

INSIGHT

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Infrastructure Investment: Bridging the Gap

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KPMG

cutting through complexity



Foreword

Let's face it: infrastructure development is an incredibly expensive business. By all accounts, the world's insatiable demand for infrastructure will require the investment of trillions of dollars over the next four decades. While infrastructure poses many challenges for governments and developers, none are as urgent or as complex as the challenges of how to finance it.

And so, for this edition of Insight Magazine, we have turned the spotlight onto the complex world of infrastructure finance. Within these pages, we have gathered the opinions and insights of infrastructure investors, developers and sponsors – as well as a number of KPMG professionals from across the globe – to examine some of the key challenges and opportunities facing the market.

But readers should be warned: there is no 'White Knight' on the horizon; no one-size-fits-all solution. Rather, what we have found is that there are a number of potential scenarios and positive solutions emerging across the sector that – with concerted effort and

collaboration – may help to close the growing infrastructure finance gap.

Through our work with infrastructure financiers and developers, KPMG professionals have been privileged to participate in many of the innovative financing approaches currently underway in the market. We hope that – by sharing our collective insight and experience – we can bring together not only new ideas and concepts, but also new collaborations and approaches to help solve the infrastructure financing challenge.

On behalf of KPMG's Global Infrastructure practice, we encourage you to take advantage of these insights so that – together – we can develop practical solutions to what is undoubtedly one of the greatest challenges facing populations, economies and governments today and in the future.

To explore these ideas and concepts further, we welcome you to contact your local KPMG member firm or any of the authors who contributed to this publication.



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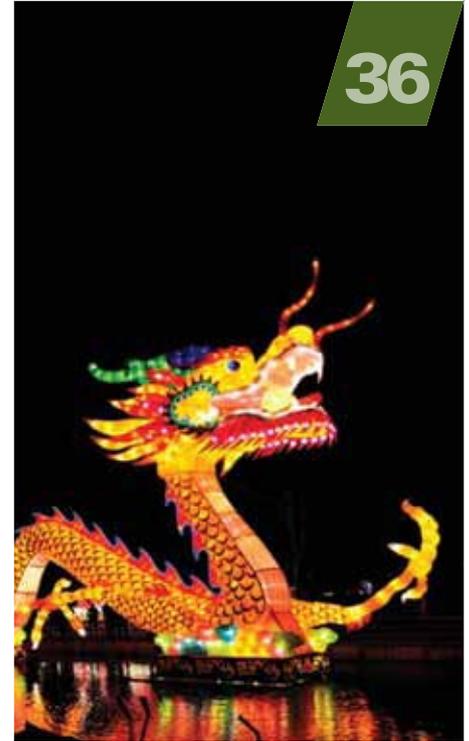
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Around the world in infrastructure



In the **UK**, the Greater Manchester Combined Authority (GMCA) is actively developing a plan to establish a USD2.4 billion Transportation Fund to invest in sub-regional infrastructure. The Fund, which has been endorsed by the 10 districts in the combined authority, aims to reduce the impact of congestion on the future growth of the economy and already includes plans for investment into the Metrolink light rail network, as well as the development of a Bus Rapid Transit scheme, two interchange schemes and four road schemes.



In another boost for high speed rail, Amtrak (the **United States** taxpayer-supported passenger railroad) is developing a business and financial plan to create a 220 mile per hour service on the East Coast connecting Washington D.C. and Boston. The project is part of Amtrak's USD117 billion plan for high-speed rail service in the Northeast Corridor.



Chile is moving forward on a basket of Public Private Partnerships (PPPs) in the hospital sector worth a combined total of USD1.3 billion. The projects, the first of which is expected to be the Hospital Antofagasta at USD265 million, are anticipated to be structured as 25-year concessions on a design, build, finance and operate model. In a separate development, Chile's state-owned Coquimbo port authority awarded a 20-year concession worth USD80 million to local port operator Ultramar, who has committed to a series of upgrades at the port including the construction of a new berthing area, passenger terminal and storage facilities.

The Corredor Bioceánico Aconcagua, a low-altitude rail tunnel connecting **Argentina's** Atlantic port in Buenos Aires to Chile's Valparaíso port in the Pacific, seems set to move ahead. The first phase is envisioned as a 52km rail tunnel and single line with multi-modal stations offering cargo services. A second phase is anticipated to increase capacity to 50 metric tons per year.



Source:

UK – AGMA: AGMA UK Government, News Release, Local Investment Agreement for Greater Manchester, June 29, 2011

US – Amtrak: UJ Online, Infra PR: US House unveils transportation spending, September 8, 2011

CHILE – Part of Coquimbo: Business News America, Epcor to award terminal concession in December, October 14, 2011

ARGENTINA – Corredor Bioceánico Aconcagua project: Business News America, Corredor Bioceánico feeder could launch by year-end, August 24, 2011

There's a lot going on in the world of infrastructure and KPMG's member firms are proud to be the advisors that many governments, private sector investors and developers turn to.

Ask our network of Global Infrastructure professionals to share their insights with you, either from the selection of projects shown here or one in your specific area of interest.



Dubai ▶

Solar energy received a boost as **Dubai's** Supreme Council of Energy presented plans for a new solar park as part of the Dubai Integrated Energy Strategy 2030. The plan, which is anticipated to include investments of up to USD 10 billion, aims to reduce the emirate's dependence on imported gas by developing generation capacity from solar, nuclear and clean coal sources.



India ▶

India's Mumbai Metropolitan Region Development Authority (MMRDA) is forging ahead with plans to develop the long-awaited Cross Harbor Bridge. The project, which has been on the drawing board for almost four decades, is now under the sole responsibility of the MMRDA, a move that is expected to eliminate many of the administrative barriers that had hampered progress to date.



Australia ▶

Australia's government is moving ahead on a landmark study into the economic benefits and financial viability of developing a high speed rail network on the country's east coast. According to the Ministry for Infrastructure and Transport, the endeavor could be a game-changer for Australia by integrating communities, reducing congestion and delivering a low-carbon transportation solution.



Angola ▶

Facing frequent electricity shortages, the government of **Angola** plans to make significant investments into the energy sector over the next five years with the intention of doubling hydroelectric generation capacity and output. With significant opportunity to drive economic growth through infrastructure development, the country seems keen to ensure capacity is sufficient to support growth.



South Africa ▶

In what will arguably be the largest infrastructure procurement project in **South Africa's** history, the Passenger Rail Agency of South Africa (PRASA) plans to rejuvenate commuter rail service through a massive investment in rolling stock over the next 20 years. The overall investment in PRASA will also include infrastructure renewal to create a safer and more reliable commuter service.

DUBAI – Dubai Supreme Council of Energy (DSCE): AMEInfo.com, Supreme Council of Energy reviews progress of Dubai Integrated Gas Strategy 2030, February 8, 2012

INDIA – Cross Harbor Bridge: Daily News & Analysis, MMRDA set to take over Sewri-Nhava Sheva project, March 10, 2010

AUSTRALIA – HSR: Australia Minister for Infrastructure and Transport, News Release: High Speed Rail Study: Stage Two Begins, December 4, 2011

ANGOLA – Energy investment: African Development Bank, News Release: 2011-2016 Country Strategy Paper & 2010 Country Portfolio Performance Review, January 2011

SOUTH AFRICA – PRASA: News Release: PRASA Feasibility Study, July 12, 2011

An urgent need

Infrastructure is – undeniably – the lifeblood of society. Those that have access to infrastructure enjoy immense societal and economic benefits; transportation, communication, power and water are all enabled by infrastructure. Those without – or with substandard – infrastructure are often deemed to be some of society's poorest.

All around the world, governments, businesses and citizens are grappling with what is now increasingly being viewed as one of the great challenges of the 21st Century. On the one hand, the challenge is related to capacity. Many cities, countries and regions simply lack the capability to deliver against the complex web of demands that are – every day – becoming more pressing. Too few developers, a scarcity of natural resources, and a lack of planning skills are just some of the capacity issues that are weighing heavily on governments and their various stakeholders.

Show us the money

But with the global financial crisis upon us, the more acute challenge is that of raising upfront capital. Assuming that the world had the overall capacity to deliver on the massive and urgent need (and that is a huge assumption indeed), there is clearly not nearly enough money in government coffers to finance it all. Even those markets with significant budget surpluses are increasingly recognizing the importance of securing new sources of capital in order to drive forward their economies and cater to the insatiable demand of their businesses and citizens.

Thankfully, the challenge is not wholly insurmountable. When one considers the capital that is currently sitting in the hands of private investors – pension

funds, sovereign wealth funds, insurance companies and the like – it becomes clear that the most urgent need is actually in finding an approach to coaxing this money into the infrastructure market in a way that delivers benefits to investors, sponsors and users of the assets.

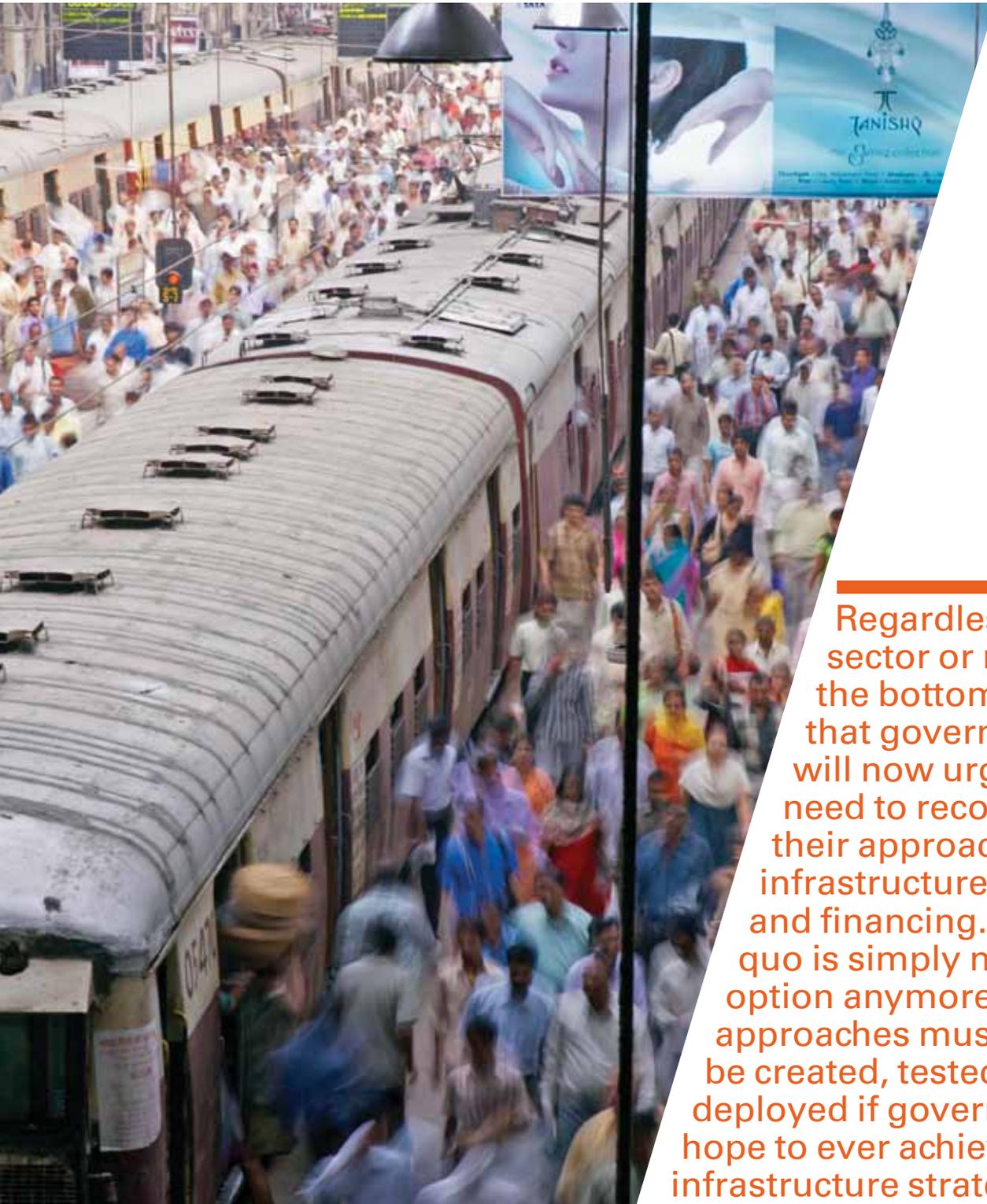
Most developers have found that accessing equity investment is proving easier than accessing long-term debt. And since banking capacity seems destined to be more limited in the future, we expect to see an overall increase in the need to access debt from new players such as the pension and sovereign wealth funds.

Blazing a new path

And while practical solutions are still few and far between, they are emerging. In some cases, governments are focused on freeing up their infrastructure capital by selling existing assets and reinvesting the proceeds into new greenfield developments (see Julian Vella's article on Privatization for more on this on page 50). Others are starting to rethink and refocus their priorities into developments that drive economic growth (Lewis Atter's piece on Greater Manchester City provides an excellent example on page 16).

Regardless of the sector or region, the bottom line is that governments will now urgently need to reconsider their approach to infrastructure funding and financing. The status quo is simply not an option anymore and new approaches must urgently be created, tested and deployed if governments hope to ever achieve their infrastructure strategies. The alternative is, frankly, unbearable for governments, businesses and citizens alike.





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Getting direct about equity investment

As governments and infrastructure sponsors struggle to attract new sources of financing, the concept of direct investment is quickly becoming one of the industry's 'hot topics'. And rightfully so: direct private investment into infrastructure offers a number of significant benefits to both investors and developers that – if properly managed – could potentially change the infrastructure financing paradigm.

But – to date – cajoling direct investment out of deep pocketed funds has proven to be exceedingly difficult. There have been a few notable successes, particularly in the Regulated Asset Based (RAB) markets in the UK and Australia (see page 30), but for direct investment to make a significant dent in the infrastructure financing gap, more will be needed across all sectors and geographies.

This does not – in any way – signal the death of infrastructure funds, which will continue to be an important source of private investment into infrastructure (see Tony Rocker's article on page 14 for more on the evolving infrastructure fund market). Indeed, in many cases, direct investment will sit comfortably beside the infrastructure funds within consortiums to finance some of the bigger projects on the books.

So what is slowing the flow of direct investment into infrastructure? Appetite for risk can often be an issue. This is not surprising: the benefactors of Pension and Insurance funds will not look

kindly on any investment failures that threaten their ability to meet obligations in the long-run. As a result, any projects that include unquantifiable risks (such as those posed by construction, traffic or regulation) are often non-starters for all but the most aggressive of direct investors.

Another challenge is capacity. Making the most of a direct investment often takes a fair amount of hands-on management and governance (check out James O'Leary's round table discussion with leading Pension Funds for more on this), and – increasingly – an ability to maximize returns (as discussed by Greg Pestrak on page 48).

What is certain is that governments and project sponsors will need to work closely with potential direct investors to create the right environment to drive the market. And while this will take close collaboration and much discussion to find a common ground, the benefits – for both governments and investors – will almost certainly be significant.



Direct private investment into infrastructure offers a number of significant benefits to both investors and developers that – if properly managed – could potentially change the infrastructure financing paradigm.

The emergence of new models



Governments' and sponsors' experimentation with innovative approaches to financing creates a wealth of best practices – and hard-learned lessons – that will undoubtedly help the infrastructure industry evolve and mature.



New infrastructure financing schemes have been popping up around the world. This is a positive trend: governments' and sponsors' experimentation with innovative approaches to financing creates a wealth of best practices – and hard-learned lessons – that will undoubtedly help the infrastructure industry evolve and mature.

The simple truth is that – in many markets – the infrastructure finance market remains dependant on commercial banks. What's more, there is an overall dearth of syndication or bond market options for Greenfield infrastructure projects, which has exasperated a situation that has become ever more acute since the financial crisis removed much-needed liquidity from the market. Banks are also under increasing pressure not to lend long-debt tenors, particularly in the face of the impending implications of Basel III.

As a result, many project financing participants are once again looking to institutional investors – pension funds and insurance companies in particular – to add much-needed liquidity into the market. But the reality is that, even if these new players were willing to become debt investors, the market still requires new models and innovative schemes to fill the financing gap.

One such scheme, the UK's Green Investment Bank (GIB), will be keenly watched by infrastructure investors around the world. As James Stewart points out, the GIB should lend much-needed confidence to investors concerned about the potential for financing gaps in the renewable energy market and, as a result, speed up the pace of investment (see page 20).

