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THE ROLE OF INSTITUTIONAL INVESTORS IN FINANCING DEVELOPMENT IN ASIA AND THE PACIFIC

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Abstract

The developing world needs the equivalent of USD 1 to 1.5 trillion per year in finance for infrastructure development expenditures to reach the millennium development goals by 2030. Given this challenge, what is the role of institutional investors in financing development in emerging and developing markets in Asia and the Pacific? The short answer is "currently small, but potentially significant". This paper identifies a number of impediments to the growth of institutional investments in development project as well as corresponding solutions.

Impediments include the limited size of capital markets in many developing and emerging economies; the complexity of infrastructure projects; and political risks associated with financing projects where government policies and regulations are particularly important determinants of the return on the investments.

Solutions to these impediments require sustained efforts in a number of areas: securing a stable macroeconomic environment; maintaining a strong legal framework supportive of the enforcement of financial contracts; streamlining infrastructure project management making the process more transparent and hence less cumbersome for potential investors; encouraging public private partnerships; and insuring regulatory consistency and transparency as well as the rule of law in dealing with potential disputes related to infrastructure investments.

These solutions require sustained and consistent efforts over several years. Jurisdictions that are able to make progress in implementing the needed reforms will reap the benefits of a larger share of institutional investment funds being allocated to their development and infrastructure needs.

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Table of Contents

ROLE OF INSTITUTIONAL INVESTORS IN FINANCING IN ASIA AND THE PACIFIC

By
Hans Genberg

1. Introduction

The developing world needs the equivalent of USD 1 to 1.5 trillion per year in finance for infrastructure development expenditures to reach the millennium development goals by 2030.[1] While much of the resources must be mobilized through taxes and fees collected by governments in the economies concerned, and while some will be provided by official development assistance and international development banks, there are growing efforts to draw institutional investors into development finance. The OECD estimates that the size of assets under management by institutional investors had reached USD 80 trillion by 2012,[2] so if only a relatively small fraction of these resources were allocated to infrastructure development projects, the pressure to find finance for development would be significantly reduced.

However, the actual allocation of institutional investors to infrastructure finance is less than one percent of assets under management. This paper thus seeks to provide some insights into why this percentage is so low, and what may be done to increase it. To set the stage, the next section gives a brief overview of the institutional investor base and provides some general indications about what considerations are most prominent in determining their asset allocation decisions.

Section 3 discusses salient features of development projects, particularly infrastructure projects, which have an impact on potential investors' financing decisions, and therefore their allocation of funds to such projects. Section 4 reviews the role of capital market development and bond financing in development finance in general and infrastructure finance in particular, and suggests measures that may be considered to support the growth of capital markets in Asia and the Pacific.

Public Private Partnerships as a model to involve institutional investors in the private sector in development finance is the subject of Section 5. The section points to the underlying benefits from such partnerships, but also to potential hurdles that may limit their scope along with suggestions for overcoming them. Section 6 turns to the potential role of impact investors, i.e. investors who are ready to forego a part of the pecuniary return on an investment project in exchange for the knowledge that the project will deliver 'reputational' benefits resulting from the

[1] Inderst and Stewart (2014) and United Nations (2015).
[2] International Monetary Fund, OECD, The World Bank (undated).

social benefits that the project delivers.

Section 7 draws together the mains strands of the paper and offers a number of recommendations that follow from the analysis.

2. Institutional Investors: Who Are They and What Do They Do?[3]

Institutional investors manage large pools of funds. According to Çelik and Isaksson (2013) their assets under management stood at USD 84.8 trillion in 2011.[4] How much of these funds we may expect to be invested in developing and emerging economies requires an analysis of the investment decisions of different classes of institutional investors. The label institutional investor is itself attached to a wide variety of institutions each with its own distinct asset allocation profile. Pension funds and insurance companies have historically been institutions most closely associated with the label. However, a number of other entities have recently become increasingly important in terms of assets under management. Mutual funds, private equity funds, sovereign wealth funds, asset managers, investment banks, hedge funds and exchange-traded funds are all examples of institutional investors. This diversity has led to a definition of an institutional investor simply as an entity that is not an individual private investor.

The investment behavior, or asset allocation choices, of each type of institutional investor will be determined by a number of factors such as its ownership structure, its fiduciary mandates, its liability structure, and the regulatory framework in which it operates.

Pension funds, the quintessential institutional investor, has a (contingent) liability structure with a comparatively predictable time profile of pay-outs that depends importantly on slow-moving demographic developments. As a caveat to this assessment it should be noted that some funds leave significant discretion to account holders to determine which types of assets they would like to be invested in. In such cases the manager of a particular segment of the pension fund will need to be mindful of the possibility that account holders may switch from, say, a predominantly EME bond fund to a more equity-based fund. For such shifts not to be disruptive, the manager of the bond fund may need to hold a more liquid portfolio than she would in an environment where individual account holders in a pension fund were not able to shift asset holdings between alternative asset classes. An additional characteristic of many pension funds is that they are publicly owned. This raises the possibility that their 'business model' is influences by factors other than the direct financial interests of the account holders. Examples would be requirements that the fund invest in 'priority sectors' of the economy to spur economic development, favor

[3] Adapted from the subtitle of Çelik and Isaksson (2013).

[4] This figure is subject to two important caveats. It is likely to be an overestimate since some institutional investors, e.g. pension funds, allocate a portion of their assets to other institutional investors, e.g. hedge funds. This implies a degree of double counting, the extent of which is not known. On the other hand, only data from investment funds (e.g. mutual funds), insurance companies and pension funds located in OECD countries are covered by the data. These institutions manage the largest portion (USD 73.4 trillion) of the total for the industry as a whole.

environmental and sustainable development projects, or invest in infrastructure.

Insurance companies are similar to pension funds in that their liability structure is relatively predictable as it can be calculated quite accurately using actuarial principles based on historical loss claims. As a consequence, the investment profile can afford to accept liquidity risks and focus on assessing longer-term credit risks.

