



**Building Australia**

New models for financing infrastructure | April 2013

Pottinger

## About Pottinger

Our clients say that we offer a completely different proposition to traditional consulting and investment banking advisors, seamlessly integrating true strategic thinking, commercial insight, financial expertise and execution excellence. Our assignments typically relate to one or more of:

- Strategy and public policy
- Mergers and acquisitions
- Partnerships and joint ventures
- Restructuring and capital advice
- Risk, sustainability and related decision-making

Our approach to every assignment reflects a fundamental belief that strategy, business and execution perspectives must underpin any business initiative if it is to be commercially successful and stand the test of time.

Together our team has advised on over 200 M&A and financing transactions, as well as many significant strategic advisory assignments. Our first hand experience covers most of the world's larger economies, and we are accustomed to working on complex assignments across borders and cultures.

We are highly regarded for our investment in people, most recently being profiled by the Australian Workforce and Productivity Agency as a role model for effective skills development in financial services. In addition, Pottinger is the only organisation ever to have won the ABA's "Recommended Employer" award for six years in a row.



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# 1. Executive summary

## 1.1 New models for building Australia's infrastructure

Australia has a pressing need for substantial infrastructure investment to support the nation's long-term growth. Key areas include metropolitan road and rail transport networks, long distance inter-city travel, social infrastructure such as hospitals and schools, and national fibre consumer telecommunications. In the post-GFC environment, financing constraints mean that traditional PPP models cannot be used for projects significantly larger than \$2bn to \$3bn. Indeed, for these projects the choice of a conventional PPP may constrain competition, increase pricing and place additional pressure on government balance sheets.

New delivery models and financing structures are needed to tackle these challenges. Marginal refinements of existing PPP structures cannot unlock the private sector financing required or attract the interest of sufficient competition from construction companies to deliver the infrastructure needed to ensure Australia's continued growth, competitiveness and prosperity.

This white paper explores a range of potential solutions to these challenges that Pottinger has developed and field tested with investors and finance providers over the last three years. These are well-suited to Australia's needs, and are relevant to other major economies that need to access private sector capital to finance infrastructure construction or renewal.

## 1.2 Leveraging global capital and construction capacity

There is substantial global investor demand for assets that offer stable long-term returns, particularly where these include inbuilt inflation protection. Many infrastructure assets offer these characteristics, so long as they do not include exposure to initial construction or the uncertainties associated with greenfield patronage risk. Traditional PPP structures embed construction risk, making them unattractive to most long-term investors, limiting investor appetite to a relatively small pool of specialist investors happy to take such risk.

Many large construction companies are seeking to establish new platforms for growth, to make up for a low growth outlook in their traditional home markets. From our regular dialogue with these companies, we know that Australia offers attractive potential, so long as they can be confident that they will be able to win a reasonable share of new business in the face of competition from domestic Australian competitors with long-established government relationships. Recent market soundings confirm that traditional PPP structures are now likely to limit the number of participants in final tender rounds to two, making it highly challenging for new entrants to bring forward fully funded proposals for larger projects. This reduces competition and potentially increases costs.

Historically, initial public offerings have commonly been used to privatise major utility companies, as they offer a practical mechanism to sell businesses that may be too large for individual companies or consortiums to purchase. Listed investments of this nature are not necessarily attractive to long-term infrastructure investors, however, who prefer stable, smoothed returns and the certainty of long-term ownership, rather than the volatile valuations that can result from mark-to-market valuation of minority investments in listed companies.

Pottinger has developed a number of new delivery models and financial structures designed to address these particular challenges and opportunities, as well as a series of related measures which can readily be introduced by Federal and State Governments for little or no cost to improve the competitiveness of Australia's infrastructure delivery sector as a whole.

## 1.3 Converting infrastructure bonds

By combining a conventional government-financed "Design, Build and Operate" construction contract with a forward sale of the asset in question on guaranteed, pre-specified terms, the construction phase of major projects could be funded using low cost government debt, whilst ensuring that the capital cost of the asset and associated interim borrowings are transferred off the government balance sheet at completion.

The end result would be identical to a conventional PPP, but risks would be better matched. In particular, construction companies would accept and manage construction risk, and long-term investors would accept long-term ownership risks. Importantly, this approach would allow project proponents to access a much larger pool of investment capital to deliver major projects, as long-term investors would be protected from short-term construction risks. This would allow more projects to be financed, and at lower cost, than using conventional PPPs.

Meanwhile, during the construction phase, financing would be provided by long-term investors subscribing for government bonds, which would convert into equity ownership once construction had been satisfactorily completed. Thus, debt taken on by the government to finance construction would be clearly matched against the asset in question. There would be absolute certainty that this debt would be extinguished once construction was complete, reducing or eliminating any potential short-term impact on state credit ratings.

#### **1.4 Initial superannuation offerings (“ISOs”)**

By combining the principles of a conventional IPO with a private ownership model for infrastructure, institutions and governments would benefit from a more open and lower cost mechanism to allow investors to provide long-term capital to existing infrastructure assets.

The structure would be relatively straightforward to implement. The business in question would be prepared for sale following typical pre-IPO processes. Appropriate public company governance and management arrangements would be introduced as needed. Superannuation and other interested investors would bid for direct ownership of shares in the company, without the need to participate in bidding consortiums. Following the ISO, the company would be a prudently leveraged, unlisted public company, and investors who wished to increase or reduce their holding would negotiate private transactions amongst themselves.

The ISO structure preserves the advantages of public offering financing structure while also addressing its shortcomings for infrastructure investors. Long-term investors (like superannuation funds) would be able to invest directly in relevant infrastructure assets, assured of long-term ownership, whilst avoiding the external consortium management costs typically associated with bid vehicles as well as mark-to-market valuation uncertainties. Governments could retain minority holdings in assets should they wish, and high governance standards could be maintained by imposing standards and requirements analogous to those required for listed public companies.

#### **1.5 Credit insurance**

Following the GFC, credit insurers have withdrawn from the Australian market and are unlikely to return over the near to medium term. As a result, we believe that there is an important role for the Australian Government to play in supporting the formation of a credit reinsurance provider to address this market failure. This would replicate the approach adopted to address an analogous market failure in relation to terrorism risk, which resulted in the creation of The Australian Reinsurance Pool Corporation.

This entity would provide credit insurance on arm’s length, commercial terms, helping larger projects access financing that would otherwise not be available. The entity would also have an important role to play in providing credit enhancement to mortgage securitisation vehicles, helping to improve the competitiveness of Australia’s smaller residential mortgage lenders and creating a more even playing field between these entities and Australia’s big four banks.

#### **1.6 Other measures to promote competition**

There are a number of other practical measures that Federal and State Governments could introduce to improve the speed and cost effectiveness with which Australia can build the infrastructure required to support ongoing growth and competitiveness. These include:

- Measures to increase competitive tension on major projects, including subsidies for bid costs, sourcing consultant reports common to all bidders, and avoiding winner-takes-all project design/tender structures; and

- Promoting competition and diversifying risk on very large projects through a more sophisticated and hands-on approach to project delivery, as well as inclusion of specific components of projects designed to provide “second prizes” to tendering consortia.

## 1.7 Avoiding accidental loss of value

There are many elements of government revenues that have highly attractive features when judged from a specialist quantitative analysis perspective. Governments need to be very cautious when exploring the privatisation of such revenue streams, as there is potential for the revenues to be worth substantially more to specialist investors than will be apparent using the conventional valuation approaches typically adopted in relation to vanilla capital markets transactions or asset sales.

Deeply specialised quantitative valuation skills are needed to be able to value assets of this nature, and specialist financial structuring expertise may be needed to ensure that this value is retained for the benefit of governments and taxpayers, rather than simply being ceded to financial investors.

## 1.8 Wider policy considerations

With the capital investment phase of Australia’s resources boom likely to slow materially within two to three years, there will be considerable political and economic appeal for the Australian Government in finding ways to accelerate the development of major infrastructure projects. In particular, this may help to bridge any gap in utilisation of construction capacity in the economy.

## 1.9 Pottinger’s team and expertise

Pottinger has extensive specialist expertise in relation to the planning, development, financing and valuation of infrastructure businesses and assets, as well as highly specialised quantitative analytical and valuation capabilities typically confined to specialist quant funds based in London and New York. Our team’s experience is grounded in the privatisation and subsequent restructuring of the UK’s major electricity and water sector utilities, and includes extensive practical know-how in relation to regulatory system design and optimisation.

Together, our team has infrastructure, financing and M&A experience encompassing well over \$500 billion of transaction experience, including hundreds of transactions in nearly all of the world’s top thirty economies, as well as most of the major economies in the Asia-Pacific region. This is further augmented by commercial line-management experience in some of the world’s largest companies, as well as practical experience of developing and implementing policy at both State and Australian Government levels in Australia.

Our team members have long-term track records of innovation in their particular fields of specialist expertise and proven capability to develop practical new solutions to otherwise intractable problems. We continue to work with clients on matters including:

- Identifying and prioritising infrastructure projects which are more viable in the light of the new delivery models and financing structures we have developed;
- Optimising delivery models and financing structures for major infrastructure projects;
- Optimising the capital structure of existing infrastructure or utilities businesses, as well as assisting with the negotiation of better terms on any prospective refinancing;
- Valuing revenue streams associated with proposed cost recovery mechanisms and mitigating the risk of value loss through sub-optimal transaction design; and
- Optimising the value to be realised on the proposed sale of any major infrastructure assets and/or utility businesses.

We would be delighted to discuss any aspect of this report or our services with you.