Much action is also underway in emerging markets. India's Infrastructure Debt Fund shows significant promise in helping that country bridge their financing gap and bring new sources of both domestic and international investment into the sector (see Arvind Mahajan's article on page 22). In China, investors are also starting to evolve their approach to investment and are rapidly building capacity for investment into foreign infrastructure projects (as described by Alison Simpson on page 36).

New models are also emerging in Europe. Finland's experimentation with Australia's Alliancing model is already showing results (see page 38 for Kai Rintala's review of their progress). And, as Margaret Stephens notes in her article (page 28), the way infrastructure is taxed is also being reviewed within Revenue Agencies around the world.

Clearly, governments are increasingly recognizing the need to create practical incentives in the market to drive infrastructure development. But with a variety of different financing models now on the table, governments will need to start to focus on identifying the right mix of incentives and approaches to properly respond to their unique situations. And with a tremendous amount of activity in almost every market, the ability for governments to view their infrastructure plans in a holistic and integrated manner will be key. Those in doubt will find James Stewart's other article (page 24) on incentivizing infrastructure to be a valuable perspective and a worthwhile read.

Examining the bank's perspective of infrastructure finance



▲ By **Darryl Murphy**,
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Banks continue to play a key role in the provision of project financing. But, with reduced liquidity, credit challenges and increasing regulation on capital requirements, will banks continue to participate at the same level as they did in the past? KPMG's Darryl Murphy, sat down to talk with executives from three of the world's leading banks; Gershon Cohen at Lloyd's Bank, Chris Heathcote at West LB, and Scott Dickens at HSBC.

Darryl: Let's start by talking about the state of bank finance in infrastructure. Do you think that we have emerged from the troubles and travails of 2008?

Chris: Even though liquidity has waxed and waned since the crisis began in 2008, we really need to recognize that the only form of senior debt financing that has continued throughout has been bank finance. Certainly, banks have been through a bit of a rollercoaster ride as a result of the increased cost and reduced liquidity, but the reality is that there is still some liquidity in the market, particularly for short-term lending. I think we're still seeing quite a bit of activity, particularly from the Japanese banks, but few seem willing to go beyond 10-year tenor.

Gershon: I would agree with that. One of the reasons that infrastructure remains attractive for banks is that the historic default rates within the sector have remained quite low. So many risk committees within banks see these portfolios as an asset class that – in relation to other sectors – has performed

well. The difficulty here is that, in the current environment, the cost of capital seems to be out of sync with today's pricing. Add in the impact of regulatory capital charges and the restraint on liquidity, and I think we are going to see a significant increase in the cost of bank debt even compared to post-financial crisis pricing.

Scott: I'd add that the increasing cost of capital for the banks has created more pressure for them to act in a more disciplined manner in how they price risk. This will create more opportunities for the capital markets to take a bigger

/// Banks continue to play a key role in the provision of project financing. ///

role in financing projects. The key issue driving this trend will be duration and capacity constraints, particularly for larger projects where there might not be enough capital readily available to enable a bank-led model.

Darryl: One of the big changes for bank financing seems to have been in their ability to syndicate the debt in the same way that occurred before 2008. Is syndication no longer an option for banks?

Gershon: That has certainly been a big change over the past four years. Before the crisis, most of the banks that participated in this sector were focused on an 'originate to distribute' model where the key was in their ability to syndicate out the debt and gain value through fees rather than from net interest income. But the primary syndication market seems to have become quite constrained in the past few years. We have also seen the departure of the Collateralized Debt Obligation/ Collateralized Loan Obligation type

structures which also played a key part in providing an exit for bank portfolios. Securitization has also suffered a reputational hit since the sub-prime fiasco and now investors are exhibiting some fear around anything that is seen as a structured securitization.

Chris: Absolutely right. The constriction of liquidity has also meant that sponsors are now rounding up as many banks as they can to ensure the deal gets done. The downside is that you are effectively going to end up with the maximum credit quality of the lowest bank meaning that sponsors may end up with credit requirements that may be less palatable to them. The other related issue is that banks are now forced to compete with each other to sell their portfolios of debt.

Scott: I think that the UK's move towards infrastructure senior debt funds will be an interesting development here, particularly if they can create a vehicle that can offer a bit more certainty and relevance to sponsors. Funds that can act on behalf of a number of institutions and can bring specialist infrastructure credit skills to the table will be able to deliver a solution that can compete alongside the banks. So more certainty of funding for the sponsor, more control over the pricing for the end purchaser and a bit more ease of delivery. At the same time, there does seem to be an increased desire from the institutional investors themselves to put more of their capital to work in this space due to the shift in banks' pricing.

Darryl: So does project finance still have a real role to play in delivering the level of infrastructure that is needed on a global basis?

Scott: There's no doubt that banks will continue to have an important role to play in this market in terms of financing, but governments around the world need to be very careful about what risks they are trying to transfer to the private sector and how financing is procured. I think that governments will need to look at all of the different sources of capital in the markets and come up with different models for different asset classes to create sustainable, efficient and optimized Public Private Partnerships (PPPs) to deliver all the infrastructure that is required.

Gershon: I think it's really about trying to harness the intellectual capacity that is already available to create the inevitable patchwork of solutions that will form around the projects. The UK government went on record to say that the majority of financing for infrastructure projects would have to come from the private sector, which is basically an admission that the required funds simply can't be raised through taxation or other types of user charging, so it is very much in the government's interest to understand what it will take to unlock the potential that exists within financial institutions.

Darryl: Looking ahead, are you optimistic about the market going forward?

Chris: I'm feeling very confident. I subscribe to Gershon's view that there is a massive need and a limited supply of public capital which means that we need banks to continue to finance infrastructure. I don't think we'll be as active in developed countries as much as in the emerging markets who will essentially mop up all of the excess capital in the market and – as a result – will require the skills and experience that will be needed to maintain that growth.

Gershon: Actually, one of the markets that is giving me the most optimism is the United States. I think that much of the success that we've seen over the past decade in places like the UK and Canada will soon be replicated in the US which, by all accounts, will be a huge market. That said, there are certainly bright lights on the horizon from the emerging markets like India, China and Turkey, but when banks look at these markets I think they worry about the underlying contractual and legal structure that needs to be in place.

Scott: I'm also an optimist for the future. Obviously the changing nature of banks means that we need to seek out new financing models and, given the different asset classes involved, we're going to see a lot more innovation in the markets from governments, supranationals, banks, institutional investors and sponsors. It's going to change the very nature of PPPs and the underlying financing of those transactions. It's going to be a very exciting time to be involved in infrastructure.

The evolution of investors in infrastructure

By **Tony Rocker**, KPMG in the UK

Infrastructure funds have recently been roaring back into action. Indeed, over the past year the market has seen significant equity raising activity by many of the larger infrastructure fund managers: Energy Council Partners raised around US\$4 billion, Alinda Capital Partners closed a second fund of around US\$4 billion, and Goldman Sachs captured almost US\$3 billion. Clearly, the death of the traditional infrastructure fund has been grossly exaggerated.

We are, however, seeing a number of significant changes and trends in the industry that are starting to alter the fundamentals of the managed infrastructure fund model. Some are related to the global financial crisis and Europe's continuing sovereign debt challenges. But they are just as much driven by more active and influential types of investors who are demanding more value from their infrastructure investments.

A core preference

For example, most infrastructure funds have started to place an almost single-minded focus on investing into core infrastructure (such as regulated utility assets or regulated transport) which, in turn, has driven some fairly feverish activity around some of these assets (HS1, OGE, Vattenfall, Endesa). What is interesting is that this trend is being driven largely by the fund's Limited Partners, who are starting to take a hard look at the types of assets that are

within the portfolio to make sure that they meet their investment goals.

In this, many sector participants and observers will recognize the impact of some high-profile scuffles between investors and managers over the underlying asset class of their funds. The very public admonishing in 2010 of Henderson Group over the deployment of their PFI Secondary Fund II into the assets of John Laing – an infrastructure development company – has sharpened minds within fund management circles as to what investors will and won't accept.

The West goes East (and South)

There has also been increased momentum in the trend towards developing and emerging market investments evidenced by a rising number of funds focused on Asia, and in particular, China and India. Macquarie Group joined China Everbright to close a fund of almost US\$500 million,

Challenger Financial Services and Mitsui (a Japanese trading house) closed a US\$275 million fund focused on China and India and JP Morgan raised and then quickly deployed more than US\$850 million into assets in India and China.

There is also ample evidence that the trend will extend to other emerging markets as well. In South America, a growing maturity in PPP structures is starting to spin out a strong secondary market in countries like Chile and Brazil, which are starting to attract the attention of fund managers, and Peru and Colombia seem set to follow.

Eurozone crisis slows sales

But the move towards the emerging markets is also being driven by investor concerns over the ongoing debt crisis in the Eurozone which has created significant uncertainty in both country and currency risk. So while Greece has put – or is about to put – more



Energy Council Partners raised around US\$4 billion, Alinda Capital Partners closed a second fund of around US\$4 billion, and Goldman Sachs captured almost US\$3 billion.

than 50 assets on the block and Ireland has made overtures in the port, airport, gas, electricity and utility sectors, many fund managers are sitting on the sidelines worried that an investment that is made in Euros today will saddle them with liabilities in some other currency in the future.

And while this has meant that some of the countries most in need of the revenue brought about by secondary asset sales to infrastructure funds are holding back their divestitures for fear of mismatch between buyer and seller expectations, it has also forced the funds themselves to look to other markets in order to deploy their capital.

Cutting out management costs

The fund model is also starting to evolve as a result of a growing number of large institutional investors moving towards more direct investment strategies. Most pronounced have been the rise of the Canadian Pension Funds like

CPP and Borealis who have developed a significant capacity for not only directing, but also closely managing, their infrastructure investments. Their lead has been taken up by a number of other Pension funds: PGGM in the Netherlands has signed a spate of infrastructure deals, as has USS, the second largest pension scheme in the UK who made their first significant purchase in the infrastructure space at the end of last year.

As a result, some of the fund managers (particularly those with a track record) are starting to evolve their service offering to provide pure advisory services to direct investors and we are also seeing a significant increase in the number of co-invests being required and taken up by Limited Partners. Given that many new investors are somewhat inexperienced and understaffed in their direct investment capabilities, this change in model should be both a welcome and successful change.

Full speed ahead

That said, the managed fund model is certainly not disappearing any time soon with some two-thirds of Limited Partners indicating they still intend to invest in unlisted infrastructure funds, demonstrating a strong future for the growth and development of future funds, particularly from the managers that have already raised and deployed second and third funds.

Infrastructure is clearly building a reputation as a unique asset class in its own right and – as managers and investors start to engage in greater dialogue about what does and does not constitute an appropriate investment – we expect to see a strong future in the cards for infrastructure investors overall.

Taking a holistic view of economic growth

By **Lewis Atter**, KPMG in the UK

It is clear that economic growth can be enhanced through infrastructure development: roads carry products to ports; mass transit brings people to cities to work and shop; sufficient generation capacity enables factories to operate without interruption; and improved sewage systems allow denser, more productive development.

These tend to be approached as fairly simple equations responding to a specific challenge (“we need to move people and goods faster and more reliably”, “we are running out of generation capacity”, or “we cannot go on polluting our rivers”). Investment is generally rationalized using sector specific methodologies (such as road users’ value of time saved in traffic versus net costs to taxpayers).

Rethinking the investment paradigm

But what happens when one takes a step back to look at the wider challenge of economic growth and how it can be delivered through infrastructure investment? Is moving people from point A to point B really delivering the greatest value for the city or region overall, or should we instead be moving where they live?

In the UK, a number of city councils and sub-regional governments have started to rethink the way they approach infrastructure investment by asking themselves how – when compared against a range of potential

investment options – different forms of infrastructure might be developed to enhance job creation and drive productivity growth, and – critically – how they might address the inevitable trade-offs.

Creating connectivity as a platform for growth

And when viewed against those criteria, one quickly starts to rethink the way that infrastructure delivers value to the economy. Digging deeper into transportation investments, for example, it becomes apparent that, rather than simply linking two points on a map, mass transit delivers value by connecting businesses to labor markets, businesses to businesses, or businesses to consumer markets. In other words, it’s about improving connectivity.

But there are other ways to improve connectivity. In Greater Manchester, this discussion led civic leaders to start to think about regeneration programs as a way to improve business connectivity, and housing programs as a means to improve labor markets. Rather than

simply building out inter-regional transportation systems in order to save commuter travel times, they began to think more clearly about how housing, planning and transport can be improved to not only boost labor markets, but also to deliver a catalyst to communities that were less connected.

Getting bang for the buck

Essentially, what it comes down to is the question of what investment will deliver the most potential for job creation and productivity. And suddenly, rather than deciding on the value of a single mass transit system, the field is thrown wide open to also include civic planning, business promotion, urban regeneration and a host of other approaches and investments that may deliver a bigger bang for the investment buck.

Of course, this path of thinking creates a number of organizational and institutional challenges for governments at all levels. For one, it requires civic authorities to consider their investment options across a wide range of government departments that – on the





Greater Manchester is now seen as the **best practice** for driving **economic growth** from investment.

whole – do not operate as a cohesive unit. So rather than thinking about a ‘transport budget’ or a ‘housing budget’, planners and administrators need to start thinking about an ‘economic growth budget’ where every dollar is channeled towards the programs that deliver the greatest value.

It also requires cities and civic leaders to think about the impact of their investment on their wider economic region and the net impact on its tax base. This necessitates close cooperation with a variety of different governments and institutions. Greater Manchester’s focus on creating economic value started long before the city’s formal establishment of a combined authority to address all dimensions of economic growth, and was initially formed on a basis of voluntary collaboration between the various city and local authorities. The combined authority was established once they had defined the mission and realized that a critical part of this was to break through traditional silos.

Being disciplined about prioritization

Finally, it also necessitates authorities to rethink the way they prioritize their investments. Again, Greater Manchester provides a valuable example. The first step was to agree amongst the various councils and civic departments about what metrics they wanted to achieve and how they would balance the overall regional impact against the localized benefits that would need to be distributed amongst them.

This led to a set of very disciplined criteria that was used to (independently) assess each of the proposals to ensure that investments were not only achieving their objectives, but also were distributed in a way that delivered the most value for the economy as a whole. This is done on a ‘whole life cost’ basis, and after taking into account the net impact on the whole city’s tax base. And while this process certainly required a significant investment of time and coordination, it has paid off. Greater Manchester is now seen as the best practice for driving economic growth from investment and is constantly

cited by national and local governments around the world as a case study to be emulated.

The torch has now been picked up by dozens of regional governments around the UK (with the strong support of Whitehall) and is quickly gaining traction in a number of international markets as well. And while each region will approach the challenge somewhat differently (as no two places have identical economic or political geographies), one thing will remain constant: a single minded focus on driving economic value from infrastructure investments.

On March 21, 2012 the UK Government signed an innovative deal with Greater Manchester, allowing Greater Manchester to ‘earn back’ a portion of the additional tax generated by investing in infrastructure. Manchester is the first ever city in the country to secure such powers and will be able to reinvest the money in local economic development and infrastructure. The city has calculated that the deal will lead to 3,800 new jobs for local people and will protect 2,300 existing jobs.

Talking to pension funds about **direct** **investment**

In recent years, pension funds have been increasing their participation as direct investors in infrastructure transactions globally. KPMG's Head of Investment Consulting, James O'Leary, sat down to talk about direct investment in infrastructure with executives from three of the world's leading pension funds; Raphael Arndt at Future Fund (Australia), Alain Carrier at Canada Pension Plan Investment Board (Canada) and Gavin Merchant at Universities Superannuation Scheme (UK).

James: The move towards direct investment into infrastructure by pension funds is relatively new. Can you tell me what has motivated your organizations to take this strategy?

Alain Carrier: I think we'd all agree that one of the fundamental reasons for the move towards direct investment is the broad recognition that infrastructure investment does not always lend itself to the private equity-type fund model. For example, at CPPIB, and I would argue for the broader pension fund sector, we don't typically have formal requirements to exit our investments within 5, 8, or 10 year cycles and so, if we are going to take long-term views on infrastructure, we can actually make more of our capital structure by investing directly.

Gavin Merchant: I'd agree. It is also about gaining stronger control over our investments. At USS, for example, we looked at our balance sheets and asset base which – as the second largest pension scheme in the UK – is quite

significant and we recognized that we can take stronger control over where our capital is being deployed by being more direct in our investments and more specific in our investment terms.

