demonstrating the nature of TIF in supporting economic development the Scottish Futures Trust include the following statement in their description of how TIF is used in their infrastructure program:

The use of TIF will normally be predicated on a 'but for' test i.e. that but for TIF the anticipated outcomes from a regeneration and economic perspective would not occur or not occur in the timeframes which TIF would enable. A TIF project must therefore demonstrate, if it is to be taken forward, that the enabling infrastructure will unlock regeneration and sustainable economic growth that will generate additional (or incremental) public sector revenues that are capable of repaying, over an agreed timescale, the financing requirements of the enabling infrastructure.

3.4.2.5 Feasibility in South Australia

In our view TIF has considerable scope for application in South Australia. The 30 Year Plan for Greater Adelaide contemplates significant investment in State infrastructure to facilitate the development of new communities and transport oriented investment. The planning and development charges system in Adelaide is considered to be inadequate in providing for the timely development of infrastructure and TIF has the potential to provide a robust framework around which new infrastructure can be developed.

Furthermore, there are broader contexts in which TIF could apply. We turn later in this report to the proposal from Infrastructure New South Wales in relation to Productivity Incentive Payments (PIPs). PIPs effectively secure incremental Federal taxes in a similar way to the way in which local taxes are secured under a TIF program. It is our view that there are a range of infrastructure developments which could utilise a 'mixed economy' of funding sources in which beneficiaries of infrastructure investment each contribute, perhaps in accordance with the benefit derived. For example, a project, such as new road, could include funding from the following sources:

- Federal tax increases – from productivity improvements – which would generate PIP funding
- Local tax increases – increasing property values – which could be used to secure TIF funding
- User charging – for direct users
- Capital contributions – to fill any remaining gaps in funding (Federal and/or State) resulting from externalities which cannot be allocated and recovered from any particular group

Therefore, while TIF may be well suited to urban renewal projects, such as the Adelaide Riverbank Redevelopment it could be used on other infrastructure projects, in particular the development of new stations, infrastructure supporting new residential developments and new transport infrastructure.

In terms of political feasibility, TIF districts have the advantage of shielding general taxpayers within a jurisdiction from broad-based tax increases and thus benefit from low political visibility. This perception that tax increment financed projects “pay their own way” may mute local opposition and increase public acceptance.

3.4.3 Productivity Incentive Payments (PIP)

The NSW government has developed proposals for a funding model which aims to capture a share the economic benefits related to certain infrastructure projects which arise at the Federal level through collection of GST, corporate and personal taxes.

The contention is that certain infrastructure projects, namely those that relieve infrastructure bottlenecks and boost productivity, are highly desirable from an economic perspective but do not proceed as the benefits of the projects are recovered through Federal, and not State taxes. By providing a nexus between those projects, their economic benefit and crucially, funding, the intention is to provide a mechanism to fund economically desirable projects that would otherwise not proceed. The NSW paper cites two examples:

‘... a State Government which funds an infrastructure investment that increases productivity and economic growth. The economic growth driven by this investment leads to an increase in corporate and personal tax revenues to the Commonwealth which do not flow directly back to the State that funded the infrastructure. The investment may of course also generate other economic benefits which are captured by individuals or companies. The lack of alignment between the entity that funded the infrastructure and the entity capturing the benefits of growth makes it more difficult for State Governments to invest in these projects. The benefit capture problem can even lead to a systemic bias against investing in infrastructure, or at least create a bias against infrastructure where the benefits of economic growth are captured by others.’

‘... the lack of alignment between the capture of benefits and investment in infrastructure is that the private sector only invests in infrastructure where the benefits are able to be monetisable to a level which exceeds the costs and meets investment hurdles. The suite of projects in which the private sector is able to invest is therefore reduced to those which can generate sufficient cash revenues from new user charges. This arises because there can be a difference between the economic benefits of a project and the monetisable, or cash benefits. For example, reduced travel times for commuters are not able to be captured in cash payments if there is no tolling or ticketing, or if tolls or ticket prices are not set high enough to match the economic benefit generated.’

There are some similarities to TIF in the design of the scheme. In particular the notion that the incremental Federal tax revenues arising from a project are those which are secured for investment. Similar to TIF the scheme design contemplates building in some incremental growth to ‘business as usual’ revenue to take account of organic GDP growth.

The NSW government has recently announced this policy and as part of this study PwC has reviewed the paper developed in support of this policy. Our considerations are based on that paper.

3.4.3.1 Scheme design

The PIP proposal aims to identify, through robust cost benefit analysis the economic benefits of infrastructure investment and then, and this is the extension which is not normally undertaken, to identify and allocate those benefits to the beneficiaries of the investment. An illustrative example of the allocation of benefits is provided in the paper:

‘The following paragraphs present an example in which the total economic benefit from travel time savings for an infrastructure investment is estimated to be \$100. For illustrative purposes it is assumed that 50% of the economic benefits from time saved is captured by work and 50% is captured by leisure.

Of the component of economic benefits captured by work, a portion will be captured by the traveller’s employer, through increased or more productive output. This output translates to an increase in profit, a portion (roughly 28%) of which will flow to the Commonwealth as corporate tax. The remainder will be retained by shareholders or for reinvestment.

The remaining work-related benefits will be captured by individual workers through increased wages. Increased wages can arise from access to higher paying jobs, or working longer hours or by being more productive. A portion of increased wages flows to the Commonwealth via personal tax (estimated at 22% of the gross wages, the Australian economy average), a portion to State Governments via

payroll tax, with the residual after-tax income retained by the worker. Additional consumption due to higher disposable income can also lead to incremental GST revenue which this analysis assumes flows directly back to the States.

In this illustrative but representative example, the majority of the economic benefits arising from travel time saved are captured by individuals. Of the benefits which accrue to government, however, the majority are captured by the Commonwealth through incremental corporate and personal tax. A small minority flows to State Governments.'

Under the PIP scheme the intent is to identify the economic benefits arising to the Commonwealth government and then capture those which accrue to the Commonwealth. The proposal requires these effects to be determined at the business case stage and at that point the Commonwealth would become obligated to fund, to the State, its share of incremental benefit (or a guaranteed portion thereof).

Some of the features of this proposal are as follows:

- **Ex-ante assessment of benefits is not revised for ex-post results.** This part of the proposal is intended to provide certainty over funding and means that Commonwealth funding is 'locked in'.
- **Rigorous business case and economic appraisal techniques would be required** to support the allocation of revenue on this basis. It is proposed that continued monitoring and refinement based on assessments of benefits realised would be used to refine future assessments.
- **Commonwealth might not be required to fund all of the 'increment'** – in order to protect against under-delivery of benefits (or over-estimation) a number of alternative approaches are considered – including only funding a defined portion of the overall increment; allocating funding on a beneficiaries basis (i.e. Commonwealth and State's fund their relative share of the benefits).
- The scheme should be **targeted at those projects which relieve productivity constraints whereby the benefits flow to government** (or a high proportion do), as opposed to schemes in which a high proportion of benefits flow to individuals.

The scope is further broadened by potentially allowing 'Private Sector Top Up Payments'. This proposal considers projects which can raise third party revenue but are not financially free-standing. The Paper notes that many projects have non-monetisable benefits, explaining:

'Many economic benefits of infrastructure investment are not readily monetisable, for example, reduced congestion, reduced travel times or reduced pollution. Reduced travel times for commuters are not able to be captured through cash payments if there is no tolling or ticketing, or if tolls or ticket prices are not set high enough to match the economic benefit generated. If tolls are set at higher levels, however, they may be above the level of economic benefit to a subset of possible infrastructure users, resulting in the toll itself reducing the potential for economic benefits to be maximised.'

The proposal in this regard is to consider 'top-up' payments where user charges cannot be applied or are non-existent.

3.4.3.2 This is a proposal with strong merit

PwC have reviewed the scheme and are supportive of it in principle and is capable of development into a viable funding model. It is our view that some of the features of the scheme as contemplated will require more development to meet the requirements of Infrastructure Australia. We have summarised below the benefits of PIPs.

However, our primary concern in relation to PIP's is the extent to which they will be viewed as a new source of funding and thus have an incremental and positive impact on the rate of infrastructure funding available. Should the Commonwealth accept the incremental nature of the revenues and tie funding to projects which give rise to them the likelihood of the new funding displacing existing is reduced. Furthermore, the extent to which the South Australian government has a portfolio of projects of this nature (bottleneck relieving projects) may be limited and restrict the applicability of PIPs in the state. .

3.4.3.3 Feasibility of PIP in South Australia

It is our view that PIP should have a role to play in the equitable funding of South Australia's infrastructure and that PIP should be supported by the State. There may be a number of projects in South Australia's portfolio which would be suitable for a PIP project.

Our main concern with PIP is that it will simply displace other spending on infrastructure by Federal government (particularly through horizontal fiscal equalisation (HFE), but could also displace other funding even if PIP is not subject to HFE) and support for this proposal is contingent that it is excluded from HSE and is incremental. However, within a constrained funding environment, an appropriately developed PIP program with clear criteria around program entry would provide a mechanism which could have a number of advantages:

- Improving the propensity of Federal Government to fund infrastructure by creating the nexus between benefit and funding
- Creating a structured approach to investment which provides additional certainty over Federal funding, i.e. clear criteria, which if met, releases funding
- Is conducive to joint State-Federal-Private responses and may help mobilise and leverage private sector capital
- Provides a clear focus on projects which are economically sound and encourages (and requires) sound economic project appraisal, i.e. promotes economically efficient investment and crowds out non economically efficient investment.

We would expect PIP to provide an additional source of funding, however States would still need to step up and provide significant funding/or commitment for projects, though the additional Federal Government investment could reduce the overall size of the funding burden on the State.

- Expected to provide incremental funding by targeting projects which would not take place "but for" the PIP investment
- Expands existing funding capacity and is excluded from HFE
- PIP could work alongside other charging regimes including TIF and user charging and is a good fit with the way in which Infrastructure Australia issues projects
- A guaranteed funding stream from the Commonwealth would provide a revenue stream against which project financing could be raised
- At the State level the proposal is likely to be credit ratings neutral.
- The proposal requires robust economic approval

3.4.4 3rd party revenue supplementation model

3.4.4.1 Overview

We are aware of the focus the Commonwealth is increasingly placing on the capture of 3rd party revenues as a funding source.

We understand Infrastructure Australia is considering how key economic benefit streams can be more readily converted to commercial revenue streams across a range of project beneficiaries. This is with a view to identifying alternative sources of revenues that project proponents could consider in order to reduce the extent of infrastructure projects requiring or requesting government subsidies.

In this section we consider how such a funding model could work and the implications and considerations for the State.

3.4.4.2 Description of the model

There are a range of benefits from investing in infrastructure. Well designed infrastructure investments can raise economic growth, productivity and land values, while also providing significant positive spillovers to areas such as economic development, energy efficiency, public health and manufacturing. As this broad range of benefits suggests, there are also a broad range of parties who benefit from such investments.

When jurisdictions and proponents provide economic appraisals for projects submitted to Infrastructure Australia for consideration as part of the Infrastructure Priority List, these appraisals measure the economic value to a range of users and other beneficiaries. These flow-on effects of infrastructure projects can be extensive and benefit a number of parties. Examples, in the context of a transport development, are shown in the following table:

User type	Example of benefit
Users of the transport network	Improvements in transport infrastructure can produce travel time savings for business and leisure travellers or freight from reduced congestion.
Non-user benefits of transport investments	Transport infrastructure developments can also benefit a range of other parties, apart from the direct users: <ul style="list-style-type: none"> • Time savings gained by users can indirectly benefit employers as workers have more timely access. • Parties with properties in the vicinity of a new infrastructure may experience property value uplift as a result of the investment/development.
Railway, airport and public transport operator benefits	Other beneficiaries could be the underlying infrastructure operators, e.g. airport and railway line operators. These operators could experience a reduction in their operating costs, e.g. signalling costs, overhead costs, as a result of changes in the infrastructure network. In addition, these operators can benefit from incremental increases in fare revenue from improvements in infrastructure as more passengers utilise services.

When proponents undertake an economic appraisal as they seek funding from Infrastructure Australia, the benefits estimated as part of this process could indicate that there may be scope to expand funding options.

As seen in the list above, there are a range of beneficiaries from infrastructure investments. If commercial revenue streams could be extracted from these beneficiaries by the project proponents, then Commonwealth and state funding could be partially reduced or redirected to capture a broader range of investments, such as those with a much lower capacity to attract substantial commercial revenue streams.

Clearly many projects are already developed on this basis. However, it could be contemplated that the funding mechanism, in the case of Federal Funding is linked to a more comprehensive assessment of 3rd party revenues. Potential funding models include:

- Funding for a set proportion of project costs – the Commonwealth Government could fund a set proportion of a project (e.g. between 20-80 per cent of project out-turn costs) not providing any assistance to fund budget blow outs. This would require states/other proponents to seek alternative funding for the remaining budget of the project, such as using state grants with some minimal version of commercial revenues streams to cover the balance of costs. A factor to consider in this approach is the potential upward pressure on cost estimates that it may create.

This may require greater detail to be provided in submissions on cost estimates and potentially also peer reviews of cost estimates during the submission phase, or greater cross-check of actual costs during construction i.e. cost to complete tests.

- Funding to match state/territory grants – the Commonwealth Government could offer grant matching with state and territory governments, to incentivise jurisdictions to equally fund projects. A recent

example of this is the Commonwealth's allocation of \$750 million in funding for the Pacific Highway on the condition that the New South Wales Government matched this amount.

- Funding to match commercial revenue streams – the Commonwealth Government could dollar match the commercial streams (rather than matching state/territory government grants).
- Providing funding only if there has been an assessment to identify commercial revenue streams and reduce funding needs – A further approach could be for the Commonwealth Government to require that there is an assessment identifying the potential for commercial/private contribution upfront or amortised over time and linked to private streams, in order to provide funding. The government can then provide funding to bridge the gap between the current level of funding and the amount needed for financial viability.
- Funding only provided for external benefit streams – The Commonwealth Government could require that proponents conduct analysis of external benefits, in order to determine what share of project's revenue requirement is it appropriate for taxpayers to fund.

There are examples of funding arrangements which seek to allocate economic benefits between users and seek third party user charging for elements of the project funding:

For example, the Independent Pricing and Regulatory Tribunal of NSW (IPART) makes decisions on the approach to fare setting for CityRail's rail network, and bus passenger services. This includes establishing the share of the revenue requirement to be recovered from passengers and from taxpayers by estimating the value of the external benefits generated by CityRail services. External benefits measured in such assessments for bus or passenger rail include: avoided road congestion, avoided environmental externalities, avoided road accidents, and avoided road damage. These are all factors that tend to be measured and monetise in an economic appraisal.

3.4.4.3 Considering the benefit of this proposal

We recommend that business cases should seek to consider external funding in all cases within a designated framework of assessment. The State's business case guidelines and gateway process should be developed to ensure full consideration is given to user pays models. This could then work alongside other State and Commonwealth funding (in particular PIP).

In this paper we contend that the scope for user charging in South Australia is considered as a source of funding. In a budget constrained environment with significant pressure on State and Commonwealth balance sheets and credit ratings that State's should (and Federal government) should seek to share the funding burden with users or other beneficiaries of infrastructure.

There is strong merit, potentially alongside PIP, for State's and users to pay according to their share of benefit received. In our view the PIP scheme would be enhanced through a detailed assessment of the merits of user charging, in mitigating the Federal and/or State contribution to projects. Furthermore, the benefits of user charging, in attaching an economic value to infrastructure use and potentially in managing demand is well documented.

However, the obvious difficulty with such proposals is the difficulty in implementing user pays pricing into sectors and regions into which there is low acceptance of such charging. Furthermore, the timing of the 3rd party revenue streams may be problematic in providing up front capital for projects, with contributions lagging the up-front investment.

3.4.4.4 *The impact of timing issues*

Where infrastructure provision is required in advance of the opportunity to charge for use (often, but not always the case) the up-front funding of infrastructure will require a solution to allow the investment to occur. Options include:

Model	Detail	Examples
Government capital contribution	<p>Government provides up-front capital and recovers investment (or part thereof) out of future revenues. For example, government can recover its investment:</p> <ul style="list-style-type: none"> • Through on-going receipts over time • Through providing concession rights to a 3rd party. 	<p>Darwin Marine Supply Base: Government will recover port access fees and is contributing capital towards the development of the project.</p> <p>The NSW government funded the Sydney Desalination project through user charges (through water rates) and is currently disposing of a concession right to that income in a disposal process.</p>
Private investor finances development	<p>Private investors finance the early development of the infrastructure and recover investment out of user chargers.</p>	<p>Toll Roads: East-Link.</p>

Where government provides funding in the construction period it is faced with all of the normal constraints of government during this period, including balance sheet capacity and ratings impacts. Private investment in the infrastructure may alleviate State balance sheet and ratings constraints, though the extent to which private capital will be able to bear revenue risk ultimately determines the financial viability of the project.

We have recently seen Darwin Marine Supply test the level of market appetite for full economic infrastructure demand risk. In that instance, following the conclusion of the market process, the project was funded with a mix of private and government funding model in the light of uncertainty over port access revenues from future offshore projects, and the limited appetite in the current market for the private sector for exposure to those risks.

Unless the issues related to revenue uncertainty can be overcome then government will be in the position in which its balance sheet, ratings and propensity to invest are curtailed. We considered the range of interventions government can make in the following sections:

- The use of revenue guarantees and government bearing demand risk: Section 4.6
- The use of capital contributions: Section 4.2.1

In our view there are a range of viable models to leverage the State balance sheet without having to fund the entire project. This will reduce the State’s exposure and allow more projects to proceed.

Therefore, notwithstanding that timing issues will arise which may impair the ability to raise private finance in advance of revenue receipt, developing projects which seek a user pays element is supported in that:

- It maximises available sources of funding and therefore reduces State and Commonwealth funding requirements
- If combined with private financing may increase the capacity to deliver balance sheet and ratings neutral investment
- Is highly equitable, in terms of each beneficiary paying their way, in conjunction with PIP
- Addresses demand issues through linking use to payment.

There are likely to be some constraints on the extent to which user charging is acceptable, desirable and economical and these issues would need to be addressed and any proposed funding model.

Funding infrastructure

Our recommendation to South Australia is that it should seek to develop a framework in which user pays models are considered in future funding decisions.

We also recommend that business cases should seek to consider external funding in all cases within a designated framework of assessment. The State's business case guidelines and gateway process should be developed to ensure full consideration is given to user pays models. This could then work alongside other State and Commonwealth funding (in particular PIP).

3.5 State Direct Investment and the impact on Credit Rating

The State currently maintains a AAA credit rating; through the maintenance of this rating is no longer a stated objective. S&P currently has South Australian on Negative Outlook, which means there is a one in three likelihood of a downgrade, largely driven by the States large unfunded superannuation liabilities (net debt is relatively low)

The South Australian government in its 2010 budget established the Sustainable Budget Commission and the government has responded to its findings through several politically and administratively challenging revenue and expenditure measures, including voluntary redundancies for public servants, reductions in CPI allowances to government agencies, and an additional savings target for the public sector. Since then there has been a further reduction in the state's GST receipts. This will place additional pressure on the State's operating position.

