

## 7. Infrastructure funding: an ICAEW assessment

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### Summary

- Addressing the weak state of the public finances presents a dilemma for the Chancellor if he wants to increase investment in infrastructure at the same time.
- By committing to achieve a public finance surplus every year in ‘normal’ economic times, the government has ruled out borrowing to fund public infrastructure. The exception is investments through the Private Finance Initiative (PFI), which do not affect the headline public finance numbers.
- Since the financial crisis, there has been less private finance available to invest in either public–private or private infrastructure projects. At the same time, direct public investment has also decreased.
- One of the concerns of investors is political risk arising from potential changes in government policies. Significant private sector investment in electricity, gas and water supply networks is based on long-term regulatory arrangements where investors have confidence around future revenues. While market incentives have also been used successfully to encourage investment in renewable electricity generation, recent changes in policy have called into question whether there is sufficient stability to encourage long-term investment in the UK.
- Government efforts to encourage private investment have been disappointing, with the coalition government’s Pensions Infrastructure Platform sourcing less than £1 billion in total over its first four years of operation, against a target of £2 billion every year. Similarly, only £1.7 billion of guarantees were issued in the first two years of the £40 billion UK Guarantees scheme designed to support private sector infrastructure investment.
- Public sector pension funds, principally in local authority schemes, have longer time horizons than private sector schemes and so should in theory have more of an appetite for investing in infrastructure. But they were effectively prevented from investing in infrastructure projects until 2013. Even so, up to £3 billion a year could potentially be made available, assuming the proposed aggregation of local authority portfolios into collective investment vehicles goes ahead.
- There is a strong economic case for bringing PFI contracts on balance sheet, and doing so now may be politically easier than in the past, as the proportional effect on public sector net debt would now be small.
- A more commercially sustainable approach would also permit new borrowing for public infrastructure projects that are expected to generate positive financial returns (either directly or through higher tax receipts) – for example, qualifying housing and transport developments. This would allow the government to retain the flexibility to make targeted investments that pay for themselves.

## 7.1 Introduction

The Chancellor faces a dilemma:

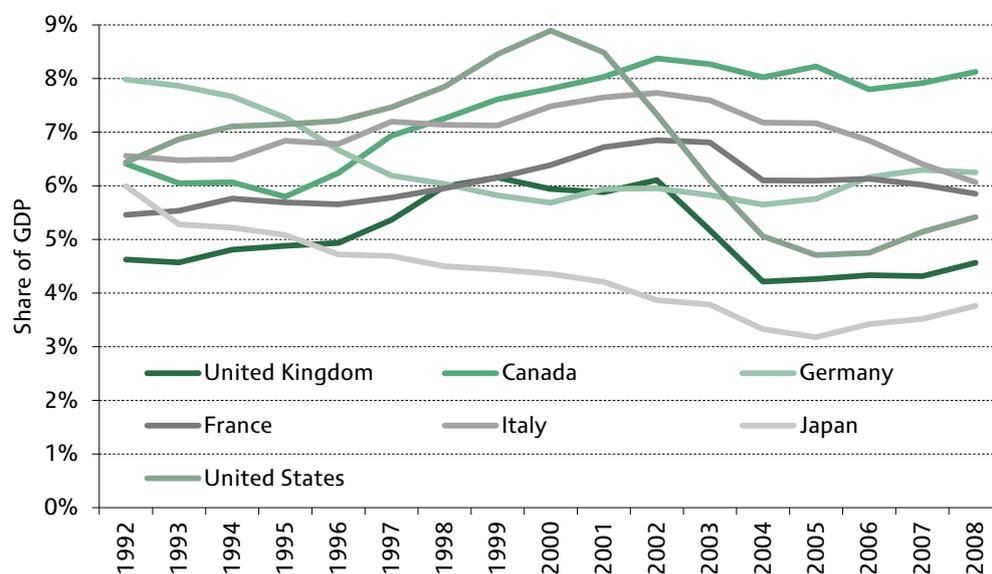
- it is clear that actions are needed to address the weak state of the public finances; but
- there is also pressure to support economic growth and improve public services by investing in new infrastructure.

The Chancellor has chosen to address the former concern by legislating for a public finance surplus and implementing cuts in spending on public services, aiming to end the significant net cash outflows experienced by the public sector since the financial crisis.

The fiscal charter rule to run a surplus effectively prohibits new borrowing in ‘normal’ economic times (see Chapter 3). As a consequence, the amount available for investment in public infrastructure may be more constrained than it has been in the past. This is at the same time as the government has expressed a belief in the need for more investment, establishing the National Infrastructure Commission to drive improvements in the delivery of infrastructure projects across the UK.<sup>1</sup>

The call for more investment has also been made by, among others, the OECD, which says that the UK government has spent less on infrastructure than most of its peers (see Figures 7.1 and 7.2), highlighting transport infrastructure as an area of particular underinvestment. The OECD notes that ‘the key challenge ... is to encourage private infrastructure investment, which up to now has been held back by unclear signals regarding the country’s long-term infrastructure needs and strategy’.<sup>2</sup>

Figure 7.1. Public investment

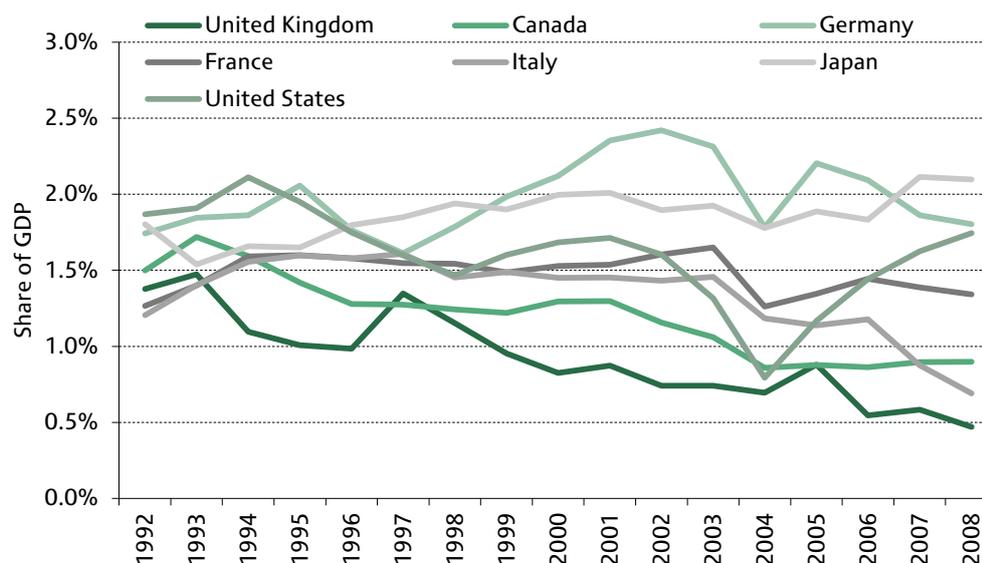


Source: Gross government capital formation as a percentage of GDP derived from OECD Data (<https://data.oecd.org>).

<sup>1</sup> HM Treasury, 5 October 2015, ‘Chancellor announces major plan to get Britain building’, <https://www.gov.uk/government/news/chancellor-announces-major-plan-to-get-britain-building>.

<sup>2</sup> Page 34 of OECD, *Economic Surveys: United Kingdom 2015*, February 2015.

Figure 7.2. Investment in transport



Source: Investment in transport equipment as a percentage of GDP derived from OECD Data (<https://data.oecd.org>).

