SECURING INVESTMENT
IN AUSTRALIA'S FUTURE

Infrastructure Funding and Financing

Business Council of Australia

About this publication

The Business Council of Australia (BCA) brings together the chief executives of Australia's largest companies to promote economic growth for the benefit of the nation.

This publication, *Securing Investment in Australia's Future: Infrastructure Funding and Financing*, incorporates a report prepared for the BCA by PwC that contains an analysis and recommendations on how to fund and finance infrastructure projects in Australia.

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Key points

- Australia has a significant challenge ahead to ensure infrastructure provision in the transport, energy, water and communications sectors, and social infrastructure, keeps pace with growth and helps to lift productivity.
- We will also face potential negative impacts on employment and growth over the next few years from falling resources investment that could be partially offset by new infrastructure investment.
- A number of recent reports have highlighted the declining capacity of government budgets and balance sheets to fund new infrastructure, and the importance of attracting more private capital into infrastructure provision.
- There is no shortage of private capital to achieve this; the challenge is to create an environment for private investment in infrastructure, including designing every public infrastructure project for private investment either upfront or over time.
- Dealing with these infrastructure funding and financing challenges requires a position on how to:
  - maximise proceeds from the privatisation of assets and then recycle these to fund new infrastructure projects
  - grow funding capacity by wider adoption and acceptance of user-pays and value-capture models
  - increase the infrastructure funding role of the Commonwealth Government
  - improve coordination through a new Commonwealth–state funding agreement
  - improve innovation and risk-sharing models for greenfield infrastructure projects.
- Infrastructure ‘funding’ refers to the question of who pays the cost of its construction, maintenance and operation. The options are either the users, via charges, or governments, through spending from the budget (sourced from taxation, borrowing or recycled funds already invested in mature infrastructure assets). The main options for expanding funding capacity are through recycling funds and more user-pays.
- Infrastructure ‘financing’ refers to the capital invested in an infrastructure asset. This includes infrastructure ownership (equity), as well as lending that incurs an interest expense and needs to be repaid (debt). Investment has historically been by governments but private investment has become a fast-rising source of annual new investment. Further private investment, particularly by superannuation funds, will occur if opportunities become available.
- There are no quick fixes to improve infrastructure provision for the future. It will take hard work on a number of fronts to get the policy settings right. This report provides a broad suite of policy recommendations for the funding and financing of infrastructure to enable the provision of the infrastructure we will need.
- Infrastructure funding and financing policies must complement effective infrastructure planning, prioritisation, delivery, maintenance and operation by the public and private sectors to form an effective infrastructure system overall.

Introduction

Meeting our infrastructure challenge

Australia has a significant infrastructure challenge ahead.

Our population is expected to grow from 23 million to 38 million by 2050 and our cities are set to almost double in size. Our freight task will double by 2030. Productivity growth of at least 1.6 per cent a year will be needed to maintain solid growth in national income.

Infrastructure is needed to keep pace with these changes, and while private and public investment have risen to historically high levels of about 4 per cent of GDP in the past decade, just maintaining this spending rate for the next 10 years will cost at least $760 billion. We may need more.

It will also be important to ensure that any future investment is spent efficiently on infrastructure that is clearly linked to servicing the needs of its users or is demonstrated to be delivering broad economic and social benefits to the community.

How well our infrastructure systems meet the challenges of adequate and efficient infrastructure provision over the next decade will determine our quality of life for generations. It will make a significant contribution to lifting productivity.

An additional consideration is that investments made in the next few years can minimise the negative impacts on growth and employment of a decline in the investment phase of the resources boom.

With Prime Minister Abbott declaring he wants to be an infrastructure prime minister, and with government, business, unions and the community all agreed that better infrastructure is key to our future wellbeing, we must focus on the most efficient way to deliver the investment pipeline.

The BCA has commissioned PwC to prepare this report to put forward recommendations for infrastructure funding and financing policies. If adopted, the recommendations will help ensure the infrastructure investment pipeline we need in the next decade and beyond can be delivered. The BCA is making these recommendations for consideration in future budgets, by the federal government's Commission of Audit and by the Productivity Commission in its current inquiry into public infrastructure.

The BCA has previously also sought to bring attention to the challenges for funding and financing infrastructure in its *Action Plan for Enduring Prosperity* (2013) and *Pipeline or Pipe Dream* (2012) reports. The BCA's principles on infrastructure, ownership and pricing, published in the *Pipeline or Pipe Dream* report, shape the recommendations in this report and are outlined below.

Exhibit 1: BCA principles on infrastructure ownership, regulation and pricing

The following criteria should determine whether an asset is owned privately or by governments, and how that asset should be operated:

- Governments should sell infrastructure assets where the private sector already owns other like assets and provides other like services (this effectively demonstrates adequate policies are already in place to protect consumers).
- Private ownership should be preferred where appropriate arrangements can be established for the infrastructure service in any of these three ways:
  - There is a market price set by an effective and contestable market for the infrastructure service.
  - There is a regulated price that allows an adequate return on an efficient investment while also protecting the interests of consumers.
  - There is an implicit contract price that a government agrees with the owner of the infrastructure on behalf of public users (includes community service obligations).
- Government ownership should only be preferred where it can be demonstrated that it is necessary for achieving the community's objectives with respect to infrastructure provision e.g. demand risk on some new greenfield projects.
  - These businesses should be sold once the project has matured.
  - Government owned infrastructure should outsource delivery and operations based on competitive long-term contracts.

A problem we can solve

While maintaining infrastructure spending by the private sector and governments at current levels for the next decade may provide the 21st-century infrastructure we need, there is a problem.

The problem lies with the infrastructure that is planned and paid for by governments. Budget deficits and debt across the Commonwealth have reduced the ability of governments to fund infrastructure investment by traditional methods of allocating spending from recurrent expenditure. The looming pressures from an ageing population will only make this situation more challenging into the medium and longer term.

The solutions to this problem are in greater use of private investment, new government funding and financing models, and user charges.

Fortunately, there is no shortage of private capital willing to step in and invest in productive public infrastructure if we can get the project funding and financing models right.

What will be needed is a strong pipeline of well-planned and funded public infrastructure projects and the mechanisms to enable the private sector to invest. To fund projects, governments should exhaust all options for the users and beneficiaries of the infrastructure to pay before making their own funding contributions.

Governments will need to innovate and be flexible in using their budgets and balance sheets to fund their share of future infrastructure investment.

What is also required, if greater private involvement in infrastructure delivery is to adequately offset the reduced capacity for governments to fund infrastructure in the years ahead, is a focus on developing more efficient infrastructure markets.

Policy settings must continue to support the shift to a market-based approach to infrastructure provision where infrastructure businesses, rather than governments, undertake long-term planning, investment and supply of infrastructure and charge infrastructure users an efficient price for its use.

Achieving this will require an honest conversation with the community. The aim would be to generate broad acceptance and understanding of the benefits of and need for greater private infrastructure ownership and sufficient user charging to recover costs.

Infrastructure financing policies also need to address barriers preventing more private investment in infrastructure projects from emerging sources such as superannuation funds. Policy should support the sale of mature public assets to private owners, with the funds received by governments recycled into new infrastructure investment. Capital markets should evolve to enable more private investment in infrastructure debt and equity where there is investor demand, for example from the fast-growing self-managed superannuation fund sector.

We can also reduce the pressure on public funding of infrastructure in two key ways. First, by optimising the use of existing infrastructure we can defer the need for investment in new assets, especially in the short term. Better use of an asset can often be achieved simply by removing unnecessary regulatory restrictions on the use of the infrastructure. Strategies to optimise the use of existing assets should be included in government infrastructure plans and be considered when analysing the costs and benefits of different options for servicing higher levels of infrastructure demand.

Second, we should pull out all stops to reduce the high cost of new infrastructure project construction in Australia. The high cost of provision erodes the value of both private and public investment and lowers the economic and social returns to the community. A recent BCA report on project construction costs identified three key areas for reducing project costs: lift the quality of project management and project design; make reforms to ensure a more productive workplace relations system; and reform Australia's project approvals systems to reduce costs and uncertainty for project proponents.

Exhibit 2: Infrastructure challenges, problems and solutions

Challenge	Problem	Solutions
• Invest for future growth in our economy and population • Address the infrastructure backlog • Sustain investment at over 4 per cent of GDP for the next 10 years – $760b in real spending • Offset a decline in resources investment • Infrastructure system working to plan, deliver and operate the projects Australia needs • Recycle public assets into higher-value public projects • Unleash private capital	• Lack of projects coming through public infrastructure pipeline • Government budgets constrained • Resistance to user-pays • Resistance to unlocking funds from public assets • Confused roles across the federation and for the private sector • Policy and capital markets under-developed in facilitating more private investment • High cost of project delivery • Delays in project approvals	• Produce a consistent pipeline of high-quality public infrastructure projects initiated by governments • Implement a program to recycle funds and obtain operational efficiencies from privatising infrastructure assets • Develop and define the funding roles of the federal and state governments • Match new funding and financing models to projects • Improve and make greater use of public–private partnerships (PPPs) • Develop capital markets by growing demand for project debt • Address the taxation treatment of long-lived infrastructure investments • Develop markets, private investment and adopting user-pays • Improve use of existing assets

The importance of infrastructure

The transport, water, energy and communications sectors together contribute around 10 per cent to Australia's GDP.

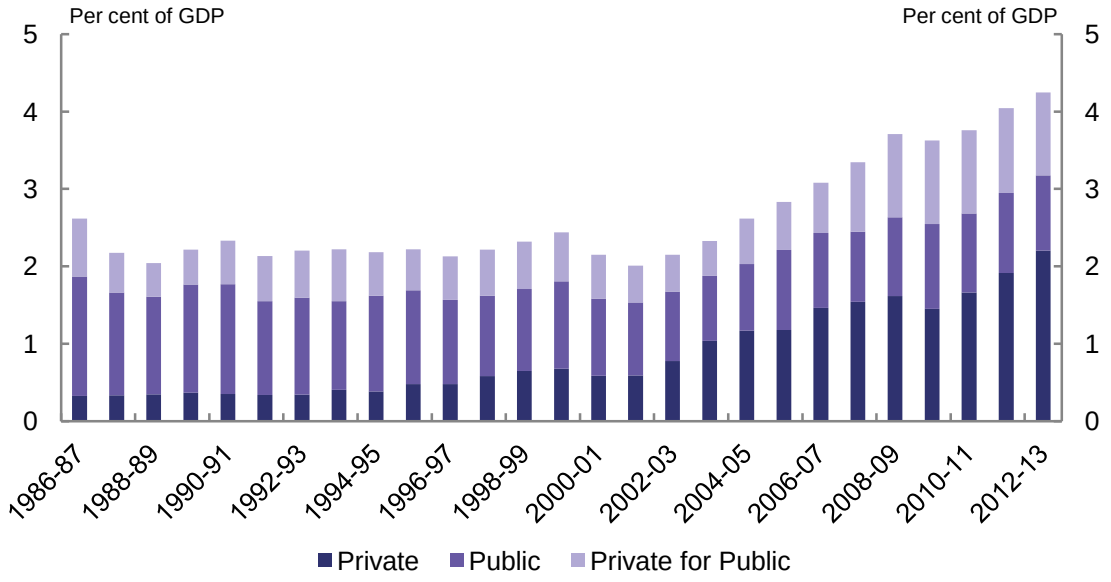
The provision of high-quality transport, water, energy, communications and social infrastructure is essential to economic growth and community wellbeing.

Modern, reliable and affordable infrastructure services provide critical inputs to business that contribute to productivity growth and competitiveness. They provide essential services to individuals and households that contribute to wellbeing. Good-quality infrastructure also makes Australia an attractive place to visit and do business.

Well-functioning transport and communication networks can facilitate productivity growth, workforce participation and more inclusive communities. One of the ways this can occur is through agglomeration benefits arising from better connections of skilled workers and deeper, more competitive markets. Better transport networks can also reduce the cost of housing by effectively reducing the shortage of 'well-located' land.[1]

As Figure 1 shows, infrastructure spending has grown recently – it was between 2 and 2.5 per cent per annum between the mid-1980s and mid-2000s and then it rose steeply to be over 4 per cent today.

Figure 1: Total infrastructure investment

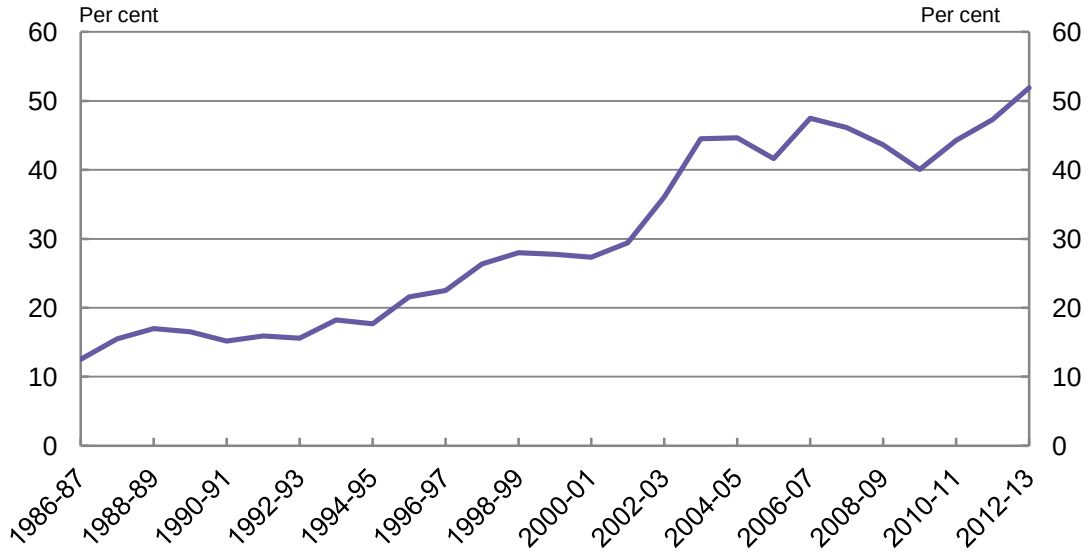


Source: ABS cat. no. 5204.0, 8762.0 and BCA.

There has been a significant rise in purely private spending, from around 15 per cent of total investment in the mid-1980s to more than 50 per cent today (see Figure 2). Private investment on behalf of the public sector – in effect, outsourced infrastructure provision – is now a quarter of spending. 'Public' investment – largely investments undertaken by public corporations and agencies – is a shrinking component, in part due to governments embracing privatisation.

1. P. Lowe, Deputy Governor Reserve Bank of Australia, *Productivity and Infrastructure*, Speech to the IARIW–UNSW Conference on Productivity Measurement, Drivers and Trends, 26 November 2003.

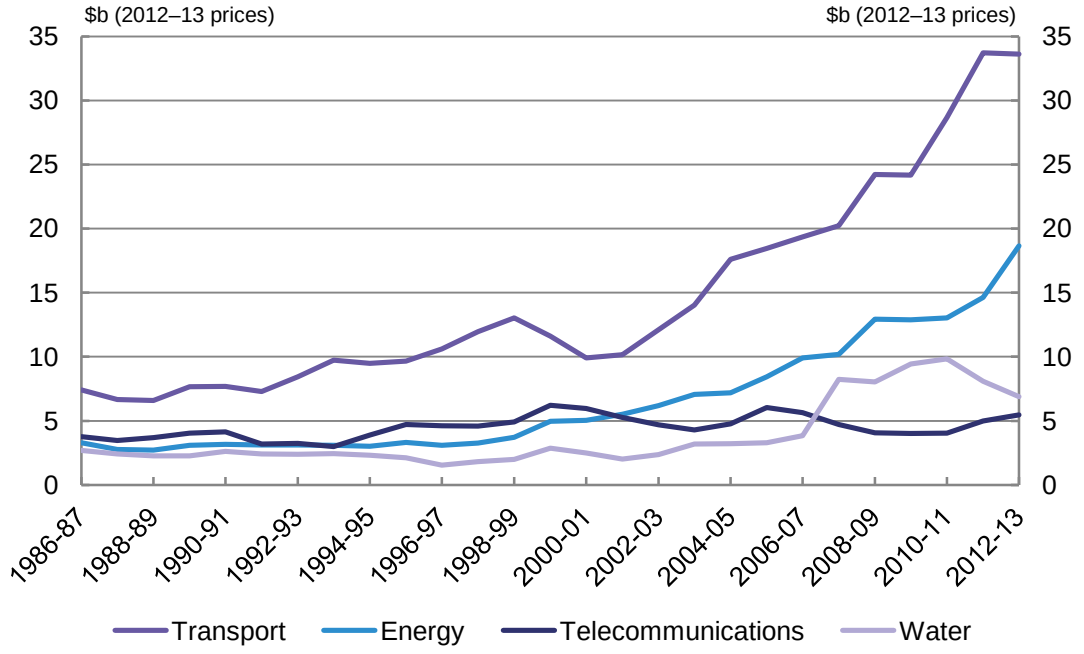
Figure 2: Private sector share of infrastructure investment



Source: ABS cat. no. 5204.0, 8762.0 and BCA.

The rise in spending has been mostly seen in transport infrastructure constituting road, rail, airports and ports, followed by energy. Water investment grew solidly as a number of desalination plants were being built, but has since fallen. Telecommunications spending has been relatively stagnant.

Figure 3: Infrastructure investment by sector



Source: ABS cat. no. 5204.0, 8762.0 and BCA.

The rise in overall spending on infrastructure has been driven by a number of factors:

- A growing recognition that infrastructure spending was not keeping pace with economic and population growth (as highlighted by the BCA in its 2005 publication, *Infrastructure Action Plan for Future Prosperity*).

- Significant growth in private spending, in part driven by the resources investment boom.
- Positive conditions for private investment due to an increasingly privatised asset base.
- Competition and infrastructure regulation reforms over time that have created better conditions for investment.
- Investment by public corporations in the energy and water sectors (some of which has been said to be 'gold plating').
- Higher spending by state governments and GFC stimulus money from the federal government.

The challenge of securing future infrastructure investment

Looking ahead, a considerable spending task remains to overcome remaining deficiencies in our infrastructure stock and also to ensure future infrastructure provision in Australia keeps pace with growth.

Despite the recent increase in spending, infrastructure deficiencies remain, as evidenced by:

- congestion in the road and rail systems and at our ports and airports
- shortages in the supply of water, communications and energy products that occur when ever-rising demand outpaces supply.

The World Competitiveness Index ranks Australia 34th for 'quality of overall infrastructure', well behind our overall economy ranking of 21st.[2]

Unfortunately there is no comprehensive assessment of the true state of Australia's infrastructure across the entire national system. The upcoming five-yearly audits by Infrastructure Australia will help to shed some much-needed light on the state of Australian infrastructure.

But it is clear we will need:

- substantial investment in new and upgraded infrastructure to service our expanding cities and regional areas, to make our cities and regions work better and to better link them together
- upgrades to existing infrastructure, for example to separate freight and non-freight use on major networks, and to take advantage of new technologies that can raise the efficiency of current infrastructure (e.g. more efficient traffic flows)
- sufficient funds set aside to maintain existing infrastructure properly and keep it in good working order.

We will also need a regulatory environment that facilitates the optimal use of our existing infrastructure and does not impose undue restrictions on the productive use of our roads, airports, ports and railways.

Infrastructure Australia's priority project list contains some of the nationally significant infrastructure investments being developed by governments that will need to be funded in the near future. In the five years since it was established, Infrastructure Australia's list has quickly grown to include $82 billion of projects undergoing assessment, mostly in the transport sector.

These are only projects put forward to Infrastructure Australia by the states, so many other new infrastructure requirements are contained in state infrastructure plans. Numerous other projects are also being developed by the private sector.