Raphael Arndt: Right. It is also useful to see direct investment as a way to diversify the fund portfolio by tailoring the exposure to match the objectives of the fund. By investing indirectly through an infrastructure fund, you are more restricted by what the manager might choose to buy and that is often driven by the activity of the market at a certain point in time. It's also about managing your risk profile. At Future Fund, we have a number of higher risk investments where other LPs in a fund are usually looking at it as a low-risk asset class, so direct investment allows us to control our risk as well.

James: And is governance a key component of exerting that control?

Raphael: I think it all depends on your approach to direct investing and how

hands-on you plan on being. So, for example, when we co-invest in an asset with a fund, we are sometimes happy to rely on the manager and don't need additional governance over and above what they are doing. But in other cases, governance control can increase our liquidity profile by letting us manage our exit and maintain the value of the investment even if the other co-investors exit.

Gavin: By being at the top table, we are jointly responsible for how the deal is structured. And by making sure our key governance requirements are dealt with, we can also help set the agenda for the consortium as a whole. There are always exceptions to the rule, but by taking a meaningful level of control, we can become much more comfortable with the structure and management.

Alain: Sometimes taking a controlling position on an investment is, quite frankly, the only way you can make sure the deal gets done. In some cases, we've been able to execute deals that, without our active participation, likely wouldn't have been done at all.

James: So what have some of the challenges been in your move towards direct investment?

Alain: The obvious issue usually comes down to people. If you want to implement a direct strategy, you have to have the right resources; individuals who have done it before and can lead a team through it. As we expand and move into new geographies and sectors –



▲ By **James O'Leary**
KPMG's Head of
Investment Consulting
(KPMG in Australia)

▲ **Alain Carrier**
Canada Pension Plan
Investment Board (Canada)

▲ **Gavin Merchant**
Universities Superannuation
Scheme (UK)

▲ **Raphael Arndt**
Future Fund
(Australia)

particularly if we are trying to execute multiple transactions or overly complex transactions at the same time – a key challenge is ensuring that we have the right people.

Gavin: Absolutely. Apart from the resourcing challenge, one of the biggest challenges – probably for all direct investors – is filtering the deal flow. A lot of things cross your desk and you need to be able to quickly filter them to make sure you stick to your course of action and know who you are going to do that with. So there are lots of deals that are clearly within our core profile, but we need to look at whether we really have an angle to maximize the opportunity and then spend time working through that.

Raphael: Both resourcing and filtering the deal flow are challenges. I also think the cultural challenges of developing a direct investment program are worth noting. A fund would normally focus on how much it has in equities or how much in bonds or alternatives, and while all of that is extremely important, it is very different from a direct infrastructure investment. It's very dangerous for a fund to go to a transactional-based culture and try to fit it into a traditional asset allocation culture.

James: Looking ahead, do you think there will be any significant changes to your model based on your past experiences?

Raphael: I'd expect to see some incremental change, certainly. I think our team will grow to reflect a model

that is very intensive in terms of the asset management phase and the need to really understand the information that is flowing from our investments.

Gavin: I think that – for USS – we need to keep thinking about how we deploy our capital prudently to create a well-diversified range of investments in our core sectors: diversified in geography, in core assets, GDP links, economic assets and such. We'll also seek to match our resources to our deployment of capital so we're likely to see growth in our asset management capabilities as time goes by in order to deal with things like monitoring, refinancing, expansion of existing assets, and so on.

Alain: I'd agree with that. We need to continue to leverage our team, but also be smart enough to know what we don't know. Oftentimes, we'll face situations that we haven't seen before either from a geographic point of view or a new segment that we haven't faced before and we will need to know when we need to get help on that.

James: Finally, I think there is a perception in the market that pension funds, as direct investors, are less attracted to Greenfield versus Brownfield investments. Is that the case for each of your funds?

Alain: I wouldn't say that we have a particular philosophy on that. I think, traditionally, there has been a large number of attractive Brownfield opportunities that keep us occupied.

I think that the risk profile of getting involved in Greenfield is certainly real, but where the projects are attached to or form part of an existing Brownfield opportunity, then yes, we would look at it. At the end of the day, the question will always be about whether we are the right investors to underwrite that type of risk.

Gavin: I agree that pension funds, by and large, are nervous about Greenfield projects and that's probably an area where governments and pension funds might need more dialogue to see what kinds of structures can be put in place to allow pension funds to play their part and – in time – I think that will naturally happen.

Raphael: It's really about the reward for the risk that you are willing to take. And since the returns that you can achieve from investing in assets with known risk profiles have been quite good from our point of view, and the risks of Greenfield – construction risk, traffic risk or some other types of market risks – are often an unknown quantity, which means that these projects haven't always justified the investment for long-term investors like pension funds.

KPMG Investment Consulting advises pension funds globally on the development and implementation of direct investment strategies into infrastructure. For more information please contact **James O'Leary** jamesoleary@kpmg.com

The greening of infrastructure finance

By **James Stewart**, KPMG in the UK

With the impending launch of the UK's Green Investment Bank (GIB) in April 2012, many infrastructure stakeholders are trying to understand how the initiative – and similar ones already under development around the world – will change the way infrastructure is financed and delivered.

In designing a GIB, planners anticipate a number of key outcomes for infrastructure funding. For one, the bank could act as a catalyst for early stage projects that are currently struggling to attract private sector funding but which – with sufficient initial investment – could help deliver on carbon reduction targets and other 'green' policy objectives.

The bank could also provide implicit benefits to the market; the very existence of a GIB may bring confidence to private investors concerned about funding gaps and therefore speed up the pace of investment. It is also expected that a GIB will increase competition in the marketplace, particularly within the small-to-medium market segment.

What exactly IS a 'green bank'?

Creating a GIB is anything but straightforward. For one, governments will need to be clear about how the bank will operate, its proposed scope and how it will invest its capital.

One scenario would see the GIB seek to make a commercial return on its investment, and therefore would leverage its capital to increase the impact and return of their investments. Countries with less active capital markets and low private investment may consider creating a GIB that primarily invests in uneconomical but 'green' initiatives by providing grant-like funding for specific projects. Others may choose to have the GIB structure investments on a commercial basis, but where expectations of returns are balanced against an equal expectation of defaults.

Setting green objectives

Government backers will also need to be clear about their objectives for the bank. In the UK, for example, the GIB seems at risk of being stretched between three – sometimes conflicting – sets of policy objectives: a preference for the bank to invest in green projects (almost regardless of their commercial viability); a desire to grow the green economy, but not at the expense of fiscal stability; and thirdly a belief that investments should be biased towards growing the national economy (particularly small to medium businesses).

Floating the green boat

Another key question will be how much to invest into the bank's initial capitalization. The UK's initiative will start with £3 billion, while Australia's recently-announced Clean Energy Finance Corporation is expected to have almost A\$10 billion in seed money when it starts operations in 2013.

Of course, the impact and reach of those investments will be strongly influenced by the bank's ability to borrow against its capital. In other words, the UK's bank – which has been given permission to borrow as of 2015 – may be able to multiply the impact of its investment, versus Australia's bank which is not expected to bring money in alongside their capital.

Not surprisingly, many developers and investors are carefully watching the progress in both the UK and Australia to see what suite of products the banks might offer and how they might be able to tap into that funding to reduce the risk and strengthen the financing of their green projects.





/// The UK's initiative will start with **£3 billion**, while Australia's recently-announced Clean Energy Finance Corporation is expected to have almost **A\$10 billion** in seed money when it starts operations in 2013. ///



India's infrastructure debt fund

By **Arvind Mahajan**, KPMG in India

India's infrastructure deficit is creating significant challenges for the country's continued economic growth. Accordingly, India will need to significantly step up infrastructure investment going forward in order to reach double digit GDP growth. Indeed, India plans to spend more than US\$1 trillion over the next five years, representing approximately 10 percent of GDP annually.

But current projections indicate a massive shortfall in funding – particularly in debt financing – that will require the country to find innovative ways to bring new sources of both domestic and international investment into the marketplace in order to close the growing funding gap.

Setting the stage for investment

To that end, India's Ministry of Finance recently announced guidelines for two types of Infrastructure Debt Fund (IDF) structures that show significant promise towards creating an environment for attracting new investment into the sector. Both face significant challenges but – if successful – may well provide a framework for future funds, not just for India, but also as a model for the rest of the developing world.

However, India faces a number of fundamental challenges that will need to be overcome for the IDFs to make a positive impact. One is the need for new, long-term investors to participate in infrastructure funding. To date, debt financing has largely been led by the banking sector which – with significant assets already on the books – is fast approaching their debt limits. As a result, the market is looking to new types of investors such as pension funds and life insurance companies who are generally well capitalized and seeking long-term returns.

The country must also seek new ways to reduce the risk of infrastructure investment. In part, this will require new approaches to enhancing the credit ratings of infrastructure projects to make them more attractive to risk-averse investors who are largely unwilling to extend credit to projects outside of the 'safe' category of AA or

AA+ ratings. For foreign investors, the challenge is compounded by the low credit ratings at the country and state levels, which are generally only slightly above investment grade.

Creating an IDF Mutual Fund structure

Both of the proposed IDF structures may well overcome these challenges. The first is a Mutual Fund style IDF that effectively allows investors to pool their resources across a range of infrastructure assets in order to reduce their risk. Investments can be made in any kind of infrastructure project – from early stage through to late stage – and may be income tax exempt for participating sponsors.

However, the structure also contains certain drawbacks. For example, the entire credit risk would effectively be shouldered by the end-investor with



no opportunity for credit enhancement guarantees. The funds will also be limited to Rupee denominated units, resulting in currency risks for foreign investors who will need to include hedging costs into their calculations. This structure may be useful for investors who are willing to bear some additional risk in exchange for a higher return.

An IDF Company

The second planned structure would see the creation of a non-bank finance company (NBFC) that is effectively restricted to investing in PPP projects that have passed the one-year commercial operations date and can therefore offer a very focused investment outlook. It can also put in place credit enhancement mechanisms to attract different categories of investors. As a result, the structure is likely to be able to achieve a credit rating that would be acceptable to risk-averse investors. The NBFC may also issue bonds in both Rupee and foreign currencies, thus further reducing the risk for international investors.

The NBFC will also face a number of challenges. For example, the sponsor will be limited to less than 50 percent of the shareholding, meaning that other institutional investors will be required to take a stake in the fund. The forced focus on late-stage assets also means

that investors are effectively limited to government sponsored assets and the market opportunity will therefore be reduced accordingly. The structure is likely to operate on thin spreads, with income tax exemption and lower capital adequacy norms expected to stimulate returns.

Making positive progress

Currently, the market is largely focused on the potential for the creation of a US\$10 billion fund through the NBFC model that, at the time of printing, was rumored to involve the government-owned India Infrastructure Finance Company Limited, the Life Insurance Corporation of India as well as a number of other Indian banks like the Industrial Development Bank of India. It is also expected to include the Asia Development Bank as a multilateral and possibly a large foreign bank such as HSBC.

Both options may be pursued in parallel as investors will more than likely find attributes of each that reflect their investment strategy and risk profile. But regardless, the Indian government will almost certainly need to intervene in some way in order to attract the types of stakeholders and investors that will be necessary to overcome the sovereign credit challenges and provide guarantees on bonds for overseas investors.

// India plans to spend more than US\$1 trillion over the next five years, representing approximately 10 percent of GDP annually. //

The path ahead

The next few months will prove to be a critical watershed for the government's IDF plans as key players review their options and gain clearer insight into the guidelines that have been articulated by the Ministry of Finance.

It seems more than likely that the first batch of IDFs will be dominated by domestic investors but – with growing interest from international investors seeking exposure to the Indian infrastructure marketplace – there is every indication that significant international players will also participate in these structures, both to test the waters and to gain more experience in this rapidly emerging and potentially highly rewarding marketplace.

Incentivizing infrastructure

By **James Stewart**, KPMG in the UK

Government funding in the
post-global financial crisis world



Let's be honest: the current approach to infrastructure funding is simply unsustainable.

In most parts of the world, governments have traditionally shouldered the lion's share of infrastructure investment, dosing out dollops of central funding from their pool of tax revenues. And in the heady days of unchecked economic growth and profitability, this was a reasonable approach for most governments to take.

But the global financial crisis changed all of that. Tax revenues crashed in many jurisdictions as unemployment skyrocketed and corporate profits plummeted. As a result, government spending was summarily slashed and program funding starved. Most prominently in Europe – but also in other major economies – governments are now engaged in an ongoing life-and-death struggle to bring down their debt and stabilize their economies in the face of continued market uncertainty.

The unrelenting demand for infrastructure

Interestingly, even in the midst of stagnating national growth and high unemployment, the demand for infrastructure has not abated. Indeed, if anything, the drive to revitalize economies through infrastructure investment has only accentuated the infrastructure gap and – with it – the cost of development. For example, in Italy the new Government recently announced, alongside stringent austerity measures, a €4.8 billion investment in infrastructure¹.

As a result, many governments are increasingly looking for new and innovative ways to cover the costs of their ballooning infrastructure bills without jeopardizing their balance sheets.

One important tool in the government funding drawer is to charge consumers for their use of infrastructure, rather than taking from the tax base as a whole. Not only does this shift the costs 'off balance sheet' from the government's perspective (thereby freeing up fiscal capacity to focus on other priorities), it also places the burden of financing on those that receive the most benefit from the asset over its lifecycle.

Tapping the consumer purse

From a political perspective, user fees may not be the ultimate panacea to infrastructure funding. For one, surcharges tend to be strongly disliked by voters, particularly in cases where costs are increasing with no visible corresponding benefit to consumers (such as capital-intensive maintenance projects or the move to 'greener' yet more expensive power generation).

What's more, many politicians see tax as a fairer mechanism than user paid charges. And while this may seem counter-intuitive, there is a general belief that taxation is essentially 'means tested', and therefore ensures that the greater share of the cost is shouldered by high income earners and more profitable businesses rather than struggling families or nascent enterprises.

¹ The Associated Press, 6 December 2011. Available at: <http://www.businessweek.com/ap/financialnews/D9RF4R3O0.htm>



Governments at all levels are also starting to acknowledge the real and significant difference between central taxation and local funding. And as central funding starts to dry up, cities increasingly need to take their destiny into their own hands. In India, for example, the Mumbai Metropolitan Region Development Authority (MMRDA) has unlocked a sustainable source of local funding by monetizing land values. The authority essentially recycles the proceeds of land sales back into infrastructure investment, thereby making the city growth much less reliant on central funding or consumer-pay schemes. In London, over £4bn was raised from a supplemental business rate to fund Crossrail.

Understanding affordability

Of course, the debate over who pays is deeply influenced by affordability. As a result, an increasing number of governments are starting to think about their spend in terms of the overall 'affordability envelope' that consumers and governments are willing to bear.

Take, for example, an average London resident. Within their affordability envelope would sit council taxes, income taxes, fuel bills, utility bills (widely expected to mushroom as renewable sources come online) and a range of other charges such as the London Congestion Charge and others. So in planning for the Thames Tideway Tunnel (a massive project designed to ease the flow of sewage out of the city), the government has to consider what is 'affordable' for residents and structure the overall funding accordingly.

The affordability envelope applies equally to government coffers. Today's finance minister must balance the cost of infrastructure against a host of other priorities, some immediate (such as debt refinancing in Europe), and some long-term (the UK's Renewable Energy Targets, for example). Add to this the rising cost of capital, uncertain economic forecasts and unrelentingly high unemployment in many jurisdictions and it becomes clear that the public affordability envelope is packed very tightly indeed.



/// Governments are increasingly **looking for** new and **innovative ways** to **cover the costs** of their ballooning infrastructure bills without jeopardizing their **balance sheets.** ///

Time for government intervention

Clearly, if governments plan to meet their infrastructure obligations, they will need to take more of a role intervening in the market to catalyze private sector capital towards financing for infrastructure. Some may choose to simply provide grants to sectors of the market that either lack proper pace or are seen as uneconomical in the near-term. Other tools may include revenue subsidies, price or volume guarantees, tax incentives or reductions. Governments will also need to place a particular focus on creating the enabling conditions for private sector investment, such as strong central planning capabilities and transparent policy.

Timing and scope of the intervention are also critical questions. Too small an intervention, and governments run the risk of achieving little for their investment (many of the infrastructure projects funded by the US economic stimulus plan in 2009 may have suffered this fate). Too large an intervention not only wastes precious budget, but may also cause bubbles in markets or create unsustainable financial obligations (such as Spain's solar panel subsidies which were slashed in 2011).

