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INFRASTRUCTURE INVESTMENTS IN LESS MATURE MARKETS

DISCUSSION NOTE

Rapid growth in emerging markets and developing economies (EMDEs) has fuelled demand for infrastructure to support economic and social development. In this note we look closer at infrastructure investments in these less mature markets. Our objective is to provide an overview of the opportunity set, key risks and return drivers from the perspective of an institutional investor.

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SUMMARY

INFRASTRUCTURE INVESTMENTS IN LESS MATURE MARKETS

Rapid growth in emerging markets and developing economies (EMDEs) has fuelled demand for infrastructure to support economic and social development. Fiscal constraints in many economies have meant that government budgets, traditionally the major source of financing for infrastructure, cannot alone be expected to finance infrastructure needs in these countries. Yet the volume of private participation in financing infrastructure projects in EMDEs remains relatively modest. There is much attention given to institutional investors as a potential source of financing infrastructure.

Infrastructure investing in less mature markets poses an additional set of challenges compared to infrastructure investments in OECD countries. In general, there is higher country risk and regulatory risk associated with investments in these markets. Infrastructure investments are sensitive to country risk due to their unique features, including the extended period over which returns are generated, the social and political sensitivities around foreign investments in public goods, and the exposure to local currency fluctuations throughout the life of the project through tariffs and user fees. Assets under construction or projects under development constitute the bulk of projects in low- and middle-income countries. The high proportion of these projects can be attributed to a greater need to build new infrastructure rather than to maintain existing assets.

The last ten years have seen a rise in public-private partnerships in developing economies as a means of crowding in investment and expertise from the private sector. International investors will generally expect higher returns from their infrastructure investments in less mature markets compared to investments in developed markets. Although some institutional investors are able and willing to invest at this higher end of the risk spectrum, this kind of allocation will likely be a small percentage of their portfolios. However, for long-term investors, infrastructure investment in less mature markets may represent interesting investment opportunities and a way to obtain a more diversified portfolio.

The range of investment vehicles currently being used in EMDEs is narrower than in developed countries, reflecting, for example, weaker regulatory standards, less developed domestic capital markets and a smaller investor base. Because of the additional complexity of direct investing in less mature markets, investors with limited experience tend to choose an indirect investment route. In addition, the lack of scale in many of these markets makes it difficult for investors to justify dedicating the resources needed to understand the country context, and for regulators to establish a track record with international investors of a stable investment environment. Multilateral development banks have traditionally played an important role in these markets.

A number of these institutions are today offering financial instruments such as investment funds or risk mitigation instruments to attract private investors. These institutions normally have local presence and experience, and may act as independent mediators between public and private parties as they will often have the neutrality required to address potential issues of conflict.

Introduction

Infrastructure as an asset class covers a set of heterogeneous investment opportunities. The OECD defines infrastructure as the system of public works in a country, state or region, including roads, utility lines and public buildings. Infrastructure investments are direct or indirect stakes in businesses that own or operate these assets. Infrastructure assets are often grouped according to physical characteristics, cash-flow properties, contractual approach, maturity of asset, or stage of market development.

Demand for capital to fund infrastructure arises from a need to renew ageing infrastructure assets in mature economies, and a need to expand capacity in emerging markets. At the same time, government capability to supply the capital required is limited. The result has been widespread recognition of a significant infrastructure funding gap.

The link between infrastructure and economic growth is widely acknowledged. Rapid growth in emerging markets and developing economies (EMDEs) has fuelled demand for infrastructure to support economic and social development. There is much attention given to institutional investors as a growing potential source of financing. Institutional investors need a diversified portfolio of long-term assets. According to figures from the OECD¹, the demand for assets from this long-term investor base has also been increasing rapidly over the last decade.

In this note, we look more closely at infrastructure investments in EMDEs, referred to here as less mature markets². For long-term investors, these markets may represent interesting investment opportunities and a way to obtain a better-diversified portfolio. The note is part of a wider assessment of infrastructure investments for long-term investors³.

