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Discussion Paper

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MOBILIZING PRIVATE CAPITAL FLOWS FOR INFRASTRUCTURE DEVELOPMENT IN ASIA AND THE PACIFIC

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Discussion Paper

Macroeconomic Policy and Financing for Development Division

Mobilising Private Capital Flows for Infrastructure Development in Asia and the Pacific

by

Rajiv Biswas

March 2016

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Abstract

The infrastructure financing needs for the developing Asia-Pacific region are estimated to be in the range of USD 700 billion to USD 800 billion per year over the next decade. With many Asian governments struggling with high levels of government debt as well as large fiscal deficits, their capacity to finance such large annual infrastructure spending is being severely stretched. Private capital flows will need to play an important role in filling the infrastructure financing gap. However private capital investment flows into infrastructure have been constrained by considerable hurdles. Asian governments will need to work together with the international financial institutions and multilateral development banks in order to create new innovative approaches that will help to boost private capital flows into Asia-Pacific infrastructure.

Keywords: Asia, infrastructure, economic development, REITs, AIIB.

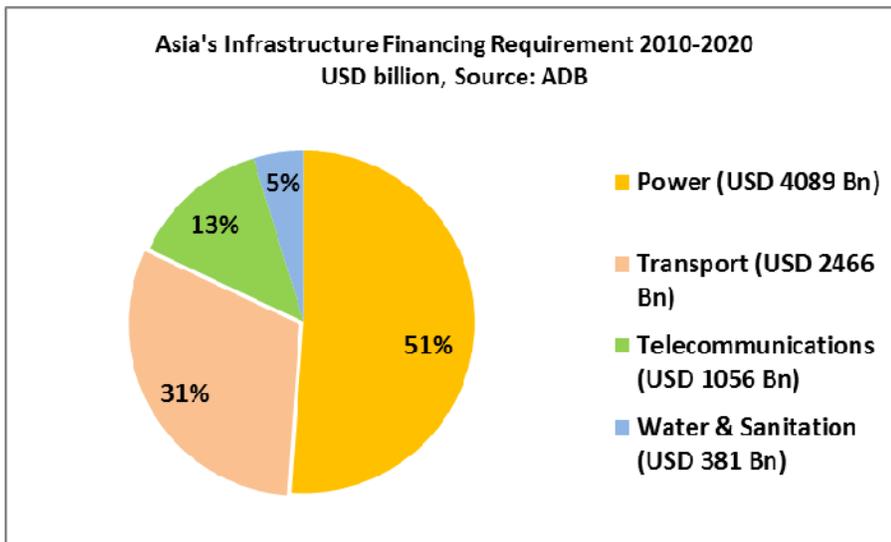
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I. The Infrastructure Challenge in the Asia-Pacific

A. Asia's infrastructure financing requirement

The infrastructure financing requirements of the developing Asia-Pacific region has been estimated at USD 8 trillion for the 2010-2020 period, according to estimates by the Asian Development Bank. Of this total, an estimated 68% is required for new capacity expansion, with 32% needed for replacing and maintaining existing infrastructure. (Asian Development Bank, Infrastructure for a Seamless Asia.) This amounts to an annual infrastructure financing requirement of around USD 700 billion to USD 800 billion per year for the developing Asia-Pacific region.

According to the Asian Development Bank's assessment, the largest share of infrastructure financing is required for the power sector, at around USD 4.1 trillion, or 51% of the total infrastructure financing requirement. The second largest infrastructure financing requirement is for the transport sector, at around USD 2.5 trillion, or 31% of the total.



Due to the large infrastructure funding requirements of the Asia-Pacific region over the next decade, national governments will not have sufficient fiscal resources to fund all of the required infrastructure investment. Therefore a key economic priority for the governments of the Asia-Pacific region is to co-ordinate strategic initiatives to boost international investment and private capital flows to meet this infrastructure funding gap.

A number of high level initiatives have already been launched in 2014 and 2015 that will play an important role in addressing the infrastructure financing gap.

China has led a number of new initiatives to increase infrastructure financing in the Asia-Pacific region (Biswas, R., "*Reshaping the financial architecture for development finance: the new development banks*", London School of Economics Working Paper, Global South Unit, February 2015). Through the creation of the Asian Infrastructure Investment Bank (AIIB), the Silk Road Fund and the New Development Bank (NDB),

significant new infrastructure funding has been mobilized from the public sector that can help to also attract new private sector infrastructure financing through project co-financing.

The AIIB has an initial authorized capital of USD 100 billion, with initial subscribed capital of USD 50 billion, and has commenced operations with planned initial lending to commence during 2016. The Silk Road Fund, with planned capital of USD 40 billion, also has a mandate to invest in infrastructure projects in Asia, and is already operational. The New Development Bank, which was created by the five BRICS countries as founding members, has initial capital of USD 50 billion. Therefore the combined impact of these three new infrastructure financing organisations could provide more than USD 100 billion in funding.