Sovereign Wealth Funds (SWFs) invest national wealth for the benefit of future generation. The archetypical example is a fund that collects revenues from the sale of natural physical resources and invests these in financial assets. For the same reasons as insurance companies SWFs can afford to accept liquidity risk and invest in longer-dated somewhat illiquid securities thereby enhancing the expected return. Like some pension funds SWFs are state controlled and can, subject to the applicable legal and governance arrangements, be used to support society's objectives such as environmental and sustainability concerns even if that entails foregoing financial returns.

Other types of institutional investors typically, although not always, tend to value liquidity properties more heavily since their liability structures are such that they face redemption risks to various degrees and of various severity. This is the case for example of certain **mutual funds**, **hedge funds** and **investment banks**, and also of some **private equity funds**. Regulatory requirements may also affect asset allocation decisions, for example when risk-based capital adequacy requirements assign higher risk weights to certain classes of assets.

An additional aspect that can be used to differentiate among institutional investors is the extent to which they use their investment as a way to influence the management of the company or project they are investing in. At one end of the spectrum would be the purchase of a long-term bond that has been issued to finance an infrastructure investment such as a port facility. Such a purchase does not imply any management control. Taking an equity interest in an existing infrastructure facility would imply direct ownership of a share of the facility and could also imply management oversight through board membership. How much management oversight is involved depends on the form of the equity interest. If it is obtained through a minority investment in a listed company on a stock exchange, the involvement is likely to be minimal. On the other hand, if it is obtained by acquiring a significant share of a private non-listed company, it is ostensibly weightier. A deeper degree of involvement in the management of the firm or project has the objective of improving efficiency and returns, but it also entails greater costs, as resources have to be allocated to the management oversight function. Investing in a greenfield infrastructure facility would typically represent yet greater management involvement and associated costs.

The degree of management control exercised differs substantially between types of institutional investors. The majority of institutional investors are passive in the sense that they have no interest in management control and only seek out infrastructure and other development finance assets because of their return and risk characteristics. World Economic Forum (2015)

claims that out of the USD 75 trillion in assets under management by institutional investors, only about 700 billion are invested with the objective of exercising some management control. As exercising some management control can be very costly because it requires dedicated teams of staff with the necessary skills and knowledge, only the very largest investors are able to do it. A somewhat more common, and increasingly important method of exercising control, albeit indirectly, is for several smaller investors to pool their investments, and hire a dedicated asset manager to carry out the management oversight function. Private equity funds are likely to be the most involved in taking a hands-on approach to investing in infrastructure and development instruments.

Data on the size of holdings of Asian assets by institutional investors are fragmentary. ESCAP (2014) presents revealing data on the size of Asian institutional investors from a global perspective. These data show that that the assets of private sector asset managers in the Asia-Pacific region amounted to 9.7 per cent of the assets of asset managers globally. Asia-Pacific pension funds accounted for 26.3 per cent of the world total, with the pension fund of the Government of Japan occupying the number one position among the world's pension funds by size. Asia-Pacific sovereign wealth funds held 44.8 per cent of the assets of such funds globally with the China Investment Corporation occupying fourth place and the fifth place taken by SAFE Investment Company. The assets of the three types of institutional investors together accounted for 14.9 per cent of the world total.[5] When this figure is compared with the size of Asia-Pacific economies' combined GDP, which is approximately one quarter of world GDP, it can be concluded that institutional investors in Asia and the Pacific have room to grow, as financial deepening in the region proceeds.

Didier and Schmukler (2014) also contains information on the size of asset holdings of institutional investors, which corroborates that contained in the ESCAP study and provides some additional insights. Three generalizations can be made: first, institutional investors are significantly larger in advanced countries than in emerging markets measured by the size of their assets; second, institutional investors play a larger role in Asia than in other emerging markets, except for the pension funds that have a large presence in Latin America; third, insurance companies are the largest institutional investors in in the Asian markets, but mutual funds seem to be growing rapidly and may soon catch up.

While comprehensive data on the country allocation and the allocation by asset classes of the institutional investors' portfolios are not available, Didier and Schmukler report, albeit based on patchy data, that most of the assets of the institutional investors in Asia, as in emerging markets in general, are in the form of government bonds and bank deposits. Corporates appear not to be attracting funding from institutional investors at present, either in the form of bonds or

[5] The figures refer to December 2012 for asset managers and pension funds and to December 2014 for sovereign wealth funds. The total for the three types of institutional investors was thus obtained by adding information for different time periods. This should not have a critical influence on the final result as sovereign wealth funds account for only about 20 per cent of total institutional assets holdings in the Asia-Pacific region and only 7 per cent in the world as a whole.

equity financing. This suggests both a limitation of the capital markets and an opportunity: the limited size and liquidity of the markets as well as institutional constraints may be a reason for the lack of interest among institutional investors, but, if this is the case, there is hope that growth of the markets and institutional reforms will make them more attractive for this class of investors.

In this context, one may ask whether foreign institutional investors are more or less likely to invest in domestic infrastructure and other socially beneficial projects than domestic institutional investors. On the one hand, foreign investors typically hold investments in a larger universe of assets than domestic investors. Therefore, they may view domestic (foreign for them) infrastructure projects as a convenient way to diversify risk. Domestic investors are more likely to be heavily exposed to domestic economic risks, which would make them less likely to take on further risks of a similar, or correlated, nature. On the other hand, domestic investors can be assumed to have more in-depth knowledge of economic conditions in their own country, and have more access to public bailout funds should a project underperform. This would make them more willing to accept the risk associated with domestic investments. On balance, it is not clear which type of investor is more likely to view domestic socially beneficial projects more favourably. A policymaker would be well advised to treat both equally.

