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Public-Private Partnerships and Leveraged Private Equity Financing

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Abstract

The popularity of outsourcing has remained undiminished in Australia as governments seek to achieve the goals of economic efficiency, debt minimisation and service delivery. The emergence of Public-Private Partnerships (PPPs) or Private Finance Initiatives (PFIs) has resulted in a more complex phase of the outsourcing process and has coincided with the increased opportunities for private equity funds to successfully bid for PPP/PFI contracts. Private equity capital is a fundamental feature of a capitalist economy; however, the aggregation of large amounts of private funds to participate in PPPs/PFIs represents a new trend that should be evaluated by public managers when negotiating PPPs at the contract formation and contract management stages of such arrangements.

While the process of creating a PPP or PFI may be transparent, the financial progress of the project over a 20-30 year period may not be adequately disclosed, so that the expectations of both government and civil society cannot be fully assessed. This paper will draw on certain recent PPP experiences, focusing on some features of private equity that have created unexpected risk to the state and to taxpayers. The research suggests that the financial and operating structures of PPPs must meet the needs of the state to solve its financial and service delivery dilemmas without creating additional risk by uncritical acceptance of complex, highly leveraged contracting arrangements with private equity groups.

Introduction

In early 1995 the *Harvard Business Review* published a warning to managers over the dangers associated with the comparatively new financial instruments called derivatives (Weinberger *et al.*, 1995). Not long afterwards, Barings Bank collapsed—a fall apparently created through misfortune in trading in the derivatives market by one of its traders and a weakness in the organisation's financial management systems that failed to immediately disclose the trading problems (Greener, 2006). While the precise details of the case, though well publicised, are not important for this paper, what remains important are the dangers of creative and complex leveraging arrangements and accounting practices associated with some recent Public-Private Partnerships (PPPs)/Private Finance Initiatives (PFIs) arrangements.

The power of international financial transactions has grown with the increasing flexibility to shift money, as a commodity, in and out of financial markets. The Government of Malaysia learnt this to its cost in 1997 (Mahathir, 1998) when it found that its ability to control the value of its own currency was insufficient to overcome the downward market pressure on the Malaysian ringgit. The importance of this experience is currently being illustrated in economies which have a floating exchange rate, permitting the value of the national currency to rise and fall according to international market demand. The impact of this flexibility has ramifications that go beyond the Malaysian Government experience where a government or national banking regulators (such as a federal reserve bank) attempt to address rising inflation by increasing interest rates.

Where exchange controls exist, the impact of such an action can be predicted with some certainty. However, in an economy with floating exchange rates, a rise in interest rates is often accompanied by a rise in the value of the national currency on international markets: the cost of borrowing rises, the cost of imports is lower, the price of exports is higher and the inflow of tourist income slows in resistance. Many inflationary pressures fail to be addressed and the message to consumers is mixed. In these circumstances the predictability of such an economic tool is uncertain.

The 2007 collapse of the sub-prime mortgage market in the US ('Beyond the subprime debate', 2007) and its ramifications within a number of economies beyond its borders also demonstrates deficiencies in the administration of interbank credit and investment banking in ways that have now severely damaged economic performance in many countries. It marked a clear end to many years of comparative economic stability. For example, an article appearing in *The Wall Street Journal*—'Why market optimists say this bull has legs in USA' (2007)—remarked on the comparative stability in world economic forces. In quite recent years Friedman (2005), and others, extolled the growing economic strength of China, India and many other Asian economies ('Rock's rescue plans "carry risk"', 2008). Even earlier, Chevallier (2000) expressed the view that this underlying stability could continue almost indefinitely.

The principal cause of these economic problems is usually traced to the failure of the US sub-prime mortgage market leading to a loss of confidence in much of the global banking system. At its core, banking is inherently about market confidence because banks essentially borrow short (typically overnight to 24 months) and lend long (overnight to 25 years). The emergence of rapid change in electronically-linked financial markets since the late 1960s and 1970s means that financial institutions invest at least part of their asset portfolio in each other. Problems in one part of the market now create problems elsewhere, as Northern Rock and the British Government have discovered to their cost ('Temporary public ownership', 2008). This short-term government ownership has become a long-term nationalisation of Northern Rock ('The belated nationalisation of Northern Rock', 2008), a situation mirrored in the USA where the federal government is finding itself providing financial support to the banking, housing, insurance and manufacturing sectors ('Obama says critical to stabilize economy', 2008).

These instances together create a significant message for public managers: constant monitoring of the changing financial structures used by the private sector in their quest for profitability has become a necessary part of contract management. Traditional tools used to manage the market economy, including inflation, may be tested for the first time in nearly a generation as economies face increasing economic uncertainty and potential recession. For procurement policy makers and managers, due diligence, as a pre-contract risk management tool, is not sufficient. A wider understanding of the market responses to change and new modes of financing will need to be monitored, especially where complex financial arrangements have become a feature of major outsourcing and PPP/PFI arrangements.

As a consequence, the author of this paper examines some recently changing financial practices and the risks they pose for public managers and their political leaders keen to embrace the practice of PPP or PFIs to fund government infrastructure activities. While the existence of risk can never be entirely removed, the discussion which follows shows some clear pathways aimed at minimising financial and operating risk. It should be noted that while the UK Government has identified eight types of PPPs, from asset sales to partnership companies, joint ventures and policy partnerships (Li *et al.*, 2005), this paper will focus on the PFI style of PPP, predominantly delivering physical infrastructure development.

In addition, the paper uses a number of case studies to illustrate the perils of certain aspects of PFIs as well as the exposure to risk faced by the parties involved. Australian examples have been used because in this country there has been widespread, almost exuberant, use of, rather than experimentation with, the PFI approach to PPPs, leading to significant successes and failures. Furthermore there is anecdotal evidence to show that this widespread acceptance of the PFI has occurred in Australia in a very short period—less than a generation. There is evidence that in the 1960s some governments experimented with contracting out infrastructure projects, using the model of contracting typical in the USA, which is simply letting a fixed price contract for the completion of a project such as a freeway (Davis, 2005).

The author worked as a rigger on the first expressway built in New South Wales (NSW), Australia, in the 1960s and travelled to the job each day with one of the contractor's lead engineers. The contractor, KD Morris and Sons Pty Ltd, had entered a contract to build the first section of the freeway and the supervising agency was the NSW Department of Main Roads (DMR). It was a complex construction task as the contractor had to meet the tight and seemingly non-negotiable specifications of the

DMR within the context of a fixed price contract while cutting through what were ostensibly sandstone hills north of the city of Sydney.

During the cutting process, the contractor unexpectedly ran into what is commonly called ironstone, a much harder rock than sandstone. This setback delayed construction and cost the contractor its profit as it had been unforeseen by either the buyer or the contractor (who had assumed the risk). At the end of the contract, the DMR reportedly vowed never to build a major road using a private contractor and took the next stage of the expressway's construction back in-house. The private contractor possibly vowed never to work with the DMR because it believed the interpretation of the specifications was too rigid.