A broader source of information on the economy-wide forward pipeline is the Deloitte Access Economics *Investment Monitor*, which collects information on projects over $20 million. Increasingly, infrastructure provision in Australia is market-based, where these decisions are made by infrastructure businesses responding to what they see are the investment and service provision opportunities to meet future demand. The Monitor picks up these projects as well as government projects.

2. World Economic Forum, *Global Competitiveness Index 2013–14*, p. 111.

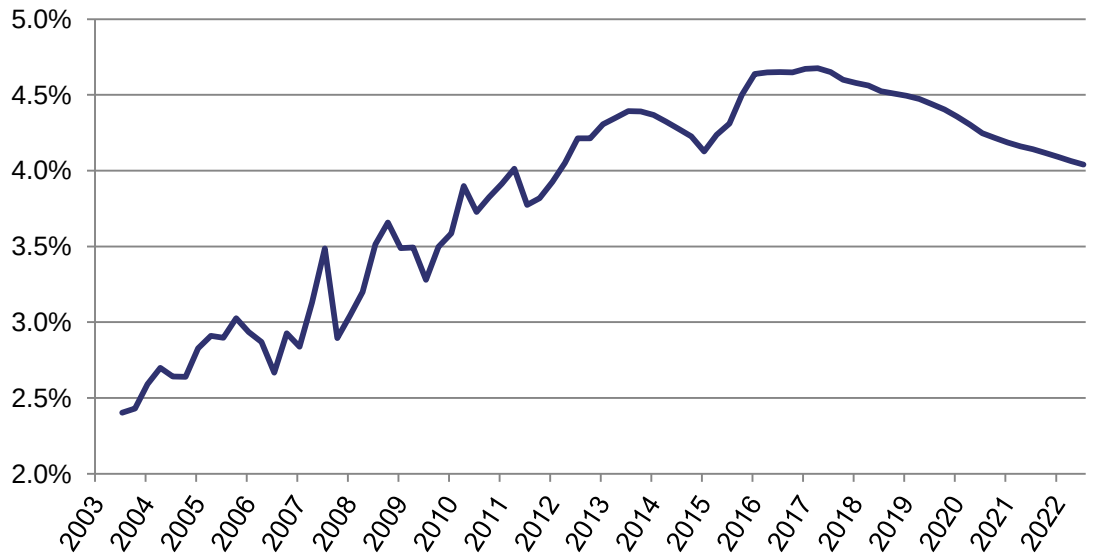
Table 1: Potential pipeline of investment by sector as at November 2013

	Electricity, gas and water	Transport and storage	Communications
Under construction	13.2	56.2	46.2
Committed	2.6	25.7	-
Under consideration	10.7	36.3	-
Possible	13.0	114.0	-
Total	**39.5**	**232.1**	**46.2**

Source: Deloitte Access Economics, *Investment Monitor*, November 2013. Projects over $20 million.

Projections prepared for the BCA by Deloitte Access Economics in a report released in August 2013 show that all new infrastructure construction spending over the next 10 years will be at least at current levels of 4 per cent of GDP a year. That is total real spending on infrastructure is projected to be over $760 billion.

Figure 4: Infrastructure investment as per cent of GDP (real spending, projections from 2013–14 onwards)



Source: Deloitte Access Economics, projections prepared for BCA. See BCA, 2013, *Securing Australia's Investment Future: Managing the Economic Transition*.

About 60 per cent of the infrastructure spend will be by the private sector. The remainder will be a mix of spending by public corporations and by state and Commonwealth governments from their budgets.

The projections by Deloitte are based on:

- an assessment of private and public commitments to investment projects already underway or soon to commence
- over time, an assumption that a sufficient amount of high-quality projects will be planned, funded and commenced by both the private and public sectors to keep pace with economic growth.

While it must be remembered that the $760 billion in real spending over the next 10 years is a projection rather than an assessment of an 'infrastructure deficit' as such, it does provide a good rule of thumb for the likely investment needed to meet Australia's future infrastructure needs,

particularly given it represents a continuation of the proportion of spending on infrastructure that is happening in the economy today.

It is worth considering what would happen if we did not achieve that level of spending:

- Missed opportunities to address infrastructure deficiencies and to invest for growth, resulting in more congestion and shortages of supply of essential services, and, consequently, lower productivity and worsening standard of living.
- A lack of infrastructure can cause community pushback around the economic and population growth that Australia needs in order to prosper.
- We would miss out on the employment and economic activity associated with the development of new infrastructure, and this would come during a time when the economy is likely to be experiencing a decline in resources sector investment. The decline in resources investment is expected to cause a cumulative decline in real spending of $39 billion over the next three years in the engineering construction sector (for a full discussion see the BCA's *Securing Investment in Australia's Future: Managing the Economic Transition* report released in August 2013). Infrastructure investment can help to offset this fall.

The right mix of roles for infrastructure markets and governments

A challenge for infrastructure provision is to change the historical mindset from governments being the dominant provider of infrastructure to move to one where markets are the primary provider and where governments instead play a facilitative role in setting policy, regulation and, occasionally, also directly providing infrastructure.

In fact infrastructure markets have developed significantly along these lines in recent decades, although the level of development differs according to the infrastructure type – transport mode, water, energy, communications and social infrastructure such as schools and hospitals.

Infrastructure markets can operate with minimal government involvement when there is sufficient competition to allow suppliers and users to make decisions to supply or consume infrastructure services in response to price signals that reflect the long-term efficient cost of supplying the infrastructure.

But infrastructure markets are not always competitive and the benefits of infrastructure cannot always be reflected in a market price. Usually the risk is under-provision. Infrastructure with natural monopoly characteristics could give the owners a level of market power that justifies government regulating prices or the quality of supply. The regulated prices aim to reflect the efficient cost base and a return on investment that should match the risk being undertaken by the investor in a competitive environment.

Governments might also need to subsidise infrastructure where markets alone may not provide the amount of infrastructure services that are needed. This may be because they are public goods with wider economic and social benefits worth capturing, or equity considerations. Government subsidies might be in the form of direct payment for the infrastructure or a subsidy or 'universal service obligation'. For new investments governments, might need to accept some level of the demand risk given future use is unknown and hard to predict (as discussed in later sections).

Finally, governments continue to play an important role as direct provider of infrastructure where it is not feasible for markets to deliver some infrastructure with high economic and social returns – particularly very large, nationally significant infrastructure projects and also infrastructure with high social benefits that are not captured in a price of use. Governments have an important role to directly plan, prioritise and fund this infrastructure.

Assessing the infrastructure funding and financing problem

Summary of problems

- Governments face significant budget pressures that will constrain their ability to fund new infrastructure provision.
- There is, however, a large and increasing pool of private sector funds willing to provide capital to infrastructure projects where it will earn an appropriate return on investment.
- The challenge is to design the new infrastructure projects with sound funding models and approvals in place ready for the private sector to invest in.
- The lack of a long-term infrastructure plan between the Commonwealth and the states means a shortage of projects for the private sector to invest in, and the planning of priorities tends to be more short term.
- Points of confusion between the roles of state and federal governments need to be addressed.
- Governments can make more use of user-pays and value-capture options to fund new infrastructure provision.
- Governments can make use of funds locked up in mature infrastructure to pay for new projects.
- In partnering with the private sector on new investments, governments may need to bear responsibility for some early-stage risks, e.g. uncertainty around future demand.
- We have relied on traditional methods and need to be more innovative in our funding and financing models and in the way that project risks are managed.

Discussion

A number of problems lie ahead in funding and financing infrastructure investment in Australia.

Budget deficits and debt across the Commonwealth have reduced the ability of governments to fund infrastructure investment by traditional methods of allocating spending from recurrent expenditure. The looming pressures from an ageing population will only make this situation more challenging into the medium and longer term.

A critical question for delivering the future investment needed will be how we access new sources of funding and finance to pay for the projects to be delivered.

The solutions to this problem are in greater use of private investment, new government funding models, and user charges.

Private capital is willing to step in and invest in productive public infrastructure, but government policies do not always make this easy.

The common misconception is that there is not sufficient capital available to pay for the infrastructure we need.

The reality is that there is no shortage of capital in the market to invest in new infrastructure. The private sector will provide most or all of the capital required where it can earn a reasonable rate of return on investment commensurate with risk.

The key to attracting this capital will be to establish well-functioning infrastructure markets and also for governments to work together to produce a rolling pipeline of well-designed, funded and approved public infrastructure projects being brought to market.

We believe that funding and financing concerns can be overcome with the policies outlined in this report.

As we have discussed in previous BCA reports on funding and financing issues, it is important to separate the issues of funding and financing (see Exhibit 3). The problems relating to funding and financing are then explored further below.

Exhibit 3: Funding or financing?

Infrastructure 'funding' refers to the question of who pays for the cost of its construction, maintenance and operation. This can be either:

- the users, via charges
- governments through spending from the budget
- some combination of the two, such as partial toll plus government subsidy.

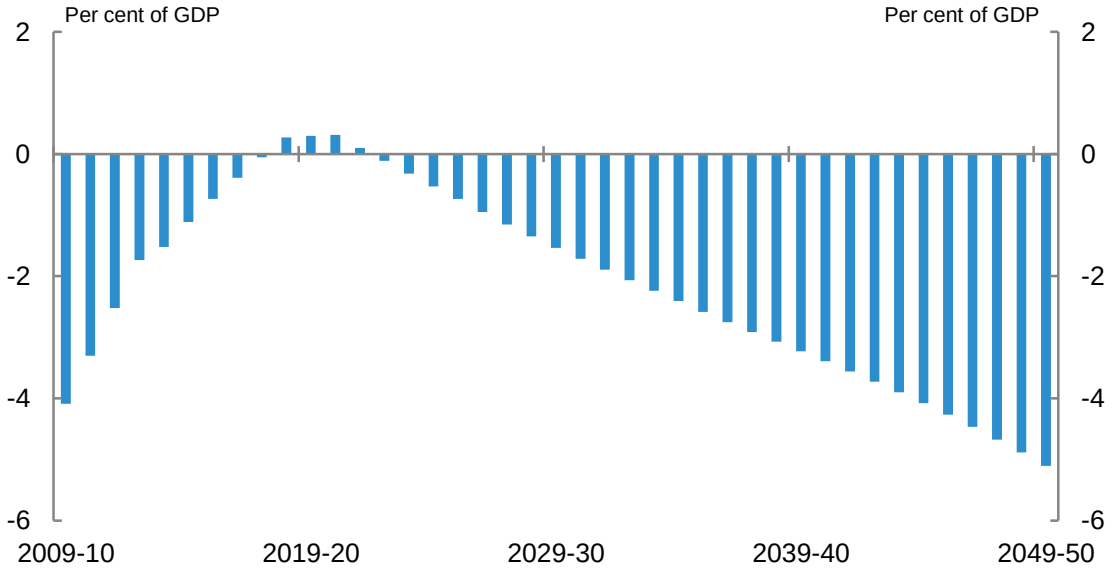
Infrastructure 'financing' refers to the capital invested in an infrastructure asset. This includes infrastructure ownership (equity), as well as lending to a project that incurs interest expense and needs to be repaid (debt). An important role of finance is to bridge the gap between the large upfront costs of an infrastructure investment and the revenues that are anticipated to be earned later to recover the costs. Whether investing equity or debt, investors take a risk that the infrastructure investment will make a positive return and return their original investment stake.

Problems with funding infrastructure projects

The problems for funding infrastructure projects are essentially that budgets are becoming more constrained and user-pays options are not used as much as they could be.

Far from having surplus funds available to pay for new infrastructure, increasing spending pressures mean the combined annual fiscal deficit across all levels of government in Australia could reach 5 per cent of GDP by 2050, or around $75 billion in today's terms.

Figure 5: Projected fiscal balance, all governments



Source: Deloitte Access Economics, 'An Intergenerational Report for the States', incorporated within the BCA Submission to the 2011 Tax Forum, October 2011.

The Parliamentary Budget Office finds that the federal budget is in structural deficit of between 1.5 per cent and 2.75 per cent of GDP, and that a structural deficit will remain throughout the forecast period ending in 2016–17.[3]

In light of these challenges, budgets are being consolidated and governments are becoming increasingly constrained in their capacity to spend on infrastructure.

Within the federation, the Commonwealth Government arguably has the greatest capacity to fund new infrastructure due to its efficient tax base and potentially higher borrowing capacity at lower costs (estimates put the capacity to borrow within the AAA rating at over $100 billion). But it also faces challenges with the budget currently in deficit and with significant spending pressures to deal with health and ageing needs on the way. The *Intergenerational Report 2010* projects that federal spending on health, aged care and retirement incomes will be almost half the federal budget by 2050.

State governments have limited access to new borrowing without compromising their credit ratings. Some states do, however, have significant funds tied up in government-owned businesses that could be released.

The alternative to governments funding infrastructure is for the users and beneficiaries of the infrastructure to pay for it, for example tolls on roads, full-cost charging by utilities, or tax measures that capture increases in property values linked to the infrastructure. However, governments and the community in some areas are still to be persuaded of the need to expand use of user charges to pay for infrastructure and the benefits that charging will bring.

User charges reduce the need for government funding of infrastructure and also encourage more efficient use of the service compared to where services are subsidised.

User charges are reasonably widespread today, although are arguably under-used in transport, rural water and social infrastructure. However, there remain good reasons for governments to pay on behalf of citizens where there is market failure or for equity reasons, so getting the balance right is important.

The solution to our funding challenges should be a matter of pursuing user-pays options as much as possible in the first instance. Should user-pays not cover the whole cost of provision then governments need to step in on the community's behalf to fund the infrastructure that is needed.

The options for government to continue to play its traditional role to fund new infrastructure projects therefore include:

- In the first case, develop user-pays options either as a shift towards a market-based approach to the provision of the infrastructure or by asking the users of public infrastructure to pay all or part of the cost of provision (e.g. tolls).
- Pursue value-capture initiatives on individual projects where the wider beneficiaries of the infrastructure also pay, for example, through area levies or by sourcing land tax increases to pay for infrastructure.
- Recycle capital from the sale of public assets into investment in new infrastructure provision (discussed further below).
- Reprioritising federal expenditure so that a minimum amount of federal expenditure is allocated to infrastructure investment annually (and deposited in a dedicated infrastructure fund like the Building Australia Fund).
- Considering federal borrowing (or types of guarantees and risk sharing) for high-quality, productive infrastructure projects. This should be subject to a number of criteria including that it is within the AAA-rated borrowing limit, the funds are first deposited in a dedicated infrastructure fund like the Building Australia Fund, and the money is strictly for Infrastructure Australia-

3. Parliamentary Budget Office, *Estimates of the Structural Budget Balance of the Australian Government*, *2001–02 to 2016–17*, Commonwealth of Australia, 2013, p. 2.

approved projects only. Treasury bonds are generally preferred to infrastructure bonds as they are lower cost.

Problems with financing infrastructure

The problems for financing infrastructure projects lie in removing barriers to more private sector investment in mature and new infrastructure investments.

Superannuation and pension funds are now major investors in infrastructure and are looking to acquire more of these assets, due to the close alignment of returns from infrastructure and their financial objectives. The demand for sound, stable investments from these private sources is expected to increase substantially.

The potential pool of funds is large and growing. Australia's superannuation system is set to rise from $1.6 trillion in funds under management today to around $6 trillion by 2037. Globally, the OECD estimates just one per cent of US$20 trillion in global pension fund assets is invested in infrastructure.[4]

Some of the problems to be addressed in removing barriers to private investment equity and debt associated with mature and new infrastructure investments are:

- as mentioned above, state governments retain ownership of many mature infrastructure businesses that could be sold to private investors under the right market and policy conditions
- capital loss on some recent infrastructure projects where private investors were exposed to demand risk have caused investors to become more cautious about future greenfield infrastructure investment
- economic regulation of infrastructure can affect private investment where there is uncertainty about future returns or where there may be a risk to future rates of return on investment to attract private investment, e.g. access arrangements
- capital markets may need to develop further to provide long-term financing and also enable participation by more private investors in infrastructure, e.g. self-managed superannuation funds
- inconsistent or uncompetitive taxation arrangements can impact on private investment.

Policy solutions

The BCA has worked with PwC to examine the policies needed to identify and pay for the infrastructure projects that will make Australia a more productive and more liveable country in the years ahead.

The PwC report is incorporated within this publication. The BCA supports all the recommendations in the PwC report, and they are reproduced in full in the following section.

The discussion that follows about policy solutions and the recommendations draws from the analysis in the PwC report and rests on two key themes:

- Wherever possible, private funding and financing options should be preferred to public funding and financing to maximise the efficient supply and use of infrastructure and also to relieve the financial burden on governments.
- The important roles of governments to set policy, regulate markets and directly plan and fund public infrastructure need to be more clearly defined and better coordinated across the federation.

The policy solutions proposed in this report build on many positive actions taken by governments so far to reform infrastructure policy and grow markets, implement new governance arrangements (e.g. the introduction of Infrastructure Australia) and lift public infrastructure funding. In many areas they represent a continuation of the reform directions that Australia has already been undertaking.

4. OECD, *Annual Survey of Large Pension Funds and Public Pension Reserve Funds*, October 2013, p. 15.

There are no ‘silver bullets’ for improving infrastructure provision; it will take hard work on a number of fronts to get the policy settings right.

A rolling pipeline of public infrastructure projects

First, governments need to work together to regularly produce a rolling pipeline of well-planned and funded infrastructure projects. The planning and designing of public infrastructure projects by government agencies needs to be sped up, with projects then brought to market for the private sector to invest in. Projects need to be appropriately de-risked by having all major planning approvals in place.

The project list must be underpinned by an effective evaluation and prioritisation process that considers all options for meeting consumer needs, including maintaining and fully utilising an existing asset, upgrading an existing asset, or undertaking the new build. The cost–benefit analysis for each investment project should be published.

Infrastructure Australia’s national project priority list should be expanded to include the projects Infrastructure Australia itself views as national priorities.

The states should produce regularly updated 15-year investment plans that include their own state investments plus the projects jointly funded with the Commonwealth and approved by Infrastructure Australia.

There needs to be more innovative models of government and private sector cooperation for delivering these projects. The addition of a funding and financing unit in Infrastructure Australia is a welcome development.

Similarly, all jurisdictions should look to implement an unsolicited proposals framework to consider good ideas for new infrastructure investment from the private sector, as has been successfully introduced in New South Wales.

Recycle capital by selling mature public infrastructure businesses and reinvesting in infrastructure

Second, governments should transfer the ownership of mature infrastructure assets to the private sector, such as superannuation funds, for two reasons. One to enable efficient private management of the assets, and secondly to release funds that can be dedicated to paying for new high-value infrastructure projects.

Infrastructure Australia estimates that up to $219 billion of commercial infrastructure assets with an equity value of up to $140 billion could be sold by governments across Australia, subject to having appropriate regulatory frameworks in place and the right market conditions.

Table 2: Estimates of public infrastructure assets that could be privatised

Enterprise value range	$195–$219 billion
Equity value range	$116–$140 billion
Asset classes included	Electricity generation, transmission, distribution and retailers; water bulk; water distribution and retailers; airports; capital city ports; bulk ports; freight rail; plantation forestry

Source: Infrastructure Australia, *Australia’s Public Infrastructure: Part of the Answer to Removing the Infrastructure Deficit*, October 2012, p. 34.

It is understood the community is not always confident about the sale of assets and user charging. But under this approach, the community’s limited capital is effectively redeployed into paying for new infrastructure that will make their lives better. Furthermore, regulatory frameworks can be designed to safeguard community and consumer interests where needed.