3. Risk/Return Properties of Infrastructure and Sustainable Development Investments

3.1 Infrastructure Projects Are Not All Alike

Infrastructure and sustainable development projects are not homogeneous. They typically differ in aspects such as the degree to which they involve public sector approval and concession; the market structure in which they operate; and the degree to which private and social costs and benefits are equally affected. These differences in turn determine which type of institutional investor may be attracted by a particular project, the type of financial instrument most likely to be used, and whether or not some type of government support is required or warranted.

Some projects, such as those related to public transport facilities or the production of electrical energy, typically involve spill-overs or externalities. This means that the benefits and costs of such projects do not accrue only to their direct users, but also to others. For example, a new railroad line between a suburb and the city center will benefit users of the train service by reducing commuting time, but it may also benefit those who continue to commute by automobile or bus by reducing congestion on the road connection. Furthermore, to the extent that the suburb is now more accessible, land and house prices may increase, thus benefiting existing owners. Restaurants and other service providers in the suburb may also benefit from clients in the city center who now find that the shorter commute make the services more readily available.

Similarly, promoters of development projects may not take sustainability concerns into account because the full benefits and costs of the project do not accrue only to the immediate

users but also to what we may call innocent bystanders. Clearing rain forests to make room for agricultural production will have benefits for the producers and consumers of the produce grown, but to the extent that CO_2 absorption by the now smaller rain forest is lost, it may have implications for climate change affecting people long distances away. On the other hand, electrical energy projects involving wind or solar power will generate positive climate externalities in additional to electrical power that can be priced and sold on the market place. The positive externalities are typically not priced, although it may be possible to do so by considering them as negative carbon footprints that can be traded on a carbon tax exchange.

The presence of positive or negative externalities means that unfettered free enterprise will not in general guarantee that the amount of resources devoted to the corresponding projects will be optimal. In cases where the spill-overs are predominantly positive the projects tend to be underfunded and vice versa in cases where negative externalities predominate. In both cases, some type of policy intervention could lead to superior outcomes.

Other common infrastructure projects have characteristics associated with natural monopolies. Examples include public utilities such as the provision of electricity or water. As in the case of projects involving externalities, some form of government intervention is typically recommended to prevent monopoly pricing and to align private and public costs and benefits. This can take the form of regulating the size of user charges, or carrying out the project in the form of a public private partnership in which the public sector retains a strong presence. Involvement of the public sector takes the analysis of the potential risks and returns associated with the project beyond purely commercial/market considerations, as it is likely to involve political considerations and uncertainties to a greater extent.

Another case where government involvement will be necessary involves the extraction of natural resources that are the property of the state, and hence the population at large. Examples include the exploitation of mineral reserves such as iron/copper/gold/etc. mines and oil/gas fields. Obtaining the rights to such exploitation typically requires some form of government concession, the terms of which will have a significant impact both on the profitability of the investment project and the revenues accruing to the state. The corresponding risk/return assessments will consequently have both commercial and political components.

Finally, there are projects such as residential and commercial real estate developments; sports and entertainment facilities; and airport and port facilities which have much in common with purely commercial undertakings, even if in certain cases they raise concerns about monopoly power and the need for government approval both in the design and operational phases.

3.2 What Type of Official Involvement?

To deal with externalities policy makers typically make use of regulations, taxes or subsidies. Regulations may take the form of prohibiting or limiting activities that entail severe negative spill-overs on bystanders. Examples include restrictions on activities that result in environmental pollution or prohibitions on smoking in public places. Taxes can in some cases be designed to have similar effects as outright prohibitions, albeit less far-reaching such as imposing taxes on carbon dioxide emissions or on cigarettes.

While regulations and taxes typically are designed to restrict activities that create negative spill-overs, subsidies are meant to encourage those with positive external effects. Tax incentives for installing solar panels in homes or factories and subsidies to users of public transport services in congested cities would be examples.

Properly designed regulations, taxes and subsidies may go a long way to limit activities that cause negative spill-overs and encourage those with positive ones. However, difficulties of enforcement may in some situations limit their effectiveness and fiscal costs may reduce their feasibility. Incentives given to financial markets to steer funds into preferred activities may constitute a useful complement, but they need to be carefully designed.

Financial markets driven purely by private risk-reward considerations will not take into account external effects in intermediating funds. Incentives need to be provided in order to align private and social benefits and costs. Regulations, taxes and subsidies may have been used to this end. For example, restrictions on the ability of foreign investors to participate in the local financial markets are used in some jurisdictions to limit the perceived dangers associated with capital inflows.

Subsidies to encourage funds to flow to favored sectors are also used. Government subsidies to mortgage insurance would be an example. More subtle forms of subsidies have also been designed. Consider the case of financing private sector investments in transport infrastructure such as toll roads, railroads, or airports. Such investments will come about only if the investor will be able to earn a return from road tolls, railroad tickets, and airport user charges. The returns must accrue over a relatively long period of time for the project to be profitable. However, as the road, train, and airport charges are often subject to government approval due to their political sensitivity, there is potentially a great deal of uncertainty about their permanency. There is a time-consistency problem at work. To induce the private sector to invest in a toll road project, the government will promise to keep road charges at a profitable level for a certain number of years. Once the road is built, however, there is a temptation to reduce charges to gain political support by easing the financial burden on users. To offset the inherent risk to the private investor some guarantee will have to be given. One way of doing so would be to securitize the expected future returns from the road charges and provide a guaranteed rate of return on the security. Any difference between the actual return from the toll road and the guaranteed return

on the security would be borne by the government.

Additional means by which governments may attempt to promote long-term investments by institutional investors have been highlighted in recent publications by the Organization for Economic Cooperation and Development (OECD).[6] OECD (2011), for example, contains no less than eight principles that are intended to guide government policy initiatives. The first principle lists fundamental preconditions such as stable macroeconomic conditions, a predictable regulatory framework and effective enforcement of the rule of law and tax neutrality as necessary elements to encourage long-term investments by institutional investments. The next section will show that these factors are crucial also for the development of capital markets, itself an important building block for attracting institutional investors to a country.