## 2. Building Australia – the critical need for infrastructure

Australia's strong and growing economy needs substantial investment in infrastructure to support its ongoing growth. State balance sheets are under considerable pressure and conventional PPP structures are inadequate to support the delivery of much of the infrastructure that is required. We provide further context on these issues in this section, highlighting the substantial global capital pools that are accessible to finance infrastructure development if the right structures are utilised. We also highlight the considerable global competition for both human and financial resources to deliver this infrastructure. Together, these factors illustrate the challenges to be navigated in designing new models for private sector provision of critical infrastructure, as well as the significant opportunity for Australia if it can meet these challenges successfully.

### 2.1 Laying the foundations for the next phase of Australia's growth

Australia has achieved exceptional growth over the last twenty five years, driven by a wide range of positive factors, including economic liberalisation, financial sector reform and the resources boom. In line with this, Australia's population has grown 45% since 1985, and is forecast to continue to grow significantly over the next twenty to thirty years.

Australia's infrastructure has, however, struggled to keep pace with the growing population in a number of areas. By way of example, most major cities have at least one large rail project planned, as well as a number of major road projects, and even larger projects are planned for long distance travel on the East Coast, such as the mooted High Speed Rail network. Communications infrastructure should not be overlooked, with significant investment required to build national fibre communications infrastructure to provide consumers with the next generation of communication technologies.

Most of these infrastructure challenges centre on Australia's major cities. Together, these contribute some 80% of GDP and employ nearly 75% of the country's workforce.<sup>1</sup> For example, estimates suggest that, between 2003 and 2008, major cities were responsible for some 84% of Australia's economic growth. Meanwhile, over the last decade Australia has increasingly become an expensive place to do business for many companies, reducing the nation's competitiveness in an operating environment where global companies are under considerable pressure to optimise efficiency and performance. Nevertheless Australia's major cities remain attractive as places to live, regularly featuring highly in global liveability indices.<sup>2</sup>

In order to continue to compete effectively against their international peers, the vast majority of Australian businesses will rely directly on the efficiency of core infrastructure investment across transportation, utility, telecommunications and social infrastructure. Infrastructure investment is thus a critical pillar on which Australia's productivity and ongoing city liveability improvements will depend. By 2050, Australia's population is projected to grow to around 35 million with two thirds of the nation's population expected to live in capital cities – a net increase in capital cities of 10 million people.<sup>3</sup> This is equivalent to another whole Sydney *and* another whole Melbourne, emphasising the significance of the infrastructure challenge.

In short, substantial investment in nationally significant infrastructure is critical to ensure Australia's successful long-term development in economic, social and environmental terms.<sup>4</sup>

### 2.2 Australia's infrastructure backlog

There is broad agreement that Australia has a substantial backlog of infrastructure investment. Figures vary, with some commentators placing the investment required as high as \$800bn over the next ten years<sup>5</sup> – a figure equivalent to over half the combined market value of all companies listed on the ASX. The shortfall is in part a function of public sector under-investment over the past twenty years or so – private sector investment, particularly into mining and resources related projects, has been substantial.<sup>6</sup>

<sup>1</sup> *State of Australian Cities, 2012*

<sup>2</sup> *Four of Australia's major cities (Melbourne, Adelaide, Sydney and Perth) feature in the Economist Intelligence Unit's Global Liveability Report's top 10*

<sup>3</sup> *Australian Bureau of Statistics, 2012 Year Book Australia, Population Projections*

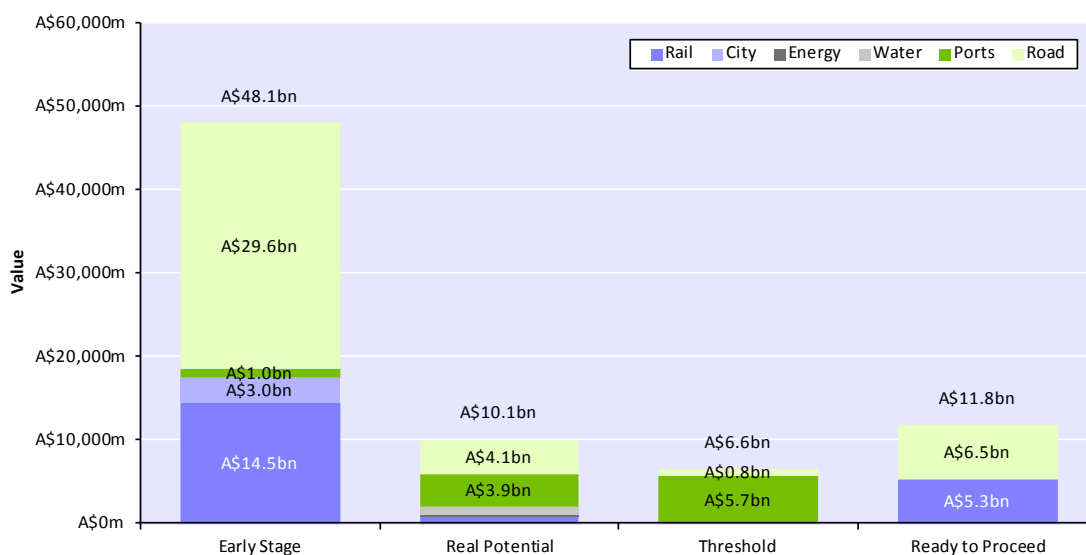
<sup>4</sup> *The Infrastructure Challenge, Public Administration Today, July 2010*

<sup>5</sup> *The Coalition's Plan for the Infrastructure of the Future, Tony Abbott*

<sup>6</sup> *Civil Infrastructure Metric June Quarter 2012, Infrastructure Partnerships Australia/BIS Shrapnel*

To ensure better co-ordination of infrastructure development and to help attract new competition to the sector, Infrastructure Australia has prepared a summary of all planned infrastructure projects, identifying the time horizon over which each project is likely to proceed and rating them in relation to stage of development. This includes both public sector and private sector transport projects, and reflects the substantial ongoing investment in Australia’s resources sector, as well as major projects such as the National Broadband Network. Infrastructure Australia’s most recent report included some \$75bn of projects. It is worth noting that this figure does not include the estimated value of some major projects such as the Melbourne Metro (rumoured at around \$10bn), the NBN (estimated at between \$40bn and \$50bn) and High Speed Rail network (over \$100bn).

Figure 1: Summary of Australian infrastructure priority projects



Source: Infrastructure Australia, “Australian Infrastructure Progress and Action”, June 2012

By way of example, both the Brisbane Cross River Rail project and the Melbourne Metro project are now considered as “Ready to Proceed”, meeting all of Infrastructure Australia’s criteria across project design, cost-benefit analysis, procurement model selection and cost and risk assessment. However, recent press around the level of detail in the overall Melbourne rail strategy and funding mechanisms for the Cross River Rail have highlighted the broader issues and challenges in commissioning these projects, notwithstanding the sound social and economic logic that underpin them.

With the capital investment phase of Australia’s resources boom likely to slow materially within two to three years, there will be considerable political and economic appeal for the Australian Government in finding ways to accelerate the development of major infrastructure projects. In particular, this may help to bridge any gap in utilisation of construction capacity in the economy.

### 2.3 The cost of success

The powerful growth of the last twenty years has brought with it a legacy in terms of relatively high costs compared to many of Australia’s global peers. The impact of these costs on Australia’s resources industry has been widely debated over recent years, and similar effects are evident in the infrastructure sector. This is not surprising, given these two sectors compete for many of the same key inputs.

On simple metrics, the cost of building core infrastructure in Australia appears to be high in world terms. For example, in the rail sector, submissions to Infrastructure Australia peg the Brisbane Cross River Rail as costing \$300m per km.<sup>7</sup> This compares to the London Cross Rail project at US\$180m per km (another exceptionally complex urban heavy rail project), the US North-East corridor line at US\$166m per km<sup>8</sup> and the California High Speed Rail at US\$50m per km.

<sup>7</sup> Australian Infrastructure Progress and Action Report, June 2012

<sup>8</sup> See Appendix for further detail



Further examples of global rail projects are provided below, with Australian projects highlighted in green text.

