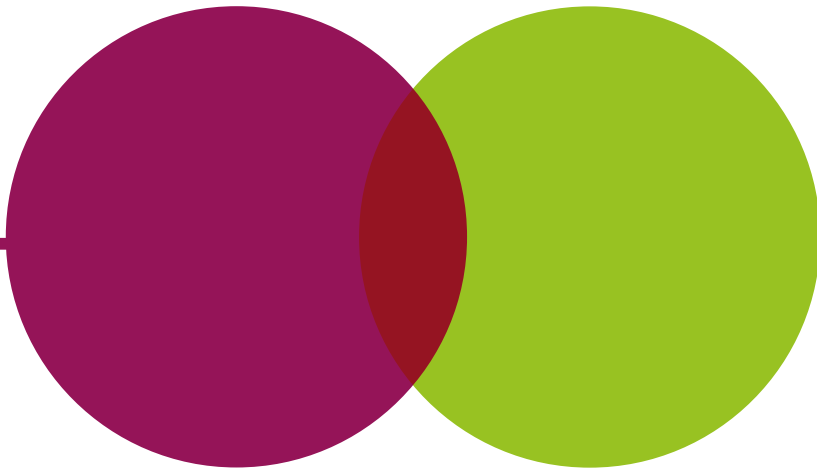




National Audit Office



INSIGHT

Lessons learned: private finance for infrastructure

HM Treasury

SESSION 2024-25
25 MARCH 2025
HC 767

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National Audit Office

Lessons learned: private finance for infrastructure

HM Treasury

Report by the Comptroller and Auditor General

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Gareth Davies
Comptroller and Auditor General
National Audit Office

19 March 2025

Lessons learned reports

Our lessons learned reports bring together what we know on important recurring issues to make it easier for others to understand and apply the lessons from our work.

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Enablers of success

Summary of key considerations for decision-makers when using private finance for public infrastructure

We have grouped our 12 key considerations under three headings

Creating the right conditions to support investor and public confidence

Effective public institutions

Public bodies responsible for mobilising private capital need clear mandates and objectives.

Credible and affordable infrastructure investment pipeline

The forward infrastructure pipeline for public investment needs to be credible and consistent.

Access to specialist expertise

Public bodies need access to the appropriate skills and resources to support investment.

Making the right decisions at policy and project levels

Value for Money assessments

Contracting authorities should apply robust and consistent criteria when assessing the business case for using private finance.

Allocation of risk and return

Departments should assess risks, determine who is best placed to absorb them, and design agreements that clearly establish the corresponding risk allocation, funding flows and flexibility to address uncertainty.

Cost of capital and expected returns for investors

The government should balance a desire to minimise the cost of finance against providing an attractive investment opportunity for investors.

Accounting and classification considerations

Project approvals and financing decisions should be based on commercial and operational objectives, and not to meet accounting classifications.

Evaluation and continuous improvement

The government should undertake comparable evaluations of publicly and privately financed infrastructure projects.

Adopting a commercial strategy to deliver successful outcomes

Efficient procurement selection process

Contracting authorities should adopt an efficient procurement process that is competitive and avoids undue delay.

Effective contract management

Public bodies should actively monitor and review performance even when projects are privately financed and run.

Appropriate government response to supplier failure

Contingency plans should include protections and alternative options when public services are at risk.

Asset maintenance, renewal and contract expiry

Public bodies must manage contracts across their whole lifecycle, including planning for the decommissioning of assets, extension of contracts, re-procurement or taking over the operation of the asset.

Note

1 These insights are not intended to be sequential processes, as there are interactions between them.

Summary

Introduction

1 The government has identified investment in new infrastructure as central to its mission to grow the economy, and has indicated that it plans to work in partnership with the private sector to deliver this investment.¹ The Infrastructure and Projects Authority's (IPA) latest National Infrastructure and Construction Pipeline, published in February 2024, identified around £1 trillion of potential capital investment over the coming decades.

2 Private finance has been an important source of finance for public sector investments in economic and social infrastructure. There is a wide range of private financing models including the extensively used Private Finance Initiative (PFI). Sources of private finance for the initial capital investment include institutional investors (such as banks and pension funds) provided in the form of debt and equity or related financial instruments.

3 The Chancellor of the Exchequer announced in the Autumn Budget 2024 that the government will increase public sector net investment (PSNI) to 2.6% of GDP during the Parliament, with over £100 billion of additional capital invested over the next five years (annual PSNI averaged 2.1% of GDP between 2013 and 2023).

