

# The New Era of Infrastructure Investing

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**Abstract:** Insurance companies, pension funds, sovereign wealth funds, endowments, foundations and family offices all have the ability to invest over inter-generational time spans. This is a unique competitive advantage in markets for long-term, illiquid assets, such as infrastructure. And yet, despite a clear affinity for this asset class, a variety of constraints are preventing these investors from taking up their theoretical place of prominence in the market for private infrastructure. Many of the constraints stem from the time-inconsistency and principal-agent problems embedded in the third party fund management model. In a bid to circumvent these hurdles, some funds have launched in-house investment teams to invest in infrastructure directly. However, before these ‘in-sourcers’ can reap the rewards of such an approach, they have serious challenges to overcome. This paper thus offers insights into how institutional investors can establish internal programs. In particular, we provide specific details about the challenges of direct investment programs and offer suggestions as to how these challenges can be overcome. However, while we conclude that direct investors are the future of infrastructure investing, fund managers will still have a crucial role to play in the markets development. This may warrant a re-conceptualization of intermediation, but, ultimately, this will lead to a revitalization of the asset class and, we expect, a new era of infrastructure investing.

**Keywords:** Sovereign wealth funds, pension funds, infrastructure, investment governance.

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## Introduction

Long-term investors hold half of the professionally managed investment capital in the world today. Insurance companies, pension funds, sovereign wealth funds, endowments, foundations and family offices, which all have the ability to invest over inter-generational spans, had \$27 trillion in assets under management *after* the global financial crisis (World Economic Forum 2011). These investors, which have unparalleled scale and longer time horizons than typical investors, hold clear competitive advantages in markets for long-term, illiquid assets. However, many investors, in practice, focus their resources and capital on generating returns over periods that rarely extend past 24 months. As such, an investor with a horizon that extends to 24 years will naturally have a leg up in asset classes for which shorter-term rivals are prevented from entering due to time horizon.

One asset class that fits this description is infrastructure<sup>1</sup>. The characteristics of an infrastructure investment are particularly well suited to long-term institutional investors. For example, infrastructure businesses often have high barriers to entry due to the sheer size of investment required. For example, the purchase of Thames Water by a consortium of investors in 2006 required £8bn, of which £2.3bn was equity. BAA, the British airport operator, was even larger, at £10bn, when taken over by a consortium of Spanish construction company Ferrovial, Caisse de dépôt et placement du Québec and Singapore's Government Investment Corporation. And yet, investment size is a relatively small problem for the community of long-term institutional investors, such as public pensions and sovereign funds. In addition, infrastructure assets have return profiles that can extend for decades, which can be a problem for a short-term investor. It isn't a problem for funds with inter-generational objectives. Finally, liquidity is generally a cause for concern among short-term infrastructure investors, but it isn't a concern for a fund that can hold an investment for the life of the asset. In short, infrastructure's 'problems' don't appear to be problems at all for the community of long-term investors. Additionally, the benefits of these investments match up remarkably well with these funds' interests. For example, infrastructure assets offer economies of scale, inelastic demand, and stable cash flows and can generate uncorrelated returns, inflation linkage, and downside protection (Inderst 2010).

This compelling value proposition has convinced some long-term investors of infrastructure's potential (Preqin 2010), as certain funds have allocated almost ten percent of their capital to the asset class (see Beeferman 2008). However, most long-term investors remain far shy of that number, with less than one percent of assets allocated (see Russell Investments 2010). As it turns out, despite the clear affinity between the investor and the investment, a variety of constraints are preventing long-term institutional investors from taking up their theoretical place of prominence in the private infrastructure market. And, ironically, it appears to be the economic agents that helped to develop this market in its infancy that are hindering the market from attaining maturity.