Yet 20 years later the PFI rose sharply in popularity and contracting out or outsourcing became the norm, even for major roadworks. Indeed, KD Morris and Sons Pty Ltd only survived a few more years (KD Morris & Sons, 1980) even though it was one of the largest construction companies in Australia at that time. The DMR subsequently became the Roads and Traffic Authority of New South Wales (RTA) whose future involvement in PFI/PPP arrangements forms the case study at the end of this paper.

Financing the Future: A Public-Private Dilemma

Outsourcing continues to be a popular business process in both public and private sectors as organisations seek to achieve the seemingly joint goals of financial opportunity and service delivery. Yet there is a tension between the objectives of the two sectors. As Davis (2005: 439) notes: 'Profit drives the private sector participants, while low-cost delivery of quality services is the objective of the public sector'. The emergence of PPPs/PFIs is a more complex phase of outsourcing services, shifting from uncomplicated services such as cleaning, maintenance and waste disposal to the construction and operation of single facilities such as gaols and hospitals. As the scale of the projects has risen, they have attracted the attention of private equity capital to bid for PPP/PFI contracts.

It is generally obvious that private capital is a fundamental feature of most economic structures. Private equity capital reflects a pooling of wealth by individuals, groups, companies, governments and monarchs and is also not a new phenomenon. What is new is the ease with which the aggregation of large amounts of private funds to participate in PPP/PFIs can be arranged and the creative ways in which these investment funds can be linked to complex borrowing arrangements, with the advice and involvement of sophisticated merchant banks (for example, Anon, 2007).

This shift is reflected in a comment by Jeffries (2006: 452) that 'PPPs are a means of public sector procurement using private finance and best practice … one key to this is the ability of the private sector to provide more favourable long term financing options than may be available to a government entity'. Thus, while the public process of creating the PPP may be transparent, the financial progress of the project over a 20-

30 year period may not be so readily disclosed in ways that the best practice expectations of both government and civil society can be assessed. In these circumstances, accountability and transparency are substantially reduced in a public procurement environment, partially defeating the typical objectives a government may have for openness in its financial transactions and minimisation of overall risk.

In periods of low or comparatively low interest rates and readily available credit, the highly leveraged nature of some bids creates a contract management challenge for both the private equity partner and the government, offsetting many of the efficiency expectations of the parties (a further best practice deficiency) and increasing financial risk. It should be noted that in 2008 rising interest rates in Australia had diminished the attractiveness of highly leveraged private equity investments while rates were, perversely, being lowered in others ('Trade, exchange rates, budget balances and interest rates', 2008). This suggested that the formal monetary instruments in play by some leading financial regulators needed some innovative adjustment to ensure such changes have the desired effect.

For example, in Australia until late 2008 the Federal Reserve Bank had made a number of interest rate increases designed to reduce both spending and inflation. However, this action also enhanced the value of the Australian currency, making imports (including oil) cheaper and exports less competitive and encouraging consumer spending. These circumstances placed interest pressure on credit (and increased the inflationary impact of higher interest rates). It became clear that this traditional model of influencing economic activity is not so easy to manage in economies where currencies are treated as a commodity and funds are transferred across borders with few restrictions. This interest rate trend has been significantly reversed since late 2008, with Australia rapidly enjoying much lower interest rates on business loans and housing, but with little impact on consumer credit charges (Macartney, 2008; RBA, 2008).

Private equity capital has similarly unpredictable aspects. This source of capital has been given a high profile by its recent history of engaging in wide-ranging buy-outs of previously listed corporations and the creation of private financial conglomerates with immense financial strength and access to leveraged funds (borrowings) (Anon, 2007). The leveraging combination creates a financing dilemma for governments seeking to finance their own projects through a PPP or PFI arrangement.

On the one hand, PPP bids from private equity funding may be highly competitive when compared to more traditional corporate players while, on the other, the leveraged structure of the bid may expose the state to risk should the private equity group fail to meet its financial commitments. In addition, private equity groups are intensely secretive and are often not required to give any detailed disclosure of their financial position and, once such a group undertakes a PPP, its financial gain from the undertaking is potentially removed from public scrutiny. The qualification 'potentially removed' must exist because in some jurisdictions there has been legislation passed to require any entity doing business with government to be subject to at least some level of audit by the jurisdiction it has contracted with.

An analysis of major private companies published in *Forbes* (Reifman, 2007) demonstrates the comparative size and strength of private companies in the USA. An examination of the top 200 private companies in the USA shows the majority of ownership falls within just a few states of the USA and the turnover of these organisations is estimated to range up to US$90 billion per annum. The highest staff level of this group of companies is in excess of 151,000. These firms occupy a position of significant influence in their industry. Examples include the business services firms of PricewaterhouseCoopers and Ernst & Young, the farm product firms including Cargill and Murdock Holding Company and the grocery stores of Publix Super Markets and Meijer (Reifman, 2007).

Furthermore, our knowledge of this sector is quite limited because of the lack of comprehensive reporting requirements on this type of entity capital. The shareholder pressure for performance is self-contained, their activities rarely appear in the media, their boardroom battles are usually conducted in secret, their dividends are known only to directors and shareholders and their financial plans do not have to be disclosed to a stock exchange. When private equity investment groups join together (as demonstrated in the cases below) a complex and secretive investment vehicle is created. It should be emphasised that this secrecy is not in any way illegal nor unethical. Indeed its existence and operation should not be seen as a threat, so long as its precise nature is understood—especially the scope, complexity and lack of transparency of the financial relationships attached to a private equity transaction.

The shift towards *smaller government* has tended to give a greater share of economic activity to the private sector, as shown by the data in Table 1 (Gwartney, Lawson & Samida, 2002; Gwartney, Lawson & Easterly, 2006). Smaller government has been forced by lower tax rates in many jurisdictions and pressure on governments to continue to provide further tax reductions without greatly reducing the level of services provided to a society by government. In the case of infrastructure development, the popularity of PFIs is enhanced by the acceptability of the 'user pays' principle (Grimsey & Lewis, 2005). A typical way of reducing costs has been to outsource activities once carried out by government, particularly in relation to infrastructure and, perversely, often having the characteristics of a natural monopoly (Davis, 2005). This action is supported by an ideological belief that the private sector will make a profit on the task because it is expected to provide the service or product more cheaply than government. Many of these ventures involve private equity capital.

Outsourcing, or contracting out, has been described by Farazmand (2001) as a form of privatisation. It involves the transfer to a third party of the responsibilities for conducting activities originally undertaken by a principal. Particular activities are completed by an external organisation under the terms of a contract between the principal and the contracting firm. The activities could be the provision of basic services under a simple, short-term contract with limited financial or operational risk. Yet, they could also encompass a 30-year contract for the design, construction and operation of high-tech public infrastructure with funding through a complex web of loans provided by a number of financial institutions. While the latter may be described as a PPP, in reality it is just another form of outsourcing.

