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Michael Regan

Bond University, michael\_regan@bond.edu.au

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# PROJECT FINANCE:

## Transactional evidence from Australia

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MICHAEL REGAN

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### ABSTRACT

The international project finance market is experiencing a period of significant change. The new Basel III capital adequacy rules will make it harder for banks to provide long-term project finance, and alternative sources of finance such as the shadow banking sector, fund managers, sovereign wealth funds, and institutional investors will take time to bridge the financing gap. In the meantime, it is difficult to source project finance for tenors beyond seven years, risk premiums are higher, and finance is difficult to source. Recent innovations in the form of the European Investment Bank's Project Bond Initiative, and the ASEAN Infrastructure Fund and Bond Market Initiative can provide credit-enhancing support for qualifying projects in the medium term.

In several respects, project finance in Australia has been working with similar constraints for many years particularly for the delivery of privately financed infrastructure projects and public private partnerships. Finance typically involves the issue of short-dated debt or bonds refinanced every six to seven years and for some projects, using revaluation and refinancing to lower average cost of capital and replace equity with debt without affecting debt service coverage and loan valuation ratios. This approach requires a stable interest rate environment and the probability that asset values will increase during the early stages of the project during which significant de-risking has taken place.

The study uses a cross-sectional analysis of PPP financing in Australia with six case studies, the Eastlink Motorway and Southern Cross Railway Station projects in Melbourne, the Airport Link and Clem 7 toll roads in Brisbane, and the Desalination Plant in Eastern Victoria, and the Reliance Rail project in New South Wales. The Victorian projects were commissioned under the Partnerships Victoria PPP policy framework between 2004 and 2009, which includes the global financial crises (GFC) of 2007-08 and following years. The

Reliance Rail project was commissioned under the New South Wales Privately Financed Projects policy, and the two Brisbane toll road projects were contracted under Queensland PPP policy in 2008 and 2006 respectively.

The object of the analysis is to identify common characteristics in the way long-term PPP projects are financed in Australia, differences to practices in overseas markets, and lessons learnt that may inform future PPP policy and private finance.

### INTRODUCTION

Traditional project financing has been with us for a long time and was first evident with private maritime trade in classical Greece, privately financed and operated bridges and punts during the Roman Empire in the time of Augustus, during the financing of the renewal of the English road system in the 18<sup>th</sup> and early 19<sup>th</sup> Centuries (Yescombe 2002, p. 5) and for the provision of many municipal services in provincial France during the 19<sup>th</sup> and 20<sup>th</sup> Centuries. Project finance played an important role in Britain's industrialisation during the late 18<sup>th</sup> Century with privately-owned chartered and merchant banks providing intermediation and financial services to match providers and users of long-term project capital (Mokyr 2009). The development of contemporary project finance occurred with the New Deal in the United States after the Depression and used to finance public infrastructure and resource projects following World War II. More recently, the privatisation of many state business enterprises in the 1990s, wider use of outsourcing, build operate transfer contracts and PPPs has led to a revival in the use of project finance for many new applications including energy production, information and communications technology, water and energy supplies, waste management and recycling projects, public transport systems, telecommunications and toll roads. The income stream for many of these projects is generated from user charges with sponsors assuming full or partial demand risk. The credit margin is generally greater for greenfield projects than it is for brownfield

or mature projects and construction finance carries a higher risk premium than term debt during the operational phases of the project. Other factors that enter the determination of credit margins include the degree of leverage, debt service coverage ratios and the track record and experience of contractors. When projects are financed with the issue of bonds, these may be sought to determine borrowing costs and significant differences exist between the cost of debt for investment grade transactions and those that are unrated or rated sub-investment grade (Standard and Poor's 2004, 2007; Reserve Bank of Australia 2012).

Shadow toll arrangements may provide greater certainty in relation to the timing and credit strength of PPP revenue streams but unless otherwise supported by minimum user or loan guarantees, user risk is borne by investors and the project financier. Empirical evidence suggests that forecasting error with transportation projects is a major problem with a large number of toll road PPP projects in distress or undergoing debt restructures in the United States, Spain, Australia, Canada, South Africa, Hungary, Poland, Mexico, and the United Kingdom (Bain 2005, 2009; Fitch Ratings 2007; Department of Infrastructure and Transport 2012). Two of the toll road case studies are presently under administration having failed to achieve traffic forecasts in their first two years of operation, and the Cross-City and Lane Cove Tunnel projects in Sydney have been under administration for some time.

Economic infrastructure may require sponsors to carry off-take or demand risk without a state indemnity or guarantee. Since 2001, PPPs have been used for non-core services in health and education services (provision and management of buildings, plant and equipment, operation of food services, laundry services, security, car parks and grounds maintenance), corrective services, public buildings and judicial premises (buildings and life cycle management, information technology), and public housing (construction, maintenance and management services). The income stream for these services is generally a unitary or availability payment by government. These payments may be structured into base and incentive components. The base component may be agreed at a level sufficient to meet debt service obligations with minimal abatement for failure to comply with the service specification. The incentive payment may be fully or partially abated for non-compliance, incentives may be offered for sustained performance that exceeds specification, and a redeemable points system may be used to allow project sponsors to offset periodically assessed abatements with incentive offsets.

## PROJECT FINANCE AND PPPS

Project finance possesses a number of distinguishing characteristics: it is limited recourse lending with the lender's security interests confined to the assets and the bundle of contracts that are being financed, it has long tenors with debt servicing matched to the anticipated cash flows of the transaction, it is highly leveraged and generally off-balance sheet, and is mainly used to finance capital-intensive assets and facilitate risk dispersion with complex projects. Although each transaction is different and there are few hard and fast rules of general application, the focal point of project finance is the matching of cash flows to debt servicing obligations based on revenue forecasts over intervals of 20 or more years.