Infrastructure requirements in less mature markets

Over the last 20 years, 3.8 percent of world GDP has been invested in infrastructure⁴. Annual infrastructure spending has been trending down in advanced economies, but has been rising in emerging markets, from 3.5 to 5.7 percent of GDP. Current spending on infrastructure in these countries is approximately 0.8-0.9 trillion dollars per year, according to Bhattacharya et al. (2012). The majority of these investments are financed directly by domestic budgets.

¹ See OECD (2013a).

² For details, see the World Bank's definition of low- and middle-income countries at <http://data.worldbank.org/about/country-and-lending-groups>.

³ Discussion Note 2-2013 "Infrastructure investments" and Discussion Note 4-2015 "Renewable energy investments".

⁴ McKinsey (2010).

Bhattacharya et al. point to a number of factors that will contribute to demand for further investment in infrastructure in EMDEs. First, global trade is playing an increasingly important role in countries' development, triggering a rise in the need for traditional transport infrastructure such as roads, railways and ports. Second, urbanisation calls for increased infrastructure spending. Between 2010 and 2030, the world's population is expected to rise from 6.1 to 8.1 billion. Most of this increase will take place in the developing world, and virtually all of this will be in urban settlements. Electricity, water and transport are expected to account for the bulk of this future spending. Third, between 10 and 15 percent of the required infrastructure investments can be attributed to making infrastructure sustainable, by ensuring lower emissions, higher efficiency and resilience to climate change. Finally, EMDEs have under-invested in maintenance of current infrastructure in recent decades: estimating a total amount is difficult but one can assume that substantial additional funds will be required to raise the levels of maintenance.

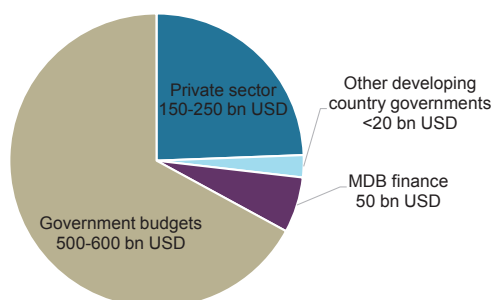
Bhattacharya et al. estimate that to meet the development requirements for infrastructure, annual infrastructure spending in less mature markets will need to more than double by 2020. Also, investments are needed to ensure that infrastructure investments are low-emitting and climate-resilient. In total, Bhattacharya et al. estimates that investments of 1.6-2.0 trillion dollars per year will be needed. However, infrastructure shortages are not easily quantifiable, but it is widely accepted that there will be a substantial demand for investment.

Sources of infrastructure finance

Since the onset of the global financial crisis, fiscal constraints in many economies have meant that government budgets – traditionally the major source of financing for infrastructure – cannot alone be expected to finance infrastructure needs in EMDEs. Yet the volume of private participation in financing infrastructure projects in EMDEs remains relatively modest. According to the World Bank, public funding of infrastructure in developing economies accounts for about 70 percent of total infrastructure expenditure.

Approximately 20 percent is financed by private sources, and the remaining 10 percent is covered by multilateral and bilateral development agencies. This is in line with the amounts reported by Bhattacharya et al., see Chart 1.

Chart 1 Existing infrastructure financing in less mature markets



Source: Battacharya et al. (2012)

The strong link between the level of infrastructure investments and growth may explain why multilateral development banks (MDBs), the World Bank and the Asian Development Bank spend up to 50 percent of their resources on infrastructure development⁵. Some Asian countries have developed infrastructure “facilities” (a fund, bank, “assisting” agency or legal mechanism) to aid institutional infrastructure investing. One example is the Asian Infrastructure Investment Bank, officially launched in 2014. These institutions can function as facilitators for investors but can also issue their own bonds. In frontier markets, where local investors are few and international investors lack experience, the involvement of governments and/or MDBs may be decisive for investors entering a market.