The funds raised from the sale of infrastructure should be placed in a dedicated infrastructure fund with strict criteria requiring that they be invested in new infrastructure that benefits the community. A recent example is the New South Wales Government selling a long-term lease of Port Botany and Port Kembla for over $5 billion with the proceeds being dedicated to the WestConnex project in Sydney as well as a regional renewal fund in the Illawarra.

Fix intergovernmental relations around infrastructure provision

Third, the Commonwealth and states should make a long-term infrastructure funding agreement that sets out the Commonwealth funding envelope and the requirements of the states in return for funding and which clarifies the roles and responsibilities for infrastructure provision going forward.

The growing participation of the federal government in infrastructure provision has been a welcome development but has meant that there is now some confusion and overlap in roles and responsibilities with the states and these need to be clarified. Infrastructure Australia itself has taken several years to settle on the best working model and its governance structure and functions are set to be changed again following the introduction of legislation to the parliament in November 2013.

The BCA's *Action Plan for Enduring Prosperity* recommended that the Commonwealth Government prepare a broader national infrastructure policy to sort out roles and responsibilities for infrastructure between the federal government, the states and the private sector. A new national long-term infrastructure funding agreement would then also provide more certainty to governments and the private sector around future funding and provide an important foundation for speeding up the delivery of the infrastructure project pipeline.

Diversify public funding sources and project risk sharing models

Fourth, diversify funding sources for public infrastructure and match the funding model to the project.

User-pays should be deployed as much as possible on public projects. There will need to be an accompanying communications strategy to explain the necessity and the benefits of the user-pays approach to the community, backed by strong leadership.

Value-capture initiatives should also be expanded so that wider beneficiaries of a project, such as local landholders and businesses, also make a contribution. The federal government could look to reprioritise the federal budget to spend more on infrastructure out of recurrent expenditure, although this will become increasingly difficult as health and ageing and other spending items grow. Use dedicated infrastructure funds to ensure money goes to projects that have proper assessment behind them.

A final option should be to consider Commonwealth borrowing so long as there are good-quality projects to invest in and a number of safeguards are strictly followed. These are:

- the investment is Infrastructure Australia-approved
- there is a rigorous, published cost–benefit analysis with a positive benefit–cost ratio
- the borrowing is within government's existing credit rating borrowing capacity (e.g. the Commonwealth's AAA rating)
- Treasury bonds are generally preferred to infrastructure bonds (because they are lowest cost)
- before allocation, the borrowed funds are held in a dedicated infrastructure fund and ring-fenced for infrastructure capital spending, not operating spending.

There are also options open to governments seeking to de-risk new projects to make them more attractive to private investment upfront or once they are completed:

- Issuing public sector subordinated notes that fill the finance gap between senior loans and equity.
- Public sector minimum guarantees that provide minimum patronage or revenue guarantees for a defined period.

- Establish a public sector development company where the government takes responsibility for the project during the development stage and looks to sell the developed project later.
- Establish a public sector development company with an availability payment structure and separately tender elements of the project with patronage risk.

Improve and expand the use of the public–private partnership model

Fifth, expand the use of the PPP process and consider it for all major infrastructure projects. PPPs have been shown to lower project costs, reduce construction times and bring innovations in design and construction. Governments should continue to reduce the cost and risk of the PPP process to bidders by considering options for reimbursing some bid costs for losing bidders and implementing a streamlined PPP model for smaller projects.

Governments and business need to continue to work together to get risk sharing right in PPPs where they partner on complex new greenfield projects. Risk-sharing arrangements need to strike the right balance, with the party best equipped to manage the risk the one that takes on the risk. There have been problems with some high-profile projects where the private sector took on patronage risks when they were probably not the best party to manage them, and subsequently suffered significant loss when the patronage levels were lower than forecast. This has been well documented and widely recognised and subsequent initiatives to establish a better reference forecasting model for toll roads is a welcome development.

Consensus is growing around a risk-sharing model where governments take on, say, the patronage risk in the early years and then sell the project to the private sector to own outright once the patronage pattern is established. This is the model adopted, in stages, for the mega WestConnex project. This is a good model, but we shouldn't apply it automatically. It's always best to test the market first, because there are times when the private sector will be prepared to take or share the patronage risk upfront. A recent example is the M1/M2 Link in Sydney.

Develop capital markets

Sixth, develop capital markets to create more options for private investment in infrastructure debt and with an aim to extend the tenor of debt for Australian investments. Privatisation itself should create the conditions for the development of a long-term corporate bond market as has occurred in the United Kingdom where privatised electricity and water businesses issue debt with tenors of approximately 20 years. This might have spin-off benefits for other long-term corporate bond issuance. The federal government can also assist by considering issuing 30-year or 50-year bonds that help to establish a longer-term benchmark rate for debt.

Reform infrastructure taxation

Seventh, remove barriers to infrastructure investment caused by distortions in the tax system. In principle, an economy-wide reduction in the company tax rate will reduce the bias against long-term infrastructure investment in the company tax system. The recent initiative to allow early-stage losses to be uplifted for selected projects was a welcome reform that will help to overcome this problem for those projects.

At a more granular level there are some tax rules that prevent early-stage losses from being accessed later in the project by investment trusts, and some differing treatment of Australian superannuation funds relative to foreign pension funds that should be reformed.

Develop efficient infrastructure markets

Eighth, develop infrastructure markets –especially water, electricity and roads – to move towards greater private investment and pricing that reflects full-cost recovery and a return on investment, with appropriate regulation in place to safeguard consumers and encourage efficient investment.

The road transport market has significant scope for reform, starting with the completion of the COAG Heavy Vehicle Charging and Investment reforms. A shift to full-cost efficient pricing by removing retail price caps for electricity provision and moving to full-cost recovery for water

provision, governed by independent economic regulation can create the conditions for better-functioning markets.

Recommendations

The full set of policy recommendations for funding and financing infrastructure is set out below. The list includes all of the recommendations in the PwC report. In addition, the BCA proposes some additional recommendations within the eight policy areas as clearly noted in the list.

Exhibit 4: Eight recommendations for funding and financing infrastructure

1. Produce a consistent pipeline of high-quality public infrastructure projects initiated by governments
2. Implement a program to recycle funds and obtain operational efficiencies from privatising infrastructure assets
3. Develop and define the funding roles of the federal and state governments
4. Match the funding and financing model to the project
5. Improve and make greater use of public–private partnerships
6. Develop capital markets by growing demand for project debt
7. Address the taxation treatment of long-lived infrastructure investments
8. Develop markets, private investment and adopting user-pays

Recommendation 1: Produce a consistent pipeline of high-quality public infrastructure projects initiated by governments

Governments need to speed up and prioritise the planning and prioritisation of high-value public infrastructure projects that can be brought to market. To do this requires:

1.1 States to provide well-constructed business cases to the Commonwealth based on standardised formats.

1.2 Infrastructure Australia to both evaluate state projects for Commonwealth funding and also take an active role in identifying, analysing and prioritising nationally significant projects. All evaluation and prioritisation to be supported by transparent cost–benefit analysis.

1.3 Infrastructure Australia to give preference to opportunities to optimise and upgrade existing infrastructure where that is the more cost-effective option.

1.4 State governments to produce 15-year prioritised investment programs.

1.5 Adopt the New South Wales practice of considering unsolicited bids from the private sector if value-for-money is expected.

Additional BCA recommendations:

- Reduce the time taken to assess the suitability of projects for delivery and bring them to market.
- Streamline the planning approvals process for infrastructure projects within and across governments to reduce delay and cost.
- Governments should de-risk projects where appropriate to facilitate the private involvement (see later recommendations).

Recommendation 2: Implement a program to recycle funds and obtain operational efficiencies from privatising infrastructure assets

Commonwealth, state and territory governments should commit to privatising those infrastructure assets for which feasible private sector ownership options exist.

2.1 Funds from the sale or lease of state-owned assets should be hypothecated towards new infrastructure investment.

2.2 National Partnership payments to states should be scaled back if there is no progress on privatisation.

2.3 Re-examine legislation that mandates retention of legacy labour provisions post-privatisation.

2.4 Private sector participation needs to be accompanied by an appropriate regulatory regime and/or contracting arrangements.

Recommendation 3: Develop and define the funding roles of the federal and state governments

Define the roles of the Commonwealth and state governments to facilitate a greater Commonwealth funding role. This requires:

3.1 Conclude a long-term intergovernmental infrastructure funding agreement to set out the amount and terms of Commonwealth support for infrastructure projects, including that user-pays and value-capture options are prioritised.

3.2 Heads of Treasuries to request the Productivity Commission to review state and Commonwealth roles in the strategic management and funding of infrastructure.

3.3 Nominate a minimum target level of Commonwealth spending on infrastructure as a percentage of the Commonwealth Budget.

3.4 Commonwealth spending through contributions to the Building Australia Fund to be evaluated and prioritised according to the advice of Infrastructure Australia.

3.5 Consider Commonwealth borrowing and other measures that use its balance sheet strength to fund high benefit–cost ratio infrastructure projects.

3.6 Capture the value of infrastructure investments and use it to pay for projects.

3.7 Develop new co-funding models between the Commonwealth and the states.

Recommendation 4: Match the funding and financing model to the project

Ensure the funding and financing model matches the project objectives by:

4.1 Building the capability in the public sector to design funding and financing models suitable for each project and be flexible to avoid a one-size-fits-all approach.

4.2 Leveraging value by choosing the most appropriate investment amounts and funding options in consultation with Infrastructure Australia.

4.3 Improving risk allocation through appropriate government de-risking strategies.

4.4 Where major infrastructure investment is through new or existing Commonwealth (or state) Government Business Enterprises it should be subject to constraints.

Additional BCA recommendations:

- Governments should adopt more diverse options for funding and financing infrastructure, with all options on the table before determining the best approach for an individual project.

Recommendation 5: Improve and make greater use of public–private partnerships

Improve and make greater use of PPPs through:

5.1 Consider the suitability of PPPs for every major infrastructure project.

5.2 Reduce the costs of delivering PPPs and continue to develop the PPP model to allow it to be used in more sectors.

Recommendation 6: Develop capital markets by growing demand for project debt

Support the development of markets to expand the ways private investors can invest in infrastructure through:

6.1 Supporting further investigations into facilitating the increased funding of infrastructure projects through both the professionally managed and self-managed super funds.

6.2 Promoting privatisation to develop demand for longer-term debt, and improve liquidity in the Australian bond market.

6.3 Exploring issuing Commonwealth bonds with a 30-to-50-year tenor to encourage and underpin a longer-term debt market.

Recommendation 7: Address the taxation treatment of long-lived infrastructure investments

Promote taxation reform that can counteract the existing bias against long-term savings and investment in infrastructure. Specifically:

7.1 Support the current infrastructure tax loss incentive scheme.

7.2 Allow infrastructure investments to be treated as eligible investments for flow-through trust taxation.

7.3 Allow unit trusts to utilise carry forward tax losses on the same basis as companies.

7.4 Exempt interest and dividends from taxation for Australian superannuation funds in the same manner as foreign exempt pension funds.

Additional BCA recommendations:

- Cut the company income tax rate to a more globally competitive 25 per cent as soon as fiscal circumstances permit.

Recommendation 8: Develop markets, private investment and adopting user-pays

Continue to develop sustainable markets for transport, communications, energy and water based on the principles of user-pays and private investment and applying economic regulation where needed. Specifically:

8.1 Transport – accelerate reform of road pricing and review transport subsidies.

8.2 Energy – complete reforms enabling efficient generation capacity and full retail contestability.

8.3 Rural water – complete pricing reforms in the rural water sector.

8.4 Urban water – extend full and independent economic regulation to all urban water utilities.

8.5 Draw on evidence to communicate the benefits of private ownership and user-pays funding to the community and to state governments.

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PwC

Report to the Business Council of Australia on infrastructure funding and financing

November 2013

Executive summary

PwC was engaged by the Business Council of Australia (BCA) to assess potential policy positions for infrastructure funding and financing. These positions are important as there are challenges confronting Australia's infrastructure systems which, left unaddressed will undermine our nation's quality of life, economic growth and, as pointed out by the OECD, international competitiveness. Addressing these challenges requires a position on how to:

- Maximise proceeds from the privatisation of assets and then recycle these to fund new infrastructure projects;
- Grow funding capacity by wider adoption and acceptance of user pays and value capture models;
- Expand the infrastructure funding role of the Commonwealth Government.
- Improve coordination through a new Commonwealth – State funding agreement; and
- Improve innovation and risk sharing models for Greenfield infrastructure.

While secondary to the infrastructure funding challenges, financing challenges also exist and hence need to be considered within the policy discussion.

This report synthesises a wide range of recent studies on these topics and overlays industry sentiments (gathered through consultation) to bring together one set of consolidated recommendations. In framing these recommendations we recognise that this is a complex area of debate with no single, or simple, answer. Hence, flexibility is needed in considering these recommendations to ensure their application across industries maximise value to the Australian economy and society.

The BCA principles on infrastructure, ownership and pricing which have shaped this analysis are outlined below.

BCA principles on infrastructure ownership, regulation and pricing

The following criteria should determine whether an asset is owned privately or by governments, and how that asset should be operated:

1. Governments should sell infrastructure assets where the private sector already owns other like assets and provides other like services (this effectively demonstrates adequate policies are already in place to protect consumers).
2. Private ownership should be preferred where an appropriate arrangements can be established for the infrastructure service in any of these three ways:
    a. There is a market price set by an effective and contestable market for the infrastructure service
    b. There is a regulated price that allows an adequate return on an efficient investment while also protecting the interests of consumers
    c. There is an implicit contract price that a government agrees with the owner of the infrastructure on behalf of public users (includes community service obligations).
3. Government ownership should only be preferred where it can be demonstrated that it is necessary for achieving the community's objectives with respect to infrastructure provision e.g. demand risk on some new greenfields projects.
    a. These businesses should be sold once the project has matured
    b. Government owned infrastructure should outsource delivery and operations based on competitive long term contracts.

Infrastructure priority areas

1 - Produce a consistent pipeline of high quality public infrastructure projects initiated by governments

Recommendation 1: Governments need to speed up and prioritise the planning and prioritisation of high value public infrastructure projects that can be brought to market. To do this requires:

- **1A:** States to provide well-constructed business cases to the Commonwealth based on standardised formats.
- **1B:** Infrastructure Australia to both evaluate state projects for Commonwealth funding and also take an active role in identifying, analysing and prioritising nationally significant projects. All evaluation and prioritisation to be supported by transparent cost benefit analysis.
- **1C:** Infrastructure Australia to give preference to opportunities to optimise and upgrade existing infrastructure where that is the more cost-effective option.
- **1D:** State Governments to produce 15 year prioritised investment programs.
- **1E:** Adopt the NSW practice of considering unsolicited bids from the private sector if value-for-money is expected.

2 - Implement a program to recycle funds and obtain operational efficiencies from privatising infrastructure assets

Recommendation 2: Commonwealth, State and Territory governments should commit to privatising those infrastructure assets for which feasible private sector ownership options exist.

- **2A:** Draw on evidence to communicate the benefits of private ownership and user pays funding to the community and state governments.
- **2B:** Funds from the sale or lease of state-owned assets should be hypothecated toward new infrastructure investment.
- **2C:** National Partnership payments to states should be scaled back if there is no progress on privatisation.
- **2D:** Re-examine legislation that mandates retention of legacy labour provisions post-privatisation.
- **2E:** Private sector ownership needs to be accompanied by an appropriate regulatory regime and/or contracting arrangements.

3 - Develop and define the funding roles of the federal and State Governments

Recommendation 3: Define the roles of the Commonwealth and State governments to facilitate a greater Commonwealth funding role. This requires:

- **3A:** Conclude a long term inter-governmental infrastructure funding agreement to set out the amount and terms of Commonwealth-support for infrastructure projects, including that user pays and value capture options are prioritised.
- **3B:** Heads of treasuries to request the Productivity Commission to review State and Commonwealth roles in the strategic management and funding of infrastructure (announced).

- **3C:** Nominate a minimum target level of Commonwealth spending on infrastructure as a percentage of the Commonwealth Budget.
- **3D:** Commonwealth spending through contributions to an infrastructure fund, eg the Building Australia Fund, to be evaluated and prioritised according to the advice of Infrastructure Australia.
- **3E:** Consider Commonwealth borrowing and other measures that use its balance sheet strength to fund high Benefit Cost Ratio infrastructure projects.
- **3F:** Capture the value of infrastructure investments and use it to pay for projects.
- **3G:** Develop new co-funding models between the Commonwealth and the states.

4 - Match the funding and financing model to the project

Recommendation 4: Ensure the funding and financing model matches the project objectives by:

- **4A**: Building the capability in the public sector to design funding and financing models suitable for each project and be flexible to avoid a one-size fits all approach.
- **4B**: Leveraging value by choosing the most appropriate investment amounts and funding options in consultation with Infrastructure Australia.
- **4C**: Improving risk allocation through appropriate government de-risking strategies.
- **4D**: Where major infrastructure investment is through new or existing Commonwealth (or state) GBEs it should be subject to safeguards or certain criteria, to ensure efficient investment.

5 - Improve and make greater use of PPPs

Recommendation 5: Improve and make greater use of PPPs through:

- **5A:** Consider the suitability of PPPs for every major infrastructure project.
- **5B:** Reduce the costs of delivering PPPs and continue to develop the PPP model to allow it to be used in more sectors.

6 - Develop capital markets by growing demand for project debt

Recommendation 6: Support the development of markets to expand the ways private investors can invest in infrastructure through:

6A: Supporting further investigations into facilitating the increased funding of infrastructure projects through both professionally managed and self managed superfunds.

- **6B**: Promoting privatisation to develop demand for longer term debt, and improve liquidity in the Australian bond market.
- **6C**: Exploring issuing Commonwealth bonds with a 30 to 50 year tenor to encourage and underpin a longer term debt market.

7 –Address the taxation treatment of long lived infrastructure investments

Recommendation 7: Promote taxation reform that can counteract bias against long term savings and investment in infrastructure. Specifically:

- **7A**: Support the current Infrastructure tax loss incentive scheme.
- **7B:** Allow infrastructure investments to be treated as eligible investments for flow-through trust taxation.
- **7C:** Allow unit trusts to utilise carry forward tax losses on the same basis as companies.
- **7D:** Exempt interest and dividends from taxation for Australian superannuation funds in the same manner as foreign exempt pension funds.

8 - Develop markets, private investment and adopting user pays

Recommendation 8: Continue to develop sustainable markets for transport, communications, energy and water based on the principles of user pays and private investment and applying economic regulation where needed. Specifically:

- **8A: Transport** - accelerate reform of road pricing and review transport subsidies.
- **8B: Energy -** complete reforms enabling efficient generation capacity and full retail contestability.
- **8C: Rural water** – complete pricing reforms in the rural water sector.
- **8D: Urban water** - extend full and independent economic regulation to all urban water utilities.

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Disclaimer

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1 Background to the report

1.1 Introduction

Ongoing investment in productive infrastructure is essential for a growing economy. A number of recent reviews of infrastructure funding and financing policy undertaken by public bodies have concluded that funding and financing are key challenges facing infrastructure.

Focussing attention on what needs to be done is not enough, so the BCA has worked together with PwC to spell out the policy options that should be pursued in order to raise the efficiency, effectiveness and level of public infrastructure spending. This paper sets out a set of comprehensive recommendations (together with supporting analysis), about infrastructure funding and financing to contribute to the debate in a practical way and provide the private sector's perspective on these issues. It has been informed by comprehensive research along with consultation with BCA members and other industry experts. It has benefitted from comments by members of the BCA's Infrastructure and Sustainable Growth Committee.