PPPs are a form of outsourcing whereby firms deliver services either directly to government or on behalf of government to the community. These contracts are for a term of years and unlike traditional procurement practices, a PPP is privately financed and requires the firm to carry responsibility for specific construction, lifecycle cost and operational risks. Risk is allocated to the party best able to manage it although this will generally be determined on the question of costs. As a general rule, the lowly-capitalised special purpose vehicle(s) (SPV) will absorb delivery, operational and financing risk which is then sub-contracted out usually to members of the consortium providing those services. In several of the case studies, the SPV was listed on the Australian Securities Exchange (ASX) thereby transferring significant equity risk from the SPV to buyers of the security. The risk carried by stakeholders is significant and includes construction time and cost, site conditions, demand risk, some network and site access risks, force majeure, financial risk, and compliance with a complex bundle of contracts. PPPs impose a number of variations on the design and operation of traditional project financing methods, such as the allocation of risk, the method of payment, discretionary contract determination provisions, high bid costs and the incomplete nature of PPP contracts

There are two contractual arrangements of particular importance. The PPP agreement will contain a service specification that sets performance standards, a breach of which may result in a financial penalty or, in the case of an availability payment arrangement, an abatement of the unitary payment. This can lead to volatility in cash flows and unless sufficiently covered by reserves, may impair debt servicing capacity. The second is the loan agreements and provisions that dictate the distributional priorities of cash flows and create debt servicing (debt service coverage ratios) and loan to

valuation (LVR) covenants, a breach of which may trigger any one of several lender interventions.<sup>1</sup> The state will generally retain site risk particularly pre-existing contamination, land tenure issues, access and some network risks. Recent reports by the Audit Commission indicate that risk take-back is a problem for the state during the negotiation stages of a PPP, with the initial risk allocation on which the project was commissioned bearing little resemblance to the actual responsibility for risk at financial close (Australian National Audit Office 2006; Jagger 2013).

A further aspect of social infrastructure BOT transactions is the payment system, which is the credit risk of sovereign, sub-national or municipal governments. For OECD countries, this credit risk is not what it was prior to 2007-08 with many countries including France, Ireland, Spain, Italy, Belgium and the United States, and the European Financial Stability Facility undergoing rating downgrades (Standard and Poor's 2013). Among nations most active with these contracts, a Standard and Poor's credit rating of A or better is common (see Appendix 1). It is questionable whether a unitary payment by a state agency rated investment grade or better is more bankable than one with a lower or no credit rating. There are a number of variables that influence the reliability of the income stream including SPV operational performance, the veracity of life cycle cost estimates, the cost of capital following refinancing, variations to service requirements over the life of the contract and the efficacy of dispute resolution procedures. PPPs are incomplete contracts that do not attempt to provide for all of the possible events that may occur over contract terms of 25 years or longer. However, it is the adequacy of the change management mechanisms embedded in the contract that will have a greater influence on the stability of revenues over the life of the contract than the credit standing of the payer. To the extent that sovereign risk is a factor with projects, lenders will take that into account in the pricing debt.

In 2012, PPPs accounted for around 6% of government capital spending in OECD countries and PPP policy frameworks are used in 142 countries worldwide to attract foreign direct investment, private delivery and management of economic and social infrastructure services. Global project finance peaked at US\$308 billion in 2007 and stood at US\$235 billion in 2011 (Eurofi 2012).

## THE PROJECT FINANCE MARKET

Project finance has experienced significant change since the events of 2007-08 with higher costs, soft supply conditions and a reduction in tenors. A further important development occurred in 2010 when the Basel

Committee on Banking Supervision published a new regulatory framework for international banks (Basel III) designed to strengthen regulation of both capital and liquidity and improve both bank and market stability. Phased in over eight years from 2013, the rules require banks to reduce leverage, increase equity capital, and reduce risk-weighted assets. Project finance involving long-term limited recourse loans and bonds will attract additional capital charges, reduce tenors and increase the cost of finance for borrowers. Additionally, banks are required to maintain capital reserves to meet cyclical downturns and countercyclical periods of excess credit growth in national economies (Chan and Worth 2011).

TABLE 1

Global Project Finance 2011-2012

	USD 2012	USD 2011	CHANGE %
Asia-Pacific (excl. Japan)	85,834	92,761	-8
Australia	42,185	24,814	70
Japan	2,366	1,524	55
Europe	46,043	72,216	-36
Africa, Asia & Middle East	22,249	18,343	21
America	38,862	38,570	1
Total	195,353	223,414	-13

Source: Australian Government, AusTrade 24 January 2013

Basel III is expected to limit the supply of project finance originating from banks over the next five years. Future supply is expected to be provided from the shadow banking sector, sovereign wealth funds, insurance companies and fund managers attracted to the tenor, risk and return attributes of long-term infrastructure investments.

## FUTURE CAPITAL SUPPLY

Demand for infrastructure and project finance in both OECD and emerging economies will continue to grow at very high rates (Reviglio 2012). However, the fiscal constraints facing state budgets and debt levels at the present time suggest a greater role for private equity and debt capital and public private partnership procurement methods in the future. The critical factor here is on the supply side. European banks have historically provided the majority of global project finance over the past decade with Japan increasing market share, in part, by the acquisition of the project finance activities of European banks (Eurofi 2012). However, the new capital adequacy rules that are being phased in under Basel III, the restructure and reduced credit rating of many global banks, and the demise of the monoline credit insurance market is affecting global supply with a contraction

of 7% in the second half of 2012 and significantly, a contraction of 39% by EU banks and 21% for other EU lenders (Eurofi 2012; Bank for International Settlements 2012).

In the years following the financial crises of 2007-08, project finance became difficult to source worldwide for PPP projects: lenders withdrew from the market, risk spreads increased putting pressure on borrowing costs, and the major monoline credit insurers underwent credit rating downgrades that jeopardised existing credit guarantees and closed the door on new business. In Australia, traditional project finance was difficult to attract to PPP projects in the aftermath of the 2007-08 financial crises although the type of projects put to the market would have been difficult to finance in any case. The Victorian Desalination project was one of the largest PPPs in the world when put to the market in 2009, the appointment of administrators to the Lane Cove Tunnel and Cross City Tunnel projects in Sydney, the Clem 7 and AirportLink projects in Queensland, and the New South Wales Government's financial assistance to the AUD3.6 billion Reliance Rail project in 2011-12. Project finance raised from domestic lenders is generally structured with tenors of around seven years. This creates refinancing risk for borrowers every five years with revaluations to reflect growth in underlying asset value and theoretically, reduces the cost of debt. Several PPPs such as the Southern Cross Station project were financed prior to the financial crises of 2007-08 with a combination of long-term US bonds issued to non-resident investors, and short-term bonds in Australian currency.

## METHODOLOGY

The study uses a cross-sectional analysis of PPP financing in Australia with six case studies, the Eastlink Motorway and Southern Cross Railway Station projects in Melbourne, the Airport Link and Clem 7 toll roads in Brisbane, the Reliance rolling stock rail project, and the Desalination Plant in Eastern Victoria. The Victorian projects were commissioned under the Partnerships Victoria PPP policy framework between 2004 and 2009, which includes the financial crises of 2007-08 and following years. The Reliance contract was commissioned under New South Wales Privately Financed Projects policy in 2006, and the two Brisbane toll road projects were contracted under Queensland PPP policy in 2006 and 2008. The object of the analysis is to identify common characteristics in the way long-term PPP projects are financed in Australia, differences to practices in overseas markets, and lessons learnt that may inform future PPP policy and private finance.