Table 1: Pattern of Changing Government Expenditures (as a % of GDP) 1980-2004

*Country**	*1980*	*1985*	*1990*	*1995*	*2000*	*2004*
Australia	34.0	34.7	33.0	35.6	35.3	36.1
Canada	40.5	45.1	44.2	44.4	38.5	36.2
France	46.1	50.9	45.7	58.2	62.5	55.1
Italy	49.9**	49.9	46.1	49.4	44.4	46.0
New Zealand	47.0	41.5	48.7	31.7	35.5	34.7
The Netherlands	57.5	60.7	57.5	55.2	58.4	55.7
UK	44.9	43.8	41.5	42.9	38.7	38.7
USA	33.7	34.0	33.5	33.0	30.2	30.8

Source: Original table. Data adapted from Gwartney, Lawson and Samida (2002), and Gwartney, Lawson and Easterly (2006).

Note: * Alphabetical order of entries follows the protocol of the Report; ** Estimate.

The economic trends of the past half century have given great impetus to outsourcing as a form of business behaviour, especially in relation to government. Outsourcing is a well established practice that can be traced to Darius the Great during 'the Persian world-state Achaemenid Empire (559-330 BC), in which two financial banking houses … were contracted out by the State for collecting fixed property taxes' (Farazmand, 2001: 3). For many more established nations, their various exercises in colonial rule encouraged some form of contracting out to gain the advantages of being a dominant state. For example, by the nineteenth century, the UK was drawing raw materials from its colonies such as Australia, New Zealand and India, processing these products and then returning them to the colony of origin.

While contracting out is not limited to government, it provides a well established solution (Farazmand, 2001) to the *make or buy* decisions of the public sector and is supported by populist promotion of contracting out in literature covering both public and private sector perspectives on the issue (Peters & Waterman, 1982; Osborne & Gaebler, 1992; Farazmand, 2001; Friedman, 2005). The contemporary ideological shift to outsourcing has become so powerful, could it now reinforce the *buy* choice and replace a reasoned decision about the *make or buy* choice? The answer is clear: the use of the PPP model of financing public infrastructure is already mirrored by the growth of similar types of contracting arrangements by large private sector organisations. These businesses use a contracting model they might describe as an engineer-procure-construct-manage (EPCM) arrangement which enables a project-based approach to major undertakings ranging from facilities construction and management to the development of new IT systems.

It is apparent that contracting out decisions may be made without a full cost-benefit assessment. More than a decade ago Domberger and Hall (1995) and Hodge (1996) produced research suggesting that the cost benefit consequences of contracting out were ambiguous. In addition, organisations may be likely to find the full cost of outsourced product or service provision—the cost of contract management plus the cost of the outsourced goods or services—exceeds the cost of doing the job in-house.

This weakness was discussed by Williamson (1985), who noted that the transaction cost of contracting out could significantly affect the benefit assumed to be created. The veracity of this claim can only be established if the costs of an activity are fully understood at the outset of the outsourcing decision. Anecdotal evidence suggests few organisations are able to undertake a complete financial analysis of the comparative costs of in-sourcing and outsourcing, perhaps because they do not possess an Activity Based Costing capability (Baird, 2007) or perhaps they do not have the inclination to undertake a detailed study of the outsourcing activities they are about to undertake. They may also choose to overlook the fact that outsourcing weakens the traditional role of management, replacing a defined level of direct command and control of staff with the legalistic undertakings associated with a contractual relationship.

In theory, a properly constructed and executed contract supported by a well-developed specification that is demonstrably understood by all the parties (perhaps supported by product prototypes and simulations) should enable a contractual situation to be managed as readily as a process being managed in-house. Similarly, a contract completed on schedule, on budget and according to the specification creates a satisfactory financial outcome and a precise summary of all costs (assuming quality and reliability goals are achieved). In practice, the situation may be more complex. Organisations are increasingly contracting out and off-shoring their activities in the apparent belief that the cost advantages outweigh the inherent delivery and produce quality risk (Friedman, 2005). However, there is anecdotal evidence that the mismatch between specifications and contract outcomes is a widespread issue—not just for the public sector—which requires greater research.

On the positive side, outsourcing or contracting out also permits organisations to contract the provision of goods and services at a higher level of sophistication than they possess in-house. However, the major problem becomes the question of how the organisation finds or maintains the skills required to evaluate and manage the contract? Contracting out decisions appear to be made with a mixture of advice from external advisers and/or the use of past experience and/or *gut reaction* and/or just taking a risk. In these circumstances the organisation is delegating its performance to one or more contracting out providers without having in-house capability. One way of managing the process is to rely on an external advisor to monitor the contract process and advise on its technical characteristics. Another is to employ 'specialists and people of unusual talent' (Henry, 2001: 98) to provide in-house advice. Once again, the transaction costs may be significant.

It is the issue of transparency, however, that seems to create the greatest challenge to the public sector, especially where private equity is employed. A principal who chooses to *make* a product has an intimate knowledge of the cost, technology, construction and labour skills required to complete the product or provide a service. There may also be research and development undertaken by the principal to complete the task; all of it within the knowledge and control of the principal. Outsourcing shifts the manufacture of the product, or the provision of the service, to the contracting agent. In the process, the task, its discrete costs and the knowledge to complete the activity potentially shift the capability from the principal to the supplier. The entire process becomes opaque and beyond the knowledge and management control of the principal. It is the loss of transparency and capability that links the typical contracting out to the rapid emergence of private equity capital.

Private Equity Capital

The notion of private equity capital has undergone a renaissance over the past five years, although it is inherently linked to the history of capitalism. For example, the value of the British Mercantile approach of the sixteenth to the eighteenth centuries was that commercial goals were conceptualised at a national rather than individual level. While in practice it seems that individuals made significant personal gain, especially the monarch and the nobility, national development was a central politico-economic concept. Economic development was based on a holistic commercial perspective supported by principles that resulted in 'Individual traders … [being] discouraged, and … commerce was [instead] carried on by great companies which … enjoyed a monopoly of trade between England and some definitely specified part of the world' (Southgate, 1934: 75).

The recent attention to private equity and its freedom to aggregate large amounts of investment capital and select the most desirable financial targets represents the revival of an old force in international finance: the concentration of large amounts of private capital held in a limited number of hands (Reifman, 2007; 'The trouble with private equity', 2007). For much of the past two centuries, legislators have worked to limit the excesses of corporate behaviour and to protect investors from themselves and from the greed of company promoters and corporate fraud. Regulators have also been busy revising public company reporting standards and raising the responsibility requirements for accountants, auditors and board members of public corporations. The most high profile recent reform involves the Sabanes-Oxley legislation in the US, more properly called the *Public Company Accounting Reform and Investor Protection Act of 2002*. Private equity, in comparison, has many attractive features from an investor's point of view; it is legal, silent, has no particular corporate stance or public policy, it is not usually contained by national boundaries, has no direct stock market reporting requirements and has very limited transparency.

Private equity investors are likely to be very demanding and expect financial success, but they are inherently their own watchdogs, auditors and beneficiaries of the results of private equity forays. Could the current popularity of this investment format be a result of the corporate restraints created by events such as those experienced by Enron and Worldcom ('The banks that robbed the world', 2004)? Has the Sabanes-Oxley legislation encouraged a shift in investors from the stock market to private equity transactions while regulators try to show the public they are containing public corporation excesses?

