Attracting Private Sector Participation in Infrastructure Investment: the UK case

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Abstract

Infrastructure investments are often regarded by governments as essential to economic growth. Within this framework, private sector participation is integral to achieve government objectives. However, in the UK infrastructure investment context we observe that private investors exhibit a cautious attitude towards this class of investments. This work examines the financial and regulatory drawbacks that hinder private infrastructure investments. We argue that the availability and the structure of infrastructure financial mechanisms should take account of, and be adaptable to, the needs of private investors. Regulatory conditions are therefore advocated as key levers for the UK Government in enabling investment and attracting private sector participation.

Keywords: infrastructure investment, infrastructure funds, private investment, institutional investors, pension funds

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1. Introduction

In the context of the present economic downturn not only is it essential to examine infrastructure investment as a major contributor to a higher economic growth rate (Balesh, 2012), but it is also critical to study how these investments can be organized and supported by financial mechanisms. The total amount of infrastructure investment required to sustain economic growth in OECD countries, given the temporal horizon of 2030, is expected to be above $50 trillion (Croce, 2011). However, despite its efforts, the UK rate of infrastructure investment has not kept pace with the needs of a modern economy and, as a consequence the UK has fallen behind many competitors. As Prime Minister Cameron advocated in 2012, “if our infrastructure is second-rate, then our country will be too.”

In order to address this challenge, the formulation of a long-term plan for UK infrastructure has been developed in the National Infrastructure Plan (NIP) 2011 and elaborated in the National Infrastructure Plan: Update – December 2012. The Plan elaborates the Government’s commitment to complete more than 550 essential infrastructure projects; and reports that over £310 billion will be invested in

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1 By infrastructure investment we refer to investment in three main categories of existing types of infrastructure: transportation, utilities and social infrastructure. Transportation refers to bridges, toll roads, airports, seaports, tunnels, etc. Utilities include electricity, energy, gas, water, and waste. The third category (social infrastructure) encompasses schools, hospitals, prisons, etc. (Beeferman, 2008).
infrastructure from 2012 onwards. The data estimated by the UK HM Treasury (2011) for investment to 2015 and beyond clearly depicts the relevance of private participation towards the realization of the UK NIP. According to the House of Commons (2013), “the Government expects 64% of its planned investment in economic infrastructure to be wholly owned and financed by the private sector.” But although the majority of the UK’s future infrastructure projects are expected to be financed by the private sector, the level of private infrastructure investment is still insufficient (CBI, 2012; House of Commons, 2013). The UK Government has taken a strong advocacy position towards private sector intervention in infrastructure investment; in this work we consider the Government position as de facto, in other words, we enquiry only into the reasons and possible solutions behind the private sector’s tentative approach towards infrastructure investment.

Private investment in infrastructure has always been part of the UK financial framework, but in recent years new developments for promoting private infrastructure financing have begun to flourish in the market. An investment vehicle known as Infrastructure Funds, first set up in the mid-1990s in Australia, gained acceptance in Europe and North America during the early 2000s in response to the need for an alternative asset class after the financial downturn of that period, and as a result of the availability of cheap debt (Inderst, 2009). Infrastructure began to emerge as a new asset class that could offer stable returns and better diversification benefits due to its specific investment characteristics.

Jordan Schwartz from the World Bank (2011) has asserted that “investing in infrastructure is the best bet to spur growth,” and this claim towards economic growth also coincides with that of the present UK Government, which however, considers private sector intervention in infrastructure investment to be pivotal. We therefore focus on UK infrastructure investment in order to bring to light the underlying reasons for the cautious participation of the private sector and its tentative attitude towards this investment class. We argue that adequate availability, the structure of the financial mechanisms, and satisfactory regulatory conditions are key prerequisites for enabling investment and attracting private sector participation. To this end we build our argument through an analysis of three main questions related to the availability, structure and regulations germane to infrastructure investment. We reach several
conclusions and policy recommendations for each question, the most significant of which is that, in order for UK infrastructure investment to help Britain grow out of the financial downturn, the Government must align its objectives more closely with those of private investors.