Tapping into the local debt market may be another source of funding. However, in many countries, there is an overall shortage of long-term locally denominated debt financing. The size of local commercial banks is often small relative to the funding required for infrastructure projects, and the loans have short tenors. Local banks also often lack the experience and skill to undertake project financing. Local institutional investors such as life insurance companies and pension funds can potentially be a source of infrastructure financing, but in most markets a significant level of capital market development is needed before their capital can be deployed. There are some important exceptions such as Brazil and South Africa, which have well-developed pension fund and mutual fund industries⁶. Local construction companies may also be important private providers of capital for infrastructure. They are able to raise debt on their balance sheets and have had a role in private infrastructure projects in, for example, Brazil, Turkey and Mexico.

Many EMDEs depend on foreign financial institutions, especially banks, in order to finance their investments in infrastructure. Bank loans for infrastructure projects are in many cases extended by a syndicate of banks rather than a single bank, as syndicated loans allow the diversification of the large risks of a single project across a group of banks. In particular, emerging Asia (excluding China) has become a major recipient of syndicated project loans for infrastructure-related sectors⁷. Another financing source of growing importance in emerging markets is export credit agencies⁸. These are entities that provide government-backed loans, guarantees and insurance to companies from their home country looking to do business in EMDEs.

According to the OECD⁹, the emerging infrastructure financing gap in less mature markets has the potential to be a source of ongoing vulnerability and a growth dampener in these economies. The potential supply of long-term financing is ample. Long-term institutional investors have very large and growing long-term liabilities. Hence they need long-term assets. The problem may be that of matching the supply of finance from the private sector with investable projects.

⁵ *Adam Smith International (2012).*

⁶ *OECD (2013c).*

⁷ *Ehlers (2014).*

⁸ *Ibid.*

⁹ *Della Croce et al. (2013).*

Risks to infrastructure investments in less mature markets

The risks associated with a specific infrastructure project generally arise from the nature of the underlying asset itself and the environment in which it operates. The magnitude of a risk varies, depending on the country (and its underlying investment climate), sector (and its institutional maturity) and project (and its complexity). Investors' exposure to these risks depends on the design of the contract, which part of the capital structure the investor has invested in, and how this exposure is structured. The high degree of heterogeneity implies that any generalisation about risk and reward can be misleading.

Risks also vary across the life of the project. Some risks are important only early on in the bidding process, while other risks will be present until the end of the project. The three distinct periods that affect risk in infrastructure projects are as follows:

- Project development phase (before bid submission and between bid submission and financial closing of the deal)
- Construction phase (greenfield investments)
- Operational phase (brownfield investments)

Risks are usually the highest during the project development phase and tend to decrease as projects move towards the operational phase as more information becomes available. For example, the quality of the infrastructure build, operational efficiency and the actual demand for services start to be observed as the project becomes operational.

Infrastructure investing in less mature markets poses an additional set of challenges compared to infrastructure investments in OECD countries. Infrastructure investments are very sensitive to country risk due to their unique features, including the extended periods over which return is generated, the social and political sensitivities around foreign investment in public goods, and the exposure to local currency through tariffs and user fees. Country risks, or political and macroeconomic risks, include country-specific factors that can reduce the profitability of doing business in a country by adversely affecting operating profits or the value of assets. In general, there is higher country risk and regulatory risk associated with investments in less mature markets.

The regulatory environment is crucial in infrastructure investing. The creation of a pipeline of investable projects for private actors requires a trusted legal framework for infrastructure projects. The long timeframes required for infrastructure project development leave businesses and investors particularly vulnerable to policy or regulatory changes over the investment lifetime. The lack of scale of projects in many of the less mature markets makes it difficult for investors to dedicate resources to understanding the country context, and for regulators to establish a track record of a stable investment environment. The limited track record of enforcement of regula-

tion increases investors' perception of risk. The 2013 Multilateral Investment Guarantee Agency and Economist Intelligence Unit (MIGA-EIU) Political Risk Survey finds that investors classify macroeconomic instability and political risk as the main constraints for investing in EMDEs. Among political risk components, the survey finds that regulatory issues (58 percent) and breach of contract (45 percent) remain the most important concerns for investors.