Figure 2: Examples of current and recent major rail projects around the world

Project name and location	Due date	Length	Cost (A\$)	Cost/km (A\$)	Status
North West Rail Link, Australia	2019	23 km	\$8,900m	\$387m	Tender
Cross River Rail, Australia	TBC	17.5 km	\$5,311m	\$303m	Planning
Copenhagen, Denmark	2018	16 km	\$3,960m	\$248m	Construction
London Crossrail 1, UK	2018	118 km	\$21,280m	\$180m	Construction
US North east corridor line, USA	2040	705 km	\$117,000m	\$166m	Planning
Helsinki City Rail Loop, Finland	2020	7.2km	\$964m	\$134m	Planning
Qatar Rail, Qatar	2022	300 km	\$36,000m	\$120m	Planning
Regional Rail Link, Australia	2016	36 km	\$4,317m	\$120m	Construction
Seoul – Gimpo, Korea	2010	20 km	\$2,001m	\$98m	Complete
Moreton Bay Rail Link, Australia	2016	13 km	\$1,147m	\$91m	Tender
Follo, Norway	2020	23 km	\$1,900m	\$84m	Planning
Queensland Light Rail, Australia	2014	13 km	\$1,100m	\$84m	Construction
High-Speed 2, UK	2026	528 km	\$43,840m	\$83m	Planning
Brisbane – Sydney HSR, Australia	2040	854 km	\$64,050m	\$75m	Planning
Melton Rail Duplication, Australia	2016+	19 km	\$1,300m	\$68m	Planning
Sydney – Melbourne HSR, Australia	2040	894 km	\$50,064m	\$56m	Planning
Delhi Light Rail, India	2017	13 km	\$730m	\$56m	Construction
California High Speed Rail, USA	2029	1,280 km	\$68,000m	\$53m	Construction
Tamsui Light Rail Phase 1, Taiwan	2018	10 km	\$441m	\$46m	Planning
East Coast High Speed Rail, Australia	2030	1,800 km	\$75,000m	\$42m	Planning
Sao Paolo – Rio de Janeiro, Brazil	2014	510 km	\$16,500m	\$32m	Tender
Hefei, Fuzhou, China	2014	806 km	\$16,900m	\$21m	Construction
Madrid , Albacete, Spain	2010	304 km	\$4,072m	\$13m	Complete
Haikou, Sanya, China	2010	308 km	\$3,080m	\$10m	Complete
Etihad Rail project, UAE	2018	1,200 km	\$11,000m	\$9.2m	Tender
Yichang, Wanzhou, China	2011	377 km	\$3,431m	\$9.1m	Complete
Nepal Railway, India	2022	1,317 km	\$12,000m	\$9.1m	Construction
Riyadh, Jeddah, Saudi Arabia	2025	958 km	\$7,000m	\$7.3m	Tender
BA, Rosario, Argentina	Stalled	710 km	\$4,000m	\$5.6m	Stalled
Makkah, Medina, Saudi Arabia	2014	450 km	\$1,900m	\$4.2m	Construction
Kanpur, Khurja, India	2017	343 km	\$1,416m	\$4.1m	Construction
Trans-Korean Main Line reconstruction, Korea	Stalled	54 km	\$180m	\$3.3m	Planning

Source: Pottinger. (1) Due date indicates expected completion

While in part high costs on Australian projects are a result of geotechnical complexities and other project-specific matters, high domestic costs are also a material factor.

As Australia plans how best to build and finance the infrastructure required to support the next phase of growth, we believe that it will be of paramount importance to pursue delivery models and financing structures that encourage the most cost efficient use of both human and financial capital. This includes ensuring strong competition from a wide range of service providers and financiers for each major project – not only to ensure the best possible outcome on the project in question, but also to support the development of a broader and deeper market in Australia for associated services.

## 2.4 Competition for construction capacity and expertise is global

The prospective boom in civil infrastructure development is not just an Australian phenomenon. Globally, a significant number of multi-billion dollar infrastructure projects are underway, with many more in the pipeline, reflecting the needs of emerging nations to build major infrastructure for the first time, as well as renewal and replacement investment in the developed world. As a result, the competition for both human and financial capital is global in nature, with important implications for Australia. Recent road and rail projects in Australia and overseas illustrate these trends, as illustrated below.

Figure 3: Examples of current and recent major tunnel and road projects in Australia

Location	Due date	Length	Cost (A\$)	Cost/km	Status
Melbourne East-West Link	TBC	18 km	\$13,000m	\$722m	Anticipated
Airport Link M7	2012	6.7 km	\$4,800m	\$716m	Completed
North-West Bypass Tunnel	2010	6.8 km	\$3,200m	\$471m	Completed
Lane Cove Tunnel	2007	3.6 km	\$1,500m	\$417m	Completed
Melbourne Eastlink	2008	39 km	\$2,500m	\$64m	Completed
Hunter Expressway	2013	40 km	\$1,700m	\$43m	Completed
Westlink M7	2005	40 km	\$1,500m	\$38m	Completed

Source: Pottinger

Figure 4: Examples of current and recent major tunnel and road projects around the world

Project name and location	Due date	Length	Cost (US\$)	Cost/km	Status
Marina Coastal, Singapore	2013	5 km	\$3,235m	\$647m	Construction
Western High Speed Toll Road, Russia	2015	46 km	\$7,475m	\$163m	Construction
Intercounty Connector, USA	2011	30 km	\$2,518m	\$84m	Completed
Paya Lebar Expressway, Singapore	2013	12 km	\$984m	\$82m	Construction
Edmonton Ring Road, Canada	2016	27 km	\$1,780m	\$66m	Construction
Mario Covas Beltway, Brazil	2014	177 km	\$6,403m	\$36m	Construction
South Fraser Perimeter, Canada	Dec-13	40 km	\$1,204m	\$30m	Construction
Waikato Expressway, New Zealand	2019	102 km	\$1,944m	\$19m	Construction
Douro Litoral Road, Portugal	2012	129 km	\$1,761m	\$14m	Completed
A1, Poland	2011	152 km	\$1,765m	\$12m	Completed
Langon to Pau A65 Motorway, France	2011	150 km	\$1,554m	\$10m	Completed
Egnatia Odos Motorway, Greece	2009	670 km	\$6,659m	\$10m	Completed
East-West Highway, Algeria	2010	1,216 km	\$11,016m	\$9.1m	Completed
Golden Quadrilateral Highway, India	2012	5,846 km	\$6,098m	\$1.0m	Completed

Source: Pottinger

Major construction companies around the world are actively considering how best to utilise their limited resources to maximise their own profitability and growth over the medium term. Australia represents an attractive market, given its strong economic growth, significant infrastructure pipeline, and the legal and economic stability compared to some higher growth emerging economies. A number of these companies are assessing how best to make the most of the opportunity presented by the Australian market, but will of course be cognisant of the strong market positions held by existing domestic industry leaders. For Australia to attract new market entrants – including some of the largest companies in the world in their respective fields of specialisation – careful consideration must be given to the design of projects and associated delivery models to encourage market entry and to ensure a sufficiently level playing field for incumbents and new competitors alike.

## 2.5 Domestic capital constraints

Australia benefits from a particularly large and deep pool of capital compared to the size of the population. This is a direct result of Australia's compulsory superannuation regime, which means that Australia now benefits from the third largest pool of managed funds in the world. In addition, Australia's banking system remains one of the strongest and best capitalised in the world.

Nevertheless, it is unlikely that domestic financing sources will be sufficient to fund all of Australia's infrastructure requirements outright.

- From a debt financing perspective, the total quantum of debt financing that may be required would put significant strain on Australia's big four banks, which are already significantly dependent on overseas financing for a significant fraction of their overall funding;
- Australia's corporate bond market is small compared to other major developed economies, making it harder for companies to access public debt markets directly;
- From an equity perspective, portfolio concentration and diversification considerations mean that there is unlikely to be sufficient capacity in the market to meet the project equity requirements in full; and
- More broadly, accessing global debt and equity capital markets will improve competition in the provision of financing, resulting in lower overall funding costs, as well as better non-financial terms (such as covenants and term of debt capital).

In addition, practical underwriting considerations mean that it is unlikely that traditional PPP consortia can secure more than some \$2 billion to \$3 billion of fully underwritten financing for a final round bid for a major project. These figures – which have been confirmed by recent market soundings – highlight the significant practical financing constraints applicable to traditional PPP structures. This is particularly true when considering larger projects, where a private sector contribution of \$2 billion to \$3 billion might represent substantially less than half of all project costs.

Accordingly, it will be important to design funding structures for major infrastructure projects to ensure that the widest possible pool of capital can be accessed on the best possible terms, whilst minimising associated costs.

## 2.6 Global infrastructure investment pools are growing

A number of recent developments illustrate and foreshadow the growing level of demand for operational Australian infrastructure assets:

- Australian domestic institutional investors have now reached a level of funds under management whereby it has become appropriate to increase overall weightings in alternative investments (such as infrastructure) to some 5% to 15% of overall funds under management, compared to around 1% to 5% prior to the GFC. This also reflects increased appetite for higher yield/lower risk alternatives to core debt and equity holdings. Accordingly, Australian institutional investor volumes of funds available for infrastructure assets have significantly grown in the last three years;
- Over the last twelve months, Australian funds invested in infrastructure have been significantly augmented by new investment from Canadian, US and European and, more recently, Chinese institutional investors; and
- The forthcoming Japanese Government's privatisation of government owned airports has also triggered renewed interest into Australian infrastructure assets by Japanese institutional investors (as they try to pre-position their portfolios with infrastructure assets to enhance their proportionate opportunities to acquire Japanese Government privatised assets).

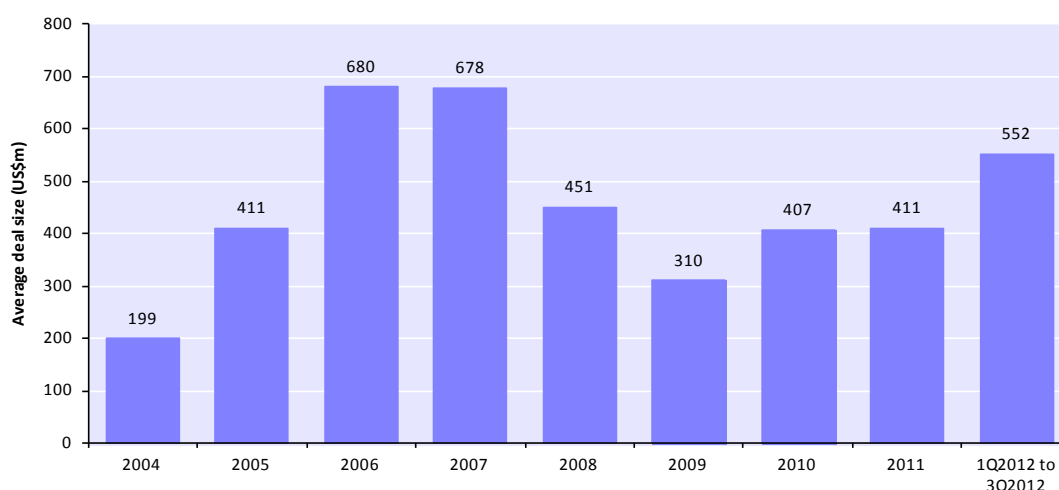
## 2.7 A unique set of circumstances favouring infrastructure investment

There is currently substantial demand for investments in operational infrastructure projects. Indeed, this demand has increased significantly as a direct result of the GFC, with investors seeking lower risk assets that offer adequate yield in the face of the very low interest rate environment in most major economies.