Hitherto, intermediaries were crucial infrastructure facilitators. By packaging the assets in a way that would appeal to institutional investors' profit motives, third party managers

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<sup>1</sup> Infrastructure investment in the context of this paper means investment in unlisted infrastructure equity.

gave life to what was otherwise an inactive and untraded sector. They adeptly matched idiosyncratic buyers with unique sellers through a variety of products and funds. Over time, however, it became clear that the interests of the institutional investors were not completely aligned with the interests of the managers. Preqin (2010), a data provider, recently reported that 73 percent of investors do not believe that limited partner (LP) and general partner (GP) interests are aligned in infrastructure funds. As such, many investors have been unhappy with the mismatch between the lifecycle of infrastructure assets and the lifecycle of the vehicles in which they are packaged (Inderst 2010). Moreover, the funds have grown frustrated with carry-based incentive structures that incentivize risky asset selection and excessive leverage. As a result, listed products and third party funds have fallen out of favor among some long-term investors, which helps to explain why many institutional investors are underweighting this attractive asset class.

Notwithstanding the intractable principal-agent and time inconsistency problems within the current outsourced products, institutional investors remain interested in infrastructure. But rather than working through third parties, a break-away group of institutions are starting to invest directly; the intention is to better align asset selection and the time-horizon of the fund by in-sourcing the investment operations. In fact, a handful of pioneering pensions and sovereign wealth funds have already developed internal capabilities to source, structure, and asset-manage large multi-billion dollar infrastructure assets. Another group of 10 to 20 institutions is in the wings, already sourcing co-investments and could eventually develop the capabilities to structure direct deals on their own. Going direct is not viewed as an appropriate strategy for the more opportunistic infrastructure investments – such as greenfield development – but it is viewed as a superior model for “core” infrastructure, which is operating, lower-risk, stable, and governed by stable regulatory regimes.

And so, direct investors would appear ready to usher in the new era of infrastructure investing. But not yet: Before this ‘new era’ can become a reality, the ‘in-sourcers’ will have serious challenges to overcome, as a direct investment program can create as many problems for institutional investors as it resolves. For example, in-sourcing asset management requires hiring people with the necessary competencies and skills, formalizing processes that will guide investment decision-making and risk management, as well as establishing protocols that immunize the funds’ decision-making from external influence. Moreover, the public status of most long-term investors (pensions and sovereigns) means that mobilizing enough resources for an effective internal investment program can be very difficult. In short, direct investment programs are only for those funds that can do these sorts of internal programs ‘correctly’.

In this short article, we illustrate the coming era of infrastructure investing. To do so, we begin with a section recapping the past experiences with the asset class, highlighting the problems with the various mechanisms providing investors entrée. Having documented the constraints hindering infrastructure investments, we then revisit the theory underpinning long-term investors’ interest in the asset class. This then leads into a discussion of how funds might best access infrastructure assets in the future. We argue that (if a fund can get it’s internal operations in order) it makes sense to invest in

infrastructure directly. Accordingly, we offer some insights into how funds can establish internal programs that will succeed. In particular, we provide specific details about the challenges of direct investment programs and offer suggestions as to how these challenges can be overcome. We conclude that, while direct investors are the future of infrastructure investing, fund managers will still have a crucial role. In short, the ‘new era’ described in this paper does not spell the end of infrastructure managers. In fact, it should be a catalyst for their revitalization.

### **The Infrastructure Conundrum: No Easy Access**

When the infrastructure investment model first emerged in the early 1990s, it was the third-party fund managers (such as Macquarie and Hastings) that drove the market. They originated, structured, acquired and managed practically all infrastructure assets available for investment. Over time, the appeal for long-term investors to work through these intermediaries waned, as there were some major weaknesses in the model. In particular, the carry incentive had the unintended consequence of undermining the rationale for infrastructure investing. After all, investors were interested in this asset precisely because of the asset’s downside protection, steady cash flows and long duration. However, carry structures typically have the effect of creating an option over the fund performance for the benefit of the manager (specifically the general partner). Because options become more valuable as the volatility of the underlying asset increases, managers can increase the value of their portfolio of carried interest by increasing the volatility of their investments. One relatively simple method is to ramp up leverage; another is to bias investment selection towards the riskier assets within their mandate. This causes the investment structure to be unnecessarily brittle from the investor’s perspective, undermining the entire value proposition of the asset class.