S&P have commented that these savings are ambitious and slippage against the savings targets or further pressure on revenues will place the rating under threat. S&P also notes the State's low tax supported debt (54%) being off-set by high unfunded superannuation liabilities. Furthermore, the State's limited fiscal flexibility further impairs the view of the ratings agencies.

Any additional infrastructure investment which increases net debt will risk further compromising the State's rating. While we have identified a number of mechanisms in this paper which would limit the balance sheet and ratings impact of State investment (or other support) for infrastructure projects, we consider here the impact of compromising that rating through additional investment.

3.5.1 What would it cost to give up its Rating

Fiscally the cost of giving up the rating might be relatively limited. The cost of SA allowing its rating to slip a notch has been quoted in press sources to be c.\$4m pa. Without independently verifying this figure this would seem to be relatively limited and is perhaps reflective of the State's low debt levels.

3.5.2 Impact of Infrastructure Investment on Rating

Investment in infrastructure has had an impact on the State's rating, the New Royal Adelaide Hospital Project and the duplication of the Southern Express Way have been key contributors to the State's debt position, (and by being added to a low debt base). The following summarises the impact of a typical investment in infrastructure:

- **Impact on net debt:** When State's borrow to invest in infrastructure the debt is recorded as a financial liability, which is part of the net debt calculation. The asset is typically a non-financial asset (a fixed asset) – this as the impact of increasing the State's debt, relative to assets.

Impact on credit ratings: The rating agencies look at the ratio of net debt to operating income (this isn't the only measure but it's a key metric) and use other benchmarks. In South Australia the benchmark ratio is 80%-90% (net debt to operating income); where the ratio is persistently in or above this range S&P have stated they will consider a downgrade.

The rating agencies work on a forecast basis, looking at the annual position and expected future position over the period of the forward estimates. As a result while NRAH is not currently in the net debt calculation, as the liability does not rest on the State's books until completion of the construction and operational acceptance, it is identified as a contingent liability in the State's Consolidated Financial Report and considered in the forward estimate of net debt by ratings agencies

- **Ongoing impact of infrastructure:** Infrastructure investments may have a number of impacts, including increasing productivity, increasing the health, well being and educational attainment of the population, reduced environmental impact. Some of these impacts will have direct monetary consequences, for example, if productivity is boosted the State will benefit from higher payroll taxes; some are indirect, for example, Federal tax collection could rise and the State may benefit from a higher allocation; some are more indirect, such as the consequences of a better environment.

The financial impacts of infrastructure, to the extent they flow through State revenues would then reduce net debt; allowing the State to pay down existing debt and through increases operating revenue. The rating agencies take into account these impacts too. However, their impact is often delayed for many years and the quantum of the benefit is uncertain.

Consequently much infrastructure investment has an immediate detrimental impact on net debt followed by improvements in later years. Where the impact of a project can be demonstrated to lead to direct and certain revenue the ratings agencies may take a different view. In the case of the Victorian Desalination Project the cost of the project will be recovered from users from increases in prices, hence the income (operating income) rises to compensate for additional net debt (from bringing the PPP project onto the balance sheet): At least one rating agency has said they will take this into account and the project will be neutral from a credit rating perspective.

Most infrastructure investments are expected to have positive cost benefit ratios and, over time, would be expected to have a strong positive impact on Federal government, State government, companies and individuals. On a long-term basis, if the investment is worthwhile, in terms of returns (economic) and risk, there is an argument that the State should make it. Compromising its short-term rating followed by many years of enhanced productivity and benefit.

3.5.3 Should the State Invest and Risk its Rating

It is impractical to suggest that every worthy project with a strong BCR should progress; ideally if the business case was robust the investments would take place but in a constrained funding environment insufficient funds are generally available for all investments

However, there is a strategic case to be made for government increasing borrowing for certain investments. In this regard projects of strategic State significance which would release productive capacity could be considered as those for which the State would increase borrowings to invest in. In effect, it would be those projects which are being targeted under the Productivity Incentive Payment (PIP) regime, which would be appropriate. Those which release constrained capacity and lead to strong economic outcomes.

The nature of the Federal-State tax relationship makes it more difficult for South Australia to invest: as a result of tax leakage. However, in combination with a commitment from Federal government in relation to PIP around certain infrastructure investments, a case could be made for committing government capital into those projects. If such an investment risked the credit rating, that may be worthwhile in the context of the expected benefits of investments. Furthermore, combining this with a PIP regime would distribute rating risk between Federal and State government.

Ideally, the State would be able to invest without compromising its rating, and this section is not to say the State should not continue its measures to shore up its balance sheet. What is argued here is for those investments, which could generate medium term returns, to be considered, even where that risks the rating.

In this report we have identified a number of ways in which the State could invest to allow an exit strategy from an infrastructure investment, for example, by investing equity or debt into a project. Some of these structures minimise the impact on the State's balance sheet and should be considered as mechanisms to further enable this type of investment.

3.6 Asset Disposals to Fund Infrastructure

Over the past 25 years both Australian and overseas governments have disposed of a number of infrastructure assets through privatisations and other market based processes. These disposals have taken place for a diverse range of reasons including:

- To introduce market discipline into asset delivery (including infrastructure provision and funding and finance).
- To transfer operational, infrastructure and investment risk to the private sector (where it would be better managed)
- To raise capital for new investment and reduce debt

The NSW government and the Queensland government have embarked on a series of asset disposals; some of the funds, from which will be invested in infrastructure.

Case Study: UK roads leasing

The UK government has recently announced plans to involve the private sector, targeting sovereign wealth funds, in the provision of roads maintenance, to provide congestion relief and to build new capacity.

Under the proposal, the new operators would lease the roads and invest in maintenance (under a regulatory model) and would be provided with opportunities to achieve higher revenue through congestion relief building new capacity and charging tolls.

Based on our recent discussions with ratings agencies it may be possible to structure disposals to achieve an off balance sheet and ratings beneficial position.

3.6.1 Forms of Disposal

A number of models have been used to dispose of assets which have had a number of different impacts for the disposal process and the residual role of government. These are summarised in the following table:

Form	Examples
Sale / Privatisation	Sale of Queensland Motorways Limited roads portfolio to the Queensland Government's investment arm QIC for \$3.088 billion
Part privatisation	Telstra / the initial public offering of 66 per cent of QR National for \$4.6 billion
Long-term lease / Sale and lease back	the 99 year lease to manage Queensland's forestry plantations to Forestry Plantations Queensland Pty Ltd for \$613 million / the 99 year lease of the Abbott Point Coal Terminal to Mundra Port Pty Ltd for \$1.829 billion

3.6.1.1 Rationale for South Australia

The South Australian government has a number of strategic assets in its ownership that could be attractive to investors and could lead to the recovery of significant revenue for infrastructure investment. These include:

Asset	Potential disposal model
Desalination plant	Sale and lease back: The accounting treatment of a sale and leaseback transaction is included in section 7.3.4. In broad terms a sale and lease back arrangement would be expected to cause an owned asset to remain 'on balance sheet'. Lease liabilities are typically recorded in a State's balance sheet. However, we understand (and note below) that it may be possible to create commercial arrangements that may result in an 'off balance sheet' treatment.
Various water treatment plants	Sale and lease back. Accounting treatment, as above.
SA Water	Privatisation
Adelaide Metro	Privatisation / Concession model
Adelaide Convention Centre	Privatisation / Concession model

In considering the veracity of asset disposals the State is likely to have at the forefront of its consideration the extent to which disposals are rational. For example, a disposal process should support broader State objectives, such as better asset management, asset utilisation, risk transfer and value for money, as well as relieving balance sheet pressure.

It is beyond the scope of this study to consider the details of a disposal process, the potential value that such a process could yield, market appetite for such a process or the potential pros and cons of further private involvement in those assets. However, there are clear opportunities to consider these assets and the strategic opportunities to release funds for investment.

Based on recent informal discussions between PwC and a ratings agency it was determined that it may be possible to achieve a beneficial outcome from sale and lease back asset disposals for ratings purposes: raising cash; eliminating liabilities and achieving an off balance sheet treatment. Our view is that it is surprising rating agencies would not “look through” the accounting arrangements and at this stage do not take this position to be definitive.

3.7 Considering the role of a Future Fund and Sovereign Wealth Funds

Sovereign Wealth Funds, such as the Australian Future Fund have been created by Governments around the world with a mandated purpose of funding important economic investments or to fund long-term liabilities (such as pension or future expected ongoing liabilities). These 'ring-fenced' pools of funds are quarantined from other Government funds and are often made up of proceeds from one-off asset sales (e.g. privatisation of Telstra), extraordinary tax receipts and royalties (such as mining royalties), or other budget surpluses.

Sovereign Wealth Funds such as the Australian Future Fund have often been considered capable of not only contributing to direct infrastructure financing but also have an ability to attract additional investment from 3rd party private financiers to a project, playing a conduit between project investment and financiers.

3.7.1.1 The Australian Future Fund

The Future Fund was established by the Howard Government under the Future Fund Act 2006 with the stated purpose of funding future public sector superannuation liabilities. The Future Fund, as a sovereign wealth fund is managed by the Future Fund Board of Guardians.

The Future Fund is split into a number of investment pools (as part of the Nation Building Funds), including:

- Building Australia Fund – a financing source to enhance the Commonwealth's funding of transport, communication, energy and water infrastructure (and eligible national broadband network matters)
- Education Investment Fund – a financing source to fund higher education, research and vocational education / training and eligible education infrastructure
- Health and Hospitals – a financing source to fund health infrastructure

This fund clearly has a strong mandate and appetite to invest directly in key nation building infrastructure, but some critics believe the Fund has not invested enough in productivity-improving infrastructure and to reduce infrastructure 'bottlenecks'.

Critics of the Future Fund take particular issue with the investment practices arguing that the fund has performed poorly. For example some believe the Future Fund should be used to reduce inefficient taxes and used to fund any reduction in tax revenue as a consequence.

3.7.1.2 Other State-based Future Funds

- The Queensland Government established the Queensland Future Growth Fund in 2007, forming over \$3bn of funds realised from the sale of electricity and gas retail businesses. This fund is expected to fund water, commercial infrastructure including in the Government's energy corporations, social housing, transport infrastructure, clean coal technology research and other renewable energy projects
- The Queensland Government is also considering the establishment of a multi-billion dollar 'Queensland Education Trust', utilising 50% of future LNG royalties – projected at over \$1.8bn over the next 10 years. This is expected to fund a number of initiatives such as Individual Trust Accounts for Education and Dedicated Education Funds.¹¹
- BankSA research undertaken in October 2011 indicated that, of those sampled, 90% of South Australians want a mining royalties future fund to be established. Research indicated that residents would prefer these funds to be used to enhance social and economic progress through investment in schools, hospitals, roads and transport, renewable energy and education.

¹¹ <http://deta.qld.gov.au/educationtrust/>

3.7.1.3 International Future Funds

From an international perspective there are a number of examples of Future Fund establishment established from sale of state assets, tax receipts and royalties. These examples are noted in countries such as France, Germany, Norway and a number of the Gulf States.

Funds, targeted at infrastructure development do not necessarily derive from economic booms or one-off cash bonanzas. In the UK, the Government is considering issuing billions of pounds of extra government debt to establish a new Infrastructure Investment Fund. This fund would establish a 'ring-fenced' pool of funds which could ultimately help finance the nation's future pension commitments currently valued at 1.3 trillion pounds. This liability is already factored into rating agency assessment so raising debts (liabilities) to fund these may be ratings neutral.

The fund may be tasked with investing in priority projects such as roads, energy and housing projects to not only relieve existing infrastructure capacity issues but also promote economic growth, a significant objective given poor economic growth conditions and prospects in that country. Another positive impact this fund may have for the infrastructure financing market is to provide confidence in infrastructure assets as a sector with 3rd party financiers (e.g. private pension funds) gaining confidence by co-lending with the Infrastructure Investment Fund. Furthermore by promoting and sponsoring priority infrastructure projects this will potentially create a sustainable pipeline of these projects, further enhancing confidence and eliciting financing commitment to these classes of Greenfield assets.

3.7.1.4 Application in South Australia

Funds do not necessarily increase the rate of infrastructure investment in the economy. Because of the importance of protecting investor returns they typically act on an arm's length commercial basis.

However, through an infrastructure investment mandate an SA fund, perhaps, capitalised through asset disposals and mining royalties, could invest in South Australia's infrastructure. In section 5 we describe a potential structure for South Australian fund established from mining royalties.

As noted above, this fund would be focused on investment in relieving infrastructure bottlenecks in the mining sector and could be used as an investment vehicle alongside which other funds from the private sector could be pooled.

4 Financing infrastructure

4.1 Infrastructure Financing

In this section we consider:

- Public Private Partnerships and new forms of public private partnership emerging in the post GFC environment
- How government is unlocking private capital, in particular the bond market and superannuation market
- The emergence of new types of financial institutions to support government investment
- Mechanisms used by government to support economic infrastructure projects and increase the rate of investment in the economy

4.3 Public and Private Finance – New Models to Facilitate Investment

Government have recently looked to a range of measures to support and stimulate the provision of private finance in the wake of the GFC. Social infrastructure projects have increasingly relied on government support. Predominantly this support has been provided where private finance could not be raised and/or cannot be raised on sufficiently economic terms to allow projects to meet value for money hurdle tests.

Furthermore, failures in the economic infrastructure sector, in particular in toll roads, have led to a significant and fundamental reduction in the appetite of investors to bear revenue risk.

New models of partnership have emerged to deal with these issues and ensure the continued delivery of PPP projects. This support can provide to projects with several benefits:

- By allowing PPP projects to proceed which would otherwise fail – PPPs offer a range of benefits including whole of life costing; improved asset utilisation, innovation, etc. which would be lost if the PPP was unable to progress
- Allowing economic infrastructure projects to proceed which would otherwise be considered to be too risky (mainly but not exclusively because of revenue risk).

4.3.1 Capital Contributions Have Been Effective in Reducing the Overall Costs of PPP Projects to the State

Capital contributions have been used on a number of recent projects. Most recently the Victorian Comprehensive Cancer Centre reached financial close using a State contribution and in Europe projects such as Karolinska Hospital in Sweden utilised the state contribution model.

Capital contribution models provide capital financing to a project to supplement private sector financing, normally without any expectation of a return for government. The intent of the capital contribution model is to provide liquidity support and/or reduce the overall cost of financing, whilst seeking to maintain the value drivers and risk allocation benefits of a private financed PPP model. The higher cost of private finance in the post GFC climate means that PPP projects have found it more difficult to demonstrate value for money compared to traditional delivery (projects funded from State debt). It should be noted that contribution is a ‘financing’ not a ‘funding’ contribution, i.e., related to financial not economic efficiency.

The capital contribution models seek to retain the same project risk transferred to the private sector as would have been achieved without any government funding support. This structure has been successful in preserving the benefits of PPP projects and risk transfer.

Example– Gold Coast Rapid Transit, QLD

The Gold Coast Rapid Transit Project adopted a State capital contribution as a means to improve value for money given the continuing high debt margins post-GFC; the capital contribution is used to reduce the amount of privately financed debt. PwC assisted in the development of a structure which optimised the value to the State contribution while maintaining effective risk transfer under PPP.

The following table sets out some of the issues and risks associated with capital contributions:

Benefits	Issues and Risks
Preserve PPP deliver	<p>It raises the question as to whether capital contributions should be as large as possible to further reduce the cost to the State and that such contributions should be maximised.</p> <p>While there is some logic in this argument, the counter argument is that at some point the benefits</p>

Benefits	Issues and Risks
	of capital contribution are diminished by a reduction in effective risk transfer to a bidder (possibly over a 30% contribution).
Widely accepted in market	Limits the opportunity to recycle capital into new investments.
Does not blur role of government (as some other forms of government support can do, e.g., State co-lending)	Earlier impact on net debt and hence credit rating when government injects capital.
Simple and non-disruptive to procurement process	Well understood by the market and government.

We recommend that government should always consider whether a capital contribution should be used to improve the overall value for money of a project, in particular for social infrastructure projects, to reduce the cost of capital while maintaining the benefits of private investment. It may not always be necessary from an overall value for money perspective, but from the point of view reducing overall cost, consideration should be given as to how to optimise the blend of private and public capital. The inability to recycle capital and the use of State balance sheet capacity and crucially, the importance of maintaining risk transfer, will limit the extent of contributions.

4.3.2 State Debt Investment

Government funding could be used to either substitute or supplement private finance by providing project debt (as opposed to a capital contribution in which there is no expectation of a return). Typically this is considered on what is known as a ‘pari passu’ basis, that is, the government lends on identical terms to the other project lenders.

State lending on this basis differs to normal State lending on a traditionally funded project. In this instance the State would use its own funds, which it may borrow using its debt program, to invest in a project. It would, in effect, act like any of the other senior lenders to the project – it would raise capital for investment in a project and on lend those funds. The key considerations and features of such an approach include the following:

Feature	Consideration
Amount of debt	<p>The State could be a minority investor or major investor.</p> <p>As the State puts in more capital inter-creditor issues increase. Other lenders do not like the types of conflict of interest which arise where the State acts as both a creditor in the deal and as the client.</p> <p>For example, if in a situation the best decision for the lenders is take an action against the State in a dispute they will be concerned that the State involved as lender will compromise their strategic position as lenders (State investors would be party to banks strategic negotiation strategy) and would be concerned that the State investor would act in the best interest of the State, not the lenders.</p> <p>For lower levels of State investment these issues can be resolved. It is much more difficult with higher levels of investment.</p>
Rates of return	<p>The State’s return could be commercial or it could be below commercial rates.</p> <p>If it is below commercial rates the project would benefits from a State investment through lower capital costs – which would improve the commercial viability of a project.</p> <p>However, the State could invests at commercial rates and earn a</p>

Feature	Consideration
	return on its investment. This is the difference between its own borrowing costs and the rates it earns on the project. This ‘return’ could be reflected in the overall assessment of the cost of the project to the State.
Duration of commitment	The State debt would typically be expected to be refinanced out of the project at some point and the refinancing provisions can be established to enable this.

This model of investment has merit. It allows capital to be recycled and allows some of the impacts of currently higher private finance costs to be mitigated. It does involve the State bearing risk akin to senior debt risk, which is a higher level of risk than the State would otherwise bear.

From an accounting and ratings perspective this type of investment would be broadly equivalent to a PPP. The State’s senior debt investment would create a financial liability and create a financial asset; which should be broadly neutral.

This model creates no new funding or funding capacity and is generally used to address financing cost issues in social infrastructure projects.

We have shown below some of examples of other approaches to improve the value of private financing.

The Canadian Wide Equity Model

The issue of higher post GFC cost of capital has been addressed by utilising a model which increases the level of equity in a project and utilises cheaper government debt (in substitute for private debt). The intent is to preserve a large element of the risk transfer under the model, by increasing equity exposure, but reducing the government’s cost of capital.

Application Note – Wide Equity Model, Canada¹²

The Wide Equity Model was used by Partnerships British Columbia in the procurement of the Fort St John Hospital as a response to the increased cost of debt during the GFC. Under the Wide Equity Model financial structure, a larger amount of equity was invested by the private sponsor (20%, compared to 10% for typical social infrastructure PPP projects) with the balance of funding contributed from government as debt capital.