Balancing prudent financial management on one hand with the need to invest for the future is similar to the challenges faced by many finance directors. There is always a tension between achieving an organisation's financial goals in the short and medium term at the same time as delivering adequate investment to ensure long-term viability and growth. This becomes particularly acute in a turnaround situation, where an organisation needs to take relatively radical action to avert serious short-term problems, without sacrificing its long-term future.

The government has several options to expand infrastructure spending while still meeting its objective of running a cash surplus, including even deeper than planned cuts to day-to-day spending. Given the scale of cuts already happening (see Chapter 6), the scope for this is limited.

Another option would be to expand the use of private financing to fund public infrastructure, bypassing the fiscal charter by increasing the number of off-balance-sheet Private Finance Initiative (PFI) contracts (see Figure 7.3 and Box 7.1). This option is discussed further in Section 7.2.

Alternatively, Section 7.3 looks at the potential for encouraging more investment into both public and private sector infrastructure, whether through making infrastructure projects more financially attractive or through increasing the pool of finance available. It reflects on the performance to date of the coalition government's Pensions Infrastructure Platform, as well as on the potential for encouraging more investment by public sector pension schemes. It also explores options to give support to projects through the use of guarantees or through regulatory or market incentives.

In Section 7.4, we discuss how a more sustainable commercial rationale for infrastructure investment might work, given the UK's capacity as a sovereign nation to take on risk and access capital markets. It proposes a new model that would prioritise public sector investments if they provide a positive financial return to the public finances, replacing the current approach that prioritises off-balance-sheet investments.

Section 7.5 concludes.

Figure 7.3. On or off balance sheet?

<i>Classification as public sector debt / financial accounting liability</i>		
	<b>National Accounts</b>	<b>Whole of Government Accounts</b>
Government and local authority debt	On	On
Debt of public corporations	On	On
Debt of bodies under public sector control <sup>a</sup>	On	On
Special purpose vehicles (e.g. Network Rail)	Off (ESA95)	On <sup>b</sup>
	On (ESA10)	
Operating leases	Off	Off
Finance leases	On	On
Finance leases embedded inside PFI contracts	On	On
PFI contract liabilities	Off	On
Debt of independent public bodies (e.g. universities) <sup>a</sup>	Off	Off
Debt of third-sector entities (e.g. charities)	Off	Off
Debt of private sector businesses & private individuals	Off	Off

<sup>a</sup> The Office for National Statistics concluded in October 2015 that housing associations are controlled by the government and should be incorporated into National Accounts measures. This will also affect the Whole of Government Accounts.

<sup>b</sup> Up until 2013–14, Network Rail was excluded from the Whole of Government Accounts in order to align with ESA95. This was in breach of accounting standards, as reported in the Comptroller and Auditor-General’s audits.

### Box 7.1. What is ‘off balance sheet’ financing?

Technically, the term ‘off balance sheet’ is only applicable in the context of financial accounts, which have balance sheets from which to be ‘off’. It is easiest understood as the opposite of ‘on balance sheet’, which is when an asset and the associated financing obligation are both recognised within financial accounts.

Despite this, the term is often also used in relation to the National Accounts to describe financial obligations that do not count towards public sector net debt and hence are excluded from the public finance deficit or surplus for the year. A more accurate description would be ‘off debt’.

Two common ways that assets can be financed off balance sheet are:

- by using ‘special purpose vehicles’, where assets and the associated debt are placed in a separate entity that is legally owned by an external party but is in effect controlled by the government;
- where assets are owned and financed by an external party, with use of the asset then provided through a contractual arrangement, such as a lease or a service contract.

An example of a special purpose vehicle is Network Rail, which was set up after the collapse of Railtrack plc in 2002. It is owned by an independent industry organisation, even though the government effectively controls it. This legal technicality was the basis for excluding the debts of Network Rail from public sector debt in the National Accounts until late 2014, when its status changed with the implementation of ESA10.

Over time, accounting standard setters have moved to capture more situations where specific assets are used by an organisation, but not owned directly. As a consequence, most special purpose vehicles and many contractual arrangements to use a specific asset, in particular leases, are now on balance sheet in financial accounts.

Leases captured in this way are known as finance leases. The legal ownership of an asset is ignored and the asset is treated as if it had been purchased for the period of the lease. A liability is then recorded for the capital element of the payments due. After all, a stream of payments for the use of an asset does not look that dissimilar to a stream of payments to repay a loan used to purchase it, so why should the accounting treatment be different?

Finance leases are on balance sheet for both the National Accounts and the Whole of Government Accounts (WGA).

However, there remains one major loophole. Not all leases are captured, with 'operating leases' off balance sheet in both the National Accounts and the WGA. These are leases where the majority of the financial risks and rewards relating to the asset are judged to be with its owner. A simple example would be a five-year lease for one floor of an office building with an overall economic life of 30 years.

This loophole is wider in the case of the National Accounts. Where the use of an asset forms part of a larger service contract (known as an 'embedded lease'), none of the financial obligations incurred will be counted as part of public sector net debt so long as the private sector contractors concerned retain most of the financial risks and rewards. This means that a PFI contract to design, construct, maintain and operate a hospital for 30 years would in most cases still be off balance sheet in the National Accounts, despite the hospital being dedicated to the use of the NHS for its entire working life.<sup>a</sup> This contrasts with the Whole of Government Accounts, which would treat that hospital as belonging to the NHS and a proportion of the service payments due as capital repayments.

As a consequence of the above, PFI contracts are classified as follows:

- Some PFI contracts are on balance sheet for both the National Accounts and the WGA. In the WGA, they form the largest element of the £5 billion balance reported for finance leases at 31 March 2014.<sup>b</sup>
- The majority of PFI contracts are off balance sheet in the National Accounts, but are on balance sheet in the WGA. At 31 March 2014, the capital value of these obligations excluded from public sector net debt amounted to around £40 billion.<sup>b</sup>
- A small number of 'operating lease' PFI contracts are off balance sheet in both the National Accounts and the WGA.

The International Accounting Standards Board has decided to end the arbitrary distinction between different types of leases and bring operating leases onto financial accounting balance sheets from 2019 onwards.<sup>c</sup>

This decision is likely to increase the pressure on national governments to follow suit and remove the loopholes that still exist within systems of National Accounts.

<sup>a</sup> Based on guidance set out in Application Note F of the (now repealed for private sector financial accounts) UK Financial Reporting Standard No. 5.

<sup>b</sup> See Table 7.4.

<sup>c</sup> International Financial Reporting Standard No. 16 'Leases' issued 13 January 2016.

## 7.2 Private investment in public infrastructure

The United Kingdom has been a leader in modernising the way in which public infrastructure and services are delivered and finding new ways to work in partnerships with the private sector over the last twenty years.

The realities of the private sector market place exert a powerful discipline on businesses to maximise efficiency and take full advantage of business opportunities. Successful Public Private Partnerships (PPP) enable the public sector to access the discipline, skills and expertise of the private sector.

Not all PPPs have, however, been successful. The Private Finance Initiative (PFI), the form of PPP used most frequently in the United Kingdom, has become tarnished by its waste, inflexibility and lack of transparency.

*HM Treasury, A New Approach to Public Private Partnerships, December 2012*

Partnering with private sector organisations to deliver infrastructure projects is not a new idea; PFI contracts have been used to construct schools, hospitals and many other public assets since the 1990s, while private finance has also been used to construct toll bridges and a motorway.

Each PFI project involves a long-term contract, involving the construction of an asset as well as its operation and the provision of services over the course of several decades. For example, a hospital PFI contract generally involves the building of the hospital, its operation and maintenance, and the provision of support services (from heat and power, through portering, to blood tests) to the NHS medical staff who provide health care to the public.

Arguably, the existence of public–private partnerships as a politically acceptable contracting option has facilitated the construction of many new buildings or facilities that would otherwise never have occurred.