As a result, long-term investors began experimenting with new mechanisms for investing in infrastructure. In the 1990s, some large funds set up wholly owned, but stand-alone, infrastructure funds management groups that have come to be known as ‘captive GPs’ (or ‘dedicated asset managers’). These investors are subsidiaries of parent pensions and sovereign funds and operate autonomously. The captive GP structure allows the asset owner to achieve a much better alignment of interests with its infrastructure manager, as the structure is tailor made *for* the long-term investor *by* the long-term investor. In addition, the captive GP structure removes the risk of the carry bias to the extent that it makes available non-standard fee and remuneration structures, which provide less incentive to the investment team to increase volatility. One example is Borealis Infrastructure, which is the subsidiary of Ontario Municipal Employees Retirement System (OMERS). It is located in a separate office building, has its own investment committee, and has its own CEO and staff so that it is relatively disconnected from its parent OMERS. This structure enables a broad cultural, strategic, and operational alignment of interests and, yet, it avoids the politics and bureaucracy so often associated with the parent institution(s).

Nonetheless, the captive GP structure has proven to have challenges of its own. For example, building sensible alignment between dedicated investment teams and the broader organization can still be challenging due to the need to compete for talent with third party funds. Moreover, while set up independently, these public entities may still have constraints on their ability to pay private sector levels of compensation, which means it can be tough to attract, retain and incent talent. Finally, building a captive GP structure can take years; establishing a wholly owned subsidiary, recruiting a high-caliber investments team, and building all of the requisite legal, tax, reporting, and back-office expertise to support the program is both time consuming and expensive. As such, these structures are reserved only for those funds with a long-term commitment and a visionary Board of Trustees. To date, only two or three of these structures have been set-up.

Given the limitations of the third party model and the obvious difficulties associated with constructing new and separate financial institutions to act as ‘dedicated asset managers’ or ‘captive GPs’, many funds have decided to simply in-source infrastructure investments. Over the past ten years and especially since 2007, there has been a pioneering group of pensions and SWFs establishing direct investment programs. Today more than 20 pensions and SWFs are investing in infrastructure directly. For long-term investors with the necessary resources, this has become the preferred way to invest. Nonetheless, this approach is not without difficulties. As with the captive GP structure, setting-up an effective direct investment programs lies in recruiting competent investment professionals, setting-up compensation systems, gaining approval on due diligence expenses, and creating the operational, legal, and back-office support to undertake such a program. These changes can be especially complicated within public sector pension plans due to government bureaucracy, and thus require high-level political support to implement.

In short, there are no easy paths for long-term investors to access infrastructure; neither the private equity model through third party managers; nor the captive GP model through standalone subsidiaries; nor the direct investment model through in-sourced teams offers a straightforward approach. As a result, most funds revert either to what’s easiest (third party managers) or they simply avoid the asset class altogether. In so doing, however, they give up their biggest competitive (and comparative) advantage in financial markets: time.

## **A Return to Long-Term Investing**

Behavioural theorists see short-termism as a human predisposition that confounds best intentions. This is particularly true for those individuals responsible for institutional investment, where short-term strategies, on average, underperform long-term strategies. Indeed, strategies that try to respond to the market, follow the market, or anticipate market momentum are typically self-defeating. Transaction costs are high, and the capacity of institutional investors to make short-term decisions consistent with their long-term interests is weak (Clark and Urwin 2008a). And yet, it is widely observed that short-termism dominates financial markets: the average holding time of traded securities has

declined significantly over the past 25 years. The OECD (2011) estimates that, whereas 20 years ago investors held securities on average for two years, by 2010 the average holding time had declined to 2 months. ‘Safety-first strategies’ of risk management are driving all investors towards the short term.