## INFRASTRUCTURE AS AN ASSET CLASS

Infrastructure as an asset class possesses a number of unique properties. Investments are long-term, capital-intensive, site and use specific and generally display monopoly trading characteristics. The financial characteristics of infrastructure include low variable costs, stable and indexed revenue streams and low demand elasticity. In listed form, infrastructure is most closely related to real estate investment trusts with which it shares a number of physical characteristics, offers a low equity beta, and provides excellent diversification potential for mixed asset portfolios because of its low correlation with other asset classes and leading economic indicators (Connolly 2012). A study of the ASX between 1998 and 2004 suggests listed infrastructure securities are negatively correlated with short and medium-term interest rates and positively correlated with the consumer price index. In relation to other asset classes, infrastructure securities returns disclose little if any correlation with other asset classes with the exception of contractors providing support services to the infrastructure and resources industry and accordingly offers diversification potential (Peng and Newell 2007). The same study identified a sector beta for returns of 0.59, the lowest of the asset classes in the study (Regan 2004).<sup>2</sup>

Moody's Investor Services rated 53 infrastructure finance issues with outstanding debt over AUD65 billion in October 2012 of which 89% were in the range Baa2 and A1 (Standard and Poor's BBB to A-) (Musiker 2012). Historically, Bonds with an investment grade weighting (Standard and Poor's BBB) demonstrate a cumulative default rate of less than 7.94% over 15 years (<4.54% over 10 years). The default rate for AAA debt over the same period is 0.83% and 0.70% respectively (Standard and Poor's 2012a). The data confirm the strong correlation between default rates and credit quality, the attractive risk-yield ratio of this asset class and its attractiveness to institutional investors over sovereign and corporate bonds (Weber and Alfen 2010, 24-29).

## CASE STUDY 1 EASTLINK TOLL ROAD, EAST MELBOURNE

The Mitcham to Frankston or Eastlink project has been on the drawing board for 30 years before works commenced in 2004. It is a 39km electronically tolled motorway and connects the Eastern Distributor toll road

1. Standard and Poor's data shows default rates of 9% for BBB rated finance and 2.2% for AAA credit rating for the 20 year period, 1981-2012 (Standard and Poor's 2012b).

from Port Melbourne to Frankston in the city's southeast with a connection to the growth industrial centre of Dandenong. The state set up a special authority to acquire the land during the planning stage and the completed toll road was delivered and operated as a PPP over a 39-year term.

Total cost of the project was AUD3,795 million of which the nominal equity was AUD1,707 million (45%) and borrowings AUD2,088 million and 55% of the capital requirement. The actual equity raised in an initial public offering was AUD1,120 million (the remainder was deferred equity to be invested on completion of construction) suggesting leverage was closer to 70% with the balance in the form of a deferred tranche and a dividend reinvestment plan.

The project entity (Connect East group) made a stapled security offering of one unit in each of two unit trusts, one effectively owned the contract and the other managed the asset. However, the equity capital was on-lent to other entities within the group.

The debt was used to fund construction (AUD2,502 million), to meet coupon and interest costs, including distributions to unit holders during construction (AUD554 million), upfront and ongoing development and financing costs (AUD444 million) and specified reserves (AUD295 million). Debt was structured as short-term interest only loans in four tranches: a construction finance facility that converted to a term debt facility on commissioning, a six year interest only facility, an eight year debt facility and additional funding to meet the cost of the deferred stakeholder equity contribution (AUD290 million) and distributions made to investors during the construction period (AUD297 million) (Connecteast Group 2004).

Eastlink is managed and operated by the ConnectEast group of companies and listed on the (ASX), one of few single asset special purpose entities to do so over the past decade. ConnectEast will revalue its investment at each "window" in the refinancing schedule (tranches A and B in 2010 and 2012; all tranches 2014 and 2019). The interest-only debt will be refinanced with amortising loans maturing at the end of the concession. The spread over the reference rate for all tranches is anticipated at between 70 and 80bp per annum (Eastlink Group 2004, pp. 59-60). Frequent valuations in the first 10 years of the project will recognise the growth in revenue over time as the ramping up phase is replaced by a steady state patronage level and real revenue growth (tolls are linked to the consumer price index). This will enable increased debt at lower cost in the future while

preserving the 1.6 annual debt service coverage ratio and realising short-term gains to equity. ConnectEast was acquired by Horizon Roads, a vehicle of the global equity investment group CP2 in October 2011 at 0.55c a stapled unit, around half the issue price.

Macquarie Bank provided capital, underwriting and advisory services to ConnectEast Group and their financing strategy adopts the short term refinancing strategy that was employed widely for Australian toll roads in the decade preceding the GFC. The model has several distinguishing features:

- Short-term interest-only debt with maturities of up to seven years
- Periodic revaluations and refinancing against increases in underlying asset value
- Conversion to amortising debt at the second refinancing
- Optional initial public offering of the equity component
- Deferred equity and a dividend reinvestment scheme bridged with short-term debt
- Early returns to equity
- Increase in debt levels over time at lower cost than in non-volatile market conditions.

Similar financing strategies were employed with the Airport Link and Clem 7 toll road projects delivered in Queensland in 2008 and 2011 respectively.

## CASE STUDY 2 SOUTHERN CROSS RAILWAY STATION, MELBOURNE

Southern Cross Railway Station was a PPP contract for the brownfield redevelopment of a public transport facility in Melbourne. The station operates as a transport interchange for tram, airport bus, interstate, regional and metropolitan rail services. The redevelopment is situated at the juncture of the central business district and the commercial and sporting precinct of the Docklands area of the city and was part of a long-term urban regeneration plan to create a new residential and commercial district for the city of Melbourne.

The bid was won by Civic Nexus consortium with a 30 year post-construction concession. Construction was carried out by Leighton Contractors Limited. The construction cost was budgeted at around AUD370 million and the net present value of unitary payments made by the Victorian Government was AUD309 million in 2002. The design characteristics of this project were outstanding and the completed project has played a major role in the regeneration of the Spencer Street precinct of the city of Melbourne.

The AUD364 million bond issue for the project was designed and underwritten by ABN Amro (subsequently Royal Bank of Scotland) and was structured as follows:

1. A tranche of AUD74 million fixed rate interest-only in US dollars with an 11.5 year tenor
2. A tranche of AUD155 million fixed rate interest-only in local currency with a 12 year tenor
3. A tranche of AUD135 million in US dollar (quarterly) indexed annuity bonds with a 30 year tenor.