4 Alongside the Budget, the government made changes to the framework for infrastructure investment including: a new fiscal rule based on public sector net financial liabilities; a financial transaction control framework, which designated five public financial institutions, including the National Wealth Fund, to deliver large scale financial investment transactions; and, the introduction of the National Infrastructure and Service Transformation Authority (NISTA) which will bring together functions of the National Infrastructure Commission and the IPA. In January 2025, the government published its *10 Year Infrastructure Strategy Working Paper* to engage stakeholders to support the development of the strategy, which will be published alongside the spending review in late spring.

¹ Infrastructure comprises fixed assets which have an economic life of at least one year, categorised under two broad headings: economic or social. Economic infrastructure includes: broadband/communications, electricity and gas transmission, energy, flood/coastal defence, science and research, transport, water and sewerage. Social infrastructure includes infrastructure relating to: borders and policing, defence, education, health and social care, housing and regeneration, justice, tax and customs, and work and pensions. Additionally, the Office for National Statistics classifies infrastructure to either the market (for-profit private sector organisations) or public sector.

Purpose and content

5 As the government establishes its 10-year strategy for infrastructure investment, we set out lessons most relevant for government to consider, drawn from over 140 National Audit Office publications with relevance to the use of private finance for infrastructure. Our report contains 12 key considerations for decision-makers grouped under three headings.

- Creating the right conditions to support investor and public confidence.
- Making the right decisions at policy and project levels.
- Adopting a commercial strategy to deliver successful outcomes.

6 Our report aims to support members of parliament, decision-makers across government and their advisers as they develop plans for new infrastructure and establish their preferred financing and funding models.

Key lessons

Creating the right conditions to support investor and public confidence

Lesson 1 – Public bodies responsible for mobilising private capital need clear mandates and objectives.

7 Clear objectives provide greater certainty for investors and other stakeholders and are more likely to support value for money for public investment. For example, the UK Green Investment Bank (GIB) was established in 2012 to accelerate the UK's transition to a greener economy. Our 2017 publication *The Green Investment Bank* reported on the sale of GIB and found that GIB had been set up with a “clear rationale, mission and objectives”.² By March 2017, it had invested in 100 projects and committed £3.4 billion of the capital that had been allocated to it by HM Treasury (HMT). It attracted £8.6 billion of private capital, equating to around £2.50 for every £1 invested (paragraph 2.5).

Lesson 2 – The forward infrastructure pipeline for public investment needs to be credible and consistent.

8 A stable and predictable infrastructure pipeline of sufficient size and longevity can support investors to plan for the future and also help create a competitive market. In most years since 2016 the IPA has published a National Infrastructure and Construction Pipeline to support longer-term planning by investors and other stakeholders. Stakeholders suggested to us that improvements to the level of detail, reliability of information, and standardisation of monitoring of projects would all further reduce the uncertainty around infrastructure investment and financing. The IPA told us that a new infrastructure pipeline will be delivered alongside the infrastructure strategy (paragraphs 2.12, 2.15 and 2.16).

² Comptroller and Auditor General, *The Green Investment Bank*, Session 2017–2019, HC 619, National Audit Office, December 2017.

Lesson 3 – Public bodies need access to appropriate skills and resources to support investment.

9 Recruitment of specialist skills can be a challenge for the implementation of investment plans. Our 2022 report on *The creation of the UK Infrastructure Bank* (UKIB) found that UKIB and HMT aimed to set up UKIB as quickly as possible and initially relied on interim and temporary staff.³ A lack of qualified staff can lead to poor scrutiny and oversight, with potential impact on decision-making. Our 2011 report *Lessons from PFI and other projects*, highlighted that contracting authorities often had limited in-house skills available to make critical decisions on complex projects, which can place the public sector at a disadvantage (paragraphs 2.17 and 2.19).⁴

Making the right decisions at policy and project levels

Lesson 4 – Contracting authorities should apply robust and consistent criteria when assessing the business case for using private finance.

10 The suitability of private finance will depend on the size of projects, nature of assets being built, and the risks involved. The Organisation for Economic Co-operation and Development (OECD) notes that it has found no evidence of higher quality infrastructure being delivered in advanced OECD economies by using private finance, as against public procurement, but its research shows that Public Private Partnership (PPP) projects are usually delivered on-time and on-budget (paragraphs 3.2 and 3.6).

Lesson 5 – Departments should assess risks, determine who is best placed to absorb them and design agreements that clearly establish the corresponding risk allocation, funding flows and flexibility to address uncertainty.

