Introduction

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The topic of this year's conference, 'Financial Flows and Infrastructure Financing', was chosen to support the G20 agenda during Australia's presidency in 2014. More specifically, the G20 is seeking to boost global growth, including through focusing on ways to improve the climate for investment, particularly in infrastructure. Reflecting the broad range of issues covered by this topic, the conference was jointly hosted with the Productivity Commission and the Lowy Institute for International Policy. The Productivity Commission has had considerable experience with a wide range of infrastructure issues, most recently with its report on *Public Infrastructure* (PC 2014a, 2041b). The involvement of the Lowy Institute for International Policy was a natural extension of their role in supporting the G20 agenda throughout Australia's presidency. All RBA annual conferences are designed to encourage debate among policymakers, academics and practitioners on important policy questions. To this end, and reflecting the relationship with the G20 agenda, the participants included academics from local and international universities, representatives from international financial institutions, members of the G20's Investment and Infrastructure Working Group, Australian policymakers, and institutional investors.

The conference benefited greatly from the participants' broad range of experience and a number of themes emerged from the presentations and the subsequent discussions. The first was that capital markets are likely to become increasingly important as sources of infrastructure financing. This suggests that there will be a need for further financial market development and continued access to cross-border financial flows in many emerging market and small open advanced economies. A second theme was that selecting infrastructure projects that deliver the greatest net social benefits and planning how they will be built and operated most efficiently should come before questions of financing. To this end, it is necessary to ensure that project selection and planning processes are transparent, based on rigorous analysis of the costs and benefits, and independent of political interference. Finally, it was clear that if there are suitable infrastructure projects on offer, there is private capital that is willing to invest.

Financial Flows

The conference started from a macroeconomic perspective. Infrastructure investment, as with all investment, is a source of productive capital in the economy, and it is an important policy challenge to understand what factors might be preventing savings from finding their way to the most productive investment opportunities. The first two papers consider the role played by cross-border capital flows in mobilising savings, particularly for small open economies and emerging markets. The third paper addresses this question through the lens of financial market development, emphasising the potential role of capital markets to intermediate efficiently between savers and those looking to invest in the Asian region, whether they are based locally or offshore.

Marcel Fratzscher (DIW Berlin) considers the drivers of capital flows and the extent to which policy can affect these flows. The range of policy options includes: macroeconomic policy tools, such as monetary and fiscal policy; prudential tools; policies that affect the quality of institutions and the investment environment; and capital controls and foreign exchange intervention. His analytical work, which uses high-frequency data on portfolio bond and equity flows, separates the effects of push factors that originate from external sources, such as changes in US monetary policy (for economies other than the United States), and pull factors that originate domestically, such as an economy's economic fundamentals and institutional environment. This distinction matters because the nature of the capital flows has a direct bearing on the effectiveness of the tools domestic policymakers have at their disposal. Professor Fratzscher's results suggest that push factors are, overall, about as important as pull factors in driving net capital flows. Additionally, using the example of changes to capital controls in Brazil, he finds that while these capital controls had some effect on portfolio capital flows into and out of Brazil, there were also spillover effects on other emerging market economies. This suggests that there is a role for policy coordination at the international level.

Philip Lane (Trinity College Dublin) also considers the drivers of capital flows, but at a lower frequency, over a longer time period, and only for emerging market economies. The paper starts by noting that infrastructure investment has a number of features that make it attractive for small open economies, particularly in emerging markets, to look to international investors for financing. In particular, he notes that infrastructure investment requires large amounts of capital, which may be difficult to raise domestically without crowding out other forms of investment. He also highlights the fact that, given their expertise, international investors have more capacity to mitigate and manage the risks involved in infrastructure. However, there is a trade-off between these benefits and the risks that come with potentially volatile capital flows. In light of this, and the analytical results discussed in the paper based on long-run data on capital flows, Professor Lane proposes a number of factors that are likely to improve the trade-off between the returns from allowing capital inflows and the risks associated with capital flow volatility. These include a strong macrofinancial policy framework, resilient government balance sheets and sustainable net international investment positions.

The theme that sound fundamentals are a precondition for managing the risks associated with deregulating financial markets was also present in the paper by Torsten Ehlers, Frank Packer and Eli Remolona (Bank for International Settlements). They consider the potential for capital markets to provide financing for infrastructure projects in the Asian region, noting that bank financing is well suited to the initial stages of an infrastructure project because of the high levels of uncertainty, the ease of renegotiating the terms of loans (relative to bonds) as uncertainties are resolved, and banks' comparative advantage with monitoring projects. However, they also note that regulatory changes, such as the introduction of the Liquidity Coverage Ratio under Basel III, are likely to affect bank funding to longer-term higher-risk projects relative to the period prior to the global financial crisis. They provide statistics on the development of project bond markets in Asia, noting that once infrastructure projects enter the operational phase the probability of default is relatively low and cash flows are relatively stable, making bond financing more suitable. They also provide evidence highlighting the importance of having sound legal and regulatory structures as well as efficient bureaucracies to support the development of these markets, consistent with the literature on the development of local currency bond markets.