In order to preserve the more traditional risk allocation within PPP structures, under the Wide Equity Model structure, a portion of the service payments are held until the last two years of the agreement to ensure the private sector is motivated to provide high levels of service until the end of the agreement.

As the government effectively stepped into the shoes of private sector debt providers under the Wide Equity Model, government assumed the typical due diligence role of senior lenders and, indeed, retained advisers to perform the due diligence functions normally undertaken by senior lenders. The government construction milestone contributions rank senior to equity and have a significantly reduced risk exposure.

The benefits of this model are similar to those of a capital contribution but potentially extend further in terms of reducing the cost of capital (exchanging public for private debt). At the same time, while risk transfer remains significant (20% of private capital is in a ‘first loss’ position) the risk transfer is less than for a traditional PPP.

Queensland Supported Debt Model

This model is a co-investment model in which cheaper government debt is added post construction. This structure helps preserve the construction risk transfer and then sees government refinancing the private senior debt post construction (leaving the residual project not unlike the wide equity model, described above).

¹² <http://www.pwc.com.au/industry/infrastructure/publications/funding-infrastructure.htm>

Example– South East Queensland (SEQ) Schools¹³

The SEQ Schools project used a combination of private and public debt - known as the ‘Supported Debt Model’ - to allow cheaper government funding to substitute for more costly private finance. The model is a variation of the conventional (fully privately funded) PPP model. The private sector provided all financing for the project (both debt and equity) during the high risk construction phase, but only around 30% of the funding required for the operations phase. Queensland Treasury Corporation (QTC) provides the balance of the finance (around 70%) through first ranking senior debt on completion of construction. The QTC funding is drawn down in tranches, subject to completion and certification of various stages of the project.

The private sector found it difficult to get comfortable with the Queensland Government in two roles – ‘debt provider’ and ‘procurement authority’ – and the associated inter-creditor issues. There were also concerns around the cost and availability of the private sector mezzanine debt provided during operations phase. However, the Queensland Government and the private sector successfully worked through the issues to achieve financial close.

Similar to other models in which the government takes a large share of the debt investment, overall costs are reduced, but risk transfer is eroded and the value for money is affected.

4.3.3 The Role of PPP Projects and whether Government should invest to save

Models which increase government debt at the expense of private debt seem intuitively attractive and lead to the question as to what the optimal balance of government and private debt should be, what role private debt really plays and should government not just invest in all projects (social infrastructure).

The key argument against public sector investment is that private debt is not as expensive on a risk adjusted basis. When the government invests in a project it uses its AAA credit rating to raise debt; this debt is cheaper than private debt (which for most social infrastructure projects is rated BBB). This debt is then invested in a project with an underlying credit rating of BBB. At face value there appears to be a clear benefit to investing cheaper government debt in place of more expensive private debt. This argument is erroneous, as explained below.

In practice the government is not receiving appropriate return for the investment it is making if it only demands a AAA return for a project with a BBB risk. If one of the risks that give rise to the underlying BBB rating arises the State will bear that risk through losses, which tax payers will bear through higher taxes to compensate for (for example) loan default.

The implication is that government should not value its investment in BBB projects at AAA rates but at an appropriate (BBB) spread over the government bond rate. This has been the approach taken by government on some recent projects in assessing the value of government investment.

Additionally, the benefits of private sector financing and risk transfer are substantial. We are aware of a water sector PPP structure which demonstrates the robustness of PPP risk transfer and substantiates the case for investment in PPP.

Example– Confidential Water Treatment PPP Project

A sub \$100m water project has been procured using a PPP model. The project is completely privately financed through debt and equity and the cost of the project has been passed to consumers through the regulated pricing regime. It has faced a number of issues, these are summarised briefly:

- Increased construction cost: The engineering company has incurred additional costs due to delay; industrial action; technical complexity. The government has not borne any additional costs. Equity investors have been required to invest further in the project alongside the engineering company.

¹³ <http://www.pwc.com.au/industry/infrastructure/publications/funding-infrastructure.htm>

Example– Confidential Water Treatment PPP Project

Private sector costs have increased by over 30%.

- **Completion risk:** The technology involved in the project is new and innovative. There is completion and commissioning risk and a risk that the project will not achieve the original objectives. The costs of resolving the engineering risk and the risk of non-completion and of losing the value of the investment is borne by the equity and debt investors and design engineers.

These types of risks are those which give risk to the underlying BBB rating of PPP projects. In this case all of those risks have been borne by the private sector. If this project was a government project government would bear all of the equity and debt risks. Where there is a capital contribution or co-investment it is likely government will face some of these risks.

This type of risk transfer is a powerful argument for transferring risk under a PPP contract. Furthermore it is not unusual that these risks arise. Leighton has reported significant losses on the Victorian Desalination Project and on roads projects in Queensland in the past two years.

If those ‘blow outs’ were in projects funded by government the additional costs would give rise to additional borrowing or curtailed investment in other sectors to fund those losses; reducing governments ability to fund other projects and programs.

Private finance is a strong driver of risk transfer.

4.3.4 Issues in Financing PPP Transactions and how they could be mitigated

There are a number of issues affecting PPP financing which are summarised as follows:

Issue	Implication	Possible Approach
Since the GFC spreads between AA and BBB are about 80 bps higher than pre-GFC.	If the underlying risk of PPP transactions has not changed then current margins do not reflect the true risk implicit in the project.	Where the government invests in a project it should charge an implicit margin based on long-term BBB margins. State takes the benefit of refinancing gains (if the market improves). State allowed right to refinance the project using State debt To reduce the cost of the project.
Long-term swap costs are high	Government requires fixed pricing and hence PPP providers must enter into hedging transactions to fix underlying interest rates.	Government can reduce this cost by accepting the risk of movements in underlying interest rates, as opposed to requiring a fixed cost. While government would be exposed to underlying rate fluctuations it is a two way bet and you could argue government is better placed to manage its own interest rate exposure on a portfolio basis.

In summary we conclude that where PPP projects are viable and desirable (for reasons of risk transfer, asset utilisation etc), that the South Australian should support those projects. Current market conditions and the higher cost of private capital mean that there is the potential to improve the financial value in PPP. We recommend that the State, as it develops PPP projects utilises the above structures to improve the financial efficiency and hence value for money of PPP projects. In particular we recommend:

- Government considers PPP procurement for all suitable projects in accordance with the Infrastructure Australia guidance material

- Utilising capital contributions if necessary – up to a level that does not disrupt risk transfer (say 20-30% but to be assessed on a project basis) – this is straightforward, accepted by the market, and can be accommodated within existing PPP frameworks
- Amending requirements for long-term swap pricing and refinancing provisions to facilitate the State's participation in future improvements in market conditions
- Where government investment is required providing the investment in such a way as to allow government an exit strategy at a future point (such as a subordinated loan or co-investment). In our view these structures are complicated and may dilute a number of the other benefits of PPPs
- Where government invests in a project recognise the cost of the government investment is commensurate with the project's risk and make appropriate adjustments to the risk free rate to ensure government debt reflects the project's risk.

The above approach will minimise government risk exposure to projects, maintain the benefits of the PPP approach and preserve government debt capacity.

We recognise the State's participation in the COAG Infrastructure Working Group and other participation in the development of the national infrastructure agenda. The recommendations, above provide a context within existing policy frameworks, for the continued investment in PPP projects as a form of procurement, in particular where the State has limited debt capacity.

4.4 Increasing private sector financing by unlocking capital

In this section we consider the extent to which infrastructure financing is constrained by capital markets and the opportunities to relieve those constraints.

4.4.1 Private Bond Market

Capital markets are considered the natural home for infrastructure investors. Bond holders require long-term stable, inflation linked, long-term investments and infrastructure investments are capable of providing this return profile.

Prior to the GFC the bond market was supported by monoline insurance providers, which were able to provide a guarantee to bond investors that the project would repay the loans (utilising the balance sheet strength of the monoline insurer). Monoline insurers would require projects to be appropriately structured to meet their own investment requirements but were essentially able to take a portfolio view of project risk and bear that risk on behalf of bond investors. The GFC saw the balance sheets of monoline insurers decimated and unable to provide the credit enhancement sought by investors. This has resulted in the virtual closure of bond markets for project finance.

The benefits of bond financing are:

- Cost of finance is lower making infrastructure projects increasingly economically viable
- Debt tenors are longer – reducing refinancing risks for equity (passed on to State's through cheaper finance costs) and reduces risk to State of project failure
- Bond holders interests are considered to be well aligned with those of infrastructure owners, i.e., long-term as opposed to speculative interest.

While these are important benefits in delivering efficient finance to projects the alternative, the bank markets, remain largely viable for all but the very largest of projects. However, what bond markets clearly provide is a more efficient source of finance for projects and this efficiency could reduce the reliance on State capital.

4.4.1.1 International Perspective on Re-opening the Bond Market

The Canadian bond market has remained open for infrastructure projects. On average, 10 to 15 bonds are issued each year. In 2011 alone, the total value of debt raised through bonds was over \$4bn.

Project bond investors in Canada are typically either pension funds or life insurance companies, which invest through direct investment or through an intermediary investment manager. Canadian PPP projects have a number of attributes that are highly appealing to these investors, including:

- **Financing terms and conditions:** Generally structured in a way that will maximise the attractiveness of the investment in order to obtain the necessary investment grade ratings, including a strong project agreement counterparty risk profile and tenors that match liability requirements.
- **D&C and O&M contractors:** Contractors typically provide robust security packages to enhance underlying performance support. This model enables the project company to obtain strong investment grade debt ratings, which therefore opens up the broadly marketed Canadian bond market for long-term and short-term bonds.
- **Larger credit spread than comparably rated corporate bonds:** Until recently, PPP bonds in Canada have traded at a spread premium of about 100bps to comparably rated corporate bonds. The spread premium arises due to a perception of lesser liquidity, greater complexity and the amortising nature of the bonds.
- **Lower credit risk than comparably rated corporate bonds:** Studies and rating agency surveys identifies that the risks to senior lenders in PPP transactions are relatively low, both because of the low risk of default and because of the low loss in the event of default. When PPP transactions have run into difficulties, the construction contractor has almost always been the first casualty.

The Canadian infrastructure market is also characterised by a steady pipeline of infrastructure transactions which contribute in maintaining a high level of interest from bond investors.

Capital markets continue to invest in regulated utilities, but for greenfield infrastructure remain largely unavailable (except in Canada and the USA). In our research we have identified the following:

Market Insight: Return of the Project Bond Market

In January 2012, financial guaranty insurer Assured Guaranty announced that it had completed one of the first monoline financial guarantee transaction for an infrastructure project since the beginning of the GFC¹⁴. Assured Guaranty said the company is now looking at other infrastructure projects, though for now they will remain focussed on the more modest sized projects.

In Europe the European Investment Bank (EIB) is also exploring mechanisms to facilitate the return of a bond market and has launched an initiative aimed at reviving it.

Application Note: European Union (EU) and European Investment Bank (EIB)¹⁵

The EU has launched the Europe 20 Project Bond Initiative. The purpose of the initiative is to consider mechanisms under which the EIB can support projects raising bond finance in the absence of a monoline insurance market.

The EIB is considering introducing credit guarantees of sufficient scale to provide an investment grade rating of senior loans to support broader appeal to capital markets (allowing projects to access lower costs and longer tenors in that market).

Alternatively, the EU is considering investing in projects through subordinated loans of sufficient scale to leave the remaining debt at investment grade. This initiative is expected to be targeted to large projects of strategic priority.

¹⁴ <http://www1.ijonline.com/infrastructurefinancenews/preview?articleid=74706>

¹⁵ <http://www.pwc.com.au/industry/infrastructure/publications/funding-infrastructure.htm>

The Europe 20 project effectively means that the EIB will provide risk capital to support the investment in project bonds; acting as an investor or guarantor in the project will place the EIB’s balance sheet at risk. This could allow access to cheaper and more viable (long tenor etc) bond finance. The EIB has the capacity and regulatory framework to act in this way and can take a portfolio view of this type of risk, which effectively places it in the role of project insurer, similar to the role of a monoline insurer.

A State could provide similar support to a project through a range of guarantees and credit enhancements which would, in effect, lend the State’s balance sheet to a project to enhance the credit rating. However, State’s do not have the benefit of large portfolios of suitable projects across which to spread project risk. The EIB initiative is aiming to limit the exposure of the EIB’s balance sheet by providing limited EIB risk capital, e.g., by appropriately sizing the subordinated loan senior debt is protected and the EIB would be exposed only to the subordinated debt investment. In Australia this could be a role for the Future Fund.

As discussed elsewhere we consider a range of credit support structures to be appropriate for infrastructure investments. Providing them, in a limited way, such as through a subordinated debt investment, could provide leverage of the State’s balance sheet without exposing it to full project risk.

Furthermore, similar to the EIB scheme, which is targeting large scale strategic projects, the Commonwealth government could step into the role of guarantor for strategic projects as a form of support based on a pipeline of suitable projects to be developed by Infrastructure Australia; though there would be significant concerns that such an initiative would place its own balance sheet at risk it could be more efficient in that it could take a portfolio view across the State’s, thus providing leverage.

4.4.1.2 *The Benefits of Developing a Bond Market*

South Australia government and procuring authorities would benefit from the presence of healthy bond markets for PPP transactions. Advantages include:

- **Additional lending capacity:** Bond markets bring additional lending capacity at all tenors, but particularly the long end.
- **Additional competition:** Bond markets bring substantial additional competition, particularly in the current bank dominated environment. This competition could reduce borrowing costs and improve the terms.
- **Market resilience:** The financial crisis has highlighted, among many other things, that relying on one source of funding is risky. While there may be a correlation between distressed periods in bank markets and distressed periods in bond markets, it is nevertheless helpful for authorities procuring essential infrastructure in an era of limited resources to have as many alternative long-term funding sources as possible.
- **Reduced risks to project:** Long-term bond markets fully remove refinancing risk by providing debt for very close to the full term of the concession. Unlike banks, bond investors actually want to lend for the long term.

4.4.2 *The use of Municipal Bonds*

Municipal bonds comprise a large part of the private finance for US state and local governments. Although the municipal bond market is not unique to the United States, it does represent a major source of private finance for state and local government. Types of municipal bonds

With regard to the funding of infrastructure, there are two sorts of bonds that could be used:

Government Bonds	Qualified private activity bonds (QPABs):
The proceeds of these bonds are used to finance the building, operation, and maintenance of public infrastructure used by the issuing party or another	The proceeds of these bonds must go to capital expenditure, so they may be used either to fund new infrastructure or to upgrade or refurbish

Government Bonds	Qualified private activity bonds (QPABs):
<p>government party. Examples of such infrastructure include roads, schools, libraries, and fire stations.</p>	<p>existing infrastructure.</p>
<p>There are three main types of government bonds issued. Each type reflects the source and security of monies used to repay them, as follows:</p> <p>General obligation bonds: These bonds are issued against the general taxing powers of the issuing authority. The bondholders do not have security against an individual facility.</p> <p>Revenue bonds: These bonds are issued against revenues received from the operation of an individual infrastructure asset—for example, a toll road. The bondholders are likely to have security over the individual facility.</p> <p>Special assessment bonds: These bonds might be issued to fund infrastructure in a specific area that will be a catalyst for commercial development in that area. To reflect the public funding, there might be a specific tax on the subsequent commercial development to repay the bonds.</p>	<p>The QPABs are bonds where the user of the proceeds is a nongovernmental body. In the United States, in order to qualify for the tax-exempt status of government bonds, the activities on which the proceeds are spent must be specifically authorized by government and are subject to a number of tests.</p> <p>For many years, these bonds have been authorized to finance some infrastructure—such as water treatment and port development—but it was not until 2005 that the exemption was extended to encompass surface transportation, including roads and bridges.</p>

The benefits of these bond structures include:

- Access to finance at rates below those of debt
- Increasing demand and thus improving competitiveness of bonds through tax exemptions
- Reducing the impact on credit rating through linking security over repayment to individual assets.

We believe there may be some scope to utilise innovative bond structures in South Australia - in particular in relation to Tax Incremental Financing.

Furthermore, creating tax incentives for specific bonds, for example, those associated with a Tax Incremental Financing could increase the commercial viability of those projects and provide additional supply of finance into schemes with tax incentives.

A key issue in providing any tax incentivised structure will be ensuring the benefits flow through to the infrastructure. Some previous schemes in Australia have failed and were considered most effective as tax planning instruments for investors, as opposed to encourage efficiency in infrastructure financing. The success of these schemes in other jurisdictions indicates that these issues can be addressed. The key issue with any such program in Australia will be in balancing Federal-State issues. Tax concessions transfer revenue from Federal to State and will have an impact on Federal revenues. The desirability of such a program would therefore come down to one of economic efficiency, i.e., is it better for States to receive grant funding for specific or general projects from government or better for those amounts to be provided through tax concessions.

There may be some benefit to providing Qualified Activity Bonds in Australia. For similar reasons to the arguments for PIP payments economic relief could be provided to projects which have a significant impact on economic activity but require stimulus to go ahead. In this regard tax exemptions could be provided, although as they would need to work on the same basis across all projects, e.g., to be provided on a tax exempt on all projects, the support required may be insufficient for some projects, i.e., the tax shield may not be equivalent to the incremental Federal tax increment.

Any such program would need to be carefully targeted to ensure qualification was provided to projects which would benefit, i.e., those which would not go ahead 'but for' the tax concession. In our view the tax concession structure is worthy of consideration, in particular in the present market where bond finance is not available for projects.

The key benefit of the tax concession would be the potential for it to assist in reopening bond markets with attendant access to long-term finance at more competitive rates. However, the benefit may be relatively limited because of the likelihood of the loss of Federal tax receipts and the potential reductions in Federal funding that would lead to under tax equalisation measures.

4.5 The Role of Superannuation Funds

There has been significant national debate about the role of superannuation funds in infrastructure given, among other things, their access to long-term, relatively competitive (compared to bank debt) capital and long-term time horizon.

As we have stated there is limited evidence, on all but the largest of projects, that capital is not available. We therefore see the benefit of superannuation fund investment being to provide access to more competitive finance and longer term finance. Their involvement in projects might improve project viability (reducing funding costs) and value for money, which may reduce the current trend in some projects to require State support, such as the Sunshine Coast University Hospital and VCCC. As a result measures which encourage their participation should be encouraged and we support current initiatives of Infrastructure Australia to facilitate further involvement.

However, it is unlikely that involving superannuation funds is the 'silver bullet' for infrastructure project funding – superannuation funds may improve viability for some projects through access to better terms and conditions but this is expected to be relatively marginal.