Interest on the interest-only bonds is payable quarterly and the annuity bonds are adjusted quarterly for CPI and paid quarterly. The bonds are secured by a first ranking charge over project assets (essentially step-in rights), rank *pari passu* and were rated Aa2 (AA) stable by Moody's Investor Services in 2011. The 12 year bonds will be refinanced in 2014 and the arrangers have mitigated refinancing risk with a forward starting swap that removes base interest rate risk and maintenance of robust loan security and debt service coverage ratios (O'Rourke 2003).

The Victorian Government will make a monthly availability payment for services delivered under the contract subject to payee compliance with key performance indicators (KPI) specified in the agreement. From the date the contract was entered into, the Victorian Government held an AAA credit rating. Does the difference between the credit rating of the private debt issue and service payments made by the payer serve as a proxy for project risk? The contract contains KPI that permit abatement of payments for service delivery that does not meet specification. In these circumstances, the source of the service payment is less of a financial risk to project lenders than the standard of performance delivered by the franchisee over the longer term. The difference may well be important is comparing the public sector comparator with private bids for the project (Grout 1997), however, in the operational stages of the contract, it is more likely to indicate lender transactional costs including the cost of lender governance and monitoring of contractor performance.

The contractor experienced site access problems constructing the project which contributed to significant cost overruns and late delivery. The cost was borne by the construction company under its fixed price contract with the SPV. However, the commercial development opportunities which also formed part of this transaction have tracked well to plan for the SPV.

## CASE STUDY 3 DESALINATION PROJECT, EASTERN VICTORIA.

The desalination project was one of the largest PPP projects in the world when put to the market in 2009. The project followed a prolonged drought in Eastern Australia between 2001-2009, which resulted in historically low dam levels, water restrictions in the eastern states of Queensland, New South Wales and Victoria, and the risk that Melbourne, Geelong and environs would run out of potable water within 12 months (Melbourne Water 2013). The desalination plant was not going to be built in time to manage this risk, however, the view of the State Government at the time was that the desalination plant delivered water security for the future on a country prone to irregular rainfall and where droughts are common.

The requirement was for a large plant of 150GL capacity capable of upgrading to 200GL capacity, procured as a PPP with a net present value of AUD5,720 million. The debt raising of AUD3,746 million took place in the years immediately after the GFC. The contract was based on a state availability payment for a minimum off-take of water with the consortium taking market risk on production over the minimum quantity. Two consortia bid for the project and for Aquasure, the winning consortium, the finance was led by a group of local AA rated banks. The likelihood of raising the full debt requirement was not strong with competition in the market from the A2 motorway in Poland, the M25 motorway widening in Britain, Greater Manchester waste project and the Liefkenshoek rail tunnel project in Belgium (Partnerships Victoria 2009). Market conditions for international project finance at this time was volatile with lenders applying higher risk premiums, restricting supply and state interventions in the form of guarantees, co-funding and liquidity support creating pricing distortions.<sup>3</sup>

The response of the Victorian Government was to provide a guarantee by way of lender of last resort support for around half of the senior debt, which with partial mitigation of demand risk sent a strong signal to the market that the government intended to proceed with the project and assisted full placement with 22 private banks.<sup>4</sup> The debt facilities were split over two tranches, an AUD2 billion senior facility met by 12 banks with a maturity of seven years and a spread of 350bp above the bank bill swap rate (BBSW) increasing to 375bp in year six and 400 in year seven. The second tranche of AUD1.746 billion was provided by 22 banks. The debt equity ratio was 80:20, average debt service coverage ratio was x1.35 and loan life cover ratio was x1.38.

The equity for the project was provided by Suez Environment, Thiess Contractors and Macquarie Capital, Itochu Corporation, UniSuper, HSBC and a syndicate of Korean investors. Construction was undertaken by Thiess Contractors and Degremont. The state agreed to an availability payment based on a capped production level, a payment to cover plant fixed costs and a payment to meet the consortium's variable costs. The project was finally commissioned in 2012 and experienced significant cost overruns, delays and penalties.

TABLE 2

**Toll Road PPP Projects 2004-2012, Australia  
Cost of Debt Finance**

Project	Credit Margin		
	Construction	Ramp-Up Stage	Mature
		Stage a	Stage b
	%	%	%
RiverCity Motorway	1.50	1.40	na
BrisConnections	1.90	1.75-1.85	na
ConnectEast	1.5	1.75	1.9
Hills Motorway		0.8-0.9	

a. Post-construction facility to year eight

b. Post-construction facility year's eight to ten

Source: Project Initial Public Offerings

## CASE STUDY 4 AIRPORT LINK TOLL ROAD, BRISBANE

The Airport Link project is a 6.7km multi-lane electronic free-flow toll road with a 5.7km tunnel section running from the inner city of Brisbane east to the Gateway Arterial at Brisbane International Airport. The project is contracted as a 45 year PPP and is capitalised to AUD4,889 million of which construction accounted for AUD3,400 million, and distributions, interest during construction and other outgoings, AUD1,489 million. The contractors were Thiess Contractors and John Holland Group. The project involved complex tunnelling in urban areas and encountered significant cost and time overruns, the cost of which was borne by the contractors.

The Airport Link project was capitalised with an initial public offering (IPO) of AUD1,226 million (over three instalments), deferred sponsor equity AUD200 million, a dividend reinvestment plan \$AUD361 million, state contributions of AUD47 million and bank debt of AUD3,055 million. The debt has 5 components:

1. A bullet construction facility (converting to a term facility on commissioning) of AUD3,150 million with a tenor of 10 years

2. A bullet equity bridge facility for the deferred equity tranche of AUD200 million with a tenor of 71 months
3. An IPO revolver bridge facility of AUD650 million with a tenor of 20 months to meet the cost of future equity instalments payable by subscribers
4. A bullet state bridge facility of AUD475 million with a tenor of 47 months to finance the state works contribution payable on commissioning
5. A reserve revolver facility of AUD120 million with a tenor of 67 months (BrisConnections 2008).<sup>5</sup>

The Airport Link project was negotiated during the GFC of 2008, which is reflected in the higher cost of funds that projects reaching financial close in 2007 and more recently. The pricing and hedging arrangements were as follows:

- Construction facility credit spread of 190 basis points (bp) for a fully hedged cost of 9.08%. On completion, the loan converts to an 80% hedged term debt facility with a spread of 1.75-1.85bp and an 80% hedged cost of 8.66-8.76%
- Equity bridge facility spread of 65bp for a fully hedged cost of 7.83%
- An IPO equity bridge facility spread of 110bp for a fully hedged cost of 8.41%
- A state bridge facility spread of 190bp for a fully hedged cost of 9.08% (BrisConnections 2008, 94).

