

INVESTING IN UNLISTED INFRASTRUCTURE: AN INSTITUTIONAL PERSPECTIVE

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Introduction

Infrastructure is a relatively new investment category that traces its roots back to the mid-1990s in Australia. At that time, the Australian government raised much needed capital by selling government assets to private investors. Macquarie Bank was the first to buy these assets from the government and sell them to investors through IPOs. Since then, infrastructure investing has spread around the world and its increasing popularity is evidenced by the growth in infrastructure investment management firms and their assets under management. In December 2003, assets under management were roughly US\$9 billion. By June 2012, 283 investment firms held US\$210 billion in assets¹. According to the OECD, over US\$50 trillion of infrastructure investment will be required to meet demand over the coming decades. This is the equivalent to 2.5% of global GDP per annum. More than US\$11 trillion will be required for ports, airports and key rail routes alone².

Given the income requirements of many institutional investors, the current low (and potentially rising) interest rate environment and the long-term nature of institutional liabilities, long-life assets that provide yield often linked to inflation have become increasingly appealing. Infrastructure is one such long-life asset. Its risk/return profile and diversification benefits have resulted in its recommendation in many recent asset liability studies. According to a 2012 Preqin survey, institutional investors put money in infrastructure for diversification (69%), as an inflation hedge (52%) and for portfolio stability (45%).

Listed infrastructure products invest in publically traded shares in infrastructure-related companies and therefore

have the advantage of being highly liquid. However, these funds are more highly correlated with the public equity markets than unlisted infrastructure investments.

In this article we will focus solely on unlisted infrastructure³.

According to Preqin, the majority of institutional investors (72%) have selected unlisted investment structures accessed through closed-end funds. Unlisted infrastructure, where performance is measured through private valuations, exhibits lower measured volatility and correlations with public markets than listed infrastructure. Avoiding the volatility of publically traded investments is very appealing to institutional investors subject to periodic actuarial valuations and/or significant annual withdrawals.

Investment Approaches

As with equity portfolios, approaches to infrastructure investing vary by style, geography, sector and method of implementation. We have provided below an explanation of the major investment approaches available today.

Investment Strategy

When considering placing capital in an infrastructure fund, investors first must choose the strategy that best suits their needs. More conservative investors normally will invest in funds focused on Core assets while Opportunistic funds are of interest to those searching for a higher return with less focus on income. Typically, there are many risk/return profiles available in the market as managers often invest in a mix of asset types.

Core – These are essential assets with consistent cash flow. Often they are contracted with governments for many

1 2013 Preqin Global Infrastructure Report

2 Strategic Transport Infrastructure Needs to 2030, OECD publications 2011.

3 Listed funds can have a place in an unlisted structure. After committing to an unlisted fund, listed investments can be used to gain exposure to the asset class while waiting for the capital to be called. Likewise, cash flows and returned capital can be invested in listed funds while waiting for new opportunities to present themselves. Some investors have adopted a hybrid approach (combining listed and unlisted assets) in order to meet their liquidity requirements.

years into the future. Core strategies are primarily focused on Brownfield assets (mature, operating assets) and are considered to be at the low end of the risk spectrum. They require little investment when purchased, and their total return will be composed mostly of income. Examples include toll roads, pipelines, energy transmission and distribution, and water systems.

Value-added - This approach involves refurbishing Brownfield assets that need repairs, upgrades and maintenance. These assets continue to generate income, but also require either one-time or on-going capital expenditures. Value-added strategies also can include replacing management to improve operating efficiencies. Total return for these assets will be a mix of income and capital gains generated by the improvements and upgrades.

Opportunistic - This approach is similar to Value-added, but with significant emphasis on capital appreciation through operational improvements or development and higher leverage. Opportunistic strategies may involve a focus on Greenfield projects (those where the assets are under development) with new construction requiring upfront capital expenditures, and no cash flow generation until the asset is operational. These projects often include an element of risk during the design, build and operation of the asset. In addition, the asset may be sold once it is complete and generating cash flow. Managers investing in Greenfield projects need large teams with deal-making, construction and operational experience. Returns from these assets will be mostly capital gains with income dependent on the length of time the asset is held after completion. Generally, Opportunistic strategies are considered to be higher risk than core strategies. However, the risk profile is always dependent on the particular attributes of the asset.

Geographic Diversification

Infrastructure markets are generally divided into OECD and developing markets. We have provided a brief description of the major markets below while noting that, normally, Australia is included also in Global infrastructure portfolios.

Europe - The European infrastructure market is very diversified by asset type. Governments in the region have experience with privatizations and there is an established regulatory framework. For example, in the UK there was a large move to privatize assets that began during the Thatcher administration of the 1980's. European infrastructure funds are fairly diversified regionally, although more recently managers have been avoiding Southern Europe for economic reasons.

United States and Canada - In the United States, there has been political resistance to the privatization of assets that are perceived to be "public" in nature, and investment options are mainly energy-related (i.e., electric power production).



