

A Global Crisis in Infrastructure

July 2009

Contents

- A Global Crisis in Infrastructure
- The U.K. Perspective
- The Australian Perspective
- The Singaporean Perspective
- The U.S. Perspective

Global investment in infrastructure is one of the great challenges of the 21st century. Governments around the world, many of which have neglected public infrastructure for decades, will now likely need to invest on an unprecedented scale to provide adequate energy, transportation, water, and public services for growing populations. According to the Organisation for Economic Co-operation and Development (OECD) estimates, globally, this investment need will reach \$71 trillion by 2030.¹

In the short term, governments are undertaking massive stimulus packages designed to create jobs and enhance their competitiveness. Such packages are expected to help to stimulate economic recovery but are likely only part of what's required to help resolve the longer-term challenge.

It has been clear for some time that, over the longer term, governments have not been able to satisfy this investment need alone. Hence, the evolution of various forms of Public Private Partnerships (PPP) over the last decade to demonstrate models of cooperation between the public and private sectors in the delivery of infrastructure services.

Many banks are currently hamstrung by capital and liquidity issues and a reassessment of credit criteria. Basel II capital adequacy requirements may result in most banks taking the strategic

choice to limit the tenor of their loans; as a result, the project finance banking market may shrink significantly. While some large public pension plans are becoming quite adept at infrastructure investing, many institutional investors are likely to have the capital to unblock the project markets but may lack conviction and experience.

As many banks tighten their belts, there is a bottleneck of infrastructure projects chasing reduced lending capacity and widening spreads. Banks that are open for business can no longer go solo on massive long-term financial deals, preferring to club together, spreading the risk. But as the club gets bigger, the price gets steeper; negotiations and agreements can take longer, and projects may get delayed.

¹ OECD, *Infrastructure to 2030* (Volume 2), 2007.

KPMG takes a look at the situation facing governments around the world and considers how they might plug the widening gap between social and economic need and infrastructure funding in some of the key global markets.

In the U.K., HM Treasury statistics show that PPP deal volumes halved in 2008 and, excluding the effect of one huge, long-standing defense transaction, were 72 percent lower in value.¹ This significant decline is part of a global pattern that not only affects new projects but refinancing, too—notably for some of the short-term funded infrastructure acquisitions of two to three years ago.

Alternative sources of funding have all but dried up. Institutional investors such as pension funds and insurance companies have seen their route to market effectively stymied when monoline insurers' AAA credit ratings tumbled. While the monolines themselves were effectively a capital adequacy arbitrage, they enabled many investors to avoid the need to develop their own competent credit functions by the simple reliance on the AAA credit wrap.

The paradox is that institutional investors have substantial capital to invest. Across the OECD as a whole, if only 1 percent of total pension funds were allocated in this way, around USD\$180 billion would be available for investment in infrastructure, and this does not include the substantial resources at the disposal of pension reserve funds and life insurance funds.² Given volatility in other investments, infrastructure, with its long-term stable, indexed cash flow that aligns with investors' liabilities, should prove a worthy asset class. But there is reluctance to commit to anything less than a perceived A-rated project and, with a few exceptions, a lack of relevant experience and resources.

Another emerging trend is banks' inclination to stay closer to home and

to focus on core client relationships. Take Commonwealth Bank of Australia which, months after having set up a new European infrastructure team, decided to rationalize and retreat to home shores.³ This focus can be encouraged by governments—notably in the United States and the United Kingdom—which now own significant stakes in national banks. But this nationalistic approach can have an adverse effect on countries that rely on international banks to fund their infrastructure development, and investment in these locations has been severely curtailed.

As commercial banking has declined, development banks such as the European Investment Bank (EIB) have taken on more integral project financing roles around the world. The World Bank, for instance, has announced its commitment to lend US\$45 billion over the next three years to support road building and other infrastructure projects in poor nations.⁴ Likewise, the EIB is increasing its total lending volume by approximately 30 percent (€15 billion) in both 2009 and 2010 to a total of around €72 billion each year, according to the EIB's latest business plan.⁵

So what are the possible solutions to the global funding problem?