Hammami, Ruhashyankiko and Yehoue (2006) analyse projects from the World Bank's Private Participation in Infrastructure (PPI) database and conclude that lower levels of corruption and a more effective rule of law are associated with a higher likelihood of securing private-sector involvement through public-private partnerships (PPPs). Both the risk of corruption and risks regarding the legal framework are particularly prominent in the development and operational phases.

Araya et al. (2013) find that infrastructure investment levels in EMDEs are highly sensitive to sovereign risk. Through an empirical analysis of the relationship between private participation in infrastructure and country risk, they show that country risk ratings are a reliable predictor of infrastructure investment levels in developing countries¹⁰. The results suggest that a difference of one standard deviation in a country's sovereign risk score is associated with a 41 percent higher level of investment in dollar terms. The authors find that the predictive ability of country risk ratings holds for all sectors of infrastructure. On average, private participation in energy-related infrastructure investments exhibits a higher correlation with country risk than private participation in other infrastructure projects such as transport, telecommunications and water investments. An analysis of PPI patterns for countries emerging from conflict reveals that they typically require six to seven years to pass from the day that the conflict is officially resolved before they attract significant levels of private investment in infrastructure. Very few investments took place in the first five years after a conflict ended, and nearly all of the investments were in the telecommunications sector – primarily in mobile telephony. Private investment in sectors where assets are more difficult to secure—such as water, power distribution or roads—is slower to appear or simply never materialises. The overall levels of investment in conflict-affected countries are lower than in other EMDEs both in absolute terms and relative to per-capita income.

Foreign investors may be concerned about expropriation risk and poor governance standards. Following policies on environmental, social and governance (ESG) issues in less mature markets can be a challenge. Van Dijk et al. (2012) conclude that the ESG risks faced by companies in emerging markets vary greatly from country to country. Looking at Brazil, Russia, India, China and South Africa (the BRICS countries) in particular, they note differences in the development of regulations and the level of ESG integration into business operations. For example, they find that deforestation and relations with indigenous people are of concern in Brazil, whereas complicated governance structures that discourage influence from foreign investors pose the greatest risk in Russia. In China, they list product quality and safety as being

¹⁰ Based on numbers from the World Bank's PPI database for 130 countries from 1990–2010, and Euromoney's country risk ratings.

of primary concern, while depleting water resources are a key risk to many industries in India and South Africa.

Exchange rate risk is unique to each investor, and because of the heterogeneity among the less mature markets, it is difficult to say something general about currency risk. However, currency risk may be of importance, especially in countries without established or liquid long-term debt markets and without market-based currency hedging products (cross-currency swaps, for example). For international investors, the involvement of an export credit agency may help mitigate some of this risk. These agencies may allow repayment of debt in local currency, at least in part.

Risk guarantees and political risk insurance

Many less mature markets face obstacles in mobilising private investment to finance their infrastructure needs. Hence, efforts are being made to provide financial instruments such as investment funds, blending and risk mitigation instruments to attract private investors who might otherwise be deterred from entering these markets. Specific financial instruments have been developed to transfer political and regulatory risk from the project sponsors and financiers to a party better suited to bearing it – such as a development bank or an insurance company. This is intended to protect the private sector from adverse incidents. The protection is in the form of guarantees or political risk insurance. These instruments come at a cost, depending on the type of risk covered. While risk mitigation instruments are no panacea, they can help “bridge the gap” while a country establishes a sound legal and policy framework – and can be extended to support efficient risk sharing later on. There is a range of guarantee products provided by different institutions. For example, the World Bank and its sister agencies, the Multilateral Investment Guarantee Agency (MIGA) and International Finance Corporation (IFC), all provide guarantee instruments.