The NDB, AIIB and Silk Road Fund combined have the potential to significantly increase the total multilateral financing available for infrastructure development in the medium-term, and will also give developing countries a greater voice in governing global development in the next decade and beyond.

While these initial capital for the AIIB and NDB will be provided by the member governments of each fund as public financing for infrastructure development, these new funds will also help to crowd-in additional public and private infrastructure financing flows through co-financing of major infrastructure projects with state-owned development banks as well as with private sector finance.

Japan, which already has played an important role for decades as a source of official development assistance for Asia, has also launched a major new initiative to provide USD 110 billion in development aid for developing countries in the Asia-Pacific.

Therefore these new infrastructure financing initiatives are creating considerable positive momentum for significant additional multilateral and bilateral infrastructure financing flows for developing countries in the Asia-Pacific region. However, despite the major new infrastructure financing commitments by China, Japan and other governments worldwide, public sector resources cannot fully fund these large-scale infrastructure financing requirements. Private sector financing will also need to play an important role in achieving these infrastructure financing targets. A key challenge continues to be mobilizing private capital flows for developing countries.

While the pool of assets held in pension funds, life insurance funds and other collective investment vehicles globally is very large, there are significant obstacles that limit the amount of assets that are invested in infrastructure assets in developing countries. These obstacles include a wide range of issues, including regulatory restrictions on asset allocation by certain types of funds such as pension funds and life insurance funds into infrastructure as an asset class, as well as factors such as the higher risk profile and lack of liquidity in infrastructure investments in many emerging markets. Often investment funds in developed countries also have restrictive mandates that limit their ability to invest in sub-investment grade assets, which significantly restricts the number of developing countries that they can invest in.

Therefore finding new solutions that will unlock the vast global pool of private savings that can be allocated to infrastructure financing in developing countries is a key public

policy priority in order to boost private capital flows to finance economic development.

II. Boosting Private Capital Flows for Infrastructure Finance

A. Liberalizing regulatory restrictions on pension funds and insurance funds

While investment in the infrastructure asset class has become increasingly acceptable as part of the investment strategy of large global asset managers such as pension funds and insurance funds, there are often regulatory restrictions by governments on the ability of pension funds to invest in such assets.

Many countries do not allow direct investment in real estate or infrastructure by their pension funds, although indirect investment in real estate or infrastructure through listed vehicles is often permitted. In the Asia-Pacific region, Hong Kong, Japan, Thailand and Pakistan do not allow their pension funds to make direct investments in the real estate sector. South Korea does not allow defined benefit pension funds to make direct investments in real estate, but does permit such pension funds to invest in retail investment funds (OECD, 2015). While Hong Kong does not permit its pension funds to invest directly in real estate, they can invest indirectly through bonds and shares of property companies and through approved Real Estate Investment Trusts (REITs). Similarly Thailand does not allow its pension funds to invest directly in real estate but does allow investment indirectly through REITs and infrastructure trusts.

Therefore a review of such regulatory restrictions by governments needs to be undertaken in order to assess whether it is possible to allow a small share of total pension fund assets to be invested in the infrastructure asset class. This is a matter for individual governments to undertake such a review and consider whether a small proportion of total asset allocation can be allowed into infrastructure assets. Similar reviews would be needed for insurance funds where government regulations restrict their ability to invest in infrastructure.

Large pools of financial assets are held in global pension funds and insurance funds. According to estimates by the OECD, the total pension fund assets held in OECD countries in both public and private sector funds amounted to around USD 25 trillion at the end of 2014. According to Willis Towers Watson, the total pool of assets held by the world's 300 largest pension funds amounted to USD 15 trillion in 2014.

Therefore if a small proportion of these total pension fund assets can be unlocked for infrastructure investment, it could potentially provide a significant new source of capital for infrastructure financing. As many investment funds prefer to invest through liquid instruments that are listed on stock markets rather than taking direct equity stakes in projects, the liberalization of regulatory restrictions on pension funds and insurance funds to invest in infrastructure also needs to be accompanied by development of the real estate investment trust and infrastructure investment trust legislation in emerging Asian countries, where such infrastructure investment vehicles do not already exist.

While the first step in reviewing pension fund regulations can be taken at a national level in order to liberalise investment rules regarding investment into domestic infrastructure assets, a broader and more co-ordinated international approach to allowing pension

funds and insurance funds to invest in international infrastructure assets would also be an important aspect of such liberalization measures, to allow pension funds worldwide to invest in infrastructure projects internationally, not just in their domestic economy.