Private Equity and Outsourcing

Thus far, the link between private equity capital and contracting out may appear to be quite distant. However, in some jurisdictions, the two have become inexorably entangled in financial, legal and contracting predicaments and opportunities. The first link comes from the development of PPPs—increasingly complex and expensive infrastructure projects established on a build-own-operate contract with a life of up to 30 years. PPPs are technically sophisticated, financially complex, legally intricate and politically expedient. A private company structure involving debt financing and supported by private capital also ensures that very little financial information about the venture is available. A curiosity is the ability of government to outsource large scale infrastructure using a non-transparent financial model. While a government may provide a detailed account of its dealings with its private equity partner, this openness does not need to be reciprocated when in the hands of a private supplier because, in many jurisdictions, there is limit to the financial disclosures required of private companies.

Some jurisdictions may already have passed legislation designed to reduce the secrecy of dealings, but will this legislation be adequate? For example, the *Auditor General Act 2005* (No. 75 of 2006) includes provision for the state audit of related entities in the following terms:

> *... if an agency performs any of its functions in one or more of the following ways*
>
> *(a) in partnership or jointly with another person or body;*
>
> *(b) through the instrumentality of another person or body;*
>
> *(c) by means of a trust,*
>
> *the accountable authority of the agency must give written notice of the fact that the Auditor General, and the person body or trust is referred to as a 'related entity' of the agency.*

The Auditor General may audit the accounts and financial statements of a related entity to the extent that they relate to functions that are being performed by the related entity –

(a) *on behalf of the agency; or*

(b) *in partnership or jointly with the agency; or*

(c) *as a delegate or agent of the agency.*

This section of the Auditor General Act is quoted in full to demonstrate the difficulties of drafting a regulatory power designed to protect the interests of government which is acceptable to commercial partners involved in government-funded arrangements. While these words may appear to provide some level of protection of the state, it is not apparent that these powers have been tested in court, nor has the operational meaning of the words of the act, 'to the extent that they relate to functions that are being performed by the related entity', been adequately defined.

Another high-level issue relates to the nature of a competitive market economy—a feature of capitalism which may be threatened by the contemporary rise of private equity. A recent press release by ABN AMRO (Anon, 2007) shows that the bank has:

> ... *made a EUR 2 billion long-term commitment to be invested in mid-market buy-out opportunities in the Dutch, UK and Nordic markets. Through these actions, ABN AMRO has further reduced its active involvement in its private equity investment management activities, particularly buy-outs, while continuing to benefit from the very good returns that the business has proven able to generate.*

An investment portfolio of this size is likely to have a more differing impact on the Nordic markets than the much larger Netherlands and UK economies. Of course ABN AMRO is active in many other markets, including Australia, as the case study later in this paper makes clear ('$1bn Sydney tunnel sold for $700m', 2007).

Apart from the scale of investment, the focus on very good returns is significant and typical of private equity investment. Share market transactions usually attach strict reporting requirements whereas private equity may have no such constraint in many jurisdictions. A private equity fund can discretely manage a large amount of funds without disclosing its sources. It acts on behalf of principals—the owners of the private capital—and the only guiding ideologies may be to achieve very good returns and minimize long-term risk. As private equity capital investments increase, they may impact the stock markets and the commercial market in which they intervene. By moving a public company from the stock market, private equity investors reduce the stock market competition. If private equity can acquire multiple organisations in an industry, then the competitive market is reduced; a shift that may affect the ability of public officials to leverage competitive deals.

In addition, any thought that PPP/PFI initiatives and their relationship to private equity funding are only of concern to public managers should be immediately forgotten. Early in 2007, the Australian public was mesmerised by the potential buy-out of national flag carrier Qantas Airways Limited by a private equity consortium called Airline Partners Australia. The bid, which ultimately collapsed, was a complex mix of private equity and substantial debt. In the wake of the failed bid, and the general downturn in private equity buy-outs, one industry journal ('Disaster averted', 2008: 98) quotes a Reuters report in which a stock broking firm's:

> ... *manager of institutional sales* … [said] '*It's largely to do with all the concern and uncertainty of what is perceived to be complicated financial organisation which has got layers of debt which are not overly transparent. The market is getting nervous about such organisations'.*

At the time the bid was launched, it was strongly supported by Qantas Airways Limited management. When the private equity group failed to gain the required shareholder approval the takeover failed and the chair of the Qantas Board resigned. It is an interesting reminder of the volatility of the global equity markets that one the private equity partners intimately involved in the Qantas bid, Allco, is now, less than a year later, facing severe financial pressure itself ('Investor unease sees Allco shares lose 63%', 2008). There is currently considerable speculation about what might have been the fate of Qantas Limited had the buy-out proposal been accepted. Qantas itself might be facing liquidation or the Australian Government might have found itself contemplating a nationalisation of the type undertaken by the British Government in relation to Northern Rock ('The belated nationalisation of Northern Rock', 2008).

While there have been some attempts to rein in the reach of private equity capital, the outcomes have been limited (the limits are created more effectively by the interest rates attached to private equity leveraging): as interest rates rise, the attractiveness of borrowing declines, and vice versa. There is also an interesting interplay between the competitive needs of capitalism and the rise of democracy. If capitalism is a 'social and economic system in which individuals are free to own the means of production and maximize profits' (Bannock, Baxter & Davis, 1998: 52) then private equity capital appears to meet the definition.

However, a market system will struggle to be a social and economic system if it has no competitive environment in which to operate. The Mercantile era discussed earlier, which existed in a time of subsistence economies where ownership was concentrated among a few large corporations and significant members of the ruling class, was eventually related to the gradual emergence of social unrest. It would be naïve to assume that societies which returned to such concentrations of capital could do so completely peacefully.

Finally, it needs to be observed that private equity tends to reduce the level of government income rather than enhance it. Owners of private equity can be assumed to minimise taxation through income splitting, seeking capital gains tax relief and other tax minimising arrangements (which are beyond the scope of this paper). The diminution of government revenues caused by these activities, legal though they may be, is further aggravated by significant use of debt by some private equity partners to PPP/PFI arrangements. The debt load, incurred to enhance the borrowing contracting capacity of the private equity partner, reduces the profitability of the contracting entity, taxation and shareholder dividends so that the full advantages of the PPP become less clear. The relationship between income tax minimisation and capital gains maximisation will also be influenced by the capital gains tax rules of the jurisdiction involved in the PPP/PFI and the relative interest rates of the time.

Will private equity capital exploit all the benefits available from contracting out and the ability to invest at will? Will this capital-raising approach lead to a sharp contraction in the notion of the market economy and the wealth of the average individual? Korten (1995) raised questions about the capacity of corporations to rule the world, yet perhaps it is the private equity consortium that will place capitalism at risk. The case study which follows is designed to illustrate the financial and operating risks that emerge from the financial and risk interchange between the private sector and government under the contracting conditions created by a PPP.