In theory, public–private partnerships can have several advantages over traditional procurement by reducing exposures to cost overruns and improving operational efficiency, sufficient to offset the higher financing cost inherent in using private, rather than public, borrowing.

However, these objectives have not always been achieved. In some PFI contracts, contractual flaws have resulted in poor value for money for the taxpayer, while the need to transfer upside as well as downside risks has provided windfall gains for some private sector operators. In addition, long-term service arrangements have sometimes meant reduced flexibility (and hence higher costs) as circumstances change.

Examples include the Metronet contract for Transport for London, where the National Audit Office estimates that between £170 million and £410 million was lost to the taxpayer when the private contractor failed,<sup>3</sup> and the Norfolk and Norwich PFI hospital, where a refinancing enabled investors to increase their return from 16% to 60%.<sup>4</sup>

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<sup>3</sup> National Audit Office, *Department for Transport: The Failure of Metronet*, 5 June 2009, <https://www.nao.org.uk/report/the-department-for-transport-the-failure-of-metronet/>.

<sup>4</sup> National Audit Office, *The Refinancing of the Norfolk and Norwich PFI Hospital: How the Deal Can Be Viewed in the Light of the Refinancing*, 10 June 2005, <https://www.nao.org.uk/report/the-refinancing-of-the-norfolk-and-norwich-pfi-hospital-how-the-deal-can-be-viewed-in-the-light-of-the-refinancing/>.

Although the coalition government was critical of its predecessors' use of PFI contracts, it decided to reform them rather than abolish their use. A new generation of 'PF2' contracts was initiated, with an objective of delivering better value for money for the taxpayer and more flexibility as circumstances change.<sup>5</sup> The current Conservative government plans to continue to use PF2 contracts over the course of this parliament and beyond.

## Planned investment in public infrastructure

In October 2015, the Chancellor announced plans to invest an average of £20 billion a year into public infrastructure projects over the course of the current parliament, including PFI deals. This includes the selected infrastructure investment plans from the 2015 Spending Review set out in Table 7.1.

Table 7.1. Selected infrastructure investment

Fiscal year	2015–16	2016–17	2017–18	2018–19	2019–20
	£bn	£bn	£bn	£bn	£bn
Railways <sup>a</sup>	7.6	8.2	7.3	7.1	9.8
Schools	4.6	5.1	4.6	4.5	4.5
Highways and roads	2.8	2.8	3.2	3.5	4.0
Housing and regeneration	1.0	1.0	1.3	2.2	2.1
Science	1.1	1.1	1.1	1.2	1.2
Flood defences and other	0.4	0.5	0.5	0.5	0.5
Total selected infrastructure	17.5	18.7	18.0	19.1	22.1
Housing associations <sup>b</sup>	7.9	7.7	7.3	7.2	7.2
Total incl. housing associations	25.4	26.4	25.3	26.3	29.3

<sup>a</sup> Railways include HS2.

<sup>b</sup> Housing association spending estimated by the Office for Budget Responsibility.

Source: HM Treasury, *Autumn Statement and Spending Review 2015*; Office for Budget Responsibility, *Economic and Fiscal Outlook: November 2015*.

If housing association capital expenditure is included, then the average investment expected is around £26 billion a year in the first four years of the parliament, before increasing to £29 billion in 2019–20.

Investment is expected to be higher in 2019–20 than in 2015–16 principally as a result of an increase of £4 billion a year in spending on the High Speed 2 (HS2) rail link, together with £1.2 billion more on roads and £0.4 billion more on housing offset by £1.8 billion in lower spending on railways other than HS2.

## Existing PFI contracts

Information about current PFI contracts can be found in the official PFI register, which is summarised in Table 7.2. According to the register, annual spending on PFI contracts is estimated to be around £10 billion a year, comprising around £4 billion in capital repayments and interest and £6 billion in service charges.

At 31 March 2014, there were 671 operational PFI contracts with a capital value of £49.8 billion, equivalent to an average capital value of £74 million per project. There were

<sup>5</sup> HM Treasury, *Private Finance 2*, December 2012 and July 2013, <https://www.gov.uk/government/publications/private-finance-2-pf2>.

Table 7.2. PFI register at 31 March 2014

	Number of live contracts	Capital value £bn	Number under construction	Capital value £bn	Total value £bn
Department of Health	117	10.7	6	1.4	12.1
Ministry of Defence	41	9.0	-	-	9.0
Scotland, Wales and N. Ireland	144	8.2	-	-	8.2
Department for Transport	61	7.3	1	0.6	7.9
Department for Education	145	6.5	23	1.3	7.8
DEFRA	15	1.4	15	2.7	4.1
Other departments	148	6.7	12	0.7	7.4
<b>Total</b>	<b>671</b>	<b>49.8</b>	<b>57</b>	<b>6.8</b>	<b>56.6</b>

Source: HM Treasury, *Private Finance Initiative Projects: 2014 Summary Data*, 15 December 2014, <https://www.gov.uk/government/publications/private-finance-initiative-projects-2014-summary-data>.

also 57 contracts under construction, with an average capital value of £119 million per project.

Together, these contracts include commitments to make total undiscounted payments of £232.4 billion between 2014–15 and 2049–50 once service charges are included in combination with capital repayments and interest. This scale of commitment in comparison with the costs of constructing the assets is an important element in achieving off-balance-sheet treatment in the National Accounts – use of the asset is only one part of a much larger overall contract that includes services.

Projects range in size from as little as £1 million for a hospital energy efficiency project in Wales to as much as £2.6 billion for future strategic tanker aircraft for the Ministry of Defence.

The introduction of Whole of Government Accounts (WGA) has significantly improved the transparency surrounding PFI contracts, as almost all PFI arrangements are included in the financial accounting balance sheet, as shown in Table 7.3.

Table 7.3. PFI and finance lease assets

Fiscal year	2009–10	2010–11	2011–12	2012–13	2013–14	2013–14
	£bn	£bn	£bn	£bn	£bn	%
Highways & roads	4.1	5.8	6.7	6.6	6.7	14%
Buildings	26.7	27.4	28.6	28.0	28.6	58%
Dwellings	3.6	3.1	5.1	4.8	5.4	11%
Land	1.9	3.9	3.8	3.3	3.4	7%
Equipment & other	4.5	4.6	4.8	4.6	5.0	10%
PFI & leased assets	40.8	44.8	49.0	47.3	49.1	100%
Total property, plant & equipment	712.8	714.0	744.5	746.8	762.6	
<i>As a % of total</i>	<i>5.7%</i>	<i>6.3%</i>	<i>6.6%</i>	<i>6.3%</i>	<i>6.4%</i>	

Note: A substantial proportion of finance lease assets relate to PFI contracts that have been classified as on balance sheet in both National Accounts and the Whole of Government Accounts. PFI assets in this context relate to those contracts that are on balance sheet for the Whole of Government Accounts, but which are excluded from public sector net debt in the National Accounts.

Source: Whole of Government Accounts 2010–11, 2011–12 and 2013–14.