2. Do the current infrastructure investment funds promote private investment?

Infrastructure usually operates under natural monopoly market conditions, thus satisfying one or more of the following characteristics: high barriers to entry, economies of scale, inelastic demand, and long-duration. These characteristics convey many attractive investment features to infrastructure assets such as secure stable cash flows, insensitivity to macroeconomic conditions and inflation hedging properties (Martin, 2010). Ideal investors for infrastructure assets are institutional investors such as pension funds. In order to guarantee the purchasing power of their resources, pension funds are known to invest in long-term inflation linked assets; therefore from this perspective, infrastructure perfectly matches pension funds’ financial strategies (Ottesen, 2013).

From the vantage point of the private sector, when investing in infrastructure one of the most relevant risks is certainly regulatory/political risk (Bitsch et al., 2010), as investors have little control over the outcome of the political process. This idiosyncratic risk is significant since the stability of cash flows is only guaranteed if no change occurs in legal and regulatory conditions pertaining to a project. Therefore, as a way to overcome the drawbacks associated with direct investment, Infrastructure Funds have been designed to offer investors the opportunity to invest indirectly in this asset class. The fund strategy of the Infrastructure Funds is based on portfolio diversification across a range of geographies and sectors, particularly in transport, water and waste, energy, and social infrastructure, and by so doing minimizing the exposure to idiosyncratic risk. Through the development of Infrastructure Funds, infrastructure has become an increasingly important investment to private investors seeking to benefit from the low correlation with traditional asset classes, i.e. equity.
and bond markets, and who are also keen to reduce risk by diversifying their portfolios (Newell et al., 2011).

A fund strategy known as fund of funds, which aims for further diversification benefits, has been developing since 2008. The strategy of fund of funds is to invest in a set of infrastructure funds rather than invest directly in infrastructure projects. The advantage of the fund of funds strategy is its ability to build a well-diversified portfolio and thus generate higher returns for the same level of risk borne by investing the same amount into an infrastructure fund (Probitas Partners, 2007). Nevertheless, at present this type of fund represents only a small fraction of the overall asset class, and it is reasonable to assume that the high management fees charged for the fund of funds, on top of tax and jurisdictional issues, sends a negative signal to private investors. From this perspective we can therefore assert that although Infrastructure Funds have witnessed some growth in recent years, the management structure of the Infrastructure Funds does not yet facilitate the entrance of private investors into the infrastructure market.

Another major barrier for private investors is the estimation of the infrastructure investment profile, i.e. calculation of the risk/return ratio. The task is cumbersome because it is contingent on the underlying project, the industry sector, and above all, on a project’s stage of development. In this context, since brownfields (secondary infrastructure) are already in operation, e.g. toll roads, this type of investment is considered to be the safest with the lowest risk/return ratio (Russ et al., 2010). Conversely, greenfield investments (primary infrastructure) are assigned the highest risk/return ratio (Inderst, 2009) because they are regarded as the most risky. Given that greenfield investments have not yet been built and thus do not generate constant current income, greenfields carry construction risks as well as operating risks.

The extent to which an infrastructure fund is exposed to each risk depends on the structure of the fund and how the manager addresses risk, but it is important to mention that pension fund managers do not have all the necessary knowledge to make these assessments (Croce et al., 2011). According to Inderst (2010), infrastructure risk analysis involves more than just the appraisal of the traditional volatility statistics.
Pension funds and their advisers must be able to calculate specific risks associated with infrastructure investments such as, for example, political risk. However, according to Croce (2011), information asymmetry, lack of proper data, and the knowledge gap due to the novelty of this investment vehicle, make this type of estimation even more difficult than in other financial assets. Croce (2011) suggests that valid results in the form of robust risk/return ratios, which prove the attractiveness of infrastructure investment, would be a positive step towards the promotion of the pension fund industry, and would also benefit regulators and rating agencies.