Cross City Tunnel, Sydney (Australia)

The Cross City Tunnel (CCT) PPP has been selected because it has generated many lessons to be learned. It illustrates a complex procurement situation where the issues of transparency and risk management have not been well managed and where the number of parties involved in the PPP financing and public policy implications probably created an ungovernable business environment. There is no evidence that any of the parties acted improperly but it is currently impossible to say whether or not further legal or financial ramifications exist for the state as the initial private equity partner has gone into liquidation and the contracted PPP arrangements are not planned to expire until 2035.

There have been a significant number of PPP arrangements created in Australia since the early 1990s. The PPP has been popular for infrastructure projects such as roads, rail, tramways, school, gaols and at least one hospital. However, as Maguire and Malinovitch (2004) have noted, the motivations for the creation of PPPs has undergone significant change. For example, they find that in the late-1980s a principal reason was that the PPP vehicle achieved 'off-balance sheet financing that would not be caught by the global [state borrowing] limits set by the Australian Loan Council' (Maguire & Malinovitch, 2004: 28) and led to government accepting most of the project risk. These older PPPs are now capable of generating problems for governments.

The NSW Auditor General (2006) reminded the then state government that in the course of creating a PFI arrangement to build a tunnel under Sydney Harbour, the RTA (formerly the DMR) made an interest-free loan of AUD223 million to the private sector consortium in 1992 which must be repaid by 2022. The RTA expressed the belief it could recover the funds; however, the Auditor General was less certain and recommended that, because the revenue generated by the tunnel was falling, the ability of the contractor to repay the loan was diminishing. Due to the terms of the contract and the abiding philosophy behind the creation of a PFI at that time, no criticism can be made of the loss of revenue to the state arising from an interest-free loan over 30 years (nor the substantial benefit accruing to the private operator).

This is not the first time the Sydney Harbour Tunnel project has attracted the attention of the Audit Office of NSW. For example, in 1994 the Auditor General issued the following opinion about the funding arrangements adopted by the RTA:

> *There is a perception that a gap exists between the State's infrastructure requirements and its ability to adequately finance these requirements alone … This issue has been the subject of a major study by the Public Accounts Committee (PAC) …* [which] *suggested that innovative financing methods ought to be considered to encourage alternative sources of finance (other than State funds) to* [fund] *large infrastructure projects.*
>
> *From an accountability and audit perspective, the proper recording of a government agency's involvement in such transactions is a paramount objective. Understanding the substance of those transactions is a prerequisite to this objective.*
>
> *Indeed, the Roads and Traffic Authority was among a number of government agencies which had already taken steps to finance large infrastructure projects using financing structures such as 'Build, Own, Operate, Transfer' ('BOOT') schemes. … The Sydney Harbour Tunnel, an earlier initiative of the State… was … proposed as a sophisticated off-balance sheet acquisition by the Authority.*
>
> *This Report is the outcome of the audit to understand the substance of those … transactions of the Authority. It has concluded that the Authority's 1993 financial accounts did not adequately reflect that substance.*

Within 6 years the government of NSW was actively planning another tunnel, this time wanting to tunnel under the city to alleviate some of the traffic congestion created by motor vehicles attempting to travel to destinations on either the eastern and western sides of the city. By 2000 the plan had become a reality and in September 2000 the RTA called tenders for the construction of a CCT (CrossCity Motorways, 2006a; Chong & Callender, 2007). The successful tenderer was the Cross City Motorway Consortium, which later became a private company, CrossCity Motorway Pty Ltd (CCM). The abbreviations Pty Ltd signify that this is a private company, which at the time represented a consortium comprising Bilfinger Berger BOT, Cheung Kong Infrastructure and clients of RFEEF Infrastructure Investments. The CCT was planned to be operated by the consortium until 2035 (Audit Office of NSW, 2005) with the tunnel being maintained by Baulderstone Hornibrook, a subsidiary of Bilfinger Berger BOT.

As noted earlier, the private company vehicle for this project provides a number of advantages for the directors and investors: comparative secrecy, possible tax benefits and substantial protection against personal financial claims by present and future creditors. The operations of the company proceed under the control of a Board of Directors, but the level of financial disclosure to either the public or corporate regulators under Australian company legislation is negligible. A search of the public records revealed only the names and addresses of the then directors, the address of its registered office and a limited number of other corporate records. Financial details were not available and no company audit requirement existed although, as noted earlier in this paper, there is evidence that statutory audit acts are being amended in Australia to permit Auditors-General to investigate the records of businesses holding contract with government (Government of Western Australia, 2006). The strength of this legislation, however, does not seem to have been tested in the courts.

When the CCT tender was being considered, the RTA—the supervising public institution—engaged in an almost standard procurement process. The contract formation process began with a public call for *Registrations of Interest* in response to which an Assessment Panel was appointed to consider the three short-listed proposals (RTA, 2003). This review panel comprised three senior executives from the RTA and the NSW Treasury Corporation and 'a principal of Evans and Peck Management' (RTA, 2003). Evans and Peck (2006: 1) describe themselves as 'international management consultancy, specialising in improving performance and outcomes in the delivery of major infrastructure projects and programs'.

The principal decision features were the size of the up-front Business Consideration Fee payable by the winning tenderer to the RTA (effectively the government), the satisfaction of the principal of 'no net cost to Government' (Audit Office of NSW, 2007: 37), the size of the toll charge to users, the capability of the tenderer to build the tunnel and the engineering credentials of the tenderer (all of whom had been pre-qualified before being asked to respond to a *request for tender*). These features are also the principal areas of complaint in the wake of the tunnel construction, with the addition of one other major item. The contract which was eventually used had significantly changed from that offered in the original tenders and the Audit Office of NSW reported unfavourably on these changes. Some detail may be useful of this project because the outcomes illustrate the major theme of this paper: that there are fundamental, possibly unmanageable, risks created for the state inherent in the creation of PPPs based on highly complex financial, operating and policy assumptions where the procurement process is manipulated by the sheer complexity of the contractual situation.

For example, the notion of a Business Consideration Fee was devised to enable the RTA to recoup some of their costs of letting the tunnel contract at the commencement of the contract. It was later suggested that the scale of such a fee influenced the procurement decision (Audit Office of NSW, 2007), although this view is contested by the RTA. It was argued by the RTA that the appropriate *bid point* was the proposed toll to be charged to users, thus preserving the *user-pays* philosophy—then one of the guiding philosophies of PPPs in NSW.

Whatever the substance of the events—and these, as the Auditor General found in 1994, will probably never be fully established—both the Business Consideration Fee and the tolls eventually agreed upon by the parties have caused political problems for the NSW Government, increased the costs of the tunnel and contributed to the high level of adverse publicity accompanying the launch of the project. The Business Consideration Fee can be regarded as extending the user-pays principal because the size of the fee became part of the eventual toll charge, so tunnel users were not only paying for the tunnel construction and operation (and contributing to the anticipated income of CCM), they were also compensating CCM for the up-front fee paid by CCM to the RTA (or the government) to enhance the attractiveness of their bid.