Table 7.4. PFI and lease obligations

Fiscal year	2009–10 £bn	2010–11 £bn	2011–12 £bn	2012–13 £bn	2013–14 £bn
Finance lease liabilities	5	5	5	5	5
<b>Other PFI contract liabilities</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>
PFI and finance lease liabilities	41	42	43	45	45
Operating lease obligations	20	21	22	21	18
PFI and finance lease interest	52	62	60	62	61
PFI service charges	97	109	111	117	110
Financial commitments	169	192	193	200	189
Public sector net debt	960	1,102	1,192	1,300	1,403
<i>As a % of public sector net debt</i>					
<i>Finance lease liabilities</i>	<i>0.6%</i>	<i>0.5%</i>	<i>0.4%</i>	<i>0.4%</i>	<i>0.3%</i>
<b><i>Other PFI contract liabilities</i></b>	<b><i>3.8%</i></b>	<b><i>3.3%</i></b>	<b><i>3.2%</i></b>	<b><i>3.1%</i></b>	<b><i>2.9%</i></b>
<i>Financial commitments</i>	<i>17.7%</i>	<i>17.4%</i>	<i>16.2%</i>	<i>15.4%</i>	<i>13.5%</i>

Source: Whole of Government Accounts 2010–11, 2011–12 and 2013–14; Office for National Statistics, *Public Finance Statistics October 2015*; ICAEW calculations.

Including PFI contracts in the balance sheet allows them to be seen in the context of overall investment by the public sector, with the £49.1 billion of PFI and finance lease assets on the balance sheet as at 31 March 2014 representing 6.4% of the overall book value of public sector property, plant and equipment. This is equivalent to approximately £760 per person out of a total investment in property, plant and equipment of around £11,800 per person living in the UK.<sup>6</sup>

More than half of the investment in PFI and finance lease assets is in buildings with £28.6 billion invested, principally in schools and hospitals. The remainder is spread over roads, housing and equipment. Land relating to all these categories is shown separately in Table 7.3.

Total amounts due for leases and PFI contracts are reported in the WGA in two elements: liabilities on the balance sheet, and financial commitments for off-balance-sheet operating leases together with future interest and service charges due under PFI contracts and finance leases, as shown in Table 7.4.

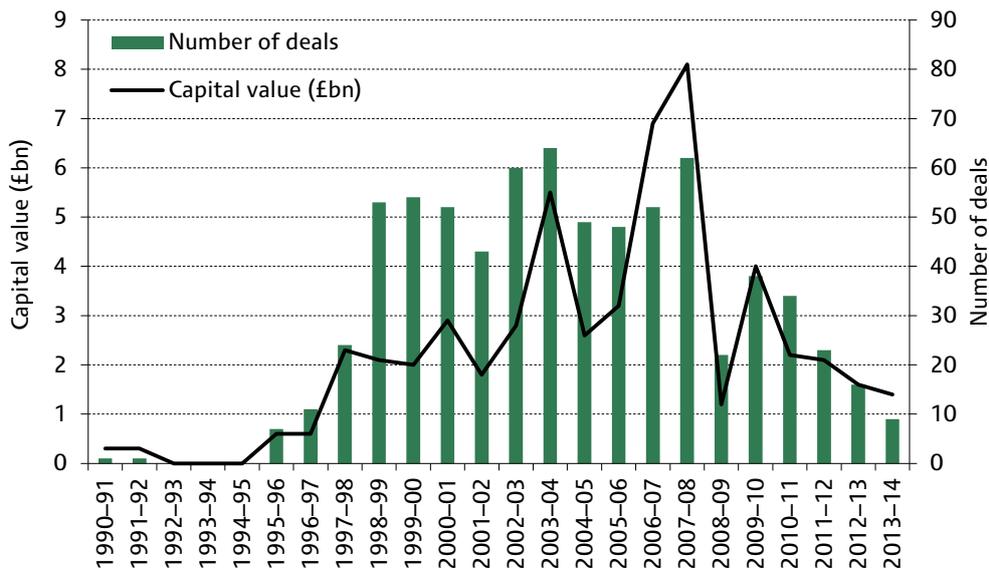
PFI and finance lease liabilities were lower than the capital value on the asset side of the balance sheet at the same dates because of advance payments.

Table 7.4 also compares PFI and finance lease obligations with public sector net debt in the National Accounts. This illustrates how bringing PFI contracts on balance sheet for the National Accounts would result in an increase of 2.9% in public sector net debt at 31 March 2014.

It also gives an indication of the scale of related financial commitments in the context of the size of government debt obligations, which although 12% higher in nominal terms at 31 March 2014 than at 31 March 2010, fell as a proportion of public sector net debt from 17.7% to 13.5% over the period.

<sup>6</sup> Office for National Statistics, 'Mid-year 2014 population estimate' (adjusted for one-quarter difference in timing to 64.5 million people).

Figure 7.4. PFI contracts reaching financial close



Source: HM Treasury, *Private Finance Initiative Projects: 2014 Summary Data*, 15 December 2014, <https://www.gov.uk/government/publications/private-finance-initiative-projects-2014-summary-data>.

The capital value of PFI projects reaching financial close (i.e. coming into operation) each year is substantially lower than it was before the financial crisis, as illustrated by Figure 7.4. The graph provides a summary of the number and value of PFI contracts reaching financial close between 1990–91 and 2013–14.

Only £1.4 billion of projects came into operation in 2013–14, less than the £1.6 billion in the previous year, and a substantial drop on the £4.0 billion completed during 2009–10 and on the £8.1 billion completed in 2007–08. This was expected to have increased to £2.0 billion in 2014–15 and to increase to £2.9 billion in 2015–16, according to HM Treasury in December 2014.

This compares with approximately £2–3 billion a year in capital repayments under existing contracts, indicating that growth in PFI contracts is likely to be fairly small at current rates of contracting.

### Potential PFI expansion

PFI contracts have a privileged position in sitting outside of capital budgets and the fiscal targets (see Chapter 3), which in theory could allow substantial capital expenditure to be delivered through this route without affecting the principal fiscal measures used by the government. However, in order to provide a restriction against potential overuse, the Chancellor has set a cap on the total capital value of £70 billion for all PFI contracts from 2015–16 onwards.<sup>7</sup>

Taking into account repayments on existing contracts, this implies that there is capacity for £5–6 billion a year in new assets to be constructed over the course of the current parliament through PFI, significantly more than that delivered in 2012–13 and 2013–14 or expected in 2014–15 or 2015–16.

<sup>7</sup> Section 1.17 of HM Treasury, *Investing in Britain's Future*, June 2013, <https://www.gov.uk/government/publications/investing-in-britains-future>.

This cap is not set out in legislation and the Chancellor could decide to increase it if desired. In reality, a substantial expansion in off-balance-sheet PFI contracts in excess of the current cap is likely to be difficult to achieve because:

- although PFI contracts are 'free' in terms of capital budgets in the year of construction, the associated long-term service commitments would take up an increasing proportion of future operating budgets, already under severe pressure from the need to make substantial cuts;
- establishing value for money is not always easy, especially as operational efficiencies and cost savings obtained by combining the construction of an asset and its operations may still be achievable through appropriately-designed construction and service contracts that do not involve private sector financing for the asset itself;
- departments are more cautious in identifying opportunities given their experience of the difficulties in ensuring sufficient flexibility to cater for future changes in circumstances over a multi-decade contract;
- persuading private investors to participate in PFI projects is more difficult than before the financial crisis as there is less financing available, and with fewer opportunities to make windfall profits under PF2 contracts, projects are less financially attractive.

The current generation of PFI contracts, PF2, are designed to retain the benefit of off-balance-sheet treatment in the National Accounts, while providing a better deal for the taxpayer. They typically involve the government taking a minority equity stake in projects so that the taxpayer will share in profits and losses made by private sector operators, together with improving flexibility when circumstances change. The PF2 guidance also seeks to address a number of issues that have resulted in poor value for money for the taxpayer in previous-generation PFI contracts.

However, there are inherent conflicts between the criteria for off-balance-sheet treatment and the PF2 guidelines for PFI contracts. The requirement to ensure that most financial risks and rewards sit with the private sector operator in order to achieve off-balance-sheet treatment in the National Accounts has to be balanced with the need for flexibility to adapt to changes in the future. In practice, there is a tension with value for money because there may be an incentive to sign contracts of a type that will be classified as off balance sheet even if taxpayers get poorer value for money as a result of these terms.