- **Global equity markets** are currently relatively buoyant, with major indices in North America and Europe at close to all time highs, despite currently challenging economic conditions. The uncertain outlook, combined with high prices means that infrastructure assets currently provide a particularly appealing and inflation-protected investment alternative to equities. It remains possible that this dynamic will change over the near to medium term, but we note that we believe strong demand will remain for infrastructure assets given their appealing characteristics for longer term investors such as superannuation funds and life insurers;
- Regarding **mezzanine markets**, there remains significant caution regarding structured investments, reflecting the substantial losses incurred by investors during the GFC. This is further impacted by the very limited availability of credit reinsurance to assist with repackaging of risks;
- **Global debt markets** have undergone substantial shifts over recent years following the GFC. In part this has been due to the substantial contraction of bank balance sheets, driven by changes to the Basel capital adequacy rules. These changes are ongoing and are likely to continue to constrain appetite from banks for the medium term. In addition, this balance sheet contraction has forced most major banks from North America and Europe to withdraw significantly from international business, and to concentrate their balance sheet lending capacity on core customers in core market segments. As balance sheets are repaired, this trend is likely to reverse slowly, resulting in a modest increase in capacity from this segment;
- **Asian banks** are becoming significantly more active, to support the development of their corporate and institutional customers' businesses, particular in the Asia-Pacific region.

There is already evidence of market participants taking advantage of these market conditions, with an increase in the average annual deal size every year since 2009.

Figure 5: Annual average infrastructure deal size from 2004 to 3Q2012



Source: *The Preqin Quarterly: Infrastructure, Q3 2012*

There is evidence that substantial capital investment can be unlocked from offshore with the deployment of the right capital structures. Recent examples include:

- **Sydney Desalination Plant:** Recently acquired for some \$2.3bn by a consortium which included two Australian superannuation funds and Ontario Teachers' Pension Plan;
- **ElectraNet:** Investment into South Australian power transmission operator by Chinese state related funds;
- **Hastings Diversified Utilities Fund's Epic pipeline:** Recently the subject of a \$1.36bn bid by Pipeline Partners, a consortium which included the Quebec Government CDPQ and Canadian Railways Pension Fund;
- **Challenger Infrastructure Fund:** Recent investment by the Dutch Government employees pension funds PGGM and APG; and
- **The Infrastructure Fund:** Recent investment by the Korean Teachers Pension Fund.

As a result, there is considerable commercial logic in moving forward rapidly to build the infrastructure that Australia needs to support its long-term growth. We believe that current market dynamics present a unique set of circumstances where loose monetary policy and recovering credit markets have resulted in historically low financing costs for infrastructure assets in particular. These conditions are not expected to last indefinitely, and there is strong rationale behind locking in attractive long-term financing that is currently available in the post-GFC environment.

Looking forward we anticipate growing investor interest from a number of sources:

- US/European investors, who are seeking long-term, low risk, moderate return, inflation protected investments; and
- Asian investors (particularly those who have accumulated significant wealth in countries such as China), who are seeking to diversify risk away from high growth but more volatile economies with a less certain political outlook into investment classes that offer reasonable returns but have a safer long-term outlook.

Both these groups see particular appeal in Australia's combination of a highly developed Westernised economy and partial leverage to long-term Asian growth.

## 2.8 Traditional PPP models have been undermined by failures

Recent experience in the Australian transportation infrastructure sector has been disappointing over the past few years, with a number of major projects recording substantial and sometimes complete losses to equity investors, debt providers and construction companies. This has very clearly highlighted to investors the risks of investing in transportation infrastructure where there is construction risk and/or some types of patronage risk.

**Figure 6: Examples of commercially unsuccessful transportation infrastructure projects**

Project	Commentary
NSW Cross City Tunnel	Sydney's \$0.79bn Cross City Tunnel forecast 90,000 vehicles per day and achieved just 34,000. With the actual traffic falling well short of expectations, it soon reached the point where the interest on the debt could not be covered. The tunnel entered insolvency in 2005, just 18 months from its opening with debts of \$500m
NSW Lane Cove Tunnel	Sydney's \$1.67bn Lane Cove Tunnel forecast 115,000 vehicles per day and achieved 58,000 shortly after opening in 2007. Within three years, the Lane Cove Tunnel entered receivership and was acquired by Transurban
Queensland Clem 7	Brisbane's \$2.8bn Clem 7 Tunnel forecast 100,000 vehicles per day but achieved just 21,178 when tolling commenced in April 2010. It was built and owned by the RiverCity Motorway consortium, which listed on the ASX in 2006 at an initial stapled security price of \$1.00. Within its first year of listing its share price fell over 80%. Like many other transportation infrastructure assets, traffic volumes fell significantly after the initial toll free period expired. In February 2011 it was unable to refinance its debt and entered administration

Source: Pottinger

While governments have been successful in securing completion of construction of assets, the traditional PPP model has been severely damaged in the eyes of investors. As a result, many classes of long-term investor have concluded that participating at the construction phase is materially less attractive than acquiring fully operational assets. These investors – including Australian superannuation funds – are searching globally for such investments, highlighting the significant competition to attract such investment. As a result, there is a very limited pool of capital willing to take construction or greenfield patronage risk.

Traditionally, equity investment to support construction risk has predominantly come from construction companies, and not from institutional investors. However, in recent years the dynamics in this market have also changed and even this source of finance is becoming increasingly limited compared to the substantial infrastructure backlog. There are a number of reasons for these developments:

- Risk transfer arrangements have transferred significant elements of uncontrollable construction risk on to the winning PPP consortium. Recent experiences have demonstrated that such

consortiums therefore should hold significantly greater equity within their capital structures to support this risk;

- Capital structures themselves have been overleveraged, with insufficient equity capital to sustain material but nevertheless realistic downside risk scenarios in the early years. We see an imminent step decrease in the acceptable levels of leverage in PPP vehicles, with greater equity contributions required. This is in part due to significantly overoptimistic patronage forecasts, where capital structures were not designed to withstand substantially lower early patronage numbers; and
- Construction companies and long-term investors alike are wary of the conflicting interests of consortium promoters (whose financial exposure may come to an end not long after the winning consortium is chosen) and their interest in ensuring the successful completion of the project and adequate long-term profitability from the operation and ownership.

As a result, there is much greater demand for operating infrastructure assets than there is demand to bear construction risk on such projects. This creates a material risk of a bottleneck in financing infrastructure development, not just in Australia but around the world. In addition, most investors who do wish to participate in the development stage of infrastructure assets are not the natural long-term owners of such assets, meaning that assets need to be on-sold before capital can be redeployed to new projects.

As a result, new delivery models and financing structures are required which better match risks with those parties that are prepared to take them, and avoid the construction capital bottleneck.

## 2.9 Structural impediments to optimal capital structures

Prior to the GFC, most Australian infrastructure financing solutions involved a monoline reinsurance company (such as AMBAC, MBIA and Assured Guaranty) that provided credit enhancement insurance for parts of the financing. These reinsurance structures allowed financing packages to be readily optimised from a credit risk perspective to allow larger, lower risk tranches to be created and hence sold into the deeper investment pools that exist for assets of that nature.

During the GFC, nearly all of these specialist monoline credit reinsurance providers suffered significant financial losses and/or exited the market. They are not expected to have the financial resources or capital backing to be able to re-enter the Australian market for another decade. This lack of credit reinsurance thus materially impedes the ability of finance arrangers (principally the global investment banks and larger universal banks) to repackage financial structures into an optimum form.

This is a structural gap in Australia's financing markets, analogous in its financial ramifications to the market failure in relation to terrorism reinsurance that occurred in the aftermath of the terrorist attacks of September 2001.

## 2.10 Conclusions

Australia's long-term growth depends critically on the construction of a substantial amount of civil infrastructure over the near to medium term. To deliver this infrastructure in the most cost effective manner, Australia's Federal and State Governments, construction companies and investors need to work together to design new delivery models and financing structures to accelerate project completion, reduce project costs and leverage current highly favourable financial market conditions for financing such projects.

In the following sections, we explore a number of potential solutions to these challenges.

### 3. Redesigning private financing of infrastructure

Delivery models represent a combination of risk transfer mechanisms and financing structures. While traditional PPPs have been historically successful in the construction of infrastructure assets, they have been disappointing as investments for equity and debt holders. Furthermore, in the post-GFC environment the traditional PPP model is likely to constrain both the level of competition in later rounds of bidding as well as the quantum of finance available to support the project. This section breaks down the components of the traditional PPP model to provide a basis for designing new delivery models and financing solutions.

#### 3.1 The attractions of traditional PPPs and recent challenges

Traditional PPPs have been preferred for major infrastructure projects in many countries around the world as they are seen to provide a number of fundamental advantages compared to alternative structures.