The coverage offered is relatively standardised in the industry for traditional political risk insurance. Schwartz et al. (2014) list the following:

- Currency inconvertibility and transfer restrictions: losses arising from the inability to convert local currency into foreign exchange, or to transfer funds outside the host country
- Expropriation: losses as a result of actions taken by the host government that may reduce or eliminate ownership of, control over, or rights to the insured investment
- War and civil disturbance: losses from damage to, or the destruction or disappearance of, tangible assets caused by politically motivated acts of war or civil disturbance in the host country
- Breach of contract: losses arising from the host government’s breach or repudiation of a contract
- Arbitration award default: losses arising from a government’s non-payment when a binding decision or award by the arbitral or judicial forum cannot be enforced

Political risks that are not insurable include legal, regulatory and bureaucratic risk. These include (Sachs et al. 2008) the legal enforceability and execution of laws, conflict of authority, issuing of approvals and consents, and corruption. There is also a non-governmental action risk that includes actions by environmental and union activists, religious fundamentalism, ethnic tensions, etc. According to MIGA calculations, the share of issuance of political risk insurance as a proportion of total foreign direct investment in developing economies is 14.2 percent.

The market for infrastructure investments in less mature markets

Over the last few years, private investments¹¹ in infrastructure projects in less mature markets have averaged about 180 billion dollars per year¹². In the period 2005-2010, there was a rise in private participation in infrastructure in less mature markets. Over the last five years, however, private participation has levelled off or even fallen slightly. Private capital has contributed around 20 percent of total investment in infrastructure during this period. In 2014, infrastructure projects with private participation totalled 160 billion dollars. This represents a small increase from 2013 levels and is in line with developments in the general level of foreign direct investment in developing countries in recent years. The figures shown in the charts and referred to in this section are all from the World Bank's PPI database. Projects included in this database do not have to be entirely privately owned or financed, and the figures reflect total project investments¹³.

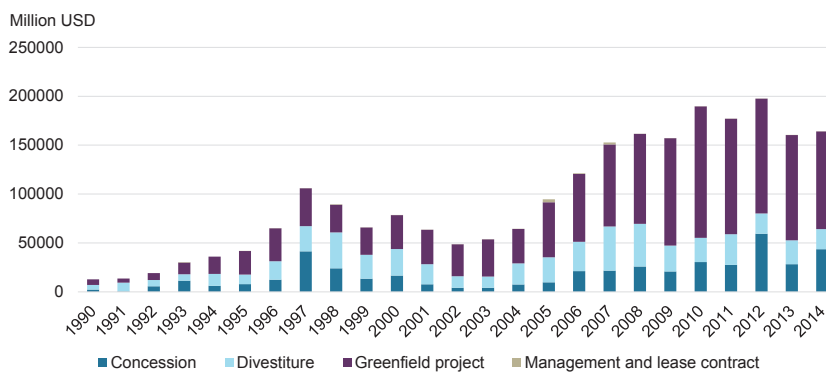
As illustrated in Chart 2, the majority of projects in low- and middle-income countries are greenfield projects. This can be attributed to the need to build new infrastructure rather than to maintain existing assets.

¹¹ "Investments" refers to investment commitments at the time of financial closure or, in the case of brownfield concessions, at the time of contract signing.

¹² World Bank and PPIAF, PPI Project Database, see <http://ppi.worldbank.org/>.

¹³ The database records contractual arrangements in which private parties assume operating risks in low- and middle-income countries (as classified by the World Bank). Projects included in the database do not have to be entirely privately owned, financed or operated. Some have public participation as well. The database figures reflect total project investments, including those of both the private and the public parties. For further details, see: <http://ppi.worldbank.org/methodology/ppi-methodology>.