These conflicts can cause tensions during the procurement process. A recent example of this was seen in 2015 with the £745 million Aberdeen Western Peripheral Route (AWPR) bypass, intended by the Scottish government to be the forerunner of a series of new (off-balance-sheet) PF2 contracts in Scotland. Contractual terms designed to improve the level of control and flexibility for the Scottish government, including returning excess profits to the public sector, resulted in the loans used to finance the construction of the bypass being classified by the Office for National Statistics as part of public sector debt.<sup>8</sup>

This decision has significant implications for the Scottish government's capital budget plans, and it has been seeking to find ways to amend the AWPR contracts to enable them to be classified as off balance sheet, albeit without success so far. John Swinney, Scottish

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<sup>8</sup> 'Scotland hits snag in funding model for infrastructure projects', *Financial Times*, 31 July 2015.

Finance Minister, stated in November 2015, 'It has become clear that a rapid reversal of the ONS's public classification of the Aberdeen Western Peripheral Route project under the revised Eurostat rules will not be possible'.<sup>9</sup>

Despite the improvements expected to be delivered by PF2, there continues to be criticism of the use of PF2 contracts, in particular the need to enter into long-term service commitments.<sup>10</sup>

## Service concessions

One variant on PFI contracts for financing public infrastructure concerns situations where there is the potential for user charges to fund the cost in place of general taxation – for example, in the case of toll roads or bridges. In this case, a service concession could be granted to a private sector operator, with the operator assuming at least some of the revenue risks in addition to construction, operating and financing risks.

Most long-term service concession contracts are also off balance sheet for National Accounts purposes. Whether they are on or off balance sheet in financial accounts will depend on the terms of the contract; many service concessions involve a sharing of revenue and control over the asset between the government and the private sector operator and, in those circumstances, the asset and the associated financing obligation would need to be on balance sheet in the WGA, similar to other types of PFI contracts.

Facilitating private investment into public infrastructure by granting service concessions may make sense where user charges can be levied. Social housing is one area with the potential for projects to be developed using a service concession model, similar to the construction of purpose-built student accommodation on behalf of universities. This could supplement the role of housing associations, now part of the public sector, for which capital investment is expected to decline (see Table 7.1 earlier).

A number of commentators have suggested expanding the role of user charges in areas such as road pricing, which if pursued would provide further opportunities for encouraging private investment in public infrastructure assets.<sup>11</sup>

## 7.3 Encouraging more private investment

We haven't done enough of that in our country in the past. And as a result British people have to spend longer than they should getting to work; they pay more than they should in energy bills; they can't buy the homes they want, all because of the failure of successive governments – and the societies that elected those governments – to think long term. That has started to change. New railway lines are being laid, new roads are being built, new broadband is being installed. Britain has rediscovered its ambition and we are thinking big again.

*George Osborne, Chancellor of the Exchequer, October 2015*

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<sup>9</sup> 'Swinney faces tricky route to negotiate £745m bypass', *The Times*, 27 November 2015.

<sup>10</sup> 'PFI has a new look, but the same old failings', *The Times*, 19 June 2014; 'Scotland's PFI boom means £1.3bn a year bill is in the post', *The Guardian*, 15 December 2015.

<sup>11</sup> D. M. Newbury, 'Pricing and congestion: economic principles relevant to pricing roads', 1990, *Oxford Review of Economic Policy*, 6(2), 22–38; Department for Transport, *Feasibility Study of Road Pricing in the UK*, July 2004.

The government’s objective of increasing economic growth not only involves investment in publicly owned or controlled infrastructure. Investment is also needed into essential infrastructure owned and controlled by private sector businesses – for example, in the energy, water, telecommunications and housing sectors.

There are no definitive statistics on the level of infrastructure spending in the UK, although in 2015 PwC and Oxford Economics estimated that total investment in infrastructure amounted to £72 billion in 2014.<sup>12</sup>

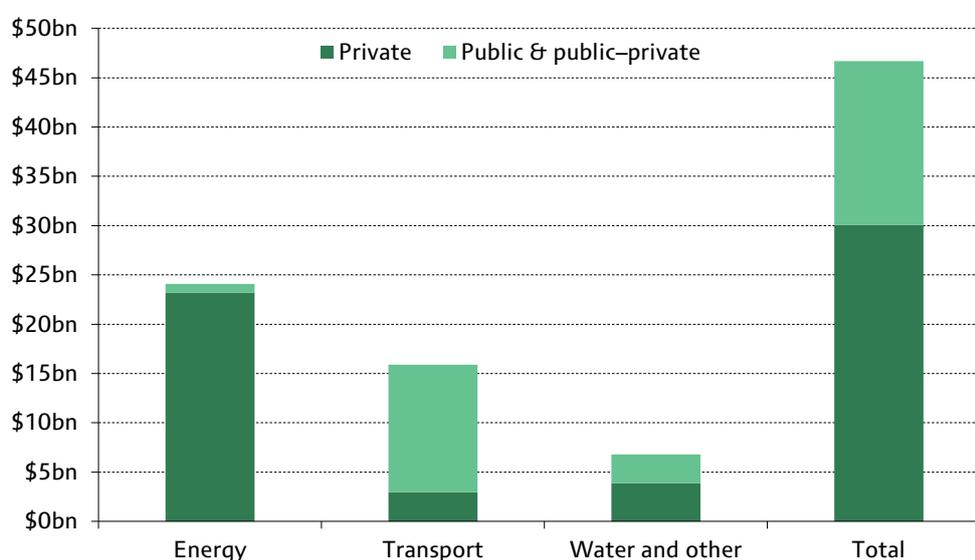
The government also tracks both private and public infrastructure through the National Infrastructure Pipeline, which tracks infrastructure projects in excess of £50 million. In July 2015, this had identified 564 projects and programmes with a total value of £411 billion expected to be delivered over the course of the coming decade, including around £47 billion a year on average over the course of this parliament (see Figure 7.5).

Of the average expected spending of £47 billion a year over the course of this parliament, approximately £30 billion a year is expected to be financed solely by the private sector, £6 billion by a mixture of public and private funding, and £11 billion directly by the public sector.

With the majority of investment in energy, water and telecommunications coming from the private sector, the largest area of public sector and public–private investment captured by the Pipeline is in transport infrastructure. This includes not only roads and highways, but also the railways, with Network Rail, HS2 and metropolitan transport networks, including Transport for London.

The average spending of £11 billion a year in direct public investment in the Pipeline is lower than the average of £14 billion of investment in public infrastructure over the same period in the Autumn Statement 2015 (excluding schools and housing; see Table 7.1

Figure 7.5. Average annual infrastructure spending, 2015–16 to 2019–20



Note: ‘Water and other’ comprises water, communications, waste, science and research, and flood infrastructure spending.

Source: Cabinet Office, ‘National Infrastructure Pipeline: July 15 update’, August 2015.

<sup>12</sup> PwC and Oxford Economics, ‘Capital project and infrastructure spending: outlook to 2025’, 2015.

earlier in this chapter), primarily because the Autumn Statement analysis includes some transport spending expected to be funded by both public and private funding.

### **Less finance available since the financial crisis**

Since the financial crisis, raising new finance has been a particular challenge as financial institutions have sought to repair their balance sheets, governments have borrowed substantial sums to fund deficit spending and there has been a perceived lowering in the risk appetite of investors.

Banks have reduced lending as they have sought to strengthen their balance sheet in response to regulatory requirements to increase their capital reserves and to improve liquidity. This has particularly affected infrastructure investments, which tie up funds for a long period, especially as banks have been less willing to participate in the debt syndication market, which allows the risk of funding very large projects to be shared.