When we consider UK pension fund resources, we can observe that the level of resources available for infrastructure investment is too low compared to international levels (Peston, 2012). Even though there are nearly 2500 pension funds in the UK, almost half of these funds are managing funds of less than £5 million, and only 190 pension funds have assets of over £1 billion (Croce et al., 2011). In contrast, in North America and Canada, pension funds have substantial resources to invest in infrastructure under umbrella organizations such as the Ontario Teachers’ Pension Plan (OTPP), the largest investment group in Canada. As of December 2010, OTPP’s assets were worth $104.7bn, of which $7.7 billion was allocated to infrastructure. Whereas one of the most active UK pension funds in infrastructure investment, the London Pensions Fund Authority (LPFA), in July 2010 had assets worth only £4.0 billion, with infrastructure investments of only 5% (Croce et al., 2011).

It is worth mentioning that the United Kingdom does not have Sovereign Wealth Funds. As observed by Armitstead (2012), the establishment of a British Sovereign Wealth Fund would provide guarantees for pension funds through a Government commitment to infrastructure investment, and in so doing, reduce political risk. Research conducted by PWC (2011) shows that the establishment of a Sovereign Wealth Fund improves transparency in a country, thereby mitigating the political risk and improving entry conditions for private investors. Comparative data indicates moreover that countries with Sovereign Funds have a higher proportion of infrastructure investment to GDP. For instance, France developed a Sovereign Wealth Fund in 2008 known as the Strategic Investment Fund in order to invest
extensively in infrastructure (Bennhold, 2008). One year after the introduction of the fund, comparative data provided by the Bank of Italy (2012) showed that France had a proportion of infrastructure investment to GDP of 4%, while the UK had invested only 2% of its GDP in infrastructure. We can therefore conclude this section by observing that general and country-specific problems still hinder the entrance of the private sector in UK infrastructure investments.

3. Is the structure of the funds fit for purpose?

Different Infrastructure Funds have evolved to satisfy the needs of investors and to also match the several maturity structures of various investments. The Barclays Infrastructure Fund is one such example; however, to date none of these structures meets the complete criteria for pension funds. As mentioned above, pension funds seek vehicles that offer long-term stable inflation-linked returns (UK House of Commons, 2013). Keeping this in mind, we can now identify three main structures presently in use: private equity, hybrid, and open-ended structures.

The private-equity fund is the most common Infrastructure Fund vehicle. In this fund the manager obtains money from investors and uses it to buy stake in a private company with the intention to increase the value of the stake by improving the financial performance of the company. These funds charge a management fee and carried interest. The management fee covers the expenses incurred from managing the fund, and the carried interest is compensation for the fund managers who receive a share of the annual profits as an incentive to improve the performance of the fund. The structure of this type of funds is illiquid with a general duration of 10-12 years. We would argue, however, that such duration is inappropriate for infrastructure investments. The chief executive of the Pension Protection Fund, Alan Rubenstein (2012), observes that the “money is there, but structure isn’t” (Infrastructure Investor, 2012). Rubenstein maintains that the use of private equity is unsuitable for infrastructure funding and criticizes the duration of these funds as too short to satisfy the needs of pension funds, where the life-time of their liabilities is much longer, and also as too short to enable inflation-hedging. As discussed above, although the investment span of infrastructure assets can perfectly match the duration of pension
fund liabilities, private equity funds are often structured such that their temporal horizons do not coincide, as they should, with the investment horizon of infrastructure assets (Ottesen, 2011).

Furthermore, Infrastructure Funds usually achieve lower returns than private equity and then must also pay fees structured as in private equity; this is not attractive to investors (Probitas Partners, 2007). Returns from infrastructure assets are realized over a longer period than in private equity, so investors might be persuaded if lower carried interest charges were to be implemented. Another valid criticism is that the amount of leverage of these funds is too high, and too much leverage leads to too much risk incurred by the investor.