Facing the Challenges for Infrastructure Financing

The next session of the conference turned more specifically to the question of how infrastructure investment differs from other forms of long-term investment and what the implications of these differences might be for financing. The paper presented by Emily Poole (RBA), Carl Toohey and Peter Harris (both from the Productivity Commission) highlights the inherent role that governments play in the provision and regulation of infrastructure. They argue that project planning and selection are critical first steps before the question of the best financing model should be considered. In particular, projects should be independently examined using cost-benefit analyses where the assumptions are transparent and made available to public analysis to avoid the possibility that conclusions could be manipulated through unrealistic assumptions. The value of well-governed decision-making and advisory institutions as a part of the selection and bidding processes was emphasised both in the paper and in the subsequent discussion. Participants also generally agreed that increasing transparency gives decision-making processes around infrastructure the best chance of being independent of political pressures, which should improve project selection.

Another theme of this paper, which was touched on throughout the conference, was that once a project has been chosen, the financing arrangements need to be designed to ensure that the incentives of all the parties are aligned to build and operate productive infrastructure in the most efficient way. This means that risks are either borne by participants who are in a position to manage them or have the best capacity to bear the risk. These considerations are fundamental for deciding on the roles and responsibilities of the public and private sectors in infrastructure provision. The paper by Jordan Schwartz, Fernanda Ruiz-Nuñez and Jeff Chelsky (World Bank) explores ways in which the different risks experienced over an infrastructure project's life cycle might be mitigated. They note that there is a case for government involvement when private sector participants cannot reasonably manage some of the risks involved or are not in the best position to bear those risks. Indeed, some risks, such as political and regulatory risk, are directly related to the government's decisions. This theme was echoed by a number of participants throughout the conference.

The paper by Clifford Winston (Brookings Institution) argues that, before proceeding with new infrastructure investment, the question should be asked whether existing infrastructure can be operated more efficiently. Using case studies from the United States, he suggests that using technology to improve price signals (e.g. through user charging) and to cater more effectively for the heterogeneity in consumers' preferences is often a cost-effective way to get more out of existing infrastructure. In discussions following the presentation of the paper, it was acknowledged that there is often community resistance to user charging and privatisation, and many politicians are wary of implementing efficiency-enhancing changes of this kind as a result.

Public-Private Partnerships

The paper by Eduardo Engel (Yale University), Ronald Fischer (Universidad de Chile) and Alexander Galetovic (Universidad de los Andes) looks at the potential for public-private partnerships (PPPs) to deliver infrastructure efficiently. They emphasise the importance of separating the economics of an infrastructure project and its financing – a point that was also made earlier in the conference. They illustrate this in a stylised framework where, in the absence of efficiency gains, the cost to the government of providing infrastructure through a well-designed PPP contract or public procurement is the same if appropriate accounting standards are used over the life cycle of the project. Despite this equivalence, they give examples of how the budgeting of PPPs is often used by governments to avoid increasing government debt and/or on-balance sheet expenditure in the near term to circumvent political economy constraints. Several participants pointed out that the record of PPPs suggested efficiency gains were often not sufficient to justify this method of procurement and management. It was also agreed that obtaining efficiency gains relies heavily on ensuring incentive compatibility by using well-designed contracts that have measurable quality standards and only shift risks to private parties that these parties can actually control.

These themes were also apparent in the first panel discussion on the lessons from practical experiences with PPPs. In general, the panellists regarded PPPs as a useful tool, but recognised that there have been negative experiences in their use. These were often attributable to poor contract design, inappropriate risk transfer and, in some cases, weaknesses in the broader operational environment, such as lack of independence from the political process and lack of competition among providers of construction and operation services. Some participants suggested that PPPs can help to overcome political economy constraints that can prevent infrastructure delivery.