The bond market was also adversely affected by the insolvency of several major monoline insurers. They had specialised in raising the creditworthiness of bonds issued to finance large infrastructure projects to AAA status by insuring repayments in the event of a default. This AAA status enabled many institutional investors to invest in bonds used to finance infrastructure projects when otherwise they would not have been able to do so. Without underwriting capacity, debt market investment in infrastructure projects reduced, removing the main source of competition to bank-sourced finance, increasing the cost of finance to infrastructure projects even as general interest rates fell.

Even where finance could be obtained, this increase in the cost of funding undermined the financial viability of some of the large infrastructure projects that had been planned. This was one of the major contributors to the fall in PFI contracts since the financial crisis, with fewer viable opportunities. Some government departments did decide to proceed with projects for strategic reasons – for example, the Department for Transport proceeded with the M25 road widening project despite £660 million in higher financing costs than would have been incurred had it been entered into before the financial crisis.<sup>13</sup> If this had been publicly funded, then the opposite would have occurred, given the significant reductions in the government's borrowing costs over the same period.

Pricing for infrastructure finance continues to be high compared with pre-crisis levels, indicating that the market has yet to recover even today.

This does not mean that there is no finance available at all. There has continued to be a supply of finance to price-regulated utilities, primarily in electricity and gas transmission and distribution networks and in water supply. The revenue certainty provided by their regulatory arrangements, and the strength of their balance sheets, mean that they are able to access bond markets directly, without requiring underwriting support.

However, with less bank and bond finance generally available, the government has been seeking to find ways to support new investment into both public and private infrastructure.

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<sup>13</sup> National Audit Office, *Procurement of the M25 Private Finance Contract*, 19 November 2010, <https://www.nao.org.uk/report/procurement-of-the-m25-private-finance-contract/>.

## Increasing incentives

One method of encouraging investors to provide more finance for infrastructure projects is to improve financial incentives.

Traditionally, tax incentives have been used to encourage investment of all types, but as corporate tax rates have reduced and anti-avoidance measures have increased, these have become less useful, especially in the context of long-term investments where stability around the tax regime is particularly important. In particular, as headline rates have come down, capital allowances have been made less generous, in many circumstances reducing the incentive for investment within the corporation tax system.

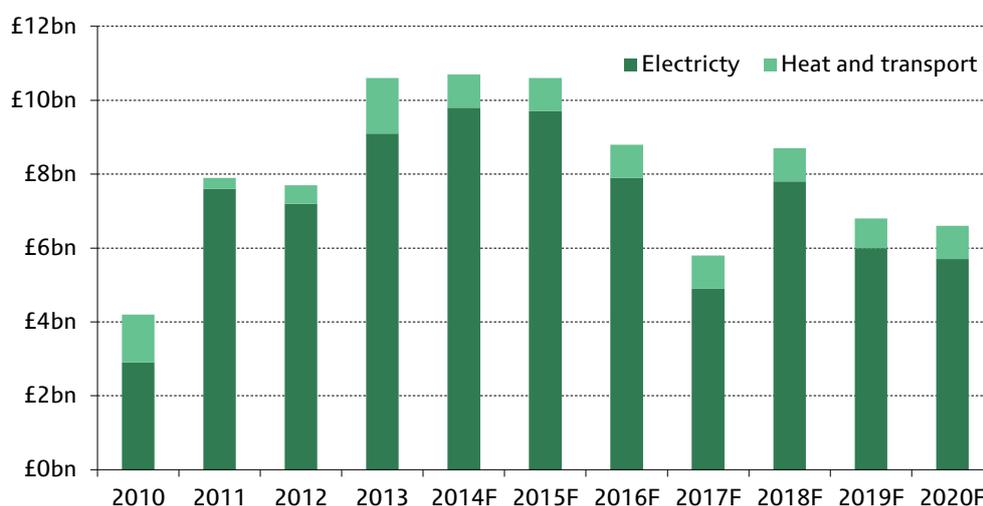
Electricity generation is an area where market incentives have been successfully used to encourage investment in renewable energy sources, such as wind turbines and solar panels, as well to provide revenue certainty to investors in new nuclear power plants. This has led to substantial investment in renewable energy, although at the cost of significant increases in bills to consumers. Even so, concerns remain over whether overall investment will be sufficient to replace retiring coal and nuclear plants, with available capacity now at relatively low levels.<sup>14</sup>

According to a PwC report from May 2015, investment in renewable energy in the UK was expected to amount to £10.7 billion in 2014, as shown in Figure 7.6, with an average of just over £8 billion a year expected to be invested between 2015 and 2019.

However, this report was issued before the government announced a number of changes to market incentives for renewable energy, and actual investment is now expected to be substantially less than that being forecast less than a year ago, with many investors cancelling projects as a consequence of these changes.<sup>15</sup>

This highlights one of the problems in using market incentives, given the tendency of incoming governments to scrap or reform their predecessors' incentive schemes. A lack

**Figure 7.6. Historical and forecast renewable energy investment**



Note: F denotes forecast.

Source: PwC UK, 'State of the renewable industry: investment in renewable electricity, heat and transport', May 2015.

<sup>14</sup> 'UK electricity supply fears follow power crunch', *Financial Times*, 5 November 2015.

<sup>15</sup> 'Energy groups axe UK renewable projects', *Financial Times*, 20 October 2015.

of long-term consistency presents a high degree of political risk for investors, with the potential that, even if new incentive arrangements are put in place, they will not have the desired effect.

This contrasts with the position surrounding investment in price-regulated utilities, where delegated authority to regulators, combined with a cross-party consensus not to make radical changes to regulatory arrangements when governments change, provides a more stable foundation for making investment decisions.

In looking at market incentives as a route to encourage investment, whether in energy generation, broadband, housing or other markets, the government may therefore wish to consider providing regulators or equivalent bodies with the power to establish long-term market incentives that might be considered more likely to endure through changes in government.

## Reducing risk

An alternative way of encouraging investment is to reduce risk. The principal route for doing so is to provide financial guarantees to investors, in effect replacing the underwriting capacity that is no longer provided by monoline insurers.

This has two benefits. First, by reducing the financial downside risk to investors, more projects may become viable. Second, better credit quality for bonds used to finance infrastructure will increase the pool of institutional investors willing to invest.

For example, a guarantee might be granted over the borrowing used to fund an initial investment in a long-term project where planning hurdles, technical uncertainties or the risk of changes in government policy midway through might otherwise deter an investor from proceeding.

Guarantees can facilitate projects with much larger investments than the value of the guarantee itself. On the other hand, such guarantees can obviously create moral hazard – if the investor faces limited downside risk, they may do less to protect against that downside.

In order to expand the use of guarantees to support infrastructure investment, the government has established the UK Guarantees scheme. This provides a standardised route through which investors can apply for government guarantees on qualifying infrastructure projects.

This scheme was initially set up with a maximum capacity of £40 billion, similar in scale to the £50 billion exposure limit for export credit guarantees.<sup>16</sup>

In theory, there is plenty of capacity to expand the UK Guarantees scheme if desired, given that overall government financial exposures are relatively low compared with recent years (see Table 4.11).

Increasing the scheme's capacity is unlikely to be necessary in the near future as, after two full years of operation, UK Guarantees had only secured six guarantees over a total of £1.7 billion in new investment, as shown in Table 7.5.

The slowness in take-up is probably partly due to the newness of the scheme, but is also because of the need to demonstrate compliance with EU state aid rules. For example, one

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<sup>16</sup> Annex B of UK Export Finance, *Business Plan 2014–17*.