What size an intervention?

Unfortunately, there is no magic yardstick by which to measure interventions. Indeed, judging the appropriate level of intervention is an incredibly difficult thing to do and is anything but an exact science. Much will depend on the state of the local market, the availability and willingness of private capital to invest and the pace at which the government is seeking to achieve their objectives.

Looking at funding through a holistic lens

With a variety of different funding models and payment options now on the table for governments, the ability to balance all of those sources to ensure sustainable, secure and appropriate funding within an overall affordability envelope will become a key capability for governments at all levels.

Ultimately, those countries that are able to construct their infrastructure plans in a holistic, joined-up and integrated way will stand a much better chance of responding to their infrastructure challenges... without bankrupting the country.

Disentangling infrastructure tax

By **Margaret Stephens**, KPMG in the UK

As governments around the world struggle to close their infrastructure gaps, tax reliefs and subsidies have long been seen as a key tool for catalyzing private sector investment. But today, governments are starting to rethink their fiscal regimes in an all-out effort to shore up government revenues and realign priorities; incentives are being slashed, tax holidays are being cancelled and headline rates are rapidly changing.

And while all this activity has certainly helped many governments to eliminate distortions in the system and safeguard their overall tax take, it has also created significant uncertainty in the market and – in many cases – forced private infrastructure players to rethink their approach to investment in many key regions.

Reducing uncertainty

In India, for example, the government has embarked on a journey to revise the 50-year-old tax code which will likely have deep implications for both domestic and foreign infrastructure participants. While the government has indicated that it is committed to increasing foreign direct investment into infrastructure through a liberalized regulatory regime and specific





/// The elimination of **solar panel subsidies** in Spain has dramatically altered the economics of **renewable energy generation** in that country and created waves across the **European industry.** ///

tax incentives such as profit-linked exemptions, investors seem reluctant to commit resources until greater clarity is provided on the future direction of taxes in the country.

Similarly, a number of governments have – almost overnight – introduced amendments to their tax systems that have created increased uncertainty and dampened investor confidence. For example, the elimination of solar panel subsidies in Spain has dramatically altered the economics of renewable energy generation in that country and created waves across the European industry.

And in Italy, lawmakers took just 24 hours in early December 2011 to introduce and pass an austerity budget that – amongst other measures – included a 10 percent tax hike on profits for the energy industry.

In a controversial move in 2008, the UK abolished tax allowances for infrastructure structures and buildings and is now struggling to find the money

to reintroduce a relief which would encourage capital investment and growth.

Short vs. long term goals

One of the greatest challenges for tax authorities and policy makers is the need to balance short-term political and economic pressures against long-term goals.

But infrastructure is – overall – a long-term investment; projects typically take many years to plan, implement and bring to fruition and the project's ultimate profitability can often depend on cash flows extending over many decades. As a result, investors need stability and certainty.

Creating a hospitable environment

The broader tax environment also has a direct impact on the attractiveness of the overall fiscal environment to infrastructure investors. South Africa,

for example, has instituted a number of specific tax incentives aimed at encouraging the PPP sector. However, the overall corporate tax rate in South Africa remains high and – while the regime is somewhat simpler than most developed markets – the tax litigation environment is exceeding complex with some cases taking several years to resolve.

Looking into the crystal ball

The simple truth is that tax regimes, even when they intend to be transparent and free of distortion, are necessarily complex. Indeed, when specific incentives are introduced to encourage certain categories of investment, the result is usually greater complexity and often increased uncertainty.

One thing is for sure: disentangling the rhetoric from the reality of infrastructure tax will require careful analysis, keen insight and a higher tolerance for uncertainty going forward.

The rise of the regulated asset based model

By **Dr Matt Firla-Cuchra**, KPMG in the UK

Attracting private investment into infrastructure is no easy feat, particularly when you are talking about assets with very long lives that demand investments in the tens – or even hundreds – of billions of dollars.

/// The **RAB model** has been spreading across Europe where it has become one of the **preferred models** for facilitating the privatization of the **power and water** networks and, to some extent, **transport sectors**. ///



But over the past couple of decades, we have witnessed the success of the Regulated Asset Based (RAB) model in bringing significant amounts of capital into infrastructure at both a low cost and a long-term basis. In simple terms, RAB models attract large amounts of private capital into infrastructure (utilities in particular) through a transparent and consistent mechanism that reduces investor risk and places a cap on consumer prices. For the investors themselves, this mechanism represents an important method for preserving the capital invested in the regulated assets.

The RAB model has been spreading across Europe where it has become one of the preferred models for facilitating the privatization of power and water networks and, to some extent, transport sectors. In the UK, where RAB models were first introduced, it has become a mature and well understood approach for a range of infrastructure assets.

An economic stalwart

RAB models have also proven to be fairly resilient in the face of the recent financial turmoil and have effectively ensured that regulated businesses had access to a continuous stream of funding, even when the cost of that funding had been



affected. This is because RAB effectively takes a long-term perspective by creating a well defined asset base and clear rules on how different elements of the overall value (such as costs, capital, returns, and inflation) are recovered.

In essence, RAB is based on the concept of Financial Capital Maintenance, in which investors can recover the exact capital they invest into the assets. As a result, businesses with RAB tend to be highly attractive to investors that are willing to trade higher rates of return for a more stable and better defined cash flow. At the same time, RAB models do not really 'guarantee' a return as recovery is based on a regulatory contract. As a result, confidence in the regulatory regime and the assumption that regulatory discretion will be reasonably exercised from one period to the next is paramount for the success of this model.

Creating a successful RAB model is therefore complex and may not be applicable to all markets or sectors. For one, RAB is best suited to natural monopolies facing limited market risk, and works particularly well where there are large investment requirements over time as the model's development demands a significant amount of planning and structuring from a regulatory perspective. This also means that markets with weak

public institutions and less developed regulatory regimes will have a tougher time creating the right environment whereby there is a high degree of understanding between investors and regulators.

The benefits of the RAB model for governments are significant. For example, RAB attracts long-term institutional investors that not only bring stability to the sector, but also fairly deep capital resources. RAB-based models also effectively transfer risk to investors and responsibility to the regulators, meaning that governments are often only involved at the sector policy level of infrastructure development and operation.

A range of RAB approaches

It is worth noting that RAB does not represent a single model, but rather a spectrum of approaches that must be tweaked and adapted to each situation. In the UK, for example, different sectors have adapted slightly different models; in the water sector, companies are able to change their pricing based on customer usage to cover their RAB base amount, whereas airports have to sell different services under 'one till' that allows them to net auxiliary revenues against regulated prices.

Critically, RAB is a dynamic model that operates on a rolling rather than a fixed point basis and therefore has no defined starting point or end point. It also allows for adopting the terms and conditions to the current sector needs. The challenge is to resist the temptation to tinker too much with the model, make it too complex or respond to short-term pressures. This might lead to unnecessary complexity and – eventually – erosion in the very investor confidence that underpins the success of the model in the first place.

On March 19, 2012, UK Prime Minister David Cameron set the ball rolling on the possibility of new ownership and financing models for the UK road network. The UK Government has drawn parallels to the privatization of the water industry and the use of a Regulated Asset Base Model, indicating that a key benefit could be greater investment flowing into the road network. However the Government remains determined that road pricing should not apply to the existing road network and it remains unclear as to what extent private companies might be able to influence the price paid by users for road travel, in the way that water companies can propose the level of charges to the Regulator, in order to fund investment in water assets.

Recycling capital

An interview with Barry Millsom, Fund Manager of the Lend Lease Infrastructure Fund

By **Jonathan White**, KPMG in the UK

In December 2010, Lend Lease launched the UK Infrastructure Fund with £220 million in committed capital available to invest in social infrastructure assets over the next five years. On launch, the Fund purchased established healthcare, education and accommodation Public Private Partnership (PPP) assets from the Group and had committed capital to fund the acquisition of future assets being delivered by the Group. Lend Lease has a minority co-investment in the Fund alongside majority investor, Dutch pension fund PGGM.



Jonathan: By setting up a successful Infrastructure Fund, Lend Lease plays a rather unique role in infrastructure financing. Can you set the stage for our readers by explaining how the Fund supports the organization's infrastructure development goals?

Barry: For those unfamiliar with Lend Lease, we see ourselves as a fully integrated infrastructure organization providing a range of infrastructure services from construction and facilities management, through to asset and funds management. It is our combination with the fund management side that gives us a truly unique position in the infrastructure sector.

Essentially, the Fund allows us to recycle our capital effectively so that we can continue to bid on and deliver a range of new projects in the future. In the same way that traditional banks are not natural holders of long-term debt, nor are developers – who are usually the key sponsors of PPP and PFI deals – natural holders of long-term equity. In simple terms, we look at our investment management operations as a way to source and manage long-term external capital which in turn allows us to free up our own capital to reinvest into new projects.

Jonathan: The Fund has seen significant success, both in attracting long-term investors and deploying the funds into the market. Can you tell us about your success to date?

Barry: Lend Lease Funds primarily invests in projects where Lend Lease has played a role in the asset's lifecycle, either through construction, facilities management or asset management. In fact, we have about 16 projects currently within our UK Infrastructure Fund where the organization was involved in one way or another in the development. On our Retail Partnership Fund in the UK, which includes the Blue Water Shopping Centre as a key asset, we are the operator, the manager and one of the developers that built the complex.

On the Fund subscription side, we have been hugely successful and now boast more than 50 investors who are participating in our UK fund. At the end of 2010, we were joined by PGGM, the second largest pension fund in the Netherlands, who invested over £200 million in capital to the Fund to invest in social infrastructure assets.

We seeded the Infrastructure Fund with a number of Lend Lease assets that – in the initial phase – realized more than £75 million, with an additional £30 million of assets that were still in construction and commissioning.

Jonathan: Clearly, governance and Fund independence are major concerns for investors around the world. Has that been a challenge for you?

Barry: At the fund raising phase, it was certainly a consideration. But we've put a heavy focus on stressing and reinforcing our independence within the fund management area. We believe that our primary duty of care within the fund management operation is to our investors, not Lend Lease, so while we are the fund manager and the operator, we have taken substantial measures to maintain that independence.

Jonathan: Signing PGGM onto the Fund is a major achievement. Looking at the wider infrastructure market, do you see pension funds taking a more active role in funding the development of infrastructure rather than simply investing in listed assets?

Barry: I don't think pension funds have been averse to taking equity stakes in the development stage of a project, but – to date – it has been quite difficult to unlock the pension funds in the debt side of the equation. I think that is going to continue to be a major challenge for developers and governments alike. The natural conclusion would be some type of bridging program where banks or government bonds cover the early stages to essentially de-risk the investment, but that leaves

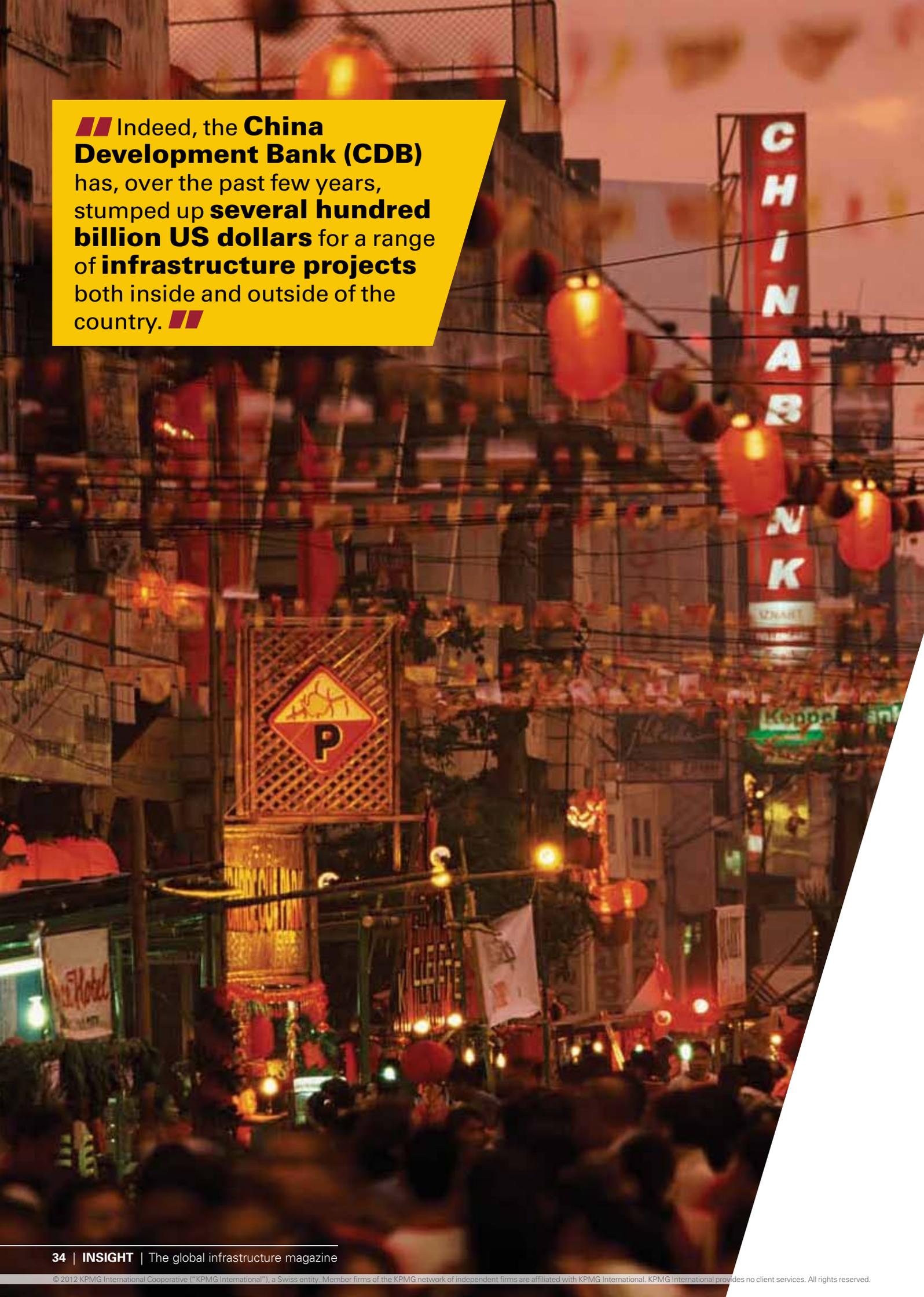
a significant refinancing risk which creates a series of other challenges.

There seems to be a common belief that pension funds are going to be the answer to the huge infrastructure funding gap that is looming over most markets, but that is not likely to be the case. The reality is that the requirement for long-term debt in the near future is going to require more than just pension funds to come into the market, so – in my mind – there are going to have to be a number of solutions developed to fill that gap, with or without pension fund participation.

Jonathan: Do you think that the financial crisis or Europe's debt crisis has impacted the way that institutional investors approach infrastructure?

Barry: The crisis has forced a bit of a shift in the appetite for social infrastructure investments in the most heavily impacted markets such as Southern Europe. Economic infrastructure like roads and airports are crucial to the national economy and investors tend to link social infrastructure with the ability of a government to repay the revenues. But outside of the region, there does not seem to have been much of a shift. In the UK, for example, there have been more than 800 PPP/PFI projects closed and less than half are currently held by infrastructure funds, so there are still a lot of assets to be traded in what is overwhelmingly seen as a pretty safe environment for social infrastructure.

I think a more significant trend is for institutional investors to move towards direct investment into infrastructure. Interestingly, because of our integrated approach and our history of having minimal leakage on our fund, many of the institutional investors tend to see Lend Lease as more of a direct investment. I think this is where Lend Lease is going to appeal to both fund investors and direct investors alike.



/// Indeed, the **China Development Bank (CDB)** has, over the past few years, stumped up **several hundred billion US dollars** for a range of **infrastructure projects** both inside and outside of the country. ///

The rising influence of Asia's Development Banks

By **Richard Dawson**, KPMG in China

Asia's meteoric economic growth faces a crucial challenge. Without a massive investment in critical infrastructure, many of the region's economic powerhouses are likely to face significantly constrained growth. In most cases, power generation is already insufficient, transportation networks are inadequate, and ports and airports are running at overcapacity.