11 Not all risks can or should be transferred to the private sector, because the cost of inappropriate risk transfer could be very high. Stakeholders told us that a lack of guidance in quantifying risk for PFI schemes, for instance, helped to fuel some of the misalignment between the additional costs, private sector return on investment and the actual level of risk incurred. Our report *Carbon Capture, Usage and Storage programme* highlighted that the private sector invested significantly in the Carbon Capture Usage and Storage programme.⁵ The Department for Energy Security & Net Zero attributed this to learning lessons from previous programmes and creating business models that allocate costs and risks effectively (paragraphs 3.7 and 3.9).

3 Comptroller and Auditor General, *The creation of the UK Infrastructure Bank*, Session 2022-23, HC 71, National Audit Office, July 2022.

4 Comptroller and Auditor General, *Lessons from PFI and other projects*, Session 2010–2012, HC 920, National Audit Office, April 2011.

5 Comptroller and Auditor General, *Carbon Capture, Usage and Storage programme*, Session 2024-25, HC 120, National Audit Office, July 2024.

Lesson 6 – The government should balance a desire to minimise the cost of finance against providing an attractive investment opportunity for investors.

12 Private finance is more expensive than public finance, because investors expect to earn a premium for risk taken and they will sometimes earn high returns on risky investments. The government should consider how the risks and gains of investments can be shared equitably with private investors. For example, in our report *Hinkley Point C*, we highlighted that the Contract for Difference used included a mechanism for sharing equity gains.⁶ If the rate of return on investment exceeded 11.4%, the company (the special purpose vehicle set up to deliver the project) will receive 70% of any gain above this level, and if rates exceed 13.5%, the company will receive 40% of any gain above that level (paragraphs 3.16 and 3.17).

Lesson 7 – Project approvals and financing decisions should be based on commercial and operational objectives, and not to meet accounting classifications.

13 The Office for Budget Responsibility has commented that selecting or designing financial structures so that they are classified as ‘off balance sheet’ for the purpose of national accounts results in a “fiscal illusion”. We have previously reported that shifting immediate costs off balance sheet while committing public funds to long-term obligations can obscure the true fiscal impact of government-funded PPP projects, as contracting authorities may overlook the eventual costs of maintaining or upgrading assets once they are handed back by the private sector (paragraph 3.22).

Lesson 8 – The government should undertake comparable evaluations of publicly and privately financed infrastructure projects.

14 As we noted in our 2018 report *PFI and PF2*, a better evaluation of the costs and benefits of privately financed projects could lead to improvements in the procurement and operation of assets.⁷ For example, understanding whether maintenance standards under privately financed projects result in materially better assets compared with the alternative of ring-fencing maintenance funds, or entering into long-term maintenance contracts, for publicly financed assets (paragraphs 3.26 and 3.29).

6 Comptroller and Auditor General, *Hinkley Point C*, Session 2017-18, HC 40, National Audit Office, June 2017.

7 Comptroller and Auditor General, *PFI and PF2*, Session 2017-2019, HC 718, National Audit Office, January 2018.

Adopting a commercial strategy to deliver successful outcomes

Lesson 9 – Contracting authorities should adopt an efficient procurement process that is competitive and avoids undue delay.

15 In our report *Improving the PFI tendering process*, we noted that the private sector was being selective in bidding for projects, partly due to the lengthy tendering periods and high costs of developing bids.⁸ In recognition of the lengthy tendering, HMT reformed the PFI model and capped the tendering process at 18 months. Our recent discussions with stakeholders highlighted that high costs for potential suppliers in putting together bids continue to be a deterrent for bidding on some government programmes. Our 2023 report *Lessons learned: competition in public procurement* highlighted steps for decision-makers to consider when running a procurement, to help maximise the benefits of effective competition (paragraphs 4.2, 4.4 and 4.6).⁹

Lesson 10 – Public bodies should actively monitor and review performance even when projects are privately financed and run.

16 Although the PFI model was designed to be self-monitoring (with the special purpose vehicle set up to deliver the project responsible for reviewing and reporting on performance) public bodies should, as a minimum, have appropriate access to information and data to support the monitoring of projects to ensure compliance with contractual obligations. The 2023 IPA-commissioned *White Fraiser Report*, on the status of behaviours, relationships and disputes in the PFI sector, noted a tendency for some investors to maintain a thin resource model, relying on subcontractors to manage operational and maintenance issues (paragraphs 4.7 and 4.9).

