

Infrastructure Funding

A Conversation Starter

An ACE publication

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ACE suggests:

- The government should explore the use of Tax Increment Financing (TIF) and their potential in the UK;
- The government should consider regional stock exchanges;
- The government should examine the case for infrastructure/green bonds;
- The government should consider incentivising asset management firms if they invest in infrastructure by offering tax breaks; and
- The government should use supplementary business rates where appropriate;
- The continued use of PPPs, utilising experience from previous projects, on aspects such as contractual design and obligations;
- Initial Public Offerings (IPOs) and their utilisation;
- Government borrowing should not be ruled out as a potential form of investment, but should target projects that are appropriate to this level of funding.



Introduction

This paper addresses the issue of infrastructure funding in light of the current economic situation: recession and tightening of credit markets. Traditional ways of infrastructure investment need to be examined and new methods explored.

It will draw upon previous calls by ACE for furtherer exploration of both more traditional and new forms of infrastructure spending stimuli.

- [Avoiding the infrastructure crunch](#). ACE identifies the problems and suggests policy solutions;
- [Infrastructure bank](#). ACE sets out the case for an infrastructure bank;
- [Infrastructure gilts](#). ACE's proposal to create an infrastructure gilt to drive investment in transport, energy and utilities; and
- [Infrastructure assessment](#). ACE's proposal for an audit of the UK's existing infrastructure.

The case for funding

Strategic investment in the UK's infrastructure network will lead to increased economic activity as well as providing the infrastructure that the UK needs to get from A to B, live in a sustainable way and raise revenue for government.

High quality infrastructure assets enhance a country's national output. It has been argued that a large part of private sector productivity growth is connected to the size of a country's infrastructure base and annual investment in it¹.

Infrastructure spending generates a large multiplier effect across the full economy by creating additional demand for materials and services. Indeed, £1 spent on construction output produces almost £3 in total economic activity, meaning that construction can be one of the most effective sectors to stimulate demand. This can be compared with other sectors:

¹ Rodriguez, F, 2006, Have collapses in infrastructure spending led to cross country divergence in per capita GDP? Wesleyan University



Sector	Short term multiplier*
Construction	£1 spent = 2.09
Agriculture	£1 spent = 1.92 (approx)
Banking & finance	£1 spent = 1.72 (approx)
Public administration	£1 spent = 1.30 (approx)

Source: UK Contractors Group²

**(not including induced impacts and long term effects. If these were integrated into the calculations they would produce almost £3 in total economic activity)*

The Eddington Report³ suggests that the economic yield of targeted infrastructure investment can be up to a factor of 10. Therefore, £1 billion spent could add around £10 billion of economic activity. The UK can stimulate its economy during the downturn as well as increasing its long term competitive advantage through investing in its transport, energy, communication and social infrastructure. There is then a 'dual dividend'. A dedicated, smart and integrated investment programme can achieve several public policy goals simultaneously. Furthermore, with interest rates at all time lows it is an ideal time for the public and private sectors to invest.

² LEK/UKCG, 2009, Construction in the UK Economy: The Benefits of Investment

³ Eddington, R, 2006, The Eddington Transport Study, The case for action.



Tax Increment Financing (TIFs)

TIF schemes are an idea that is currently being promoted as a possible method of financing local urban projects within the UK. The British Property Federation⁴ has explored tax increment financing (TIFs) schemes in the USA, and surmised how these could be applied within the UK.

What are TIFs?

TIFs effectively use anticipated tax increases to fund investment projects. This occurs via a mechanism in which local government create a designated area in which public/infrastructure improvements are required. If we took the USA system as an example, once a project is approved the rate of tax is frozen at that point in time (base rate). Taxes collected after this period up to the base rate continue to go to the local authority. However, any taxes occurring above this level (derived from aspects such as increasing property values) are paid into a fund which has the sole purpose of paying off bond commitments (which are issued to finance the project), or paying for the development as it occurs.

What can we learn from TIFs in the USA?