Principle 5 in the OECD document is of particular relevance for the present discussion. It states that "[g]overnments may consider providing risk mitigation to long-term investment projects" (p. 9). These would include "credit and revenue guarantees, first-loss provisions, public subsidies, and the provision of bridge finance via direct loans" (p. 9). Each of these would reduce the risk borne by the investor in infrastructure or environmental protection projects. Credit and revenue guarantees would protect the investor from failure of the project to generate enough revenue to give the investor the contractual return. First-loss provisions would provide financial support to a financing vehicle so as to increase the credit rating of the securities it issues to finance the infrastructure project. Similarly, public subsidies and provision of bridge finance at below-market interest rates would reduce the cost for the investor.

The justification for such support makes reference to the socioeconomic and environmental impacts of the investments, in other words to consequences beyond the narrow scope of an individual project. While such considerations are important from a collective point of view, and while the suggested measures are likely to attract some additional institutional investments, it is important to emphasize that in each of the examples, there is a potential call on public funds to 'bail out' the private investor. The budgetary consequences of this must be considered carefully in a general cost-benefit calculus.

Finally, it may be tempting for governments to pressure domestic institutional investors such as pension funds and insurance companies into taking environmental and sustainable economic development objectives into account in their asset allocation decisions. This may be justifiable when these objectives have a direct impact on the returns and risks associated with the asset allocations. If it means that institutional investors should incorporate the spill-over effects of the projects they invest in, the situation is different, however. The case for making individuals, such as pensioners who are dependent on institutional investors' performance for their livelihood, suffer a loss of financial return for the common good of greater environmental protection is weak. Such protection should be paid for by society as a whole.

[6] OECD (2011) and OECD (2015).

3.3 Challenging Risk Assessment

Assessing the risk associated with infrastructure and sustainable development investments is notoriously difficult in view of their long-term character. In addition, their heterogeneous nature makes generalizations particularly hazardous. It is useful to distinguish between two types of risks, those that depend on macroeconomic developments, and those that are project specific. Project-specific risks can in turn be divided into those that depend on supply and demand conditions particular to the project, and those that are subject to discretionary government decisions.

General macroeconomic developments are very hard to forecast beyond a horizon of three to four quarters. Hence, the best a long-term investor can do is to attempt to hedge the associated risks. For example, in a market where inflation-linked bonds exist, it may be possible to protect an investment from unexpected inflation developments, but corresponding hedges are not generally available for other types of macro risks. Even for inflation risk, only a small number of markets offer hedging possibilities.

For investments, whose outcome are principally market determined, project-specific risks can be analyzed based on fundamental factors that apply. For example, investments in real estate are likely to depend on variables such as demographic developments, urbanization trends, and long-term economic growth. Institutional investors typically have access to professional assessments of these trends and can make considered decisions based upon them. Even in these cases, however, the execution of a project depends importantly on the management of the construction process, which therefore may need to be closely supervised. This can be carried out if the investor not only takes a share of the ownership of the project but also in its management. As noted in the previous section, such close monitoring is costly and requires considerable expertise. Some private equity investors do have such expertise, but arms-length investors such as pension funds and insurance companies would typically hire dedicated asset managers to execute this task, to the extent that they chose to pursue these types of investment projects in the first place.

4. The Unfulfilled Potential of Infrastructure Bonds

4.1 Why Do Institutional Investors Not Invest Significantly in Infrastructure Bonds in Spite of Their Potential Appeal?

We have seen that assets under management by institutional investors now amount to somewhere between USD 70 and 100 trillion based on OECD estimates for 2011 and accounting for some subsequent growth. As noted in section 2, institutional investors have a natural demand for long-term assets to match the long-term nature of a large portion of their liabilities. Infrastructure bonds would seem a natural asset to invest in. Yet, only a very small portion, 0.4 percent according to Ehlers, Packer, and Remolona (2014), are invested in such bonds. What

explains this discrepancy between the potentially very large demand for infrastructure-linked bonds and the actual investments allocated to them?

Recall from section 3 that infrastructure investments have a number of special characteristics that an investor must cope with. They typically require large up-front investments; whose returns only materialize after several years. This feature requires close monitoring in the early stages of the project to reduce the risk of mismanagement and unproductive use of the borrowed funds. In this bond investors are at a disadvantage because they tend to be arm-length. Banks, private equity, or asset managers, on the other hand, often make substantial investments in monitoring activities. They are therefore more inclined to invest in the early phases of an infrastructure project.

Why, however, is there not more bond financing, especially in emerging markets, during the latter stages of a project when it starts to generate regular returns? Ehlers, Packer, and Remolona, op. cit., suggest four possible reasons: the complexity of infrastructure projects which makes it excessively expensive for many investors to acquire the necessary information about expected returns and possible risks in order to make considered decisions; the substantial role of government regulations in setting the rules related to infrastructure investments gives rise to risks of a political nature that are difficult to evaluate; the empirical observation that the cyclicality of the infrastructure bond market closely follows the cyclicality of the international bond market in general, which takes away some of its attractiveness as a long-term investment; and finally, for developing and emerging markets in particular, the underdeveloped nature of bond markets in many of these markets.

These impediments to bond financing of infrastructure suggest possible solutions, some of which are quite familiar by now. With respect to the complexity of infrastructure projects, some governments have set up offices that are dedicated to streamlining infrastructure project management making the process more transparent and hence less cumbersome for potential investors. This is particularly useful in the case of public private partnerships discussed in section 5 below. Another development around the complexity problem is for investors to join forces in investment funds dedicated to infrastructure financing and hire expert asset/project managers for the fund as a whole.

Risks associated with the importance of government policies for infrastructure development require more far-reaching solutions, such as insuring macroeconomic stability, regulatory consistency and transparency, and the rule of law in dealing with potential disputes. As we shall see, these elements are also important for the development of domestic bond markets.