Lesson 11 – Contingency plans should include protections and alternative options when public services are at risk.

17 Inevitably, some privately financed projects may fail, or suppliers may get into financial difficulty. Following the lessons from Carillion Plc's failure in 2018, the Government Commercial Function established policies within its Sourcing Playbook to minimise the impact of supplier failure. Consideration should be given to the strength of the contractual mechanisms in privately financed infrastructure projects as the government may need to intervene when private partners fail. Our guidance *Monitoring and responding to companies in distress* sets out further questions to support the monitoring, preparedness and response to company distress situations. The IPA has also published *Navigating the risks of PFI project distress* to provide guidance to PFI contract Senior Responsible Owners and contract managers to support their assessment and management of project risks (paragraphs 4.12, 4.14 and 4.15).¹⁰

8 Comptroller and Auditor General, *Improving the PFI tendering process*, Session 2006-2007, HC 149, National Audit Office, March 2007.

9 Comptroller and Auditor General, *Lessons learned: competition in public procurement*, Session 2022-23, HC 1664, National Audit Office, July 2023.

10 National Audit Office, *Monitoring and responding to companies in distress*, October 2023.

Lesson 12 – Public bodies must manage contracts across their whole lifecycle, including planning for the decommissioning of assets, extension of contracts, re-procurement or taking over the operation of the asset.

18 Our 2020 report *Managing PFI assets and services as contracts end* highlighted that the public sector does not take a strategic or consistent approach to managing PFI contracts as they end and risks failing to secure value for money during expiry negotiations with the private sector.¹¹ In 2022, the IPA published practical guidance for contracting authorities on managing PFI expiry and service transition. The guidance is supplemented by a toolkit of additional materials to support authorities in managing expiry. Additionally, in 2023, the IPA published *A Guide to PFI Expiry Health Checks* to support contracting authorities in assessing their readiness for PFI expiry and a further guidance *PFI Asset Condition Playbook* was released in March 2025. Our discussions with stakeholders identified that, while some progress has been made, much remains unchanged, with public bodies continuing to show a lack of preparedness for contract expiry, particularly for long-term contracts (paragraphs 4.17, 4.20 and 4.21).

¹¹ Comptroller and Auditor General, *Managing PFI assets and services as contracts end*, Session 2019–2021, HC 369, National Audit Office, June 2020.

Part One

The UK infrastructure investment landscape

1.1 This part of the report covers the history of infrastructure financing in the UK and the various infrastructure investment frameworks that have been used.

Historical, current and planned investment in infrastructure

1.2 Infrastructure assets are considered fixed capital assets, which have an economic life of at least one year. They are categorised under two broad headings: economic or social infrastructure (see glossary at Appendix Four for definitions). The UK infrastructure statistics published by the Office for National Statistics (ONS) focus on trends in economic infrastructure, and exclude investment in housing and social infrastructure.

1.3 The total value of infrastructure assets in the UK is estimated at more than £1 trillion, with roughly 70% by value owned by the public sector, including road and rail infrastructure. The value of public sector infrastructure recorded in the Whole of Government Accounts for 2022-23 was £831.0 billion, while the ONS estimated that the value of private sector infrastructure was £350.2 billion in 2023.

1.4 In the Autumn Budget 2024, the Chancellor announced an increase in public sector net investment (PSNI), to target 2.6% of GDP over the next five years (annual PSNI averaged 2.1% of GDP between 2013 and 2023). **Figure 1** overleaf shows PSNI as a percentage of GDP over the past 54 years. PSNI as a percentage of GDP for the financial years 2024-25 to 2029-30 is forecast at 2.3% to 2.8%.

1.5 The government has announced a series of reforms to help provide a clearer focus on its priorities for growth. These include:

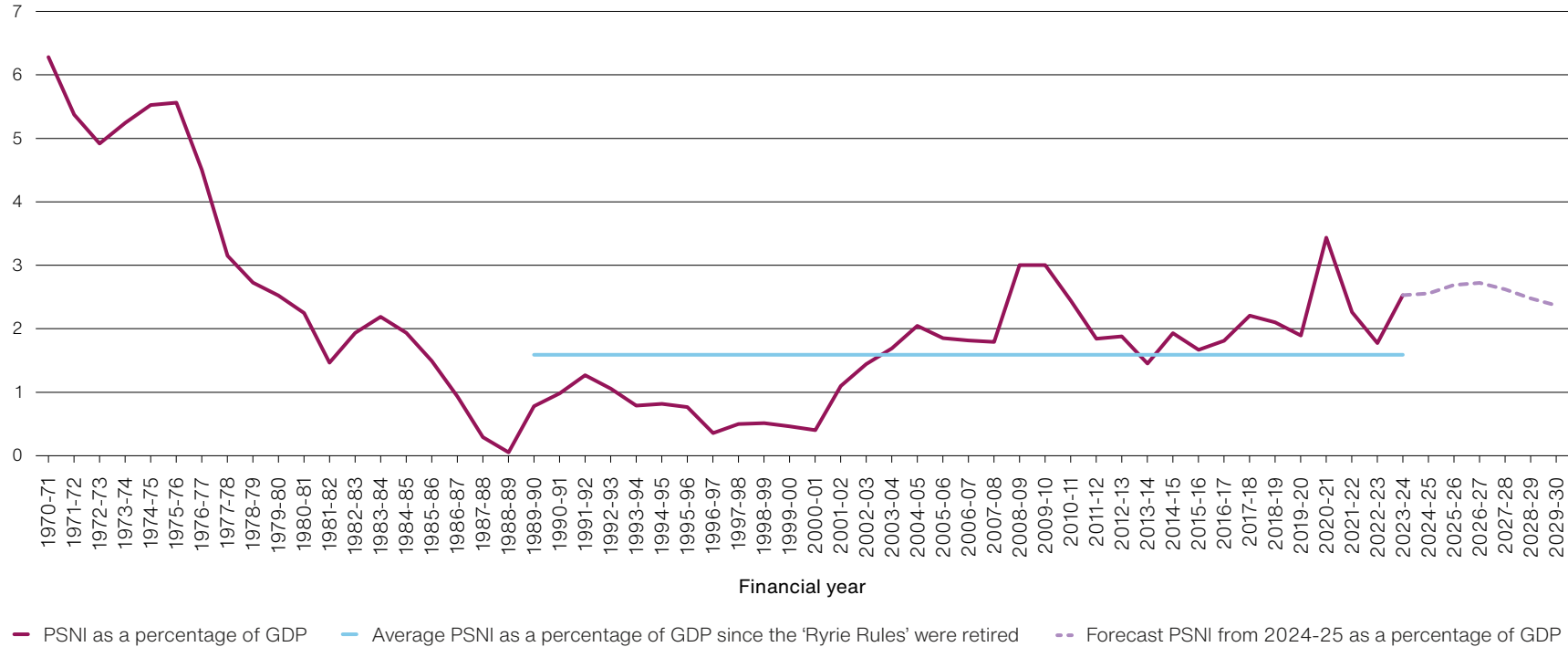
- The public infrastructure institutional landscape and a financial transaction control framework, which designated five public financial institutions, including the National Wealth Fund, the British Business Bank, British International Investment and UK Export Finance, to deliver large scale financial investment transactions.
- Establishing the National Infrastructure and Service Transformation Authority (NISTA) by bringing together the functions of the National Infrastructure Commission (NIC) and the Infrastructure and Projects Authority (IPA).

Figure 1

Public sector net investment (PSNI) as a percentage of GDP, 1970-71 to 2029-30

PSNI has averaged 1.6% of GDP since the retiring of restriction on the use of private finance to deliver public infrastructure

PSNI as a percentage of GDP (%)



Notes

- 1 Data points from 2024-25 onwards are forecasts.
- 2 Public sector net investment (PSNI) consists of three main elements, the largest being gross fixed capital formation, which is the net acquisition of fixed assets (such as roads and buildings) by the public sector, as well as a significant amount of research and development spending. Depreciation of assets is the second largest component. The remainder consists almost entirely of capital grants to and from the private sector, with some of these grants (for example, grants for social housing) used to increase fixed assets in the private sector.
- 3 GDP is a measure of economic activity which can be represented as either the sum of all production activity with the economy, the sum of all final expenditures by the economy, or the sum of all income generated by production within the economy. These should all in theory be equal to each other.
- 4 HM Treasury made the introduction of private finance possible in 1989 when it retired the 'Ryrie Rules' (these rules discouraged public sector projects from being privately financed) and announced that it would allow additional privately financed investment in roads. In 1992, the use of the private finance was extended to other sectors and the name 'Private Finance Initiative' was used for the first time.