Given the experience in the USA there are some issues where further investigation into their effectiveness would need to occur before their introduction in to a UK regulatory environment:

- The provision of public services within such schemes. TIFs rely on taxing the future increase in property prices based on the development of items such as infrastructure. The incremental increases in the value of property prices during this period will also raise the expectation of residents with regards to the provision of services. Effectively this means that, once completed, another source of funding (potentially another TIF) will be required to meet these renewed expectations.
- Secondly, it is debatable that TIFs generate additional benefit in the areas in which investment is most needed. Do TIFs create new projects or are they simply redistributing resources within the urban environment.

⁴ Source: BPF - <http://www.bpf.org.uk/topics/document/23520/tax-increment-financing---a-new-tool-for-funding-regeneration>



It is important to point out that the issue regarding the provision of public services will always exist within any investment project that result in subsequent positive externalities (such as an increase in local house prices), and so would be difficult to legislate against. Regarding the effectiveness of TIFs, it may be possible to design a framework within the UK that can mitigate some of the issues that have occurred in the USA.

Introducing TIFs into the UK

If TIFs were to be introduced in the UK they may relieve some of the burden on central government, sourcing funding from a localised source. However, for TIFs to work, a suitable regulatory environment would need to be created and any proposed projects would have to carry out detailed feasibility studies. These studies would be key to the success of such a system given that they will fundamentally influence the overall risk factor, and thus also the level of investor confidence. Finally, such a scheme could be made more attractive to investors by offering tax breaks on earnings.

Given the current credit constraints and the rising concern with regards to countries' deficits, the UK government could learn from schemes such as TIFs in the USA as an alternative source of financing. Any initial projects would have to be applicable within the current regulatory environment. However, where such an environment does not exist, possible legislative changes should be considered to enable the financing of urban renewable projects on a localised scale.

Within this legislation would need to be safeguards that any projects that are undertaken as a result of TIFs should be those that otherwise would not have been financed by the private sector. There is limited additional benefit if projects could have been undertaken on a private basis.



Regional stock exchanges

Regional stock exchanges are not a new concept. In fact, in 1914 the UK had 22 regional exchanges which continued operations until the 1970s. Beyond this point the exchanges were effectively integrated into the London Stock Exchange (LSE) which now monopolises the market.

Do exchanges guarantee investment?

It is important to remember that a large majority of investment does not go through an exchange and, to some extent, having an exchange does not necessarily mean it will. Investors like to have specialised contracts and terms, with differing rates of return, and exchanges generally do not provide such bespoke contracts.

When looking at regional investment, the size of an investment is generally not significant enough that an individual or company could request/negotiate an arrangement such as those mentioned above. Regional exchanges could play a key role in delivery investment to this segment of the market.

So what was the rationale behind the consolidation of exchanges?

Small regional exchanges where limited trading activity occurs are not attractive to investors. The size of the market place provides the multitude of options and enables choice. Another aspect is the range of products offered; although regional exchanges can provide a variety of goods these are only applicable to a certain region, whereas larger exchanges can offer products that span multiple regions, thus enabling companies and investors to spread risk.

There is also a greater potential for transparency, given that it can occur across multiple regions with few discrepancies. This to some extent shows the importance of a system of regional exchanges being able to operate in a transparent and consistent manner.

Would we be going backwards if we were to re-open regional exchanges?

Not exactly. Although integration provided the UK with an exchange that could compete in an international market and bring significant benefits to larger UK organisations that wanted to raise funds, its services and value added benefit is to some extent restricted to the south east.

Regional exchanges could support companies at a smaller level, giving them a mechanism to raise funding and build networks with investors, financial services



and possibly even local finance schemes. Currently, one of the main reasons cited by smaller organisations for not listing with LSE is the cost of doing so. Although some mechanisms have been introduced by the LSE to try and alleviate this problem, it seems to be persisting.

Regional exchanges could swap information and encourage investment between areas, with each benefiting from the local knowledge of the other in areas such as sustainability, profitability and risk management.

Such a system, given current technological advances, could provide a significant amount of flexibility within the investment sector.

The final aspect to consider is whether these exchanges would operate in addition to, or as a subsidiary of, the LSE. Given the recognition of the LSE on a global market one option, may be to run these as regional subsidiaries of the LSE, giving them access to a global market of investors through the brand and reputation of the LSE. The second option would be for each of the regional exchanges to operate independently. To some extent it should be recognised that a one-approach-fits-all attitude should not be applied here.