The remainder of this chapter looks at the importance of infrastructure in supporting economic growth and societal prosperity. It makes the case as to why open discussion around funding and financing reform are currently required to ensure that infrastructure continues to play this important role into the future. The timing and importance of this case results from the:

- Acceleration in demand for essential infrastructure as the economy and population grow;
- Prevailing economic conditions, both in terms of the looming infrastructure investment cliff associated with peaking of the mining investment cycle and fiscal pressure being placed on Government budgets due to falling revenues; and
- Changing roles and responsibilities both within Government and between Government and the private sector.

Chapter Two then delves into the details of funding and financing infrastructure. It outlines the important distinction between the two and explains how each of these has traditionally been undertaken within Australia. The discussion is concluded by identifying specific policy challenges associated with each area.

Chapters Three and Four then expand on how these infrastructure funding and financing challenges can be overcome. These chapters contain a comprehensive set of recommendations (together with supporting analysis) for funding and financing Australia's infrastructure pipeline. These recommendations will contribute to the debate in a practical way and provide the private sector's perspective on these issues.

1.2 The importance of infrastructure

The importance of infrastructure for the continued development and growth of the Australian economy and the standard of living and wellbeing of its population is now well-recognised. There is an established link between both economic output and increasing levels of productivity associated with the efficient investment in high quality infrastructure. A Productivity Commission report on the financing of infrastructure found that:[1]

- The services from economic infrastructure account for more than 10 per cent of Australia's gross domestic product;
- Infrastructure services are major inputs for Australian industries and businesses. Business use represents some 70 per cent of total demand for the services of:
  - Power;
  - Water and sewerage;
  - Rail; and
  - Other transport and communication services.
- Efficient infrastructure service provision is particularly important for Australia's traded goods sector; and
- Economic infrastructure services account for some five per cent of consumer spending.

In terms of economic benefits, research from the Brookings Institute suggests that a 10 per cent increase in the stock of a country's infrastructure assets can increase GDP per capital by 0.7 to 1 per cent. The OECD has estimated that each additional dollar of investment in infrastructure can increase economic output by $1.10 to $1.30, while the IMF has estimated a range of between $0.50 and $1.80.[2]

1.3 Where we have come from

Significant progress has been made in Australia over the past twenty years improving the efficiency and quality of Australia's infrastructure. This has been driven by a shift from state ownership to privatisation of infrastructure assets in a number of states and the concomitant development of a set of regulatory bodies that have monitored the quality of services provision and private sector profitability. However, these developments have been uneven throughout the states, and until the recent privatisation phase in Queensland and New South Wales (NSW), the momentum of the 1990s had been lost.

The global financial crisis, which developed through 2008/09 saw a shift toward greater Commonwealth Government spending on infrastructure. Following the Council of Australian Governments (COAG) meeting in 2008, Infrastructure Australia (established in early 2008) was tasked with developing and maintaining

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1 Productivity Commission (2009), *Public Infrastructure Financing: An International Perspective*, Productivity Commission Staff Working Paper, Canberra.

2 Business Council of Australia (2013), *Action Plan for Enduring Prosperity: Providing Infrastructure.*

an Infrastructure Priority List, to assist the Commonwealth Government's funding decision making process. At the same time the Building Australia Fund was created to fund critical major infrastructure in the transport, water and energy sectors. At the state level, several years later, Infrastructure New South Wales was created to coordinate and prioritise the delivery of infrastructure in that state.

Movements in historical expenditure on Australia's major infrastructure engineering work (adjusted by chain volume index) are displayed in Figure 1.1 below.[3] Over the period from 1986/87 to 2010/11, total spending on major infrastructure rose in real terms from approximately $15 billion per annum to over $50 billion in 2010-11.

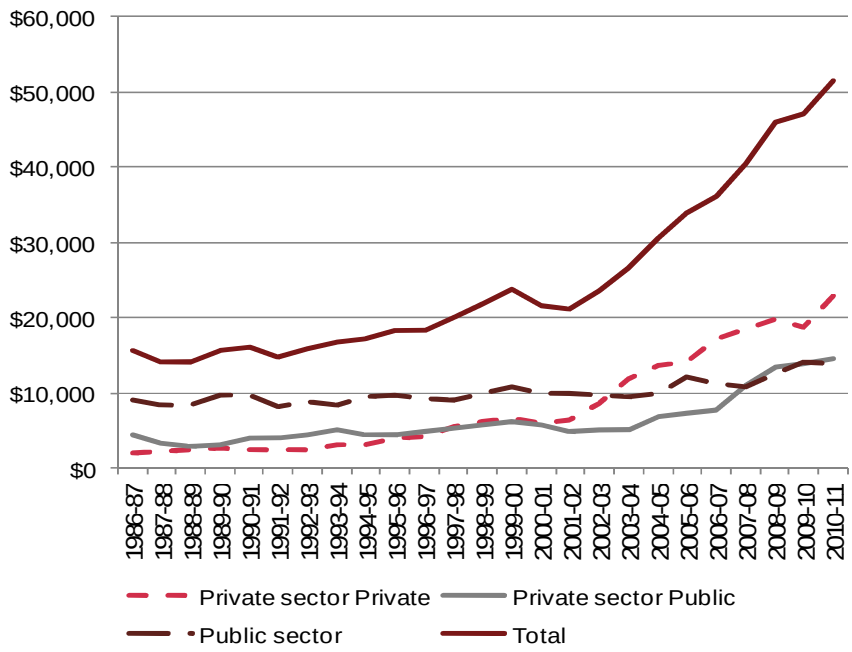
The two noticeable features of changes in the growth of spending on infrastructure in Australia are:

> ***1) Accelerated growth in infrastructure spending*** – As displayed in Figure 1.1 below, compared with the decade between the mid 1980s and mid 1990s, when infrastructure spending grew at approximately 1 per cent per annum, there has been a marked increase in the growth rate of the last decade. Since 2001 infrastructure spending has grown at approximately 5 per cent per annum. While it is expected this growth rate will slow marginally with the peaking of the infrastructure investment cycle, annual growth will still need to remain high if the projected real spend of over $760 billion on new infrastructure investment is to be delivered over the next decade.[4]

3 Engineering and Construction data provides an estimate of the engineering construction work done on major economic infrastructure by both the private and public sector. This value excludes the cost of land and repair and maintenance activity, as well as the value of any transfers of existing assets, the value of installed machinery and equipment not integral to the structure and the expenses for relocation of utility services. However, a contract for the installation of machinery and equipment which is an integral part of a construction project is included.

4 Business Council of Australia, *Securing Investment in Australia's Future: Managing the Economic Transition,* 2012.

Figure 1.1 Value of major infrastructure engineering work, adjusted by chain volume index ($ millions)

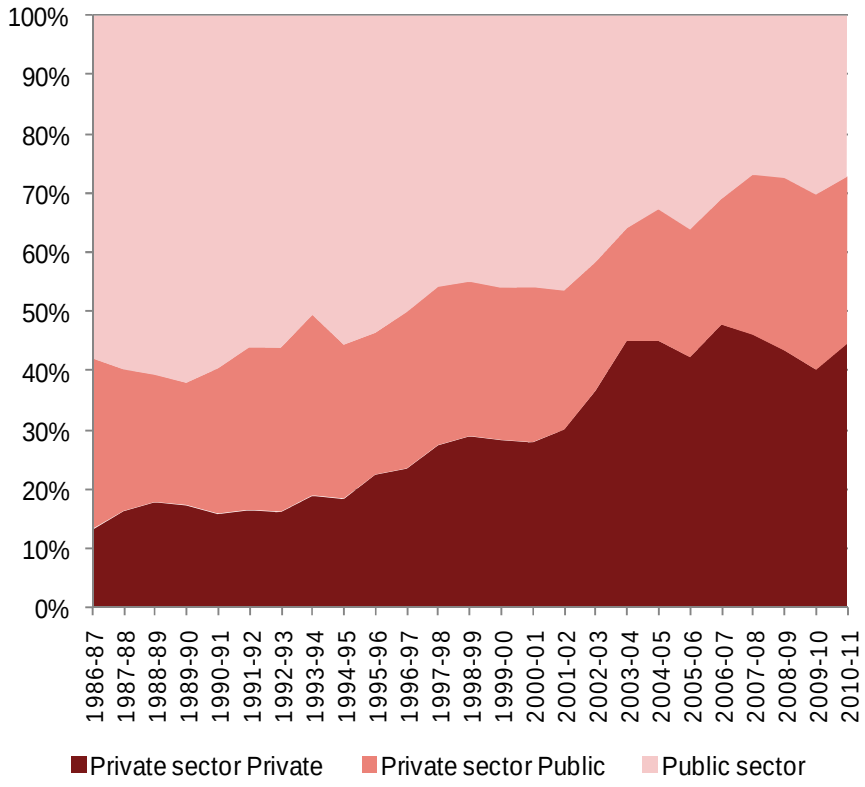


Source: Australian infrastructure statistics yearbook 2012, Tables 1 2.1a and 1 2.1b

2) Increasing participation by the private sector – Figure 1.1 also shows that there has been relatively faster growth in infrastructure expenditure by the private sector, both on its own account, and in infrastructure work on behalf of the public sector. Private sector engineering work on its own account now comprises approximately half of the over $50 billion in total expenditure. On the other hand, public sector infrastructure engineering work has stayed roughly constant, accounting for approximately $14 billion in expenditure in 2010-11.

Figure 1.2 clearly identifies the changing trends in the shares of infrastructure spending undertaken in Australia over the past 25 years, with private sector construction (on its own account and on behalf of the public sector) now accounting for just over 70 per cent of all infrastructure spending. Also apparent, however, is the fact that private sector expenditure on its own account has stayed at approximately 40 per cent over the past 6 years.

Figure 1.2 Private and public sector shares of major infrastructure engineering work, adjusted by chain volume index ($ millions)



Source: Australian infrastructure statistics yearbook 2012, Tables 1 2.1a and 1 2.1b

Government's role in infrastructure provision and coordination has also shifted over this period. In recent years there have been significant improvements in the coordination of, and efficient delivery of infrastructure, in particular:

- Improved identification and coordination of the delivery of priority projects, which has been assisted by Commonwealth Government's establishment of Infrastructure Australia;
- The continued development of increasingly professional state government-based agencies for infrastructure delivery, such as Infrastructure NSW;
- Increasing engagement with the private sector to finance, deliver and operate infrastructure facilities; and
- Greater appreciation of the linkages between the funding and financing of infrastructure provision, and of the need to reform pricing mechanisms (including the introduction of user charges) to fund the provision of infrastructure.

1.4 Looking ahead – challenges and opportunities

The longer term challenges facing Australia are noted in the Commonwealth Government's Third Intergenerational Report which identifies that the pressure for greater infrastructure spending is likely to be intensified by:

- Population growth;
- Demographic change;
- Greater urbanisation; and
- Climate change.

These challenges underpin the anticipation that spending on infrastructure will need to remain above four per cent of GDP per annum to deliver the real spending of over $760 billion projected over the next ten years.[5] A shorter term challenge revolves around the looming 'investment cliff' associated with the peaking and expected decline of the resources investment boom over the next two to three years. As the mining and associated heavy industrial sectors contract, an expansion in infrastructure spending sourced from government revenue, government borrowing or taxes can cushion a 'hard landing' for the engineering sector as a whole.

These challenges need to be understood against a backdrop of broader pressure on Government balance sheets, specifically:

- Lack of funding, particularly as GST receipts decline and the mining sector contracts and/or defers investment;
- Pressure on State balance sheets, through declining GST and property income (such as stamp duty) is constraining State's desire and ability to invest; and
- Competition for spending on other priorities such as health and ageing services.

Combining these challenges leads to a situation in which the long-term intensification of demand for infrastructure is likely to be met with a weakening in the Government's position and / or mechanisms to fund this demand.

Infrastructure funding is a common theme investigated in a number of recent reports produced by the Infrastructure Finance Working Group, Infrastructure Australia, the Productivity Commission and a range of State agencies.[6] These

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5 Business Council of Australia, *Securing Investment in Australia's Future: Managing the Economic Transition,* 2012.

6 Outlines of the contents of key reports and their policy conclusions are provided in the Appendix A. Recent reports include:
- Infrastructure Finance Working Group (April, 2012) – Infrastructure Finance and Funding Reform
- Infrastructure Australia (June 2012) – Australian Infrastructure – Progress and Action: A report to the Council of Australian Governments
- Productivity Commission (October, 2012) – Electricity Network Regulatory Frameworks, Draft Report

reports are summarised in Appendix A. These all point to funding challenges, specifically:

- Insufficient or inefficient user charges; and
- Pressure on government funding, stemming from a constrained revenue base and other competing spending priorities.

Once issues of funding have been addressed, the cost of, and access to finance becomes the secondary challenge.

The reports above all focus on privatisation or private sector partnerships as key policies for improving the efficiency of essential services provision, with the Productivity Commission calling on State governments to privatise their electricity assets, and the OECD urging removal of barriers to private participation in PPPs.

Other common themes in these reports include the need for:

- Improved governance and long term strategic planning of infrastructure investment and divestment;
- User charges and congestion pricing in road transport;
- Regulatory reform;
- Adapting financing mechanisms for PPPs to reflect the current capital market circumstances; and
- Improving private sector procurement policies.

A final critical point frequently raised by industry revolved around the planning and prioritisation of public infrastructure projects. It was noted that there is no specific shortage of capital but rather, there was a shortage of appropriate projects offering an acceptable rate or return.

1.4.1 Specific challenges and Government's response

In considering how best to fund infrastructure projects, government is justified in focusing on optimising the commercial and financial structure in order to achieve an appropriate balance between government and private sector funding, and how each party may share in the project's revenues and risks. The major funding challenges are listed below.

- ***Large scale of infrastructure projects*** - Many planned infrastructure projects are very large scale, and need to be retro-fitted into developed urban environments. With an absence of existing land reservations, this often requires the building of high capital cost tunnels. These 'mega-projects', with

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- Infrastructure Australia (October 2012) – Australia's Public Infrastructure – part of the Answer to Removing the Infrastructure Deficit
- Infrastructure New South Wales (October, 2012) – First things first – A 20 year State Infrastructure Strategy
- Victorian Department of Treasury and Finance (November, 2012) – Future directions for Victorian public private partnerships
- Organisation for Economic Cooperation and Development (December, 2012) – OECD Economic Surveys – Australia overview

their multi-billion dollar construction cost budgets, present significant challenges to funding, financing and hence, successful delivery (e.g. Melbourne Metro and the East West Link in Melbourne, North West Rail and M4 East in Sydney and Cross River Rail in Brisbane).

- ***Staged delivery*** - Some large scale projects must be delivered in stages, with initial stages suffering diminished project revenues until the user benefits of the total project are realised upon final completion. Staged delivery can significantly undermine financial viability of initial stages and therefore the ability for investors to earn a commercial return in the short term, which creates a barrier to financing.

- ***Social projects*** - For other projects the revenue potential may be so inherently limited that they will never be financially viable on a stand-alone commercial basis. These are projects that typically need to be funded by governments. However, the non-financial economic benefits of these projects may be sound.

- ***Potential under-investment*** - The prevalence of external economic benefits (e.g. relief of congestion on competing transport routes and environmental gains) may mean that reliance solely on direct third party revenue potential will result in systematic underinvestment and a failure to achieve the public policy purpose.

- ***Impact of high profile financial failures*** – In the toll road sector there have been several instances of financial failure of high profile projects that were initially considered to be financially viable, and had performed well operationally. Examples of such failure include the Cross City Tunnel, the Lane Cove Tunnel and most recently the Clem7. These failures have severely undermined private sector appetite for demand risk in greenfield projects. The aversion to demand risk now extends to any project where the private sector must obtain bank debt based on its own long term demand forecasts, without the benefit of an existing record of patronage.

- ***Finance costs and availability of finance*** – Sourcing finance at an appropriate cost and tenor is much more challenging than prior to the GFC. The retreat of monoline insurers has left a gap in the market that has been to a large extent filled by banks. The relatively higher cost and shorter tenor of bank finance impose further constraints on the viability and value for money proposition of private sector finance, impacting both economic and (to a lesser extent) social infrastructure projects.

Accordingly there is a need for new funding models to be developed, which enable governments to:

- Maximise cost recovery from the users and beneficiaries of the infrastructure;

- Leverage private sector investment in infrastructure assets;

- Earn a potential return and recycle government capital;

- Reduce the costs of financing new infrastructure and share in future recovery of financial markets; and

- Address demand risk for economic infrastructure.

2 The funding and financing of Australian infrastructure

2.1 Distinguishing infrastructure funding and financing

It is important to make a clear distinction between the funding and the financing of infrastructure. These terms sometimes are confused and used interchangeably in debates about the topic. These two concepts can be distinguished as follows:

- ***Funding*** refers to the mechanism used to pay for the construction and operation for the infrastructure. Infrastructure can be funded in one of two ways:
  - Through users paying a charge for the use of the infrastructure (e.g. in the energy, water and telecommunications sectors where users pay the full price, or close to the full price); and / or
  - Through Government spending, which essentially reflect the Government paying a collective 'charge' on behalf of all users (e.g. the transport sector where user charges only cover a proportion of the full price or social infrastructure where Government pays for use such as schools and hospitals).

  Increasing Australia's capacity to fund infrastructure therefore requires:
  - Increasing the ability to efficiently price the use of infrastructure assets;
  - Delivering infrastructure more efficiently, reducing the costs of projects and therefore allowing Government funds to be allocated to more projects; and / or
  - Government's ability to allocate a greater proportion of their budget towards infrastructure spending.

  This implies that a government's capacity to fund new infrastructure is constrained by the difference between revenue (mostly taxation) and recurrent government expenditures on services. Hence, government funded infrastructure spending can only sustainably grow in line with the economy (i.e. tax revenue) or the ability to reprioritise funding within its budget.
- ***Financing***, on the other hand, refers to the need to provide money for the construction and/or operation of infrastructure facilities, which changes the timing of the funding payments:
  - Public sector financing may be undertaken by public sector borrowing for construction and/or operation of infrastructure, with the payment

of interest and capital to government bond holders, which can be funded either by tax revenue or user charging; or

– Private sector borrowing for the construction of infrastructure, which is funded by availability payments from government (e.g. in the case of PPPs), or by user charges (e.g. in the case of toll roads)

It is critical to note that private *financing* cannot, in and of itself, provide more infrastructure *funding* capacity (which can only come from Government spending and/or user charges). The purpose of private financing, especially when coupled with private delivery, is to provide superior value for money outcomes through better:

- Management of project risks; and/or
- Innovation that results in lower costs and/or better service outcomes (which is driven by the profit motive).

Joint financing arrangements between the government and the private sector can be set up so that particular risks are aligned with the party who is best able to manage them. For example, in some cases (such as a new greenfield airport) the government may be better placed to take on patronage risk.

However, the quality of interaction with the public sector is crucial to the success of the private sector. Some private projects are prevented from going ahead or could be facilitated through government intervention – for example, reducing planning controls and environmental controls (both of which have been done in the United Kingdom); removing a bottleneck that then allows more private investment (e.g. a port); or creating a more favourable regulatory and tax environment.

2.2 How infrastructure is funded in Australia

As noted above, in Australia the construction and operation of infrastructure is ultimately funded by either government payments or user charges. A recent report by the Urban Development Institute of Australia (South Australia (SA) Division) identified a number of current and potential funding approaches, and how they are applied (or may be applied) to different infrastructure sectors. The report identified categories through which infrastructure can be funded through (these are discussed below):

- Government payments;
- User charges and value creation and capture; and
- Re-channelling proceeds from asset sales.

2.2.1 Funding through Government payments

Funding through Government payments requires an understanding of the sources of Government revenue which can support these payments.