The principal underlying assumption with the project financing is that term facility will be refinanced with interest-only facilities on commissioning in 2012 and when due in 2018, 2024, 2030 and 2035 at a cost of funds before credit spread and hedging costs of 6.65% pa. Asset revaluations were forecast for 2019 and 2026 with an increase in aggregate debt to preserve a 1.50x debt service coverage ratio and permit withdrawal of equity. The increased value is based on the assumption that revenues will increase over time through real traffic growth and price escalations resulting from growth in the consumer price index (BrisConnections 2008, 94). In March 2008, 10 year Commonwealth bond yields were 6.21% and 1-5 year A-rated corporate bonds were 8.78%. The yield curve for Commonwealth bonds at this time was negative at 6.14% for three years, 6.10% for five years, and 6.04% for ten years (Reserve Bank of Australia 2008). BrisConnections did not apply for a credit rating for this project which was commissioned in 2012.



## CASE STUDY 5 CLEM 7 TOLL ROAD, BRISBANE

The Clem 7 tunnel project Airport Link project is a 6km multi-lane electronic free-flow toll road with a 4.8km tunnel section running between Ipswich Road and the Pacific Motorway to the major arterial motorways in Brisbane's north including the Inner City By-Pass, Airport Link and Lutwyche Road. The Clem 7 connects to the Airport Link toll road and the later commissioning of that project should enhance the financial performance of both toll roads.

The Clem 7 is contracted as a 45 year PPP and capitalised at AUD2,840 million of which construction accounted for AUD2,003 million, and distributions, interest during construction and other outgoings was budgeted at AUD837 million. The contractors were Bilfinger Berger Civil, Baulderstone Hornibrook and Leighton Contractors, each of which has considerable toll road construction experience. The equity arrangement for this project uses a stapled security with subscriptions by instalment.

The Airport Link project was capitalised with an initial public offering (IPO) of AUD724 million (over two instalments), deferred sponsor equity AUD155 million, a dividend reinvestment plan \$AUD150 million, state contributions of AUD377 million and bank debt of AUD724 million. The debt has five components:

1. A construction facility (converting to a term facility on commissioning) of AUD1,434 million
2. A term debt facility (tranche A) of AUD717 million with a tenor of eight years
3. A term debt facility (tranche B) of AUD717 million with a tenor of ten years
4. An equity bridge facility for the deferred equity tranche of AUD155 million
5. A Brisbane City Council (BCC) works facility of AUD377 million during the construction stage (RiverCity Motorway 2006).

The pricing and hedging arrangements were as follows:

- Construction facility credit margin of 150 bp (bp) for a fully hedged cost of 7.591%.
- Tranche A credit margin of 140bp with 70% hedged and a cost of 6.91%
- Tranche B credit margin of 140-160bp with 70% hedged for a cost of 6.908%
- Equity bridge facility margin of 40bp for a fully hedged cost of 6.387%
- A BCC works facility margin of 150bp for a fully hedged cost of 7.574% (BrisConnections 2008, 65).

The Clem 7 project was delivered ahead of time and under

budget. However, the project was one of the many projects toll road projects commissioned over the past 30 years to experience patronage forecasting error and revenue well below expectations for the early years of operation.

## CASE STUDY 6 THE RELIANCE RAIL ROLLING STOCK PROJECT

Reliance Rail was Australia's largest PPP project when put to market in 2005-06 at AUD3.6 billion with a capital requirement of AUD2.35 billion. The contract requires design, construction and maintenance of 78 urban train sets (626 carriages with 8 per train) for 30 years with options for further rolling stock purchases beyond that term. The contract was the first PPP for rail rolling stock procurement in Australia involving a long seven year manufacturing and construction period, complex risk allocation and international procurement arrangements. The new trains feature high levels of innovation and the contract extends to driver and crew training and construction of a new maintenance facility to service rolling stock over the life of the contract. The trains are operated by the state-owned RailCorp organisation as part of the NSW rail transport service and the PPP paid by way of an availability payment involving availability, reliability and disruption performance criteria.

**TABLE 3**

### **Capitalising the Reliance Rail Project**

	TENOR YEARS	AMOUNT AUD MILL.	PRICING BP
CPI INDEXED ANNUITY BONDS	29	300	
Senior Bullet Bonds	10 to 14	1,500	24-28
Junior Bullet Bonds	15	100	32
Senior Bank Debt	9	357	
Equity		137	
		2,394	

Notes:

- Physical and synthetic CPI cover
- Fixed rate debit during manufacture and floating rate during the operational phase of the project
- Credit wrapping to AAA on all debt and derivative obligations

Source: Project Finance April 2008; Martin 2007

The winning bidder for the project was a consortium of the engineering company Downer EDI (49%), ABN Amro and Babcock and Brown Public Partnerships (12.75% each), and AMP Capital Investors (25.5%). ABN Amro provided an underwriting of the AUD1.95 billion bond debt component and bank debt was provided by Westpac, Mizuho, National Australia Bank and Sumitomo Mitsui.

The components of the AUD2,394 million capitalisation are set out at Appendix 2.

The Reliance Rail project is highly leveraged with equity accounting for around 6% of project capitalisation. The debt finance and the interest rate swaps required for the fixed (pre-operational stage), floating (operational stage) debt feature a monoline guarantee from FGIC and Syncora. The bonds are swapped into CPI for inflation protection at lower cost than otherwise available in the Australian market (Project Finance 2006-07). A credit wrap was purchased in 2007 from two monoline insurers Syncora Guarantee Inc. and FGIC UK Limited for the bond and bank finance to reduce the cost of capital to that available for AAA grade debt. Following the financial crises of 2007-08, both insurers incurred credit rating downgrades and in 2010 Moody's rated the guarantee of both companies at Ca (Standard and Poor's CC) (Moody's Investor Services 2010).

In 2012 Reliance Rail encountered credit reappraisal ahead of a drawing on its bank facility. The concern involved the consortium's weak financial position, delivery delays and an 18 month slippage in the delivery schedule. The project's AUD2,060 million senior debt was given a credit rating by Standard and Poor's CCC+ in May 2013 and the AUD100 million junior debt was rated CCC- reflecting a weakened credit position and operational problems and delays.

A summary of the debt financing of the six projects is set out at Appendix 2.

## FINDINGS

Several characteristics of the case studies and other privately financed infrastructure projects in Australia are evident from this study.