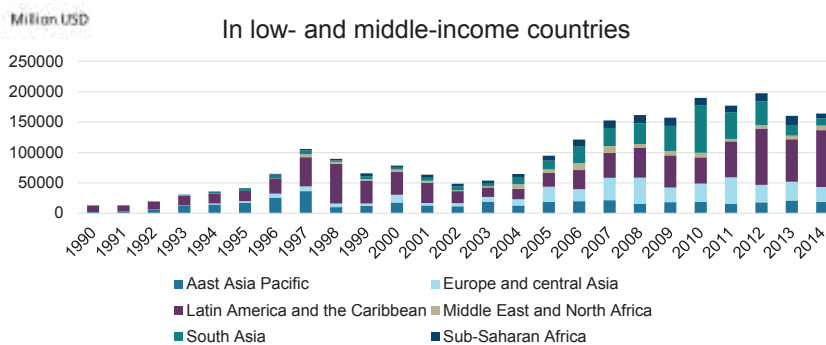
Chart 2 Infrastructure investments - by type



Source: World Bank and PPIAF, PPI Project Database. (<http://worldbank.org>) Date 03/20/2015

Latin America and the Caribbean are by far the largest region for private participation in infrastructure, and in 2014 this region accounted for 57 per cent of total investments. Investments in Brazil, Colombia and Peru represent the bulk of the investments in this region. These countries offer a certain market scale which may enable investors to dedicate resources to understanding the country context. The top five countries for PPI investments in 2014 were: (1) Brazil, (2) Turkey, (3) Peru, (4) Colombia and (5) India. Brazil's large stake is a continuation of a recent trend. The country received 24 per cent of global investment in 2013, and 42 per cent in 2012. India has seen the opposite development, and despite it being among the top five countries in 2014, investment in India reached a nine-year low that year.

Chart 3 Private infrastructure investment by area



Source: World Bank and PPIAF, PPI Project Database. (<http://ppi.worldbank.org>)

Chart 4 illustrates the sectoral distribution of private investment in less mature markets. The ease of attracting private-sector involvement varies between sectors¹⁴. Both the energy and telecommunications sectors provide excludable goods where fees can easily be charged. Telecommunications has been the largest sector for private investment since the beginning of the 1990s, accounting for almost half of private investment in infrastructure projects. These investments have often included privatisation or sell-offs of government assets. These assets have less development risk and construction risk than other types of investments. The trend in private investment in telecommunications has been towards mobile access, with fixed access and long distance accounting for a small fraction of PPI investments in telecom-

14 World Bank (1994).

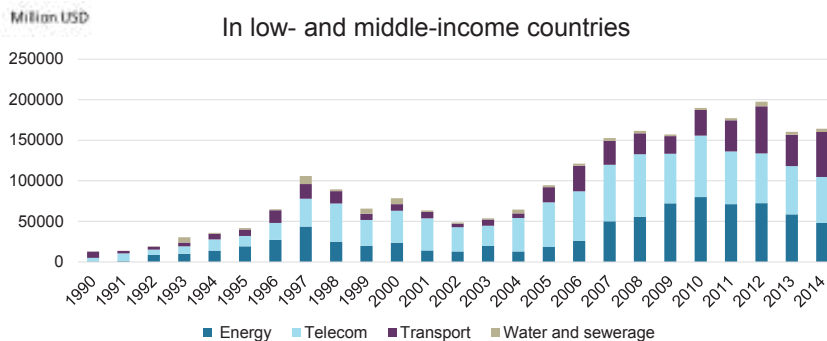
munications in 2013. The number of new projects in the sector has been trending down over the last decade.

The energy sector has traditionally been the sector with the second-highest amount of private investment. Private infrastructure investments in the energy sector in developing countries in 2014 amounted to 48 billion dollars. There has been significant investment in renewable energy in the last few years. In many less mature markets, there is a lack of generation capacity and grid connectivity, which often makes off-grid solar the most viable alternative for investing.

The transport sector saw a large increase in investment from 2013 to 2014 due to several large-scale projects in Brazil, Colombia, Peru and Turkey. The largest share of investments in the transport sector has so far been in roads, with airports as the second most important subsector.