Green/infrastructure bonds

ACE has already made the case for gilts to be set aside for infrastructure if quantitative easing continues. Bonds have traditionally been seen as providing a low risk option for investors, and given the current financial uncertainty products that provide a reasonable, stable rate of return should be attractive.

Why the current level of uncertainty?

The financial crisis, level of government debt, and fragility of confidence has led to some concerns within the markets as to the possibility of projects being abandoned, only partially completed, or coming in significantly over budget. It may be difficult to calculate the life expectancy of the project and its earning potential. For example, if you build a nuclear power station but the majority of electricity is generated using intermittent wind and you can only supply the marginal this would potentially create a very unprofitable investment. Political and environmental uncertainty and the potential of having changes on future ownership forced upon the investor due to national importance also factor into the risk side of the equation.

The OECD has reviewed the potential of infrastructure as part of pension schemes. Below are some selected comments⁵:

“The idea of investing in infrastructure seems to strike a chord with many pension plan directors and members. Infrastructure feels more tangible and real than a lot of other complex products and derivative strategies presented to pension funds these days, where they find it difficult to detect the underlying value. In addition, infrastructure is made for the long term, and there seems to be a natural fit with the long-term liabilities of many pension plans.”

“Unfortunately, there is considerable confusion in this area, in particular with regard to the definition of infrastructure assets, the investment options available, the actual investments of pension funds, the expected and realized returns, the diversification benefits and the specific risks.”

Balancing rates of return and cost

As is the case with all regulated returns one must try to calculate what a fair return would be. Whilst you want the bond to be attractive to investors, you do not want

⁵ Source: OECD - <http://www.oecd.org/dataoecd/41/9/42052208.pdf>



to pay a rate which over compensates them creating value for money issues for governments.

Can bonds provide stability and investment?

The issuing of bonds to finance infrastructure is not a new idea but is potentially an option which is under utilised. The above demonstrates the need for transparency within the bonds market, given the right level of information this should not be too difficult to achieve.

Taking this a step further, the creation of an infrastructure or green bank could facilitate investment in such an area providing the additional levels of stability and security for investors and the economies of scale required to finance large capital projects.

Bonds should be attractive to a number of investors when considering the stability of cash flows, the fact that some are inflation linked, the possibility of tax breaks, they diversify their portfolio and do not vary in line with other investment sources such as the stock market.

Bonds provide one way of encouraging investment into the engineering sector that can provide a significant return to the economy.



Asset management funds

Asset management funds already provide investment for infrastructure projects. Depending upon their risk factor and investment period, funds can range from a multitude of investments covering many markets or consist of investments within a specific sector of the market. Infrastructure is generally seen as a long term form of investment and, although individual projects can carry significant risk, having a portfolio with several projects across countries mitigates the risk and can provide a relatively stable long term form of investment. If the UK wanted to increase funding to infrastructure it could provide tax breaks to asset management companies so that investors are attracted to the potential returns.

Banks such as Macquarie⁶ provide a wide variety of such funds with varying risk and return potential, demonstrating that given the correct taxation policy, the public sector could potentially unlock and direct future private funding.

⁶ Source: Macquarie Bank - http://advisers.macquarie.com.au/au/corporations/sfpc/infrastructure_funds/overview.htm



Business rate supplement – Funding infrastructure.

The theory behind a business rate supplement is that, for a given area around an infrastructure project, local businesses and residents benefit from land value gains due to the creation of implementation of such projects. Taxing such gains is not necessarily a new idea and has roots in the form of a land value tax (LVT).

What is land value tax?

As a means of background, a pure LVT is an interesting idea in that an individual landowner would pay no other taxes except for that of LVT. This tax would not be based upon the buildings or output of a site but only the value of the land. To some extent this could drive productivity and utilisation of land given that land owners would be unlikely to want to pay the highest rates of LVT if the land was producing no discernable income.

Suggestions are that such a model would streamline the processes of calculating tax and create efficiency. However, as with any asset the calculation of land value is not as simple as it may seem. For example, is a piece of land in London worth as much as a strip of land on the coast, given that one piece of land currently has significant economic potential but the other has fabulous views, natural beauty, and is also limited given the available areas for residential development along the UK coastline?