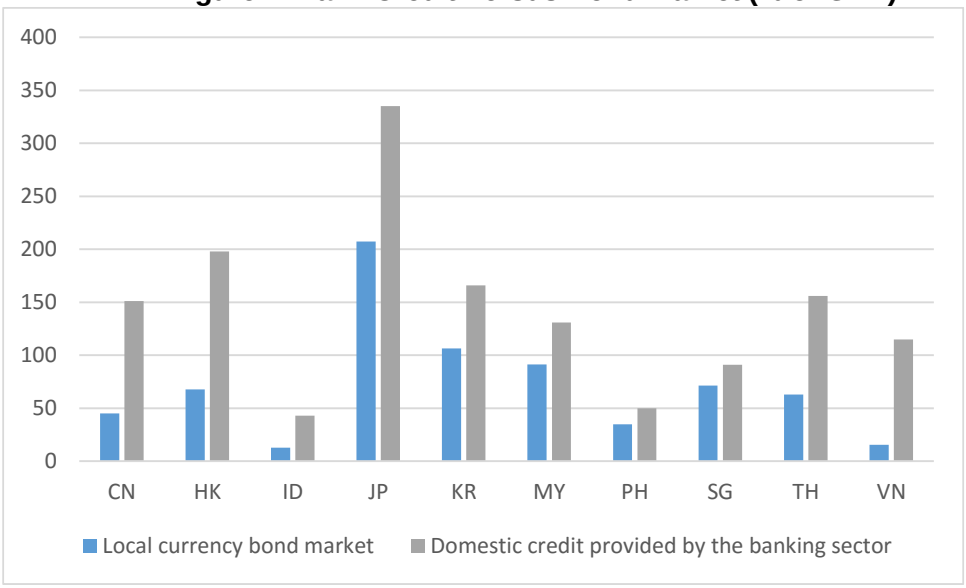
Cyclicality is difficult to deal with at the level of an individual market that is part of a larger international financial system, but its consequences may be attenuated in part by measures that bring about deeper and more liquid local bond markets, and in part through integration of small individual bond markets into a larger regional network.

Finally, the importance of developed local bond markets for investors is exemplified by the fact that infrastructure bond finance is most developed in countries like Malaysia and the China, where the local market is most vibrant. The next section discusses bond market developments in emerging Asia-Pacific economies and measures that may be taken to encourage it.

4.2 Developing Bond Markets in Developing and Emerging Economies

The traditional dominance of bank finance in the Asia-Pacific region is well known. As illustrated for a sub-set of economies in Figure 1 the ratio of bank credit provided to the private sector to the size of the local currency bond market ranges from about 1.2:1 to over 7:1.[7] Similar dominance of bank credit relative to equity finance is documented in Genberg (2015).

Figure 1. Bank Credit Versus Bond Market (% of GDP)



Source: Bond Market: Asian Development Bank, https://asianbondsonline.adb.org.
Bank Credit: Asian Development Bank Key Indicators for Asia and the Pacific, 2014.

What factors may determine the evolution of capital markets in general and bond markets in particular going forward? Empirical research recently reviewed in Laeven (2014) has identified a number of critical relationships.

Macroeconomic instability is detrimental to the development of domestic capital markets. High and variable inflation tends to be associated with supressed local currency bond markets as investors and issuers both seek the relative certainty of foreign currency-denominated instruments even though that entails exposure to currency mismatches. Cross-country experiences indicate that equity market development is similarly held back by volatile inflation

[7] The data are for 2011.

and economic growth.

With respect to institutional and legal frameworks the literature suggests that strong property right protection, such as enforcement of securities laws and debt contracts, and strong corporate governance, are beneficial for capital market development.

Financial infrastructure, i.e. both the organization of trading activities and the regulations that govern trading, is also very important. A well-functioning infrastructure is essential for trades to be executed rapidly and safely thereby contributing to the liquidity of the market. It also contributes to building confidence among issuers and investors in the integrity and fairness of the process of price discovery, elements that are necessary for their participation in the market.

As Laeven points out, governments have an important role to play in each of the three areas mentioned through: providing a stable macroeconomic environment; introducing and maintaining a strong legal framework supportive of the enforcement of financial contracts; and encouraging the creation of robust trading platforms and practices. In addition, measures that increase the size of the investor base and facilitate the participation of a wider group of borrowers could effectively increase the breadth and liquidity of the market contributing to its growth and contribution to economic activity. Measures that make it easier for pension funds and other institutional investors to participate in the domestic capital market and that encourage the introduction of innovative investment vehicles should be explored. Opening the domestic market to foreign investors may also be considered.

5. Involving the Private Sector Through Public Private Partnerships

As we have seen, reaching millennium development goals will require substantial investment, which cannot be covered entirely by the public sector or international aid. The developing world will have to engage the private sector, in particular for large-scale infrastructure projects. While capital markets could provide some of these funds, they tend to be relatively expensive and volatile, due to the markets' typically short-term outlook. In addition, as noted above, capital markets are typically not well developed in many of the economies in great need of infrastructure investments. Therefore, while bearing in mind the caveats listed in section 2, some types of private institutional investors are ideal sources of capital given their long-term liability structure. In order to obtain such institutional participation in funding development goals, one model of interest is that of Public Private Partnerships (PPPs).