The U.K. Perspective

In the United Kingdom, the project finance market is definitely slowing but it is far from dead. Despite contractions in U.K. lending, prime deals are still being sealed. Increasingly, the EIB plays a role in transactions, and non-bank funding institutions such as Aviva and Nationwide are expanding their coverage—but this activity is no cure-all. Jeremy Barker,



director, Corporate Finance, is leading KPMG in the U.K.'s response to the crisis in infrastructure funding. He says, "Capital and liquidity constraints aside, infrastructure, as an asset class, is a safe place to be." He refers to a Standard & Poors report⁵ that investigated over 5,000 global infrastructure projects and found that less than 1 percent experienced a default between 2004 and 2007, with recovery typically at 90 to 100 percent. "Given that the survey includes projects in some higher-risk sectors and geographies, U.K. Private Finance Initiative (PFI) deals seem a very safe bet." What may also make U.K. PFI a safe investment is that projects are not typically contingent on demand. Instead, they work on availability risk, which is much easier to predict. The implication is that the "true" rating of these deals ought to be much better than BBB.

Early in March 2009 came news that the government would set up its own infrastructure bank, setting aside around £2 billion per annum to help deal with the backlog of transactions, and already, public money has been deployed into projects. Although welcoming the new money, the big question for Barker is whether the rigors and disciplines of privately run transactions will be undermined, particularly if there is no privately loaned money in a deal.

¹ HM Treasury, Infrastructure Finance Unit, 2009.

² OECD, Infrastructure to 2030 (Volume 2), 2007.

² *Infra-News*, CBA Cuts European Project Finance Team, December 2, 2008.

³ *Associated Press*, World Bank boosts aid for infrastructure to \$45 billion, April 23, 2009.

⁴ European Investment Bank, EIB Board of Governors' meeting, June 9, 2009.

⁵ Project Finance Consortium study reveals credit performance trends from the early 1990s through 2007 Standard & Poors, December 2008.

“There is a risk of these deals becoming politicised and that while co-lending is fine together with other institutions with strong credit skills, were Her Majesty’s Government (HMG) to lend 100% that can seriously affect the powerful behavioural incentives of the good PPP and PFI deals.”

In addition to government lending, Barker considers that there are other valuable initiatives that the U.K. government could pursue:

- Rationalize the up-front work that banks undertake at the ‘Competitive Dialogue’ phase of the bid. “By all means involve a friendly lender to ‘sense check’ the deal structure, but banks cannot currently commit resource or terms too far in advance.”
- Allow greater flexibility for the full indexation of project revenue. Institutions seek long-term inflation-linked revenue streams to match their commitments.
- Provide or encourage new sources of capital grants, equity, or mezzanine finance creating senior debt with a higher credit rating. Given the high charges demanded by banks, this could be an ideal opportunity for pension funds to step in and make a reasonable return and introduce competition to keep deals affordable.
- Create consistent and replicable deal flow to attract new entrants to the market. Building Schools for the Future is one such initiative. The clear political vision and structure that rewards winning bidders with follow-on business has attracted several new players to the schools market. Other programs, such as new prisons and social housing, have been less clear.

Those banks that survive the downturn and industry shake-up are likely to emerge fitter and leaner than before. Even though some have opted out of infrastructure in the short-term, they are likely to get back in as the government invests. But they will not be able to meet

infrastructure investment demand single-handedly and they may continue to be constrained by Basel II rules.

A wider pool of pension and insurance money, some in the form of debt funds, may have to enter the infrastructure market and help take up the slack. They might act as a warehouse for post-construction deals if they can meet certain performance and structural hurdles. This model plays to bankers’ credit experience while leaving the long-term lending ‘asset’ with institutions that have long-term liabilities.

What seems clear, however, is that the United Kingdom’s aging infrastructure will continue to push demand for investment. Carefully thought-through structures will likely still attract the necessary funding.

The Australian Perspective

In other parts of the world, construction firms and project operating companies have typically led transactions, whereas PPP deals in Australia are generally led by the investment banks. It is not, according to, Graham Brooke, partner and head of the Infrastructure and Projects group for KPMG in Australia, a situation that has always sat comfortably with the Australian government.

For bank lending, we believe Australia’s four biggest banks—ANZ, National Australia Bank (NAB), Commonwealth Bank, and Westpac—will remain financially strong and their ongoing involvement in infrastructure looks certain. But while the domestic banks are still going strong in the infrastructure market, the global credit crisis has taken its toll on international players, and banks are now leaving Australia, returning capital to their domestic markets. “Deals are being signed,” says Brooke, “but there has been some nervousness in the term sheets, an increased emphasis on market disruption clauses, and more resistance to lengthy bid validity periods.”