In an attempt to address the problem of the short duration of funds, hybrid structures have been developed which “enable investors to invest across the infrastructure risk/return spectrum by aggregating investment with both shorter and longer maturities” (Probitas Partners, 2009). In these structures greenfield investments are sold after completion of a project in order to give investors a higher return than would be received by holding them until maturity. After the project construction phase, long-term investors such as pension funds can enter and invest in the project, thereby avoiding construction risk and benefiting from stable secure returns. Hybrid structures nevertheless have some limitations. One of the main sticking points is the pricing of the position at the time of transfer. Since some investors want to keep their exposure and others want to liquidate their positions, hybrid structures need to develop a standard method to price investor positions at the time of transfer (Haward, 2012).

A third type of Infrastructure Fund known as open-ended or ‘evergreen’ was developed in response to the illiquidity and short duration issues associated with private equity. These are designed as open-ended real estate funds and their long duration closely matches the infrastructure characteristic of brownfield investments (long-term income streams). This structure is attractive to long-term investors who want to match their long-term liabilities but who also want the possibility of a liquidity option. However, the exit option for investors creates pricing issues similar to those faced in a hybrid structure. Another problem with open-ended structures is
the calculation of carried interest; they are not publicly traded so any carried interest paid to the manager is calculated on the Net Asset Value (NAV) and this calculation can vary from fund to fund (Probitas Partners, 2009).

When one looks closely at Infrastructure Funds, it is reasonable to argue that their structure is indeed a drawback to their success. The structure of Infrastructure Funds should take account of and be adaptable to private investor needs. Despite the attraction of pension funds to infrastructure investments, the pricing issues in conjunction with inappropriate structures, leveraging, and fees charged by managers, reveals a misalignment of interests between investors and fund managers. The fact that these structures fail to adjust to the needs of private investors represents a form of market failure requiring government intervention. Ottesen (2011) succinctly remarks that “the government must establish guiding principles and let the market mechanisms work within these established guidelines.”

4. Does current regulation encourage or hinder private investment?

Scholars and practitioners have observed that international regulations following on the heels of the financial crisis will block the private sector from closing the funding gap for investment in infrastructure (Hellowell and Vecchi, 2012). In order to respond to these challenges and mitigate their negative effects on private intervention, the UK Government has drawn up some initiatives.

With the introduction of Basel III in 2010, which will be implemented between 2013 and 2019, the Basel Committee sought to improve the resilience of the banking sector by enhancing the regulatory requirements for capital. According to the Chief Executive of Societe Generale, Frederic Oudea, Basel III will directly affect infrastructure projects (Cowell and Laurent, 2012). Under this new regulation, for the same amount of debt that banks gave before the economic downturn, banks will now have to allocate two to three times more capital. The implication here is that long-term investment will become very expensive in relation to banks’ capital requirements (Reviglio, 2012).
Given the limits introduced to banks by Basel III, the burden of financing infrastructure now rests on institutional investors such as pension funds (Cowell and Laurent, 2012). However, the new insurance regulation (Solvency II), scheduled to replace Solvency I in January 2014, will also be applicable to pension funds (FSA, 2012). Solvency II has been designed to reduce the risk of firm bankruptcy in the aim to protect policyholders and prevent market disruptions (FSA, 2012). Under this new regulation, pension funds will be obliged to meet higher capital requirements, which will make investing in infrastructure will become more expensive (Hellowell and Vecchi, 2011). Infrastructure investments will have to pay the same capital charges as hedge funds, private equity, and other types of equity. The fact that infrastructure assets face the same capital charges as other assets proves that regulatory authorities and rating agencies do not yet recognize that lower risk is a main characteristic of infrastructure fund investments. Empirical studies indicate that the risk/return profile of infrastructure assets is better than that of other investments; for instance, using data from the Preqin infrastructure database, Inderst (2010) demonstrates that when compared to other funds between 1993 and 2007, infrastructure funds slightly outperform all funds except buyout and mezzanine funds. Like mezzanine funds, they show the most stable returns. Furthermore, infrastructure funds show the least dispersion of returns across all funds (volatility).