The water and sanitation sector accounts for a small proportion of private infrastructure investment and has declined by 40 percent since 2012. It is hard to draw conclusions on general trends, as there have been fewer projects in the sector, and the spectrum of projects varies significantly in terms of capacity and scale. Water has been a very minor sector for PPI investments, but Bhattacharya et al. (2012) expect it to account for 15-30 percent of the annual infrastructure needs of developing countries by 2020.

Chart 4 Private infrastructure investment by sector



Source: World Bank and PPIAF, PPI Project Database. (<http://ppi.worldbank.org>)

The opportunity set for an institutional investor

The vast majority of institutional investors' investments in infrastructure are still concentrated in OECD economies. Nevertheless, some of the leading international institutional investors have started to seek out opportunities in developing economies. One obstacle, however, is the lack of scale in many of these markets. An investment requires dedicated resources to understand regulations and market environments, and most investors therefore focus on the larger economies. As a result, the market for private infrastructure investment in less developed markets is very fragmented.

An investor considering infrastructure investments will have to consider whether to invest in debt or equity, in the listed or unlisted space, directly or through funds. The range of investment vehicles currently being used in EMDEs is narrower than in developed countries, reflecting, among other things, less developed domestic capital markets, weak regulatory standards, poorer governance, and limited investor capacity and knowledge. The country context and level of market development will determine what sort of investment vehicle is best suited. For example, in a country or region with relatively developed capital markets, there may be a market for project bonds or other securitised instruments. This may, for example, be the case in some countries in Latin America.

Institutional investors are predominantly looking for steady, inflation-adjusted income streams. This means that institutional investors will generally be more interested in mature operating assets that already generate a cash flow and are situated in a stable regulatory and macroeconomic environment. The typical infrastructure project in less mature markets is more complex, longer-term and riskier, as most projects in these markets are greenfield projects. Although some investors are able and willing to invest at the higher end of the risk spectrum, this will likely be a small percentage of their portfolios¹⁵.

Because of the complexity of direct investing in less mature markets, investors with limited experience will often choose the indirect route of investing. According to Preqin, 83 percent of infrastructure investors looking to access infrastructure investments in emerging markets state that they invest through funds. Many commercial funds exist, mainly in the form of private equity funds, mutual funds or listed investment trusts. Other types of funds frequently have some level of sponsoring through government, national agencies or multilateral development banks. An estimated 50 billion dollars of capital has been channelled through unlisted infrastructure funds in emerging markets. Between 2004 and 2013, 123 funds were closed with a volume of 41 billion dollars, and almost 500 deals were made over ten years, about half of them in Asia. Energy, utilities and transport have received the largest share¹⁶.

¹⁵ Inderst and Stewart (2014).

¹⁶ Inderst and Stewart (2014), Preqin (2015).

One possible way to invest in these markets is through a PPP, defined by the World Bank as “a long-term contract between a private party and a government agency, for providing a public asset or service in which the private party bears significant risk and management responsibility”. Many countries lack a favourable environment for, and experience with, PPPs. Ehlers (2014) identifies the lack of properly structured PPP projects as the major hurdle for private infrastructure financing. Hence, there is not necessarily a correlation between the scale of need for infrastructure and investable projects for private investors.

Multilateral development banks

Multilateral development banks (MDBs) can play an important role in facilitating investments for an institutional investor in less mature markets. MDBs generally contribute their own direct funding to infrastructure projects via both equity investments and project loans, often with longer maturities and grace periods than commercially available. They can also attract capital from the private sector by playing a part in syndication or other co-financing mechanisms, or also issue risk guarantees and project insurance against risks such as civil disturbance or government non-payment. Hence, they can enhance confidence and reduce risk premiums for infrastructure projects in emerging markets.

In many cases, money is not the core resource being sought from MDB involvement. In the case of ongoing projects, MDBs often act as independent mediators between public and private parties. For example, issues of corruption and abuse of political power can be addressed by MDBs, which may have the leverage and recognised neutrality to improve the situation. The MDBs often have a close relationship with the local government and long experience of working with it. They may therefore have the ability to promote policies that improve the investment climate or mitigate sudden changes in policies.