Aerial view of a highway interchange in Chicago, Illinois (I-290 & I-90/94)

The U.S. is a huge potential infrastructure market still in its infancy; however, some limited progress has been made towards privatizing a broader array of assets. An example is the Federal Aviation Administration's airport privatization program, started in 1997 and reauthorized in 2012, which allows for 10 airports to privatize. In Virginia, some roads were privatized in the late 1980s. In a high profile decision in 2006, Chicago's mayor leased out the Chicago Skyway for 99 years for \$1.8 billion dollars. Indiana also privatized a road in 2006. Other states have been resistant to selling their roadways.

The Canadian infrastructure market is smaller than that in the U.S., but it has a well-developed capacity to bring Public-Private Partnership (PPP) projects to market. According to Infrastructure Canada, there have been 71 PPP projects between 2005 and 2011 with an approximate capital value of over C\$33 billion.

Developing Markets - A lack of infrastructure in developing markets has been identified as a significant impediment to their continued economic growth. Therefore, projects in these countries are focused mostly on the construction of new assets rather than the refurbishment of existing assets seen in the developed economies. Funds focused on developing markets typically target higher internal rates of return (IRRs) than OECD-focused funds.

Most institutional investors and large infrastructure managers are focused on developed markets with assets allocated to global mandates being invested in Europe and North America. Combining regional funds to create a global portfolio is also a popular choice. A review of the Preqin Infrastructure database shows us that there are a large number of smaller funds focused on the developing markets.

Asset Type

Infrastructure assets can be divided into various sectors. At a high level, assets are either in regulated or unregulated

industries. Regulated industries are subject to periodic pricing resets as established by the regulator. This usually results in very stable returns that are less volatile than would otherwise be expected. Therefore, these assets are exposed less to market cycles and generally are considered to be defensive investments. Regulated assets include electricity transmission lines, gas and oil pipelines, water distribution systems and wastewater collection and processing systems. Unregulated industries price within the context of the market and are exposed far more to market and economic cycles. Examples of unregulated infrastructure include ports, toll roads and airports.

Infrastructure assets can be divided into sectors. We have provided a breakdown below. This is not an exhaustive list and readers may find different categories from other sources.

Communications - These assets include radio/television broadcast towers, wireless communications towers, cable systems and satellite networks.

Energy - This is a broad sector that includes pipelines, electric power generation, natural gas transmission and storage and renewable energy (i.e., wind farms, solar power). Listed infrastructure indices often include a high weight in publicly listed electricity utilities. Income is based on the units of energy transported, stored or consumed.



Wind generators in Australia.

Social - This sector provides or supports the delivery of public sector services, covers a wide range of assets, and often is implemented through PPP structures (more common in Europe than in the U.S.). Asset types include hospitals, detention centers, court houses, prisons, schools and government buildings. Income is generated almost entirely from government organizations.

Transportation - This sector is comprised of toll roads, tunnels, bridges, airports and rail. Income is generated from user fees, either directly (toll roads) or as part of another revenue stream (airports).

Water & Waste Management - Historically, this sector has been managed by governments, but outsourcing (particularly in the UK) has become more common. Revenue for these services also is driven by user fees.

Investing in infrastructure funds - issues to consider

The largest institutions have built their own in-house teams, which allow them to invest directly in infrastructure assets, a luxury not available to smaller investors. Given the large asset size, legal complexities and large, expert staff required to invest directly in infrastructure assets, many small- to mid-sized (and larger) investors have opted to access the asset class via funds. The following are some of the issues that warrant consideration when hiring an infrastructure manager.

Fund term

Some investors prefer a longer term of 15-20 years or an open-ended structure as they feel that this is well suited to the long-dated nature of infrastructure assets. The longer term arguably does not force the sale of good assets prematurely because the fund has reached the end of its term. However, most closed-ended funds take this into account by having options to extend the life of the fund with a vote among the LPs. Other investors prefer the traditional 10-year term because they are able to access their capital sooner and feel that the shorter term is a more manageable time horizon with less possibility of management changes at the asset management firm.

Open- vs. Closed-ended Funds

Some funds have opted for an open-ended structure that, to an extent, solves for liquidity during normal conditions (funds may suspend redemptions); however, the investor must transact at a calculated NAV, which is subject to valuation assumptions. An open-ended structure allows the manager time to diversify the fund and be patient. Open-ended funds that have been established for a few years also provide the added benefits of instant diversification across vintages and assets while limiting blind pool risk (uncertainty as to the future holdings in the fund).

Fee considerations

Infrastructure fund fees evolved from the private equity model of 1.5%-2% management fees with carried interest (performance fees) above a preferred rate of return. A major criticism of infrastructure funds is that performance fees are not as well suited to core, high yielding assets where the objective is to hold for a long period of time, and the expected IRR is lower than for private equity investments. Managers charging a carry argue that it is important for the alignment of interests; however, there are other means possible to align the GP's and LP's interests. Preferably, carried interest should be charged on a whole-fund basis

at the end of an asset's life and not on individual assets. In this way the manager does not have an incentive to sell assets prematurely in order to earn the carry. An important factor as to how large a manager's carry can be is whether or not it has a catch-up provision (performance fee paid on all returns greater than 0% if the preferred rate of return is met). Some managers have adopted fee structures without carried interest. Reduced fees are more common among newer funds, which are competing on fees to get a foothold in the market.