But human predisposition, fears of long-term commitments and the temptation to favor the short term need not dominate investment management. So, for example, there have been academic attempts to frame the investment decision-making process in ways consistent with long-term commitment. These types of frameworks emphasise the people, processes, and politics of investment decision-making, providing the logic for institutional design and governance as well as the application of expertise consistent with long-term objectives (Clark and Monk 2011). The most sophisticated institutional investors have also sought ways of organizing their investment decision-making so as to dampen short-term temptation, while taking a strategic view as to the advantages of long-term commitment. If the market is transfixed with short-term volatility, this is an opportunity for savvy investors to develop long-term strategies that step aside from the current incentive structures.

As such, there is a case for long-term institutional investors to revisit the in-sourcing option for infrastructure. While it has the challenges highlighted in the section above, it offers the best alignment with long-term investors’ interests. Institutional investors that in-source the investment management of infrastructure assets do so with the deliberate goal of distinguishing between short-term and long-term performance. It is a strategy that seeks to impose control upon agents’ incentives, which provides the opportunity to realise long-term investment goals. However, realising the advantages of in-sourcing infrastructure investing (and long-term investing generally) requires rethinking the internal governance of investment management. Indeed, research on best practice pension fund governance (Clark and Urwin 2008b) demonstrates a fund’s governance budget, which refers to the resources available to build the investment operations, is a crucial determinant of an investor’s capacity to change the decision-making process in such a way that favours long-term commitments. Additionally, the governance budget should be consistent with the nature and scope of the risks assumed in its chosen investment strategies. That is, there is a symmetrical relationship between the governance budget and the risk budget of an institution: both are related to the short-term management of an institution to achieve long-term objectives.

We believe that the composition of boards is a crucial determinant of the success or failure of in-sourcing strategies. It is vital that board members and senior executives of such funds are themselves focused upon the long term, whether by virtue of continuity in their appointment or by virtue of assessment cycles that have ‘milestones’ or indicators of performance related to long-term commitments. In our view, the expertise and sophistication of in-sourced staff is a reflection of board competence and understanding of what is required within the investment management process for success. Inevitably, this places a premium on the hiring process, the sequential evaluation of staff performance, and the design of incentive systems that are unambiguous in their intention. The nexus between people and the process of long-term investment is sustained by the

continuity of rewards and commitment, while sanctioning poor performance. And it's the design of this entire system, and its governance, that will determine the investors' success with in-sourced investments over time.

### **Practicalities of Direct Programs**

The steps needed to establish a new direct investment capability for infrastructure are numerous. In this section, we set out some guidelines for how to approach these challenges. However, before we offer practical advice for design and governance, it is important that funds first consider what their overarching aims, strategies and available resources are for such an endeavour. In understanding these three factors, the design and governance picture will be clearer:

- The aim of the infrastructure allocation and the in-house management thereof must be determined by the fund's board and advised by the strategic asset allocation team of the fund. The objective is to clearly set out what is expected from the infrastructure program in terms of target risk and return levels, type of returns expected (e.g., inflation-linked, high proportion of returns from cash flow, etc). And, finally, the board must determine the amount to be invested in the asset class.
- The strategy refers to the broad plan around how the aims will be achieved, setting out the intended scope of the infrastructure mandate in terms of geographical and sectoral reach. It also refers to the type of infrastructure investor that the fund wants to be (e.g., an active financial investor prepared to take minority stake but not without board representation and negative control over key decisions). Clarity of focus at this stage of the process will pay dividends later.
- Resourcing involves assessing the resource requirements implied by the aim and strategy against the resources that can be provided by the fund, and adjusting aim or strategy as appropriate. Target investment amount is often a critical gating issue at this stage. The institutional investors will have to evaluate whether the amount of capital to be invested in infrastructure really justifies the costs of setting up an in-house investment program.

These broad themes set the foundations for the more practical design and governance considerations. In a manner of thinking, the aim, strategy and resourcing will determine *whether* a fund should begin developing an in-house infrastructure team. Then, if the fund decides to in-source, the main consideration becomes *how* the fund should implement the in-house strategy. Successful implementation is a function of people, process and politics.