In July 2011, HM Treasury announced that UK Guarantees of up to £40 billion will be available for infrastructure projects, particularly in transport, utilities, energy, and communications sectors (HM Treasury, 2012). The scheme was launched to ensure that projects struggling to find private investment can proceed as planned. The Guarantee will be given to projects as long as they fulfill the criteria in the Government’s NIP 2011; these include the ability to start construction 12 months after the Guarantee is given, that they are financially credible in limiting risks to the taxpayer, and they contribute positively to economic growth. As illustrated in the NIP (2012), from the 75 enquiries received up to the present day, projects with a capital value of £10 billion have prequalified for a UK Guarantee. The purpose of the UK Guarantees scheme is to make infrastructure projects more attractive to pension funds and reduce the negative impacts of Solvency II.
A new Government scheme under the auspices of the UK pension funds is known as the Pension Investment Platform (PIP), and was created to support pension fund investment in infrastructure and match the interests of pension funds. The PIP was designed to address the inadequate size of UK pension funds, and consequently to bolster investment in infrastructure. By following the examples set by other countries where pension funds come together to invest under umbrella organizations, HM Treasury hopes to achieve improved organization and increase the resources for UK infrastructure investment. To date, six new pension fund schemes have raised £700m of capital (Infrastructure Investor, 2012).

Until recently, the exposure of pension fund investments to partnership structures such as real estate, private equity and Infrastructure Funds was limited to 15% of their assets. In an attempt to unlock pension investment in infrastructure, the Government has raised the limit to 30%. It was estimated that raising the level to 30% will free up £22 million for infrastructure projects, specifically roads and rail (Graham and Menon, 2012). We have already discussed how concern about construction risk has led infrastructure investors to invest only in brownfield investments. According to Graham Robinson, an infrastructure specialist at Pinsent Masons, the new regulation to increase the limit of exposure to infrastructure of a pension fund portfolio from 15% to 30% allows pension funds to invest more, but it does not address the riskiness of the investment (Graham and Menon, 2012). Risk in infrastructure investments arises not only from construction risk but also from the amount of leverage of these investments. Many Infrastructure Funds have very high leverage, up to 80%-90%; therefore, in order to address the increased leverage of Infrastructure Funds, the UK Government could for example, restrict the leverage level to 50% (Infrastructure Investor, 2012).

Lending will also be available for Public Private Partnership (PPP) projects struggling to obtain much needed private finance as long as they pass Government approval procedures and obtain most of their debt and equity requirements from the private sector. The new PPP UK policy is now known as PF2. PF2 tackles the main drawbacks present under the Private Finance Initiative (PFI) introduced in 1992 as a way of encouraging PPPs. One of the limits of the PFI was that only specific risks
were given to the private sector, and the public sector was burdened with the higher risk premium. A study by Shaoul et al. (2008) on PFI projects in the UK health sector shows the high cost of private finance. In particular, they calculate an additional cost of £60 million a year as a result of private ownership. To counteract this problem in accordance with PF2, the Government will act as an equity stakeholder in the aim to reduce the increased cost. In the PFI it was also concluded that project completions were too slow. New measures have been introduced in PF2 to ensure acceleration of delivery, such as frequent checks made by the Treasury at the pre-procurement stage. Other changes include the introduction of hybrid structures, as was previously discussed; the ‘split-finance’ hybrid structure splits the funding between two investors: a bank and a pension fund, where the bank can fund a construction project such as a greenfield project and then exit after construction is complete. This arrangement would meet the Basel III requirement for shorter investments and would ensure higher liquidity. A pension fund can then invest in the project during its operation period and avoid construction risks.

PFI projects were based on financially complex systems in terms of collecting and presenting information on financial performance and assessment of risk (Fischbacher and Beaumont, 2003). But in PF2 there is greater transparency through various measures, for instance the requirement for the private sector to publish equity returns. Moreover, it introduces risk management strategies to minimize certain operational risks and intends to provide better allocation of risk (HM Treasury, 2012).