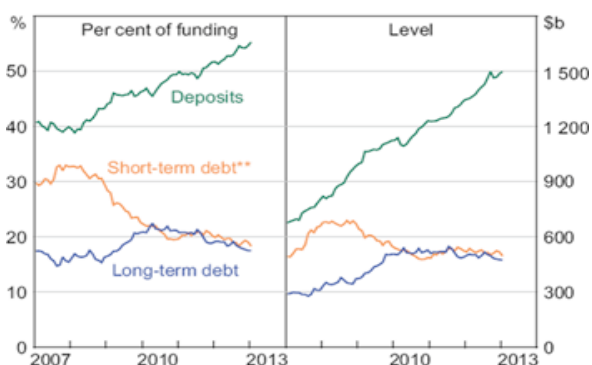
## SHORT-TERMISM

Australian PPP bids are led by financial services providers (FSP) and not private investors or contractors, a different approach to consortium bids in North America and the United Kingdom. Many PPP bid consortia are underpinned by short-term economics:

1. PPPs are a wasting asset from the date that they are commissioned for investment purposes, and investors need to fully amortise their investment and return over the term of the contract
2. FSPs derive most of their fees at contract close and contractors to the project are remunerated over the early-stage construction cycle
3. Finance is mostly offered with tenors of seven years which requires refinancing every six to seven years over the life of a 20-35 year PPP contract <sup>6</sup>
4. Attention spans diminish once the project is commissioned and the operational phase commences because construction firms and consultants are not long-term investors and mechanisms exist under most PPP contracts to permit withdrawal with the consent of government subject to nomination of a replacement shareholder for the SPV and novation of the residual financial and contractual obligations.

The short-term tenors of commercial lending are a characteristic of Australian commercial lending and are linked to the short-term configuration of bank liabilities (see Figure 1 and 2). Short-term borrowings declined following the financial crises of 2007-08 from around 34% of total debt to 19% in 2013 with the shortfall provided by higher household deposits. Long-term debt has remained constant at an average of around 19% of borrowings.

**FIGURE 1**  
**Funding Composition of Banks in Australia**



- Adjusted for movements in foreign exchange rates
- Includes deposits and intragroup funding from non-residents

Source: APRA; RBA

**FIGURE 2**  
**Wholesale Funding of Banks in Australia**  
**Share of Total Funding**



- Adjusted for movements in foreign exchange rates; wholesale debt is on a residual maturity basis
- Includes deposits and intragroup funding from non-residents

Source: APRA; RBA

## SHORT AND LONG-TERM FOREIGN WHOLESALE DEBT

In the toll road case studies, the contractor's equity contribution is deferred, supported by a guarantee and bridged with additional construction debt during the construction phase (ConnectEast Management Limited 2004; RiverCity Motorway Management Limited 2007).<sup>7</sup>

Short-term investment horizons, debt tenors of seven to ten years and changes to the underlying economics of PPPs create refinancing risk, which has both positive and negative implications for investors. Refinancing carries the risk that debt is available and at lower cost. These conditions are determined by the market (a systematic risk) and the extent to which the project has been de-risked during the construction period (unsystematic risk). Revaluation may realise a capital gain for investors and create opportunity for increasing the level of debt against higher contract value, at lower cost and permitting a distribution to equity.

Revaluation gains and lower funding costs that are a consequence of refinancing of economic and social infrastructure projects are shared with government if the return to investors exceeds the equity return hurdle rate used for the base case of the public sector comparator (Infrastructure Australia 2008). Revaluation gains may be significant (National Audit Office 2005).<sup>8</sup>

The short-term approach to PPP contracts is understandable in contemporary capital markets: firm merge, are listed and delisted on the Securities Exchange, the business cycle may affect the strategic decision-making of companies, or firms may simply need to rebalance their portfolio of investments and/or activities. The further factor here is the wasting nature of a PPP contract and the influence that this has on underlying investment economics. The short-termism of private equity investment has a parallel in the short-term debt offered by Australian banks and high churn rate in the ownership of listed and unlisted infrastructure investment vehicles (Regan 2004). Does short-termism disadvantage Australian infrastructure investment? Transactional data indicates a relatively high success rate for Australian PPP projects with transactional equity participants withdrawing once the project has been significantly de-risked to be replaced by yield-focussed institutional investors. The bid market has adapted to the short-term debt provided by Australian banks following the demise of the credit insurance market and tight supply conditions internationally since the GFC. The way that PPPs are financed in Australia does not appear to constrain competitive bid markets or lender interest in this asset class.

UK PPP contracts in the health sector are contractor-led with facility management services provided in-house by contractors. This dual role gives the contractor a longer-term engagement with the project compared with a construction-only role. The market lacks sufficient depth in Australia for that to be the case and the role of FSPs is generally underwriting capital for the project on an arm's length basis without taking up formal membership of the consortium. Most equity is sold down to investors, participating contractors or as occurred in recent toll road transactions, securitised in a listed investment vehicle.<sup>9</sup> FSP-related investment trusts may take up an equity interest in the SPV or acquire the contract at a future date although this generally is limited to economic infrastructure assets.

A solution to short-termism is the entry of institutional investors particularly superannuation fund managers as equity investors and financiers. This class of investors can match their long-term liabilities with long-term assets that have a low correlation with other asset classes and hence offer strong diversification potential for mixed asset portfolios (Connolly 2012; Inderst 2009; Peng and Newell 2006; Regan 2004). In recent years, fund managers have acquired both listed and unlisted infrastructure assets with a 2009 survey of funds showing an aggregate investment of AUD201,000 million (average fund holding AUD7,200 million). The asset allocation objective of the surveyed funds was in the range 5-25% with investment favouring unlisted assets (Infrastructure Partnerships Australia 2010).

## SPVS ARE NOT FOREVER

PPP contracts may attract high investor turnover. Construction firms and consultants are not long-term investors and mechanisms exist under most PPP contracts to permit withdrawal with the consent of government subject to nomination of a replacement shareholder for the SPV and novation of the residual financial and contractual obligations.

The short-term approach to PPP contracts is understandable in the present environment. As noted above, firm merge, are listed and delisted on the ASX, the business cycle may affect the strategic decision-making of companies, or firms may simply need to rebalance their portfolio of investments and/or activities. The further factor here is the wasting nature of a PPP contract and the influence that this has on underlying investment economics. The short-termism of private equity investment has a parallel in the short-term debt offered by Australian banks and high churn rate in the ownership of listed and unlisted infrastructure investment vehicles (Regan 2004).



Nevertheless, there are exceptions where the contract includes a long-term and specialised ongoing maintenance or management role. The Victorian Desalination and the Reliance Rail project provide examples of agreements under which contractors agree to design, manufacture and maintain assets for the full duration of the project.