4.5.1 The Role Played by Superannuation Funds on the National and International Stage

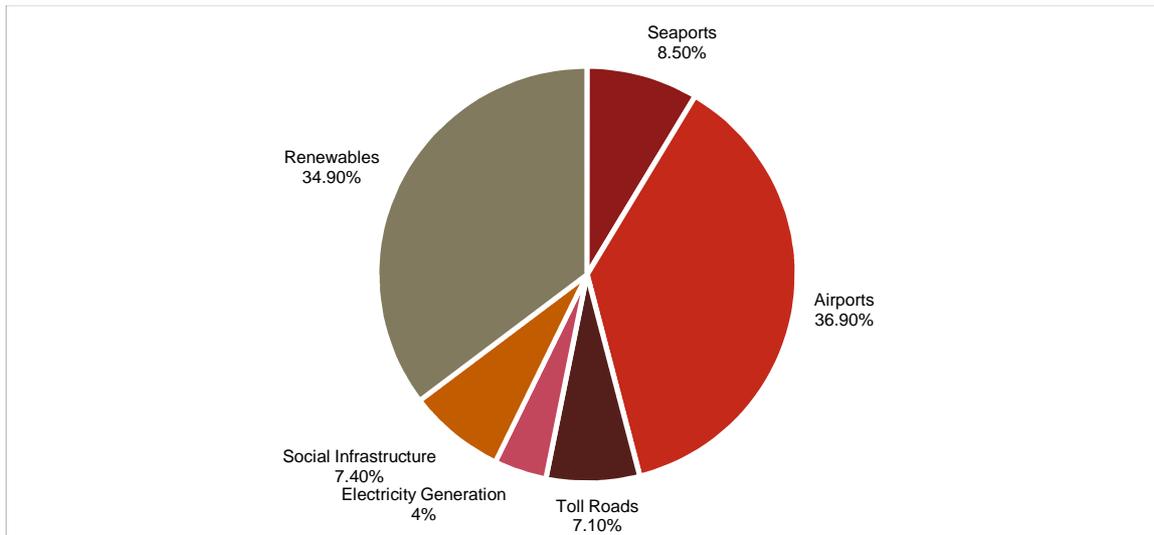
Superannuation funds already invest in a range of infrastructure assets in Australia. The New Royal Adelaide Hospital project was supported by both Australian Super and IFM in a senior debt capacity.

Case Study: Victoria Desalination Project

The A\$4.5bn Victorian desalination PPP provided clear indication that super funds are not merely content to be passive investors. The inclusion of the AustralianSuper Fund as arrangers in the A\$1.7bn debt syndication is indicative of increased participation in infrastructure by superannuation funds. AustralianSuper provided debt to the project. UniSuper was also one of the largest equity investors in the project¹⁶.

Furthermore, both domestically and internationally superannuation funds invest significantly in private or regulated infrastructure. For example, IFM discloses the following funds exposure for its Australian Infrastructure Fund (which is a pooled open ended superannuation trust):

¹⁶ <http://www.unisuper.com.au/investments/news-and-commentary?articleid=42E6995D-D488-057D-5E670C5DAEF0F94B>



The key issue is not whether superannuation funds participate, but how and when they do.

A large potential pool of private finance lies with institutional investors such as pension funds. However, historically, institutional investors, and pension funds in particular, have tended not to play a major role as direct investors in infrastructure assets, for a variety of often articulated reasons including:

- Limited capacity to assess project risks and make direct investments, as a result of which most pension funds tend to invest in infrastructure indirectly through intermediaries such as infrastructure funds, or by buying shares or bonds of publicly listed utilities.
- The need for deal flow: Superannuation funds need a long-term pipeline of planned investment opportunities to assist them with investment certainty.
- The preference for Brownfield over Greenfield projects: Superannuation funds prefer Brownfield projects because they don't have to bear construction risk and can see the proven returns before they invest in them, but there aren't many of them available for investment, and they are outnumbered by Greenfield projects.
- The taxation treatment of Greenfield projects: More favourable taxation treatment would encourage superannuation funds to invest in these types of projects, and the Commonwealth's announcement it will look at more favourable treatment of early stage tax losses is helpful.
- The scale of bid costs: With tender processes running up to 18 months or more, investors spend time, money and effort, and these substantial costs can only be recovered by the winning tenderer or by providing bidders with a stipend to recover partially the bidding costs.
- The need for liquidity: superannuation funds are statutorily bound to maintain a level of liquidity sufficient to match expected outflows of retiring and transferring members. There is a perceived mismatch between this need for liquidity and the long-term nature and size of infrastructure investment.

4.5.1.2 The UK Government Faces similar Issues and is developing a Response

The UK government has made clear that it wants institutional investors, such as pension funds and insurance companies, to play a major role in UK infrastructure going forwards.

The government hopes that this pool of capital could be used to finance the construction of new projects, which largely involves the building, or improving, of road, rail and energy infrastructure. Depending on the level of government support, it is estimated that pension funds would probably be happy with a small margin over UK Treasury Gilts.

UK pension funds hold over £1 trillion in assets, but only around 2-2.5% of this is currently invested in infrastructure. The UK Government is targeting an additional £20 billion worth of investment from this source and in late 2011 the government signed a Memorandum of Understanding with the National Association of Pension Funds (NAPF) and the Pension Protection Fund (PPF), to facilitate the development of a new pension infrastructure platform to help pension funds invest more in infrastructure.

The Association of British Insurers (ABI) also announced its intention to work with the Government to create a new asset class of infrastructure bonds to encourage insurers and pension funds to invest in infrastructure projects. Acknowledging that fund managers have a responsibility to make sure their investments deliver in the long term, the UK Government has agreed to set up an Insurers' Infrastructure Investment Forum to address the risks associated with developing this new asset class.

It is not yet clear what arrangements will be made to facilitate pension funds investment in infrastructure. We understand that the UK Government may create an internal fund management-type structure to pool investment funds for projects. However, if the Government is too involved this might present a conflict of interest with government as procurer and regulator on the one side and financier on the other.

While long-dated, inflation protected cash flows are attractive to pension funds, the risk exposure during the operations phase of any project, the complexity of different infrastructure projects and structures and risks (from project to project as well as from sector to sector), and the risks posed by investing in an illiquid asset class, it remains to be seen whether Greenfield infrastructure can be made sufficiently attractive for investment.

One of the challenges faced in the UK sector is the relative size of funds. Australian funds are larger and better equipped to make investments in this sector. We believe the government conduit structure is a potential route and have highlighted a potential route for this. This has further merit and we recommend the State should support the development of a similar working framework for superannuation funds pooling in South Australia.

4.5.1.3 The Canadian Model as Exemplar

The Canadian Infrastructure market has been able to develop a market in which pension funds invest in PPP projects. The Canadian bond market (discussed earlier in this section) is dominated by life insurers and pension funds. The project fundamentals which would facilitate similar investment in Australian projects are all exist to make similar investment in Australian infrastructure desirable. This implies the key issues are those of deal flow.

The Canadian model, though often cited as bringing superannuation funds to the table, actually brings a broader array of investors, including:

- Life insurance companies
- Infrastructure fund managers (managing pension & mutual funds investments)
- Other investors looking to match fund long dated liabilities

It is for this reason that the UK government is also engaging with the life insurance market as a source of finance.

There are some concerns around the competitive environment of the Australian big four banks, which are dominant in the local market and have a short-term lending horizon. Bonds (invested by superannuation funds) are normally co-invested alongside senior debt, this creates inter-creditor issues and alongside differences in time-horizons and the lack of competitiveness in the Australian banking market, means the appetite to deliver bond financed transactions is limited.

4.5.1.4 Potential Response of SA Government in Supporting Superannuation Investment

In our view the non-government bond market is restricted because of a lack of competition in the market and some structural issues. Most of the fundamentals are in place and, as shown above, superannuation funds are participating already. Removing some of the barriers noted above, around deal flow, bid costs, risks and the like

will lessen the structural issues and will improve the attractiveness of the market more attractive to bond investors (including superannuation funds).

Developing conduit structures which remove bidding risk and provide portfolio benefits of risk diversification would also improve the attractiveness of infrastructure as a sector and might provide the superannuation market with the capacity needed to compete effectively against senior debt. This concept is being developed in the UK and we have suggested in Section 5 a potential application of this type of fund in South Australia.

We recommend on a project-by-project basis South Australia takes a pragmatic view to risk allocation when involving the private sector. Improving the project fundamentals will increasingly make projects attractive to the market. In particular we are aware of investor appetite in the water treatment sector, for projects in the \$100m-\$200m size and with guaranteed off-take arrangements. This may make the Mount Barker and Murray Bridge projects suitable for a bond financed solution (noting there would be competition from senior debt). For a suitably sized transaction (such as Mount Barker) we would encourage a variant bid under a capital markets solution.

Furthermore, to encourage further participation from superannuation investors a pipe-line of projects could be developed to encourage investment and participation. This is a role that Infrastructure Australia could play, and to some extent they already do, through the provision of a guaranteed pipe-line of projects which will be delivered utilising private finance.

This could provide broader benefits through the infrastructure industry – the National Infrastructure Construction Schedule already.

The Department of Infrastructure and Transport is developing the first National Infrastructure Construction Schedule which will collate all known and forecast infrastructure investments by the three levels of government. It will be developed in consultation with all state and territory governments through the Council of Australian Governments Infrastructure Working Group. The data on projects receiving funding will lead to greater certainty for industry and increased competition in the marketplace.¹⁷

We believe such initiatives should be supported. Together with the construction pipe-line additional certainty may be provided to bond investors through further commitment to the use of private finance for certain types of project.

4.6 Increasing focus on Dedicated Infrastructure Banks

The global economic crisis has seen parts of the private finance offering virtually disappear; for example, the capital and commercial bank debt markets have become severely constrained in the amount and terms of their lending, as discussed previously. Government's role in supporting projects and filling gaps in the availability of private finance has increased.

Alongside this increased role for government a number of countries are exploring whether infrastructure lending institutions should be established, particular given the increasing role of government as lender of the last resort but more progressively in a way in which to achieve leveraged support for projects, i.e., making each \$ of capital enable multiple \$'s of infrastructure and to manage the exposure of the State balance sheets more effectively.

Infrastructure banks are not new and there is significant precedent for their use in supporting the development of projects. The European Investment Bank (EIB) has provided a range of financing support for infrastructure projects in Europe; typically lending to projects which meet certain social or economic criteria and providing access to competitive finance and providing gap finance.

¹⁷ <https://www.nics.gov.au/>

4.6.1.1 *An Overview of International Practice*

As noted above, Infrastructure Banks are gaining currency. The UK National Infrastructure Plan announced that the UK government will establish a Green Investment Bank (GIB) that will start operation in 2012 and will receive funding of GBP 3 billion over the next three years (although latest press suggest the UK's focus on its green agenda is waning).

The intent is for GIB to act as a catalyst to expand the pool of investors and capital available to fund the UK's transition to a green economy (similar challenges will face Australia and South Australia as the Carbon Tax is implemented). Its interventions are intended to improve the mobilisation of new investors for both debt and equity, enhance the pricing of risk in financial markets through increased transparency, and provide investment for marginal projects that would otherwise not have happened.

In principle, the GIB may participate in projects through the supply of its capital in the form of equity, mezzanine (subordinated) debt, or senior debt. In some cases, it might offer capital on a contingent basis, in which equity is injected when construction costs overrun substantially, freeing up capital set aside by other parties to be used in other projects.

In offshore wind and waste, it is expected that utilities will find the idea of co-investment equity attractive if their balance sheet is constrained and if it allows them to expand their project pipeline. In both cases, firms may not find a lender or co-investor elsewhere who is prepared to accept the prevalent commercial risks.

The following table sets out the approach taken to the State infrastructure banks across the globe:

Bank	Remit for infrastructure finance	Impact on infrastructure financing
European Bank of Reconstruction and Development (EBRD)	<p>Describing itself as a transition bank, the EBRD was established in 1989 to support the financing of projects in Central Europe and Central Asia that serve the transition to market economies.</p> <p>It is owned by 61 countries as well as the European Community and European Investment Bank. It has a capital base of € 20 billion and supports infrastructure projects in a range of sectors including transport, environment, energy, and shipping. It primarily supports projects in the private sector.</p>	In 2008, the EBRD provided €279 million to municipal and environmental infrastructure and € 660 million to transport.
Development Bank of South Africa (DBSA)	<p>Established in 1983 by the South African government, the DBSA plays a number of roles to support the funding of physical, social and economic infrastructure in South Africa. These roles are described as Financier, Partner, Advisor, Implementer, and Integrator. Its portfolio is split approximately 75:25% between public- sector projects and infrastructure funded through private- sector intermediaries.</p>	In 2009, the DBSA provided total funding, both equity and loans, of Rand 9.3 billion creating a total portfolio of Rand 20.48 billion. Of this, approximately 15% went to road and drainage projects, 8% to other transport, and 21% to water projects.
The Brazilian Development Bank (BNDES)	<p>The BNDES is a federal public company established in 1952 linked to the Ministry of Development, Industry and Foreign Trade. It aims to provide long-term financing to enhance Brazil's development and the competitiveness of Brazil's economy, including large-scale industrial projects and infrastructure. In the infrastructure sector, much of its current focus is aimed at the energy sector, including renewables, logistical bottlenecks including access to ports, expanding the telecommunications network, and developing urban infrastructure.</p>	In 2008, BNDES' total disbursements were R\$92.2 billion, of which R\$35.1 billion (38%) went to the infrastructure sector. This includes R\$13.8 billion to roads/highways and R\$8.6 billion to electric power.
KfW Bankengruppe (KfW)	<p>KfW is owned by the Federal Republic (which also guarantees it) and Lander (federal states) of Germany. It was established in 1948 as part of the post-war reconstruction effort. Today it describes itself as a promotional bank and it supports economic, social, and ecological development in Germany and worldwide as is an advisor to the German federal government.</p>	In 2008, KfW committed a total of € 340 million to invest in renewable energies (other than large-scale hydro), which was more than the World Bank in the same period. It also plans to lend a total of € 3 billion for municipal and social infrastructure in Germany in 2009 and 2010.
State Bank of India (SBI)	<p>The SBI is the largest commercial bank in India, both in terms of its geographic reach and its balance sheet size. It is a public-sector bank with the Government of India having a majority shareholding (approximately 60%). It is listed on Indian stock exchanges.</p>	In 2009, the SBI established a US\$1.04 billion private equity fund with Macquarie Capital, with the IFC a minority shareholder and cornerstone investor, to invest in infrastructure in India.

Bank	Remit for infrastructure finance	Impact on infrastructure financing
		The SBI also topped the 2009 Project Finance International League Tables as the Global Initial Mandated Lead Arrangers, having arranged US\$19.9 billion for 37 deals in 2009.

4.6.1.2 *An Australian Infrastructure Bank*

It is our view that the bank and capital markets in Australia are relatively well functioning for infrastructure lending and investment, in terms of capacity and there is no fundamental market failure. That said, the competitiveness of Australia’s banking sector could be considered to be an impediment to the efficient delivery of projects, in particular high costs, low appetite for risk and short-term debt tenors. Furthermore, in some sectors, such as the emerging green sector, investment constraints exist; which an infrastructure bank may be able to help address.

At this stage we are not aware of any infrastructure bottlenecks which an Infrastructure Bank is best placed to resolve. Clearly there are bottlenecks, and developing an approach which leverages capital into these difficult projects would be advantageous in some instances. In our view an infrastructure fund or future fund at the State level could be more effective than developing a lending institution with the considerable skills, resources and regulatory input that would require. Over time there may well be a role for such an institution, though this would naturally need to be a national institution and nationally sponsored.

The infrastructure issues presented in South Australia, such as in relation to roads programs, mining infrastructure and freight bottlenecks, etc. can be effectively addressed through more targeted State level structures. The development of a State level future fund, while coming with significant regulatory and governance complications, could be structured as having a State focus, dealing with the State’s infrastructure issues. We believe such an organisation could act as a conduit for other investors, including superannuation funds.

4.7 *New Approaches for Economic Infrastructure*

Economic infrastructure projects will generally proceed where the private sector business case is sufficient to support those projects. Given the reliance on third party revenues to provide the income to recoup the infrastructure costs (and loans used to finance them) third party revenue expectations are a key element of the business case. Over the past 4 years there have been widely reported failures of economic infrastructure projects meeting revenue expectations and failing. Recently the Darwin Marine Supply was procured following a market process to establish the level of private sector appetite to finance the infrastructure based solely on future user charges – i.e. a full economic infrastructure project. Following the market process the government elected to proceed on the basis of joint public sector and private sector funding.

Furthermore, in some sectors, such as mining and resources, the size and scale of infrastructure costs can act as a key impediment to project success. The long-term nature and scale of the enabling infrastructure investments can create a significant barrier to investment: often requiring a number of parties to come together to develop the infrastructure and uncertainties around the timing of individual mine projects is a key risk to infrastructure developers.

Where there are limited barriers the private sector will invest and these investments will contribute to the economic development of the State (increased income; mining royalties; property values; increased skills; more innovation etc).

4.7.1 *Addressing Issues Related to 3rd Party Income*

Uncertainty around 3rd party revenues has fundamentally affected the economic infrastructure market. Projects which were previously viable on a stand-alone basis may no longer be independently viable. The key issue affecting their delivery is the reluctance of funders to take risk on user (e.g., traffic, or ports access) volumes. The Darwin Marine Supply Base provides an insight into how this issue can affect government:

Case study: Darwin Marine Supply Project

The Darwin Marine Supply Project (DMSP) is a project to develop port and associated logistics infrastructure for the supply of vessels servicing of offshore oil and gas facilities. It is envisaged that this project will increase the competitiveness of industry in the Northern Territory as a key supplier in the offshore oil and gas value chain.

The procurement process undertaken for the project was designed to establish the level of market appetite to finance the project as a pure economic infrastructure PPP. The project's revenues will come from port access charges and ancillary fees and charges. The procurement process anticipated the possibility of a requirement for government funding to mitigate private investors' exposure to uncertainties in:

- The extent to which operators would utilise the facilities at Darwin (rather than using facilities elsewhere)
- The timing of future oil and gas installations (a key contributor to demand)
- The frequency of usage
- Marine access channel dredging costs – which are considered to be uncertain.

The 'go to market' process established the extent of market appetite to finance the project. Following an assessment of the cost and quantum of private finance offered, the government decided to proceed on the basis of a mix of public and private finance for the capital cost of the project. Under this model the private sector and government each fund a portion of the port construction costs, and the private sector design, builds and operates the port. Both parties bear exposure to the project's revenues in proportion with their respective financial stakes in the project.

The government retains flexibility to hold or exit its investment for the longer term. As such provisions within the contract arrangements contemplate a possible future exit strategy for government. At the same time the successful private sector proponent is incentivised to deliver successfully and maximise revenue.

In developing this project the Territory took steps to ensure the project would provide open access to all potential users of the port and that no party would be excluded. As a result it was a condition of the project that open access was provided to facility users.

As a partial owner and investor, the financial return earned by the Territory is subject to demand risk; once the project's usage levels and revenues have reached a steady state point, the appetite of the private sector to bear this risk in full and provide an efficient financing structure to acquire and maintain the physical assets will increase; this in turn will provide a higher value in any possible future sales process.

Lessons learned

- Strong but unproven economic case requires government intervention – private sector cannot provide full financing and there is significant uncertainty regarding future revenues
- Government bearing a risk which the market could not adopt (efficiently) to allow a project to proceed efficiently on a fully privately-funded basis
- Planned exit strategy to allow government to recycle capital
- Ability to continue to rely on private sector discipline and risk transfer around key design, construction and operational elements of the project.