Source: National Audit Office analysis of Office for Budget Responsibility data

Infrastructure investment frameworks

1.6 The UK has a long history of innovation in private finance investment frameworks to deliver new infrastructure. These include, but are not limited to:

- **Public Private Partnerships (PPPs)** – including Private Finance Initiative (PFI); Concession contracts for transport infrastructure; Local Improvement Finance Trust (LIFT) in the provision of primary healthcare and community facilities; the Welsh Government’s Mutual Investment Model (MIM); and the Scottish Government’s Non-Profit Distributing PPP model (NPD).
- **Contractual arrangements** – including capacity auctions to award ‘Contracts for Difference’ to guarantee wholesale prices for generators (for example, offshore wind) over 15-year periods; government support packages to protect infrastructure developers; Direct Procurement for Customers for major new infrastructure in the water sector; and indexation of operating costs to protect infrastructure providers from inflation.
- **Financial transactions** – including taxpayer loans to the private sector, equity investments in projects, and financial guarantees issued by a public financial institution.
- **Economic regulation** – including the licensing of infrastructure projects or operators and setting of an allowable return on capital and Regulated Assets Bases (RAB).

Appendix Two provides further information on these frameworks and the extent to which they have been used for infrastructure projects.

1.7 Between 1992 and 2018, the government made extensive use of PPPs (including PFI contracts) to deliver and maintain infrastructure, including to design, build, finance and operate infrastructure projects for public authorities. The UK was one of the first countries to use PFI, and the privatisation and economic regulation model applied to utility sectors (such as energy and water). According to data published by HM Treasury, as of 31 March 2024, there were 665 PFI contracts with a capital value of £50 billion, 79% of that value was on social infrastructure and 21% was on economic infrastructure.¹² Other PPPs have also been used with a minimum value of at least £6.8 billion invested through LIFT, MIM and NPD.

¹² See glossary.

1.8 The overall value and number of infrastructure projects delivered using other private finance investment frameworks is significant but, unlike the PFI contract portfolio, it is not monitored centrally because responsibility rests with departments and sector regulators. Appendix Two provides a non-exhaustive set of examples to illustrate the significant scale of activity. As a guide:

- on the RAB model, around £9 billion was invested – including for Thames Tideway Tunnel and Heathrow Terminal 5 – and £20 billion is the estimate for the proposed Sizewell C nuclear power station as of May 2020;
- investment in grants for affordable homes stands at around £22.7 billion; and
- under the UK Guarantee Scheme, a total of £1.8 billion worth of financial guarantees were issued for infrastructure projects.

Part Two

Creating the right conditions to support investor and public confidence

2.1 This part of the report sets out lessons and expectations on creating the right conditions to support investor and public confidence and covers:

- effective public institutions;
- credible and affordable infrastructure investment pipeline; and
- access to specialist expertise.

Effective public institutions

Lesson 1 – Public bodies responsible for mobilising private capital need clear mandates and objectives.

2.2 The government has announced the formation of the new National Infrastructure and Service Transformation Authority (NISTA) which will combine the functions of the National Infrastructure Commission (NIC) and the Infrastructure and Projects Authority (IPA).

2.3 Many different public bodies are involved in the financing of infrastructure. HM Treasury (HMT) is responsible for allocating and controlling public spending; the Cabinet Office and Government Commercial Function set standards for the procurement of goods and services; and NISTA will support the development and implementation of a 10-year infrastructure strategy. Public financial institutions such as the National Wealth Fund provide financing for infrastructure projects, and other bodies provide finance for specific sectors, such as Homes England for housing.

2.4 With many different bodies supporting infrastructure investment, there is a risk of overlapping responsibilities and unclear objectives. Our 2015 *Financial institutions landscape* report established that the number of policy-related financial institutions had increased because government departments tended to establish separate public bodies to conduct financial transactions.¹³ The report also highlighted that multiple public bodies had emerged to perform a range of activities commonly found in the financial sector, including lending and managing government investments. Some of these institutions appear to have survived the market conditions they were created to alleviate, and the rationale for their continued existence in the public sector is unclear.

2.5 By contrast, clear organisational mandates, stability of policy decisions and associated project scope and requirements can help provide certainty for investors. For example, the UK Green Investment Bank (GIB) was established in 2012 to accelerate the UK's transition to a greener economy. Our 2017 report *The Green Investment Bank*, reported on the sale of GIB and found that GIB had been set up with a "clear rationale, mission and objectives".¹⁴ By March 2017, GIB had invested in 100 projects and committed £3.4 billion of the capital that had been allocated to it by HMT. It attracted £8.6 billion of private capital, equating to around £2.50 for every £1 invested.