### RAISING EQUITY ON THE AUSTRALIAN SECURITIES EXCHANGE (ASX)

A third characteristic is the raising of equity with an IPO and listing of a SPV on the ASX. An IPO was used to raise equity in the Clem 7 and AirportLink toll roads with subscriptions paid by instalment.<sup>10</sup> Within a short time of listing, shares in both companies were trading at a significant discount and investors could see little prospect of getting their investment back. Retail investors defaulted in the face of further calls and the project underwriters, Macquarie Capital Advisors and Deutsche Bank, became majority shareholders.

The failure of both projects signalled the demise of the IPO as an equity raising option in Australia particularly with retail investors. Other toll-road IPOs Hills

Motorway and ConnectEast were delisted after several years trading following acquisition by Transurban and private equity group Horizon Roads respectively. A toll road is not an appropriate asset for a single asset listed company.<sup>11</sup> As a general rule, the revenue stream is typically low during initial traffic “ramp up” period and a strong yield performance only materialises in the latter stages of the project following reduction in debt and interest costs. As traffic flows increase, financial and operational risk declines, revaluation offers opportunities for a return to equity and a lowering of overall cost of capital.

### DEMAND RISK AND FORECASTING ERROR

A further characteristic of PPPs in which the SPV carries demand risk is systemic forecasting error (Flyvbjerg, Skamris-Holm and Buhl 2006). Many toll roads undertaken in Australia experience forecasting error which results in lower than expected revenue and no capacity to service debt once debt servicing reserves are depleted. The Lane Cove Motorway and Cross-City Tunnel projects were placed under administration and the Clem 7 and AirportLink were placed in administration within 18 months of commissioning and delisted with partial or full loss



of equity. This is a particular problem with listed single asset toll road companies because of the immediate impact this has on debt servicing and value covenants under the loan agreement and many of the foundation contracts created for the transaction. Private investors are today no longer willing to accept wholesale transfer of market risk and stage 1 of the new WestConnex motorway in Sydney will be financed by government until revenues have stabilised sufficiently to support institutional investors and private limited-recourse finance for subsequent stages of the project (Australian Financial Review 2013).

Forecasting error is linked to the broader question of optimism bias, which affects nearly all construction projects (Flyvbjerg, Skamris-Holm and Buhl 2005). The incidence of time and cost overruns is greater with non-standard civil engineering, building and equipment procurement (Mott MacDonald 2002). Optimism bias is a systemic problem that has adversely affected infrastructure projects particularly transport projects for over 30 years and a solution remains elusive. Recent success in forecasting complex projects in the resources sector does suggest that alternative methods of mitigating forecasting risk will eventually be developed.

## PENSION FUND INVESTMENT

Pension fund investment is a natural fit for infrastructure projects, and Canadian and Australian fund managers are significant players in both the unlisted and listed infrastructure investment market. The Canadian fund managers with significant defined benefit retirement savings to invest can match their long-term liabilities with debt, equity and annuity securities in a portfolio of infrastructure sectors. Listed infrastructure securities offer fund managers diversification and liquidity. In Australia, fund manager preference is for unlisted investment in single asset investment vehicles in sectors such as airports, energy generation, ports, desalination projects and health services.

Fund managers are reluctant to take *ex ante* equity stakes in projects, preferring to take up an equity or debt position at a later stage. The reasons for this include fund manager aversion to construction risk: four of the six case study projects experienced construction delay and cost overruns.<sup>12</sup> For motorway projects, a further reason is forecasting error and lower than expected revenue resulting in default under the loan agreement. In the case of the Clem 7 and AirportLink projects, consortia SPVs were put under administration.<sup>13</sup>

## CAPITAL MARKET DISCIPLINE

PPP projects are contractually complex and require the participation of many actors and a large number of tripartite and quadripartite agreements that connect the actors jointly and severally. Central to the PPP agreement is the role of the project lenders, often syndicated and represented by a lead financier and a securities trustee. As the party most exposed to project risk in financial terms, the financier's legal interest is in the underlying project assets and the bundle of contracts that generate the revenue stream. As a limited recourse facility, the lending syndicate will want to generate sufficient revenue to meet debt-servicing requirements with a margin for error (the debt service coverage ratio). Financiers will also take into account the value of the PPP contract with a view to an early retirement or refinancing of the project. To maintain the syndicate's step-in rights in the event of consortium default, the contracts between the syndicate and other actors such as the operations and maintenance contractor, the government agency, the construction company, sub-contractors, and parties to the input and off-take agreements, will be incorporated by reference into the loan documentation ensuring the lead financier can exercise all of the rights, authority and discretion of the consortium in the event of default.

In most project finance arrangements, lenders play an important role in monitoring the consortium's performance under the contract which subsists in parallel to the performance monitoring of the government agency to ensure the services delivered by the consortium meet specification. Under a PPP availability payment model, the agency will abate or withhold payment for services that do not meet specification, which may affect the consortium's capacity to meet debt service requirements. This risk is mitigated in the United Kingdom with the use of a point system that permits the accumulation of performance debits and credits reconciled on a quarterly basis. Points for underperformance may be redeemed with points for sustained compliance or over-performance in an earlier or later period. In some arrangements, the abatement is set at levels that only affect the consortium's management fee and not the portion of the payment needed to meet debt servicing obligations (National Audit Office 2003).

A review of the Airport Link toll road project finance facility (BrisConnections 2008) identifies the important ongoing role that lenders play in project finance. The debt financing documents provide for priorities in the allocation of net cash flows including distributions to equity which are determined using a

minimum two quarter debt service coverage ratio of 1.20x after payment of operating expenses. Where a quarterly ratio is equal to or less than 1.25x, surplus cash flow is applied to debt reduction. An event of default occurs if the ratio is less than 1.10x which is based on a base case patronage variation of 40% (BrisConnections 2008, 91). Other provisions of the debt documentation include:

1. Compliance with the requirements contained in all project documents
2. Information and reporting requirements
3. The creation of ramp-up reserves (designed to meet 14 months debt servicing following commissioning), maintenance and repair reserves, distribution and contingency reserves
4. Negative pledges not to dispose of assets, incur additional indebtedness and give security
5. Restrictions on capital expenditure
6. Restrictions on the payment of fees, interest or distributions to unit holders without meeting requirements, such as the debt service coverage ratio and the cash cascade priorities contained in loan documentation (BrisConnections 2008, 91).