- ***Commonwealth Government taxes*** – Funding from general tax revenue via grants accounts for approximately half of State government funding sources.
- ***State Government taxes*** – States apply a range of taxation measures that do not include income taxation.

- ***Local Government taxes*** – Councils are empowered to impose a range of charges on land, which can be hypothecated to fund the provision of infrastructure.

- ***Zoning Uplift Charge*** – This is an uplift charge that is a tax on the rezoning of land where the value of the land appreciates as a result of the zoning change. These are usually only considered a source to support infrastructure funding if they are hypothecated as opposed to following into general revenue.

It is worth noting that infrastructure investment can generate uplifts in land values; under a mechanism known as tax incremental financing (TIF), these value uplifts (in stamp duty, rates and land taxes) are hypothecated and used to fund infrastructure development.[7] Essentially TIFs use the tax system to capture the benefit of the nexus between infrastructure funding and land value to forward fund infrastructure development.

2.2.2 *Funding through user charges*

The nature of user charge needs to reflect the infrastructure asset. Given the existence of an open market or appropriate regulatory structure, prices should reflect the full recovery of the efficient cost of investment (including a risk adjusted return on investment). Any pricing model which does not achieve this requires Government funding to bridge the difference. User charges can include:

- ***Tariffs, charges and rentals*** – User charges are widely applied in relation to most economic infrastructure, irrespective of whether the infrastructure is privately or publicly owned. These include;

  – Passenger payments, such as rail and bus fares are used to fund new investment. For example, in the UK rail fares have already been increased ahead of construction in the new High Speed Rail project. Tolls have been applied over many centuries as a means of funding the construction of bridges, roads and highways. Currently, tolls are only applied to freeways and bridges in the metropolitan areas of Brisbane, Melbourne and Sydney where they now have broad public acceptance. Other states (e.g. South Australia) have had toll roads in the past.

  – Access fees, such as port access fees, are an important source of funding for port development.

- ***Developer charges*** – These are legally required upfront contributions toward the cost of new or upgraded infrastructure, including:

  – Transfer of land – ceded or gifted to the government by the developer;

  – Work-in-kind – infrastructure facilities that are constructed by the developer and ceded to the government on completion of the project; and

7 PricewaterhouseCoopers (2008), *Tax Increment Financing to Fund Infrastructure in Australia*, Draft report to the Property Council of Australia.

- Monetary charges – developer contributions to government to pay for the acquisition of land for public use, or for public infrastructure facilities.

Ultimately, developer charges are a form of user charge, since the developer will pass the cost of these charges onto the ultimate users. For example, in suburban land development these developer charges will find their way into the price of land or housing so that the developer may earn an appropriate return on investment.

2.2.3 *Funding through re-channelling proceeds from asset sales*

By realising value through a privatisation process, governments are provided with greater financial flexibility, which may be used to:

- Recycle the funds immediately into other infrastructure projects; and
- Pay down debt, giving governments the ability to:
  - Create future borrowing capacity for more infrastructure when it will be needed; or
  - Generate availability payment streams to be used as required.

Table 2.1 below provides an example of the sectors where various infrastructure funding approaches have been applied.

Taxation funding sources are applied to almost every sector (except Telecommunications). Developer charges are applied to a number of sectors associated with property development, including the supply of services (e.g. water, stormwater, electricity, gas and sewerage) and local and arterial roads. User charges (e.g. tariffs, charges and rentals) are applied in a range of sectors that include economic infrastructure (e.g. electricity, gas, water, ports, airports, rail and bus), and social infrastructure (e.g. health and educational services).

Table 2.1 Infrastructure funding approaches currently used (taxes and user charges)

	Australian Government Taxes	South Australian General Taxes	Local Government General Taxes	Developer Delivery / Responsibility	Mandatory Developer Contributions	Negotiated Developer Contributions	Private Service Providers Tariffs/Charges Rentals
Arterial Roads	x	x				x	
Local Roads			x	x		x	
Water Supply		x	x	x	x	x	x
Electricity Supply		x	x	x	x	x	x
Gas Supply				x			x
Sewer Supply		x	x	x	x	x	x
Stormwater management		x	x	x		x	
Telecommunications				x			x
Open Space		x	x	x	x	x	
Education Services	x	x					x
Health Services		x					x
Judicial/Correctional Services		x					
Emergency Services		x					
Community Services		x	x			x	x
Ports	x	x					x
Airports	x						x
Rail (Trains/Trams)	x	x					x
Bus Services		x	x				x
Civic Facilities		x	x				
Affordable Housing	x	x					
Urban Environment		x	x				
Car Parking		x	x				

Source: Adapted from Urban Development Institute of Australia (May 2010), p.9.

Other additional funding approaches include:

- ***Designated growth areas differential charges*** **-** Instead of a developer paying upfront for the cost of external service infrastructure, the costs would be gradually recouped through additional charges to the end users (households and businesses) over a set period.

- ***Transaction uplift charges*** – This would be a stamp duty paid on the transfer of property in a designated growth area, with the proceeds of the tax being hypothecated to assist in funding infrastructure in the area.

The scope of charging set out above is much broader than that which is used currently and shows the potential range of funding sources available for an infrastructure project. The additional funding can reduce the burden of investment on the State's balance sheet and provides the potential to 'open up' the market and bring forward investment by creating a clear link for the public between infrastructure benefit, use and cost.

Table 2.2 Potential approaches to fund infrastructure (taxes and user charges)

	Tax Increment Financing	Designated Growth Areas Differential Charges	Rezoning Uplift Charges	User Charges - Tolls	Transaction Uplift Charges
Arterial Roads	x	x	x	x	x
Local Roads		x			
Water Supply	x	x		x	
Electricity Supply	x	x			
Gas Supply	x	x			
Sewer Supply	x	x		x	
Stormwater management	x	x	x	x	x
Telecommunications					
Open Space	x	x			
Education Services	x				x
Health Services	x				x
Judicial/Correctional Services					
Emergency Services					
Community Services	x	x			
Ports					
Airports					
Rail (Trains/Trams)	x		x		x
Bus Services			x		x
Civic Facilities	x				
Affordable Housing			x		x
Urban Environment	x	x			
Car Parking					

Source: Adapted from Urban Development Institute of Australia (May 2010), p.9.

2.3 How infrastructure is financed in Australia

Infrastructure financing allows the timing of construction and operation of infrastructure assets to differ from the funding of those activities. The major sources of financing, and their potential impact on investment, include:

- ***Government debt*** – By taking on debt (through the sale of Commonwealth Government or State Government bonds, or corporate borrowings in the case of municipal councils), governments and local government authorities are able to bring forward the construction and operation of infrastructure facilities. However, the ultimate repayment of the

interest and principal on the bonds will require funding from taxes and/or user charges.

- ***Special purpose infrastructure bonds*** – These bond issues may be applied to a particular infrastructure project or channelled towards more general infrastructure funding.
- ***Government Business Enterprise (GBE) dividends, retained earnings and debt*** – Through applying user charges, government business enterprises will earn profits, which can be channelled back to finance further infrastructure (i.e. capital expenditure) through dividends and retained earnings. GBE debt is sourced from the corporate bond market (e.g. bond issues by such businesses as Snowy Hydro and Air Services Australia). Capital injections from the government owner are rare (e.g. Australian Rail Track Corporation).
- ***Public Private Partnerships*** – As discussed above, PPPs are a form of infrastructure procurement and financing for the development of infrastructure, since the private party will obtain debt finance, which will ultimately be repaid by user charges or availability payments from the government party (which will be provided from government revenues derived from taxes or user charges). Typically the PPP company will raise debt and equity finance for the project, and more recently this has been supplemented by government's making capital contributions
- ***Private sector debt and equity*** – Privately owned infrastructure business are financed by a combination of debt (corporate bonds and bank debt) and equity. Debt programs are generally staggered in order to minimise re-financing risk, and debt term at issuance is in the order of 10 years for energy network infrastructure businesses. Through retained earnings, dividend reinvestment plans (DRPs) and new equity raisings (seasoned equity offers (SEOs)) privately owned infrastructure businesses can channel additional equity into infrastructure.

2.4 Availability of finance / debt

Debt finance is readily available for all but the largest of projects in Australia. Even during the height of the Global Financial Crisis (GFC) the Victorian Desalination project was able to secure fully underwritten debt across two consortia (albeit with some government support). More recently the New Royal Adelaide Hospital project secured in excess of $5 billion of private finance across two consortia.

To deal with these capacity constraints for these large projects, government intervention or project packaging and staging may be required. Although the recent trend for government to provide capital contributions to projects is reducing the extent of the constraints in private debt and equity markets and has proven successful in maintaining risk transfer to the private sector while introducing an element of 'lower cost' finance into projects.

Debt terms in Australian markets are shorter to those seen in Europe and opening up the market to other investors would be desirable from a cost perspective. In particular, the reopening of capital markets and the emergence of finance from superannuation funds would be welcome and could provide a competitive alternative to the bank lending markets.

3 Infrastructure funding reforms

3.1 Chapter summary

In this chapter we consider infrastructure funding reforms, which is the most fundamental issue facing governments that are seeking to develop infrastructure. As noted above, the ultimate sources of funding for infrastructure are government payments and user charges.

This chapter therefore explores a number of options the States and Commonwealth Government have for growing the funding capacity for new infrastructure projects during a time of fiscal constraint. These options include:

- Recycling funds from privatised public assets (section 3.2). This requires:
  - Actively explaining the benefits of asset sales to the community
  - Preparing and selling mature businesses to the private sector
  - Ensuring an adequate regulatory regime
  - Hypothecate funds (where appropriate) received towards new infrastructure projects.
- Extend user pays model (3.3) and promote value capture (3.4). This requires:
  - Promoting user pays within the community and applying it to projects
  - Reform pricing and market regulation to enable full, efficient cost recovery
  - Review existing subsidies (eg public transport)
  - Explore value capture opportunities for each new project.
- A greater funding role for Commonwealth government (3.5). This requires:
  - Redefining the roles of governments to accommodate a larger Commonwealth funding role
  - Reprioritise the Commonwealth budget towards infrastructure spend
  - Use an infrastructure fund with criteria that projects must pass cost-benefits analysis and Infrastructure Australia prioritisation
  - Use Commonwealth funds to leverage other sources of project funding.
- A new intergovernmental agreement that assists in coordinating, incentivising and prioritising privatisation and infrastructure delivery (3.6). This requires:
  - Laying out the rules for funding shares and conditions for Commonwealth supported projects
  - Productivity Commission to review the optimal funding roles at each level of government (underway)
  - States to commit to providing high quality and consistent business cases, producing a privatisation pipeline and investing according to long-term (15+ year) infrastructure plans.

3.2 Recycling funds from privatising public assets

State Governments hold a significant number of assets that could be sold to the private sector. Infrastructure Australia estimates that over $100 billion in equity could be released from the sale of commercial assets owned by governments.[8] The challenge is to find a way to incentivise State governments to sell those assets in a way that maximises value to the community.

BCA: Why private ownership of infrastructure is preferred

Private ownership of infrastructure is generally preferred to government ownership for two key reasons:

- Government ownership of infrastructure locks up limited capital that could be used to fund other worthwhile infrastructure projects; and
- The private sector is better at innovating and running businesses and more likely to deliver better and more efficient infrastructure investments than government businesses.

It is important, however, that private ownership is consistent with achieving policy objectives for efficient investment in infrastructure and protecting the interests of consumers. The public sector's role should be to set policy and regulation that achieves these aims.

Source: Pipeline or Pipe Dream: Securing Australia's Investment Future, Business Council of Australia

3.2.1 Communicate the benefits of privatisation

Despite these potential funding and efficiency benefits there appears to be significant public pushback on the idea of privatising public assets, particularly in the sectors of:

- *Electricity* - where recent price rises have been linked to the carbon tax debate; and
- *Water* - where the public health-aspect of services creates additional sensitivities with respect to privatisation.

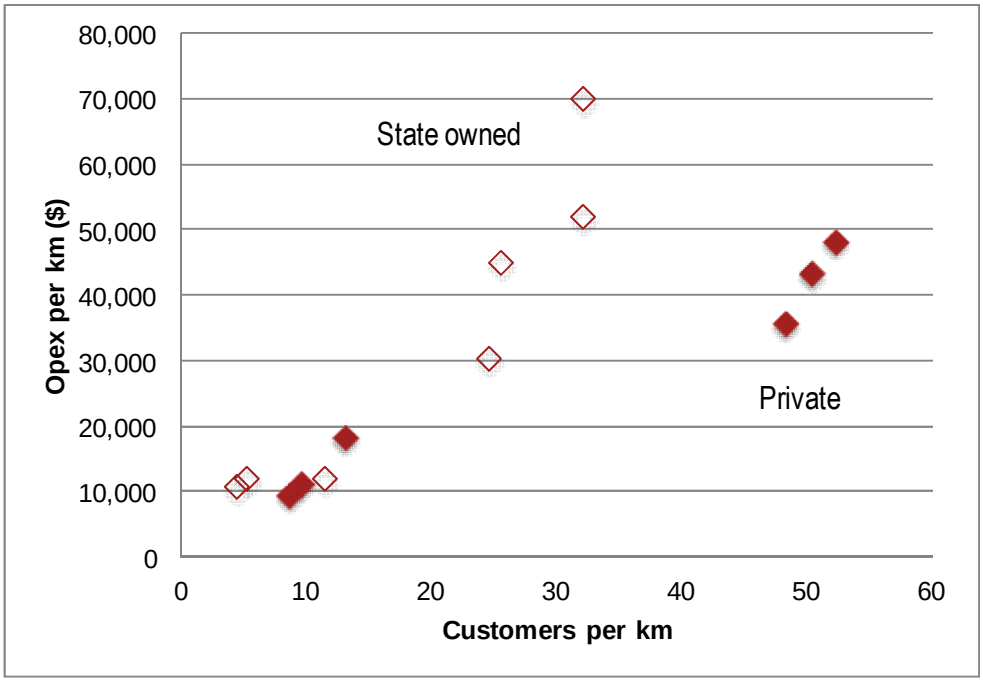
Two key impediments to privatisation are the philosophical opposition that exists in some parts of the community and in some State governments. At least in part, this opposition reflects a lack of information about the benefits of privatisation. Existing research on the benefits of privatisation needs to be drawn upon (or if not already available, then it should be commissioned) and communicated to states and the community.

[8] Infrastructure Australia (18 October 2012), *Press Release: Australia's Public Infrastructure – Part of the Answer to Removing the Infrastructure Deficit*, available at: http://www.infrastructureaustralia.gov.au/media/2012_10_18.aspx

The case for privatisation is very strong. Victoria privatised its major energy generation, transmission and distribution assets during the latter half of the 1990s. Economic regulation by the state-based Essential Services Commission of Victoria (ESCV), and more recently by the Australian Energy Regulator (AER) has seen an improvement in service quality, and energy prices that have risen less than in other states where privatisation has not taken place. Additionally, the privatisation of energy assets arguably has contributed to Victoria having one of the strongest balance sheets of any Australian state.

Similarly, there is research available to show the benefits of privatisation to consumers, and a good deal more could be undertaken to demonstrate these benefits, and articulate the findings to the public at large. One recent example was provided by the NSW Commission of Audit, which found publicly owned NSW electricity businesses are inefficient in comparison with those that are privately owned.[9] Another was the Productivity Commission's recent Draft Report which showed how the cost structures (operating costs per kilometre) of state-owned and privately owned electricity networks differed depending on the degree of customer density (customers per kilometre).[10] As shown in Figure 3.1 below, this cost relationship is much flatter for privately owned networks, reflecting a lower operating cost for customers more so than just that attributable to scale economies in service provision.

Figure 3.1 Operating expenses for state-owned and private businesses



Source: Productivity Commission (2012), p. 21.

9 NSW Commission of Audit (4 May, 2012), *NSW Commission of Audit Final Report*, p.185.

10 Productivity Commission (26 June 2013). *Electricity Network Regulatory Frameworks Report*, available at: http://www.pc.gov.au/projects/inquiry/electricity/report

The sources of State government resistance to privatisation also need to researched and understood. If the impediments can be isolated, policies can be designed to address them.

Recommendation 2A:

Draw on evidence to communicate the benefits of private ownership and funding to the community and state governments

3.2.2 Progressing privatisation

Most Australian states still own a large number of infrastructure assets that are likely to satisfy the BCA's principles for private sector ownership (see Box below).

BCA principles on infrastructure ownership, regulation and pricing

Three criteria should determine whether an asset is owned privately or by governments:

1. Governments should sell infrastructure assets where the private sector already owns other like assets and provides other like services (this effectively demonstrates adequate policies are already in place to protect consumers);

2. Private ownership should be preferred where an appropriate and transparent price can be established for the infrastructure service in any of these three ways:

    a. There is a market price set by an effective and contestable market for the infrastructure service;

    b. There is a regulated price that allows an adequate return on an efficient investment while also protecting the interests of consumers; and

    c. There is a contract price implicit in the availability payments that a government makes to the owner of the infrastructure on behalf of public users (includes community service obligations);

3. Government ownership should only be preferred where a public benefit test demonstrates that government ownership is necessary for achieving the social objectives of infrastructure provision.

Source: Pipeline or Pipe Dream: Securing Australia's Investment Future, Business Council of Australia

Many of these assets are regulated by an independent state or national regulator, and are self funding. Other infrastructure assets are providing community services that are dependent on continued government funding. Both types of infrastructure asset are likely to be more efficiently operated by private sector owners with a profit incentive that is tempered by independent regulation to provide superior outcomes for the community.

As noted by the recent Productivity Commission report on electricity network regulatory frameworks, Tasmania, NSW and Queensland's transmission and distribution networks are state-owned but have conflicting constraints placed on them that do not enable them to operate in a cost-minimising efficient manner. These include social and environmental obligations, requirements to procure locally, prohibitive employment contracts that are not in tune with the rest of the economy and poor governance with politically motivated board appointees:[11]

> There are strong arguments for privatisation of these businesses. There is no evidence that the productivity, reliability, quality or cost performance of private sector electricity network businesses is worse than their public sector equivalents. To the contrary, the evidence in Australia and internationally suggests that such private sector enterprises are more efficient. It should be emphasised that privatisation is not de-regulation. To the contrary, there is a symbiosis between regulation and privatisation. Strong regulation is needed to achieve the private provision of secure, reliable and appropriately priced electricity network services. And privatisation strengthens the effectiveness of incentive regulation.

In light of these funding and operational efficiency benefits, stakeholders suggested the onus should be placed on the states to justify to Infrastructure Australia why the assets they hold should not be privatised or subjected to long term leases.

It is widely recognised that privatisation of the assets held by the states could not, and should not, be achieved over night. In order to undertake a successful programme of privatisation across a number of states, therefore, requires a level of intergovernmental coordination and transparency through a clear privatisation pipeline.

Recommendation 2:

Commonwealth, State and Territory governments should commit to privatising their infrastructure assets for which feasible private sector ownership options exist.

The public is also more likely to support a privatisation program that hypothecates the proceeds to deliver additional infrastructure facilities to the community. Recycling privatisation proceeds through a special purpose vehicle (SPV) will thereby enhance economic activity and productivity and lessen the need for governments to obtain a mandate for the future privatisation of the new asset (once patronage has been proven).

Recommendation 2B:

Funds from the sale or lease of state-owned assets should be hypothecated toward new infrastructure investment.

The States need to be incentivised, and at a minimum, not discriminated against for privatising their infrastructure assets. Hence, the Commonwealth Government should consider scaling back National Partnership (productivity) payments to the states if there is no progress, planning or clear prioritisation pipeline on privatisation of state-owned assets. The Grants Commission (or other schemes for funding transfers) should also not penalise states that have obtained funding for new infrastructure through the sale or lease of state-owned assets. Whilst past practices may not have been ideal, and it may be claimed that this approach would

[11] Productivity Commission, (October, 2012), *Electricity Networks Regulation Frameworks*, Draft Report, Volume 1, pp. 20-21.

discriminate against states that have privatised assets in the past, it is necessary to look forward with policies that will not hamper the privatisation process.