The first part of the panel discussion focused on the experience with PPPs in emerging Asia. David Hawes (Australian Department of Foreign Affairs and Trade), who has had direct experience with implementing PPPs in Indonesia and the Philippines, indicated that there has been too great an emphasis on providing 'big-ticket' infrastructure (such as roads and power stations) rather than crucial social infrastructure (such as schools and hospitals). Additionally, there has been too much focus on financing the investment rather than on funding the operation once it has been built. More recently, institutional and regulatory reforms have been put in place to respond to some of these problems. The second speaker on the panel, Maria Monica Wihardja (World Bank), also referred to the case of Indonesia and provided details on the evolution of Indonesian PPPs and the associated changes in regulation that have facilitated this progress. Mr Hawes commented that these reforms have led to a much more positive environment for infrastructure financing, and have delivered a broader range of benefits. In particular, he noted that there has been more focus on introducing competition into sectors that have traditionally been dominated by state-owned enterprises and, when that has not been possible, there has been more emphasis on designing competitive and transparent bidding processes. Dr Wihardja also noted that the ability to pursue PPPs going forward will rely on a maturing of financial institutions and financial markets. Both Mr Hawes and Dr Wihardja discussed the invaluable role played by international cooperation through the Association of Southeast Asian Nations, the Asia-Pacific Economic Cooperation and the G20, as well as through international financial institutions, particularly with respect to capacity building and supporting the reform agenda. However, both speakers noted that there is scope for greater coordination across agencies.

The second part of the panel discussion focused on the lessons from implementing PPPs in the Australian state of New South Wales (Peter Regan, NSW Treasury) and Europe (Gerassimos Thomas, European Commission). Both panellists indicated that PPPs are an important part of the strategy for developing infrastructure in their jurisdictions and that, although there had been mistakes made in the past, lessons have been learned. Mr Regan discussed how achieving an appropriate risk transfer between the public and the private sectors could be challenging and emphasised the importance of tailoring the details of PPP contracts to the specific circumstances of the project. Mr Thomas also highlighted the fact that delivering infrastructure through a PPP improved the final outcome because it forced consideration of how best to build, operate and maintain infrastructure. Both panellists commented on the benefits of developing technical expertise within the public sector.

The need to develop capital markets as a way of tapping private sector financing as the capacity of banks and governments to provide financing diminishes was raised by both panellists. Mr Regan pointed out that the capacity of the private sector to construct and deliver infrastructure was also a potentially limiting factor that might be eased if there is a sufficient flow of projects to attract new participants. However, this needs to be weighed against the capacity of the public sector to manage a large flow of infrastructure projects. Mr Regan also spent some time discussing the benefits of the 'capital recycling' program being undertaken in New South Wales. He suggested that ring-fencing the proceeds of privatisations in a fund that can only be used for further infrastructure investment allowed decisions around infrastructure provision to proceed with more independence from the political process. He also noted that capital recycling had further benefits in terms of making privatisation more acceptable to the general public.

The Role of Institutional Investors

The second panel looked at the prospects for long-term institutional investors, such as pension funds, to participate in financing infrastructure projects. André Laboul (Organisation for Economic Co-operation and Development) moderated the discussion with the panellists Frédéric Blanc-Brude (EDHEC Risk Institute-Asia), Leo de Bever (Alberta Investment Management Corporation), Jan Dehn (Ashmore Investment Management), Michael Hanna (IFM Investors) and Shemara Wikramanayake (Macquarie Funds Group).

The discussion was wideranging and touched on many of the issues raised at various stages throughout the conference. In particular, the panellists made it clear that there is appetite from institutional investors to invest more in infrastructure assets, but that there is a shortage of projects with suitable characteristics. In particular, regulatory risk is seen as a major impediment. One way forward is to increase the transparency and independence of decision-making processes. However, it was noted that the ability of governments to deliver a pipeline of projects in a transparent way with efficient bidding processes has been constrained by the skills available in the public sector and weaknesses in the institutional framework governing the process. Several participants suggested that risk aversion among politicians and public servants has been an impediment to reforming these processes. It was generally agreed that multilateral development banks, such as the World Bank and the Asian Development Bank, can play an important role in mitigating risk in emerging markets through their project preparation work and ability to assist in dealing with political or regulatory challenges. In this respect, it was noted that institutional investors find it costly and difficult to build a sufficient degree of expertise in smaller emerging markets.

There was a lively debate on other ways to attract institutional investors into infrastructure financing in addition to improving the flow of suitable projects. One suggestion was that more could be done to define benchmarks that would allow institutional investors to treat infrastructure as a distinct asset class. However, some panellists suggested that the risk and return on individual infrastructure projects should be evaluated separately, and that some of the most profitable opportunities come from projects that do not neatly fall into standard benchmark categories.

The merits of the different investment models used by institutional investors were also discussed at some length. Some large funds have moved to a 'disintermediated model', where expertise in infrastructure project management is developed internally and funds are invested directly in unlisted projects. In contrast, other pension funds use external fund managers or invest in listed vehicles. It was argued by some participants that the key benefits of the disintermediated model were a better alignment of incentives between investors and procurement authorities, and much lower costs in terms of fees for asset management.

References

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PC (2014b), *Public Infrastructure: Volume 2*, Inquiry Report No 71, Productivity Commission, Canberra.