Faced with glowing liquidity constraints, in our experience, banks have not



been contributing more than AUS\$125 million to individual deals. They may club together to invest up to AUS\$750 million dollars, but billion-dollar deals are now a real challenge without government support. Significant reductions in benchmark interest rates have been more than offset by increases in debt margins—often in excess of 250 basis points. Tenors, meanwhile, are now as low as five years.

Australia is also suffering from the illiquid bond market and the dual loss of monoline insurers and the securitization market. For now, at least, domestic banks are calling the shots. But it is not just primary infrastructure investments that are being hit.

Existing assets—in essential infrastructure such as electricity generation, airports, and ports—have maturing debt profiles and will struggle to refinance in the near term. It is proposed that the federal government steps in, as has the U.K. government, as lender of last resort.

The KPMG member firm in Australia is working as part of Infrastructure Partnerships Australia to help identify tailored remedies for states and territories at a project level and longer term; a package of strategies is anticipated at the project, state, and federal levels. AUS\$20¹ billion has been committed by the Australian government

¹ Australian Government, *Infrastructure Australia, \$20 billion for Nation Building Projects*, 13 May 2008.

to a Building Australia Fund to spend on infrastructure projects with 'high social value.'¹ Other funds have been set aside for schools (AUS\$11 billion) and hospitals (AUS\$5 billion). The intention is that these stimulus packages will encourage private investment, accelerate and increase infrastructure programs, and create sustainable employment.

Graham Brooke expects that the future model will include guarantees or direct government finance for PPPs. He predicts that assets could also be put into government special purpose vehicles (SPVs), with a view to selling them at a later stage. The inability of consortia to secure fully underwritten debt finance places contractor-led bidders on a more equal footing with the investment banks. Brooke warns that future leaders of consortia may no longer be investment banks. "They are more likely than previously to be contractors and service providers with bank debt competed as a commodity. This arrangement should suit the government, which has seemed rather uncomfortable with finance-led methods of procurement for social infrastructure programs." This structural shift in the investment model could see foreign contractors and service providers bid on Australian projects and potentially take over from where the international banks left off.

Foreign contractors such as Acciona and Laing O'Rourke are already established in the Australian market. With their extensive experience of leading bids in their domestic markets, they are well positioned to take on the Australians in their backyard. "Whether they anticipate a shift away from the investment bank-led consortia remains to be seen," says Julian Vella, head of Infrastructure for KPMG in Australia and ASPAC region, "but environment is one area in which I believe foreign contractors could take the initiative."

In the secondary infrastructure market, real concerns remain about refinancing.

If the economic situation is not resolved in, say, five years' time, Australia could face a scenario where crucial existing infrastructure assets fail to attract funds. "There is," concludes Brooke, "a likelihood that certain assets could find themselves direct investments of superfunds. As well as a new model for investment, we could see a whole new model for ownership in infrastructure in the years ahead."

The Singaporean Perspective

After the publication of the PPP guidelines by the Ministry of Finance in Singapore in 2004, there have been about 10 infrastructure projects offered for private sector participation across sectors including water, waste, broadband, education, and sports. Eight of these projects have achieved financial closure or reached preferred bidder stage.

However, PPPs are expected to face some stress in the current economic environment as evidenced by the delays in financial closure of some projects.

Satyanarayan Ramamurthy, head of Corporate Finance at KPMG in Singapore, expects the recent turmoil in world financial markets to potentially slow down the government's pipeline of infrastructure projects structured as PPP in the short to medium term. "Singapore is expected to continue procurement through both traditional as well as PPP/PFI approaches. While the procuring agencies could start doubting the ability to have a successful PPP project in the current environment, the track record of successful projects likely will continue to encourage them to consider PPP as a viable procurement option."

The leading project finance banks like Standard Chartered, HSBC, and the local banks, are relatively less impacted by the crisis and have an appetite for fundamentally sound projects, albeit at higher spreads in tune with the current market.



Following successful divestments of its two power-generating companies in March and September 2008, government-owned Temasek Holdings divested its last generation company (PowerSeraya) to Malaysia-based YTL Power in March 2009. Debt for the acquisition was funded by way of a S\$2.25 billion three-year term loan by Asian financial services group DBS.²

Towards the end of 2008, the National Environment Agency in Singapore divested its Senoko incineration plant. The project was structured to act as a seed asset for a new infrastructure fund to be listed in Singapore by the preferred bidder. This structured divestment of key public assets and a plethora of tax concessions signify the government's ambitions to deepen the capital markets and develop Singapore as a hub for fund management industry. A number of infrastructure funds have listed in the Singapore market over the last couple of years.