- **Budget certainty:** The traditional PPP model provides the government with certainty regarding the overall capital cost of the project to the government, as well as in relation to the ongoing costs of operation of the asset in question. As a result, these structures have worked well where key risks of construction and/or operation can be well assessed in advance. Where this is not the case, private sector capital will now seek a significant premium in return for taking on the risk in question, and/or funding to support the project in question may be substantially constrained as we have outlined earlier;
- **Design efficiency:** PPPs can help to optimise the overall efficiency and effectiveness of the project, in particular in relation to the interplay between design details, construction costs, maintenance costs and operational efficiency/availability;
- **Innovation:** PPP structures offer the ability to unlock private sector innovation in order to deliver better overall policy outcomes; and
- **Off-balance sheet funding:** PPPs allow the financing required to support the development in question to be raised largely or entirely off the relevant state's balance sheet. This is of particular appeal when government borrowing and/or credit ratings may be under pressure.

These factors remain highly relevant in the post-GFC environment. However, constrained government borrowing capacity and increased competition for both construction capacity and private sector finance have created a new set of challenges. In addition, there has been a significant reduction in the amount of capital available to support construction risk and/or greenfield patronage risk.

As a result, project proponents need to assess carefully at the outset how best to design project delivery models and financing structures to balance policy priorities, value for money considerations, availability of private financing and speed of completion.

#### 3.2 Private finance – structuring considerations

The key delivery models commonly utilised for major infrastructure projects represent combinations of different options in relation to:

- **Design:** Who assumes responsibility for the detailed design of the project?
- **Build:** Who accepts responsibility for the building of the project and for associated cost overruns during the construction period?
- **Maintain:** Who is responsible for maintaining the asset once construction is complete?
- **Operate:** Which party is responsible for operational service delivery during the expected life of the project?
- **Finance:** Which party assumes ownership of the asset during the working life of the asset (or for the first such period) and hence is responsible for financing the project?
- **Residual ownership:** Does the asset remain in private ownership in perpetuity or does the asset revert to government ownership after an initial concession period (typically 20 to 30 years)?

In addition, the precise structure used for any particular project will also determine the accounting treatment to be used and whether the project lies effectively on or off the state balance sheet. We note that these rules are complex and continue to evolve. As illustrated below, many different delivery models are possible.

Figure 7: Alternative delivery models – scope of private sector involvement

Delivery models	Design	Build	Maintain	Operate	Finance	Residual
Alliance model	Partial	Partial	Possible	Possible	No	State
Managing contractor	Partial	Possible	✗	✗	✗	State
Franchisee	N/A	N/A	N/A	✓	Partial	State
Early contractor engagement	Partial	✓	✗	✗	✗	State
Design then build	✓	✓	✗	✗	✗	State
Design and build	✓	✓	✗	✗	✗	State
Design, build and maintain	✓	✓	✓	✗	✗	State
Design, build, maintain & operate	✓	✓	✓	✓	✗	State
Public private partnerships	✓	✓	✓	✓	✓	Flexible

Source: Pottinger

In many jurisdictions, PPPs in the 1980s and 1990s were motivated, at least in part, by a desire to achieve off-balance sheet financing. Today, the use of PPPs tends to be driven by public policy factors more than balance sheet considerations, such as value for money and optimal risk transfer.

In addition, we note that whilst most models result in the State retaining ownership following completion of the project, most infrastructure assets can readily be sold to private investors following completion, whether via a trade sale or IPO of the business or assets in question. Such conventional models are not, however, ideally suited to the preferences of longer term investors such as superannuation funds, highlighting the importance of new structures for the privatisation of operational infrastructure assets and utility businesses.

### 3.3 The need for new models to access private sector investment

Although traditional PPP models offer many attractions for projects of this nature, there are now significant constraints in relation to the amount of private sector finance available to support PPP bid vehicles. In particular, previous vanilla PPP structures transferred all construction, development, patronage and financing risks to the private sector in a single block, with a number of consortia incurring substantial losses in recent times.

As a result, long-term investors such as domestic and offshore superannuation funds are very reluctant to commit funds to greenfield PPP projects, and indeed greenfield infrastructure projects where there is significant construction risk. From an investor perspective, there are a number of underlying reasons for this:

- The risks accepted in such projects by investors have been disproportionately high compared to the returns achieved;
- The returns achieved by syndicate arrangers, who generally have not retained any meaningful long-term interest in the projects, have been disproportionately high;
- Cost overruns in construction have, in some instances, positively benefited contractor profitability, whilst negatively impacting the returns achieved by investors. The latter have limited ability to influence outcomes during the construction stage; and
- Ultimately, superannuation investors are principally motivated by achieving long-term stable returns, and not by the higher, shorter term returns that may be achievable during the construction phase.

With this context, the challenge is to design alternative structures which:



- Use existing financing concepts to provide more effective and more equitable mechanisms for the transfer of relevant risks between the public and private sectors;
- Unlock better, earlier and cheaper overall project outcomes through more sophisticated initial design and prioritisation of major projects that integrates policy, commercial, financial and risk transfer considerations;
- Provide long-term investors with low risk, inflation-linked returns;
- Avoid the creation of additional risk through artificial financing structures;
- Maximise the quantum of private sector finance to support the project;
- Promote a more competitive tendering and financing environment; and
- Minimise impact on government balance sheets.

### 3.4 Delivery models, financing structures and cost recovery

In developing new approaches to infrastructure projects, it will be important to avoid the introduction of unnecessary risks. As an example, operational costs on eg major rail projects will include a significant element of inflation exposure. Meanwhile cost recovery options are likely to include some form of levy on ticket prices, providing a natural opportunity to index the levy with inflation. If this levy is passed through directly to the operator, the operator will benefit from natural inflation protection through the indexation built into the revenue stream. If, on the other hand, the cost recovery payments offered to the operator are fixed, or increase at a fixed rate over time, the operator will be accepting a level of basis risk between its revenue streams and operational costs. A rational operator will build in a margin of error to account for such risk, increasing overall project costs.

In addition, some forms of cost recovery will expose project proponents and/or consortiums to significant moral hazard risks. In particular, the provision of central government support, such as credit enhancement, that are not tied to direct equity ownership or some other form of arms' length reward will create asymmetric outcomes for equity providers and hence may drive inappropriate behaviours. As an example, the provision of free central borrowing agency credit enhancement would incentivise consortium members in a traditional PPP to maximise overall leverage, as increased downside risk would be borne by the government, and enhanced upside benefit would accrue to private capital providers.

### 3.5 New approaches to infrastructure finance

Over the last three years, Pottinger has developed a number of innovative solutions designed to meet these particular challenges. The challenges faced in Australia are not unique to our market, and most, if not all, of the proposals outlined below are applicable in other economies in across the world in addressing analogous issues.

The pool of finance available for infrastructure investment is becoming increasingly global, and governments over the world should ensure that they have appropriate mechanisms/structures in place which best access these funding sources for both private and public infrastructure projects.

In the following sections, we outline a number of new approaches to infrastructure finance. Namely;

- A **converting infrastructure bond** delivery model which better matches risks with risk ownership and thereby provides access to much more capital;
- An **initial superannuation offering** funding structure which is optimised to those seeking stable, inflation-protected long-term investment returns (such as superannuation investors); and
- Other **mechanisms to improve market efficiency**, such as means to better prioritise infrastructure investment and leverage Australia's AAA credit rating, exploring the potential role of the government in providing credit reinsurance, and ways to improve competitive tension via eg bid cost recovery, common consultant reports or appropriate delivery model design/incentivisation.

## 4. Converting infrastructure bonds

The use of converting infrastructure bonds would allow governments and private sector project proponents to access a much larger pool of investment capital to deliver major projects. Risks would be better matched with their natural owners than under a traditional PPP structure. As a result, substantially larger amounts of private sector capital could be accessed to support major infrastructure projects, including potentially very large (\$10bn+) initiatives.

### 4.1 A hybrid model for major projects

By combining a conventional government-financed Design, Build and Operate (“DBO”) construction contract with a forward sale of the asset in question on specified terms, major projects could be funded using low cost government debt whilst ensuring that the capital cost of the asset and associated interim borrowings are transferred off the government balance sheet at completion of construction.

The end result would be identical upon completion to a conventional PPP, but risks would be better matched as:

- Construction companies would accept and manage construction risk; and
- Long-term investors would accept long-term ownership risks.

During the construction phase, financing would be provided by long-term investors subscribing for government bonds, which would convert into equity ownership once the construction had been satisfactorily completed. Further details are provided below.

### 4.2 An introduction to converting infrastructure bonds

Converting infrastructure bonds retain all of the benefits of traditional PPPs whilst opening up substantial new funding sources, through the transfer of construction and operating risks to a contractor/consortium (eg through a traditional DBO approach) and long-term ownership/financing to long-term investors. This model addresses twin private finance challenges in that contractors have limited access to capital to support construction risk, and long-term investors have a strong preference for infrastructure assets that are in operation and that provide stable, inflation hedged returns.

The structure would operate essentially as follows:

- The State Government would issue “converting infrastructure bonds” to financial investors such as pension funds or other investors seeking long-term stable inflation-linked returns;
- During the construction period, investors would receive a fixed coupon at or around the same level as equivalent Commonwealth Government bonds;
- The appointed design/build/maintain/operate contractor(s) would assume construction risk, most likely via incentive and penalty arrangements built into construction contracts, ensuring that this risk was transferred to the private sector. The contractor(s) would be paid on a staged basis as for a design and build contract;
- Once construction and commissioning was complete, converting infrastructure bonds would convert to ownership of the asset in question. This would guarantee that project debt was automatically removed from the state balance sheet and that ownership of the asset transferred to the long-term owner at a predetermined price;
- Following handover, the appointed contractor would continue to operate the asset, reporting to the new shareholders (previously converting infrastructure bond holders); and
- Converting infrastructure bondholders, now holding equity in the infrastructure asset, earn returns from the SPV vehicle, which in turn receives availability payments from the State Government (backed by the Commonwealth), or whatever other payment stream was used to provide returns to the owner (eg revenue from toll payments or otherwise from operations); and
- We note that converting infrastructure bondholders may also choose to refinance their equity position into one which better matches their optimal capital structure.