Large Asia-Pacific pension funds		
Name of fund	Country	Estimated assets
Government Pension Investment Fund	Japan	USD 1.1 trillion
National Pension Fund	South Korea	USD 430 billion
Central Provident Fund	Singapore	USD 207 billion
Local Government Pension Fund	Japan	USD 195 billion
National Social Security Fund	China	USD 247 billion
Employees Provident Fund	Malaysia	USD 184 billion
Employees Provident Fund	India	USD 80 billion
Australian Super	Australia	USD 70 billion
National Public Service	Japan	USD 68 billion
Colonial First State	Australia	USD 50 billion
Public School Employees	Japan	USD 49 billion
QSuper	Australia	USD 45 billion
BT Retirement Wrap	Australia	USD 40 billion
AMP Superannuation	Australia	USD 40 billion
Retail Employees Super Trust	Australia	USD 30 billion
Retirement Fund KWAP	Malaysia	USD 31 billion
Government Pension Fund	Thailand	USD 22 billion
Government Service Insurance	Philippines	USD 21 billion
New Zealand Super Fund	New Zealand	USD 20 billion
NTT	Japan	USD 19 billion
Fujitsu	Japan	USD 18 billion
Social Insurance Funds	Vietnam	USD 17 billion
Mizuho	Japan	USD 17 billion
Hitachi	Japan	USD 14 billion

Sources: Willis Towers Watson 2015 survey; Australian Prudential Regulation Authority.

Note: Pension fund figures shown are approximate values based on 2014-15 surveys, and are subject to significant fluctuations over time due to changing market valuations and exchange rate movements.

There are many large pension funds worldwide that do invest a significant share of their total assets under management in infrastructure as an asset class, with examples in the Asia-Pacific region including Australian Super, the Retail Employees Super Trust of Australia, and the New Zealand Super Fund. Confronted with very low yields in bond markets, some large Japanese private sector pension funds are also increasing their focus on infrastructure as an asset class to improve long-term returns and portfolio diversification.

CASE STUDY: New Zealand Super Fund

The New Zealand Super Fund is a sovereign wealth fund that has a mandate to fund pension benefits for New Zealand citizens. The fund had an asset allocation in global infrastructure assets of 5% of its total portfolio at the end of June 2015, with a further 5% asset allocation to property assets.

Building the infrastructure project pipeline: There are many hurdles and constraints that limit private capital flows to developing countries for infrastructure projects. One important constraint that limits private sector investment flows into public infrastructure projects relates to inadequate preparation by governments for their infrastructure project pipelines. When governments do not undertake the necessary project approvals and clearances, this can create significant costs for private investors, particularly if there is uncertainty about whether project approvals will be granted by the various government departments involved in the project approval process.

Private sector infrastructure investment can be facilitated by government initiatives to prepare projects for investors by undertaking feasibility studies, preparing priority lists of infrastructure projects, preparing necessary government project approvals and other steps to ensure that the projects are at ready for private sector investment.

The establishment of an infrastructure project pipeline can also be enhanced by better co-ordination among government agencies for the infrastructure project approval process to accelerate the timeframe for obtaining the necessary project approvals. Consultation mechanisms between the government and private sector may also help to improve the infrastructure approval process.

Bond markets: The use of bonds to finance infrastructure financing is already very well developed globally. In the US and Canada, the development of a municipal bond market has played a significant role in infrastructure financing, particularly through the creation of tax-exempt municipal bonds to encourage private sector asset allocation towards municipal bonds. In the US, the municipal bond market has a total size of USD 3.7 trillion, and is largely bought by US private sector investors through municipal bond funds, providing a large source of low-cost infrastructure financing for a wide range of infrastructure projects. More widely, building deeper and more liquid domestic bond markets will be important for mobilising long-term domestic private sector financing for infrastructure.

Credit enhancements: The use of measures to improve the attractiveness of infrastructure projects for private investors includes techniques such as loan guarantees as well as loss reserves on the infrastructure project's balance sheets to provide for lower than expected revenues.

Insurance risk mitigation products: A range of insurance products help to provide risk mitigation for private sector investors in infrastructure projects in developing countries. These insurance products are provided by both government export credit agencies and by private sector credit and political risk insurers.

Private sector insurers as well as public sector export credit agencies can provide insurance products that facilitate private sector investment in infrastructure projects in developing countries. The spectrum of such insurance and risk mitigation products is very wide, including political risk products, reinsurance for banks and corporates, as well as reinsurance for multilateral development banks such as the World Bank and ADB.