Whether or not fees are charged on uninvested capital commitments must be considered when examining the fee structure. It can be argued that the manager should be compensated while looking for assets and not rush to invest in order to start collecting fees; however, the investor should consider whether the resulting J-curve effect of paying fees on un-invested capital is worthwhile.

Expected Returns

The majority of core infrastructure funds today target returns in the range of 9% to 12% net IRR. Certain funds employing more active value-added approaches target net IRRs greater than 12%. As funds have different vintages and invest in different types of assets, making direct comparisons is difficult. For instance, 2006 and 2007 vintages have not performed well whereas 2009 and 2010 vintages have fared much better.

Benchmarking

There is currently no industry-wide standard benchmark for unlisted infrastructure. A few large pension plans have adopted an absolute return benchmark or an inflation plus a fixed return benchmark (CPI + 400-500bps). Others have adopted listed equity and fixed income benchmarks such as 50% Real Return Bond + 50% MSCI World. When tracking fund performance, valuation frequency and assumptions also should be considered. The most commonly used



Glen Canyon Dam and Lake Powell in Utah.

valuation methods are based on discounted cash flows, which are subject to the assumptions used in valuation models.

Risks

Infrastructure is often perceived as relatively safe and stable. However, there are important risks inherent in infrastructure investing. The major risks are outlined briefly below.

Regulatory & political risk: Regulatory risk is an important consideration in infrastructure investing. A recent example that highlights this risk occurred in early 2013 when Norway, which was considered to have a stable and predictable regulatory environment, surprised investors by announcing its intention to cut gas transportation tariffs by 90%.

Political risk stems from changes in tax rates, contracts by government bodies and deregulation or nationalization. Often, these risks can be more pronounced in emerging markets. Changes in subsidies also create risk as seen in the Spanish solar energy sector. After the financial crisis of 2008, the Spanish government drastically cut feed-in tariffs and in 2010 made the changes retroactive to existing solar energy installations.

Popularity: Despite the large need for infrastructure, assets have not become available in large enough volume to keep pace with the amount of capital seeking investments. This has driven down the IRRs of infrastructure investments and led to competitive bidding for assets. It is important when selecting an infrastructure manager to ensure that it will not overpay for assets in auctions, particularly for mature operating assets where cost of capital is important and where large pension plans investing directly have an advantage due to their tax exempt status.

Leverage: Certain infrastructure assets are highly levered. PPPs backed by government purchase agreements can be levered in the 80-90% range. Even though the cash flow is essentially backed by the government, there is risk inherent in that degree of leverage. GDP-sensitive assets typically have lower levels of leverage in the 40-60% range, but also present risks if debt is not used prudently. Credit market conditions impact the amount, cost and terms of credit available to infrastructure assets. Managers can mitigate this risk by making conservative refinancing assumptions when underwriting and employing leverage prudently in quantity, structure and tenor. Debt should only be applied at the asset level and not at the fund level, this way if one asset were to become distressed it would not impact the entire fund.

Rising Interest Rates: Essential infrastructure assets generally produce high and stable cash flows due to inelasticity of demand and high barriers to entry. Rising

rates can have a negative impact on total return as they lead to higher discount rates being applied to future cash flows and lower valuations. However, if interest rates are driven by inflation due to strong economic growth or if there are positive supply and demand dynamics, infrastructure can outperform as the inelasticity of demand allows for increases in tariffs, fees, etc. The impact of rising interest rates also depends largely on how much leverage has been employed.

Liquidity: Uncertainty as to whether an investment can be exited in a reasonable amount of time and at favorable terms gives rise to liquidity risk. Closed-end funds offer no liquidity until the end of the fund's term and the secondary market is still in the early phase of development. Liquidity needs must be carefully considered before making investments in unlisted infrastructure.

Development/Construction: Greenfield projects face higher construction risks and demand uncertainty than mature assets. Investors can choose to avoid these risks by investing only in Brownfield assets. Many core infrastructure funds will invest in late-stage Greenfield assets where protections against cost overruns and delays during construction are built into the contracts with the risks assumed by the builder. Those willing to take these added risks may be compensated with higher IRRs.

Conclusion

There is an important global need for investment in infrastructure as many assets in the developed world require replacement or upgrade. At the same time, the developing world requires capital to build new infrastructure assets as their populations increase, economies expand and standards of living rise. There is a natural match between the long-term return and income requirements of institutional investors and the capital requirements of the world's governments. Although there are risks to infrastructure investments, the rewards of liability matching, low volatility, portfolio diversification and high returns are equally enticing. It seems clear that infrastructure investing is here to stay and may have an important role in many institutional portfolios.

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