### 4.3 Benefits of converting infrastructure bonds for governments

This approach would yield a number of attractive benefits for governments:

- As with traditional PPPs, construction risk can be managed through the Design and Construct contract and fully passed on to the constructor if that represents the best value for money. As with a traditional PPP, if an event causes significant disruption, the government may need to intervene to restore the infrastructure to functionality;
- A mandatory conversion trigger would ensue complete risk transfer once construction was complete;
- Governments utilise their AAA/AA credit ratings to source the lowest/lower cost debt to finance the project during the development and construction phase;
- The structure provides access to a much larger pool of capital than is generally available to fund infrastructure assets, increasing competition and lowering finance costs. This is because the model explicitly decouples the financing from construction of these projects, effectively opening up sources of funding which were previously inaccessible;
- Larger elements of projects could be delivered using design and construct or design/build/maintain/operate structures, without the need for the Australian or State Governments to retain such assets on their balance sheets for the long-term or take risk on the sale price achieved through a subsequent securitisation;
- The existing skills and impartiality of central borrowing authorities in negotiating, financing and managing large and complex projects can be leveraged;
- Governments make use of their experienced and long-term track record as bond issuers; and
- With appropriate structuring, government credit ratings should benefit positively from the prospect of mandatory risk transfer once projects are complete.

### 4.4 Benefits for construction companies

Potential construction contractors would find the structure attractive as:

- The structure separates the financing elements from the construction elements of the tender process. The construction tendering process is therefore no longer constrained by the availability of underwritten finance and potential construction contractors would not have to compete with other potential contractors to secure financial partners for a bidding consortium;
- Significantly more capital would become available to support new infrastructure projects, allowing these to proceed more rapidly than might otherwise occur; and
- Overall, this would create a more competitive tendering environment.

### 4.5 Benefits for investors

Investments of this nature would be attractive to a range of infrastructure investors:

- Super funds would be attracted by the reduction in construction phase risk;
- The bond structure is well understood by investors, fund managers and other market participants;
- Super funds would be able to utilise a much larger proportion of their funds for this type of investment, as fixed income investments are typically 15% to 25% of fund portfolios. In comparison, infrastructure equity investments make up no more than 5% of portfolios; and
- The unitised nature of a bond issue would allow smaller funds to invest, further expanding the pool of accessible investors.

+In addition, there is a range of additional benefits:

- Bond-like structures are easier to price and sell than equity participation in PPP syndicates;
- The concept of reinsurance of a part of bond risk is well established in global markets;
- Financing can readily be structured with a wide range of coupon structures; and

- Investments can easily be packaged in retail sized parcels, underwritten by financial institutions and resold to private investors including self managed super funds.

#### **4.6 Public policy considerations – government buy-back options**

This delivery model could be augmented by this structure through including an option for government to buy back the underlying asset at a predetermined pricing formula at a distant maturity date. This mechanism provides a government with the opportunity of re-acquiring the asset and provides an institutional investor with a potential sale avenue with a relatively predictable sale price. For particular assets such as social infrastructure this enhancement may be an attractive addition to government asset sales.

## 5. Initial superannuation offerings

**Initial superannuation offerings are an alternative financing structure designed to combine the benefits of initial public offerings with the preferences of long-term providers of capital. There are numerous advantages to using this structure, for investors, governments as well as the public.**

### 5.1 The role of IPOs in privatisations

Globally, many major privatisations have taken the path of an initial public offering (“IPO”). This has been particularly true of privatisations of larger organisations with substantial consumer visibility, including national telecommunications carriers, water, electricity and gas utilities, rail transport networks and infrastructure and other similar businesses.

The first major round of privatisations took place in the UK in the 1980s, as Britain sought to access private sector capital to rebuild aging infrastructure, as well as to utilise market forces to drive improved efficiency and reduced costs in a number of industries. Virtually all of these privatisations were implemented using IPOs, with examples being British Petroleum, British Telecom, ten water and sewerage utilities, twelve English regional electricity companies (electricity distribution or “poles and wires” businesses), two Scottish integrated power companies and British Gas.

Importantly, these privatisations spawned a new breed of regulator (one for each industry, ie OfTel, OfWat, OfEr etc). Pricing regimes for each company were typically set in five year time bands using an RPI – x% formula to drive down prices in real terms whilst allowing investors to achieve an adequate return on invested capital taking account of ongoing repairs, renewals, infrastructure extension and operational costs.

IPOs offer the ability for a wide range of investors to participate in the sale (not just the winning consortium). Frequently this has had significant policy attractions, particularly if there is substantial participation by retail investors, as any undervaluation on privatisation benefits private investors, not just a tightly held bidding vehicle. In the UK, all major privatisations were implemented using IPOs, and were structured and promoted in a manner designed to promote investment by retail investors. In addition to creating additional demand for the shares, and hence pricing tension, this also resulted in a material increase in direct mass market equity ownership, a significant policy priority at the time.

IPOs also offer a number of other benefits, including:

- Transparency regarding the ongoing share price performance of the business – this is particularly helpful in determining whether ongoing regulatory price settings balance the needs of consumers and investors appropriately;
- Comparability of peers (where several similar businesses are listed in parallel), not just in terms of operational or financial metrics, but also in terms of returns to shareholders;
- Ongoing access to capital on market terms, optimising the capital raising process for future major capital investments; and
- A ready mark-to-market price and liquidity for investors.

It is important to remember that the earliest UK IPOs took place in the context of a strong bull stock-market (in the run up to the 1987 crash), but the simultaneous listings of the ten water companies, and subsequently the twelve electricity companies, took place in much flatter markets when investors were seeking safe havens for investment. Meanwhile, long-term investors such as superannuation funds and life insurers were still fixated on outperforming required rates of return through significant weightings to equities, reflecting the view (correctly held at that time) that strong growth would be achieved as a result of deregulation and improving efficiency in major industries, especially utilities and financial services.

### 5.2 Targeting money newly available for investment

Listed vehicles are not attractive to all types of investor, however. In particular, investors with very long-term time horizons such as superannuation funds prefer to avoid the volatility associated with mark-to-market accounting for listed equities. In addition, long-term investors have recently increased weightings towards assets that are expected to generate lower returns than equities, but

with inflation protection characteristics. With the right pricing regime, many infrastructure assets are particularly well suited to these needs.

Importantly, superannuation funds globally continue to receive strong positive net investment flows, driven by fiscal incentives and, in Australia and some other countries, compulsory superannuation regimes. As a result, these types of investor represent one of the strongest sources of money available for new investment.

Privatisation of infrastructure via a trade sale is not an ideal structure for the sale of major utility and other similar business to this type of investor, particularly for larger transactions above around \$2 billion to \$3 billion in size:

- Globally there are few individual trade purchasers large enough to contemplate all cash, cross-border acquisitions of \$2 billion or more. Typically an acquirer contemplating a transaction of this size would be wary of investing more than 10% of its overall enterprise value in such a transaction, implying, with gearing of 60:40 debt to equity, that the acquirer would need a market value of around \$10 billion;
- Long-term investors such as superannuation funds will be forced to form bidding consortiums. This increases complexity for the underlying bidders (who have to co-ordinate and fall into line with other investors), introduces additional cost (through consortium management fees and extensive duplicated due diligence programmes) and stifles competitive tension compared to the more open bidding process utilised in traditional IPOs;
- Vendors have to manage multiple price and contract negotiations in parallel, to make sure that there is competitive tension between alternative acquirers until as late as possible in the process; and
- The sale proceeds achieved are negatively impacted by lowest common denominator pricing within each consortium, as all consortium members need to agree to the bid price.

To address these challenges, Pottinger has developed an alternative asset sale structure. This structure, while named an Initial Superannuation Offering structure (“ISO”), should *not* be thought of as being limited solely to super funds – it is named thus as these are the most likely set of investors. The structure itself is optimised to target both institutional and private superannuation investors, as well as other investors that are seeking stable, inflation-protected long-term investment returns.

### 5.3 An introduction to Initial Superannuation Offerings

By combining the principles of a conventional IPO with a private ownership model for infrastructure, institutions and governments would benefit from a more open and lower cost mechanism to allow investors to provide long-term capital to existing infrastructure assets. In summary, this structure ensures:

- Public company governance, board and management systems and processes would be implemented (if not already in place);
- The business in question would be prepared for sale following many of the processes used for an IPO, including the preparation of a full prospectus and supporting due diligence and verification material;
- Superannuation and other interested investors would bid for direct ownership of shares in the company, without the need to participate in bidding consortiums;
- Shares would be allocated following an appropriately modified book-build process;
- Following the ISO, the company would be privately held, with investors who wished to increase or reduce their holding negotiating private transactions amongst themselves; and
- If private investors such as self-managed superannuation funds were allowed to participate directly, mechanisms could be implemented to provide some form of periodic liquidity event. This could include share buybacks by the company in question. Alternatively, third party investment managers would be free to collect individual demand via closed end funds which they listed separately on a stock exchange.

This ISO structure preserves the advantages of the public offering financing structure while also addressing its shortcomings. In particular:

- Long-term investors, including domestic and offshore superannuation funds, as well as potentially self-managed super funds, could invest directly in relevant infrastructure assets;
- External consortium management costs typically associated with bid vehicles could be avoided;
- Long-term investors would avoid unwanted short-term mark-to-market variations in the value of assets;
- Governments could maintain more direct control over the nature of the shareholder register immediately following the ISO, including avoiding undue participation by very short-term investors who seek to “stag” IPOs;
- Governments could retain minority holdings in assets for the longer term, should they wish; and
- High governance standards could be maintained, through imposing appropriate standards and requirements analogous to those required for listed public companies.