CASE STUDY: INSURANCE RISK MITIGATION FOR MYANMAR

Nippon Export and Investment Insurance (NEXI), the official export credit agency of Japan, helped Japanese private sector companies to invest in a new Myanmar infrastructure development project for the establishment of an industrial park with high quality infrastructure. NEXI provided Overseas Investment Insurance for the project for a Japanese private sector consortium comprising Mitsubishi Corporation, Marubeni Corporation and Sumitomo Corporation for the Thilawa Industrial Park Development Project. The insurance contract was implemented in December 2014. This project is a crucial step forward in Myanmar's development of its manufacturing sector, as it has created the first industrial park with modern infrastructure.

Co-financing: The role of co-financing by multilateral development banks as well as national development banks and development finance institutions has already got a well-established track record in catalyzing infrastructure financing flows from the private sector for many years. The multilateral development banks already have a long history of working together with national development banks and development finance institutions and export credit agencies to provide financing for infrastructure projects for developing countries, with co-financing by private sector institutions.

However co-financing is likely to become an increasingly important channel for future infrastructure project financing. Large new funding for infrastructure finance for Asia is now becoming available through the AIIB and the Silk Road Fund, and the co-financing model of financing infrastructure projects will become increasingly important, particularly for developing finance for riskier projects in developing Asian countries.

For large infrastructure projects in developing countries in Asia and the Pacific, co-financing will become an increasing important for large projects, with multilateral development banks such as the World Bank or AIIB playing a lead role in providing project loans, but through a co-financing model with MIGA and national export credit agencies as well as national development banks, as well as private sector financing from commercial banks and credit mitigation products from insurers.

CASE STUDY: MONGOLIA'S OYU TOLGOI MINE CO-FINANCING

The co-financing of Mongolia's Oyu Tolgoi copper-gold mine project provides a recent example of large-scale project financing amounting to USD 4.4 billion provided by a syndicate of international financial institutions and export credit agencies, together with 15 commercial banks. The project finance facility was funded by Export Development Canada, the European Bank for Reconstruction and Development, the IFC, the US Export-Import Bank, the Export Finance and Insurance Corporation of Australia and 15 commercial banks. The commercial banks were BNP Paribas, ANZ, ING, Société Générale Corporate & Investment Banking, Sumitomo Mitsui Banking Corporation, Standard Chartered Bank, Canadian Imperial Bank of Commerce, Crédit Agricole, Intesa Sanpaolo, National Australia Bank, Natixis, HSBC, The Bank of Tokyo-Mitsubishi UJF, KfW IPEX-Bank and Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden. MIGA provided political risk insurance for the commercial banks.

III. Value Capture Systems

The use of value capture systems to boost infrastructure development has been well established in the US for several decades, and is also used in the EU, with significant infrastructure projects in the UK utilizing such funding approaches. In Asia, Hong Kong has also been a leader in utilizing value capture systems, notably for the Mass Transit Railway.

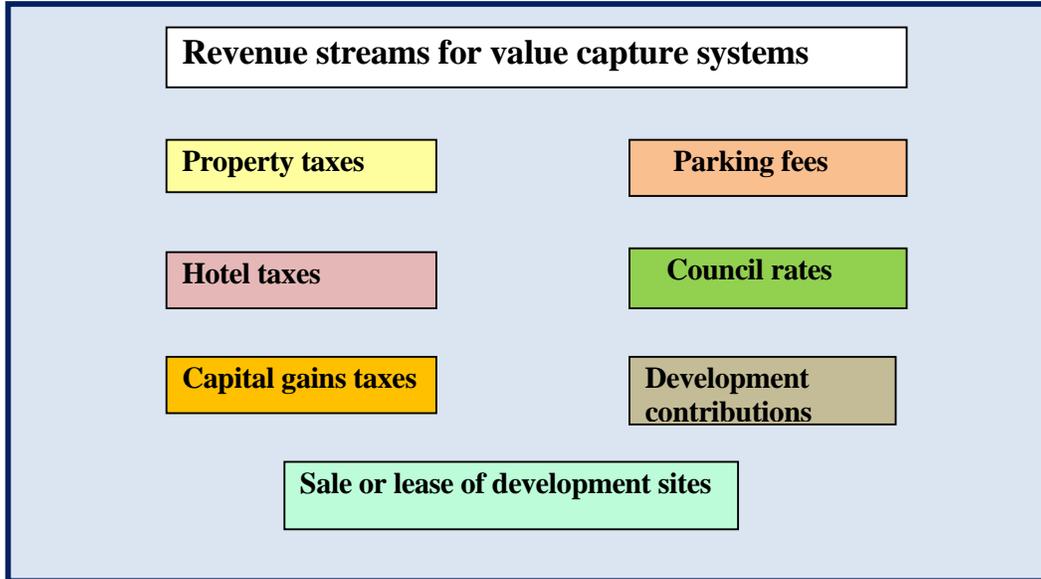
The basic concept of a value capture system is to tap the additional capital gains and income from new infrastructure investment, generating increased revenue stream opportunities arising as a result of a particular infrastructure project. For example, building a new urban light railway system will usually boost property values for residential and commercial properties located close to the new railway, as well as creating new commercial opportunities in and around the railway stations that are being built. Historically, many governments simply used public finances to invest in these infrastructure projects, with much of the improved value of the land and property as a result of new infrastructure becoming a windfall gain for the property owners.