Another strategy operated by HM Treasury is the Business Finance Partnership (BFP). It was established in 2011 to increase capital for infrastructure through sources other than bank lending and to assist mid-sized and small firms in being less reliant on banks. The Government has put aside £1.2 billion under the BFP scheme for investments that must have private sector matching funds (HM Treasury, 2012). In addition, the Government has developed other non-bank sources of finance, including online platforms and leasing. And finally, despite the fact that PF2 does not tackle green investments directly, the Green Investment Bank (GIB) was set up in October 2012 with £3 billion and is expected to privately finance mainly waste and energy projects (HM Treasury, 2012).
Even though it is clear that the new international regulations will hinder private investment, it is undeniable that the UK Government has taken great strides in designing instruments to encourage private investment in infrastructure and towards overcoming the barriers raised by international regulations. Political risk goes hand in hand with infrastructure investment, but the National Infrastructure Plan (NIP) represents a positive step towards building a credible UK infrastructure strategy. Nevertheless, more needs to be done to increase private investor confidence in relation to the risk/return ratios of infrastructure investment. For example, the development of a British Sovereign Fund, which would invest in infrastructure, could provide a stable tool for handling political risk and guaranteeing returns. A British Sovereign Fund should act as a permanent fund where pension funds can invest within it and form part of the portfolio. The pooling together of pension fund investments, in addition to a British Sovereign Fund, could provide significant resources for UK infrastructure investment.

5. Conclusions

The drain of public resources due to the recent financial crisis has prompted many governments that request private sector intervention to financially support the investment infrastructure. Investment banks and fund managers insist that, due to the investment characteristics of infrastructure assets, investing in infrastructure should be ideal for such institutional investors as pension funds. Nevertheless, we can observe that private investors maintain a tentative attitude towards infrastructure investment (House of Commons, 2013). In this work we have addressed the main obstacles that hinder private sector investment in infrastructure in the United Kingdom by examining the availability and structure of the financial instruments currently in the market, as well as the regulatory environment in which they operate.

We found that a major obstacle for private sector investors is the knotty problem of calculating Infrastructure Fund performance; this consequently impacts on their choice of investments which, in order to reduce risk, are often directed to brownfield projects (Inderst, 2010). A broader and in-depth research agenda to assess the
investment characteristics and performance of infrastructure funds would increase confidence in this asset and encourage greater private sector investment, particularly in greenfield projects. Apart from encouraging private investment, more valid analyses and results on the performance of infrastructure as an asset class could also facilitate the design of new financial tools and flexible regulatory measures. For instance, we have proposed the ‘split finance’ model as an effective tool for stimulating greenfield investment. This model, by addressing the needs of the investors according to the different phases of a project, not only releases pension funds from the burden of construction risks, but also complies with the Basel III regulation that discourages banks from long-term lending.

Furthermore, we also found that the structure of the infrastructure funds is often not fit for purpose. By this we mean that high leverage and high fees, together with short duration, shows a clear misalignment of interests between investors and fund managers (Infrastructure Investor, 2012). A reasonable proposal would be for fund managers, investors and regulators to find common ground through interaction and cooperation and seek to restructure the current investment vehicles.

In our study of UK infrastructure investment we have observed that pension fund mechanisms are still too fragmented to pool sufficient financial resources for the required investments (Croce et al., 2011). Nevertheless, interesting initiatives such as the PIP have been launched to address the shortfall of resources and to attract substantial capital for infrastructure investments. In this respect we cannot forget that infrastructure investment carries extensive political risks that need to be reduced to their absolute minimum. For example, the establishment of a British Sovereign Wealth Fund would anchor the advocacy of the UK Government in infrastructure investment, thereby instilling greater confidence in its returns (Armitstead, 2012).

Threlfall (2012) has asserted that “economists estimate that for every £1 spent on construction, £3 is generated in economic activity.” If the UK Government is truly keen to encourage and support economic growth, the road towards infrastructure investment is a reasonable choice; however, if in this journey the Government wants
to be accompanied by the private sector, it must acknowledge and stand beside this travel companion.

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