Whereas Europe and North America are – in large part – focused on upgrading and maintaining much of their existing infrastructure, Asia's focus is on building out a vast range of new assets and services to help maintain growth and drive up GDP.

Filling the gap

Clearly, securing appropriate capital to meet the region's infrastructure requirements will be a significant challenge as regional governments are unlikely to have the financial muscle to fund the colossal associated investment. Financing is the most obvious problem; developing the legal and regulatory frameworks conducive to attracting private debt and equity will be an equally high hurdle.

In the meantime, a growing proportion of the funding gap is being filled by the regional and national development banks. The Asia Development Bank (ADB) – the main regional development bank – has been very active across the region, particularly in projects where it is clear that private finance will not be forthcoming. What's more, much of the ADB's activity centres on the region's

emerging markets such as Indonesia, Vietnam and Malaysia.

The ADB has also taken a lead role in trying to stimulate growth in infrastructure funding and capital. Most recently, the bank has been developing a local currency bond guarantee fund designed to help borrowers raise debt capital from an investor base that – without explicit guarantees – would otherwise find it difficult to tap into the local debt securities markets. Infrastructure projects will almost certainly be a strong focus for the fund.

National scope, global ambitions

Likely the bigger story, however, is the growing clout of the national development banks in China, Korea, Japan and Singapore. Indeed, the China Development Bank (CDB) has, over the past few years, stumped up several hundred billion US dollars for a range of infrastructure projects both inside and outside of the country – more than the aggregate funding support of the Asian focused multilateral organizations put together. Also active are the Korean Development Bank, the Development Bank of Japan and – while not natural

development banks – the sovereign wealth funds of Singapore.

Armed with mandates to encourage growth within their national economies and often their national champions overseas, these heavyweights have been quietly supporting a range of infrastructure projects around the world. Africa and South America have been popular destinations, but significant levels of investment have also been flowing into the economies of North America and Europe.

Priming the pump of private capital

However, even with the support of the deep-pocketed national development banks, Asia still faces an extraordinary infrastructure development burden that cannot conceivably be filled without the participation of private capital.

To achieve this, Asia's national governments will need to place renewed focus on developing legal, regulatory frameworks, and market based financing schemes that offer private investors and lenders a transparent, consistent and reliable structure for investing in the region's infrastructure projects.

Will the Year of the Dragon bring a flood of Chinese investment into **western infra markets** ?

By **Alison Simpson**, KPMG in China

Unlike their wicked western cousins, Chinese dragons are considered to be divine creatures, astute and benevolent, bringing prosperity. They are also said to have power over water, in particular the ability to control rivers, seas, rain and floods.

In the run up to the arrival of the Year of the Dragon we saw a number of high profile Chinese transactions in European infrastructure, such as China State Grid into Portugal's REN and, rather appropriately, China Investment Corporation (CIC) into UK's Thames Water. As a result, many infrastructure stakeholders in mature markets are looking east to try and determine exactly how much wealth the Chinese dragon will bring in this auspicious year.

The answer will depend in part on which type of investment we consider: greenfield/project investment, strategic investment or financial investment.

Greenfield activity will remain challenging

The Chinese have been investing in key international infrastructure for many years, from the 1,870km Tanzania-Zambia Railway in 1970, to the US\$1.4

billion Hambantota Port in Sri Lanka currently being built. However, most investment has been in the developing world, commonly using a combination of engineering, procurement and construction (EPC) and debt finance structures. They are also often politically driven or part of larger deals to secure natural resources. Most Chinese infrastructure companies still consider Africa, Latin America and South East Asia as core markets due to their continually high construction margins.

However, increasingly open competition and the introduction of Public Private Partnerships (PPP) in certain developing markets, as well as the increasing awareness of political risk (due in part to some losses resulting from the Arab spring), is resulting in much greater consideration being given to entry into mature markets such as the UK and US. It is hoped that such a move will also help the development

of key procurement, project and risk management skills that are important to remain competitive in markets globally.

This trend is being supported by political initiatives such as the 'Memorandum of Understanding on Enhancing Cooperation in Infrastructure', signed in September 2011 by the UK and Chinese governments, which is hoped will lead to increased Chinese investment into UK infrastructure projects.

Despite much optimism in the West, many challenges still exist – particularly around adapting to the planning, regulatory and procurement idiosyncrasies of mature economies, which can act as a major barrier to entry in the short-term for Chinese entrants. The Chinese will become major players in western greenfield infrastructure markets, but probably not this year.

Strategic investment will be where the action is

An important part of China's 'going out' strategy (as encouraged by the 12th Five-Year Plan) is to create global leaders. In the oil and gas sector, the big Chinese petrochemical companies have, for a long time, been respected global market players. The focus of many mergers and acquisitions have recently moved to power, with deals by Huaneng into Intergen, State Grid into a portfolio of grid assets in Brazil then REN in Portugal, and Three Gorges into EDP, also in Portugal. With all these deals, key considerations were the synergies that the investments could bring – selling in products and services or jointly entering new markets.

The Chinese will certainly continue to take advantage of the ongoing financial crisis and resulting sell-off in Europe. This should bring opportunities to secure strategic assets at advantageous valuations. We are likely to see significant strategic investment into non-power sectors, including ports and airports, while the construction companies may well start acquisition programs to secure local technical experience and expertise in target markets.

However, the lengthy approvals process for equity investment by State-owned entities will continue to be a challenge where sales processes are rapid. Further, given the requirements of the State-owned Assets and Supervision

Commission (which supervises the activities of all State-owned enterprises) for effective risk management, substantial overseas equity investment will likely continue to be driven by the most trusted of the State-owned enterprises.

Sovereign funds will continue steady portfolio expansion

The real success story is sovereign funds, particularly CIC. These funds are developing into sophisticated investors, modeled in part on the Canadian pension funds and focused on taking stakes in investments which generate long term inflation linked to stable cash-flows. The funds are likely to go from strength to strength as their portfolios expand and their confidence increases.

Their greatest challenge could well turn out to be identifying sufficient suitable investment opportunities to meet their voluminous appetite and capacity to invest and therefore maintain their target returns.

Overall, this will almost certainly be a year of intense outbound activity for the various Chinese infrastructure investors across the world's markets. However, though the dragon is wealthy, it is also wise, and investment into mature infrastructure markets will only come at the right price and terms. Many deals will certainly be done; but it is likely that we will still see more smoke than actual fire from the dragon in the west this year.





Building alliances to share risks and realize efficiencies

By Kai Rintala, KPMG in Finland

As the sovereign debt crisis lurches on and governments come under increasing financial pressure, many jurisdictions are starting to explore alternative procurement models for their critical infrastructure projects.

/// The **selection process** is also much more **collaborative** and **transparent** than what the **construction industry** is traditionally used to. ///

In Finland, for example, the Finnish Transit Agency (FTA) has recently launched a new project aimed at upgrading and modernizing more than 90 kilometers of rail line along a major freight and passenger route. And while the deal will involve capital expenditure of some €90 million, the agency is keen to ensure that the potential for innovation is realized so that risk is appropriately shared across all participants in the project and the final price remains in line with market norms.

The birth of the European Alliance Model

To achieve this, the FTA has launched Europe's first Alliancing project. The Alliancing Model, which has already seen strong utilization in Australia, effectively creates a partnership between the public sector and private sector contractors and consultants where all parties share a proportion of both the upside benefits and the downside risks of the project.

It is important to note that the Alliancing Model tends to also include a floor on the downside that caps a developer's exposure to risk at a reasonable level, while offering incentives around key metrics such as (in this case) the overall effect on rail traffic and environmental impacts.

As a result, in comparison to a fixed price design and build contract, the model piloted by the FTA limits project risk to the private sector with the aim of reducing the overall cost to the public sector by stripping the risk premiums out of the pricing while – at the same time – encouraging the two parties to work together effectively in managing the project risks.



Choosing the right partners

The selection process is also much more collaborative and transparent than what the construction industry is traditionally used to. In the case of the FTA, five consortia submitted outline proposals and participated in in-depth interviews to ascertain their ability to service the contract and meet the project requirements.

From here, two parties were selected to participate in one-on-one workshops with the FTA where specific project challenges were discussed and debated. This allowed the FTA to test the working relationship with each of the candidate consortia and

develop a better understanding of the type of outputs and problem solving skills that could be expected from each bidding party.

The FTA worked with the two bidders to develop the commercial contracts and agree on the definitions of the reimbursable costs and, following an external audit to ensure that the projections were within normal parameters, the bidders were then invited to submit their consortia's overhead and profit margin requirements to the selection team who considered these as part of the process of selecting the preferred bidder.

A new tool for infrastructure procurement?

Based on this experience and that of more than 350 similar projects already concluded in Australia under the Alliancing Model, this approach is particularly suitable for projects that carry significant technical risks which – under a fixed price contract – would have inflated the overall contract price.

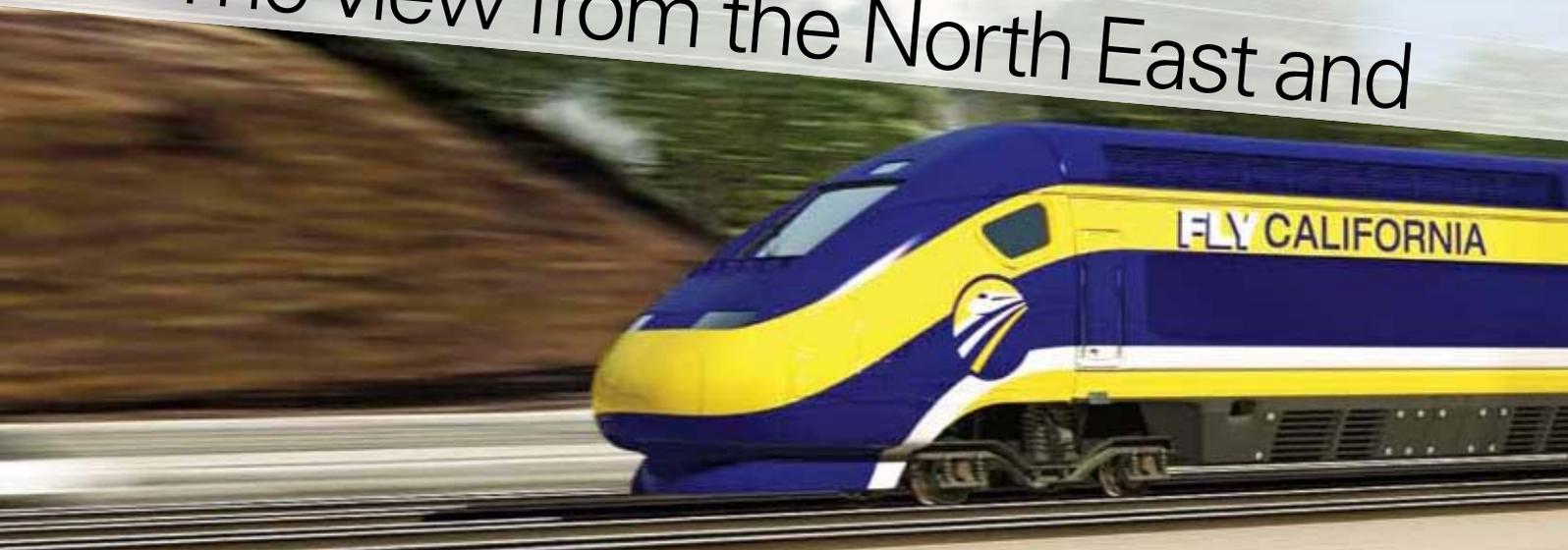
And while the FTA's rail upgrade project is not necessarily overly-technical, the

Finns have used this opportunity to develop experience, capacity and insight into the model for more technical future projects such as a major city-centre tunnel that is already in procurement.

Based on the current market response to the FTA's approach and early results from the project, it seems clear that alternative models such as the Australian Alliancing Model will soon take their place within the infrastructure procurement mix in Europe and – if successful – further afield.

High Speed

The view from the North East and



By **Darryl Murphy**, KPMG in the UK

KPMG sat down with executives from **Amtrak High Speed Rail Authority** and the **California High Speed Rail Authority** to talk about the challenges and opportunities facing High Speed Rail in the United States.

KPMG: California and the US North East Corridor are developing plans for high speed rail systems. What's driving that renewed interest in both of those regions?

Amtrak: In the North East corridor, we already have a very successful rail system, so our challenge here is centered on taking an asset that is – today – doing a pretty good job, but has some major challenges, and improving and expanding it for future needs. For us, it's really about expanding the capacity of the corridor overall using different technologies

and investment approaches to drive change across all of the segments that we already serve.

California: For our part, we're seeing some significant population growth, particularly in two very separate areas. So we really need to connect the state, both to reduce congestion on the roads, but also to create efficiencies to help drive the State's economy. In comparison to the North East, we're fairly lucky in that we still have a relatively open – albeit agricultural – central valley system that gives us the space to build across some pretty long distances by laying down a fairly small footprint, particularly when compared to other transportation systems like roads.

Amtrak: That's a good point. Our population density in the North East is a bit of a double-edged sword for high speed rail. On the one hand, it gives us the critical mass to create real value for a huge segment of the population by pairing major cities, but it also means that we have some of the most expensive land and an ingrained and highly trafficked system that sees roughly 2,200 trains travelling the system



/// We are **building assets** that will deliver **value for 100 years** or more. ///

– Amtrak High Speed Rail Authority

Rail in America

the South West



each day. We are dealing with a network that includes commuter trains, regional trains, some freight activity and the higher-speed, limited-stop network that all work together, so integrating high speed rail technology within the system will be a challenge.

KPMG: Is there an appetite from stakeholders to develop the system?

California: One of the biggest challenges we face in the US – particularly in California – is that there isn't a really good understanding of the efficiencies that high speed rail can deliver. Most mass transit systems in existence today are generally highly subsidized, but this is not the case with high speed rail in various parts of the world; it's really a very attractive investment opportunity and economically viable, at least from an operations perspective. That's been very hard for Americans to understand.

Amtrak: Absolutely. I think the hard part is not only painting that picture, but then connecting actions to it; taking that broad idea and turning it into investment. It has always been – and will continue to be – a challenge to explain and help people understand the broader impact of these types of investments, not only in transport or rail, but the general benefits that these investments will provide through infrastructure improvement. We're really trying to gain a level of awareness among the business community around the role of high speed rail and the possibilities and opportunities that an expanded and improved service can provide for the region.

California: To that end, we're trying to bring forward the business case for private investment by looking at examples from other parts of the world. In Italy, you see NTV cutting through as both an operator with rolling stock and depots and as a partial investor in Public Private Partnership arrangements for

infrastructure. There is a similar story in Spain and France with tunnel investments, real estate and station area developments that are being delivered with private participation.

KPMG: Is there a need for a cultural change before the US sees broader acceptance of high speed rail?

Amtrak: Certainly there will need to be a cultural shift, but that is already underway. America is currently in the midst of a change in terms of travel patterns that is being driven by rising fuel costs and a significant change in the way people live, move and work and I think that high speed rail is ready to capitalize on that if we can create the right product in the right markets. If we can create a competitive and reliable service, I think that Americans are very interested in that.

California: The bigger challenge from our perspective is getting policy-makers to acknowledge that we need to work together to find the funding and to create a longer-term vision. The US tends to make shorter-term project decisions, whereas high speed rail spans many political election cycles. We certainly have capacity for longer-term investment, particularly in infrastructure; California has built dams, viaducts and freeways, so the challenge is to ask – if our forefathers could do that – why can't we repeat it?

Amtrak: In essence, we are building assets that will deliver value for 100 years or more, so a big question is what America is going to look like in 2100. Looking back 100 years, the railway is one of the only things that has stood the test of time. It is one of the things that we are really excited about and that makes us deeply confident that high speed rail is not only needed, but also a very noble and important function. But as with any project where you are planning that far into the future, no one knows for sure what the nation will need in 50 years, let alone 100. It's a major challenge indeed.

Infrastructure and the sovereign debt crisis:

Lessons from Ireland and Portugal

By **Michele Connolly**, KPMG in Ireland and **Fernando Faria**, KPMG in Portugal

A Q&A with **Michele Connolly** (KPMG in Ireland) and **Fernando Faria** (KPMG in Portugal)

Editor: *Ireland and Portugal were some of the first countries to be impacted by Europe's sovereign debt crisis. How did this impact infrastructure financing in the region?*

Michele: Infrastructure has certainly been one of the casualties of the sovereign debt crisis. One of the first challenges arose from the rising yields on government bonds which – with margins on Government bonds anywhere from five to ten percent – were far more attractive to international banks than the three percent being realized

from project-finance transactions. So financing became considerably more expensive.