CASE STUDY: HONG KONG MTR – “RAIL & PROPERTY” MODEL

The Hong Kong Mass Transit Railway has used a value capture system approach for its infrastructure development. The basic formula used by the MTR is a “rail plus property” model. This development model utilizes an integrated development approach through the construction of residential real estate as well as shopping malls and office towers on land acquired by MTR. These real estate developments are built in the vicinity of a railway station. The value created by the railway line helps to boost property prices and rents, allowing the MTR to create substantial revenue streams to fund its infrastructure development.

A key benefit of utilizing value capture systems to raise revenue streams from infrastructure projects is that it creates specific additional revenue streams from an infrastructure project that can be used in a number of ways, including to create more attractive project returns for private sector investors.

However clearly the use of value capture systems has its limitations as a model that may work well for certain types of infrastructure projects, but may not be applicable to a significant range of infrastructure projects.



IV. The Role of REITS and Infrastructure Trusts in the Asia-Pacific Region

Since the early 1990's, the use of REITS or REITS-type products has boomed worldwide, with considerable success and rapid growth in total assets invested through listed real estate and infrastructure investment vehicles in the US and many EU countries.

In the Asia-Pacific region, REITS and infrastructure trusts have become very well established in most major economies, and play a significant role in mobilizing private capital flows into real estate and infrastructure. The total value of listed REITS in the Asia-Pacific region was estimated at around USD 250 billion in 2015. REITS-type Listed Property Trusts were established in Australia in the 1970s, and have grown substantially. Japan and Singapore have also had considerable success with REITS legislation and have seen rapid growth in the total investment in these vehicles. As a major international financial centre, Singapore has also been successful in becoming a hub for listing of REITS and infrastructure trusts that are invested in real estate and infrastructure assets held in other Asian countries. Taiwan, South Korea, Thailand and Malaysia have also introduced REITS-type vehicles.

In the new Sri Lankan Government's first Budget for fiscal 2016, a range of important measures to deepen domestic capital markets were announced, including the introduction of REITs, with stamp duty exemptions for transfer of real estate assets to a REIT structure that distributes 90% or more of its income to REIT unit holders.

REITs offer considerable advantages for mobilizing capital flows since they are listed vehicles which open up a wider pool of investment from institutional and retail investors who wish to invest in liquid instruments that are traded on stock exchanges but want to invest in real estate and infrastructure as an asset class.

REITs offer a number of advantages for investors, allowing liquidity for real estate and infrastructure investments, as well as greater diversification through investing in a portfolio of properties rather than a single building of infrastructure asset. Diversified REITs invest in a variety of property types, such as shopping centres, apartments, warehouses, office buildings and hotels. Infrastructure REITs are investment vehicles for financing transport infrastructure such as airports, ports and roads, as well as utilities and social infrastructure such as schools and hospitals.

REITs can also be used by the public sector to release capital tied up in government assets such as office buildings, or to de-merge property assets from the balance sheets of public sector corporations.

CASE STUDY: REITS IN THAILAND

The Thai listed real estate market commenced in 2003 with the creation of Thai property funds, with rapid growth in the number of listed property funds during 2004-2006. Currently there are 51 property funds listed in Thailand. In 2013, the Thai Securities and Exchange Commission implemented REITs legislation, and new property funds were no longer allowed to be created since 2014. Five new REITs have been listed on the Stock Exchange of Thailand since the new legislation was introduced. Existing property funds can convert to REITs, and it is expected that eventually there will be a growing number of such conversions which will increase the total number of REITs in Thailand.

V. South Asia's Infrastructure Financing

South Asia has large-scale infrastructure financing needs over the next decade, with an estimated USD 250 billion per year of infrastructure financing required. A World Bank study ("Reducing Poverty by Closing South Asia's Infrastructure Gap", World Bank, 2014) estimated that around USD 1.7 trillion to USD 2.5 trillion of infrastructure investment is required to close the infrastructure gap in South Asia over the next decade. This would require annual infrastructure spending of around USD 200 billion to USD 250 billion per year. While a significant proportion of the funding for this infrastructure development will come from national government budgets of South Asian countries, a substantial share will need to be funded by a combination of official development assistance through grants and loans, as well as through private sector financing.