Recommendation 2C:

National Partnership payments to states should be scaled back if there is no progress on privatisation.

It is also important to ensure that the privatised assets are able to achieve their expected efficiency savings. In response to the recent reforms of the Queensland public service, the (former) Commonwealth government introduced the Fair Work (Amendment Transfer of Business) Bill, the aim of which is to:

> ... enable certain employees in Queensland, New South Wales, South Australia, Tasmania and Western Australia to retain their existing terms and conditions of employment where they transfer from a public sector employer to the national workplace relations system as a result of a transfer of a business.

It is understood that these transfer of business protections already apply in Victoria, the Commonwealth and the territories. However, the preservation of job conditions which are uncompetitive constrains the potential efficiencies of privatisation and are a drain on the strength of the economy. The full benefits of privatisation cannot therefore be achieved without also examining the labour efficiencies associated with the asset. From a wider social lens, the efficiency gains that are promoted by privatisation will generate many more job opportunities in the community through releasing funds for the construction of new infrastructure, raising productivity and wealth creation. The Commonwealth's *Fair Work Amendment (Transfer of Business) Act* preserves job conditions post-privatisation. Therefore, this statute should be re-examined to assess the extent to which it is a deterrent to privatisation.

Recommendation 2D:

Re-examine legislation that mandates retention of legacy labour provisions post-privatisation.

3.2.3 Ensure there is an accompanying regulatory regime

Privatised assets require a regulatory regime to ensure that consumer interests are served. Stability and predictability of the regulatory regime is important to encourage investment and innovation. An appropriate balance is required. The Productivity Commission report on electricity network regulatory frameworks noted this, recommending that the interests of the consumer should be the primary influence on regulators. For example, consumer demand for reliability standards should be used for guidance by regulators, rather than having artificially high and more expensive (potentially politically motivated) standards imposed. Over time in energy networks, regulators pass on the benefits of improved cost efficiencies to consumers through reduced transmission and distribution prices. (See specific recommendations for individual infrastructure sectors later in this report)

As emphasised by Infrastructure Australia's recent report (see Appendix A):[12]

> Experience has shown that regulatory regimes can provide protection against the misuse of market power. In particular, independent regulators setting price/revenue paths based on efficient costs and market returns, and setting controls on the quality of service, provide these businesses with similar incentives to deliver the sorts of outcomes achieved in competitive markets.

Recommendation 2E:

Private sector ownership needs to be accompanied by an appropriate regulatory regime and/or contracting arrangements.

3.3 Adopt user pays models and market development

Funding capacity can be expanded if users are willing to pay more for use of (existing and future) infrastructure. Whilst in some sectors significant progress has been made toward the implementation of user pays models and market development, progress has been varied. Proper application of user-pays mechanisms offers scope not just to expand the funding envelope available for infrastructure providers, but also to manage more efficiently users' demands on infrastructure networks and to use price-signals to identify better what service characteristics are most valued by users.

Recommendation 8:

Continue to develop sustainable markets for transport, communications, energy and water based on the principles of user pays and private investment and applying economic regulation where needed.

3.3.1 Develop markets and expand users pays in the transport sector

Roads

Transport charging and funding arrangements are resulting in underinvestment in road maintenance, an inadequate focus on high productivity vehicle access, and potential distortions in the market between road and rail freight transport. Heavy vehicle charges hypothecated to HV road investment and overseen by an independent third party would significantly improve productivity outcomes. Apart from the pursuit of efficiency, reformed road user charges would reduce the funding pressure on governments. We consider that this proposal would be complex and challenging to establish, monitor and manage, but could potentially work.

The Heavy Vehicle Charging and Investment Reform (formally the COAG Road Reform Plan) has estimated a net present value of between $5 billion and $7 billion from the introduction of funding and direct pricing reforms [13]

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[12] Infrastructure Australia (October, 2012), *Australia's Public Infrastructure – Part of the Answer to Removing the Infrastructure Deficit*, p. 36.

[13] COAG Road Reform Plan (4 November, 2011), *CRRP Feasibility Study – Final Report to* COAG, p. 16.

- Providing information to heavy vehicle road operators on the cost of road use through more direct charges and to road providers on the requirements for road infrastructure to meet the freight task (pricing reform) - which means more efficient use and investment in road networks; and

- Creating certainty of sufficient, long term funding by establishing a direct flow of heavy vehicle charge revenue to road providers for investment, operation, maintenance and management of the road network (funding and expenditure reform) - which means growth in the capacity of road networks.

One idea for the roads sector that has recently emerged from work undertaken by the British Confederation of Industry (BCI) is to bundle together a network of major trunk routes and sell them to the private sector. [14] This approach would transfer the management and maintenance of road infrastructure to long term investment vehicles. Private investors would be offered stable capped returns under a variant of Regulated Asset Base (RAB) model that has been successfully applied in energy, water and other transport applications (e.g. ports and rail).

An independent regulator could therefore monitor efficiency gains and returns, with revenue to flow to the private sector owners via a combination of:

- Hypothecated motoring taxes; and

- User charges (such as tolls) that could vary with time of day and other characteristics of the road user.

This framework is expected to initially hold costs constant for road users as a whole, and may result in longer term reductions in costs through greater efficiency in road asset management.

Public Transport

In a recent address to Infrastructure Australia on the issue of user pay models, the Executive Director of the Commonwealth Treasury's Markets Group noted that:[15]

> Many transport markets are certainly imperfect, leading to problems in terms of pricing, overuse and limited ongoing involvement by the private sector. These imperfections have led many governments to traditionally take the lion's share of responsibility for making transport infrastructure investments around this country…
>
> …In the face of competing demands for government expenditure, the traditional approach is proving to be unsustainable, and the community should be encouraged to reconsider its perception of the road network as being a pure public good. One way to address congestion and improve economic efficiency is to consider expanding the scope of user charging.

The high funding cost of transport subsidies was recently highlighted by the report of the Audit Office of NSW which found that during 2011/12 the NSW Government subsidies to public transport operators totalled $4.4 billion. . The purpose of the report was to show that subsidies should be administered to reflect the efficient cost of provision of public transport and the benefits that public goods provide to the community. As shown in Table 3.1, RailCorp fares only cover 20 per cent of operating costs, and State Transit fares cover less than 50 per cent of costs. Furthermore, the trends observed by the Audit Office over the last 6 years show a

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[14] BCI (2012), *Bold thinking – A model to fund our future roads.*

[15] Jim Murphy, (22 March, 2012), *Addressing the infrastructure funding challenge*, Address to Infrastructure, User Pays: Exploring the Myths Of Free Infrastructure Conference, p.2.

picture of gradually declining share of cost recovery from users.[16] This is counter to what would be expected under a reform process that was placing more emphasis on user pays funding models.

Table 3.1 Government funding of the NSW public transport operators

Year ended 30 June	Railcorp		State Transit		Sydney Ferries	
	2012 $	2011 $	2012 $	2011 $	2012 $	2011 $
Cost of services provided per passenger journey	12.52	11.82	2.93	2.88	8.49	8.47
Passenger revenue per passenger journey	2.51	2.37	1.36	1.33	na	na
Net non-fare funding cost per passenger journey	10.01	9.45	1.57	1.55	na	na

Audit Office of New South Wales (5 December, 2012), p.11.

Recommendation 8A

Accelerate reform of road pricing, review transport subsidies.

3.3.2 Complete pricing reforms in energy and water

Electricity networks

The Australian electricity industry broadly comprises three components:

- The National Electricity Market (NEM) which operates in the eastern states;
- The South West Interconnected System (SWIS) which operates separately in south western WA; and
- Other regional networks, particularly in WA and the Northern Territory (NT).

The NEM has developed over the past two decades and now operates on a largely competitive basis, with separation of major generation, transmission and retailing assets in each state. The market features standard regulations, open access and little direct government intervention. There are a large number of privatised entities operating at each stage in this market.

The SWIS developed from the disaggregation of the Western Australian government-owned Western Power Corporation. Since disaggregation, there has been some progress towards the development of competition in generation and retail. This has been assisted by a range of mechanisms including the establishment of a wholesale electricity market, restrictions on the major

16 Auditor General New South Wales (5 December, 2012), *Financial Audit – Focusing on Transport and Ports*, Volume Eight, p.10.

generation business, building more generation plant and restrictions on vertical integration.

Full retail energy contestability and time of day pricing can contribute to lower overall energy costs to industry and consumers. The OECD has recently also called for advanced metering infrastructure, but this equipment requires appropriate pricing products to achieve its efficiency potential. Perhaps more critically, various jurisdictions retain different forms of price caps for retail (and other) customers. These mute price signals to energy users, and limit opportunities for retail competition, service innovation and efficient demand management.

Recommendation 8B

Complete reforms enabling efficient generation capacity and full retail contestability.

Water

The water industry has lagged behind the energy sector in terms of structural reform and vertical separation, although the extent of the gap varies significantly across jurisdictions. During the last two decades, significant governance reforms and a move to more commercial operations in the Australian water industry has occurred.

Past reforms in the water industry mean there is some prospect for more assets to be owned by the private sector. However, the regulatory framework requires further development in most states in advance of this. Both the Productivity Commission and National Water Commission, in their recent reviews of the urban water sector, highlighted the need for clearer delineation between government roles as owner and as general policymaker for the industry. The Productivity Commission recommended that each State and Territory develop governance reform plans to further move their water authorities to a more commercial footing. The National Water Commission went further and recommended that independent economic regulation be expanded across all urban water systems.

An example of the continuing conflicting roles of government is the institutional impediments and policy constraints that prevent (or at least inhibit) trade between rural water users and urban water suppliers. There are opportunities to more efficiently meet demand with reliability-differentiated water supplies. Arguably, these and other opportunities would be facilitated by structural reforms, including privatisation, which enhanced the commercial disciplines and incentives on utilities to efficiently meet customer demand.

In the rural water sector, there are already a number of private businesses in NSW and SA supplying water to irrigators. These businesses are owned by users and are subject to pricing oversight by the Australian Competition and Consumer Commission (ACCC) under the Commonwealth Water Act (2007). However, in the other states rural water businesses remain government owned and are typically subject to a similar governance and regulatory arrangement as applies to (mostly State-owned) urban water businesses. Further reform is required in relation to pricing of non-urban water resources to ensure water is used efficiently and future water supply strategies are appropriate.

Recommendation 8C

Complete pricing reforms in the rural water sector.

Urban water providers in major metropolitan centres currently are regulated by independent bodies that set prices or review prices or the price setting processes. However, the level of independence of these agencies varies, and progress in extending economic regulation outside of major capital cities is patchy. There is an

opportunity to extend full and independent economic regulation to all urban water utilities, allow flexible pricing and governance through sound economic principles. These reforms can also help pave the way towards private ownership of urban water businesses.

Recommendation 8D

Extend full and independent economic regulation to all urban water utilities.

3.4 Facilitate 'value capture' from infrastructure projects

Value capture essentially broadens the notion of 'user pays' to 'everyone who benefits pays', thereby providing Government with an additional potential funding stream.

Value capture allows Governments to partly fund infrastructure investment with the proceeds or uplift in the 'site value' that is created by new infrastructure facilities. The appropriate value capture mechanism depends on the site, the nature of the value that is created by new infrastructure facilities and the most appropriate way in which to capture this value.

An example of this mechanism is where a transport infrastructure project leads to an increase in land values which would not arise if it were not for the particular infrastructure investment. These uplifts in value can be used to secure financing and subsequently fund infrastructure investment. Tax Increment Financing (TIF) seeks to capture those uplifts arising from an investment – typically targeting incremental council rates and land and property sales tax to fund investment. TIF schemes are common in the USA and increasingly are being used in the UK. A common application of TIF is to use it to forward finance and subsequently fund enabling infrastructure for a major civic, transport or urban renewal project.

A second example of a value capture mechanism is the use of an infrastructure levy. Again, there tends to be a nexus between the infrastructure users and those paying the levy, though the relationship can be less direct than is the case through a TIF development. For example, a city wide levy was used to partially fund the development of the Gold Coast Rapid Transit project.

Recommendation 3F:

Capture the value of infrastructure investment and use it to pay for projects.

3.5 Greater funding role for the Commonwealth Government

There is a compelling argument that the Commonwealth Government should play a larger role funding infrastructure in the Federation given its larger, stronger and more efficient funding base. This funding base rests upon the broader tax base and its lower borrowing costs. On the other hand, State Governments whose traditional responsibility has been to fund and deliver infrastructure are facing increasing fiscal constraints due to the growing costs of providing services and a smaller, less efficient tax base.

With the Commonwealth Government beginning to increase its role in the prioritisation and funding of infrastructure, there is a need to redraw roles to aid accountability and reduce disagreements due to overlapping responsibilities:

- Commonwealth Minister – responsible for the Commonwealth envelope of funding for infrastructure;
- Infrastructure Australia – prioritised independent list of nationally significant projects;
- Commonwealth Department – responsible for national policy and funding; and
- States – responsible for planning, funding, execution and delivery.

Recommendation 3:

Define the roles of Commonwealth and State governments to facilitate a greater Commonwealth funding role.

3.5.1 Commonwealth government role

The Commonwealth Government plays an important role in not only funding infrastructure, but also prioritising and coordinating the rollout of this infrastructure. Recommendations for the Commonwealth government's role in funding infrastructure are discussed below.

(1) Change the proportion of the Commonwealth budget allocated to infrastructure. Over the past 15 years the contribution by Australia's infrastructure industries to GDP has equated to approximately a 10-11 per cent share.[17] The fact that the output of Australia's infrastructure industries constitutes a relatively constant percentage of GDP, which is in turn correlated with the size of the Australian Commonwealth budget, suggests that at a minimum target level could be allocated to the building and renewal of infrastructure assets. The Commonwealth Government should then use its policy and prioritisation mechanism to, where appropriate re-allocate funding towards infrastructure where it demonstrates a stronger societal and economic return compared to alternate funding choices. The minimum target could be reassessed periodically – say, every five years – to ensure that it remains current with both the level of high-value infrastructure funding needs and the Government's budgetary position.

Recommendation 3C:

Nominate a minimum target level of Commonwealth spending on infrastructure as a percentage of the Commonwealth Budget.

(2) Consider borrowing to fund priority projects with a positive BCR. This is needed to ensure a continuous flow into high priority projects that are required. Australia is also in a unique position of having a strong fiscal position which could facilitate such borrowings. As noted by Standard & Poor's in its October 2011 affirmation of Australia's AAA credit rating:

[17] Bureau of Infrastructure, Transport and Regional Development (2012), *Australian infrastructure statistics yearbook 2012*.

> Although Australia's public finances have worsened as a result of the global recession, the deterioration has been more contained than for most 'AAA' rated peers, whose steep deficit increases have been more pronounced and may well persist for longer... We estimate that the general government debt burden will rise by two percentage points of GDP to 21.3% in 2011.

Table 3.2 indicates that on a consistent basis, Australia has significantly more borrowing capacity than G7 AAA rated countries, including its closest comparator, Canada.

Table 3.2 AAA rated G7 and Australian net debt: IMF comparable basis (per cent of GDP)

Country	2010	2011	2012	2013
Australia	4.6	9.2	11.7	12.3
Canada	31.3	31.8	31.4	30.7
Germany	76.9	79.6	81.6	82.2
United Kingdom	75.1	82.8	87.6	90.4
United States	66.8	72.3	76.2	80.3

Scott Kompo-Harms (7 April, 2010) p.17

Any subsequent borrowing to fund infrastructure should also meet the following criteria:

- Be included as a 'Threshold' or 'Ready to Proceed' project on the Infrastructure Australia priority list;
- Have a rigorous, published and positive BCR;
- Occur within a AAA rating;
- Have a preference for Treasury bonds; and
- Be ring fenced so they cannot be used to fund recurrent spending (i.e. spending across the general budget).

Recommendation 3E:

Consider Commonwealth borrowing and other measures that use its balance sheet strength to ensure the funding of high BCR infrastructure projects.

In addition to the role of funding infrastructure, the Commonwealth Government also has an important role to play in the prioritisation and coordination of infrastructure delivery. This has primarily been facilitated through the independent prioritisation of Infrastructure Australia and the subsequent rounds of the Building Australia Fund which have been allocated based on Infrastructure Australia recommendations.

The Building Australia Fund can assist in smoothing the application of Commonwealth funds to projects that have been vetted, prioritised and sequenced by Infrastructure Australia. That is, if the Commonwealth Government were to make a continuing commitment to fund infrastructure, given the lumpy nature of infrastructure projects, the Building Australia Fund could act as the 'reservoir' for the detailed allocation funding over time. The strength of using the Building Australia Fund, guided by the independent Infrastructure Australia pipeline, is the scrutiny placed on the projects and the requirement for cost-benefit analysis.

Recommendation 3D:

Commonwealth spending through contributions to an infrastructure fund, e.g. the Building Australia Fund, to be evaluated and prioritised according to the advice of Infrastructure Australia.

Recommendation 1B:

Infrastructure Australia to both evaluate state projects for Commonwealth funding and also take an active role in identifying, analysing and prioritising nationally significant projects. All evaluation and prioritisation to be supported by transparent cost benefit analysis.

Recommendation 1C:

Infrastructure Australia to give preference to opportunities to optimise and upgrade existing infrastructure where that is the more cost-effective option.

A further strength of this approach is the flexibility for the Commonwealth to adopt a range of possible methods for providing support to projects in addition to traditional grants, by choosing the option best suited to the particular project. For example, traditional grants, availability payments, concessional loans, loan guarantees and limited project guarantee (e.g. cap and collar).

Recommendation 4B:

Leverage value by choosing the most appropriate investment amounts and funding options in consultation with IA.

The Commonwealth Government has established a number of GBEs to deliver major infrastructure, including NBN Co and Moorebank Intermodal Company. Major infrastructure projects that are to be delivered through new or existing Commonwealth GBEs should be subject to three conditions:

1) Passing a cost - benefit analysis framework (e.g. IA requirements and BAF);

2) Having the Commonwealth's competitive neutrality framework apply in full; and

3) Having in place legislation that requires privatisation when the investment matures (However, government equity may be appropriate at times).

Constraints on Commonwealth Government investment in infrastructure projects are required to protect the community's interest. The discipline of the Building Australia Fund process, and the application of competitive neutrality are required to ensure that value-for-money is achieved. This is also necessary so that any Community Service Obligations are transparent, so that public interest spending may be separated from the efficient cost of supply. Enshrining a process of divestment through legislation is required in order to ensure efficient operation of the project assets after it matures.

Recommendation 4D:

Where major infrastructure investment is through new or existing Commonwealth (or State) GBEs it should be subject to safeguards or certain criteria, to ensure efficient investment.

3.5.2 Commonwealth– State coordination

The discussion in the preceding section focused on the core role that the Commonwealth Government can play in securing and distributing funding. This section steps beyond this to explore the coordination and working relationship between the Commonwealth and State governments required to underpin the efficient use of both State and Commonwealth funds in the delivery of infrastructure. Specifically, the system of agreements that formalises such issues as the terms of grants, funding models and the required analysis and documentation.

As part of concluding this agreement, parties should request independent advice from the Productivity Commission with respect to:

- The allocation of responsibilities for the strategic management of government owned infrastructure assets; and
- Appropriate public debt / equity funding of infrastructure. (note: this is currently underway).

Recommendation 3A:

Conclude a long term inter-governmental infrastructure funding agreement to set out the amount and terms of Commonwealth-support for infrastructure projects, including that user pays and value capture options.