But as the crisis deepened and country sovereign credit ratings started to drop, many of the international banks began to worry that if governments defaulted on their debt obligations, then infrastructure debt may also be written off. And then, finally, affordability of infrastructure spend – no matter how it was financed – became the crunch point with governments left in the difficult position of prioritizing their spend against a range of critical needs such as paying public sector employees and servicing ever-increasing levels of debt.



Editor: Both Portugal and Ireland seem to have reversed some of those trends over the past two years. Is the infrastructure market starting to rebuild as the situation becomes less precarious?

Fernando: Certainly there have been a number of projects that have been completed since the crisis began. But many of these projects were actually legacy investments from 2007/2008 which proved to be very hard to renegotiate. In other words, while many of the projects that were already funded did progress, others that were not as far along were put on hold due to lack of funds. We've also seen projects – such as Portugal's high speed rail – where concerns about affordability have led the government to put the project on hold, even though funds had already been secured.

What we are seeing today, particularly in Portugal, is a drive towards extracting additional value from existing infrastructure assets in order to shore up government coffers and reduce the annual expenditure of these projects. Some of this is driven by the requirements imposed by the EU bailout, but governments are also trying to get their arms around the whole-of-life cost of their investments to ensure the affordability of those costs in the long-term.

Editor: In hindsight, is there anything that the national governments could have done to staunch the impact of the crisis on infrastructure?

Michele: On a macro-level, probably not. The problem wasn't necessarily in the way that infrastructure finance was being structured, but rather the lack of liquidity of funding at an affordable level within the international banks. That said, part of the lack of confidence in the market related to a level of uncertainty as to how the situation would play out and where exactly infrastructure debt would rank in order of priority in the event of a government default. And uncertainty almost always reduces interest in lending.

But given that Ireland and Portugal were essentially treading a new path, it is unlikely they could have forecast the impact of the crisis or provided any assurances that would have changed the course of events substantially.

Editor: Clearly, this has also had an impact on the infrastructure developers operating in these countries. How have they fared since the crisis began?

Fernando: Much of the developers' activity tended to be nationally-based in the past, meaning that many of them continue to be exposed to the risks of their assets. As a result, most are actively working to diversify their business internationally. But this also requires a significant amount of equity and finance which – when entering a brand new market – is exceptionally hard to secure.

However, we expect this gap to be narrowed through a more dynamic secondary market where players from emerging markets may look at markets such as Portugal as an opportunity to acquire existing projects and – at the same time – build expertise in the PPP area.

Editor: Are you optimistic about the future of infrastructure finance in these markets?

Michele: I think we have started to separate our challenges from those of Greece, but we have some way to go still before we regain our stride. The overall uncertainty in the Eurozone is still tending to overshadow whatever gains we might individually make at a national level. With that in mind, I believe that Ireland is making good headway given the extent of the crisis.

That said, the underlying economics of many of the infrastructure projects fundamentally remain the same, despite the current debt crisis. As long-term and relatively low-risk stable cash flows, these investments should always prove an attractive investment on their own. So while project finance in Europe tended to be highly dependent on the balance sheets of the EU banks, there is now an emerging opportunity to explore other forms of financing.

Of course, with the virtual collapse of the monolines, the capital markets have become a difficult source from which to secure funding and – as a result – we anticipate that initiatives like the EU Project Bond program will be encouraged by national governments and infrastructure developers. However, we need the credit ratings of countries like Ireland and Portugal to improve before we can even qualify to access that funding source. The affordability of infrastructure spend is also likely to remain an issue for some time.

Australia's infrastructure challenge

By **Julian Vella**, KPMG in Australia

Much like any other country in the world, Australia is grappling with a significant need for infrastructure investment. By some estimates, the country will need to invest more than A\$750 billion over the next ten years alone.

As many will note, Australia enjoys a number of important advantages over peers in other countries and regions. The country has a mature and thriving Public Private Partnership (PPP) market that, over the past decade, has successfully delivered a number of critical assets. PPP regulation is well-tested and transparent, providing a strong environment for future activity.

The country is also one of the biggest holders of institutional capital in the world with Superannuation funds (the equivalent of Pension funds in other markets) holding some A\$1.4 trillion in assets under management. What's more, the 'Superfunds' have been fairly active in investing in infrastructure with somewhere between five and ten percent of their assets allocated to the sector. In comparison, the UK pension funds are thought to contribute less than four percent of their assets to infrastructure, and only 1.4 percent of European pension funds invest in infrastructure assets at all.

Taking a fresh perspective

But Australia still faces a significant infrastructure funding gap. Neither the federal nor state governments have the budget capacity to meet rising demand and the flow of private investment is not – to date – sufficient to close the shortfall.

To respond to this challenge, Infrastructure Australia, a statutory authority created to plan and coordinate infrastructure projects across the country, recently established the Infrastructure Finance Working Group (IFWG) with a mandate to identify current barriers to attracting infrastructure finance and develop possible options aimed at encouraging greater private sector investment.

The IFWG, a ten-person group that includes five public sector leaders and five private sector leaders (including myself), has therefore come together to consider four main challenges now facing infrastructure development in Australia:

- What reforms can the government bring to bear in order to maximize the pool of funds available for infrastructure investment;
- How can the national investment pipeline for infrastructure projects be further developed;
- How can the costs related to the bidding process for infrastructure projects be reduced, thereby lowering the cost of infrastructure overall; and
- What role should user charges play in funding infrastructure projects.

Searching for alternative approaches

These challenges raise a number of important issues that must be tackled head on if the country is to meet its investment goals. For one, we must look at alternative measures for raising capital that do not expose government balance sheets to increased levels of debt. This must include a frank and honest discussion about our existing asset base with a view towards which assets can and should be privatized to effectively recycle capital back into infrastructure.

Some activity has already been undertaken in this space: Queensland recently privatized its railways and ports; New South Wales has also announced the privatization of its port and is currently in the process of refinancing its desalination plant, and a number of states have made some advances,





albeit in the late 1990s, in privatizing their power sector (for more on this, see my other article on page 50). But there are still a number of states that hold significant assets in the power and utility sectors, as well as other potentially high-value sectors such as roads and bridges.

There will also be significant discussion on how to properly structure the market in order to drive greater participation from the Superfunds who – to date – have been active investors in listed assets but have been shy about participating in the PPP market. That being said, there is a general indication from many of the Superfund managers of an increasing appetite for allocating a greater portion of their asset management towards direct investment. Achieving this, however, will take concerted effort from governments.

Eliminating barriers to investment

Both state and federal government players will need to place renewed focus on bringing greater consistency to the PPP process. So while there is currently significant capacity and experience in structuring PPPs, there is a general belief that the approach is disjointed between the various levels of government that hold responsibility for infrastructure. Solving this challenge will require a greater level of coordination when taking transactions to market across the country.

Risk also poses a continuing challenge to enhancing private investment in infrastructure. In the past, a number of PPP programs have met with failure, not because of a lack of capacity within government or the private sector, but rather because of a propensity on the part of governments to offer up too

much risk to the private sector which has added unnecessary costs to the delivery of projects. In Europe, for example, the CIB and EU have proposed providing a level of guarantee over project debt thereby creating a tiered system of debt that would potentially be attractive as a bond to institutional investors.

Reporting back

As a next step, the IFWG has been tasked with delivering a preliminary report on these challenges and possible solutions to the government over the next few months. Readers of this magazine can look forward to a further review and analysis of the group's findings in the next edition of Insight Magazine.



Putting aid dollars to work

By **Katherine Maloney**, KPMG in the US

Created in January 2004 by the US Congress, the Millennium Challenge Corporation (MCC) is an innovative and independent foreign aid agency focused on helping lead the fight against global poverty through economic growth. The MCC has approved more than US\$8.4 billion in compact and threshold program funding worldwide, often to support infrastructure projects in developing and emerging markets.

Mr. Daniel W. Yohannes, CEO of MCC, spoke about the organization's innovative funding models with Katherine Maloney, a Director with KPMG's International Development Assistance Services (IDAS) practice in New York.

Katherine Maloney: I understand that the MCC is very involved in supporting the development of infrastructure in compact recipient countries. Why is infrastructure so important to reducing global poverty?

Daniel Yohannes: Our investment priorities are actually decided by our partner countries, who come to us with proposals after conducting some

rigorous analysis on the factors that are constraining their economic growth. We look at their proposals and then make decisions based on the projects that are expected to return the greatest economic benefit for the countries and their populations.

What we have seen is that about 65 to 70 percent of our portfolio ultimately

goes towards infrastructure-related projects which are vital for promoting trade and investment. One of the biggest constraints to economic growth in developing countries is a lack of infrastructure such as airports, ports and roads, and this is where most of the funding requests are focused.

Katherine Maloney: The sustainability of infrastructure has become a key topic, particularly in the developing world. How is MCC working with partner countries to ensure that the investment provides value long into the future?

Daniel Yohannes: Sustainability is very important to MCC. We don't want to spend five years building roads only to have them fall apart after we are done. That is why we consider sustainability at all phases of our project design and implementation and pro-actively look for ways to reinforce sustainability – for example, by requiring governments, before the project even begins, to put aside a significant portion of maintenance costs and by requiring them to invest in improving the capacity of public works departments. We want the assets we fund to deliver value for a very long time.



/// About **65 to 70 percent** of our portfolio ultimately goes towards **infrastructure-related projects** which are vital for promoting trade and investment. ///

– Daniel Yohannes

Our project in Nicaragua is a great example of this. Before we arrived, the country was only able to maintain about 500 kilometers of road on a budget of US\$2.5 million. But before we would invest in new roads, we needed to make sure that the government could secure the funds to properly maintain them into the future. We required that the government levy a national fuel tax; with the proceeds the country now maintains 3,000 kilometers of road from an annual budget of about US\$31 million. Some of those are roads that we built, but the government has also been able to service the national road network.

Katherine Maloney: MCC has always put a significant focus on encouraging private sector participation in infrastructure development. How is this helping to reduce poverty in the regions within which you work?

Daniel Yohannes: Countries cannot rely on public sector investment alone to bring about long-term prosperity. So we make sure that the private sector is involved from Day one. The private sector is often involved in the development of the constraints analysis at the outset, but they are also usually the first to recognize that these investments are effectively opening up markets and increasing trade. The private sector is also often involved in project design and development in our partner countries, and is certainly involved in contracting to implement projects. We are also focusing increasingly on sector policy reform to encourage private sector investment.

For example, we have a US\$275 million contract with Jordan to enhance that

country's water security. Our funding is being complemented by a private sector builder and operator of water treatment plants who is bringing about US\$85 million to the program to leverage our investment. Another example is our project in Namibia where we have a three-way partnership in which we are providing substantial funding to improve the management of national parks in the north of the country and about 25 percent of the costs of establishing new joint venture tourism lodges, which are partnerships between communities and tourism investors. The government is providing the wildlife and the private lodge owners are providing the remaining 75 percent of the costs. The local population benefits from the construction of these lodges and the resulting infrastructure and jobs.

But we are also working with the national governments to create the right environment for private investment from a policy perspective. In Benin, where we are helping to build a port, the government has introduced major policy reform to help reduce the customs burden. Before we became involved, businesses would have to go through 25 different windows to clear customs and now they are only required to go through one. As a result, we have seen significant improvement in the port's efficiency as the time to unload a ship has fallen from four days to just two, and that number is continuing to fall.

Another example is Georgia, where they have really focused on creating a positive environment for business. Just a few years ago, the country ranked 118 in terms of ease of doing business, but with some concerted effort they now rank 12th which

has greatly increased their attractiveness to private investment.

Katherine Maloney: Looking ahead, what trends do you see gaining traction in the markets in which the MCC invests?

Daniel Yohannes: There is a growing demand for infrastructure that supports inter-regional trade. For example, in Tanzania, the government has invested a significant portion of their compact into building a major road to connect northern Tanzania to Hora Hora on the border with Kenya. That is going to help Tanzania become more competitive and increase its balance of trade within the region. As a result, private investors can now think of Tanzania as a conduit to markets in Kenya and Uganda.

Growth in Africa is actually projected to outpace that of Asia over the next few decades and to help fund that growth, we are seeing increasing partner country interest in leveraging relationships with the private sector to create infrastructure assets to help those countries become more competitive in the global market. Businesses are looking at these countries to see if they can be competitive by allowing them to lower their cost of doing business.

One of the great attributes of the MCC is that we have no specific earmarks or sector requirements imposed by Congress. So everything we do is primarily based on addressing both the needs of the country and the opportunity for businesses to participate and benefit from our investments. That's what makes us so successful; we look at every deal from the perspective of business.

Maximizing returns in infrastructure investment

By **Greg Pestrak**, KPMG in the UK

The days of taking a passive approach to infrastructure investment may be over. In the past, investors in the infrastructure sector could be fairly confident that – if they could identify strong assets with a consistent cash flow – they could expect to achieve relatively stable returns of 10 percent or better. What's more, given the high initial investment requirements and significant capital expenditures involved, there has historically been limited competition for good quality infrastructure assets.



Adapting to change

Today, the dynamics have changed. The current economic environment has increased the pressure on portfolio companies and put their historically stable cash flows under threat. Business plans that – just four or five years ago – seemed like safe bets are now in need of review: power companies are facing pricing pressure from governments while consumers struggle to pay bills in the face of underperforming economies; ports are feeling the impact of reduced traffic and margins as consumer spending declines force down manufacturing activity and imports.

At the same time, competition for strong infrastructure investments has increased with new investors such as sovereign wealth funds and emerging market investors moving into the market and pushing up asset prices.

Add to this the pressure of pending refinancing requirements for businesses that were highly leveraged in the credit boom in the first half of 2000, and it quickly becomes clear that historic assumptions can no longer be taken for granted.

Recalibrating for the future

Today's infrastructure investors are quickly recognizing what Private Equity realized in mid-2000: that relying on financial engineering or multiple arbitrage will no



/// Competition for strong infrastructure investments has increased with new investors such as sovereign wealth funds and emerging market investors moving into the market and pushing up asset prices. ///

longer deliver the necessary returns and that operational improvements will be necessary to achieve the requisite returns or limit any downside risk. And with mounting pressure from the new investors – many of whom are co-investors who are focused on shorter time horizons – infrastructure investors are quickly realizing the need for increased scrutiny on management teams to ensure that they are sufficiently focused on driving value from their investments while not increasing the portfolio risk profile.

The challenge, however, is how best to accomplish this. The majority of infrastructure investors are typically steeped in financial experience, but are often lacking the skills needed to drive operational improvements within their individual assets. As a result, there has been an increasing focus on determining the optimal operating model for forward-looking funds: should they be hiring operations professionals, appointing non-execs with operations experience to their boards, or simply relying on the capabilities of external advisors?

A differentiated approach to driving value

The reality is that there is no right answer and the final decision will likely be dependent on a number of factors such as the size of the fund, their mandate, the level of ownership they have in their portfolio companies, the strength and capabilities of their management teams and the location or proximity of their investments.

What is clear, however, is that infrastructure investors now recognize the value that can be released by ensuring that their portfolio companies are managing their operations more effectively. So while infrastructure

assets have traditionally not had the same focus on cost optimization as other sectors in recent years, the importance of driving performance improvement has certainly risen up their agenda.

The case for active management

As a result, infrastructure investors are starting to take a more active role in ensuring that these opportunities are delivered by developing a clear understanding of the financial and operational baseline, analyzing performance through internal and external comparators and identifying the key operational levers required to drive a step change in the performance of their portfolio companies.

Indeed, those investment managers that are able to quickly develop an ability to influence operational performance improvements, while operating within the boundaries of their risk profiles – either by developing the capacity in-house or by leveraging external advisors – and that can create an effective governance process to ensure that the performance improvements that are achieved are sustainable, will be better positioned to outperform their peers.



The art of privatization: Setting the groundwork for a sustainable industry

By **Julian Vella**, KPMG in Australia

Thinking about privatizing your infrastructure assets? Before you hang the 'For Sale' sign in the window, you may want to think carefully about how to make sure the deal is a success for everyone involved.

The simple truth is that privatization is not a strategy to be taken lightly. Managed properly, the sale of government infrastructure assets can provide a number of valuable benefits: competition can be increased in the market leading to lower consumer prices and better quality services; risk can be transferred off of government balance sheets and into the hands of a private enterprise who – arguably – may be better prepared to manage it; and valuable cash can be released from the asset to be reinvested into new infrastructure programs and projects.