The International Finance Corporation (IFC) is a member of the World Bank Group and is the largest global development institution focused exclusively on the private sector in developing countries. The IFC works with the World Bank through initiatives such as the Global Infrastructure Initiative to attract institutional investors to infrastructure projects in developing countries. In 2014, the World Bank created a Global Infrastructure Facility (GIF) to provide support for investors using skills and resources from within the World Bank Group and the public and private sectors. The aim is to unlock a credible pipeline of viable and bankable PPP projects in EMDEs.

Return expectations

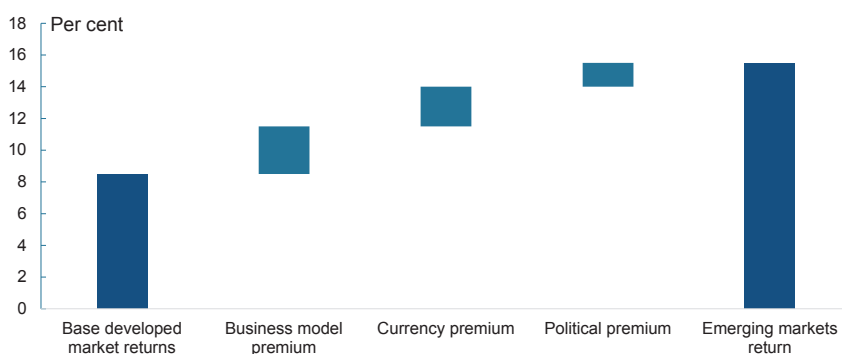
The performance history of infrastructure investments is limited, and performance data are to a large extent private. The high degree of heterogeneity complicates comparisons across projects, structures and jurisdictions. Academic studies on infrastructure investments are limited in number, and the approaches taken to deal with the shortcomings in the available datasets vary. It is therefore challenging to draw firm conclusions based on these studies.

The risk-return profile of an infrastructure investment generally arises from the nature of the underlying asset itself, the environment in which it

operates, and the choice of investment vehicle. Both direct investments and investments through funds have the potential to deliver attractive risk-adjusted returns to an institutional investor. However, investors in infrastructure have traditionally focused their investments on the developed markets of Australia, North America and Europe. An investment in a less mature market exhibits different risk and return characteristics than an investment in more developed ones, and bond-like core infrastructure investment opportunities are very scarce in less mature markets. Most investment opportunities involve some construction or development risk. The large number of projects that require capital at the development stage can offer very attractive returns, but the stability of the cash flow from the project is very uncertain. The nature and the level of risk affect the cost of capital. While actual risk and return certainly still matter, in less mature markets it is even more difficult for investors to have all the information available to judge the actual levels of risk and return before taking an investment decision.

As a consequence, international investors will generally demand higher returns from their investments in less mature market infrastructure compared to investments in developed markets. One way of illustrating the return expectations of infrastructure investing in less mature markets is Partners Group's risk premiums, which are presented as additional return requirements for regulatory, political and currency risks. There is also an added business risk, as investors frequently must be willing to enter a project at a much earlier stage than in developed markets. The regulatory and political risk is difficult to quantify. The political risk is measured by Partners Group as the cost of political risk insurance for the country or area, which is added to the return requirement. Regarding foreign exchange risk in emerging markets, international and local investors view and rate it differently: local investors are less concerned, while international investors may be significantly impacted if their liabilities are denominated in their domestic currency. Significant swings in the currency may result in considerable costs, and hedging currency risk in less mature markets may be challenging. Chart 5 illustrates how infrastructure investments in less mature markets can be characterised in terms of expected risks and returns. These markets may represent interesting investment opportunities for investors willing and able to take on these additional risks. The relative immaturity of the market for private infrastructure investments in these countries may also offer investors an early mover premium.

Chart 5 Emerging markets infrastructure IRR build up



Source: Partners Group (2013)

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