Recommendation 3B:

Heads of treasuries to request the Productivity Commission to review State and Commonwealth roles in the strategic management and funding of infrastructure (announced).

There is a need to explore Commonwealth – State co-funding models that spread available Commonwealth funds across more projects. This can be achieved under the inter-governmental agreement through developing co-funding models with State Governments. For each project, this model then needs to be able to determine:

- The mix of user pays versus public funding;
- Guidance on how the public funding component will be split between the Commonwealth and State Governments and the best funding mechanism to apply (e.g. grants, payments, loans etc); and
- The balance between conditions tied to the specific use of Commonwealth Government funds, the State Government delivery responsibility and the relative benefits or revenue streams received by both parties.

Recommendation 3G:

Develop new co-funding models between the Commonwealth and the states.

With a number of States providing information to the Commonwealth Government and its agencies, it is desirable that a common framework of input and assessment be applied in order to streamline prioritisation, funding, sequencing and auditing processes. This would also increase the efficiency of the process, reducing inconsistencies in business case and analysis requirements sought by both State and Commonwealth agencies.

Recommendation 1A:

State Governments to provide well-constructed business cases to the Commonwealth based on standardised formats.

Finally, there is also a responsibility on State Governments to produce 15 year fully funded and prioritised investment programs to promote certainty and efficiency in the provision of infrastructure (funding could be guaranteed for first 5 years with published, in-principle commitments for the outer years). By setting out a prioritised 15 year forward plan, the Commonwealth and the States will provide the lead time that is required to facilitate efficient delivery, funding and operation of the nation's infrastructure. This would provide the pipeline of activity that is required, and avoid the development of future 'funding gaps'.

Recommendation 1D:

State Governments to produce 15 year fully funded and prioritised investment programs.

4 Infrastructure financing reforms

4.1 Chapter summary

While the funding of infrastructure is the central challenge this report seeks to advance, this chapter explores options to improve the financing of infrastructure programmes. These options include:

- Improving innovation and risk sharing models (4.2). This requires:
  - Promote the public-private model of project delivery
  - Pursue innovation that improves risk allocation, simplifies project tendering and provides flexibility across industries.
  - Develop financial and project expertise in government to apply to each specific project (4.3).
- Develop capital markets by growing demand for project debt (4.4).
- Reform infrastructure project taxation (4.5).

4.2 Promote public private partnership arrangements

The case for Public Private Partnerships (PPPs) has been made in numerous studies. A major study of 53 PPP and Traditional procurement projects published by Infrastructure Partnerships Australia (IPA) found:

> The cost over-runs experienced by Traditional projects due to a combination of scope changes and contractor efficiency were 35.3 percent. In the case of PPP projects the cost over-run was less than a third of this, at 11.6 percent. However, the most telling findings are provided by the results for Stage 3, which depend largely on the performance of the respective providers. Here we find that for the Traditional projects in our sample, an expected cost of $4.53 billion at signing was over-run to the value of $672.5 million, representing a 14.8 percent increase in cost. By contrast, the $4.95 billion in contracted PPP projects had on average over-run their budgets by only $57.6 million, or 1.2 percent, which is not statistically different from zero.

Experience shows that PPP projects are more likely to be constructed on time (providing faster community access to facilities) and on budget compared to other projects, and also provide lower cost ongoing operations.

Recommendation 5A:

Consider the suitability of PPPs for every major infrastructure project

Supporting successful PPPs from a government perspective requires a central line of sight across the government portfolio of infrastructure assets, and continual learning and refinement of approach. This in turn needs to be supported by the appropriate skill sets, structures and processes to design funding and financing models that are flexible and tailored to specific project and market requirements.

Recommendation 4A:

Build the capability in the public sector to design funding and financing models suitable for each project and be flexible to avoid a one-size fits all approach.

4.2.1 *Improving the PPP model overall*

The Australian PPP model is among the most sophisticated in the world and in recent years Australia has had one of the most active PPP markets.

Although Australia is a leader in the sector, other markets can provide some insight into potential improvements for Australia. A recent survey by Baker & McKenzie identified Canada as the market where Australia could learn most from. Table 4.1 below identifies some of the lessons from Canadian PPPs in more detail.

Table 4.1 What can Australia learn from the Canada PPP model?

Feature	What has Canada done better?	What can we learn in Australia?
PPP agencies	PPP delivery agencies have a strong PPP mandate. All significant capital projects assessed as a PPP.	Assess all projects for PPP potential.
Public interest	Has tackled the Public Interest test 'head on' – and has marketed the benefits of the PPP approach.	Stronger emphasis on promoting the benefits of PPPs.
Strong PPP Pipeline	Has developed a strong PPP Pipeline.	A strong pipeline enhances competition and should be promoted.
Focused on specific sectors	Alberta (roads and schools), Ontario (hospitals).	Develop stronger emphasis around the development of PPP programs in specific sectors which are well suited to PPPs and which are supported by empirical evidence.
Additional Financing sources	Active Bond Market for long term debt, pension funds active investors in PPPs (both debt and equity).	Consider mechanisms to diversify sources of financing.

Source: Baker and McKenzie

Recommendation 5B:

Reduce the costs of delivering PPPs with a and continue to develop the PPP model to allow it to be used in more sectors

4.3 *Improve risk allocation and project tendering*

4.3.1 *Innovative risk sharing models*

A deterioration in the risk appetite of investors for greenfield infrastructure with patronage risks means that new models of government support can be used to deliver private finance and allow the continued use of PPPs.

There are a number of models which can then be explored to achieve the right balance of public / private risk allocation. These models are discussed below, with an expanded discussion of the models contained within Appendix 2.

1. ***Public sector subordinated notes*** *(essentially de-risking a project so debt can be issued against it)*. For certain projects there may be more scope for upside performance through future financial restructuring, when the riskier build and ramp-up phases are completed. Once revenue has stabilised and construction risk is overcome, infrastructure projects, such as toll roads or ports, typically offer stable cash flows with relatively lower risk. This will enable gearing to be increased after a ramp-up period where the forecast is met, with the equity return requirement dropping in line with the characteristics of the "de-risked" project. In these circumstances governments should participate in future upside if public sector capital has been contributed up-front, and one way to achieve this is through government-issued subordinated notes.

   By providing a subordinated loan, a government can bridge gaps in the financial structure between senior loans and equity. These government loans can then be repaid if the project performs as expected with revenues in line with base case forecasts.

2. ***Public Sector minimum guarantees.*** Under a public sector minimum guarantee the government would provide minimum patronage or revenue guarantees for a defined period. The government support could be a contingent guarantee, which would not be triggered unless an adverse outcome emerged. The guarantee could cover debt service, but not necessarily equity. Ideally, the guarantee would fall away once certain revenue thresholds have been met.

3. ***Public sector development company.*** This model is based on the premise that if the private sector is initially unable to cost effectively finance the project because of revenue risk, then the government should take responsibility for the project during the development stage and look to sell the developed project later. The government would design, finance and build the asset and operate and maintain it in the initial years. The intention would then be to refinance the project with private sector capital after it is built and revenue streams have been proven.

4. ***Public sector development company (with availability based PPP delivered infrastructure.*** Government could provide an availability payment structure and separately tender elements of the project with patronage risk. This is the model being developed for the East-West Link project in Victoria.

Recommendation 4C:

Improve risk allocation through appropriate government de-risking strategies.

4.3.2 Improve tendering process

Competitive tendering is fundamental to the development of successful PPP projects. High bidding costs, timing delays, under-estimates in the public sector comparator, and inappropriate risk transfers have all been identified as areas in which the PPP procurement process could be improved. Australian government

agencies are turning their attention to addressing bidding costs. At the end of November, 2012, the Victorian Department of Treasury and Finance published a Discussion Paper with a number of suggested reforms to the nature of the PPP framework operating in Victoria. As noted above, the five key proposed reforms were as follows:[18]

- Reforming the Public Sector Comparator;
- Using modified financing arrangements to deliver value for money in project specific circumstances;
- Expanding the PPP model to include additional services;
- Piloting a trial for reimbursing specified bid costs for significant projects; and
- Developing and implementing a streamlined PPP model for smaller scale projects.

High levels of bid costs have been a constant issue for PPPs. In Canada government typically repays an element of bid costs. The benefits of this are in encouraging strong competition and through the acquisition of the intellectual property from unsuccessful tenders. The key features of this approach include:

- Unsuccessful bidders typically are entitled to a contribution to bid costs;
- Provides partial compensation to cover bid costs with payment being conditional upon:
  - Submitting a fully compliant bid
  - Agreeing to transfer to the procuring authority all intellectual property rights
- Can be paid by the winning bidder to losing bidder(s).

The amount varies by Project and depends upon size and extent of the tender requirements, including the complexity of the project. Table 4.2 shows the value of the contribution for a range of recent Canadian projects.

[18] Victorian Department of Treasury and Finance (November, 2012), *Future directions for Victorian public private partnerships.*

Table 4.2 Bid costs in Canadian PPP projects

Project	Jurisdiction	Project Size ($ CAD)	($m CAD)
Anthony Henday Ring Road	Alberta	$1,420m	$0.5
Calgary NE Ring Road	Alberta	$650m	$0.75
Calgary Stoney Trail	Alberta	$250m	$1.5
Kicking Horse Canyon	British Columbia	$130m	$0.6
Canada Line	British Columbia	$1.9bn	$2.0
Sea to Sky	British Columbia	$600m	$1.5
Autoroute 25	Quebec	$299m	$1.0
McGill University Hospital Centre	Quebec	$1.34bn	$7.7

Government could provide incentives for the private sector to propose new infrastructure projects that are good for the community. There should be no artificial constraint placed on creativity. If the private sector identifies a project that the government has not considered, and is able to demonstrate a value for money outcome to the state, it should be pursued. Such proposals can provide a win-win outcome for the community and investors, and examples in New South Wales include the M2-F3, and harbour Tunnel. The key attractive characteristics of such proposals are their:

- Uniqueness in providing a solution to an infrastructure problem;
- Provision of Value-For-Money to the community;
- Potential to deliver an off-balance sheet nature (e.g. being toll funded); and
- Application of a low-cost staged process that keeps costs low while feasibility is being determined.

Recommendation 1D:

Adopt the NSW practice of considering unsolicited bids from the private sector if value-for-money is expected

4.4 Develop capital markets by growing demand for project debt

4.4.1 Explore where capital markets are under-developed

In Australia there is an ongoing discussion around how to best align the interest of superannuation funds with infrastructure investment needs, especially around the development of long-term greenfield projects. This discussion is in turn part of a wider discussion around the role of superannuation within Australia's financial system, how this has changed consumer savings habits and its role in funding Australia's economic growth. The entirety of this topic will hopefully be addressed in the impending review on Australia's banking system.

From an infrastructure perspective, the benefit of this alignment comes from the potential access to more cost effective long-term funding. Consultation indicated that from a superannuation perspective, funds are not able to gain the yields required based on the infrastructure opportunities currently available to them. Structural barriers around investment mandates and liquidity were also raised as barriers to investment. For example, a significant proportion of Australia's $1.4 trillion funds management industry will be less attracted to greenfield investment than their Canadian counterparts. This is because they are open ended superannuation plans, and not defined benefit schemes (and therefore require liquidity that longer-term infrastructure investment may not provide as effectively).

However, $430 billion is in self-managed superannuation funds, and there is an argument for tapping into this investment (some infrastructure projects in the UK have attracted private investment).

A more effective model for securing access to superannuation fund investment may be the approach in the UK where an 'aggregation' organisation has been formed by the pension industry with a focus on greenfield infrastructure investment.

Recommendation 6A:

Support further investigation into facilitating increased funding of infrastructure projects through both professionally managed and self managed superfunds.

4.4.2 Explore opportunities to improve tenor and term of loans to projects

One of the problems in the Australian market is the relatively short tenor of bank debt and issuance terms in the corporate bond market. For example, while Australian energy transmission and distribution businesses on average issue bonds with a tenor of 10 years, this is partly due to issuance of international bonds with a more than 10 year tenor. In the UK and US capital markets, similar energy utilities, issue bonds with average tenors of approximately 20 years, which reduces re-financing risk and promotes investment in the infrastructure sector.

Greater privatisation would itself promote longer debt terms in the Australian market. For example, privatisation of the energy transmission and distribution businesses in New South Wales and Queensland is likely to require private debt in the order of $50 billion. This debt will need to have a significantly longer tenor than the current arrangements for the state-owned GBEs, whose debt facilities are underwritten by the state finance corporations (like QTC and the NSW Treasury Corporation). Current tenors are much shorter due to the fact that the state governments face much less re-financing risk (which is underwritten by the tax payers of the states).

Privatisation would also have a significant positive effect on the development of the Australian bond market, since the large number of state-owned corporations currently distorts the market by reducing demand for long term corporate investment grade bonds. Electricity and water network businesses have a natural demand for longer term corporate bonds, since they wish to reduce refinancing risk and more closely match tenor to the age of the assets. In the UK the privatised electricity and water businesses issue debt with tenors of approximately 20 years.

However, in Australia the state-owned energy and water companies obtain their debt from state-based central borrowing agencies, which can issue the state's paper, and are therefore not as exposed to potential financial crises. Since refinancing risk is thereby virtually eliminated for state-owned network businesses, they rely on shorter term debt that has been raised by their respective central

borrowing agency. Privatisation of the electricity and water networks would eliminate this market distortion, and create a natural demand for long term corporate bonds in the Australian market. This would provide spinoff benefits for corporates outside of the utilities sector, which would then be able to issue long term Australian bonds.

Privatisation would also have a positive effect on the Australian equity market, by providing greater balance through a lower risk component to the market portfolio, which is currently dominated by resources and bank stocks. This was another aim of the original privatisations in the UK, which helped cement London's pre-eminence as an international financial centre in the 1980s and 1990s.

Recommendation 6B:

Promote privatisation to develop demand for longer term debt, and improve liquidity in the Australian bond market

To support the market development that is associated with privatisation, the Commonwealth Government could play a role in issuing bonds that have tenors exceeding 30 to 50 years. This is an issue industry has discussed in the past, with proponents suggesting that the Commonwealth's role is to issue longer term bonds to underpin the market.

Recommendation 6C:

Explore issuing Commonwealth bonds with a 30 to 50 year tenor to encourage and underpin a longer term debt market.

4.5 Reform project taxation

As noted by the IFWG paper, under the current Australian taxation system, tax losses that are created in the early stages of a project can't be used until the project has sufficient income in future to offset the tax loss. This reduces the value of the tax loss due to the time value of money, and if there are changes in the nature of the project or ownership, they may be lost completely.

As part of the 2011-12 Budget the Commonwealth announced a reform that would allow infrastructure projects assessed as nationally significant by Infrastructure Australia to potentially be able to have the value of early stage losses uplifted over time. This uplift is at the Commonwealth bond rate, and the program is subject to an expenditure cap of $25 billion up to 30 June 2017. Performance of the scheme should be reviewed upon this completion date with the aim of subsequent extension or modification to further support investment in infrastructure, if found to be having a positive effect.

Additional distortions in the taxation of infrastructure which should be addressed include:

- Allowing infrastructure investments to be treated as eligible investments for flow-through trust taxation;
- Allowing unit trusts to utilise carry forward tax losses on the same basis as companies; and
- Exempting interest and dividends from taxation for Australian superannuation funds in the same manner as foreign exempt pension funds.

Recommendation 7:

Promote taxation reform that can counteract the existing bias against long term savings and investment in infrastructure. Specifically:

- **7A**: Support the current Infrastructure tax loss incentive scheme.
- **7B:** Allow infrastructure investments to be treated as eligible investments for flow-through trust taxation.
- **7C:** Allow unit trusts to utilise carry forward tax losses on the same basis as companies.
- **7D:** Exempt interest and dividends from taxation for Australian superannuation funds in the same manner as foreign exempt pension funds

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Appendix A Recent reports on infrastructure funding and financing in Australia

1 Infrastructure Finance Working Group

The Infrastructure Finance Working Group (IFWG) was established to provide Infrastructure Australia with advice on infrastructure funding and financing policy issues.[19] The expert advisory panel included senior Commonwealth Government officials as well as senior private sector practitioners in the financing and delivery of major infrastructure projects. The terms of reference were to:

- Advise Infrastructure Australia on the implementation of certain measures of the 2011-12 Commonwealth Budget relating to infrastructure investment;
- Identify and advise on impediments and options for reform to infrastructure finance policy; and
- Advise on the role of private finance, user charges and alternative finance models in the provision of public infrastructure.

The IFWG subsequently delivered thirteen recommendations that were grouped into three broad policy objectives:

- Reform of funding arrangements:
  - Increase the capacity to invest through user charging;
  - Identify and monetise existing assets;
  - Capture additional value from infrastructure investment;
  - Australian Government place higher priority on infrastructure funding;
  - Australian Government consider co-funding and other flexible funding models; and
  - Incentivise Australian Government payments to the States.
- Better planning:
  - Prepare long-term strategic plans

[19] Infrastructure Funding Working Group (April, 2012), *Infrastructure Finance and Funding Reform*.

  - Develop transparent, robust and funded pipeline
  - Reduce the cost of procurement and coordinate investment nationally
- Efficient Markets:
  - More flexible refinancing risk allocation
  - Diversify sources of debt
  - Facilitate greater superannuation investment

2 *Infrastructure Australia on funding and financing*

As part of its ongoing program, in June 2012 Infrastructure Australia provided its report to the Council of Australian Governments (COAG) titled Australian Infrastructure – Progress and Action.[20] Noting the criticality of infrastructure to national productivity, economic growth and overall wellbeing, Infrastructure Australia emphasized the central position of infrastructure as an enabler for the growth and performance of the economy.

Infrastructure Australia also highlighted some of the key challenges confronting the funding, provision and operation of infrastructure today. These include:

- The funding constraints of government, which are causing governments to avoid difficult questions that need to be resolved;
- The need for the community to come to terms with and debate the need for user charges for infrastructure services, and how these might impact cost of living;
- The need to understand the future costs that are imposed in the absence of adequate infrastructure provision; and
- The need to undertake regulatory reform.

Infrastructure Australia considered that the way forward, in order to build on progress to date, is to concentrate further effort on improving performance in:

- *Strategic planning* – establishing credible long-term infrastructure plans, which focus on better use of existing infrastructure as well as new capital investment;
- *Funding and financing* – implementing initiatives to increase the pool of funds available to invest in new projects, and use more efficient financing mechanisms, particularly in partnership with the private sector; and

[20] Infrastructure Australia (June, 2012), *Australian Infrastructure – Progress and Action: A report to the Council of Australian Governments.*

- Governance and reform – making meaningful improvements to existing policy and regulatory arrangements to make infrastructure markets more responsive to community needs and market demands.