Setting the stage for success

But achieving these worthwhile goals will require governments to create the right environment for not only the sale to succeed, but also to ensure that what is left behind is an efficient industry that can be sustained as a private enterprise while delivering benefits to the consumer.

Indeed, when privatizing major infrastructure like power and utilities, ports or airports, governments must put a significant amount of work into ensuring that those assets will operate within a well-regulated framework that also provides clarity around future prospects for the new owners. This may mean creating an environment where competition is embedded into the industry or, where competition is not possible (such as in the airports or power transmission sectors), creating as much certainty as possible to allow private investors to minimize their risk.

The power of regulation

Take, for example, the experience of the power industry in the Australian state of Victoria. The vertically integrated state-owned power company was effectively broken up into three separate sectors. On the generation side, the state established a number of power companies that owned one or more generation plants that could properly compete against each other within the market. Separate distribution and retail companies were also created to effectively act as the interface with consumers. For transmission, one entity was created to ensure the grid operated as efficiently as possible.

All of this restructuring happened early on in the privatization process through a transparent transition process that allowed each entity to establish a track record for performance in their market before being sold to the private sector. As a result of this groundwork, Victoria has consistently enjoyed some of the lowest energy prices in Australia and continues to be one of the most competitive markets in the world, with obvious benefits to consumers.

Protecting consumers and taxpayers

Of course, it was critical that the government structure all of this in a way that ensured that efficiency gains were shared with the consumer and not just captured by the industry. There are a number of cases around the world where governments have privatized assets only to see prices

become unaffordable or the new owners run the company down to a point where the asset was forced back into public ownership.

We can expect to see a steady flow of privatizations over the foreseeable future as cash strapped governments seek to reduce debt, or alternatively raise funds for investment in new infrastructure. These assets should also prove to be very attractive to the growing number of institutional investors who are seeking to increase their investment allocation to infrastructure because of its relatively low risk, long term profile.

With proper groundwork and preparation, governments and regulators should find that they can not only create a sustainable and efficient industry, but also retrieve some much needed capital from their existing infrastructure assets.

Table 1. Examples of asset privatization deals worldwide

Country	Year	Entity	Segment	Value of Transaction (\$mil)	Type
 United Kingdom	2009	British Energy Group PLC	Power	16,938.36	Trade sale
 Netherlands	2009	Essent NV	Power	10,410.73	Trade sale
 Japan	2000	Nippon Telegraph & Telephone (NTT)	Tele-communications	8,760.22	IPO
 France	2006	Autoroutes du Sud de la France (ASF)	Roads	7,121.51	Trade sale
 Turkey	2005	Turk Telekomunikasyon AS	Tele-communications	6,550.00	Trade sale
 Venezuela	2010	Republic of Venezuela-Carabobo	Power	4,848.00	Trade sale
 United Kingdom	2003	Infraco SSL, Infraco BCV	Rail	4,710.30	Trade sale
 Russian Fed	2011	PGK	Rail	4,222.70	Trade sale
 Mexico	2007	Mexican Toll Roads	Roads	4,030.27	Trade sale
 Philippines	2009	Transco	Power	3,950.00	Trade sale

Tapping into Islamic finance

By Neil D Miller, KPMG in the UAE

On the face of it, few things are more perfectly aligned than Islamic finance and infrastructure investment.

Indeed, the theory behind Maqasid al-Shari'ah (Shari'ah Law) is that wealth should be deployed for the good of humanity. And clearly, participating in the development of roads and bridges, schools and hospitals, water and power utilities falls firmly within that scope.

Tracking the flow of Islamic finance

Scratch the surface a little deeper, and it quickly becomes apparent that the movement of Islamic Finance into infrastructure has been sluggish at best. In part, this is a consequence of size and scope; 'pure-play' Islamic financial institutions tend to be much smaller than their conventional counterparts and rely largely on short-term deposits of one to two years for much of their funding. Clearly, tying up deposits in 20 year deals places a significant risk on the liquidity of these institutions.

As a result, many Islamic financial investments have been centered on short-term debt financing and pure equity investments that offer clear mid-term exit strategies. Notwithstanding the positive impact that many infrastructure projects offer, their relative illiquidity and limited equity upside made them less attractive than other asset classes. Ultimately, this means that – in recent years – much of the available finance has been directed towards real estate investments (often speculative in nature), which – through the course of the Global Financial Crisis (GFC) – have lost significant value. The irony of this has not been lost on some in the Islamic finance industry.

Striking a new path

On closer inspection, it seems that a large part of the Shari'ah-compliant infrastructure financing activity that has occurred in the Muslim world (and predominantly in the GCC) over the past decade or so has actually been conducted by larger Western banks who – with significant experience in infrastructure development and deep pocketbooks – have carefully structured their deals in these jurisdictions to be Shari'ah-compliant.

Although booked by the bank's Islamic finance 'windows' the ultimate source of the funding has not been provided by Muslim investors. An interesting side effect of the GFC has been that funds held by many Islamic financial institutions have significantly increased and are often perceived as safe havens by now much more cautious depositors; there is now a massive amount of capital standing on the sidelines waiting to be deployed into Shari'ah-compliant investments. And while a small number of Islamic financiers are crying out for more Shari'ah-compliant infrastructure investment activity to take place across the Muslim world, it remains unclear if depositors want to commit to this asset class with the current implicit liquidity restraints and lower returns than they became used to in previous years.



Adapting approaches for success

One of the most significant challenges for those investing through Islamic finance comes in the form of tax; only a relatively limited number of countries – even in the Muslim world – have adapted their tax frameworks to facilitate Islamic finance. For example, most tax regimes operate on the premise that loans carry interest and therefore have a defined deductibility and treatment for tax purposes.

But Islamic transactions are often characterized as ‘trading’ contracts, and therefore tend to attract sales taxes and VAT, without receiving the beneficial deductibility treatments. Cross-border payments may also be treated less favorably under withholding arrangements. This means that investors in Islamically-structured deals need to pay close attention to the structure of their deals to ensure that their tax position is treated no less favorably than they would be under an equivalent form of conventional finance. The bottom line is that investors are seeking a ‘level playing field’, not advantageous treatment.

Ownership may also be a particular issue for foreign banks seeking to invest through an Islamic structure as many jurisdictions restrict the foreign ownership of certain assets. This

may require third party involvement to facilitate the deal and can impose additional costs and complexity.

Not so different after all

For Western infrastructure developers and investors, unlocking the power of Islamic finance may well provide a rich source of project equity and co-funding. And while the Islamic approach to financial intermediation may seem somewhat confusing at first, foreign banks and export credit agencies will often find that Islamic contracts are not all that different from Western ones.

Indeed, with the proper analysis, overlaying funding guarantees or gaining clarity into how the contracts will hold up under certain circumstances should be relatively straightforward and – if structured appropriately – should be no less lucrative than conventional methods.

The spring of Islamic infrastructure finance

That said, there are a number of factors that may eventually encourage the infusion of more Islamic funds into infrastructure. For one, there is a growing realization that Islamic capital markets require additional depth and breadth. This will likely result in tradable instruments based upon (or at least backed by) infrastructure assets which would help to both develop the capital markets further

/// Many Islamic financial investments have been centered on short-term debt financing and pure equity investments that offer clear mid-term exit strategies. ///

and address short-term liquidity demands, especially if they can be structured using sovereign ratings. Already, there are signs of activity in this regard.

The events surrounding the Arab Spring will also eventually result in the rebuilding and development of the affected countries, and much of the needed financing will likely be funded by other Muslim states along Islamic lines. What’s more, the Islamic Development Bank and several other Islamic investment institutions are becoming increasingly aware of the attraction of Shari’ah-compliant infrastructure funds and many industry commentators expect to see an increase in the launch of such funds over the next two years. Clearly, there is good reason to be optimistic about the potential for Islamic finance in infrastructure.



Indian cities: the great infrastructure challenge

A synopsis of a round table discussion on the need for transformation in India's Urban Infrastructure sector

By **Arvind Mahajan**, KPMG in India

With an estimated 700 million people moving into India's urban areas between now and 2050, the country needs to build the equivalent of 500 cities over the next four decades. Clearly, development of this scale would be a massive challenge for any country. But India also struggles with a number of significant barriers that continue to hamper the development of urban infrastructure: complex leadership structures, land valuation challenges, capability gaps, and funding shortfalls are all part of the urban challenge that is effectively holding India back from a new round of dramatic economic growth.

In advance of the World Economic Forum Meeting in Mumbai, India (12–14 November 2011), KPMG's Global Infrastructure practice convened a round table discussion of leading Indian Infrastructure practitioners. The group discussed a wide range of challenges unique to the Indian marketplace and developed consensus on six key urban infrastructure issues that must be overcome:

1. Creating an urban vision: India requires a strong national vision for the development of cities that integrates infrastructure into a wide range of urban priorities such as jobs, education, social services, housing, as well as the population's desire for an aesthetically pleasing experience. This will require governments at all levels to increase their capability to conduct 'Master Planning' and may

be facilitated by developing smaller cities that are more vertical in nature and support the growth of important sectors such as manufacturing.

2. Empowering urban institutions: In many urban areas, responsibility for urban infrastructure falls under a number of different agencies and institutions. This lack of clarity around leadership has resulted in conflicting

priorities, duplicated investments and lost efficiency. There is, therefore, a strong need for cities to centralize responsibility for urban planning and infrastructure development under a senior technocrat with the power and scope to span all of the interested parties, agencies and institutions.

3. Realigning project procurement:

Rather than focusing on delivering individual assets or projects, urban developers and government planners will need to think about infrastructure in terms of services to residents by leveraging output-based contracts and project structures that take into account the value that urban infrastructure provides to residents. In part, this will require a stronger focus on developing a Total Cost of Ownership perspective, as well as borrowing best practices from international participants.

4. Supporting effective

implementation: Integrated and well-planned implementation will require India's central government to take a leading role in catalyzing

urban development. And while this will almost certainly be facilitated by the wider sharing of central experience and knowledge, projects are often also impacted by decisions taken at a local level. As a result, the central government may need to bring the knowledge capital and initial trunk investment to spur urban development, but local governments will need to provide the leadership, planning and on-the-ground implementation support to ensure the projects succeed.

5. Building capacity for growth:

As India's focus starts to shift towards urban development, the government and developers will need to quickly build capacity and gain much-needed capabilities to meet the growing demand for infrastructure. From developing greater capacity for Master Planning within all levels of government to building stronger abilities in implementation, India will need to develop and enforce policies and regulation while also exposing town planners to global approaches and methodologies.

6. Securing long-term funding: With no real municipal bond activity or debt markets for city development and low tax revenue recovery in many urban areas, governments and infrastructure planners will find securing long-term funding increasingly challenging. In many cases, local municipalities are looking to unlock value through land monetization, thereby providing a sustainable and off-budget approach to infrastructure funding. But there is still an urgent need for the development of new instruments to encourage the local financing of urban infrastructure.

The next few years will ultimately be the real test of India's ability to radically transform the status-quo of urban infrastructure development. There will be much change and – indeed – some uncertainty. But if the hard questions are asked – and answered – by all infrastructure stakeholders: government, developers, funders and citizens working together, there is much optimism that a sustainable and visionary path forward will soon be found.



Asia rising

By **Simon Booker** and **Alison Simpson**, KPMG in China

By all accounts, Asia Pacific is quickly becoming a hot topic for infrastructure investors. Indeed, the past year has seen a flurry of activity in both the primary and secondary markets, and the attention of global investors has clearly been captured.



“Asia Pacific certainly presents opportunities, investors will need to be clear about their objectives and savvy about adapting their investment model in order to adapt to – and benefit from – each individual market.”

Take a closer look, and it does not take long to realize that Asia Pacific presents challenges as well as opportunities for infrastructure investors. On the one hand, there are a small number of markets that have achieved a significant level of maturity in structuring and executing infrastructure projects using private finance through Public Private Partnerships (PPPs). Australia and Singapore are the most obvious examples, but other markets such as the Philippines and Thailand have also recently improved their regulatory environments to promote PPP structures, and Vietnam is not far behind.

Learning to walk before they run

Digging a little deeper however, it becomes clear that infrastructure delivery models in Asia Pacific are in a state of transition. Much of Asia has been gaining experience in the letting of operating concessions (particularly roads, water utilities and airports), but the region has yet to make the leap into more complex financing arrangements that transfer significant risk to operators in order to deliver sophisticated infrastructure assets such as hospitals and schools.

In China, private finance for infrastructure is largely non-existent and, regardless, is essentially not

cost competitive due to budgetary surpluses and reserves which dampen the need for courting private investors. But China may be on the cusp of some significant changes, mostly driven by recent actions of the central government which have resulted in limiting the borrowing power of local authorities for infrastructure development. As a result, we expect to see the country mature more quickly in this respect, coupled with a growing recognition of the merits of risk transfer and commercial expertise in the delivery of infrastructure.

Some challenges persist

While many of the larger infrastructure funds have earmarked significant capital for investment into Asia – and China in particular – there still seems to be some concern over country risk, driven in part by new, unsophisticated or untested regulatory environments. As a consequence, there continues to be a critical role for multilaterals and aid agencies in delivering fundamental infrastructure in these markets.

Other challenges are also impacting investor confidence in the region. The Philippines, for example, has seen some rather public disputes over the security of revenue flows for PPP concessionaires who, having had their fingers burnt, have taken their cases to Washington for arbitration. In the secondary asset market – where the

Infrastructure Funds predominantly focus – there are also challenges in finding quality assets in many of the Asian markets, often as a result of the slow development of basic infrastructure.

Emerging markets, indeed

That said, investors with an appetite for long-term returns may find Asia Pacific to be exactly the panacea that they seek to balance investments in the ailing markets of Europe and America. Asia Pacific's populations are growing and becoming more affluent; governments are trying to quickly adapt regulation to deliver more transparency and confidence to private investors; and economies are continuing to expand and mature despite the economic turmoil being felt in other regions of the world.

It is worth remembering that it took the UK more than two decades to develop and formalize the PPP/PFI model into a sophisticated tool for driving private investment. Most of Asia has been working towards this goal for only five to ten years and the pace of change is accelerating markedly.

So while Asia Pacific certainly presents opportunities, investors will need to be clear about their objectives and savvy about adapting their investment model in order to adapt to – and benefit from – each individual market.

Global diary

KPMG firms' professionals are committed to sharing insights and exploring issues and opportunities through industry events. Here we share a selection of recent and upcoming forums organized, or with significant involvement, by KPMG. Follow the links to learn more or email us at: infrastructure@kpmg.com

New York City, US

Climate Change and Sustainability Summit – Business Perspective on Sustainable Growth: Preparing for Rio+20

14-16 February 2012

KPMG's Global Chairman Michael Andrew presided over KPMG's first three-day global summit designed to address one of the fundamental challenges of our time: driving sustainable business growth in a resource-constrained world. Business Perspective on Sustainable Growth: Preparing for Rio+20 provided business and policy leaders with an important forum to identify and prioritize key sustainability issues.

www.kpmg.com/sustainability



Montevideo, Uruguay

Inter-American Development Bank (IDB) Annual Meeting

16-19 March 2012

KPMG's Global Infrastructure Chairman was invited to participate as a panelist at the Inter-American Development Bank (IDB) and the Inter-American Investment Corporation (IIC) Annual Meeting in Montevideo, Uruguay. The panel discussed PPPs and creating partnerships for infrastructure development. Participation at the Annual Meeting is by invitation only.

www.iadb.org/



Siem Reap, Cambodia

Environmentally Sustainable Cities Seminar

6-8 March 2012

KPMG presented at the 3rd High Level Seminar on Environmentally Sustainable Cities (HLS ESC) in Cambodia. The main objective of the seminar is to provide a broad platform for fostering partnership, sharing of best practices and to promote achievements on environmentally sustainable city development in the ASPAC region.