Added to this dilemma was the requirement that the tunnel be built at 'no net cost to Government' (Audit Office of NSW, 2007: 37). Once again it took an Audit Office review to shed further light on this term. The contract Evaluation Committee included members of the NSW Treasury and whether or not their input was significant to this principle it is difficult to say from the evidence. The Audit Office has published some of the correspondence it received from the Executive Director, Private Projects and Asset Management, NSW Treasury, on the issue during its review of 2007 (Audit Office of NSW, 2007: 37):

> *There is a bit of confusion about the no net cost to Government position, which … was that for this project there should be no net cost to Government* (sic) *which meant there should be no cost to other areas of Government. But if the RTA wished to put additional money into the project it was to come from its own budget.*

This view remains contested by the RTA and, as the Audit Office recommended that the term 'no net cost to Government' be further clarified in future contracts, it can be assumed that the Auditor General was also dissatisfied by the definition of the phrase by Treasury.

The CCT attracted a great deal of negative publicity when it opened in August 2005. The cost of the toll charged to motorists was a principal complaint, but it was claimed that the RTA had modified a number of roads providing access to the tunnel in a way that diverted as much traffic as possible into the tunnel, forcing drivers to pay the required toll for the journey. It transpired that the fine detail of the terms and conditions included requirements that any changes to the public transport system, not to mention other service facilities such as electricity, telephone and gas, would all require the agreement of the tunnel operators before they could be made. The reason for these conditions was said to be that the income of the tunnel project could not be placed at risk ('NSW paying Harbour Tunnel owners $1m a week', 2008).

The tunnel operators, a private company, thus became a driver of public transport policy, even though its public and governance policies and its income patterns were not disclosed in detail. In early 2006 it was reported that tunnel usage was around 25,000 movements per day compared to the original forecasts of 90,000-100,000 movements when the tunnel was being developed (RTA, 2003; CrossCity

Motorways, 2006b). Usage has only risen to 35,000-40,000 per day and once again complaints are raging about the toll, which will be shortly increased ('Cross City Tunnel toll to rise to $3.96', 2008).

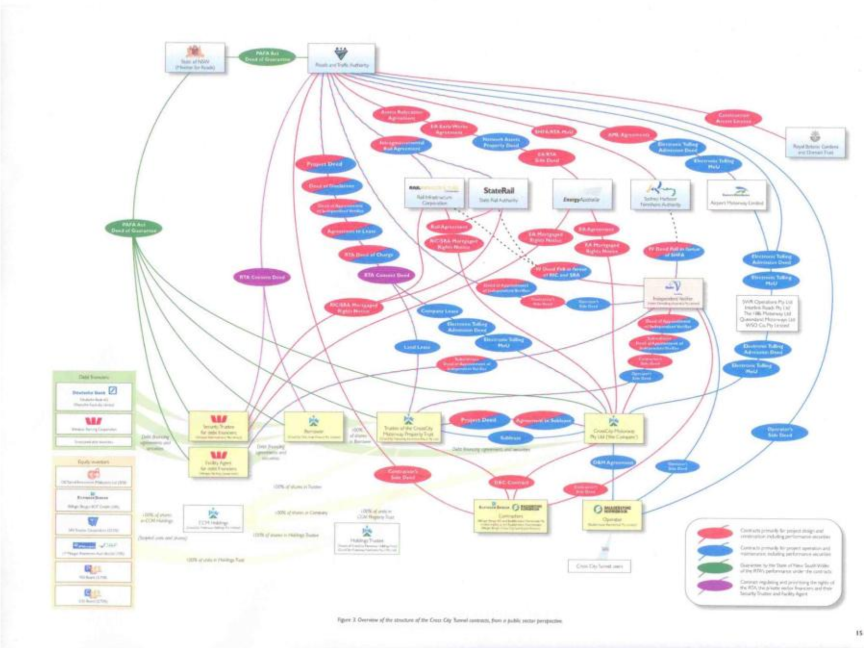
The private operator went into bankruptcy in 2007 and the liquidators subsequently negotiated the sale to a consortium led by investment bank ABN AMRO and Leighton Holdings who purchased an asset allegedly worth AUD1,000 million for around AUD700 million ('$1bn Sydney Tunnel sold for $700m', 2007). Although this was considerably better than the AUD350 million suggested earlier in 2007, the selling price represents a charge to creditors and taxpayers of around 30 percent of the total asset value. The under-utilisation of the tunnel was cited as the major factor in the financial failure.

Arguments over infrastructure utilisation are not unusual. In the state of Victoria (Australia), Stanley and Hensher (2004: 43) report on the creation of a set of public transport PPPs that were designed to 'increase competition in the supply of goods and services that had previously been publicly owned'. The term of the franchises was 12 years for urban trams and 15 for urban rail with the contracts being let to experienced rail transport operators. After three years one of the franchisees declared it could no longer meet its contractual requirements and it abandoned its franchising commitments despite the injection of further subsidies by the state. It emerged that one of the major weaknesses of the contracts was over-exuberance on the part of the state to create a competitive market and a similar over-exuberance of the private providers to participate in this market. As a result, the economic size of each business was too small to be financially viable. Yet, at the time, both the public and private contracting parties accepted the risk and complained vigorously when this type of PPP failed dismally (Stanley & Hensher, 2004).

In the case of the CCT, the over-exuberance of the parties is demonstrated by the extraordinarily complex financing and policy arrangements the parties were prepared to accept. Figure 1 provides a graphic diagram showing the relationships created to initiate and maintain this PPP. The diagram was produced when the tunnel project was well advanced and clearly shows that the structure was beyond the ready comprehension and management of the parties involved, whether they were the private equity partners, the government or the polity. The complex, multiple, layer-upon-layer relationships undoubtedly contributed to the operating problems of the CCT and the eventual financial debacle that ensued. The AUD300 million loss probably suffered by taxpayers may grow if there are any residual legal actions arising from the collapse and subsequent sale of the CCT. A loss of 30 percent after just two years of operation is surely a substantial loss in any investor's view, although some of the funds may have been offset by the up-front Business Consideration Fee charged to CCM at the outset of the project.

This diagram also illustrates the existence of what can be described as the spoken and unspoken lessons of this PPP. The summary of events outlined above provides adequate evidence of the *spoken* issues. First, the need to ensure transparency of an entire PPP/PFI has been reinforced by both the events as reported in the media and uncovered by independent audits (Auditor Office of NSW, 2006). Second, the consequences of manipulating public policy in order to support a major infrastructure project need to be communicated to the populace rather than covered up until the project becomes operational and the effect of the manipulation becomes obvious to all. Three, the challenges of dealing with a sophisticated and complex engineering and financial contract, within the complicated overlay of urban policy, and its capacity to generate *wicked problems* (Rittel & Webber, 1973) leave public sector procurement managers, agency CEOs, government ministers and their advisors, and the private sector contractor with an unmanageable mix of relationship and operating issues.

Figure 1: Contracting Relationships of the CrossCity Tunnel Project



Source: RTA (2003).