However there have been many barriers to private sector financing in South Asia, including the limited capacity of domestic commercial banks to fund such large-scale infrastructure funding requirements, high hurdles in terms of required rates of return, as well as other key factors such as credit risk and political risk which have constrained international investment flows from global investment funds and pension funds.

A. Case study: mobilizing private capital flows in India

The Indian government has recently undertaken a number of new initiatives to encourage private capital flows into infrastructure that may provide a future model for other developing countries to follow. These include the creation of bond guarantee funds, the creation of a government infrastructure investment fund to inject capital into Indian infrastructure financing companies, and the creation of a credit enhancement facility to guarantee infrastructure bonds.

Bond guarantee fund: The Indian government plans to create an Indian bond guarantee fund, to provide guarantees for long-term bond issuance for infrastructure development. These guarantees can play a key role in catalyzing institutional investment into infrastructure projects, as the guarantee will help to improve the credit rating of the bond. As many international institutional investors require a AAA credit rating for infrastructure bond investments, this will be a significant step in helping to boost international investment flows into infrastructure projects.

Government infrastructure investment fund: The Indian government announced in the 2015-16 Budget the creation of a National Infrastructure Investment Fund (NIIF), which will be a government fund that will invest in the equity of Indian infrastructure finance companies. This is intended to boost the total financing capacity of Indian infrastructure finance companies.

Credit enhancement guarantees: The ADB has worked together with the Indian Infrastructure Finance Company Ltd (IIFCL) in order to create a credit enhancement facility that will guarantee infrastructure bonds. The first such joint ADB-IIFCL bond guarantee was implemented in 2015 for an Indian power company, ReNew Power Ventures Private Ltd.

The effect of having such a credit enhancement guarantee should help to lift the credit rating of the infrastructure bond, which improves its attractiveness for international institutional investors, whose investment mandates often require very high credit ratings to allow them to be included in the investment portfolio.

Indian REITs and infrastructure trusts: In the 2014-15 Budget, the Indian government proposed the introduction of REITS and Infrastructure Investment Trusts. Subsequently the Indian securities regulator SEBI issued legislation relating to REITS and the Indian Cabinet also approved foreign investment into REITS. However India's track record with progressing REITS has been extremely weak due to inordinate delays in finalizing REITS legislation that has taken over a decade since SEBI first released guidelines in June 2006 for the establishment of REITS in India.

Despite the recent efforts by the Indian government in the 2014-15 Budget, not a single REIT has been listed yet on the Indian stock exchanges so far. Industry views indicate that this is due to the complexity and uncertainty related to the Indian taxation structure for REITS, which has made investors unwilling to move forward with establishing REITS in India.

However, in the 2016-17 Budget, the Indian government has announced that it will exempt the dividend distribution tax for payments made to REITS by special purpose vehicles holding the property assets, removing double taxation of the dividend distribution. This is a key reform that had been viewed as necessary by the Indian real estate industry for REITs to be successful in India.

However it has been argued by some Indian real estate market analysts that further reforms may also be necessary to improve the efficiency of the tax regulatory regime for REITS, such as exemption from capital gains tax and state government stamp duties. Until the Indian REITs and Infrastructure Trust taxation regime becomes efficient compared to other major financial centres worldwide, the progress of Indian listed property vehicles may be hampered, due to bureaucratic roadblocks to mobilizing private capital flows for Indian infrastructure.

Market estimates indicate that the total amount of capital that could be mobilized through Indian REITS and Infrastructure Investment Trusts could be in the order of USD 20 billion to 30 billion over the medium term, which would represent a significant amount of new private investment into Indian real estate and infrastructure projects.

V. Infrastructure Financing Challenges For Small Island Developing States

Small island developing states globally are generally characterized by a high degree of economic vulnerability, and this is particularly true for many of the Pacific Island developing states. Factors that make many of the Pacific Island states vulnerable include the relatively small size of their economies, often with narrow economic bases heavily dependent on several key industries, such as tourism, agriculture or fisheries. Their vulnerability to climate change and the often devastating effects of natural disasters such as cyclones or tsunamis compound their vulnerability.

Data from the OECD Development Assistance Committee also indicates that Small Island Developing States have a much lower share of external private financing flows from international bank lending and foreign direct investment than other developing countries, and also have much more limited access to international debt capital and equity capital markets. As a result, the Small Island Developing States are more reliant on bilateral and multilateral overseas development assistance as well as remittance flows from their workers abroad.