There is no single standard definition of PPP. Instead, the term is applied to a variety of arrangements, depending on the organization or jurisdiction. For the purposes of this paper, we propose the broad designation put forward in the World Bank / ADB / IDB PPP Reference Guide: "A long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance" (World Bank et al., 2014, p.14). Within this

framework, there is a range of possible structures that fall between fully public and fully private delivery. On the public to private continuum, we may discern the following general categories of PPP: *management contracts*, where significant management and operational responsibility for the provision of a public service rests with the private contractor, whose remuneration includes both fixed and variable components based on performance and is disbursed by the government; *affermage or lease contracts*, where the private operator is fully responsible for service provision and maintenance, though not for new or replacement investment, collecting revenue from the end-user while paying the government a lease or affermage fee; *concessions*, where in addition to financial and operational accountability, the private partner is responsible for all capital investment; *build–operate–transfer (BOT) and similar arrangements (including BTO, BOO, DBO, DBFO)*,[8] where the private entity or group provides the capital to build the new infrastructure project, with variations on what party is responsible for designing, operating and owning the facility and at what time; and *joint ventures*, where ownership and risk of a project is shared amongst public and private partners (Asian Development Bank, 2008; IOB, 2013). Service contracts, where public authorities hire a private entity to provide a specific service generally on a short-term basis (public procurement), and full divestitures (privatization) are not included under the PPP umbrella.

The decision to enter into a PPP and of what sort depends on a host of factors, including the goals of the government, the project's sector and type, local circumstances and support, private partner interest, public and private capabilities, and financing options, among others. These factors are project-specific and will differ from project to project. From a more general perspective, the PPP model is typically considered attractive because it ideally involves the mobilization of private resources and the sharing of risk, taking advantage of the financial and technical expertise, capacity for innovation, and managerial efficiencies offered by the private sector, and along with economic growth, promoting a broader reform agenda. More controversially, PPP contracts can be accounted for off balance sheet, even though they typically involve some form of government liability (PWC, 2005; Asian Development Bank, 2008; Araújo and Sutherland, 2010). Regarding infrastructure development in particular, PPPs may address frequent challenges such as inadequate or non-existent supply, or low quality or reliability due to a lack of resources, poor planning and operation, or plain corruption. Indeed, market imperatives and contractual incentives may ensure that private partners select, build, manage, and deliver to a higher standard than the public sector (World Bank et al., 2014).

PPPs are, however, no panacea. The challenges and risks inherent in the model require careful assessment and management. For one, PPPs may appear to alleviate public sector funding issues more than they actually do. This relates not only to off-balance sheet liabilities, but also to potential guarantees imputable to the government, either explicit (revenue or credit guarantees) or implicit (moral obligation, public expectations) (World Bank et al., 2014). For instance, overly optimistic ridership and freight estimates for the Channel Tunnel Rail Link

[8] BTO: build, transfer, operate; BOO: build, own, operate; DBO: design, build, operate; DBFO: design, build, finance, operate.

between France and the UK, among other issues, forced the private partners to go back to the government for financial assistance, which the latter had to provide given the high-profile nature of the project (OECD, 2014 b). As for risk sharing, it only works if risk is in fact allocated to the party that can manage it best, which requires not only careful attention to contractual terms but also prudent planning. A contract is only as good as the analysis that preceded it, as flawed cost and benefit estimates leading to poor results can severely undermine a project, as seen in the case of the Eurotunnel above. With respect to private sector expertise and efficiency, the proper incentives and safeguards have to be in place, lest, for instance a contractor become opportunistic once the contract is won or underinvests as it nears its term. Furthermore, the bidding and award process is not immune to corruption. A bidder could thus be favored for reasons unrelated to whether it is suited to the job. Finally, regarding the promotion of reform goals, they can only succeed in the context of broader policy and legal changes. Indeed, the regulatory framework and more importantly confidence in the rule of law are key elements in negotiating efficient contracts, and to some extent, in negotiating any contract at all. Regulatory uncertainty (fear of expropriation, for instance) can increase risk perceived by the private partner and thus cost to the public sector to levels that make a project unviable (Araújo and Sutherland, 2010; World Bank et al., 2014)

In view of these risks and challenges, a number of elements are crucial to potential success. Overall country readiness has been shown to be a key such driver. This includes a strong legal and regulatory framework, as mentioned above, but also a reliable framework for assessing and entering into PPPs. A PPP unit within the government, for instance, can be an effective way of accreting knowledge and experience, with the view of streamlining the review process and reducing the not insignificant costs associated with it. With regard to the process itself, it should be transparent and competitive. The aims of the PPP should also be clear to both the public and private partners, thereby facilitating the legal drafting. This extends to expectations and conditions regarding the partnership and project, bearing in mind that ultimately the PPP is meant to provide a public good. Thus, the government should maintain a leading role in the process to ensure that public welfare is in fact being served. Within the agreement, in addition to a clear assignment of roles and responsibilities, performance-linked bonuses and penalties should be unambiguously laid out. (PWC, 2005; Farquharson et al., 2011; IOB, 2013; Asian Development Bank, 2014; Alikhani et al., 2015)

While these factors are essential to the success of a PPP in itself, they are also key elements in potential investors' evaluations of PPP investment opportunities. Current allocation to infrastructure by pension funds is on average in the order of 1-3 per cent, according to the OECD Large Pension Fund Survey (OECD, 2014a). Target allocations, however, range from 1-20 per cent, seemingly suggesting pent-up demand. Why has investment consequently not skyrocketed? One reason relates to the risks and challenges mentioned above, and in particular to the frequent lack of stability and transparency in institutional and regulatory environments in developing countries. Dissatisfaction with instruments available to invest in infrastructure assets is another, along with perceived lack of government facilitation. Ultimately, these factors have led

to a regrettable dearth of suitable infrastructure investment opportunities (OECD, 2014b).