Of course, in observing this project the Territory government shares in the exposure to the risk that revenues are not as contemplated.

In the case of this project, government intervened and took revenue risk itself. It has a regime which allows an exit at a future point and could sell a concession to the port in the same way in which the NSW government is selling rights in Port Botany.

The direct investment by the Northern Territory would be expected to have a balance sheet implication, unless the ratings agencies are able to factor into their assessments the future income from ports access and other revenue. At the point of disposal net debt could be reduced and/or the capital could be recycled into another project.

We have identified a number of other models of support which government could provide to enable economic projects to progress.

4.7.2 Public Sector Minimum Guarantees

Under a minimum guarantee government underwrites a minimum demand or patronage level to a concessionaire. This type of structure could be devised in a number of ways.

In the context of the current infrastructure finance projects, in particular toll roads, this form of Government guarantee can leverage significant additional private finance.

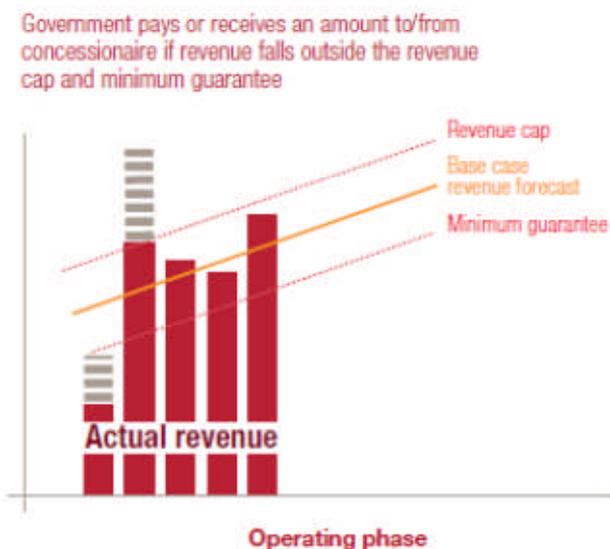
The Government support would be a contingent guarantee, with the expectation that it would not be triggered unless an adverse outcome emerged (e.g. non-achievement of ‘minimum’ patronage levels).

4.7.2.1 Overview of a Minimum Guarantee Structure

The guarantee could be formed in a number of ways, typically placing equity at risk and providing a strong level of protection for debt financiers. Examples of the structural features of this structure include:

- Cover debt service - not typically equity
- Be in effect for only limited period of time, e.g., for a defined period until the revenue forecasts are established (during the ‘ramp-up’ period)
- Set around a minimum patronage level - for example this could be set as 10-30% below expected base forecasts provided to operators to limit government exposure. These bands of demand (minimum ‘collar’, base and revenue ‘cap’) may be nominated by Government at the outset of the competitive tendering process for an asset / concession
- Often accompanied with a revenue share agreement between Concessionaire and the private sector for revenue above threshold amounts. This would allow Government to enjoy any ‘super-profits’ where demand significantly exceed forecasts, in part to compensate Government for its contingent liability

Figure 2: Revenue profile under public sector minimum guarantee



This financing model does not require any physical (cash) debt or equity contribution, but rather is a contingent liability to the State. A key benefit is that this may not impact upon budgets (for a project that could otherwise not be ‘bankable’). This model therefore may allow Government equity and debt contribution to be utilised on other priority projects, whilst still generating significant increases in private sector (financing) appetite for projects.

The private sector counterparty (e.g. concessionaire) retains construction and operational risk of project, but with a true partnership approach between private and public partners around revenue. This includes commercial risk sharing of risks such as market demand.

There is also an argument that by Government taking a share of downside risk the role of equity may be diminished resulting in potential reduction in performance during 'ramp-up' due to this form of Government support.

This model provides scope for expanding the funding pool. Where an investment is economically viable but cannot be financed because of concerns about demand risk; a State guarantee in relation to minimum patronage or usage or rent could provide the certainty private investors (debt and equity) require to invest in and delivering the project.

The potential exposure to the State's balance sheet under this structure is summarised as follows:

- The financial liability may need to be recognised on balance sheet for the guarantee which would be reflective of best estimate of the government's expectation there will be a cash outflow for the guarantee.
- The exposure to the balance sheet is likely to be limited to the 'risk' of the call on the guarantee. This is likely to be lower than if the government support was in the form of a loan.
- Given the government have assessed and recorded the risk of cash outflow, credit rating agencies would not be expected to adjust the balance sheet for any other factors.

This model thus allows government to invest in a way which may mitigate some of its balance sheet exposure and maintains many of the benefits of private financing. Recent precedents of this approach include the following:

Application Note – Australian University Sector

In the Australian university sector a current project for student accommodation is being developed on the basis of a demand guarantee from the university. The project has been developed on the basis of a demand forecast and has been full privately financed. Funding for the project is derived from rents (and to a lesser extent ancillary income such as catering). Concerns regarding student demand, in particular for overseas students, in the light of ongoing adverse global financial conditions, which have had an impact on student numbers, means that the investors are unwilling to underwrite demand.

In response the University has provided a guarantee that takes effect when the student demand falls below a predetermined level. The level is set such that debt remains fully protected. The university support for the project is contingent on student numbers and as a result its commitments may be recorded as contingent liabilities.

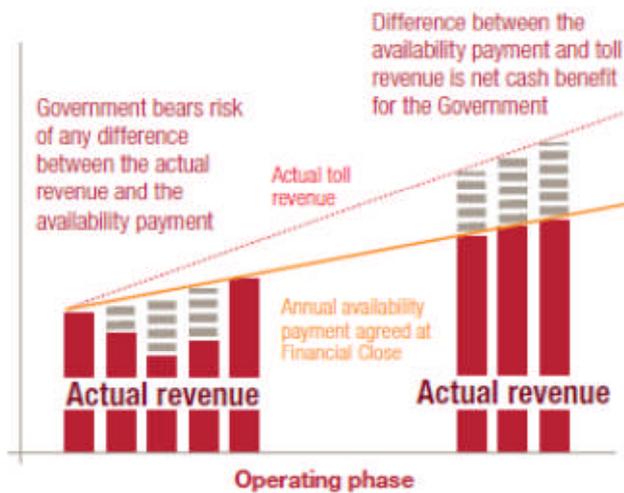
The impact of this structure is that the universities capital commitment to the project has been minimised and the private sector has been able to finance a project from an established infrastructure user (the student).

4.7.3 Public sector Development Company (PDC), with availability based private finance

This is a model in which the State establishes a development company to establish infrastructure, receive revenues. That company in turn could then allocate to the private sector design, build, and finance and operate contracts. The PDC would pay availability fees for the infrastructure provision from revenues received and from other forms of government support. This will mean the infrastructure provision benefits from normal risk transfer but government is left in a position where it bears revenue risk.

Thus, depending on the underlying financial viability of the project, government could either enjoy a surplus of project revenues (over annual PPP service payments), or suffer a deficit. As is the case of the chart below, this dynamic could well change over the life of the project.

Figure 3: Revenue profile under public sector development company (with availability based PPP delivered infrastructure)



The benefit of the PDC is that it provides a structured exit route for government. The investment in the PDC could be sold and cash recycled at a future point.

A weakness of this model is that as a traditional availability based PPP project would not fully align the interests of the PPP proponent with that of government (as recipient of project revenues). However, the availability model could be refined to introduce a (limited) element of demand risk exposure for equity (while still fully shielding debt from demand risk).

The State would be required to make agreed availability payments on a periodic basis. This payment obligation will be reflected in government accounts. The impact of this is that, if the project revenues cannot be brought onto the government balance sheet upfront (the starting position), the impact on the balance sheet will be as if the government had funded the project itself.

Further, while the government will receive the revenue stream, there is no certainty regarding the level of revenue. Consequently, the net impact on the government budget each period will only be known when revenue is actually realised, but there will be a benefit from revenues above forecast.

4.7.4 *Public sector subordinated notes*

In a post-GFC environment, Government can fill an important gap in the capital structure (between senior debt and equity) by providing a subordinated loan. Subordinated loans may attract a combination of annual yield and bonuses for good project performance.

Subordinated loans give the government the right to receive a share of ongoing revenues as interest on the loans, subject to a cash flow ‘waterfall’ designed to safeguard senior lenders’ debt service. Early repayment of subordinated loan may occur if early refinancing of project debt leads to increase in gearing – which is possible once project cash flows are stabilised and construction risks are managed.

Government and private sector financial interest are aligned creating potential for sustainable partnership.

4.7.4.1 *How Subordinate Debt Investment would work*

The model would need to include mechanisms for government to share in these returns (either through accelerated repayment mechanisms or separate upside sharing arrangements).

One of the challenges for use of public sector subordinated notes is resolving the inter-creditor issues between the government and the senior debt providers, similar to those involved in senior debt.

The benefits and risks of this structure are similar to those of senior debt. However, by structuring the government investment as a new tranche of capital some of those issues can be dealt with in a more pragmatic way – allowing a more structured investment and exit path with more limited overlaps with other sources of finance.

Previous use of subordinated debt includes¹⁸:

- M2 toll road & student housing projects, New South Wales
- Transport Infrastructure Finance and Innovation Act (TIFIA) program USA (transport projects) – highway, transit and rail projects)
- Spain – toll road through Subordinated Public Participation Loans (SPPLs). These have also been implemented by regional and local governments for motorway and airport concessions.

Example – M2 toll roads-NSW¹⁹

In Spain toll roads have been funded partly through Subordinated Public Participation Loans (SPPLs) that gave the public sector the right to receive returns. The government provided its support to the concessions to mitigate risks difficult for the private sector to manage (e.g. regulatory risk and, in some cases, traffic risk) and to increase financial feasibility of projects which were socially desirable.

While the government can design SPPLs for specific projects, they are regulated by Spanish law and must have the following characteristics:

- Traditional transfer of demand risk to private sector with capped/defined public sector support for any funding gap
- They are always subordinated to senior debt – the government will be paid back only after the concessionaire has met its obligations to the senior lenders but will be paid back before equity receives any dividends.
- The expected rate of return of SPPLs has to be related to the performance of the concession – the better the actual traffic numbers the greater the rate of return of SPPLs.
- The expected rate of return to be obtained by the government must reflect the level of risk retained –the expected yield of SPPLs should be market-based.
- The characteristics of SPPLs are defined by the government in the bidding terms, which establish a maximum SPPL amount to be requested by the bidders. Usually the SPPL is capped at 50% of the predicted investment, although the government can in exceptional circumstances permit a higher percentage.

Although SPPLs have mostly been implemented in toll road concession contracts awarded by the central government of Spain, they have also been implemented by regional and local governments for motorway and airport concessions.

4.7.4.2 Conclusion

Government can support economic infrastructure projects in a number of ways and it will often be economically rational for it to do so. However, there is no one way in which government should provide this support and for projects which would otherwise not proceed but for government support there are a range of strategies government can use which:

- Allow government to support projects and enable economic infrastructure investments to proceed (which might otherwise fail)

¹⁸ <http://www.pwc.com.au/industry/infrastructure/publications/funding-infrastructure.htm>

¹⁹ <http://www.pwc.com.au/industry/infrastructure/publications/funding-infrastructure.htm>

Financing infrastructure

- Limit government exposure to risk (mainly revenue) through timed and planned exit strategies
- Allow government to limit capital exposure and recycle investment.

We recommend these strategies are considered for economic infrastructure projects.

5 An Integrated Funding and Investment Model for Mining Infrastructure Development

5.1 Overview

In this section we explore the potential to utilise the State's future mining royalties as a source of funding for infrastructure projects and how these funds could be used to invest in projects which boost the economic prosperity of South Australia.

5.2 Royalties Leveraged Funding

Mining royalties provide an important source of revenue to the State. In the 2011-12 Budget Statement mining royalties were stated as \$154.9m (2011) rising to \$258m in 2014-15. These are expected to rise further as new mines are exploited over the next decade.

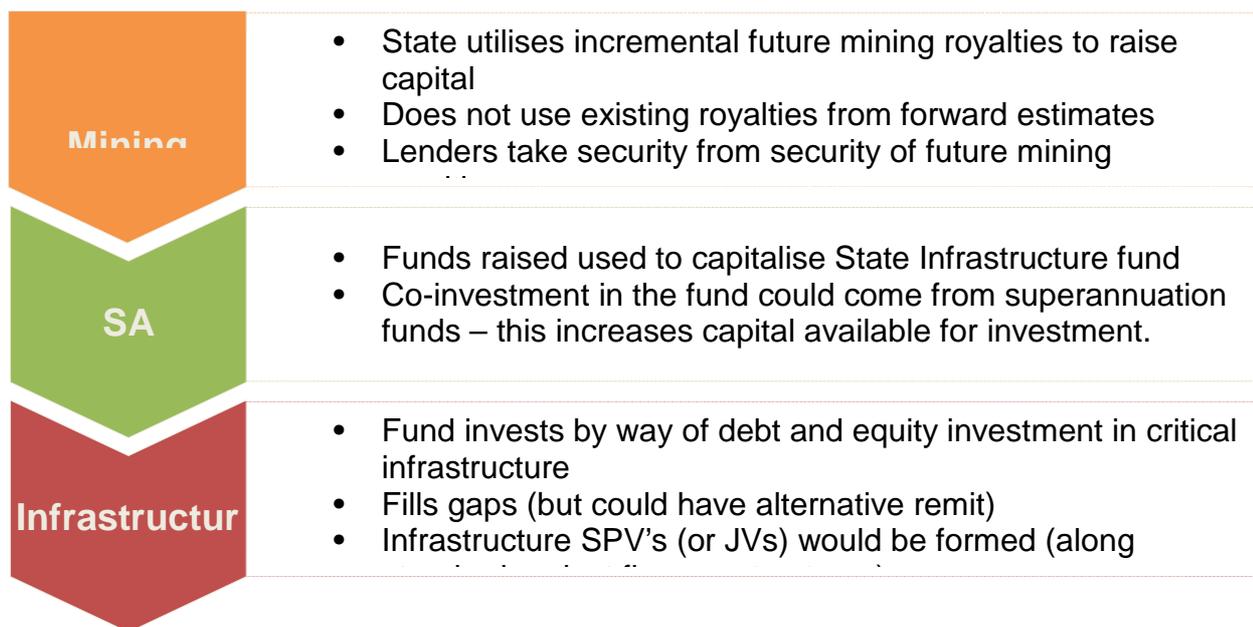
We have considered how the South Australian government could fund investment in the infrastructure required to boost mining productivity and support the growth of the mining industry. Infrastructure gaps represent a key constraint on productivity in the mining sector: adding to cost and increasing the time taken to get take product to market. Furthermore, the high up-front costs of infrastructure development are often prohibitive, in particular for smaller developers with limited balance sheet strength and undiversified mining portfolios.

The high level of uncertainty around investment in and the availability of infrastructure is considered to be a key impediment of mining development. This constrains the rate of development for projects which are ultimately expected to be economically viable and be of benefit to the State and the national economy.

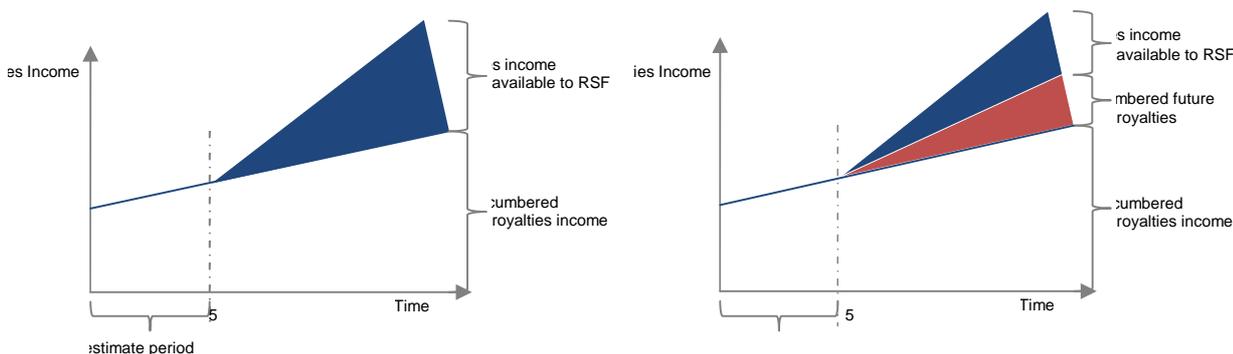
In this section PwC is proposing a mechanism which enables the State to pump-prime supporting infrastructure investments in a financially sustainable manner which mitigates the impact of the investment levels on the State's balance sheet and related ratings agency exposure.

5.2.1 Royalties Leveraged Funding (RLF) Explained

RLF uses the State's future royalties potential by utilising future royalties' income to raise new capital to invest in mining related infrastructure development. This model is described in simple terms in the following diagram:



Under this proposal the State would use future mining royalties to raise revenue bonds or would securitise that income stream. The diagram below shows how the proposal targets future and not current royalties' income (current income is already reflected in the forward estimates and this is left 'untouched in this proposal):

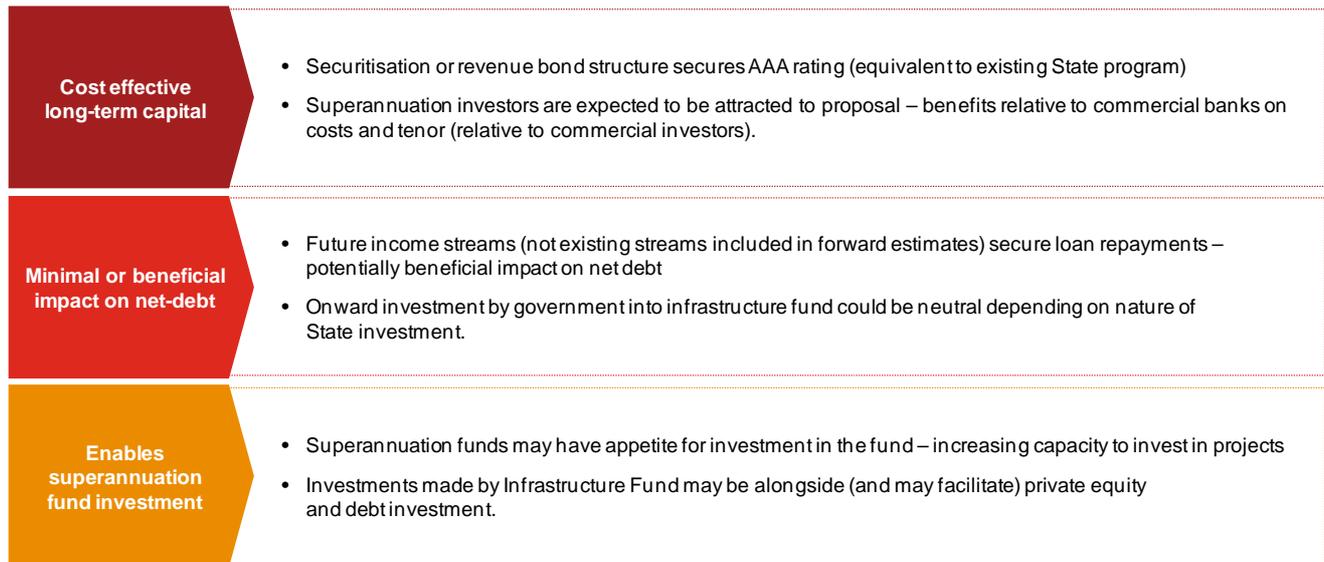


The capital raised would be allocated to a State Infrastructure Fund (SIF). This SIF could be conceived in a number of ways and is discussed further below. At this point we assume the SIF is controlled by the SA Government.