Research by ESCAP (2010) has indicated that many Pacific Island Developing Countries, including Papua New Guinea, Vanuatu, Tonga, Samoa and Fiji ranked in the lower half of the infrastructure development index for the Asia and Pacific countries. Moreover, the Pacific Regional Infrastructure Facility has estimated that the costs of maintaining existing infrastructure are very high, at an estimated 6% of Pacific Islands GDP per year.

The infrastructure financing problems for Pacific Island Developing Countries are compounded by their high level of vulnerability to natural disasters, which in addition to the devastating human impact, also can result in extremely substantial economic damage to key industries such as agriculture and tourism, as well as to critical infrastructure. One recent example is the impact of Cyclone Pam in 2015, which caused tremendous economic losses in Vanuatu and Tuvalu.

Insurance and reinsurance solutions are increasingly being looked at as potential long-term risk mitigation strategies for the economic impact of natural disasters. A number of such catastrophe risk insurance projects have been initiated, including the Pacific Catastrophe Risk Insurance Pilot, which was created as a joint initiative of the World Bank, ADB, and the Secretariat of the Pacific Community, with support from the Japanese government. The risk insurance was provided by private sector insurers comprising Sampo Japan Insurance, Mitsui Sumitomo Insurance, Tokio Marine & Nichido Fire Insurance, Swiss Re, and Munich Re. Under this particular scheme, the payouts were linked to the strength of the natural disaster, with the purpose of using insurance to help pay for losses due to a natural catastrophe.

CASE STUDY: CYCLONE INFRASTRUCTURE DAMAGE IN VANUATU

In March 2015, Cyclone Pam caused tremendous economic damage in the Pacific Island states of Vanuatu and Tuvalu. The total damage and lost production in Vanuatu was estimated at around 61% of GDP, while in Tuvalu the total damage and losses were estimated at around 30% of GDP (IMF, 2015).

Estimated infrastructure damages and losses by Cyclone Pam in Vanuatu (as percentage of GDP)

Sector	Damages	Losses	Total
INFRASTRUCTURE	8.0	3.7	11.7
of which:			
-transportation	3.8	2.7	6.5
-public buildings	0.7	0.0	0.7
-water	0.5	0.4	0.9
-communication	2.8	0.5	3.3

Source: Government of Vanuatu Post Disaster Needs Assessment (IMF, 2015).

Following the G-7 Leaders' Declaration in June 2015 to increase insurance coverage to help to manage the negative impact of climate change related disaster risk, the focus on finding insurance solutions to mitigate economic losses from natural disasters is likely to make further significant progress over the 2016-2020 period.

At the Commonwealth Summit in November 2015, UK Prime Minister David Cameron announced a climate change support package for Commonwealth small island states, including a GBP 15 million disaster risk insurance fund for the Pacific islands to help mitigate the effects of natural disasters.

G-7 Leaders' Declaration to Increase Disaster Risk Insurance Solutions

Schloss Elmau, Germany, June 8, 2015

From G-7 Leaders' Declaration on Climate Change

“To this end, we will:

a) Intensify our support particularly for vulnerable countries' own efforts to manage climate change related disaster risk and to build resilience. We will aim to increase by up to 400 million the number of people in the most vulnerable developing countries who have access to direct or indirect insurance coverage against the negative impact of climate change related hazards by 2020 and support the development of early warning systems in the most vulnerable countries. To do so we will learn from and build on already existing risk insurance facilities such as the African Risk Capacity, the Caribbean Catastrophe Risk Insurance Facility and other efforts to develop insurance solutions and markets in vulnerable regions, including in small islands developing states, Africa, Asia and Pacific, Latin America and the Caribbean.”

Beyond the specific challenges of natural disasters, mobilizing domestic private sector capital flows for infrastructure financing is a major hurdle for many small island states. Due to the small size of the economies of many Pacific Island Developing Countries, most lack substantial pools of domestic private savings in the form of bank deposits, pension funds or insurance funds, and domestic capital markets are generally very small or non-existent. Furthermore, international commercial banks have limited credit lines for Small Island Developing States due to the small size of their economies and their often relatively higher risk sovereign credit ratings.

Therefore bilateral and multilateral donor assistance will continue to play a critical role in infrastructure financing for many Pacific Island Developing Countries. However there have been some significant successes for public-private partnership infrastructure financing projects for Pacific Island countries, and co-financing solutions can also contribute to long-term infrastructure financing flows for the Pacific Island small states.

CASE STUDY: VIRGIN SAMOA AIRLINES

The IFC developed an innovative public-private partnership to inject private capital into a loss-making national flagship airline. This resulted in a public-private joint venture partnership between the Government of Samoa and Australia's Virgin Blue airline. This created a new national airline called Virgin Samoa, which turned around from a loss-making airline to a very profitable airline within two years. Significant savings were estimated to have accrued to consumers due to lower airfares, while total private sector investment in the project was around USD 10.5 million, around twice the amount originally expected. Inbound seat capacity more than doubled within the first four years, yielding significant benefits to the local tourism industry.