#### 5.4 Implementing an ISO

The preparation phase for an ISO would be very similar to an IPO, albeit with somewhat greater flexibility as there would be materially less need to accommodate market timing considerations. In particular:

- Governance procedures appropriate for a public company would be put in place, including appointment of an appropriate Board and introduction of public company management processes;
- The company would undergo the usual pre-IPO due diligence procedures, designed to ensure that the Board could produce an appropriately verified prospectus;
- Associated selling documentation would be prepared, including shorter form investor materials to support the marketing of the company;
- Any regulatory pricing regime would be reviewed and optimised to ensure an optimal balance between public interest considerations and ensuring appropriate incentives for cost-efficient operation of the asset over the longer term; and
- Other pre-sale preparations would be completed to ensure investors were acquiring a “clean” business, without material downside risks that might be hard to quantify.

The opportunity would be marketed in a similar manner to an IPO, but targeted at long-term institutional investors, including domestic and foreign superannuation funds. A book-building process would be undertaken, with investors able to submit and revise bids that tabulated their demand across a range of sale prices.

Governments would benefit from significantly greater flexibility than on a traditional IPO. In particular:

- There would be no need for a minimum number of shareholders to be included on the register from the outset;
- There would be no need for a minimum free float to be achieved, giving greater ability to respond in the light of investor demand at the time; and
- Other technical listing requirements that are necessary for listed companies could also be avoided, allowing for the offer structure to be more precisely tailored to take account of public interest considerations.

A number of different approaches could be adopted to the book-building process. The simplest approach would be to establish a clearing price that met the vendor’s requirements for the proportion of the company to be sold. All investors that had offered to acquire shares at this price or higher would pay the same clearing price, and would receive their desired investment in full.

## 5.5 Pricing advantages compared to a traditional IPO

ISOs offer a number of potential advantages compared to IPOs, generating additional value for the vendor in question:

- **Tighter pricing through minimisation of the cover ratio:** All other factors being equal, pricing should be higher than on a conventional IPO. This is because there would be no need to limit the number of shares sold at the clearing price to create after-market demand for the shares. On a traditional IPO, the coverage ratio of the amount of demand at the IPO price to the volume of shares sold at the time of the IPO is typically set at 1.5x to 2.0x, in order to seek to ensure that the share price increases after listing. This would not be necessary on an ISO, as the shares would not be publicly traded. Thus the vendor should be able to sell more shares, at a higher price, than would otherwise be possible;
- **No underwriting costs:** An ISO would not necessarily require underwriting, as there would be no requirement for a minimum number of shares to be sold at a particular price, and the more onerous timing and other requirements of a traditional IPO could be avoided;
- **Reduced conflicts of interest:** Potential conflicts of interest associated with traditional IPOs would be avoided. In particular, on a traditional IPO the underwriter will balance the profit that it achieves from underwriting fees on a successful IPO against the broking and trading profits that it can make through participation in the aftermarket. These gains are extremely difficult to ascertain or police from the outside, but can be substantial. The ISO structure avoids many of these conflicts; and
- **Public participation:** As noted above, ISOs are specifically designed to appeal to long-term superannuation funds, whose underlying investors are the vast majority of the general public. In addition, ISOs can be structured to allow additional direct participation by the general public.



## 6. Improving efficiency in the infrastructure market

There are a number of significant barriers to improving the overall efficiency and competitiveness of Australia's infrastructure construction and financing sector. There are, however, a number of practical measures which could be implemented by Federal and State Governments to address these issues, with minimal requirement for financial investment. Indeed, in most cases payback periods are likely to be very short, highlighting the appeal of these initiatives from a public policy perspective.

### 6.1 Prioritising infrastructure investment

Infrastructure Australia and analogous state level bodies play an important role in providing information on the pipeline of infrastructure investment required in Australia, as well as in applying standardised frameworks for assessing the readiness of such projects to move forward into detailed planning and implementation.

There is considerable public pressure on governments to accelerate the delivery of major infrastructure projects. At the same time, nearly all commentators are wary of governments taking on significant additional borrowings, given the potential impact on Federal and state credit ratings. This represents a substantial challenge for Australia, particularly given the enormous volume of private sector and public sector infrastructure investment required over the next decade.

The solution to this conundrum requires early consideration of the key drivers of the commercial viability of proposed infrastructure projects. These drivers include:

- **Construction costs:** The estimated cost of the project, taking account of geotechnical and other similar requirements, identifying major risks and building in appropriate contingencies. There are well established practices and procedures for building up the requisite body of information to allow an informed appraisal of the related issues and hence these aspects are generally well addressed in project development;
- **Cost recovery options:** Pottinger's assessment of a number of the largest projects indicates that there are substantial potential sources of revenue that would allow appropriate cost recovery mechanisms. We believe that such mechanisms must strike an appropriate balance between "beneficiary pays" (ie where appropriate, all beneficiaries pay, not just direct users), public policy considerations (eg driving more efficient behaviours in the nature and timing of use of roads and/or public transport) and consumer affordability. These factors will need to be overlaid with political considerations as appropriate. The larger and more diverse the sources of cost recovery revenue streams, the easier it will be to design a package of revenue sources optimised to deliver adequate returns to capital providers;
- **Intrinsic risk considerations:** In many cases, with appropriate design it is possible to create revenue streams that match the long-term risks taken on by an investor in owning and operating a major infrastructure asset. As a simple example, the majority of operational costs will be exposed to inflation. Accordingly, providing a revenue stream that is automatically index linked (such as an index-linked levy on ticket prices) will provide a natural hedge to the operator, avoiding the need to build in risk contingencies; and
- **Investor demand:** With the right combination of revenue model and financing structure, governments can unlock and tap into the current substantial demand for infrastructure investment.

Combining these perspectives will allow governments and their advisors to balance policy priorities against the ease of private delivery of major projects more effectively. In particular, with the optimal approach we believe that accelerated delivery of a number of critical state and national infrastructure projects will be possible on cost effective terms.

### 6.2 Leveraging Australia's AAA credit rating

Bidders for traditional PPPs face significant practical market constraints that impact both the amount of funding available for particular projects, as well as the cost at which this funding is available. As noted previously, for larger projects with a total cost over \$2 billion to \$3 billion, current market soundings indicate that private sector financing will not be available to cover the entire project cost.

As a result, such projects cannot be pursued as traditional PPPs without direct government financing support.

Alternative financing models such as converting infrastructure bonds represent one practical solution to this channel and have the benefit of matching construction, operational and financial risks directly with the parties most willing to bear them. In some circumstances, however, it may be desirable for policy reasons for the Australian Government to provide some form of credit support for specific projects, for example via the issue of appropriately structured credit guarantees.

Conceptually, the primary objective of credit enhancement is not to reduce the overall cost of financing a project, but rather to enable private financing to be raised where otherwise it would not be accessible. In some circumstances, where there is markedly more investor interest for higher-rated debt instruments, then credit enhancement will reduce overall costs. This represents a form of market inefficiency, where credit risk enhancement providers price risk differentials differently from investors, and is thus unlikely to be sustained over time.

Significant care is required in the structuring of any such guarantees if moral hazard risks are to be avoided. In particular, where the underlying borrower is a private consortium, it will be particularly important for any such credit enhancement to be priced on arms' length terms. This will help to ensure that such credit support is primarily utilised to unlock financing that would not otherwise be accessible, rather than simply to allow the underlying investor to maximise the amount of gearing introduced.

By way of example, if credit enhancement was provided for free, the underlying investor would be incentivised to utilise a highly leveraged structure, leaving the large majority of downside risk with the Australian Government, whilst taking virtually all upside risk itself. In this context, we note that on most major projects that we have investigated in detail, the fundamental challenge is availability of financing in sufficient volume, not the actual interest costs associated with that borrowing per se.

A secondary benefit of such credit support may be to allow the underlying investor to access debt on terms that are most cost effective overall (ie taking account of both direct borrowing costs as well as the cost of credit enhancement itself). In an efficient market, these savings are likely to be modest however. We would treat with scepticism, therefore, suggestions that any net major cost savings could be achieved through the use of credit guarantees.

Logically, such credit support would best be provided by a specialist agency operated on normal commercial lines, analogous to both the Export Finance and Insurance Corporation and the Australian Reinsurance Pool Corporation ("ARPC"). We explore this further below.

### **6.3 Addressing market failure – the role of credit reinsurance**

One of the more significant impacts of the global financial crisis has been a dramatic reduction in the ability of debt issuers to obtain credit reinsurance from specialist credit reinsurers. Over the preceding twenty years, many debt issuers, and particularly large securitised debt pools, relied significantly on credit reinsurance to structure debt offerings to match the credit appetites of investors. The leading private sector credit insurers have either failed, or dramatically reduced their activities in the region, and this has had a material impact on the ability of many issuers to structure viable debt offerings.

This is particularly relevant to securitisation. As an example, the largest would-be issuers of mortgage-backed securities have the ability to select a pool of mortgages with the desired credit metrics, allowing the main tranche of the securitisation to attract eg an AA or AAA rating. For mid-sized or smaller issuers, this is simply not possible without the use of third party reinsurance, as they will not have sufficient net new lending to be able to create AA or AAA risk pool of sufficient size to be viable as an individual issue.