A primary benefit of this structure is that the capital raised could be neutral or beneficial from the perspective of the State's net debt position. We believe that the impact could be structured to be ratings and balance sheet positive; in particular compared to other forms of funding these projects. The ratings and ratings implications are considered further below.

The SIF would use this funding to make investments in infrastructure. We believe that the SIF could be structured to leverage additional funding from other investors, including superannuation funds and Federal Government.

The benefits are summarised as follows:



5.2.2 *The Royalties Bond Structure*

Revenue bonds would be used to access capital from domestic and overseas capital markets. The bonds could be issued publically or privately placed. If combined with tax incentives (discussed separately in this document) the bonds could be structured to be attractive to domestic retail investors.

The bonds would be repayable from the State’s future royalty income. This would involve careful debt sizing to ensure that future royalty receipts are sufficient to repay debt and interest and concurrently achieve an investment grade sufficient to attract market interest. If it wasn’t possible to achieve an investment grade on the underlying bonds alternative security could be considered:

- **Monoline Insurance:** A monoline insurer may be prepared to insure the bonds
- **Utilise existing royalties to secure income:** Using a proportion of the existing royalty income to provide security. While this may have an impact on ratings we would not expect the relationship to be 1:1. That is, for each \$1 of debt raised from the royalties bonds we would expect the State to use significantly less than \$1 of existing royalty revenue.

As a result of the above structuring we expect the capital raised and the underlying loans to be ratings neutral or positive.

5.2.3 *Accounting and Ratings Impact*

By de-linking loan repayments from the cash flows of any other State assets and providing security from a future payment stream the ratings impact of the proposal could be positive. That is, cash raised will strengthen the State’s asset base and the new debt could be excluded from the calculation of net debt on the basis it is fully repayable from future royalty receipts, i.e., not eroding anticipated cash flow.

The Melbourne Desalination project was considered by Moody’s to be ratings neutral as a result of the linkage of the investment to an increase in future revenues, in that case by Melbourne Water passing on the cost to consumers through water bills. In this case the third party revenue will be future royalty receipts.

Under this proposal the improvement in rating might be eroded as the SIF invested in infrastructure projects and cash is utilised for contributions or investments. However, to the extent that the SIF investments are structured to meet the definition of a financial asset, such as a subordinated loan, the ratings impact of the onward investment of capital could also be neutral.

5.2.4 The State Infrastructure Fund could secure additional funding from other sources

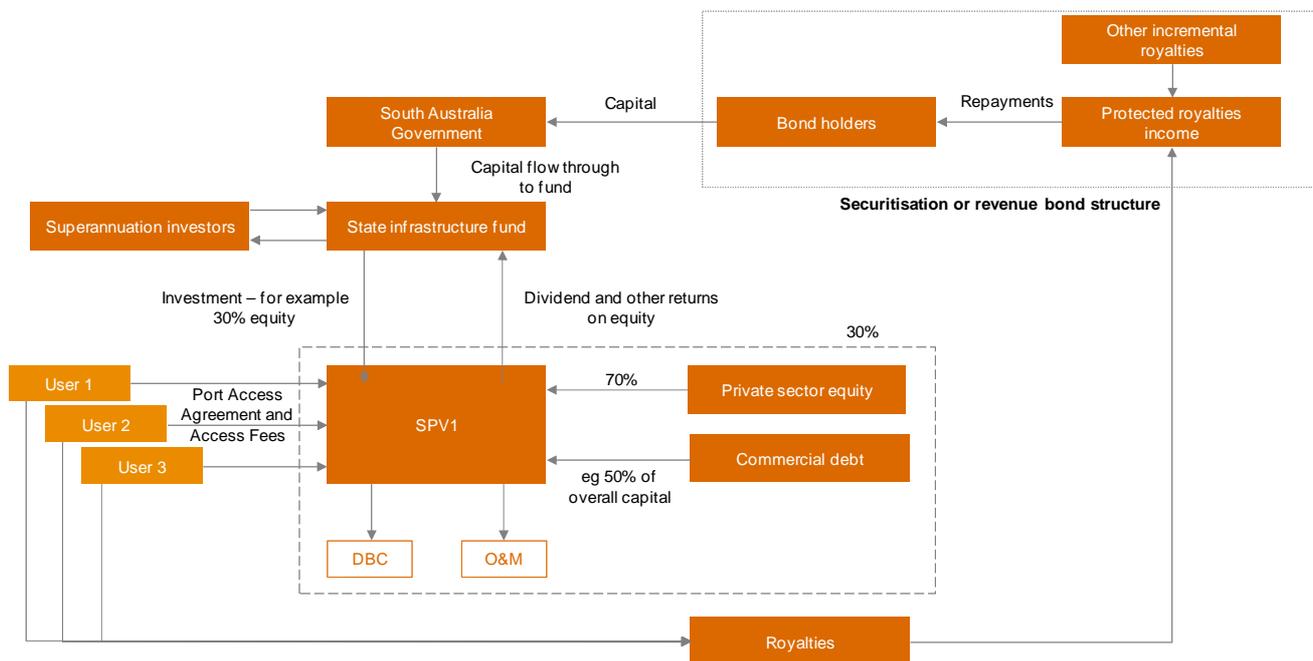
The SIF could act as a conduit for investment by superannuation funds in infrastructure development. This would present more complex governance issues but could be attractive to the State in providing further funding leverage and access to cheaper long-term finance. Super funds might find the investment attractive from the perspective of providing greater access to infrastructure investments (not subject to competition but offering returns equivalent to other Greenfield developments and avoiding expensive bid costs). The likelihood that the SIF investment would be spread across a number of projects would provide a portfolio benefit (thus mitigating risk exposure).

In our view a key benefit of this model is the role that superannuation funds could play. One could envisage them in taking the initial bonds from the State and/or investing directly into the SIF. Superannuation funds already invest in a range of other funds; providing governance issues could be addressed there may be strong appetite for this investment structure.

5.2.5 Utilising the SIF in a flexible and robust structure

The SIF would be invested in infrastructure to enable mining developments to come ‘on-stream’ in a more timely way or allow projects which cannot be financed independently to go ahead (developing the SIF investment criteria would be a key decision point).

Funds would be invested in a number of ways, including: equity investments; subordinated debt investments and senior debt investments. An example of the investment model for SIF investing in equity is shown below; in this example it is a minority interest in an Infrastructure SPV. The Infrastructure SPV would be responsible for developing infrastructure and would receive income, which would provide an investment return, by way of typical economic infrastructure charging structures (such as ports and track access fees).



7

Other key features of this structure are:

- The State’s risk exposure is an equity exposure
- It may be possible to attract senior debt into the vehicle and provide more leverage for the investment (both minimising SIF exposure and improving the cost of capital)

- The SIF could exit the investment at a future point, selling its equity, making a gain when the project is de-risked and re-financed. At that point ownership would transfer to a long-term infrastructure owner
- The recycled funds could be used for new investment in other projects or could be used to pay down the bonds (it may be possible to provide further credit enhancement through creating security in the investments of the SIF)
- We would not expect (under most structures) for the loans raised within the Infrastructure SPVs to be consolidated into the State's accounts (proving the State is a minority interest)
- The SIF's investment would be structured to meet the requirements of the particular project and could take a number of forms, including straight contribution (although this would not be preferred on the basis that it would not have the benefit of recycling State capital)
- It may be possible (and indeed could be preferable) for PIP's to be raised for the project
- The SPV (or JV) could mitigate development risk through traditional project financing techniques, including:
 - Fixed price construction contracts
 - Take or pay arrangements with mine owners
 - Exclusivity arrangements with mine owners

5.2.6 This approach is not interdependent and can be disaggregated and drive benefit in infrastructure delivery

The elements of this proposal do not need to be integrated. The SIF could be developed without the securitisation of mining royalties and could play a key role in the development of the State's infrastructure.

We understand that at least one other State is considering options, which include an infrastructure fund, which would take strategic stakes in State infrastructure projects.

5.2.7 Examples of Use

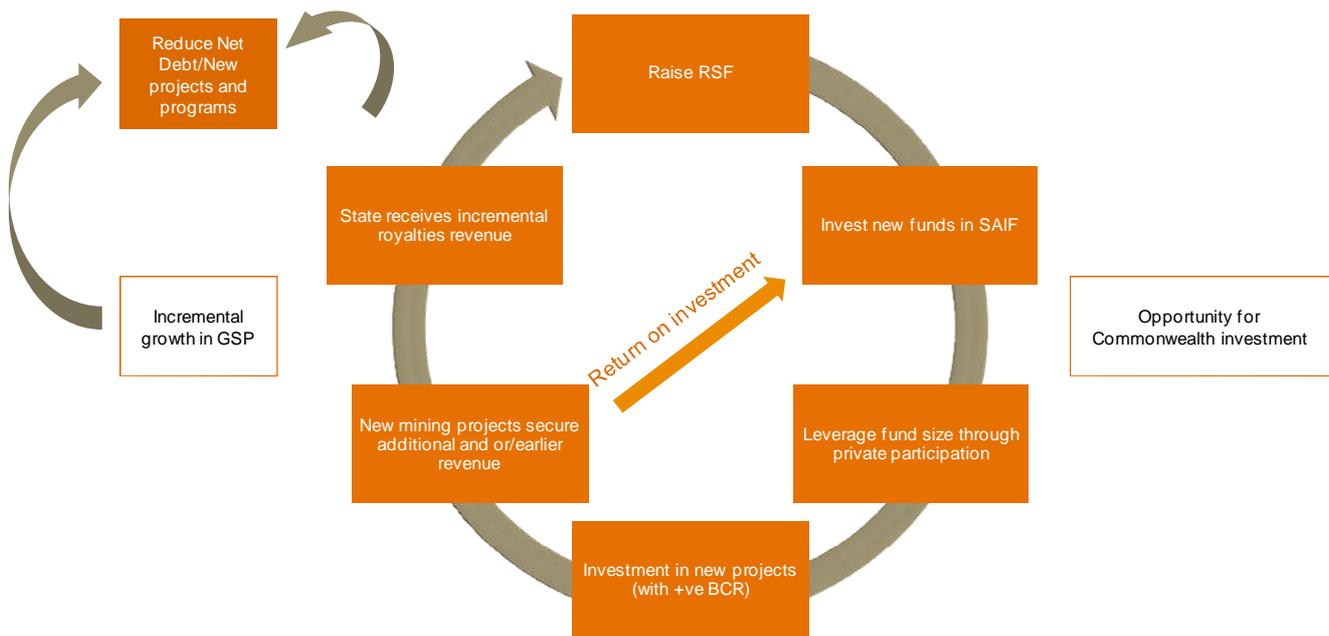
We have not identified precedents for the use of the structure in Australia. However, the structure is similar to Future Flow Funding which has been on a number of asset backed securitisations. The Mexican and Brazilian government have securitised future mineral income to raise debt. These transactions have been successful in achieving higher credit ratings than the sovereign and, at the same time, not increasing the sovereign ratings.

These structures have attracted high investment grade ratings and have raised significant capital. Based on our research there is no precedent of default.

5.2.8 Preliminary Conclusion

This is an innovative structure in this sector but which brings together a number of features and benefits of structures commonly used successfully in other sectors.

We believe this structure minimises the exposure of the State balance sheet and credit rating to accelerate the rate of investment in GDP accretive infrastructure. It forms a virtuous cycle of investment in that investment, funded from royalties, is used to invest in infrastructure, which leads to mining growth, which increases royalty levels etc.



Furthermore, it provides a mechanism to involve superannuation funds, in a meaningful way, in the State's infrastructure. This structure has a number of features which are highly consistent with the investment objectives of, and the address the concerns raised by, superannuation investors.

Recent press from ABC in South Australia supports the contention that it may be politically acceptable:

'A BankSA survey has found that more than 90 per cent of South Australians support the idea of a mining royalties future fund.

*South Australians identified that the future fund would be used for infrastructure and really focused I guess on social and economic infrastructure, so things like schools, hospitals, roads and transport, as well as renewable energy, creation of jobs, and also funds for regional development.'*²⁰

This is innovative and would require significant testing to assess the scale of potential borrowing, to test market appetite, and the views of rating agencies. The governance structure would need to be developed and issues such as the State's dual role as investor and regulator / planning authority would need to be addressed. This is beyond the scope of our study.

Further work would be required to develop the policy framework in which this model could be developed. The approach, as developed, is at a relatively high level and the implications on policy, market appetite, confirmed approach of ratings agencies, consideration of scale, etc. would need to be confirmed before the merits and desirability of the approach could be confirmed.

In developing this model we have assumed that there would be no impact on HFE. In particular we have assumed that there would be no change in the rates at which mining royalties are levied, which has previously given rise to HFE issues, and have assumed that the State maintains its existing royalty's rates.

²⁰ <http://www.abc.net.au/news/2011-10-18/future-fund-banksa-survey-mining/3576792>

6 Other Mechanisms to Improve the Rate and Efficiency of Infrastructure Investment

6.1 Government institutions

6.1.1 Overview

Infrastructure projects are inherently complex, require multiple layers of government, involve difficult questions of capital allocation, and require the participation of markets to assist in the delivery of those projects. Consequentially government throughout Australia and internationally have developed organisations to support the delivery of projects.

While Infrastructure Australia promotes a national agenda for investment in infrastructure there is clearly a role for the State's to play in the promulgation of projects, including those with a federal angle and those which are more local. The requirement for coordination of infrastructure development and delivery is recognised within other States, for example, in Victoria through Partnerships Victoria and in New South Wales through the recently formed Infrastructure New South Wales. Greater coordination of the UK's infrastructure priorities is now provided through Infrastructure UK (for England, Wales and Northern Ireland) and through the Scottish Futures Trust (SFT) (in Scotland). Similar organisations exist in other countries which promote public private partnerships, including Canada in which each province has its own agency supporting projects.

6.1.2 SA Government does not have this level of integrated support for infrastructure

While the SA Government has been successful in the procurement of projects with significant private sector participation, such as the New Royal Adelaide Hospital (NRAH) and the SA Schools project, we understand that the Partnerships SA unit within the Department of Treasury and Finance has been scaled back following completion of the NRAH project. We understand that infrastructure development is broadly supported through a number of agencies within government.

It is our initial view that the level of integration across government in supporting the development of infrastructure could be improved. In our view there is a case for the development of an organisation with broad capability and to have increased responsibility for the development and delivery of projects. The following section considers the potential benefits of a more coordinated approach to infrastructure delivery.

6.1.3 Examples of project delivery organisations and their role and effectiveness in delivering infrastructure

The following table identifies the role of a number of organisations, both nationally and internationally and their role in the delivery of infrastructure projects and programs and the governance frameworks within which they operate:

Organisation	Role
<i>Partnerships Victoria</i>	<p>Partnerships Victoria has been successful in supporting the development and delivery of PPP projects in Victoria. The private sector has significant confidence in the PPP process in Victoria, which has responded to market challenges during the GFC to keep the partnerships program on track. For example:</p> <ul style="list-style-type: none"> • During the GFC the Victorian Desalination Plant was delivered utilising government support for refinancing (at the point that private contractors could not accept this risk) • The Victorian Comprehensive Cancer Centre has utilised a capital contribution in order to secure value for money. <p>Recently the Department of Treasury and Finance has introduced a High Value, High Risk Projects policy to ensure that projects, in particular infrastructure and IT projects, are developed in a way which properly considers risks and in which the role of the private sector in procurement is fully explored.</p>
Infrastructure NSW	<p>Infrastructure NSW (INSW) was established in July 2011 to assist the NSW Government in identifying and prioritising the delivery of critical public infrastructure for NSW as a statutory body.</p> <p>Its focus is to improve major infrastructure networks such as transport, water, energy and communications to increase productivity and support the growth of the economy.</p> <p>INSW will develop a 20-year State Infrastructure Strategy, which will identify major infrastructure requirements. The strategy will also identify the barriers to projects being successful and identify how to activate both public and private resources to deliver them.</p> <p>The final strategy is due to be delivered in September 2012. It will be the first time an integrated infrastructure strategy has been delivered for this state. In addition, INSW is:</p> <ul style="list-style-type: none"> • evaluating submissions by agencies for projects greater than \$100 million • preparing infrastructure statements regarding particular sectors or precincts such as a review of the Port Botany – Sydney Airport precinct • reviewing unsolicited infrastructure proposals from the private sector • providing advice to the Premier on funding models • assessing public private partnership proposals being considered by agencies • coordinating NSW infrastructure funding submissions to the Commonwealth.
Scottish Futures Trust	See case study below.
PPP Canada	<p>A range of bodies exist in Canada which support the delivery of infrastructure projects and programs such as In September 2009, the Government of Canada established PPP Canada to support the development of PPPs by working with both public- and private sector parties and to serve as a centre of excellence and federal focal point for PPPs.</p> <p>At the same time, they established a C\$1.2 billion fund aimed at developing the market for projects procured by the public procurement partnership route or the alternative finance procurement route followed by some provinces.</p>

Case Study: The Scottish Futures Trust

Scotland has a population of approximately 5.5 million. While larger than South Australia the success of the SFT in developing a Scotland's infrastructure provides a relevant back-drop to what could be achieved in South Australia.

Some of the successes of the SFT include:

- Development and promotion of a bespoke procurement model for Scotland's PPP projects. The Not for Profit Distributing Organisation (NPDO) model is similar to normal PPPs but limits private profits and recycles 'super-profits' into projects. This model has reached financial close on a number of projects
- The SFT was the first region in the UK to develop Tax Incremental Financing legislation; a program of projects and the structures which is being used to deliver a number of projects - the legislation is passed and the first projects are in progress.

The SFT is staffed by a senior team of professionals with significant private and public sector experience in the delivery of infrastructure projects. The Chief Executive, Barry White, was previously the CEO of BAM, a major PPP investor and contractor, other senior members of the team have previously held senior positions within legal and financial and commercial advisory organisations, as well as government. This means the organisation is well aligned to fostering a strong relationship between public and private sector.

The SFT has a team of around 35 people working to increase the efficiency and effectiveness of infrastructure investment in Scotland. They focus on a number of areas including extracting value from existing infrastructure; developing 'traditional' projects and working to enable investment in new sectors – in particular renewable energy.

Two examples which demonstrate the diversity of the work undertaken by the SFT are:

- It is reviewing the effectiveness of the country's existing PPP projects to determine whether it can extract value from them through, for example, simplifying contract management and reducing the performance requirements where they are over specified – the aim here is to save money
- It developed and is now overseeing the TIF program. This involves it working with council's to develop new TIF projects, and review the merit of TIF investment – the aim here is to provide better cities and grow the economy through making sound investment decisions.