However, Singapore, like the rest of the world, is currently hamstrung by lack of liquidity in the financial markets and by banks tightening their credit lines. With few signs of improvement in the short term, capital to finance new infrastructure projects is limited. The Singapore Sports Hub project—the flagship PPP in sports and leisure infrastructure—is a case in point.

¹ Australian Government, Infrastructure Australia, \$20 billion for Nation Building Projects, 13 May 2008.

² YTL Corporation, YTL Power completes acquisition of PowerSeraya, 6 March 2009.

While the preferred bidder was announced in January 2008, the consortium is still in discussion with the government on alternative finance options given the changed financing environment.¹ "In dealing with these issues, Singapore may have to draw extensively on the evolving experience from the other mature markets like the U.K. and Australia for balancing private ownership with public responsibility," says Ramamurthy.

Finance is available for robust projects, but there is a general reluctance among financiers to commit to long tenors. Singaporean transactions of over 20 years in the very recent past are unlikely to be replicated, and in the current market, there is a preference for short-term loan financing of around five years. Refinancing becomes a real risk requiring stakeholders to rethink the long-term sustainability and value for money of projects. The spread on debt has risen up to 300 basis-points from sub-100 basis point levels with much tighter covenants.² In addition, there is now much greater focus on market disruption and market flex clauses.

As the financial crisis continues to take its toll on the global infrastructure market, KPMG in Singapore is working closely with our firms' clients (both private and government) around Asia, sharing insights and know-how to help create possible strategies for the infrastructure market leading to strong value-for-money and win-win propositions.

The U.S. Perspective

The United States is unique in that it is comprised of hundreds of separate and distinct markets considering the jurisdiction of state and local governments over public works projects. Furthermore, the U.S. market is distinctly broad and versatile in that project sponsors have the opportunity to tap both tax-advantaged debt and bank lending markets to finance projects. Nonetheless, the global credit crunch has

affected many public sponsors' ability to finance anything other than highly rated projects with proven credit.

To try to address infrastructure needs and to help stimulate the economy, the U.S. government recently passed a US\$787 billion stimulus package. The legislation is focused heavily on job creation and near-term economic activity. Included in the bill is a series of tax-advantaged bond programs designed to enhance liquidity in the bond markets and to stimulate private investment in U.S. infrastructure.

The recent gridlock facing traditional tax-exempt bond financing has freed-up significantly—partly due to yield adjustment and partly as a consequence of innovative programs in the stimulus such as the 'Build America Bonds' program. This program provides a new opportunity for municipal project sponsors to issue taxable municipal bonds and receive direct reimbursement from the federal government equal to 35 percent of the associated interest costs. Alternatively, municipal issuers may choose to issue taxable tax-credit bonds that pay a reduced current coupon (versus normal taxable debt) but also offer investors a federal tax-credit. Several billion dollars of successful Build America Bond issuance over recent times has proven there is an expanded market for taxable municipal bonds and resulted in a spread tightening between tax-exempt and taxable municipal bonds.

"These types of programs are stimulating new investment in infrastructure projects from some less traditional investors, including pension funds and taxable bond funds seeking long-term, predictable returns," says Tim Wilschetz, principal in KPMG's Infrastructure Advisory team in New York.

The PPP market is still in its early stages in the United States, in part due to the public's historic lack of appetite for privately or foreign-controlled infrastructure assets. Nonetheless, PPP has begun to take hold.



In March 2009, for instance, a club of 12 foreign banks reached financial close on a 35-year design, build, finance, operate, and maintain (DBFOM) contract to reconstruct and widen the Florida I-595 mainline.³ The innovative I-595 payment structure, similar to the availability-style mechanism used in U.K. PFI deals, demonstrates that well-structured projects, like this and the Virginia Capital Beltway, can be completed even in extremely challenging market conditions.

The United States still lags behind the more mature PPP markets, but that may change as the Obama administration has indicated that the country's significant infrastructure needs, coupled with limited federal and state resources, will likely necessitate more effective partnerships between the public and private sectors. US\$200 million of new funding has been allocated to the federal Transportation Infrastructure Finance and Innovation Act (TIFIA) subordinate loan program, and indications are that the popular tax-exempt "Private Activity Bond" program will be significantly expanded in the upcoming multiyear transportation funding bill.⁴ Federal legislators have also proposed a National Infrastructure Bank, which could be capitalized through tax credit bonds or other sources and allocated to public or private infrastructure projects under criteria yet to be determined. Such a program would need to be aligned

¹ Infrastructure Journal, Singapore government to bail out sports hub, 22 April 2009

² Based on publicly available data on closed transactions with tenors of 20 years or more.