Capital market discipline plays an important governance role with PPP projects that assists the compliance aspects of these long-term and incomplete contracts. However, it will not correct for poor investment decision-making, optimism bias in the planning stages of a project and forecasting error. A conclusion from the six case studies is that demand risk projects are unlikely to be financed in the present environment without risk-sharing or other support from government. PPPs are a small but significant part of infrastructure procurement and deliver better value for money outcomes for government with greater transparency and more innovation than other methods of procurement. A further conclusion is that further escalation in the size of projects and limited access to longer term finance is limiting competitive bid markets and contributing to unacceptable refinancing risk in uncertain times.

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## ENDNOTES

- 1 Lenders may apply penal interest rates, exercise step-in rights or terminate the loan for repeated breaches. It is a requirement for most PPPs in Australia that the SPV provide a debt servicing reserve to meet unexpected variations in cash flow. In recent years, the debt service reserve have been capitalised to 18 months full debt servicing.
- 2 The study comparison was based on sector indexes for direct and indirect property, property developers, the energy, transport and telecommunications sector (Regan 2004, 317). The economic indicators measured quarterly to a lag of 12 months included short, medium and long term bond rates, domestic and US GDP, employment indicators, exchange rates, managed fund performance, consumer price index, foreign direct investment, investment, retail sales and industrial production (Regan 2004, 319).
- 3 The proposed changes to capital adequacy requirements adopted by the Third Basel Accord (Basel III) and to be introduced 2013-15 effectively limit bank lending for long-term and limited recourse

- project finance. International banks commenced winding back their project finance exposures from 2008.
- 4 SFP HVAC Guarantee and Indemnity 2009 Department of Treasury and Finance, Government of Victoria, Contract 309309 and viewed on 6<sup>th</sup> September 2013 at [www.tenders.vic.gov.au/tenders/contract/view/](http://www.tenders.vic.gov.au/tenders/contract/view/)
  - 5 A bullet facility is a term loan repayable in one balloon payment at maturity. A revolving loan permits an installment of principal to be redrawn at a future time.
  - 6 The Southern Cross Station project was an exception with the bond issue designed to meet the 30 year investment preferences of non-resident indexed annuity buyers.
  - 7 The ConnectEast Toll Road in Melbourne provides an example of contractor withdrawal following the construction stage of a project. The Tollroad was constructed between 2005 and 2008 and the contractors sold their equity interest in the project in 2011 (Leighton Holdings 2011). Deferred equity raises the interesting proposition that contractors who are members of the PPP consortium may in fact enter into an option for the sale of their equity ahead of completing construction for the project. Formal transfer of equity interest in a PPP SPV requires state consent but the SPV shareholder agreement may not impose restrictions on dealings in relation to the shareholding of SPV members.
  - 8 Revaluation gains are shared equally between State Government agencies and the SPV or equity investors under all Australian PPP policies. However, revaluation losses are carried by the SPV or equity investors (Infrastructure Australia 2008).
  - 9 A number of Australian toll roads were securitised in Australia including Hills Motorway, Eastlink (Mitcham-Frankston Tollroad), Citylink (Transurban), Clem 7 (RiverCity Motorway) and AirportLink (Brisbane Airport Tollroad). Other tollroads were securitised within portfolios of listed fund managers that included Hastings and Macquarie Infrastructure Group.
  - 10 Melbourne's Westlink and the earlier CityLink and Hills Motorway toll roads were also listed on the Australian Securities Exchange although institutional investors were more widely represented on their share registers than occurred with either BrisConnections or RiverCity Motorway groups.
  - 11 The ConnectEast and Transurban companies were initially single asset investment vehicles but sought early approval to modify their charter to multi-asset portfolios.
  - 12 This is a risk transferred to the construction contractor. The Victorian Desalination project, the Southern Cross Station project, and BrisConnections (AirportLink) experienced significant construction cost overruns.
  - 13 The RiverCity Motorway and AirportLink projects were placed in administration within 18 months of commissioning. Both projects failed to reach revenue levels sufficient to achieve debt servicing as a result of patronage forecasting error. Previous motorway projects in Australia such as the Cross City Tunnel and Lane Cove Motorway projects in Sydney experienced a similar problem. The Eastlink motorway in Melbourne also failed to achieve its base case forecast patronage but nevertheless achieved sufficient revenue to meet the SPV's debt service obligations.



## APPENDIX 1

Source: Standard &amp; Poor's 2013

## Credit Rating Survey of PPP Active Countries

COUNTRY	FOREIGN CURRENCY	COUNTRY	FOREIGN CURRENCY
	SOVEREIGN RATING		SOVEREIGN RATING
Australia	AAA	Ireland	BBB-
Austria	AA+	Italy	BBB+
Canada	AAA	Mexico	BBB-
Chile	AA+	Netherlands	AAA
Czech Republic	AA-	Norway	AAA
Denmark	AAA	Slovak Republic	AAA
France	AA+	South Africa	BBB
Germany	AAA	Spain	BBB-
Greece	B-	Sth Korea	BBB-
Hungary	BB	United Kingdom	AAA

## APPENDIX 2

## Case Study Financial Summary

Project	Debt Finance Type	Debt Profile Capitalisation			Nominal Debt: Equity %	Contract Term Post-Construction	Debt Tenor Years	Loan Life Cover Ratio X	Credit Margin	
		Debt	Equity	Total					Construction	Operation
		AUD mill.	AUD mill.	AUD mill.					bp	bp
Eastlink Motorway	Interest only term debt (deferred amortisation), IPO	2,088	1,707	3,795	1.2	39	6, 8 and 10		1.5	165-190
Southern Cross Station	Multi-currency, mixed tenor bond issue	364	100	464	3.6	30	11.5, 12 and 30	1.48	na	na
Victorian Desalination	Construction facility converting to term loan	3,746	936	4,682	4.0	30	6,7	1.38	350	375-400
Airport Link Motorway	Construction facility converting to term loan, IPO	3,055	1,834	4,889	1.7	45	10	1.50	190	175-185
Clem 7 Motorway	Construction facility converting to term loan, IPO	1,434	1,406	2,840	1.0	45	8, 10	1.50	150	140-160
Reliance Rail	Production finance	2,257	137	2,394	16.4	30	9,15 and 29	na		24-32

## Notes:

1. ConnectEast credit margin is 1.65% 6 years, 1.75% 8 years, and 1.90% 10 years. Fixed
2. CPI annuity bonds 29 years, senior bullet bonds 10-14 years; junior bullet bonds 15 years, and senior bank debt 9 years

Source: Project IPO Documentation



## MICHAEL REGAN

Michael Regan is Professor of Infrastructure at the Institute of Sustainable Development at Bond University. He holds qualifications in law, economics, finance and infrastructure, and lectures in project finance and procurement. His research interests are in project procurement, non-adversarial contracting and public private partnerships.