<http://cleanairinitiative.org/>



Sydney, Australia

Energy State of the Nation Forum (ESON)

23 March 2012

KPMG will host a session at the Energy Policy Institute of Australia Energy Forum on Investment and finance. The objective of the Institute is to provide a mechanism for all stakeholders in Australian energy to collaborate on risks and concerns impacting energy finance, production, supply and export.

www.energyalliance.com.au/



London, UK

ACI Airport Economics and Finance Conference & Exhibition

7-9 March 2012

Airport Council International (ACI) is hosted the 4th Annual ACI Airport Economics and Finance conference on Airport Investment, Financial Management and Economic Sustainability. KPMG's Amber Dubey participated in the panel discussion on "What PPP means for your airport: Understanding the financial, management and operational implications of PPP schemes".

www.aci-economics.com



Bogota, Colombia

2nd BNAmericas Andean Infra Summit

28-29 March 2012

KPMG is proud to be a sponsor of the 2nd Andean Infrastructure Summit. The summit will bring infrastructure sector leaders from the Andean region and Central America together with international players.

www.andeaninfrastructuresummit.com/



Brasilia, Brazil

Modernization of Public Management Seminar

3-4 April 2012

KPMG is proud to sponsor the Modernization of Public Management Seminar. The forum will provide leaders and public policy makers the ability to discuss efficient models of success. The seminar will focus on five sectors: Public Management for results, Public Employee Training and Management, Intelligent Cities, Healthcare Management and Education Management.



Singapore, Singapore

The World Cities Summit

2-4 July 2012

The World Cities Summit is attended by ministers and senior policy makers, business leaders, practitioners and futurists, and will cover cross-cutting issues around the interplay of people, technologies and markets facing cities today, with specific emphasis on leadership and governance, sustainable and eco-friendly cities as well as harmonious and sustainable communities. This year's theme will be "Liveable and Sustainable Cities – Integrated Urban Solutions".

www.worldcities.com.sg/



Puerto Vallarta, Mexico

World Economic Forum on Latin America

16-18 April 2012

The World Economic Forum is a world class summit attended by business, political and academic leaders who will shape regional and global practices to improve the state of the world. The Latin America Forum will address the region's role and contribution to the governance of the global economy, the creation of innovative models for a sustainable future and the improvement of capabilities for a regional transformation.

<http://www.weforum.org/events/world-economic-forum-latin-america-2012>



Miami, US

Infrastructure Summit: An Island Perspective of a Global Challenge

23-25 September 2012

KPMG is proud to host the Second Annual TOG Infrastructure Summit. The event focuses exclusively on the unique opportunities and challenges involved in developing islands' infrastructure. Participants include Premiers and Ministers of State for island economies around the world.

www.kpmg.com/infrastructure



Munich, Germany

Global Issues Forum: City, Climate, CO₂-reduction: an attractive business case?

24th April 2012

Stephen Beatty, Americas Head of Global Infrastructure, will participate in a panel discussion on "Low carbon infrastructure: an attractive investment case and an opportunity for our insurance business?" at the Allianz Global Issues Forum in Munich.

www.allianz.com



Vienna, Austria

KPMG Global Power & Utilities Conference

28-29 November 2012

This conference is KPMG's premier event for CEOs, divisional heads and financial executives in the power and utilities sector. The intensive program focuses on strategic, financial, environmental and risk related issues, including related to infrastructure, and providing insight into the tools and strategies to help manage them.

<http://www.kpmgpowerconference.com/>



Vienna, Austria

EMEA Tax Summit

20-21 June 2012

Tax professionals from around the world participated in the firm's annual Global Europe, Middle East and Africa Tax Summit. Tax implications for infrastructure will be a key topic of discussion, including industry trends, indirect and corporate tax rate changes and implications, regulation, and the ways environmental tax can contribute to saving the planet.

www.kpmg.com/taxviews



Various Locations

Women's Infrastructure Network (WIN)

Various Dates

KPMG is proud to have played an integral role in the formation of WIN. KPMG, in collaboration with Freshfields Bruckhaus Deringer, initiated WIN in the United States in 2008. Since then WIN has expanded and created chapters in the United Kingdom, Ireland and Canada. WIN's mission is to help women to emerge as leaders in the infrastructure sector and to assist collaboration between the public and private sectors in the development and provision of infrastructure globally. For a list of upcoming events in your region visit www.womensinfrastructure.net/events/

www.womensinfrastructure.net



Bookshelf

A selection from our library of global infrastructure reports and insights. To access these publications, please visit: www.kpmg.com/infrastructure or email us at: infrastructure@kpmg.com

Insight – The Global Infrastructure Magazine

Insight is a semi-annual magazine that provides a broad scope of local, regional and global perspectives on many of the key issues facing today's global infrastructure industry.



Insight: Infrastructure 2050 – First Edition

The first edition of Insight explores one of the great universal challenges of the 21st Century – infrastructure. In this issue, our professionals share insights from global experiences, across many sectors, and throughout the infrastructure lifecycle.



Insight: Urbanization – Second Edition

The second edition of Insight explores the infrastructure challenges currently being faced by cities, and includes feature interviews with key city leaders and private sector executives from around the world to shed light on how they are responding to the infrastructure challenge.



Reaction Magazine: Fourth Edition

This issue looks at M&A trends from both an emerging market and established market company perspective and examines how M&A activity may change the shape of the global chemical industry over the coming years. We consider current trends in the global construction industry and see how tax efficiency in the supply chain can provide a competitive advantage.



Agenda Magazine Issue 7

This edition discusses how strategic divestments and rigorous risk management led to the growth and success of GMR, India's market leader in infrastructure development, how the 'Made in China' label is becoming a high-value brand proposition and how the modernization of rural banking can change the investment landscape. It also discusses how global regulations in the banking sector might change the way businesses access liquidity.

KPMG and UCL Infrastructure Intelligence Club Series

A series of reports investigating the operational impacts of the use of private finance. Rather than opinion and assertion, these reports offer an objective analysis based on available data.



Operating Healthcare Infrastructure: Analyzing the Evidence

How does private finance affect hospital operational performance? This report explores the findings of data analysis on the topic.

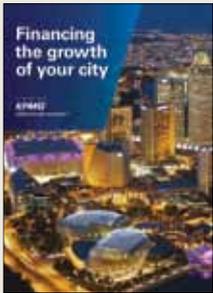


PFI in School Building – does it Influence Educational Outcomes?

Our second report further investigating the impact of investment in school building, and the use of private finance, on educational outcomes.

Latest insights – KPMG Global Infrastructure publications and reports

KPMG member firms are privileged to be involved in many of the exciting changes that are happening in every corner of the world, across many sectors, and at various stages of the lifecycle of infrastructure. We continuously seek to share the insights we are gaining in the process. To access our most recent publications and reports, visit: www.kpmg.com/infrastructure.



Financing the growth of your city

This paper highlights alternative financing mechanisms and structures for urban infrastructure financing. These financing options, including Public Private Partnerships (PPP), could help cities gear up to not only meet the challenge of rapid growth but also become global cities with world class infrastructure.



Power Sector Development in Europe – Lenders' Perspectives 2011

This report highlights the key findings from a survey of top European banks on the prospects for power infrastructure financing in Europe.



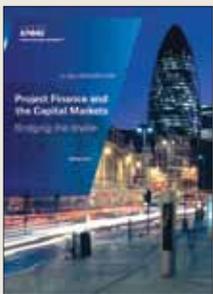
New nuclear – an economic perspective

This paper discusses the recent events at the Fukushima Nuclear Power Plant. Nuclear power is already playing a substantial role in the decarbonization of the global economy and currently offers the sole cost-comparable, low-carbon alternative to fossil fuels.



The green challenge for telecoms

According to some estimates, the Information and Communications Technology sector directly accounts for between 1 and 2 percent of global energy consumption and emissions. This paper reports on the status of responsible low energy design options for the communication sector.



Project Finance and the Capital Markets

This paper examines the barriers to accessing the debt capital markets for project financing and provides a qualitative and quantitative analysis of the potential solutions that are being developed – in particular the product being offered by Hadrian's Wall Capital as compared to the current project finance bank market.



KPMG Global Power & Utilities Conference – Europe 2011: Conference Report

This publication provides a comprehensive summary of the key issues and perspectives discussed during the KPMG Global Power & Utilities Conference – Europe 2011.



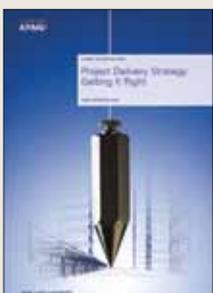
Infrastructure 100

From KPMG and Infrastructure Journal – a look at 100 of the most exciting infrastructure projects underway globally. A distinguished group of judges selected these game changers from hundreds of submissions.



Construction Risk in New Nuclear Power Projects – Eyes Wide Open

This report draws on KPMG experience advising on new nuclear builds around the world. The report focuses on construction risks and shares examples of models in new nuclear power projects. It also discusses other critical considerations for investors.



Project Delivery Strategy: Getting it Right

What are the various project delivery options available to owners? What are the factors that might influence the selection of one method over another? This paper explores the options.



Success and Failure in Urban Transport Infrastructure

This joint report with University of London College explores the findings of nineteen case studies from cities around the world, including New York, London, Hong Kong, Singapore, Dublin, Bogota, Manila, Manchester, and Bangkok.

KPMG-Economist Intelligence Unit (EIU) Survey Series

During 2009 and 2010, KPMG commissioned a series of surveys with the EIU into issues and the way forward for infrastructure development worldwide. The three resulting surveys show a clear consensus of opinion by business leaders, infrastructure providers and government officials that as infrastructure ages around the world, we are making insufficient investments to protect our future.



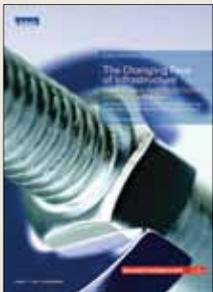
Bridging the Global Infrastructure Gap: Views from the Executive Suite

A survey of 328 C-level executives and board members from 22 countries. The majority of respondents expressed concern about the adequacy, quality and availability of infrastructure to support both their business growth and that of their national economies.



The Changing Face of Infrastructure: Public Sector Perspectives

Survey of 392 public sector infrastructure policy developers and procurers from 50 countries worldwide. The majority of respondents agree that the politicization of infrastructure priorities and lack of funding are biggest impediments to infrastructure development.



The Changing Face of Infrastructure: Frontline Views from Private Sector Infrastructure Providers

A survey of 455 executives from 69 countries worldwide. The majority of respondents expressed concern regarding governmental effectiveness inhibiting infrastructure development.



Rail at High Speed: Doing large deals in a challenging environment

Many countries are preparing and/or implementing high-speed rail projects. This paper shares lessons learned from work performed by KPMG member firms advising Portugal's first high speed rail project.



The Roll-out of Next Generation Networks: Investing for 21st Century Connectivity

A spotlight report on approaches being taken by governments around the world relative to the roll-out of high speed broadband networks.



The Great Global Infrastructure Opportunity: KPMG Global Construction Survey 2012

The last three years have, without a doubt, been full of uncertainty for many in the engineering and construction industry. Interviews with senior executives from 140 of the world's leading engineering and construction companies highlights that one constant is the insatiable demand for energy and infrastructure in all forms.



Delivering Water Infrastructure Using Private Finance

We examine the risks and rewards of using private finance to fund water infrastructure, including how municipal governments and potential investors can benefit.



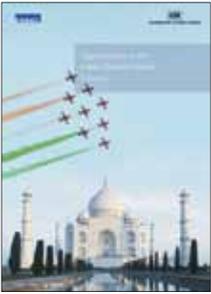
Island economies and their infrastructure: An outlook 2010 and beyond

A first of its kind report on Island Economies, providing a comparative analysis of the state of the infrastructure challenges currently being faced by island economies.



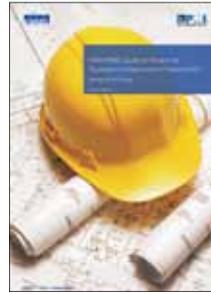
Think BRIC! Key considerations of investors targeting the power sectors of the worlds largest emerging economies

A series of publications highlighting major trends and challenges shaping the evolution of the BRICs countries' power sectors over the course of the next decade.



Opportunities in the Indian Defence Sector

A joint study by CII-KPMG reveals the India is upbeat about the opportunities in defence and aerospace, and eager to grow its industrial capabilities in this space, but is looking to government to continue its process of developing and fine-tuning the procurement regime and industry drivers that will enable industry to grow.

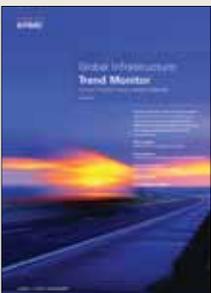


KPMG-PMI Study on Drivers for Success in Infrastructure Projects 2010

KPMG in India and the Project Management Institute undertook this survey to decode the issues inhibiting successful project delivery. Includes the views of over 100 top management personnel representing leading Indian companies across multiple infrastructure sectors.

KPMG's Global Infrastructure Trend Monitor Series

The *Global Infrastructure Trend Monitor* is a series of publications allowing infrastructure investments to be compared across geographies. Our aim in developing the series is to help improve the quality of debate in identifying the geographically attractive markets for infrastructure investment.



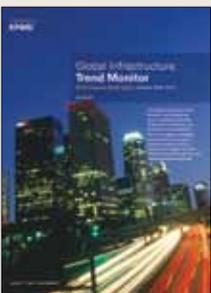
European Transport Edition: Outlook 2008-2012

Spain emerges as a "star" market – both large and expected to grow rapidly. Other smaller markets expected to grow rapidly fast are Bulgaria, Estonia, Iceland, Ireland, Latvia, Lithuania, Poland, Portugal and Romania.



Indian Healthcare Edition: Outlook 2009-2013

Of the 32 states considered in our research, the six states of Maharashtra, Rajasthan, West Bengal, Uttar Pradesh, Tamil Nadu and Andhra Pradesh are forecast to represent approximately 50 percent of expenditures for the 2009-2013 period.



North American Roads Edition: Outlook 2009-2013

In Canada - Alberta, British Columbia, Ontario and Quebec are expected to continue to attract nearly 90 percent of Canadian road investment. In Mexico, expenditure is predicted to shrink by an average of 8.6 percent per annum. In the US, California, Florida, and Texas lead in terms of combined public and private investment in road infrastructure and are projected to maintain their dominance through the medium term.



Southeast Asian Transport Edition: Outlook 2010-2014

Of the 10 nations included in our research, Indonesia, Malaysia, Singapore, and Thailand are forecast to represent over 80 percent of the total cumulative expenditure for the 2010 to 2014 period.



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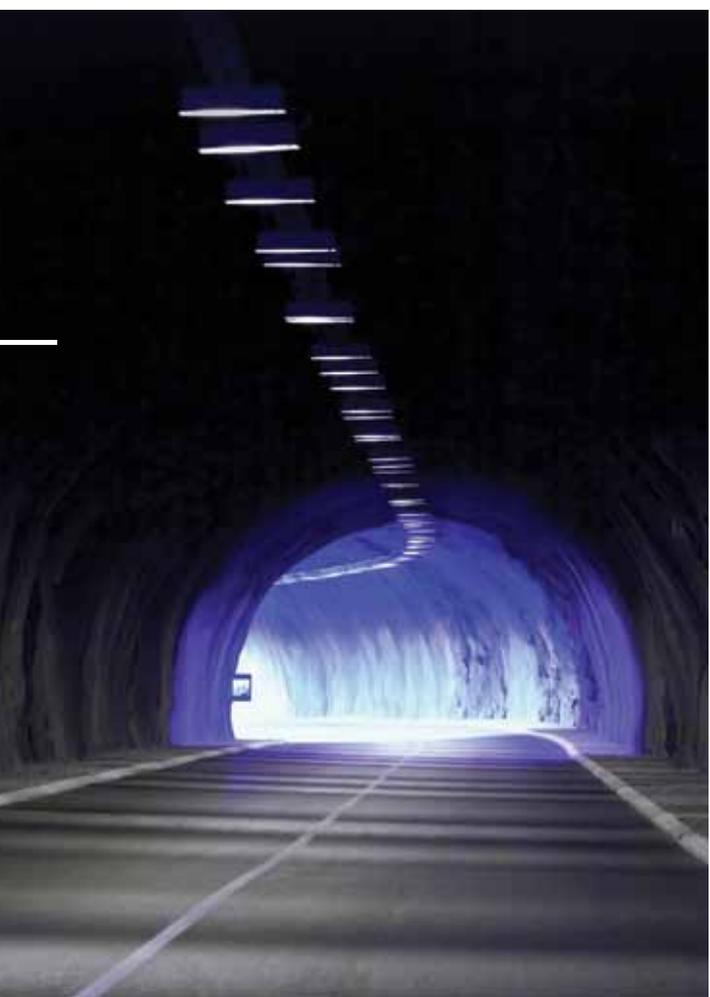
FORESIGHT

A Global Infrastructure Perspective

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