In the context of infrastructure finance, and particularly utility style businesses, Australian governments and semi-governments and regulators have targeted capital structures that yield an overall credit rating of around BBB or BBB+. Whilst this rating may optimise overall capital efficiency, in the post-GFC environment there remains significant limits on the amounts of debt which can be

sourced at these levels, restricting the ability of stand-alone infrastructure/utility companies to access sufficient debt to be able to finance new projects.

As a result, we believe that there is an important role for the Australian Government to play in supporting the formation of a credit reinsurance provider in the Australian market. This would replicate the approach adopted to address an analogous market failure in relation to terrorism risk, which resulted in the Australian Government creating the ARPC.

This special purpose company was formed in a manner that required minimal initial capital contribution from the Australian Government and which also did not create on-balance-sheet liabilities. Pottinger team member Andrew Agnew advised on the creation of the ARPC, including the financing structures put in place, and we would be delighted to provide further background where relevant.

## 6.4 Increasing competitive tension

High transaction costs for bidding consortiums are a significant barrier to competitive tension in the procurement process for major infrastructure projects. In a recent report examining barriers to competition in PPP projects in Australia, research has found that bid costs were lower than in the UK, but higher than in Canada.<sup>9</sup> The report found that bid costs for a losing bidder were approximately \$2 million to \$3 million for a \$250 million project and \$5 million to \$6 million for a \$1 billion project.<sup>10</sup> Worse, costs can escalate dramatically when there are repeated changes to overall specifications, or where changes in prioritisation impact whether and when particular projects proceed.

In addition, the concentrated nature of Australia's infrastructure construction sector means that a small number of organisations have won the large majority of contracts. Potential market entrants remain wary of bid costs in this context, concerned that they may be used as a stalking horse to keep prices down where there is a preferred domestic provider with long-established operational relationships with decision makers. This dynamic materially reduces the perceived possibility of recouping bid costs by winning the tender. In the same survey, approximately half of the market participants surveyed cited the high costs of establishing a bid team as a barrier to competition.

Accordingly, there is merit in considering mechanisms to provide some support for bid costs. There are three basic mechanisms which could be employed:

- **Subsidising bid costs:** As it is in the Australian infrastructure seller's best interests to attract the widest range of capable investors to each infrastructure financing, providing full or partial bid cost recovery for suitably pre-qualified tenderors would provide these organisations with significant downside protection. More broadly, the government would be seen by potential new entrants of having some "skin in the game" in encouraging new providers to enter the market. This has been successfully used in a range of jurisdictions, including Canada, Portugal, France<sup>11</sup> and, in Australia, NSW. In order to encourage the ongoing development of the national infrastructure construction market in Australia, the Australian Government could consider providing a level of support for bid costs;
- **Common consultant reports:** State or Federal sourcing of consultant reports common to all bidders (eg in relation to modelling or regulatory compliance issues) would provide a further a simple and effective means of reducing duplicated and often unnecessary bid costs. This approach is widely used around the world on asset sales, with vendor due diligence reports prepared by prospective sellers of businesses and assets then made available to potential purchasers; and
- **Avoiding winner takes all dynamics:** On larger projects, typically those above at least \$1 billion in value, there is frequently potential to develop an overall delivery model and contracting structure that includes elements designed to be won by a contractor other than those in the main consortium. Inclusion of such "second prize" elements in major infrastructure projects will increase competition for these elements of the work, as well as incentivising major global competitors through the prospect that they have an increased chance of winning at least an

<sup>9</sup> PPP Procurement: Review of Barriers to Competition and Efficiency in the Procurement of PPP Projects, KPMG, May 2010, p3

<sup>10</sup> This represents approximately 0.8-1.2% of transaction value for a \$250 million project and 0.5-0.6% of transaction value for a \$1 billion project. See p29 of the KPMG report

<sup>11</sup> PPP Procurement: Review of Barriers to Competition and Efficiency in the Procurement of PPP Projects, KPMG, May 2010, p37

element of the work. Specifically we believe that Request For Proposal structures should be set up so that the main contractor cannot win such second prizes, thus avoiding winning takes all dynamics.

## 6.5 Very large projects – promoting competition and diversifying risk

The largest infrastructure projects – such as the proposed East Coast High Speed Rail network (estimated cost \$61bn to \$108bn) and the National Broadband Network (estimated cost \$40bn to \$50bn) – are particularly complex but also offer the opportunity to drive significant productivity *improvements* in relation to infrastructure delivery, if the optimal approach to project delivery and financing can be utilised.

These projects are both large in global terms. For example, Australia's High Speed Rail network is the second largest heavy rail construction project currently under consideration globally (after the US North east corridor line, targeted for delivery by around 2040). This is not surprising, as Australia's Sydney – Melbourne and Sydney – Brisbane air routes are two of the world's busiest and operate over distances ideally suited to high speed rail. As a result, these projects represent some of the most important business opportunities for global infrastructure construction companies specialising in their relevant fields.

Projects of this size lend themselves to segmentation into a series of smaller projects, allowing multiple contracts to be awarded to different contractors. This would increase the incentives for new market entrants to invest time and resource in bidding for such contracts and building up the requisite on-the-ground resources to support delivery. The nature of individual components can also be structured to appeal to different types of specialist. As simple examples, the high speed rail network could be delivered as a series of network construction contracts, with high priority elements completed in parallel with each other, constructed by multiple contractors.

We see this approach as particularly important for the high speed rail project, where the substantial majority of value will be unlocked only once there is full high speed connectivity from Melbourne to Sydney (including Canberra connections) and/or from Sydney to Brisbane. This is because the substantial majority of revenues will be associated with passengers making through trips from Sydney CBD to Melbourne CBD, taking advantage of shorter end to end journey times and improved comfort and utility on the journey. We will explore these issues further in our report *“Train or plane? The future of East Coast intercity travel”*. This will be published once the stage 2 High Speed Rail report has been released and we have considered the further analysis provided.

Meanwhile the construction and fit-out of elements such as stations could be awarded separately, allowing for increased competition in station design and speed of completion. This would also have the merit of ensuring that a series of smaller “second prizes” were available to civil construction companies seeking to build their scale in the Australia market and establish their credentials.

From a practical perspective, our ongoing discussion with relevant market participants suggests that hybrid delivery models of this nature are viable for projects with a total cost of around \$2 billion or more, and in some cases for smaller projects. In terms of individual components, individual elements as small as \$200m (eg for a series of train stations) are potentially attractive to relevant construction companies, and offer attractive potential to drive the best possible outcome for highly visible elements of major infrastructure projects.

## 6.6 Profiting from disintermediation

There are many elements of government revenues that have highly attractive features when judged from a specialist quantitative analysis perspective. Simple examples include revenue streams with inflation protection characteristics, especially where these have low correlation with overall stock market performance and/or economic growth. More technical examples include revenue streams with unusual characteristics, such as the auto-correlated features often associated with lotteries duties.

Governments need to be very cautious when exploring the privatisation of such revenue streams, as there is potential for substantial value loss to taxpayers if inappropriate valuation techniques are

adopted or if the revenue streams are packaged in a manner which obscures this value. There are a number of areas of particular risk for governments, including:

- The direct securitisation of any government revenue stream;
- The sale of state-owned assets or businesses which embed certain types of revenue stream. Examples include utility companies, lotteries businesses and motor registries;
- The allocation of certain types of revenue stream as a cost recovery mechanism for major infrastructure projects (ie where such projects are financed by a levy, duty or charge on consumers that is passed directly through to the infrastructure provider).

In each of these cases, the revenue stream may be worth substantially more to specialist investors than will be apparent using the conventional valuation approaches adopted in relation to vanilla capital markets transactions or asset sales.

Deeply specialised quantitative valuation skills are needed to be able to value certain assets of this nature, and specialist financial structuring expertise may be needed to ensure that this value is retained for the benefit of governments and taxpayers, rather than simply being ceded to financial investors.

From a government perspective, there is a significant opportunity for treasury corporations to play in ensuring that profits to be made from maximising the value of relevant revenue streams are captured for the benefit of the state. As an example, rather than simply allocating a particular revenue stream directly to an infrastructure provider by way of an availability and/or volume payment, such revenue streams could be securitised, realising greater value than would be attributed by an infrastructure owner, with the proceeds used to make the required availability payments over time.

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# About the Authors



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Nigel is Joint CEO and founder of Pottinger. Nigel is one of the most experienced bankers in the Asia Pacific region, with well over twenty years' advisory experience. He has advised on leading assignments in most of the world's major economies, including acquisitions, joint ventures, mergers and disposals, hostile bids and de-

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## **Jonathan Wong, Associate**

Since joining Pottinger in 2009, Jonathan has had wide ranging corporate advisory experience across a number of markets, industries and types of transaction. His recent advisory experience spans the infrastructure, energy and resources, financial services, telecoms and retail sectors. Having lived and worked across Asia, America

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## **Daniel Mulino, Director, Policy**

Daniel is a highly experienced policy and strategy advisor. He has experience at every stage of the policy process - from policy development through to implementation and evaluation. He has wide-ranging experience at both Federal and State levels of government of managing effective partnerships between the public

and private sectors. Daniel has also provided strategy and policy advice while working at a leading management consulting firm to government, large corporations and the Not-For-Profit sector. In his roles as a Ministerial Advisor, senior policy officer and management consultant, Daniel has effectively managed a wide range of stakeholders, often in highly contentious circumstances.

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## **Andrew Agnew, Special Advisor**

Andrew's career in finance & corporate advisory spans three decades and includes substantial practical international execution experience including 10 years building businesses within Asia. He has advised across a wide range of industries, most recently with a particular emphasis on the government

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