2.6 In some cases, public bodies' objectives and operating model will develop over time. Our 2022 report *The creation of the UK Infrastructure Bank (UKIB)* highlighted that when HMT set up UKIB (now the National Wealth Fund), it shortened or deferred some important elements of the usual process in a bid to launch UKIB quickly.¹⁵ For example, it produced one business case rather than the usual three and it was still working on that business case after UKIB had launched. Some important planning steps were skipped, and a range of important operational framework elements (such as for people, process and technology) were not in place at launch.

2.7 *Managing Public Money* guidance stipulates that HMT and the Cabinet Office should be consulted about powers, status and funding when new arms'-length bodies are planned.¹⁶ Departments should also seek advice from UK Government Investments (UKGI), the government's centre of excellence in corporate finance and corporate governance.

13 Comptroller and Auditor General, *Financial institutions landscape*, Session 2015-16, HC 418, National Audit Office, September 2015.

14 Comptroller and Auditor General, *The Green Investment Bank*, Session 2017-2019, HC 619, National Audit Office, December 2017.

15 Comptroller and Auditor General, *The creation of the UK Infrastructure Bank*, Session 2022-23, HC 71, National Audit Office, July 2022.

16 HM Treasury, *Managing public money*, May 2023, pp.201 (viewed 7 March 2025).

2.8 The Autumn Budget 2024 announced government plans for more central coordination to deliver and issue large-scale financial transactions (such as government equity investments, loans and financial guarantees) through one of five designated public financial institutions. The designation does not, at present, include public bodies such as the Low Carbon Contracts Company (which is the contractual counterparty for Contracts for Difference relating to Hinkley Point C and other investment frameworks developed by the Department for Energy Security & Net Zero) or Homes England (responsible for social and affordable housing).

2.9 The designation of public institutions and establishment of NISTA may improve the adoption of good practice in providing support for investment and reduce duplication. The National Audit Office's publication *Governance and decision-making on mega-projects* sets out lessons to improve how government approaches strategic governance and decision-making in the largest, riskiest and most complex projects.¹⁷

Credible and affordable infrastructure investment pipeline

Lesson 2 – The forward infrastructure pipeline for public investment needs to be credible and consistent.

2.10 Our 2015 report *The choice of finance for capital investment* noted that, in the 2014 Autumn Statement, the government had emphasised the importance of infrastructure for economic growth and prioritised capital investment over day-to-day spending.¹⁸ The government also stated that it was taking a long-term approach to tackling the historic problems of short-term decision-making but as noted in our report, several factors were affecting central government capital investment decisions, including budgeting, project appraisal, procurement, finance and accounting treatment.

2.11 To improve transparency about longer-term investment priorities and to support investors with planning, the IPA published the National Infrastructure and Construction Pipeline annually between 2016 to 2024 with the exclusion of 2019, 2020 and 2022. The most recent publication contains details of the forthcoming procurement and assumptions for the estimated value of the investment that will be delivered via public finance and private finance. The publication shows a pipeline of projects and other investments across a range of infrastructure types (see **Figure 2** overleaf).

2.12 The IPA recognised that the pipeline was a snapshot in time, reflecting the previous government's priorities. The IPA also does not analyse past performance, as the data are too inconsistent to compare pipelines year on year, and the historical gaps for the years 2019, 2020 and 2022 have further reduced the value of the pipeline.