A sense of the complexity of the contract relationships is illustrated by Figure 1, which was published by the RTA as the contracting process unfolded. This is one of the unspoken lessons of this project: that the scale of formal relationships within the contract is likely to be beyond the capacity of any one individual (or project management team). A preliminary application of a simple formula designed to estimate the number of potential relationships could be ($n^2 - 1$) where n = total number of individuals or organisations (original source is unknown, but is discussed in Callender, 2009). Here a relationship is defined as a face-to-face, telephone or written communication involving two or more individuals or groups (or in this case, organisations) resulting in a work-related or personal-related outcome (including a friendship).

Ignoring the number of individuals involved but applying this formula to the potential organisational relationships, the basic number of potential inter-organisations starts at around 25,600 (assuming a base count of 160 organisations, though the counting process is fraught with difficulty). The number of organisations involved in this project exceeded 20,000 and if this factor is added to the base count of organisations, the potential for communication failure is obvious. The notion of the complex organisation takes on a new meaning.

This communication difficulty is complicated by the policy challenges created by the contract and which were interpreted by the parties in different ways. For example, it is noted that CCM is only *one* of the parties in this complex web of relationships. While it was a core contributor to the contract, it was still only one of the interacting parties. The government agencies that were involved from a policy point of view all saw the issues from a slightly different perspective, as was illustrated by the diverging understanding of the NSW Treasury and the RTA when they attempted to agree on the principle of 'no net cost to Government'. Indeed, the scope of the diverging opinions and interpretations underscored the shortcoming of decision models in the case of wicked problems (Rittel & Webber, 1973). The case illustrated how the causal factors of a problem are perhaps impossible to uncover and even the original starting point of the problem is unclear or disputed by all the parties. In the absence of a clear perception and ranking of the major issues, it is very difficult to establish priorities for action.

Finally, mention needs to be made of the financial underwriters of the project: the lenders and the private equity providers. It is not clear from the Audit Office of NSW reports that any attempt was made to use any legislative capability to investigate the financial performance of CCM at any stage of the project—rather the Auditor General's investigation appeared to centre on the evidence provided by examination of the various agencies involved in the project, principally the NSW Treasury and the RTA. As a consequence it is not possible to draw conclusions about the strength of the state to investigate a *related entity* within the meaning of a relevant audit act or even to establish which organisations are caught by such legislation. Certainly there was no suggestion that financial underwriters be investigated though their records might yield some rich evidence about the perceived viability and performance of the CCT project at various stages of its development.

The public record is therefore quite deficient in its ability to monitor and document the financial arrangements and to help public managers understand the nature of financial instruments that are being used by the private equity contractors to advance the project. While there is sufficient information to report in aggregate terms—tunnel usage, toll levels, toll evasion and tunnel performance problems—there is silence on the matter of expenses and profitability. It seems that the private equity partners were able to use the shield of *commercial-in-confidence* and the limited reporting requirements of corporate laws to provide the public and civil servants with very little evidence about their financing arrangements for the project.

Perhaps there was an assumption that as profit optimisation is assumed to be a dominant goal of the private sector, this feature alone would minimise financial risk to the state. Yet, as the example of Qantas Limited and its financial predators shows ('Disaster averted', 2008), the motivations of private capital shift swiftly and can be strongly and adversely influenced by changes in overall financial conditions. Without transparency, there can be little discussion about the financial instruments used to *bankroll* the project or, in the end, enough evidence to establish the exact loss to the state from the overall project.

A greater acknowledgement and understanding of the unspoken issues evident in this case, the risk they pose to policy makers and the risk they pose for the state provide an area of future research to support the evolution of PPPs. The case also suggests that, for public managers, the increasing complexity and potential instability of sophisticated modes of financing PPPs and the non-transparency of private equity financing pose additional risks to the state which are not offset by the traditional profit motives of the private sector.

Conclusion

The emergence of equity capital as a global economic force is seemingly in its early days. However, this type of capital-raising and the contracting out process, whether it be for a minor contract or for a PPP/PFI, carry a key characteristic which impacts public governance: the shift of business activities from transparent or regulated corporate behaviour to an opaque business mode where the activities are conducted without adequate public scrutiny.

While contracting out has become commonplace, especially the PPP/PFI model, the risk for public sector managers arises not only from the substitution of non-transparent privately-financed activities for previous arrangements which are open to public scrutiny, but also from the leveraging arrangements created by private equity deals and the weakness of the regulatory environment attached to such contracts. The limited public scrutiny may be offset but enhanced audit requirements (though this is far from certain). However, the typical due diligence that forms part of the supplier and tender evaluation process may require more detailed examination, especially in regard to the limits to debt (or leverage) associated with any PPP/PFI existing at the inception of the contract and during its life. Such limited arrangements are comparatively well established in the finance industry, though the use of flexible financial instruments makes this type of internal regulation more difficult.

Unless similar restraints are placed upon aggregated private equity arrangements, all the regulatory work of the past two hundred years, and more recently the development of legislation such as the *Sabanes-Oxley Act* of 2002, will be wasted and the challenges created by the financial circumstances illustrated by the earlier case studies will remain. At present, the owners of aggregated private capital seem to be able to indulge their investment desires without the protection of society by governments. Regulators will need to re-examine the role of private equity and develop guidelines for the financing of PPP/PFI arrangements to ensure that during times of economic hardship, government is not exposed to unexpected risk.

References

'$1bn Sydney Tunnel sold for $700m' (2008) *Adelaide Now* [On-line]. Available: www.news.com.au/adelaidenow/story/0,22606,21940954-913,00.html.

Anon (2007) *Press Release, ABN AMRO* [On-line]. Available: www.capital.abnamro.com/render.do?doc=Quarterly%20Results&type=press_release&country=uk.

Audit Office of New South Wales (1994) *A Private Participation in the Provision of Public Infrastructure: The Roads and Traffic Industry*. NSW Government, Sydney.

Audit Office of New South Wales (2005) *Auditor-General's Report to Parliament 2005 (Volume 4)*. NSW Government, Sydney.

Audit Office of New South Wales (2006) *Performance Audit: The Cross City Tunnel Project*. NSW Government, Sydney.

Audit Office of New South Wales (2007) *Auditor-General's Report to Parliament 2007 (Volume 6)*. NSW Government, Sydney.

Baird, K. (2007) Adoption of activity management practices in public sector organizations. *Accounting and Finance*, 47 (4) pp 551-69.

Bannock, G., Baxter, R. and Davis, E. (1998) *Dictionary of Economics*. Penguin Books, London.

'Beyond the subprime debate' (2007) *Washington Post*, 28 March A15.

Callender, G. (2008) *Efficiency and Management*. Routledge, London.

Chevallier, F-X. (2000) *Greenspan's Taming of the Wave or the Golden Age Revisited*. Kogan Page, London.

Chong, S. and Callender, G. (2007) One more time … How to measure alliance success in conditions of public-private partnering. In K. Thai and G. Pigo (Eds) *Advancing Public Procurement: Practices, Innovation and Knowledge Sharing*. PrAcademics Press, Boca Raton, FL. 97-115.