This would be a rather radical reform to the UK tax system and there are significant doubts as to whether such a tax would provide sufficient revenue to fund current government expenditure.

Could the ideas behind such a tax be utilised on a localised scale to fund infrastructure projects?

In fact, to some extent this is currently happening in Crossrail, where the funding arrangements are as follows:⁷

- *Government will contribute by means of a grant from the Department for Transport of over £5 billion during Crossrail's construction.*

⁷ Source of funding information: <http://www.crossrail.co.uk>



- *Crossrail farepayers will contribute towards the debt raised during construction by Transport for London, and Network Rail through projected operating surpluses from the use of Crossrail's services.*
- *London businesses will contribute through a variety of mechanisms, including the Supplementary Business Rate.*

There are also considerable financial contributions from some key beneficiaries of Crossrail:

- *The City of London Corporation has agreed to make a direct contribution of £200m and in addition will seek contributions from businesses of £150m, and has guaranteed £50m of these contributions.*
- *BAA has agreed to a £230 million funding package.*
- *Canary Wharf Group has agreed to contribute £150m towards the costs of the new Canary Wharf Crossrail station at Canary Wharf. Canary Wharf Group will also design and build the new station.*
- *Berkeley Homes has agreed to construct a station box for a station at Woolwich.*

As can be seen from the financial details above, local business and key beneficiaries are to contribute significant sums towards the cost of Crossrail given the future benefits the railway will provide.

[Local impacts and effects](#)

There has been some concern that businesses who incur the charge do not necessarily believe that their company undergoes limited foreseeable benefit. Businesses are sensitive to price and tax increases; if they deem an increase to be unreasonable there is a chance they will relocate from the area, resulting in the opposite effect of that intended when investing in infrastructure.

Owners of businesses are also keen to point out that residents also benefit significantly from infrastructure improvements and so should also be included in any local levy. There is a valid discussion to have around such a proposition.

The supplementary rate is shifting the time period in which tax is collected. It would provide local people with a sense that their money is being utilised in a way that is tangible with the possibility of local authorities gaining more financial control.



A supplementary rate will not always be appropriate method of funding. It can work for urban generation but it is unlikely to be as useful if you were building a powerline through less developed areas given there are fewer individuals to contribute.

There may also be issues as to who derives the benefit and to what extent they pay. For example, if the M6 toll road was built using the above methodology residents and businesses nearby could argue that, although they get some benefit from the road, so too do drivers who use it on their way up to Scotland from the south - yet they do not incur the cost of construction.

The above rationale to some extent advocates the use of toll charges as a source of infrastructure funding for projects, such as the M6 toll road. Tolls charge directly for the use of the road and its perceived benefits. For a toll scheme the revenue from tolls must equate to the capital outlay, interest charges, and provide a reasonable rate of return over the life of the project. This requires both the price and quantity aspects of the charges to be sufficient to guarantee the viability of the scheme.

An interesting combination of the two may be possible with local businesses paying a supplemented business rate and possibly being exempt or paying a reduced toll, whilst residential users pay the toll on a use by use basis given that an individual resident's impact on such infrastructure is likely to be less than that of the overall businesses impact.



Public Private Partnerships (PPP)

PPP schemes have delivered a wide variety of investment into infrastructure, as demonstrated by Macquarie banks infrastructure development literature⁸. The key to PPP schemes is the way in which the public and private sectors co-operate and the subsequent distribution of risks and responsibilities.

At a time when private companies and investors are risk averse and confidence is low it may be necessary, as has been demonstrated by the issues within the Transport for London PPP program, for the government to provide support to projects that mitigates risk.

Given the financial crisis and need for investment has the distribution of risk within PPP projects changed?

The distribution of responsibilities and risks needs to be calculated extremely carefully. Risks should be held by the parties best placed to manage them. It is important to balance the efficiency, expertise and investment from the private sector with the security, reasonable level of service and value for money required by government.

The Conservative Party has recently suggested that the risk from such schemes can be distributed more towards the private sector, allowing government to commit fewer public funds aiding its deficit reduction plans. In opposition to this, private sector confidence remains low with companies unenthusiastic about taking on additional risks.