The state aim of the Scottish Futures Trust (SFT) as stated in SFT's 2010-2011 Business Plan is to improve the efficiency and effectiveness of infrastructure investment in Scotland by working collaboratively with public bodies and industry, leading to better value for money and ultimately public services.

6.1.4 *Effective delivery organisations can provide significant benefit*

Based upon the above review we believe that a local infrastructure delivery organisation should be established to provide a focused, whole of government approach to the delivery of the State's infrastructure program. We recognise that these functions may already exist within government, but our observation is that these lack coordination and integration in the way envisaged under Infrastructure NSW or within the Scottish Futures Trust.

We recognise that the State's population size and infrastructure program may not warrant an organisation on the scale of INSW or The Scottish Futures Trust and that the State has recently scaled back the Partnerships SA unit with Treasury. However, a new organisation, Infrastructure South Australia, could be established with a much broader role than oversight of PPP projects and may justify investment; this role would encompass all infrastructure, regardless of the delivery model. The Scottish Futures Trust cites the following:

'SFT is committed to saving taxpayers' money and works with the public sector to deliver the best possible value where money is being spent on bricks and mortar. SFT currently leads or supports a portfolio of projects to the value of £9bn and last year it delivered £129m in savings and benefits, which represents a 16% increase on the £111m savings it made during 2009-2010²¹.'

The benefits of such an organisation could include:

²¹ [http://www.eastthorncourier.com/news/haddington/articles/2012/05/03/428298-hardup-nhs-committed-to-new-community-hospital/-/](http://www.eastthorncourier.com/news/haddington/articles/2012/05/03/428298-hardup-nhs-committed-to-new-community-hospital/)

- Developing SA as a destination for investment
- Improving the credibility of SA as an infrastructure partner for the private sector
- Increasing public sector capability and capacity to extract value for existing, current and future projects
- Increase capacity to drive the national debate and ensure SA's seat at the table
- Accelerate investment by coordinating activities within government
- Achieve a coordinated approach to planning and delivering infrastructure investment to support the 30 Year Plan for Greater Adelaide

We recommend that the South Australian government seeks to investigate the feasibility of establishing a multidisciplinary infrastructure policy, coordination, and delivery organisation - along similar lines to the SFT and INSW.

6.2 Coordinated infrastructure Planning / Coordination with Funding

The infrastructure industry continually bemoans the lack of maintenance of a projects pipe-line. The development and maintenance of a projects pipe-line would have a number of benefits; including creating certainty for construction companies and investors; allowing them to gear up around infrastructure projects.

During the early 2000's companies in the UK were able to restructure themselves to align for PPP projects based on the strong pipe-line of projects at that time. Significant government capital was allocated to the PPP program and governments were supported in the delivery of their infrastructure programs. This certainty allowed companies such as Jarvis and Amey to restructure themselves as 'whole-of-life' service providers, well attuned to the industry. Similarly in Australia Theiss has developed services capability and Leighton is expanding into this area.

South Australia's competitive position might be improved through the development of a certain project pipe-line of projects well supported by the State and Federal government. Some of the models considered in this paper are capable of providing new funding to create the investment needed in the State's infrastructure and would enable the development of a stronger project pipe-line. The benefits of the development of a pipe-line could:

- Encourage greater investment in the State
- Reduce costs through the benefits of competition

In the absence of no new funding, the development of a committed pipe-line will be harder to achieve; although developing Infrastructure SA (if implemented) would provide more focus around strategic planning and would be expected to foster additional certainty by prioritising projects and supporting their passage through to delivery.

We also note that there were concerns in the construction market that the number of large projects in the next few years in central Adelaide would present issues. For example, NRAH, SAHMRI, Adelaide Oval, Riverbank Precinct etc. all taking place on similar time-lines could present issues such as city centre congestion as well as having resourcing (and hence costs) implications. A managed pipe-line could help ensure these issues are considered strategically, as opposed to resolving them on a project by project basis.

6.3 Developing a Simplified PPP Model to allow Infrastructure Consolidation

A key issue with PPP and complex procurement models is the cost of implementing them. Tender costs are high and where private finance is involved finance is expensive. There is a large fixed cost involved in delivery of complex procurement.

Infrastructure Australia is currently undertaking work to develop processes which might improve some of the well known features of projects (PPPs, Design & Construction contracts and Alliances) which lead to high tendering costs.

A number of States are considering the feasibility of a simplified PPP model. The intent is that the relative simplicity of some procurement; say primary schools and social housing; do not warrant a full PPP approach and are often of insufficient size to carry high levels of bid costs. The 'PPP Lite' model would simplify the PPP process and PPP contracts; such as the performance requirements; to make them easier to tender for. This is expected to create a process with lower tender costs. The intention would also be for the model to be replicable across a number of projects to enable efficiency (no reinventing the wheel from project to project).

South Australia could develop a similar approach for its social housing and schools programs. Project's with a cumulative size of \$50-\$100m could be grouped and delivered as a consolidated package. This would then be able to attract private finance. In the absence of this packaging the individual projects would not benefit from the procurement innovation, discipline and private finance, that a PPP approach would deliver.

We note that this would not improve the State's net debt position as the assets would remain on the State's balance sheet. Although, to the extent that public housing generates third party revenue, there may be an opportunity to achieve an off balance sheet treatment.

The extent to which this model can deliver value may be compromised by current market conditions in the debt and equity markets, but is with merit with regards to providing more private sector discipline into infrastructure project delivery.

7 Accounting and credit rating considerations

7.1 Introduction

7.1.1 Overview

The Federal Government's clear objective is to return to budget surplus in the next few years. The current credit report for the Commonwealth of Australia by S&P estimates a deficit of 4.4% of GDP in 2011 and a forecast of 2.5% of GDP in 2012. The outlook estimated by S&P states a return to surplus by the year 2014.

The position of the State government has previously been to maintain its AAA credit rating, although this is no longer a stated objective.

Funding infrastructure through PPPs is well established in Australia and traditional funding models, such as availability and volume-based projects, are understood by credit rating agencies. Traditional PPPs have been popularly characterised as government shifting all the project risk and the entire funding burden to the private sector; examples cited include toll roads, which have recently resulted in financial failures and an evaporation of investor appetite.

This study has identified the diversity for potential alternative approaches to government participation in both the funding and the financing of infrastructure. The new approaches are characterised with government stepping up to be a true partner of the private sector and to satisfy a range of competing objectives and must be assessed from both an accounting and risk perspective to understand ramifications for balance sheets and credit ratings.

7.1.2 Credit ratings perspective

A key objective for Government is to fund public infrastructure while maintaining its desired credit rating. In order to achieve this, Government must find alternative funding models that can leverage private investment while minimising budget impacts and maximising value for money and proceeds to the state. The challenge is that these objectives often compete.

Alternative models will likely share risk at particular stages of a project whether it is finance risk, construction risk or demand risk, depending on the project in hand. Accounting for these projects will consider changes in the commercial arrangements in place and the transfer of risk over the course of the project (for example, if the State were to originally bear a risk which fell away after a period of time, such as following traffic ramp up for a toll road).

Credit rating agencies will also make their assessment of a project based on the commercial nature of the arrangement and the level of risk transfer. However, in some cases, their assessment of who bears the financial risk may not necessarily coincide with the accounting treatment. Off-balance sheet accounting may be of little consequence to rating agencies if they assess the risks of the project haven't been adequately presented.

Rating agencies routinely look beyond the balance sheet to evaluate whether obligations and commitments disclosed in the notes to the financial statements would restrict government's capacity to incur additional debt. In some circumstances, they will evaluate the likelihood of a claim on government finances, such as a bail out, even where there is no legal obligation for government to do so. It is not a question of on or off-balance sheet but rather who bears the risks of the project. Areas where rating agencies may routinely make adjustments in relation to infrastructure projects or asset sales include operating lease arrangements, availability payments, sale and leasebacks and guarantee arrangements.

From this perspective the balance sheet treatment of certain assets is of less importance than the commercial impact of the particular project and which party bears the risks and rewards of asset investment. While this means the potential for innovative balance sheet structuring may be limited (it hasn't completely diminished), these alternative structures may provide solutions which mitigate adverse credit ratings.

Case Study

Where government makes a subordinated loan investment in a project, for example, a Ports project which, perhaps due to excessive risk around revenue security, could not attract full private sector financing. Government, in this instance, could protect senior debt through a subordinated loan. This loan, assuming it is debt financed by government, would appear as a loan on the State's balance sheet; however, the State's investment would also be stated as a financial asset; this would mitigate the impact of the project on net debt.

7.2 Financial reporting concepts for infrastructure projects

This section will consider the common funding structures currently in place and key concepts that have a significant impact on the accounting outcome and credit rating assessment for Government infrastructure projects. The credit rating assessment is aimed at trying to reflect the cash flow obligations of the Government and uses the accounting treatment as a basis for performing the quantitative assessment.

There is a focus on getting more consistency in public sector financial reporting. Public sector accounting has a direct impact on critical areas for Government, such as managing the State credit rating, communicating to stakeholders on value for money and achievement of outcomes, and most importantly optimising the delivery of funding to maximise the impact of public infrastructure projects.

There are four broad concepts that provide context to the financial reporting implications of commercial funding structures used to deliver public infrastructure. These include:

- **On/off balance sheet:** A balance sheet shows the economic resources that an entity controls or owns in order to produce value (assets) and obligations of the entity based on past events (liabilities). The accounting principle is based on economic substance over form, so assets and liabilities recorded on the balance sheet represent the value of economic benefits flowing to and from the entity. For assets to be considered off balance sheet the arrangement must in substance result in the risks and benefits of the project flowing to another party.

For the public sector, the balance sheet presents the economic benefits derived by the public that the entity controls. In order for infrastructure to reside off balance sheet the public sector entity is not able to control the benefit to the public.

- **Credit rating:** An evaluation of an entity's ability to repay debts which acts as an indicator for investors. Credit ratings exhibit the trade-off of risk and reward, whereby higher credit ratings are an indication of lower risk to investors. From the perspective of debt issuers such as a Government, a strong credit rating means the ability to raise capital at a lower cost and ultimately provide greater services to the public. The ability to repay future financial obligations is a key consideration of current credit rating.

Standard & Poor's bases credit ratings on qualitative and quantitative analysis of a range of financial, economic, fiscal stability and institutional factors. These factors are analysed within a framework that establishes a quantifiable metric set specifically for each State and monitored by the rating agency over the forward estimates using the current and forecast accounting results.

- **Net debt:** A financial metric that compares specific liabilities to specific assets which is included in the determination of the State credit rating. Net debt is one of the key quantitative components of the credit rating assessment however only Non-Financial Public Sector (NFPS) entities are included in this calculation.
- **Disclosures:** Supplementary discussion and presentation of items with potential effects to the entity within the financial statements relating to specific projects. This supplementary information is considered by users of the financial statements in viewing the overall financial position of an entity and as such, commitments for future expenditure may be included in users evaluating the credit rating of the entity.

This section will consider how differing funding structures impact the above financial reporting concepts. A key factor in managing these impacts is to adopt the funding structures that minimise both the risk and amounts of future cash outflows from the State.

7.3 Funding structures

In the public sector there is a lack of definitive guidance on how the Government should account for structures that are used to fund infrastructure projects. As funding structures have evolved there has been diversity on accounting practice based on the different commercial arrangements and the different interpretations adopted by each State Government. The accounting principles of traditional funding structures are broadly well understood by all involved, including credit rating agencies. Common models used by Government's are outlined below and consider the accounting and credit rating impacts of these models.

7.3.1 Ratings agency considerations

Rating agencies make adjustments to publically reported information in order to maintain consistency in their quantitative analysis, in part, as a result of differences in accounting treatment of infrastructure project obligations by Governments and the existence of different risk-sharing mechanisms. Though debts associated with infrastructure projects to date are unlikely to be significant enough to affect government credit ratings due to their size in relation to the total Government debt, increasing frequency and magnitude of projects are likely to increase their relative significance going forward.

Government credit ratings are based on an assessment of both qualitative (policy and political) and quantitative (economic and financial) factors to determine fiscal sustainability.

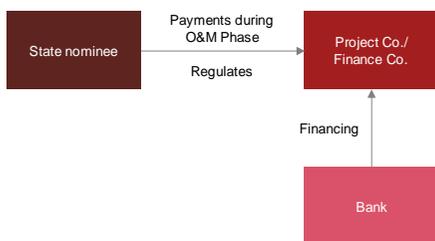
The key criteria identified that can be directly impacted by infrastructure projects are:

1)	System support and predictability	In relation to transparency and accountability and the extent which national accounting rules conform to international best practices.
2)	Financial flexibility	The ability to adjust revenues or expenditures in the face of external shocks to maintain financial performance Key ratio: Peer comparison of capital expenditure as a percentage of total expenditures.
3)	Liquidity and debt management	Levels of cash and readily marketable securities, committed bank lines, access to capital markets and projected cash inflows and outflows during the year, including their seasonality and elasticity to economic performance Key Ratio: Free cash flow and liquid assets as a percentage of debt service.
4)	Debt burden	Considers the debt related cash outflows and debt on the balance sheet including current and forecast levels for the coming two to three years to determine the government's ability to maintain debt obligations. Key Ratio: Net Direct debt as a percentage of operating revenues.
5)	Off balance sheet liabilities	The size and quality of contingent liabilities can have a material impact on the creditworthiness of a government. A public sector payment stream (availability payment) is likely to be added to Debt Burden where risk transfer is minimal. Toll arrangements are unlikely to be added to Debt Burden but are considered as contingencies due to potential political, economic or stated guarantees to support private partner performance.

The above criteria do not present a comprehensive list of all of the elements considered by a credit rating agency as the focus for this report is on the impact caused by infrastructure projects. These criteria have been considered in the following review of the financial impacts of a sample of infrastructure models currently used.

7.3.2 Availability model

Overview of model	Financial impacts				
<p>State-Nominee engages a Project Co. to design-build the asset and then operate-maintain the asset for a period of 30 years. The asset reverts to the State-Nominee at the end of the project term. Construction risk is transferred to the Project Co.</p> <p>In exchange, the Project Co. will receive payments from the State-Nominee based on the terms of the Project Deed on a periodic basis from the time the asset is made available and continuing during the maintain/operate phase.</p> <p>A portion of the payments are in consideration of Project Co's recovery of capital investment and recovery of operating expenses.</p>	<p>The arrangement is accounted for as a lease as the State has a commitment to pay a fixed amount over the term of the concession; accordingly the arrangement is recognised on-balance sheet by the State. The portion of payments relating to the design and build phase of the infrastructure asset is accounted for as an on balance sheet leased asset (with the State as the lessee), with a corresponding lease liability for the obligation to make future payments. This on-balance sheet impact occurs once the asset is fully constructed and ready for use; however there are disclosure requirements of the lease commitment from the date the agreement was entered into.</p>				
	Phase	Income statement	Balance sheet	Net debt	Disclosure
	Design/ build	No revenues or expenses incurred during Design/Build phase.	No impact on the basis that construction risk has been transferred to the Project Co. Leased asset and lease obligation only recognised at construction completion.	No impact on the basis that construction risk has been transferred to the Project Co.	Lease commitments and significant terms of the arrangement that can affect the nature, timing and certainty of cash flows.
	Operate/ maintain	Increase in operating expense due to depreciation of the leased asset, interest expense on the lease and operating costs paid to Project Co to operate and maintain the asset.	Asset recorded in full once construction is completed of equal value to related obligation. Depreciation of asset over its useful life and reduction in lease obligation over project term.	Increase in Net Debt The financial obligation to compensate the Project Co. represents additional net debt.	Continuing disclosure of lease commitments.



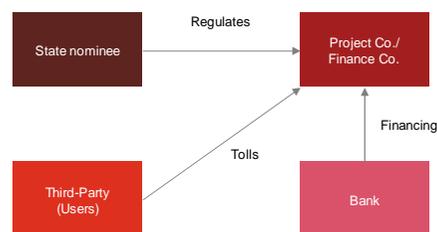
Credit rating impacts

An availability structure typically has the impact of increasing net debt at the point the asset and liability is recognised on the State's balance sheet. Although, there are availability models in place which may not give rise to an effect on the credit rating. For example if availability funding structures can demonstrate additional cash flows will be generated to service the debt, the credit rating agencies may make adjustments that exclude these liabilities from their net debt calculation and therefore the project can become neutral for the credit rating. An example of this would be the Melbourne Desalination Plant, where the additional payments are passed on to the end user through increases in the regulated water price.

7.3.3 User pay model

Overview of model	Financial impacts
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A State-Nominee enters into an agreement with a Project Company to design and construct the asset and then operate and maintain the asset for a specified term. The asset reverts to the State-Nominee at the end of the project term. In exchange, the Project Company is entitled to collect a toll or payment directly from users of the assets in accordance with the terms of the Project Deed. The Project Company does not own the asset at any time. The State-Nominee makes no payments during the design/build or operate/maintain phases.



The accounting treatment of the user pay model varies by State. The Victorian Government does not recognise an asset and liability as the construction and maintenance of the asset is funded by the users. At the point when the asset transfers to the Victorian Government an asset will be recognised. An example of this would be EastLink in Victoria. The New South Wales Government recognises the toll road on its balance sheet under an “emerging asset” approach, whereby the value of the asset is recognised progressively over the life of the concession term, up to the residual value of the asset at the end of the concession term.

Disclosures of the infrastructure project would be included in the financial statements under both accounting treatments outlined above.

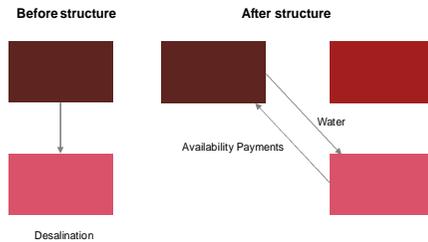
Phase	Income statement	Balance sheet	Net debt	Disclosure
Design/ build	No revenues or expenses incurred during Design/Build phase.	No impact on the basis that construction risk has been transferred to the Project Co.	No impact as there are no cash outflows committed.	Disclosure of significant terms of the arrangement including financial or service guarantees.
Operate/ maintain	No revenues or expenses incurred during Operate/Maintain phase.	No impact as there are no direct cash inflows or outflows projected during the Operate/Maintain phase, except for the emerging asset approach. For the emerging asset the asset is recognised progressively on the balance sheet.	No increase in net debt.	Continuing disclosure of lease commitments.

Credit rating impacts

The user pay model was traditionally popular from a State’s perspective given there are no implications for net debt as the State has no cash outflow commitments. The model has become less attractive as private investors find it increasingly difficult to fund the entire project with all the demand risk.