- People are essential to any business, but talent is crucial for the knowledge-focused, idiosyncratic, highly specialised field that is infrastructure direct investing. Indeed, the skill set required for infrastructure investment is different from the skill set an institutional investor may have already established: infrastructure is comprised

principally of illiquid assets traded infrequently in very large parcels (\$100m or more), not market-traded assets that can be purchased in amounts and at times of an investor's choosing. This means that infrastructure investment is transaction-oriented rather than market-oriented; investments are long term rather than short term, and asset management is crucial (since exiting an underperforming investment may be both time-consuming and expensive in transaction costs).

In short, infrastructure investment is quite different from traditional asset classes, such as bonds or stocks, and more akin to direct real estate investment or private equity. Accordingly, the investment team will need diverse capabilities to succeed in this environment. For example, transactional skills like origination, structuring and execution of transactions are invaluable (but must be supplemented with highly detailed risk analysis skills). Asset management skills will be needed to ensure that the investor is able to oversee management and maximize value in the asset. Building a team with this collective skill set is part of the task but each individual will also need to have the mindset of a long-term, buy side investor; not all qualified individuals will fit in with this investment model. Remuneration needs to be structured to attract appropriate people from competing employers as well as align the team with the aims established for the infrastructure allocation and the organization as a whole.

- Process tends to be key for successful investment, and institutional investors will need to tailor their processes to the particular requirements of direct investment. Critical risk control functions like investment committees need to be capable of working within the tight timeframes of transactional investment, without compromising their oversight function. Governance processes that are suitable for typical institutional investment decisions, such as strategic asset allocation and fund manager selection, may not be agile enough for unlisted transactions. Conversely, governance processes used within liquid asset classes are likely to be predicated on the ability to enter and exit positions at a low cost, and therefore are insufficiently robust for infrastructure investments. For example, successful direct investment governance will have ready answers to some of the following questions: How many steps will be involved in approvals? How will transaction costs be authorised? How much information is expected at each step? How long does it take to get a decision? Does the investment committee meet on a calendar basis or is it as needed?

Just as critical as the operation of the governance process are the members of the relevant committees. The committee members will need to have the experience necessary to rapidly assess the in-house teams' analysis and challenge any weaknesses. A range of perspectives will be needed to ensure coverage of the broad risk areas within infrastructure (e.g., legal, operational, and financial). Representation from the strategic asset allocation team may also be helpful to ensure investments remain 'on target' with respect to the aims of the infrastructure program. One of the key roles of the board, however, will be to hold the investment teams' accountable for long-term performance, while not pushing them towards short-term mindsets. Employees need to be incentivized to focus on investment performance (rather than



deal-doing) over a long-term investment horizon and be willing to walk away from deals that are not suitable. This is particularly challenging for a long-term investor in any transactional investment business; it is difficult to balance the operational tempo between acquisition or divestment ‘sprints’ and asset management ‘marathons’. As such, the governance processes need to move beyond holding the in-house team accountable and instead facilitate the in-house team’s long-term performance.

- Politics tends to be a major concern for infrastructure investors. Indeed, investors need to consider the political environment inside and outside their business. To establish a successful in-house infrastructure team, an institutional investor must make a significant commitment to the asset class and to an in-house investment strategy. For public funds, it can be a challenge to mobilize the necessary resources to do this and can open these public funds up to politicization. In all cases, however, a good infrastructure investment team will take some years to fully develop, and supporting teams (such as internal legal, tax, accounting and performance calculation) will need to be beefed up to deal with the particular needs and peculiarities of infrastructure. In addition, the investor will also need to be aware of a change in their own business risk associated with infrastructure investments. These assets are long-term commitments that are difficult to withdraw from. They are also often high-profile and politically sensitive. An investor needs to be aware of the risk of being dragged into any political or public relations problems around their investments. Managing this risk is part of effective asset management but ultimately it is a risk that the investor needs to contemplate in considering in formulating their infrastructure strategy.