Table 7.5. UK Guarantees scheme: the first two years

Fiscal year	2013–14 £m	2014–15 £m	Total £m
Energy	84	268	352
Transport	1,007	-	1,007
Education	-	292	292
Total	1,091	560	1,651

Source: HM Treasury, Infrastructure (Financial Assistance) Act 2012 reports.

out of the six guarantees prior to 31 March 2015 is subject to an official investigation by the European Commission for this reason.<sup>17</sup>

The level of guarantees is expected to increase further, with 19 pre-qualified projects not reflected in Table 7.5. Fifteen of these projects relate to energy generation or energy transportation and storage, with the remaining four relating to housing and telecommunications. The largest of these is the £2 billion guarantee announced in September 2015 to support investment in the new Hinkley Point C nuclear power station.<sup>18</sup>

The UK Guarantees scheme is relatively new and so it will take some time before it becomes clear whether the provision of guarantees to private sector investors is encouraging investment into infrastructure that would not otherwise have been provided.

One other way of encouraging investment would be to address the high-risk pre-approval stage of infrastructure projects. Investors may need to invest millions of pounds on feasibility studies, planning applications and preliminary design costs with no certainty that a project will be approved. Finding ways of mitigating these costs would be likely to increase the number of viable projects and so unlock more investment.

### Widening the pool of finance available

Another route to increasing investment is to seek new sources of funds from investors who have not previously invested in infrastructure projects.

One potential source identified by the government is UK pension funds. With their long-term investment horizons, they seem natural investors into infrastructure projects. After all, foreign pension funds are often major investors in infrastructure – for example, the Ontario Teachers Pension Plan alone has around £7 billion invested into infrastructure projects.<sup>19</sup>

Table 7.6 reflects the estimated £2 trillion in investments held within UK pension funds. Assuming a typical maximum limit of 15% for any particular asset class, this implies that potentially up to £300 billion could be available for investment.

This was the rationale for the Pensions Infrastructure Platform (PIP), an investment vehicle established by the UK pension fund industry in 2011 at the instigation of the

<sup>17</sup> European Commission, 'In-depth investigation into UK public support for Drax power plant', 5 January 2016, [http://europa.eu/rapid/press-release\\_IP-16-2\\_en.htm](http://europa.eu/rapid/press-release_IP-16-2_en.htm).

<sup>18</sup> HM Treasury, '£2 billion support for Hinkley Point', press release, 21 September 2015.

<sup>19</sup> Ontario Teachers Pension Plan, *Annual Report 2014* – CAD 12,659 million invested in infrastructure converted at an exchange rate of 1.81:1.

Table 7.6. Estimated pension funds available

	Total funds invested £bn	Potential investment £bn
Private sector pension schemes	1,800	270
Public sector funded schemes	200	30
Public sector unfunded schemes	0	0
	2,000	300

Note: Investment amounts rounded to nearest £100 billion.

Source: Towers Watson Global Pension Assets Study 2014; Whole of Government Accounts 2013–14.

coalition government. Its aim was to raise £2 billion a year in new infrastructure funding from UK pension funds. This would mean redirecting around 0.1% of total UK pension fund investments into infrastructure each year.

This may appear to be a relatively modest objective. However, asking private sector pension schemes to switch from traditional investments in bonds, equities and commercial property into higher-risk direct investments in infrastructure projects is not as easy as it seems. Most of the larger schemes – those with the capacity to make large investments – are defined benefit plans that are currently actively reducing their risk profiles as they mature (many of them are closed to new members and the average age of their participants is rising). Defined contribution and private self-invested pension plans generally do not have the scale or desire to participate as investors in infrastructure projects.

Perhaps it is unsurprising that by 2015 less than £1 billion had been raised, reflecting the challenges in persuading investment managers that risks involved in infrastructure projects are sufficiently worthwhile.

Ironically, public sector pension schemes potentially make much better candidates for sources of investment funding. They are less mature than private sector schemes and hence should have more of an appetite to invest in long-term infrastructure projects. Infrastructure projects should also improve the financial health of their participating public sector employers (and so their ability to make future contributions) through improved economic growth and hence greater tax revenues.

Three-quarters by value of public sector pension schemes in the UK are unfunded, meaning that it is mainly local authority schemes that have funds available to invest. And, as the PIP discovered in 2011, local authority pension schemes were restricted in the proportion of their portfolios that they could invest in partnerships, the legal form used for most UK infrastructure project investments.

This made encouraging investment from public sector pension funds difficult, but with legislation to repeal this restriction and replace it with a higher limit in 2013, this first obstacle has been overcome.

Unfortunately, this change has not facilitated a rush of investment, as there are 89 local authority pension schemes, most of which do not have the scale or expertise necessary to invest directly in larger infrastructure projects. A significant investment in a single project by an individual pension scheme might put too large a proportion of its funds at risk, while there are relatively few opportunities to take small minority stakes at a project level.

This was illustrated by the £4.2 billion investment in London's 'super-sewer' project to build a new 25-kilometre underground tunnel, which was funded almost entirely by overseas institutional investors and infrastructure funds, including overseas pension schemes. This is perhaps unsurprising given that this project alone is not much smaller than the whole of the £5½ billion Lancashire pension fund, one of the larger local authority pension schemes.<sup>20</sup>

The government plans to address this by forming several collective investment vehicles for local authority funds to provide the scale necessary for larger investments. This would reduce transactions costs per pound of investment and provide sufficient funds to be considered as a partner for a large infrastructure project, or even to be the lead investor. Even so, some local authorities do not believe the proposed regional investment vehicles will have the scale necessary and they have called for a single national vehicle for infrastructure investment.<sup>21</sup>

Removing these obstacles is necessary before public sector pension funds are even in a position to choose to invest; whether they decide to do so remains uncertain given the risks involved. Even so, with £228 billion in public sector pension funds at 31 March 2014 and £10 billion a year in contributions to those funds,<sup>22</sup> it might be possible to switch as much as £3 billion a year into infrastructure investment over the course of a decade if sufficient opportunities were available.

## 7.4 Improving public investment decisions

The most straightforward way of funding infrastructure is, of course, to do it yourself.

The allocation of the capital budget to different infrastructure projects in the UK is based on sound principles embodied in the Green Book, the government's internal manual for deciding how to appraise proposals before committing funds to achieve a public policy objective.<sup>23</sup> It primarily focuses on obtaining the best value between different options for delivering a policy objective – for example, in deciding between options for procuring a new hospital in order to provide medical services to the public.

However, the government's current approach for determining the total amount of investment does not appear to be the most sensible one: it involves setting a budget for capital spending and then permitting additional investment outside of that budget only if funded by higher-cost off-balance-sheet borrowing.

The current preferential treatment of PFI contracts within the National Accounts creates an incentive to use PFI contracts to avoid budgetary limits. It also reduces flexibility in negotiating them with private sector operators.

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<sup>20</sup> 'UK lacks homegrown investors for its large infrastructure needs', *Financial Times*, 3 August 2015.

<sup>21</sup> 'Set up infrastructure investment platform for local government pension schemes, say councils', *Public Finance*, 25 January 2016.

<sup>22</sup> Whole of Government Accounts 2013–14.

<sup>23</sup> See HM Treasury, *The Green Book: Appraisal and Evaluation in Central Government*, 2011, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/220541/green\\_book\\_complete.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf).

## **Time to bring PFI contracts on balance sheet?**

Many commentators, including the Treasury Select Committee, believe that PFI contracts should be brought onto the balance sheet in the National Accounts.<sup>24</sup> For some, this is about improving the quality of fiscal reporting in the National Accounts, better reflecting the commercial substance of these transactions as forms of borrowing to finance public assets. For others, it is because the availability of off-balance-sheet routes to finance projects may provide untoward incentives to use PFI when straightforward borrowing would be more appropriate.