7.3.4 Disposal of asset through long term lease in order to achieve ‘off balance sheet’

Overview of model	Financial impacts				
<p>An attractive option for the State to consider is the “sale” of existing infrastructure assets to a private sector buyer which can then free up funds for investment in other projects. The accounting treatment and credit rating outcome for these transactions will depend on how much of an obligation is retained by the State to support the operations of the asset or whether any commitment exists for the asset to return to State at the end of the term.</p> <p>A recent example of this has been the proposed sale of the Sydney Desalination Plant by Sydney Water. The State is looking to lease the land and sell ownership of the Plant to a third party for the remaining life of the Plant. However in order to maximise the ‘sale’ proceeds, the State has underwritten the water demand risk of the desalination plant by making an ‘availability’ payment to the owner of the Plant which effectively will give a guaranteed fixed return to the Plant owner irrespective of the amount of water produced as long as it is operational.</p>	Phase	Income statement	Balance sheet	Net debt	Disclosure
	Operate/maintain	Expense is recognised as cash outflow for availability payment occurs. No increase in revenue as a result of this structure, Desalination Plant was already factored into water pricing.	No liability for availability payments are recognised on the balance sheet. Cash from the sale of the Desalination Plant to the Private Consortium is used to retire debt.	Decrease in net debt. Availability payments are not recognised on balance sheet. Cash inflows from the sale of the Desalination Plant are used to retire debt.	Disclosure of ongoing commitments.



Credit rating impacts

Despite no recognition of the liability on the balance sheet, the credit rating agencies will still consider the underlying risks of the model and may then risk adjust any factors not identified in the balance sheet. In the case of the Sydney Desalination Plant, as the State remains obligated to make payments to the owner of the asset over the term of the arrangement the credit rating agencies have publicly stated that they will manually adjust the calculation of net debt. If a credit rating agency can identify that the risks of a project is retained by the State then the net debt calculation will be adjusted to reflect these obligations and therefore continue to impact on the credit rating assessment even if accounting 'off-balance sheet' treatment can be achieved.

Genuine asset sales can result in increased leverage

Recent government divestments, such as the sale of port, rail network and haulage infrastructure assets in Queensland, have been structured as 99 year lease arrangements. These transactions transferred control and operating risk to the private sector with no recourse to the State. This has enabled the State to invest in vital infrastructure such as schools and hospitals and reduce the state's budget deficit. For accounting and credit rating purposes, these transactions ticked the relevant boxes to qualify as an outright sale.

As off-balance sheet treatment requires a genuine surrender of control by the state, an outright sale is often not feasible for public service infrastructure. Divestment in this manner is usually better suited to commercial assets that aren't politically sensitive and can often be more effectively run by the private sector.

7.3.5 The impact of the State accessing external revenue streams

States may choose to fund projects directly and then be entitled to the external revenue streams, for example, a car park that is funded by the State in return for the rights to the car park fees. In this funding structure, the liability for the amount funded would increase the net debt, and the investment into the asset does not impact the net debt calculation. The future income streams from the project do not get recognised on balance sheet, although the revenue stream will impact the credit rating. Credit rating agencies use a ratio of Net Debt/Revenue, therefore any accretive revenue streams will mitigate the full impact of the liability. A number of factors should be considered when assessing the State's credit rating impact of these projects including, the overall State's credit rating position and the profile of revenue over the life of the asset.

7.4 Future funding structures

The traditional funding structures, outlined above, have been popularly characterised as Government shifting all the project risk and the entire funding burden to the private sector. Change appears on the horizon for funding structures. In recent years, there has been resistance to continuing with the traditional user pay approach due to high profile failures of many toll road projects. The outcome of these user pay approaches has resulted in less willingness by the private sector to take on the full operational risk. Added to this is the fact that State Government's are sensitive to the management of their credit rating and their ability to create headroom to optimise the number of infrastructure projects funded. Accordingly, the State Government are currently seeking alternative approaches which reflect how to best balance the various risks

With State Government's desire to seek alternative structures there has been a focus on getting assets and associated debt "off balance sheet" as there is a perception that this would reduce leverage and free up debt capacity. Structuring arrangements to get this accounting outcome may not always lead to a reduction of leverage and have the outcome of freeing up debt capacity. The importance of structuring requires the right balance between commercial options, delivering deal value and ensuring the focus on accounting treatment is for the right reasons.

Whilst a level of structuring may prove useful in managing the impact on credit ratings, agencies look at all the relevant facts and circumstances in order to make quantitative or qualitative adjustments to their assessment. Rating agencies will take a similar approach in their assessment of any new funding models proposed by State Governments and other deleveraging opportunities such as asset sales, long term lease arrangements or the monetisation of real estate. Credit rating agencies will assess who holds the financial risk and will look through attempts to manipulate balance sheet presentation to mask leverage.

The funding models that will be developed to address the shift in risk allocation will not naturally fit into the accounting frameworks that are currently used. Given the way rating agencies assess funding models, these new alternatives are currently untested, and are most likely complex, and therefore require careful interpretation. Critical to assessing the optimal accounting outcome and understanding of the credit rating impact is to understand relevant commercial factors, including:

- allocation of construction and demand risk
- the level of operational control and operating risk
- the length of a contract or lease term
- the amount of competition/other customers
- guarantee arrangements
- regulated pricing and payment mechanisms
- control of residual interest
- put and call arrangements
- financial recourse to Government.

For example, an alternative model that may be appealing for future projects is a hybrid funding model that reflects commercial characteristics evident in availability models and user pay models. A key element to the hybrid model would be to balance the operating risk more evenly between the Government and private sector. The operating risk shared between the two parties will be one of the key commercial factors considered by credit rating agencies when undertaking their qualitative assessment.

Providing further complexity to this assessment is that global accounting is heading away from off balance sheet treatment for these structures, and new accounting guidance may bring more assets and liabilities onto the State's balance sheet. The changes may affect both existing and new funding models.

In the current economic environment, understanding the accounting implications of major projects and transactions is crucial to managing balance sheet metrics and credit ratings to ensure no unwelcome surprises. Ideally, the optimal accounting treatment will successfully mitigate, rather than mask, any credit rating impact. Ultimately, an early focus on how the commercial and accounting implication of infrastructure projects affects the credit rating analysis will assist State Government's in managing its capacity to maximise project deal flow.

8 Case studies

Case study 1 – Adelaide Riverbank Redevelopment

Project Overview

The South Australian State Government's Riverbank vision is to revitalise the precinct through a \$394 million funding program. This will see the expansion of the Convention Centre, improved pedestrian accessibility and a new pedestrian bridge to link the redeveloped Adelaide Oval with the southern side of the Riverbank Precinct.

The redevelopment of the Riverbank Precinct is one of the city's largest and most significant urban renewal initiatives and presents an opportunity to realise the potential of the significant government investment in areas such as the Adelaide Oval and Convention Centre.

The broad aim of the Riverbank Precinct master plan is to prepare a coherent design vision and intelligent planning framework for the Riverbank Precinct, which also recognises key interfaces and linkages with the city. It will deliver a preferred option that achieves the precinct's potential as a vibrant destination of international significance.

A new visionary Riverbank Precinct will provide new opportunities for economic development, tourism and employment, aligning with key elements in South Australia's Strategic Plan, and helping to achieve a number of targets. This includes contributing towards increasing visitor expenditure in South Australia's tourism industry from \$3.7 billion in 2002 to \$6.3 billion by 2014.

Infrastructure Requirements

Stage 1: Torrens Pedestrian Bridge & Related Infrastructure Public Components

- Pedestrian Bridge
- War Memorial Drive northern bridge landing
- Festival Drive southern bridge landing, stair connection and link to Adelaide railway station northern platform entry
- New stairs from Festival Drive level to Dunstan playhouse plaza level
- New escalators from Adelaide railway station northern forecourt (Festival Drive level) to Riverbank Gateway (Station Road) (Casino level).

Related / Private Other Components:

- Redevelopment of the Adelaide Oval precinct
- Redevelopment of the Adelaide Convention Centre

Stage 2: Festival Square / Car Park & Riverbank Gateway (Station Road) Redevelopment

Public Components:

- Establish continuous ground plane linking the Adelaide Festival Centre, Dunstan Playhouse and the Adelaide Casino
- New underground Festival Centre car park (up to 200 cars)

- Establish a commercial / retail development site fronting Riverbank Gateway (Station Road) and Festival Square
- Redevelop Riverbank Gateway (Station Road) as a pedestrian dominant access and drop-off street and with direct access to the Festival Centre car park
- Related private / other components
- Redevelopment of Festival Square entry foyers for Festival Centre
- New retail commercial development on Riverbank Gateway (Station Road) with active ground floor retail.

Stage 3: Intercontinental & Casino Redevelopment

- Dunstan Playhouse surrounds, Riverfront “Steps”, Retail / Café Precinct East & Casino / Intercontinental Northern Redevelopment

Public Components:

- New integrating ground plane around the Dunstan Playhouse to link with the new Festival Square to the east and to the existing concourse to the west. New stairs linking to the Riverfront related café precinct
- North-south pedestrian linkages between Intercontinental Hotel and Adelaide Convention Centre from North Terrace to east-west promenade.

Stage 4: Elder Park & AFC Frontage

Elder Park Redevelopment & Festival Centre Northern Frontage Public Components:

- Redevelopment of Elder Park and southern edge of the Torrens Lake to create a contemporary public park and event space
- Redevelopment of the Torrens southern lake front from the Dunstan Playhouse to the Morphett Street bridge including linking in with café precinct east

Related private / other components:

- New retail and entertainment development to northern frontage of the Adelaide Festival Centre.

Stage 5: Riverbank Retail & Natural Riverbank

Riverfront promenade retail / café precinct west, Western Footbridge & Adelaide Convention Centre Interface Public Components:

- Riverfront promenade, terraced parklands and upgrade southern edge to lake Torrens
- East-west promenade extension and linkage with upgraded Adelaide Convention Centre through to Morphett Street bridge
- Formation of retail / café precinct east site
- Development of a Natural Riverbank at Pinky Flat including wetlands and interpretive walk
- Development of western pedestrian crossing of Torrens (linked to existing Morphett Street bridge).

Related Private / Other Components:

- Commercial development of retail / café precinct east site between east-west promenade and Riverfront promenade
- Possible upgrading and integration of existing boatsheds.

Funding and Financing Options

The development of the Riverbank is likely to be suitable for a range of procurement, funding and financing

models:

Joint Development Company (JDC): The State could enter into a joint development agreement with a private sector developer for the development of the project or parts thereof. The State's ownership interest in land could represent part of the State's investment in the project (additional capital investment may be required) alongside which a developer would contribute capital.

The JDC could develop enabling infrastructure and package development parcels for private development (such as the commercial retail). The JDC would have the benefit of:

- Bringing in private sector expertise early in the process
- Exerting commercial discipline on the development
- Sharing risk in relation to infrastructure costs

The extent to which the enabling and non-commercial infrastructure could be funded from commercial development would need to be considered.

To the extent that there is 'social' or non-financial value in streetscape infrastructure the JDC may require other forms of State funding or support – or those non-financial aspects could be excluded from the JDC's remit.

The commercial developments could be funded out of debt. A developer may be able to secure pre-commitments from prospective tenants to raise finance for the infrastructure and commercial facilities.

Private Car Park Development: The Stage 2 car park has the potential to be funded through private sector investment. This would involve a car park developer financing the project and funding it from car parking charges. Similar projects have recently been financed on this basis, including QE II car park in WA. The festival centre traffic and increased activity on the site may make this element of the development attractive to private car park developers.

The car park could be structured in a number of ways. The QE II car park included a license fee payable to the State. If this was achievable in this instance the State could utilise the revenue to fund other site infrastructure.

Tax Incremental Financing: The urban infrastructure, and streetscape could be funded (or part thereof) through a tax incremental financing scheme.

The area surrounding the precinct could be defined as an activity zone. Businesses that would benefit from the revitalisation of the area could include the Intercontinental Hotel and other local businesses benefitting from additional activity would be expected to see rateable values of their properties increase. A TIF scheme would dedicate the expected increase in rates to the funding of the project.

The future additional rates revenue could be used to secure current funding in a manner that is ratings neutral. This finance would be used to invest in the enabling and streetscape infrastructure.

Private Convention Centre / Festival Centre: The convention and festival centre are State assets which generate 3rd party revenue. These assets may be capable of privatisation which would remove some or all of the financing requirement and funding risk to the private sector. Where the project is not fully viable based solely on 3rd party revenue government support may be required. However, private operators may be willing to finance a proportion of the project.

Case study 2– Mynopie Point Port Development

Project Overview

Mynopie Port Development is a new deep water port on the eastern side of Spencer Gulf. It is earmarked to be developed for the export of magnetite iron ore out of the Braemar Iron Province.

Myponie Point is about 20kms north of Wallaroo in South Australia and it is proposed that it will export iron ore from the Braemar Iron Formation, which stretches for approximately 250km from Peterborough in SA to Broken Hill in NSW, will be transported through the port.

It is noted that other locations, for example Port Pirie, might also serve as a port for the export of iron ore from Braemar. Infrastructure funding alternatives would need to be considered with respect to a location such as Port Pirie, which has existing road and rail connections, water, electricity and an available workforce.

The proponents (through membership of the Braemar Iron Alliance) have approached government (Ministers and key government agencies) on the basis of making the proposal (that a new deep water export port will be required within 5-7 years to ship iron ore from the Braemar Iron Province) known to government.

Infrastructure Requirements

The wider port development would house infrastructure associated with bulk commodity exports such as port terminals, storage facilities, mineral processing facilities and associated infrastructure, wharf infrastructure and ship loading systems.

It might also include desalination facilities for slurry pipelines and ore processing facilities.

Funding and Financing Options

A number of options for the development of the Port and associated transport facilities have been considered:

State Support for the Project

A number of mechanisms of State support could be provided:

- **Government Land:** To reduce the overall size of the project and increase the economic viability of the project, government could acquire and contribute land for the site into the Project.
- **Royalties Abatement:** For a pre-defined period of time reduce the level of royalties for mining developments accessing the port; for example 5 years of abatement. Such a mechanism would assist in supporting the financial viability of the Project.
- **Planning and Policy Intervention:** The State could support the economic viability of the investment through the planning system. In particular to increase the certainty for infrastructure investors by reducing exposure to competition. As a quid pro quo the State would negotiate for the Ports to be operated on a non-exclusive basis (open access) – providing higher future mining royalties.

The basis of government's investment would be to release infrastructure bottlenecks and receive flow on benefits from investment in the State and receiving additional flows of mining royalties.

State Investment in the Project

The State could make additional investment in the Project. For example, the Port could be developed as a Public Private Partnership (PPP). Under this arrangement the State would lease land at the port to a private developer (PPP Co). The PPP Co would be responsible for designing, building, financing and operating the Port. The PPP Co would repay loans and provide a return to equity investors through levying port access fees; loading fees; tugging; and other portside activity.

The commercial viability of the port would be crucial, notably certainty in relation to future revenue and the timing with which new mining developments would provide sufficient activity to generate commercial revenue to cover the debt and equity investment.

Other critical infrastructure would play a role in the economic viability of the port; in particular supporting railway and road links and commitment to supporting infrastructure might be a pre-requisite to the ports development.

The PPP structure could be structured as a Build Own Operate Transfer (BOOT) arrangement or a Design Build Finance Maintain (DBFM) arrangement:

- Under a BOOT the private sector would bear revenue risks
- Under a DBFM contract the State would bear the revenue risks. The State would use these revenues to make 'availability' charges to the PPP Co.

A BOOT scheme may not have an impact on the State's balance sheet and credit rating (unless the State provided guarantees or other forms of support); whereas a DBFM is likely to be 'on balance sheet'. The impact on ratings will be determined by the extent to which credit ratings agencies are prepared to off-set future revenue potential against current investment in infrastructure. On the other hand, the State would benefit from any unexpected revenue upside.

A BOOT scheme would allow the best balance sheet outcome for the State. However, uncertainty around demand might require government guarantees; which would be expected to be recorded on balance sheet. In the main report we identified the Darwin Marine Supply Base project as one in which the go to market process established that the appetite of the private sector to provide private finance on the basis of uncertain future revenue may not match the full funding requirement of the project and a "funding gap" can arise which government may choose to meet.

However, like the Darwin project, the State could structure any funding support to fall away once demand was proven or after a period of time. A key issue for infrastructure investors will be the timing of mining developments, volumes and related infrastructure (required to bring product to port). Government could underpin early year revenue risk through, for example, subordinated debt investment in the project or providing guarantees in relation to the availability of supporting infrastructure.

A further alternative would be for the State to take a stake in the Project. Examples of investment include:

- Joint Venture: Where government and a port developer jointly share costs and risks related to the development of the port.
- State Development Company: Where the State is responsible for the development of the Port. Ultimately the State could dispose of its interest and recycle capital.

The State Development Company could enter into an availability based PPP for the development of the port itself in which ports infrastructure is designed, built financed and maintained by a private operator and the State Development Company makes availability payments to the infrastructure developer. It is likely that this entity, and its obligations to make availability payments, would be consolidated onto the State's balance sheet.

The Development Company could also progress the project to a certain point and de-risk it at which point it could then sell the development to private investors. This approach was used for the WICET development. This could allow the project to commence early (without delay).

If the Development Company was itself structured as a joint venture, or even with a State minority interest, it may be possible to avoid consolidating the availability payment obligations onto the State's balance sheet. However, the impact of this structural adjustment, while resulting in lower government commitments (and balance sheet utilisation) could undermine the ability of the infrastructure PPP to raise its own debt (without the State as the counterparty to the availability payments).

Securitising Future Royalties for Investment

Future mining royalties related to the port development could be used to fund the investment. Recognising that any increase in royalty could trigger the Commonwealth government to make adjustments to State funding through horizontal fiscal equalisation, the proposal is to use the existing royalty's formula. To fund the ports development the State could:

- Allocate a proportion of future royalties revenue arising because of the ports development to the project, i.e., hypothecate royalties income.
- Raise capital against that income. The State could issue revenue bonds which would be repayable from the

royalties accruing from the development.

Under this structure the State may be able to keep revenue bonds off balance sheet, because the obligation to pay is only from future income.

To the extent that there is uncertainty in relation to the level of future royalties' income, the State may be able to provide some form of guarantee for the bonds. While the guarantee may reduce the extent to which the new debt is off balance sheet, the full value of the debt may not need to be guaranteed. This type of structure is discussed in the Report as Royalties Leveraged Funding.

As the intent would only be for the State government to facilitate development – ultimately this should be paid for by the private sector – the State could 'invest' in the project through a mechanism which generates a return. Examples of the State's interest in the Port development could include:

- Loans: Whereas revenue risk from the project might prohibit a bank from investing in the project – the State could use the funds raised through the securitisation to invest in the project as a lender. This could include, perhaps to most effect, in providing subordinated debt

The State's investment could be refinanced at a defined point and the State's capital could be recycled into new projects.

This type of investment is likely to be balance sheet neutral

- Equity: The State could make equity investment in the Project (alongside the loans described, above). This would provide the State with additional control over the development of the project (but may create conflicts of interest).
- Grants: The State could contribute capital with no expectation of a return. This would not lead to recycling of State capital.

A loan may be preferable in terms of:

- The State's taking some 'top-slice' risk would be beneficial in attracting other investors – senior debt and equity.
- It allows the State to recycle capital at a future point (on the premise the development is successful) to fund other projects.

The investment contemplated, above, is into a Special Purpose Vehicle through which private developers are developing the project.

We note that projects such as WICET and NCIG have delivered a fully financed solution with limited or no government funding support.

Our comments in this section are based on the premise that this project requires some form of State support to proceed.