## **Direct Investment Strategies**

For those funds that manage to surmount the design and governance challenges, direct investing offers a compelling path into long-term infrastructure deals. Still, there are certain strategies that work well for institutional investors and certain strategies that do not.

- What works: Direct teams should focus on core operating assets with quality internal management. The key to success is ensuring the deal is structured to achieve long-term alignment and efficient deployment of capital. Some direct teams have also taken to buying a platform company with operational expertise to then turn around and acquire similar companies. This so-called ‘buy a fox to catch a rabbit’ strategy can, at it’s best, combine the benefits of a dedicated sector-specialist acquisition teams and strong asset management skills with the comfort of being able to actively oversee the ongoing acquisitions to ensure scope creep does not occur and a consistent standards are maintained. Finally, many direct investment teams are increasingly working together in clubs. This can be an effective way of teaming to acquire larger assets, but most clubs will need a leader to organize and catalyze the transaction. Capability to lead transactions will require even more resources and experience than for in-sourcing transactions.

- What doesn't work: There are also a variety of strategies that do not seem to work in the direct investment space. For example, greenfield PPPs have had a mixed history. For financial investors looking to pursue a human resources light strategy, the long timeframes, high levels of bidding risk, and small equity in greenfields PPP deals makes them difficult transactions. Construction companies and sector specialists are better positioned to handle these difficulties than institutional investors. In addition, privatizations of formerly public assets can be challenging for direct investors, as the investors have to verify they have high-quality management teams, modern financial reporting and control structures, freedom from governmental interference in decision-making, and a profit-focused corporate culture. Without these elements in place, financial investors will find such privatizations difficult to manage and to generate the financial returns desired. Large industrial companies are better placed for the sort of wholesale transformation required in these cases. Finally, partnering with industrials, contractors or operators for new-build assets also doesn't seem to work well. Undoubtedly, there is the appeal of matching financial depth with operating skills. However, these investments also carry some very difficult conflicts of interest, as each side has different objectives from the beginning.

## **Final Thoughts**

Insurance companies, pension funds, sovereign wealth funds, endowments, foundations and family offices all have the ability to invest over inter-generational time spans. This is a unique competitive advantage in markets for long-term, illiquid assets, such as infrastructure. And yet, despite the clear affinity for this asset class, a variety of constraints have been preventing these investors from taking up their theoretical place of prominence in the market for private infrastructure. Many of the constraints stem from the time-inconsistency and principal-agent problems embedded in the third party fund management model. In a bid to circumvent these hurdles, some funds have launched in-house investment teams to invest in infrastructure directly. However, before these 'in-sourcers' can reap the rewards of such an approach, they have serious challenges to overcome.

Accordingly, we do not see in-sourcing as an end for third party infrastructure managers. The institutions that have gone down the direct investment track have learned that there will always be a role for intermediaries. Put simply, the requirements in terms of people, process and politics are often too burdensome for average institutional investors to consider in-house investment teams. As such, third party fund managers will inevitably form an important part of the new infrastructure investing eco-system; they are disproportionately (relative to capital base) likely to have the internal capabilities, specialization and experience to lead consortia. Specialization is especially important when seeking investments in distant emerging markets where knowledge of local language, culture, history, and business environment are critical and in sectors such as water and utilities where local politics and regulatory dynamics are complex and ongoing.

In sum, investing in a long-life, low-volatility asset class means that avoiding ‘fatal flaws’ is critical; there will be few opportunities to claw back lost value via upside opportunities and a long-term investment horizon means that even distant future risks will eventually become near-term problems. There is thus little room for error, which suggests to us that infrastructure investing will gravitate towards a hybrid model whereby the 3<sup>rd</sup> party fund managers will partner with and guide direct investors into infrastructure deals. Inevitably, this will warrant a re-conceptualization of intermediation in the infrastructure space, but this will lead to a revitalization of the asset class and, we expect, a new era of infrastructure investing.

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