How to remedy these issues? At the risk of sounding repetitive, providing favorable conditions to investment through legal and regulatory effectiveness and predictability is fundamental. In terms of investment instruments, earlier forms of collective investment vehicles, such as listed infrastructure funds, were found wanting, in particular after the 2008 financial crisis, due to inadequate performance, excessive fees, disproportionate leverage, and a short investment period (typically 10 years) despite the long duration of the underlying assets (OECD, 2014b). A new form of infrastructure fund, such as that developed in Australia, namely open-ended and charging lower fees, is becoming more attractive, in particular for smaller institutional investors (Inderst and Della Croce, 2013). For large pension funds with sufficient scale to build in-house expertise, the trend has in fact been toward direct investment by individual entities or syndicates of institutional investors. The Global Strategic Investment Alliance (GSIA), for example, was launched in 2012 by the Ontario Municipal Employees Retirement System (OMERS) as a co-investment platform to bring together sophisticated institutional investors to invest directly in infrastructure assets (OECD, 2014b). Thus far, the alliance has attracted commitments from a number of Japanese institutional investors, including the Government Pension Investment Fund (GPIF), the world's largest pension fund. As of March 2014, capital commitments totaled USD 11.25 billion (www.omers.com). Approximately 70 per cent of infrastructure investment by large pension funds is direct vs. approximately 30 per cent through unlisted infrastructure funds (OECD, 2014a).

Note that while the aim of attracting institutional investment to fund infrastructure development goals is to increase the overall amount of capital available to that end, private financing is usually more expensive than public funding, as governments can typically borrow more cheaply than corporations. Furthermore, depending on the source of revenue for the private partner, some projects/sectors will be more expensive to fund than others. PPPs where the private partner is remunerated by end-user fees entail more risk than PPPs where remuneration derives from availability payments by the government. The former will usually require a larger equity component while the latter can be financed almost entirely through debt[9] (Della Croce and Yermo, 2013). This should unquestionably constitute an important component of the initial project feasibility and viability analysis.

While the lack of satisfactory investment vehicles is mostly an issue for the private sector to solve, the public sector can foster direct investment by providing higher quality and more comprehensive assistance. Indeed, and ultimately, government involvement and facilitation are paramount: instituting clear mechanisms for investment, building the expertise needed to be considered a credible and trustworthy partner able to put forward viable projects and establishing a track-record as such, as well as investing alongside private capital, at least in the first several

[9] Securitization, as we have mentioned, is another source of financing whereby the private partner sells on its interest in the project upon completion of the building phase, though this may restrict the efficiencies achievable in combining construction and operation (Della Croce, 2013).

PPPs, and on the same terms, in a gesture of good and sustained faith. The Philippine Investment Alliance for Infrastructure Fund (PINAI), for instance, stemmed from efforts by the Philippines government to encourage private investment in domestic infrastructure. The Government Service Insurance System (GSIS) fund, a government entity, along with the Asian Development Bank and Dutch pension fund asset manager APG, came together in 2012 for that purpose. They selected a fund manager, Macquarie Infrastructure and Real Assets (MIRA), familiar with both domestic markets and the infrastructure sector in general, committing a total of USD 625 million to the fund (of which half was contributed by the GSIS). It is noteworthy that this enterprise was facilitated by the government's strong commitment to infrastructure as a growth engine, putting in place a favorable regulatory framework as well as focusing on its domestic PPP pipeline to provide sufficient investment opportunities (OECD, 2014b).

Given the costs involved, are PPPs worth the effort? The evidence so far is in fact inconclusive. A systematic literature review on studies of PPPs in developing countries by the Dutch Foreign Ministry reports that conclusions drawn from PPP evaluations are scarce and generally do not rely on robust empirical counterfactual analysis. The effects that are reported, however, do seem to lean toward the positive in terms of immediate and short-term effects, while overall impact is harder to gauge. This is due not least to the fact that PPPs have typically outlined only very general goals, omitting to specify quantifiable, achievable, relevant, and timely objectives. Moreover, PPPs exist in a wide variety of configurations and contexts, further complicating an already complex evaluation given the number and types of entities involved (IOB, 2013). In the absence of clear empirical evidence, the necessity of conducting rigorous preparatory analysis, formulating measurable objectives and performance criteria, and operating transparently throughout the infrastructure project development process is all the more crucial, if the costs to the public sector are to be justified in terms of involving the private sector in the provision of public goods, and to make this involvement attractive to both construction/management and finance partners in the private sector.

6. Impact Investors as an Additional Source of Funds?[10]

Thus far, the discussion has centred principally on financial risks and return. These factors are decisive for institutional investors who have fiduciary responsibilities that emphasize financial returns first and foremost. However, some investors do think of returns in broader terms, taking social and environmental factors into account in their investment decisions. Such considerations can take the form of negative screening (eliminating certain sectors or companies from the manager's investment universe based on specific environmental, social and governance (ESG) criteria), positive screening (investment in sectors or companies with best-in-class ESG performance), and integration of ESG criteria into the investment valuation process. A specific example is the rise in themed investments related to sustainability, such as clean technology or green energy funds, in which capital is supplied to sectors and companies because of their

[10] This section is adapted from Genberg (2015).

specific activities. Another example is the emerging asset class of impact investment, which is generally defined as the provision of capital that is expected to generate both a financial return, usually in line with the market but not necessarily, as well as a social or environmental return. The latter should be both intentional and measurable. In order to encourage truly sustainable development, policymakers may consider focusing on growing the impact investment market.

The term impact investment was coined in 2007 at a conference organized by the Rockefeller Foundation (E.T. Jackson & Associates, 2012), and impact investment as a separate asset class has gained increasing prominence with the publication of reports and policy papers by JPMorgan, the Monitor Institute, OECD, the G8 sponsored Social Impact Investment Taskforce (headed by Sir Ronald Cohen, founding father of the United Kingdom venture capital industry), and the World Economic Forum, among others. One estimate values the potential market over the next ten years as ranging from USD 400 billion to nearly USD 1 trillion (O'Donohoe, Leijonhufvud and Saltuk, 2010). In this context, policymakers should think of impact investment as a tool with the potential, ideally, to harness the efficiency and range of the private sector to meet and scale solutions to public needs.