3 Productivity Commission report on electricity network regulation

The main conclusions and recommendations of the Productivity Commission's draft report on Electricity Network Regulatory Frameworks were as follows:[21]

- The pre-eminence of the consumer as the main consideration when making regulatory and policy decisions should be made primary objective:
- Australian governments should create an industry funded representative energy consumer body with the expertise to be an effective participant;
- Peak demand – 25 per cent of retail electricity bills are required to meet approximately 40 hours of critical peak demand each year. To defer the costly investment involved in building a network to cope with this high demand the Productivity Commission proposed a phased and coordinated suite of reforms, including:
  - Time-based pricing of network charges that reflect the underlying network costs;
  - Signal critical peak prices to consumers in advance — to encourage people to shift the time of their power use (hot days are predictable);
  - The use of smart meters and associated technologies to determine people's electricity consumption over time;
  - Phasing out of retail price regulation, which would otherwise frustrate time-based charging and stifle retail competition and innovation;
  - Large industrial customers are already exposed to critical peak pricing via their metering systems and this should be extended to all business which could provide a relatively low cost and more rapidly achieved source of critical peak load reduction.
- Reliability standards are too high, and should be based on what customers actually want, rather than through prescriptive (sometimes politically influenced) standards.
- Privatisation is recommended. Tasmania, NSW and Queensland's transmission and distribution networks are state-owned but have conflicting constraints placed on them that do not enable them to operate in a cost-minimising efficient manner. These include social and environmental obligations, requirements to procure locally, prohibitive employment contracts that are not in tune with the rest of the economy, and poor governance with politically motivated board appointees:

[21] Productivity Commission (October, 2012), *Electricity Networks Regulatory Frameworks – Draft Report.*

> There are strong arguments for privatisation of these businesses. There is no evidence that the productivity, reliability, quality or cost performance of private sector electricity network businesses is worse than their public sector equivalents. To the contrary, the evidence in Australia and internationally suggests that such private sector enterprises are more efficient. It should be emphasised that privatisation is not de-regulation. To the contrary, there is a symbiosis between regulation and privatisation. Strong regulation is needed to achieve the private provision of secure, reliable and appropriately priced electricity network services. And privatisation strengthens the effectiveness of incentive regulation.

4 Infrastructure Australia on privatisation of infrastructure

Infrastructure Australia's October 2012 report on the role of privatisation in removing the infrastructure deficit coincided with the release of the Productivity Commission's draft report on Electricity Network Regulatory Frameworks, which also advocated privatisation. Recognising that privatisation is needed to drive the productivity growth that underpins economic growth, Infrastructure Australia was also cognizant of the concerns that privatisation presents to some members of the community:

> Infrastructure Australia recognises that some members of the community have genuine concerns about the private sector owning or controlling infrastructure that has long been in public hands. There is evidence that those concerns can be addressed through appropriate regulatory structures that maintain service levels, provide pricing protection to consumers and preserve environmental standards. In addition, social objectives can be more effectively and transparently provided through community service obligations.

Economic benefits due to privatisation are derived from:

- *Productive efficiency gains* – with the competition for debt and equity capital providing incentives for businesses to reduce costs in order to increase profitability;
- *Allocative efficiency gains* – due to broader public policy objectives being removed with government ownership, providing businesses with the incentive to better respond to market demand; and
- *Dynamic efficiency gains* – with private sector owners having the incentives to undertake investments in long term innovations that will drive profitability (with regulatory arrangements ensuring that these gains are shared with customers).

Infrastructure Australia also provides a number of case studies demonstrating the benefits of privatisation:

- Hobart Airport
- QR National
- Golden Casket
- Sydney Desalination Plant

A number of industries with assets available for privatisation were reviewed by Infrastructure Australia, including:

- Electricity generation
- Electricity transmission

- Electricity distribution
- Electricity retailers
- Water bulk
- Water distribution and retailers
- Airports
- Capital City Ports
- Bulk Ports
- Freight Rail (ARTC and residual QR National holding)
- Plantation forestry

Potential privatisation proceeds in these industries were estimated based on relatively conservative methodologies (e.g. 1.1 to 1.2 times Regulated Asset Base for network assets, 12 to 14 times EBITDA for electricity generation, and 13 to 15 times EBITDA for bulk ports). These valuations revealed an enterprise value range of $195 billion to $219 billion, and an equity value range of $118 billion to $140 billion.

5 Infrastructure NSW

Infrastructure NSW has released its *State Infrastructure Strategy 2012-2032: First Things First*, which is an assessment of priority infrastructure problems and solutions for the next two decades for the state of New South Wales.[22]

The report covers urban and regional projects and reforms across transport, freight, aviation, energy, water, health, education and social infrastructure. It recommends 70 projects and reforms that should take priority over the next five, 10 and 20 years to drive productivity and economic growth. These priorities are expected to cost a total of $30 billion over 20 years, but are expected to add $50 billion to the State's economy and create an extra 100,000 jobs.

After deducting assumed user funding of $10 billion, the incremental cost to the State is $20 billion over 10 years. This averages about $1 billion per year compared with total NSW Government capital expenditure of about $15 billion per annum. Infrastructure NSW Chief Executive Paul Broad said:

> The State Infrastructure Strategy 2012-2032 had been developed to be affordable and realistic - and to stop the productivity slide. It is about a first-things-first approach to put in place the basic platforms for growth to deliver a sustained improvement in economic performance, which will contribute to individual prosperity.

[22] Infrastructure NSW (October, 2012), *First things first – A 20 year Infrastructure Strategy*.

Funding Strategies

Six funding strategies were identified by Infrastructure NSW:

- *Motorway Tolls* – It was recommended that tolling be applied only on new and upgraded roads, which would allow an incremental introduction of distance based tolling on the Sydney motorway network as it is expanded over the next 20 years;
- *Restart NSW* – As the Government's asset sales program proceeds, Infrastructure NSW will provide advice to Government on the use of Restart NSW to fund the delivery of the prioritised projects;
- *Reduction of public transport subsidies* – Consistent with the NSW Commission of Audit, Infrastructure NSW recommends that the NSW Government reduce the proportion of funding that transport agencies receive from public subsidy to the levels determined as efficient by IPART. This will be achieved through a combination of operational efficiencies and modest fare rises;
- *Reprioritisation* – Infrastructure NSW will develop the Five Year Infrastructure Plan in conjunction with Treasury and Agencies. This process will consider opportunities to reprioritise capital works to allow the priorities identified in the Strategy, where endorsed by the Government, to proceed;
- *Commonwealth* – Infrastructure NSW will develop and co-ordinate funding submissions to Infrastructure Australia that best respond to Infrastructure Australia's key themes and challenges; and
- *Value Capture* – Infrastructure NSW supports the use of targeted value capture mechanisms, including special purpose property levies, in situations where there is a clear link to new infrastructure.

Financing Strategies

- *Public Private Partnerships (PPPs)* – PPPs should continue to be considered for all major infrastructure projects, consistent with past practice, subject to meeting value for money hurdles set out under the National PPP Guidelines;
- *Cost of Capital* – The current differential between public and private cost of capital, if sustained, requires an evolution of the PPP model to ensure value for money to the Government;
- *Risk Allocation* – Infrastructure NSW recommends a limited reassessment of PPP risk allocation as required by market conditions, recognising that any changes must demonstrate value for money to Government; and
- *Sources of Capital* – Infrastructure NSW recommends that the Government continue to engage with the Australian superannuation industry regarding a risk transfer arrangement for greenfields investment that represents value for money to taxpayers;
- *Procurement* – Output specifications, rather than input specifications, should be used for the procurement of major infrastructure projects. This approach is most likely to improve the value for money in infrastructure procurement, by encouraging private sector innovation;

- *Project contingency* – Contingency for major infrastructure projects should be managed in a transparent fashion at the centre, in order to improve management.

However, Infrastructure NSW concluded that:

> ...it is highly unlikely that Government spending on infrastructure can be materially increased in real terms during the next 20 years without threatening the State's credit rating and increasing NSW's cost of borrowing.

6 Victorian Department of Treasury and Finance

At the end of November, 2012, the Victorian Department of Treasury and Finance published a Discussion Paper with a number of suggested reforms to the nature of the PPP framework operating in Victoria. The five key reforms were as follows:[23]

- *Proposed reform 1: Reforming the Public Sector Comparator* – The Public Sector Comparator (PSC) is an important part of the PPP process, as this has an important bearing on the assessment of the value-for-money of the PPP proposal. The Victorian Department of Treasury and Finance note that this measure may change during the process of a PPP, and suggests that an independent technical adviser be appointed to review the PSC for each PPP prior to the Request for Proposal (RFP) stage.

- *Proposed reform 2: Using modified financing arrangements to deliver value for money in project specific circumstances* - The issue here is how much 'skin in the game' does the private sector require to drive innovative performance outcomes. It is unlikely that private sector investors need 100 per cent in order to have a strong incentive to perform, which means that the government can provide the remainder. This is particularly relevant in current market conditions, with higher private sector debt margins.

Table A.1 Examples of modified structures across jurisdictions

Where	Project	Where and when
Queensland	Gold Coast Rapid Transit	45 per cent of capital during construction
Queensland	Sunshine Coast University Hospital	50 per cent of capital during construction
Victoria	Victorian Comprehensive Cancer Centre	30 per cent of capital during construction
NSW	Convention Centre	Percentage of capital cost post completion
Canada	Infrastructure Ontario project	30-80 per cent of projects post completion
Canada	British Colombia projects	40-60 per cent of projects during construction

Source: Victorian Department of Treasury and Finance (November, 2012)

[23] Victorian Department of Treasury and Finance (November, 2012), *Future directions for Victorian public private partnerships.*

- *Proposed reform 3: Expanding the PPP model to include additional services* – According to the Victorian Department of Treasury and Finance:

  > Where the private sector is responsible for a greater range of services, government may achieve improved efficiencies and service outcomes. When applied appropriately, greater private sector involvement in service delivery can also provide a catalyst for system wide reform and improving performance.

Hence, the Victorian Government is considering extending the package of services, including both core and ancillary services for all future PPPs.

- *Proposed reform 4: Piloting a trial for reimbursing specified bid costs for significant projects* – There needs to be a rationalisation of information required from bidders, in order to keep costs down. It is also proposed to experiment with cost reimbursement, potentially funded by the successful bidder, in exchange for intellectual property in the unsuccessful bid.

- *Proposed reform 5: Developing and implementing a streamlined PPP model for smaller scale projects* – The Victorian Government is considering adopting the UK approach of tailoring its PPP model to drive value for money in frequent procurement for some classes of infrastructure (e.g. housing).

7 OECD

The most recent OECD Economic Survey of Australia notes that Australia's exceptional performance through the global financial crisis, resulting in 21 years of uninterrupted economic growth. However, continued good performance will require 'resolving infrastructure bottlenecks through better planning and more efficient financing and use of infrastructure.' Specific recommendations include:[24]

- Improve infrastructure outcomes by reducing the complexity of governance and provision of infrastructure investment and ensuring a more effective planning. Remove barriers to private participation in financing infrastructure investments. Continue efforts to increase the effectiveness of public-private partnership processes and improve approaches to managing risks of such projects.

- Broaden the use of road user charges. Introduce location-specific and time-varying congestion charges for road infrastructure in large cities. Move towards more cost reflective prices in the water sector. Install advanced metering infrastructure ('smart meters') for electricity to promote energy-efficient consumption choice.

[24] OECD (December, 2012), *OECD Economic Surveys – Australia*, Overview, p.2.

Appendix B *Financing models*

1 Public Sector subordinate notes

For certain projects there may now be more scope for upside performance through future financial restructuring, when the riskier build and ramp-up phases are completed. Once revenue has stabilised and construction risk is overcome, infrastructure projects, such as toll roads or ports, typically offer stable cash flows with relatively lower risk. This will enable gearing to be increased after a ramp-up period where the forecast is met, with the equity return requirement dropping in line with the characteristics of the "de-risked" project. In these circumstances governments should participate in future upside if public sector capital has been contributed up-front, and one way to achieve this is through government-issued subordinated notes.

By providing a subordinated loan, a government can bridge gaps in the financial structure between senior loans and equity. These government loans can then be repaid if the project performs as expected with revenues in line with base case forecasts. The government would have the right to receive a share of ongoing revenues as interest on the loans, subject to a cash flow 'waterfall' that safeguards senior lenders' debt service. Early repayment of the subordinated loans would occur if a favourable refinancing of the asset can be completed once it is operationally stable and generating surplus net cash flows.

Subordinated loans would be repaid after debt service on senior loans but before returns to equity holders, and upside returns could be generated when revenues exceed the base case and/or through refinancing parameters exceeding base case assumptions. The model could incorporate mechanisms for government to share in these up-side returns.

The timeframe for repayment of the subordinated debt to the government would need to be structured as medium to longer term, with repayments occurring at the back end of the concession so as to be consistent with the priority given to senior debt. This will commit government to long term investment, but also provide potential for early recycling of capital under favourable refinancing scenarios.

A challenge of public sector subordinated notes is how to resolve inter-creditor issues between the government and the senior debt providers, as the government is playing two roles (lender and procurer). The government would face restrictions on exercising typical creditor rights that would force termination.

Public sector subordinated notes have been used in:

- *Spanish toll roads* – partly funded through Subordinated Public Participation Loans (SPPLs) to mitigate regulatory risk and in some cases traffic risk.

- *M2 toll road, New South Wales* - Subordinated rates were used on the M2 toll road as a mechanism to share in revenues rather than participate in funding. The M2 toll road project was delivered around a concession deed which provided for government to receive a rent in consideration for the granting of the concession. The financial viability of the project was assessed through a base case financial model and a target equity return was set as a hurdle.

- *Student Housing Projects* - Australian universities have been asked by the private sector to contribute part of the capital cost of providing student accommodation on campus, in order to make projects financially viable while still providing affordable rents for students. Rather than the University capital being provided in the form of a grant, Universities have examined the prospect of their capital being repaid through sharing rental revenue. Surplus revenue can be generated, for example, if rental escalation occurs at a greater than anticipated rate over a full concession term, or if target occupancy rates are exceeded.

- *Transport Infrastructure Finance and Innovation Act (TIFIA) program, USA* - The three largest infrastructure PPP projects to reach financial close in the USA in 2009 all featured subordinated debt from the TIFIA Credit Program. For eligible surface transportation projects, TIFIA offers three types of credit assistance: direct secured loans, loan guarantees and standby lines of credit. The secured loan has been the most commonly used form of support and provides deferred repayment schedules (up to 35 years), fixed interest rates equivalent to treasury rates, potential deferral of debt service for up to five years post commencement of operations and flexible amortisation schedules. TIFIA fills market gaps and leverages private co-investment by providing supplemental and subordinated capital for up to a maximum of 33% of eligible project costs. Until the equity hurdle return was achieved, the concessionaire could elect to provide promissory notes in lieu of rent.

2 Public sector minimum guarantees

Under a public sector minimum guarantee the government would provide minimum patronage or revenue guarantees for a defined period. The government support could be a contingent guarantee, which would not be triggered unless an adverse outcome emerged. The guarantee could cover debt service, but not necessarily equity. Ideally, the guarantee would fall away once certain revenue thresholds have been met. Depending on the accuracy of the forecasts to which the guarantee relates, the guarantee could fall away as early as three to four years after the new infrastructure has been opened.

The minimum patronage or revenue threshold could be set below (e.g. 10 per cent to 30 per cent) the expected base forecasts, reducing government exposure, while providing coverage sufficient to protect debt capital. This would maintain the private sector's financial incentive in the project. The concessionaire would enter into a revenue sharing agreement under which it shares a percentage of revenue with the government once a threshold is exceeded. The government's share of the upside can be utilised to fund other infrastructure projects.

Under such an approach the majority of the project risks would be transferred to the private sector, however, the government would retain an exposure to demand risk for the project until the time that the guarantee falls away.

Public sector minimum guarantees have been used in:

- ***Latin America and Asia*** - Minimum revenue and traffic guarantees are common forms of government support in most Latin American countries, such as Mexico (e.g. the City-Toluca project), Chile (e.g. the South Access to Concepcion project and the Talca-Chillan project) and Columbia (e.g. the Buga-Tulua project and the El Cortijo-El Vino project), and in Korea.

- ***The Sydney Harbour Tunnel*** – This was the first modern private sector owned toll road project in Australia. The RTA makes monthly payments to the concessionaire to meet its financial obligations in relation to the tunnel operations. Debt was provided in the form of bonds with a State guarantee.

The concessionaire is guaranteed an Ensured Revenue Stream "ERS" over the term of the lease. Full market (traffic) risk resides with the RTA. The ERS payment is calculated by reference to a formula which is based on theoretical traffic volumes, a toll, bridge toll collection costs, actual tunnel toll revenues and a weighted index. The ERS effectively guarantees all of the debt service. As a result the project was virtually fully financed with debt. Compared to the minimum guarantee model outlined above, the guarantee from government for the Sydney Harbour Tunnel bonds never expired and minimal private finance was raised as a result, reflecting the reluctance of the market to take on risk at that time.

3 Public sector development company

This model is based on the premise that if the private sector is initially unable to cost effectively finance the project because of revenue risk, then the government should take responsibility for the project during the development stage and look to sell the developed project later. The government would design, finance and build the asset and operate and maintain it in the initial years. The intention would then be to refinance the project with private sector capital after it is built and revenue streams have been proven.

In the case of a toll-road, government could set up a special purpose company funded with debt and equity to develop the project (call it 'Toll-road Company'). When the underlying road is built and the traffic levels are established, the government could look to sell Toll-road Company to the private sector. The risk profile of the project has been mitigated and the realisation of the consequent uplift in value goes to the government. The uplift received from the project would be invested in future infrastructure projects.

Under a government funded approach, the government could enter into a long-term operations and maintenance (O&M) contract with an O&M provider. The provider in the early stages of designing and developing the asset to ensure the asset is developed with efficient operations and maintenance in mind. This would mimic some of the attributes of private finance, by encouraging a whole of life approach to the project.

Once construction has been completed and there is a proven usage track record for private sector investors to assess, there should be a robust transition plan for how the asset is to be sold to the private sector. The transition plan will need to ensure continuity of satisfactory levels of service.

Under this model government retains substantially all project risks as principal, until the project is divested. The significant risk of this model is that government may not ultimately be able to sell the project to recover its development cost, for example, where sustainable project revenue is insufficient to generate acceptable commercial returns.

A public sector development company has been used in:

- ***Queensland Motorways*** - Queensland Motorways Limited was established in 1995, as a wholly-owned entity of the Queensland Government, operating the Gateway Bridges, the Logan Motorway, the Port of Brisbane Motorway and the Gateway Extension. The Queensland Government included Queensland Motorways, with a market value of around $3 billion, as part of its privatisation program. In 2010-11, Queensland Motorways was sold to the State's investment arm, Queensland Investment Corporation (QIC). QIC paid an agreed market value, which resulted in $3.1 billion of direct government debt being repaid.

- ***Queensland ports*** - As part of the successful asset sales programs conducted in Queensland, the Government disposed of established port infrastructure, including the Port of Brisbane and Abbot Point Coal Terminal. The Government was able to generate a significant return of capital to the Queensland taxpayer by selling assets that the Government had originally constructed and financed, and had assumed the operating risks of. As the assets had been significantly de-risked, the private sector was able to make an informed investment decision regarding the likely risks and returns that would be generated.

4 Public sector development company (with availability based PPP delivered infrastructure

This model is a refinement of the government owned development company model described above, but with availability based PPP delivery of the underlying project assets:

- The private sector designs, builds, finances, operates and maintains the asset for the concession term. Thus, this model addresses the key weakness of the previous model, through benefitting from the value that can be delivered through (1) a whole of life approach to project delivery, (2) effective transfer of associated risks to the private sector and (3) private sector innovation.

- Payments are made by the government to the concessionaire based on the availability of the asset after construction. These payments are used to repay the private sector funding and provide a return to equity providers. The payments are reduced if the asset is not available in an agreed condition throughout the concession term.

- Government would receive third party project revenues (e.g. toll revenue) and retain the risk on its forecast of these revenues.

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.

It would be possible to retain the PPP structure for operation of the underlying assets and simply divest the revenue stream under a separate franchise or concession. However, the inclusion of PPP delivery of the underlying assets would likely limit (but not eliminate) the market for future divestment of government's interest in the project. This is because under this model, government would essentially be selling the entitlement to the future revenue stream only.

Experience shows that PPPs are much more likely to be constructed on time (providing faster community access to facilities) and on budget compared with traditional approaches, and provides lower cost ongoing operations.

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