CrossCity Motorways Pty Ltd (2006a) *The Tunnel: About Us* [On-line]. Available: www.crosscity.com.au/DynamicPages.asp?cid =18&navid=19.

CrossCity Motorways Pty Ltd (2006b) *The Tunnel: Project History* [On-line]. Available: www.crosscity.com.au/DynamicPages .asp?cid=65&navid=19.

'Cross City Tunnel toll to rise to $3.96' (2008) *The Sydney Morning Herald*, 16 February p 1.

Davis, K. (2005) PPPS and infrastructure investment. *The Australian Economic Review*, 38 (4) pp 439-44.

'Disaster Averted?' (2008) *Australian Aviation*, 247 (March) p 98.

Domberger, S. and Hall, C. (1995) *The Contracting Casebook: Competitive Tendering in Action*. Australian Government Publishing Service, Canberra.

Evans and Peck (2006) *Welcome to Evans and Peck*. Available: www.evanspeck.com.au/.

Farazmand, A. (2001) *Privatization and Public Enterprise Reform: Implications for Public Management.* Greenwood Publishing Group, Westport, CT.

Friedman, T. (2005) *The World is Flat: A Brief History of the 21st Century*. Farrar, Straus & Giroux, New York, NY.

Government of Western Australia (2006) *Auditor General Act 2006 (No 75 0f 2006).* Government of Western Australia, Perth.

Greener, I. (2006) Nick Leeson and the collapse of barings bank: Socio-technical networks and the 'Rogue Trader'. *Organization*, 13 (3) pp 421-42.

Grimsey, D. and Lewis, M. (2005) Are public private partnerships value for money? Evaluating alternative approaches and comparing academic and practitioner views. *Accounting Forum*, 29 (4) pp 345-78.

Gwartney, J., Lawson, R. and Samida (2002) *Economic Freedom of the World 2002*. Fraser Institute, Vancouver, BC.

Gwartney, J., Lawson, R. and Easterly, W. (2006) *Economic Freedom of the World 2006*. Fraser Institute, Vancouver, BC.

Henry, N. (2001) The contracting out conundrum in the United States: Or, Do we really understand privatization. In A. Farazmand (Ed.) *Privatization and Public Enterprise Reform: Implications for Public Management.* Greenwood, Westport, CT. 95-126.

Hodge, G. (1996) *Contracting our Government Services: A Review of International Evidence.* Montech, Melbourne.

'Investor unease sees Allco shares lose 63%' (2008, February 25) *Financial Times* [On-line]. Available: www.ft.com/cms/s/0/92b451f2-e3c1-11dc-8799-0000779fd2ac.html.

Jeffries, M. (2006) Critical success factors of public private sector partnerships. *Engineering, Construction and Architectural Management*, 13 (5) pp 451-62.

K D Morris & Sons Pty Ltd (in liquidation) v. Bank of Queensland Ltd (1980) 146 Commonwealth Law Reports, p 165 [On-line]. Available: http://law.ato.gov.au/atolaw/view.htm?rank=find&criteria=AND~forward~basic~exact:::AND~exchange~basic~exact:::AND~rates~basic~exact&target=CD&style=html&sdocid=JUD/146CLR165/00005&recStart=141&PiT=99991231235958&recnum=145&tot=387&pn=ALL:::ALL.

Korten, D. (1995) *When Corporations Rule the World*. Earthscan, London.

Li, B., Akintoye, A., Edwards, P. and Hardcastle, C. (2005) Critical success factors for PPP/PFI projects in the UK construction industry. *Construction Management and Economics*, 23 pp 459-71.

Macartney, J. (2008, October 7) 'Asia stocks rebound as Reserve Bank of Australia cuts interest rates'. *Times on Line* [On-line]. Available: http://business.timesonline.co.uk/tol/business/industry_sectors/banking_and_finance/article4896511.ece.

Maguire, G. and Malinovitch, A. (2004) Development of PPPs in Victoria. *Australian Accounting Review*, 14 (2) pp 27-33.

Mahathir, M. (1998) Malaysia: The building of a nation. *Asian Affairs*, 1 (3) pp 3-16.

'NSW paying Harbour Tunnel owners $1m a week' (2008, December 11) ABC News [On-line]. Available: www.abc.net.au/news/stories/2008/12/11/2443340.htm.

'Obama says critical to stabilize economy' (2008, December 10) *International Herald Tribune* [On-line]. Available: www.iht.com/articles/reuters/2008/12/10/America/OUKWD-UK-USA-OBAMA.php.

Osborne. D. and Gaebler, T. (1992) *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. Addison-Wesley, Reading, MA.

Peters, T. and Waterman, J. (1982) *In Search of Excellence*. Harper and Row, New York, NY.

Reifman, S. (2007) *America's Largest Private Companies* [On-line]. Available: www.forbes.com/2007/11/08/largest-private-companies-biz-privates07-cx_sr_1108_land.html.

Reserve Bank of Australia (2008) Indicator lending rates - F5 [On-line]. Available www.rba.gov.au/Statistics/Bulletin/F05hist.xls.

Rittel, H.W.J. and Webber, M.M. (1973) Dilemmas in a general theory of planning. *Policy Sciences,* 4 pp 155-69.

Roads and Traffic Authority (RTA) (2003) Cross City Tunnel: Summary of Contracts [On-line]. Available: www.treasury.nsw.gov.au/wwg/pdf/cct_contracts_summary_june03_2.pdf. (Figure also available at: www.treasury.nsw.gov.au/__data/assets/pdf_file/0004/3100/Cross_City_Tunnel_contracts_summary_2008_update_lowres.pdf)

'Rock's rescue plans "carry risk"' (2008, February 18) BBC World News [On-line]. Available: http://news.bbc.co.uk/2/hi/business/7250023.stm.

Southgate, G. (1934) *English Economic History*. J M Dent and Sons, London.

Stanley, J. and Hensher, D. (2004) Melbourne's public transport franchising: Lessons for PPPs. *Australian Accounting Review*, 14 (2) pp 42-50.

'Temporary public ownership: What it means to you,' (2008) *Northern Rock* [On-line]. Available: www.northernrock.co.uk/.

'The banks that robbed the world' (2004, June 9) *BBC World News* [On-line]. Available: http://news.bbc.co.uk/2/hi/business/3086749.stm.

'The belated nationalisation of Northern Rock' (2008, February 21) *The Economist* [On-line]. Available: www.economist.com/world/britain/displaystory.cfm?story_id =10740475.

'The trouble with private equity' (2007) *The Economist*, 5 July pp 34-5.

'Trade, exchange rates, budget balances and interest rates' (2008) *The Economist*, 10 May p 104.

Weinberger, D., Tufano, P., Francis, C., Sodhani, A., *et al.* (1995) Using derivatives: What senior managers must know. *Harvard Business Review*, 73 (1) pp 33-42.

'Why market optimists say this bull has legs in USA' (2007) *The Wall Street Journal Asia*, 24 May p 1.

Williamson, O. (1985) *The Economic Institutions of Capitalism*. Free Press, New York, NY.