As an emerging concept, impact investment is facing a number of development challenges. Key among these are insufficient intermediation, lack of supporting infrastructure, and a shortage of absorptive capacity for capital. While the private sector can and should take the lead in addressing these challenges, government also has a key role to play in furthering the development of the impact investment field, thereby facilitating institutional investor involvement and furthering national and regional development goals (Freireich and Fulton, 2009; IIPC, 2014; Wilson, 2014; Wilson, Silva and Ricardson, 2015). Public sector involvement can extend from general framework conditions, ranging from legislative and regulatory action to direct investment, to simply displaying goodwill. On a general scale, measures to promote the development of local capital markets discussed above will also support impact-driven investment. More specific supportive measures could take the form of guarantees, subsidies, and the outright provision of capital by establishing or co-investing in landmark funds. Another form of support could be to use the public sector's clout as a major procurer to secure demand for impact-driven enterprises or simply to provide technical assistance.

Several of these policies are already being implemented in various countries around the world. Among others, social impact bonds have been rolled out in the United States of America and in the United Kingdom of Great Britain and Northern Ireland, for example. The United Kingdom has also introduced tax relief initiatives and the European Union is putting in place a fund labelling system (O'Donohoe, Leijonhufvud and Saltuk, 2010). Most impact investors are in developed countries in the West. Investors from this group have taken the lead in promoting impact investment. A majority of impact investments are made in developing countries, however, and aside from these outside investments, developing countries have been increasingly active in the sector. In Asia a number of initiatives are under way. The 2014 Asia Sustainable Investment Review notes the following projects, plans and proposals, among many others (ASrIA, 2014) In

China, authorities are considering policies, regulations and standards that would promote green bonds, such as incorporating environmental risk into credit ratings, making lenders and investors liable for environmental pollution, and implementing environmental metrics to foster disclosure and facilitate the creation of indices and benchmarks in public equities markets. In 2012, the government of Hong Kong, China, set up the Social Innovation and Entrepreneurship Development Fund, with an initial commitment of HKD 500 million (USD 64 million), to help foster new ways of tackling poverty and social exclusion. On a smaller scale, the Government of Indonesia established the Indonesia Climate Change Trust Fund (ICCTF) in 2009 to bring together funds from the public and private sectors and international donors to finance the country's climate change programmes. The fund, though small –USD 21.01 million pledged and USD 11.21 million deposited as of June 2015[11] – has created a framework for enhanced public-private collaboration. Another notable endeavour is the Impact Investment Exchange Asia (IIX), based in Singapore, established to help channel return-seeking capital to impact-driven enterprises. While most sustainable investment in Asia still takes the form of negative screening (inherent to sukuk bonds, for example), integration of ESG criteria in traditional investing has become more prevalent, which could eventually help pave the way for the deeper commitment required by impact investing.

So, there are ways to attract institutional investors not just to invest, but to invest responsibly and sustainably and in a way that will actively support the social and environmental development of host countries and regions. By promoting themselves as destinations for impact investing, governments can tap into a deep vein of demand for investments that actively 'do good' without giving up financial benefits. However, it is not only a question of marketing. Governments also need to provide supportive environments in the form of sound micro- and macroeconomic policies and take measures to enhance the attractiveness of local capital markets as discussed in section 1. Absence of corruption and a clean record on human rights and similar high-profile areas are also critical. No investor who wants to be seen as 'doing good' wants to risk his reputation by being seen investing in a country that has issues with corruption, human-right violations and the like.

7. Concluding Remarks

The developing world needs the equivalent of USD 1 to 1.5 trillion per year in finance for infrastructure development expenditures to reach the millennium development goals by 2030. Given this challenge, what is the role of institutional investors in financing development in emerging and developing markets in Asia and the Pacific? The short answer is "currently small, but potentially significant". The analysis in the paper has identified several explanations for each element of this assessment.

[11] www.climatefundsupdate.org/data (accessed 19 October 2015).

First, obtaining finance in developing and emerging markets suffers from the relative underdevelopment of capital markets in many countries that would benefit from such financing. This limits the possibility for potential investors to acquire securities with similar duration as their liabilities. For institutional investors that seek long-dated securities this problem is particularly acute.

Second, development finance, and infrastructure finance in particular is complex. Infrastructure projects often have a long gestation period during which there are no revenues, and during which project management skills are essential for investments to succeed. Traditional institutional investors such as pension funds do not typically have the required skills, and acquiring them is costly.

Third, the nature of infrastructure projects, particularly those that have the characteristics of public goods or natural monopolies, is such that some government involvement is the norm. This implies that they are subject to political risks that are very difficult to evaluate and hence difficult to hedge.

These factors explain the observed modest allocation of institutional investors' assets to development projects in general, and development projects in developing and emerging markets in particular. But they also suggest possible solutions.

First, the development of a deep and liquid capital market necessitates a stable macroeconomic environment, a strong legal framework supportive of the enforcement of financial contracts, and the existence of robust trading platforms and practices where trades can be executed efficiently. Governments have an essential role to play in putting these elements in place. In addition, measures that increase the size of the investor base and facilitate the participation of a wider group of borrowers could effectively increase the breadth and liquidity of the market contributing to its growth and contribution to economic activity.

Second, with respect to the complexity of infrastructure projects, governments may seek to streamline infrastructure project management making the process more transparent and hence less cumbersome for potential investors. This is particularly useful in the case of public private partnerships. Another development around the complexity problem is for investors to join forces in investment funds dedicated to infrastructure financing and hire expert asset/project managers for the fund as a whole.

Third, risks associated with the importance of government policies for infrastructure development require solutions similar to those needed for the development of capital markets, in particular insuring regulatory consistency and transparency as well as the rule of law in dealing with potential disputes.

Making a list of requirements to increase institutional investors' involvement in development finance is relatively straightforward. Carrying out the required reforms is very much more difficult. There is no silver bullet. The solutions require sustained and consistent efforts over several years. Jurisdictions that are able to make progress in implementing the needed reforms will reap the benefits of a larger share of institutional investment funds being allocated to their development and infrastructure needs.

Institutional investors manage over USD 80 trillion of assets. Even a modest increase in the allocation of these assets to development needs can make a substantial difference for the wellbeing of the population of developing and emerging market economies.

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