³ Infrastructure Journal, Design partner contract awarded for I-595, 4 March 2009

⁴ Federal Register, Vol. 74, No. 94, Notices, May 18, 2009.

with existing state infrastructure banks that independently have the ability to prioritize local and regional projects. The clear message is that private developers should enjoy much broader access to lower cost funding.

Wilschetz believes that public sponsors will be increasingly focused on managing costs to stretch budgets further. "For tight budgets, cost containment can be just as valuable as revenue enhancement." Availability structures, like the I-595 project, may become more prevalent in the U.S. market, especially as a means to take existing capital maintenance requirements 'off balance sheet' and free up budget capacity for other unfunded capital programs.

As the PPP model evolves, many questions beyond the current credit constraints need to be addressed. KPMG in the U.S. is advising clients all over the country on establishing infrastructure programs, bringing to bear lessons learned from around the world. "Investors are looking for the rules of engagement on these new and complex procurements," says Richard Lee, head of U.S. Infrastructure Advisory for KPMG in the U.S. "We believe our focus on addressing strategic issues for government, such as protecting the public interest, using performance-based decision criteria, and providing transparency and accountability, will ultimately help move the market in the right direction."

Conclusion

As the global financial crisis runs its course, can infrastructure rescue the world economies from recession? National governments are certainly making it a priority as it helps keep people employed, which in turn feeds the economy. Unfortunately much of this

spending targets short-term maintenance issues. Long-term strategic investments are needed to lay the groundwork for decades of future prosperity.

Continuous reinvestment prevents existing public amenities from crumbling and falling into obsolescence while new infrastructure development gives national economies serious competitive advantage. In other words, the legacy of the worst recession in recent history could be an overhaul of global infrastructure and a focus on sustainable investment—from urban and inter city transit systems, to fiber and wireless networks, to better water, sewage, and renewable energy sources—that could see us well into the second half of this century.

But funding such innovation is another matter entirely. As traditional PPP projects are threatened by the financial crisis, new funding trends are emerging and pension fund money is likely to play a part. Governments may also play a greater role in financing, as well as funding, infrastructure. This presents potential conflicts of interest as governments take on dual roles of procuring authority and lender and could compromise the rigors that the private sector has instilled in PPP projects. At the same time, large public pension plans are awakening to the attractive economics of hold-to-maturity infrastructure investing.

The nature of private sector investment in infrastructure projects will likely also change. If governments are to realize an infrastructure legacy out of financial crisis, then it is important to engage in debate with those parties with a track record for new ideas and delivery to identify workable new models for public private working.

As global dynamics alter the PPP environment going forward, the critical messages for governments to consider are:

- Remain flexible and open to a variety of possible financing solutions as markets continue to ebb and flow
- Create risk-sharing mechanisms that employ the strengths of both the public and private sectors to help ease the pressures of financial uncertainty keep project financiers working and the deals flowing
- Drive new sources of funding that can open up the markets to institutional investors with deep pockets and long-term commitments.

If these messages are heeded, then economic stimulus may mark the starting point of the response to the global infrastructure challenge.

For additional information, please e-mail infrastructure@kpmg.com, or contact the authors directly:

Jeremy Barker, Director
KPMG in the U.K.
+44 (0)20 7311 8156
jeremy.barker@kpmg.co.uk

Graham Brooke, Partner and Head of Infrastructure and Projects Group
KPMG in Australia
+61 (2) 9455 9091
gbrooke1@kpmg.com.au

Satyanarayan Ramamurthy, Head of Corporate Finance and KPMG Corporate Finance in Singapore
+65 6213 2060
sramamurthy@kpmg.com.sg

Tim Wilschetz, Principal
KPMG in the U.S.
+1-212-954-7422
twilschetz@kpmg.com

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.

The views and opinions are those of the authors and interviewees and do not necessarily represent the views and opinions of KPMG International or KPMG member firms.

© 2009 KPMG International. KPMG International is a Swiss cooperative. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm. All rights reserved. 20902NSS
KPMG and the KPMG logo are registered trademarks of KPMG International, a Swiss cooperative.