VI. Summary and Key Recommendations

With an estimated USD 700 billion to USD 800 billion of infrastructure funding needed each year for the developing countries of the Asia and Pacific region, private sector financing has a crucial role to play in meeting their infrastructure financing needs. Recent initiatives by China and Japan have created new positive momentum to boost infrastructure finance for the Asia-Pacific, and this will play an important role in leveraging greater private sector co-financing for infrastructure projects. However there are also many additional measures that governments can take to boost private sector financing for infrastructure.

Importantly, the ability of different developing countries to utilize various forms of private sector financing does vary greatly, according to the economic size of the nation as well as the various stages of economic development attained. Therefore there cannot be a “one size fits all” approach to development financing, and the individual financing approaches for each nation need to be assessed on a case-by-case basis, finding pragmatic solutions to what is best suited to the financing capacity of a nation.

Nevertheless, some of the mechanisms that developing countries in the Asia and Pacific region can consider for mobilizing private capital flows for infrastructure development are listed below.

1. **Unlocking pension fund and insurance fund financing:** Vast pools of savings are held in public and private pension funds and insurance funds worldwide. However many of these funds are not permitted to invest in infrastructure assets directly, or sometimes not even through indirect investments. Therefore greater co-ordination and information exchange by governments about the potential scope for liberalizing pension and insurance fund regulations to allow investments into infrastructure asset classes may help to allow a small share of total pension and insurance fund assets to flow into infrastructure asset classes.
2. **REITs and infrastructure trusts:** In parallel with initiatives to unlock pension and insurance fund investments into infrastructure assets, the creation of liquid markets for collective investment vehicles in real estate and infrastructure will also help to enable pension funds and insurance funds to invest in real estate and infrastructure through collective investment vehicles rather than illiquid, direct equity stakes in infrastructure projects. Governments of nations that do not have well established REITs and infrastructure trusts should undertake assessments of how such investment vehicles can contribute to infrastructure development in their countries.
3. **Co-financing:** Co-financing models for mobilising private sector infrastructure investment will become increasingly important. Co-financing of large infrastructure projects will be particularly critical for developing countries with a higher country risk profile. Multilateral development banks will continue to play a leading role in providing lending, supported by national export credit agencies, which helps to facilitate private sector lending by commercial banks as part of a syndicated project financing deal. The role of national development banks is also expected to become increasingly important in such co-financing deals, with Asian national development banks from China, Japan, South Korea and India

expected to be increasingly significant players in project co-financing in Asia.

4. **Domestic bond markets:** Continuing to develop deeper and more liquid local currency bond markets and also building out the yield curves for different bond tenors will continue to be an important strategy for many developing countries for mobilizing greater long-term private capital flows, including for infrastructure financing.
5. **Value capture systems:** Governments in the Asia and Pacific region should assess the international experience and success stories of utilizing value capture systems to enhance private sector investment flows into infrastructure. While the use of value capture systems is limited to certain types of infrastructure projects, it has been effectively utilized for major infrastructure financing projects such as Hong Kong's MTR, and provides a project financing model which has potential applications in many other urban infrastructure projects.
6. **National infrastructure pipelines:** Governments in the Asia and Pacific need to develop project pipelines that are in an advanced stage of feasibility assessment and with necessary government approvals and permits in place, to reduce the burden on the private sector when making an investment decision in the project. Governments should also develop their own ranking of project pipelines to prioritize projects.
7. **Insurance and reinsurance risk mitigation:** While insurance and re-insurance risk mitigation solutions are a well-established part of infrastructure project financing for developing countries, the use of reinsurance to mitigate the economic impact of natural disasters has become a key policy focus for the G-7. A number of catastrophe risk insurance projects have already been implemented, and further progress in utilizing such innovative solutions may also make an important contribution to protecting infrastructure assets.

Despite the considerable challenges facing the Asia-Pacific region in mobilizing large-scale infrastructure financing flows, the long-term outlook has been boosted by the new strategic initiatives being taken by China and Japan to boost regional infrastructure financing flows. A key positive factor is the rapidly growing size of the Asia-Pacific region as a share of world GDP, which is driving strong growth in the size of total financial assets in the Asia-Pacific banking systems, investment funds and pension funds.

This is creating a rapidly growing pool of Asia-Pacific financial assets, a significant share of which can be mobilized for financing economic development. The growing importance of Asia-Pacific multilateral development banks, commercial banks, national development banks, asset managers and insurers as key players in APAC development financing is creating a much brighter long-term outlook for mobilizing capital flows for the Asia-Pacific region.

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