Such a change would also enable more flexibility in negotiating PFI contracts, which would no longer be required to meet the strict requirements necessary to achieve off-balance-sheet treatment. For example, it would be easier to make the clawback of windfall profits from private sector operators a standard feature of future contracts.

Ironically, now may be an opportune time to include PFI contracts within public sector net debt in the National Accounts as the significant growth in the size of the government's debts means that PFI contract liabilities are now proportionately smaller. For example, public sector net debt at 31 March 2014 (excluding housing associations) would have been only 2.9% higher at £1,442 billion instead of the previously reported £1,403 billion.

In addition, assuming PFI contracting continues at the current level, the headline public finance deficit or surplus would be relatively unaffected. This is because higher capital spending from recording new PFI contracts on balance sheet would be offset by a similar reduction in current spending from lower operating payments on existing PFI contracts.

As a consequence, bringing PFI contracts on balance sheet in the National Accounts – which is an economically sensible thing to do – could probably now be done without many of the political difficulties this might have created in the past.

There is one caveat. If PFI contracts were to increase to the level of £5–6 billion a year, then there would be an increase in spending of around £3 billion a year recorded in the National Accounts if PFI contracts were brought on balance sheet. Although relatively small in the context of total government spending of £821 billion forecast for 2019–20, such a change would significantly reduce the Chancellor's headroom in the first year that there is required to be a public sector surplus under the fiscal mandate.

## **A sustainable commercial rationale for public investment**

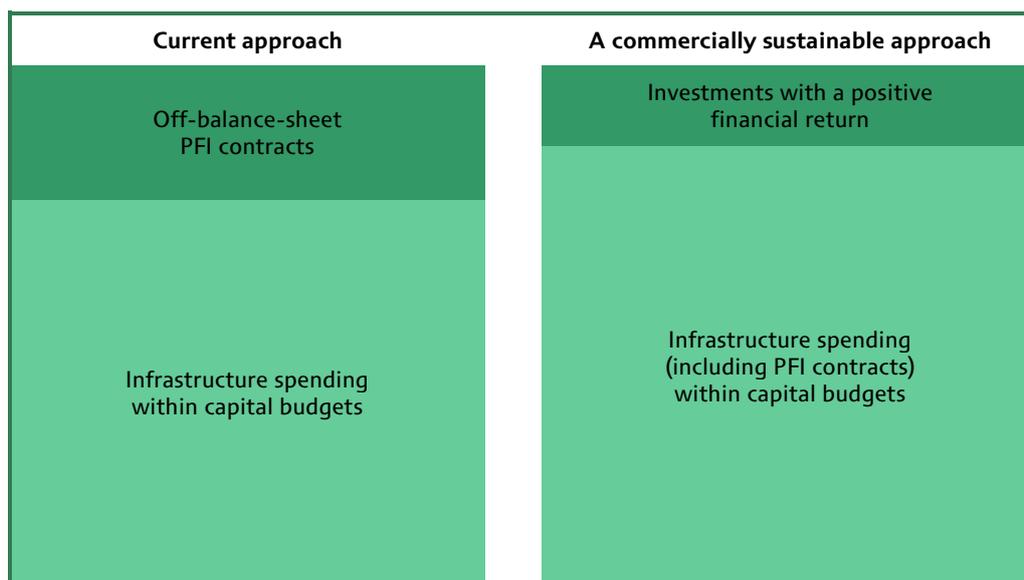
The government's approach permits (de facto) borrowing through off-balance-sheet PFI contracts, but does not permit borrowing to fund investments that would generate a positive financial return and hence pay for themselves, either directly through income from user charges or indirectly through higher tax receipts.

This creates a systemic preference for higher-cost off-balance-sheet projects over financially beneficial investments that might improve economic growth by much more in comparison. Requiring such investments to be paid for out of current income means that they need to compete for funds against other priorities, even though the public sector as a whole would be better off if borrowing were to be permitted to fund them.

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<sup>24</sup> House of Commons Treasury Committee, *Private Finance Initiative*, Seventeenth Report of Session 2010–12, July 2011.

Figure 7.7. Prioritisation of infrastructure investments



Examples of projects that are disadvantaged by this approach include direct public sector investment in housing and transport developments that are not suitable to be built through PFI contracts, but which would potentially generate sufficient additional direct revenues and higher tax revenues to pay back the cost of the public borrowing needed to finance them.

A more commercially sustainable approach would enable targeted investments that would generate positive financial returns to the taxpayer, while still meeting the government's desire to improve the financial health of the public finances.

This proposed approach is illustrated in Figure 7.7.

A rigorous process would be needed to assess the business case for investments that are believed capable of generating a positive financial return. Similar to the capital investment approval processes of larger commercial organisations, it would evaluate the merits of each proposal and assess the risks of achieving a financial return for the taxpayer, with a higher threshold for approving projects with less certainty of paying back the original investment.

Objective and independent assessment would be needed for both assessing the criteria used and evaluating individual businesses' cases. The former might be appropriately the province of the Office for Budget Responsibility, while the National Infrastructure Commission or a similar operationally independent body could deal with the latter, all overseen by the National Audit Office.

Given the lower cost of borrowing available to government, care would also need to be taken to ensure that public sector investments do not inappropriately substitute for private sector investment by ensuring that there is an appropriate public policy objective being met. For example, increased investment in social and affordable housing is likely not to be an issue given the failure of private sector house builders to compete in this area, whereas investment in luxury housing might be inappropriate for government investment even if it did provide a positive financial return.

Generating a sufficient financial return to the public sector to justify incremental borrowing while still achieving public policy objectives is a relatively high bar. The majority of the economic benefit of a public infrastructure accrues to individuals and the wider economy, with the increase in tax revenues being only a proportion of that. Hence, to generate a positive financial return, a project would need to increase economic growth enough to pay back its costs and the interest on the public borrowing used to finance it.

One benefit of this approach might be in areas of historical underinvestment such as housing and railway networks, where direct income such as rents or contributions from train operators would contribute to a positive financial return when combined with incremental tax revenues stemming from increased economic growth.

This approach would be consistent with the principle implicit in the Chancellor's objective of eliminating the deficit in order to reduce public sector net debt. Capital investments in improving public services, such as in new schools and hospitals, would be made when covered by revenues, without preventing commercially-driven decisions to invest in infrastructure projects that are reasonably expected to pay for themselves.

## **7.5 Conclusion**

The desire to strengthen the public finances while delivering necessary investment in infrastructure presents the Chancellor with some difficult choices, particularly as the economy is still emerging from the financial crisis.

Significant challenges are faced in encouraging fresh investment from private investors, whether into public or private infrastructure, and efforts to date in terms of the use of guarantees and encouraging pension fund participation have had only limited success. Although there is plenty of capacity to use guarantees to support investment, in practice this has proved to be more difficult than hoped, with only £1.7 billion issued over the course of the first two years of the £40 billion UK Guarantees scheme.

Widening the pool of finance available for infrastructure projects is also important and the pooling of local authority pension funds into collective investment vehicles is likely to enable them to have the scale necessary to invest in major infrastructure projects.

Reducing operating expenditure or increasing tax to free up further cash for infrastructure investment may be part of the solution, but it might be that the best way to deliver the essential public infrastructure the government believes necessary to support future economic growth will be for the government to borrow to deliver it.

A more sustainable and commercial rationale for public sector investment would be to permit borrowing for investments that are expected to generate a positive financial return, in preference to the current fiscal structure that implicitly prioritises higher-cost off-balance-sheet projects that lock the government into long-term financial and service commitments.