Realistically, if we wish to see significant private expenditure in infrastructure over the next few years, given the current credit constraints and low level of confidence, the government is going to have to be prepared to mitigate risk and provide a degree of security within PPP projects. That is not to say that government should allow for inefficiency, greater control over front end planning risks, project execution and costs should all help to reduce risk and improve the long run economic potential of a project. The current demand for 'safe havens' within the financial sector to sure up their balance sheets, should provide ample opportunity

⁸ Source: Macquarie Bank - http://www.macquarie.com/mpfi/spi_flyer.pdf



for well designed PPP projects to ensure reasonable and secure rates of returns stimulating investment.

An alternative to PPP is a return to the use of regulated asset bases, with regulators deciding upon a suitable level of return. There will be questions as to the regulators' responsibilities to consumers, given that any costs above and beyond the expected level are likely to be passed onto the consumer or subsidised by government. One advantage to this system is that the government can potentially exert more downward pressure on costs than that of PPP or PFI initiatives.

ACE has previously suggested that the ideas of Dieter Helm and Policy Exchange⁹ regarding a regulatory asset base should be explored by government.

⁹ Source: Helm, D, Wardlaw, J & Caldecott B, 2009, Delivering a 21st Century infrastructure for Britain, Policy Exchange:35



Initial Public Offerings (IPOs)

How it works?

IPOs are a means by which companies can raise capital by issuing new securities/stocks/shares into the market. Announcements regarding IPO activity generally occur for the following reasons: smaller companies trying to raise capital to invest in expanding operations and activity; larger companies wishing to raise capital for operations within new markets; or as a means for large privately owned companies to 'go public' raising the size of funds available for investment and expansion.

When a company issues new shares via an IPO, existing shareholders (investors) have to purchase additional shares to maintain their holding within the company, being offered preferential rates to ensure that take up is sufficient. Although discounting shares in the IPO, may generate interest in the issuing company, it does amount to lost capital, given that in theory the stock could have been sold at a higher price (this level will generally be between the discounted issue price and the current market price, given that an increase in the supply of shares reduces the value of an individual share). The market also anticipates such pricing strategies with the issuing companies share price fall towards that of the underpriced (discounted) value following the announcement of a share issue. An example of this was seen when "Lloyds Banking Group plc announced that the issue price at which the new shares will be offered pursuant to the Rights Issue has been set at 37 pence per new share¹⁰." Subsequently, over the next five days their share price on the open market fell from approximately 90 pence to 50 pence.

The underwriters of an IPO are responsible for the distribution of the issue. If the take up is low the underwriter may end up holding a number of the securities/shares (at a discounted rate) which they can then subsequently sell (trying to capitalise on any price differential), or may benefit from having previously taken a position on the spread.

How it could help

The financial crisis has seen several large rights issues by banks (such as Lloyds and Barclays) to raise capital to secure their capital base. This demonstrates that

¹⁰ Source: Reuters - <http://www.reuters.com/finance/stocks/keyDevelopments?symbol=LLOY.L&pn=3>



even in a market environment with tightening credit constraints, that IPOs can raise significant sums. Given the current tightness and risk in the financial markets, companies may opt to fund investment and infrastructure growth through methods such as IPOs, to provide them with secure, long term capital returns.



Government borrowing

Government borrowing may be constrained for the foreseeable future, but it should be remembered that it plays a vital role in terms of providing public goods, supporting infrastructure, facilitating investment and providing social and moral responsibility which the free markets alone may not provide. The UK will have to take prudent steps to ensure it tackles the rising deficit, although that is not to say that efficient targeted investment cannot occur.

A recent report concluded that construction activity provides positive returns on investment. Every £1 invested in construction generates a total of £2.84 for the wider economy, most of which is retained in the UK¹¹. Based on this, it would be reasonable to suggest that such an investment could help to drive future economic growth.

Given the above it is felt that, if projects are shown to provide significant positive returns on investment and provide the UK with a strategic advantage, the government should take the necessary actions to fund (or part fund), and build confidence within the market to ensure the commencement of such schemes. This could be done directly or through a number of the mechanisms explored in this paper.

¹¹ Source: LEK (2010). Construction in the UK Economy: the benefits of investment. London: UK Contractors Group.