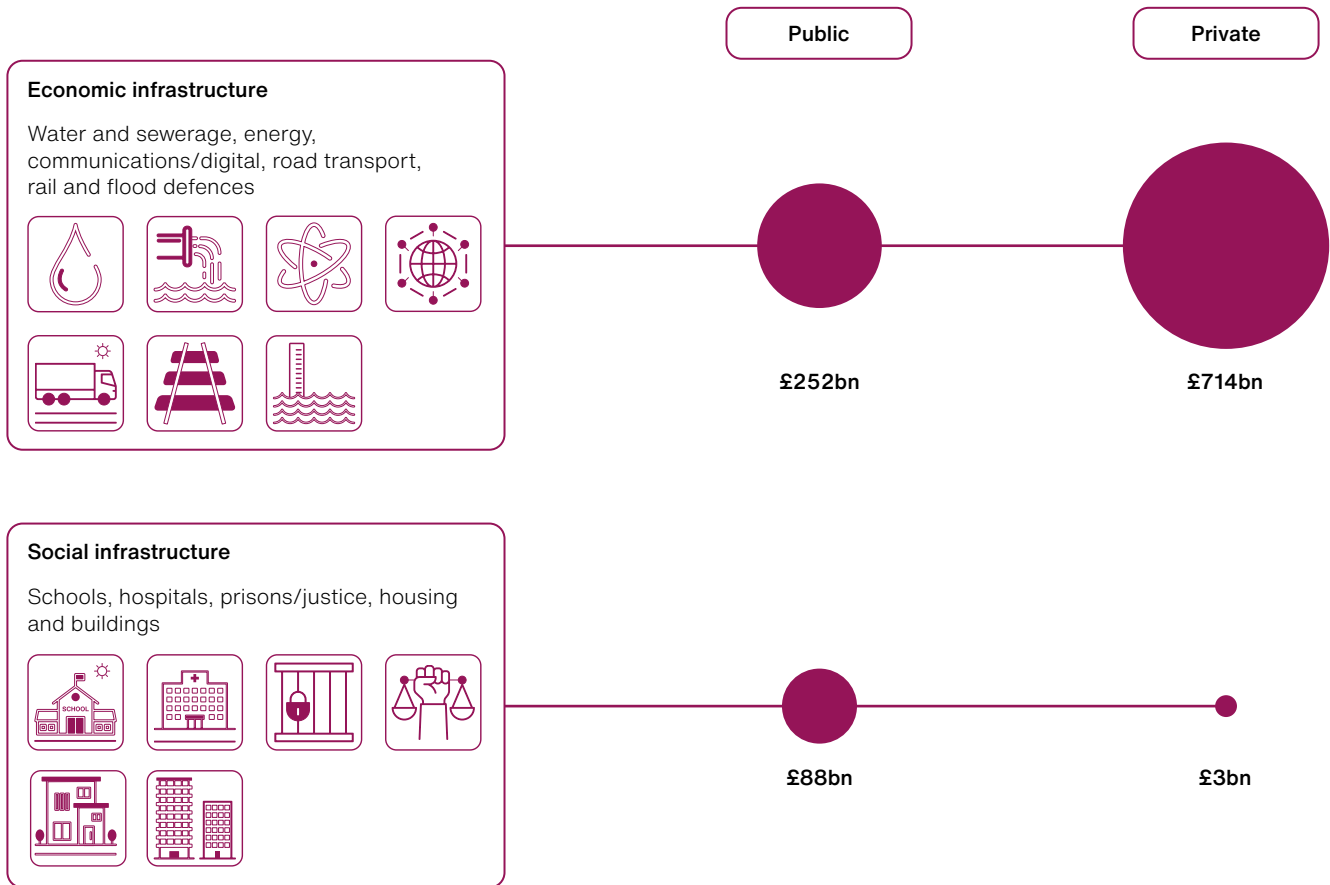
¹⁷ Comptroller and Auditor General, *Lessons learned: Governance and decision-making on mega-projects*, Session 2024-25, HC 545, National Audit Office, March 2025.

¹⁸ Comptroller and Auditor General, Briefing, *The choice of finance for capital investment*, National Audit Office, March 2015.

Figure 2

Proportion of planned social and economic infrastructure investment by the private and public sector as of summer 2023

Over £1 trillion of potential capital investment is planned for infrastructure projects with the majority of economic infrastructure being delivered by the private sector and the majority of social infrastructure delivered by the public sector



Notes

- 1 The National Infrastructure and Construction Pipeline includes projects and programmes distributed across the UK. The majority of the value of the pipeline, however, relates to activity in England. This is because a large proportion of infrastructure spending in Scotland, Wales and Northern Ireland is the responsibility of each devolved administration, and therefore is not included within the pipeline. Experimental Office for National Statistics figures indicate that the digital market is £8 billion larger than the official statistics suggest. This £8 billion is therefore not captured in the figure above.
- 2 The data relating to private investment in social infrastructure are presented as a lower range estimate. This is because we have removed most private investment in schools and further education as the planned investment was found to relate to school and non-school capital expenditure on projects not captured by public allocations and announcements. If we were to include those figures, then the £3 billion of privately delivered social infrastructure becomes £11 billion.
- 3 Some capital expenditure figures relating to road and rail investment were presented as ranges in the pipeline. We have taken the midpoint between these ranges for the purpose of summing all planned investment.
- 4 The pipeline shows minimal private sector investment in social infrastructure, but has omitted the loans and bonds being used to finance the construction of the majority of social/affordable housing.
- 5 The pipeline also shows very little public sector investment in economic infrastructure, but has omitted the substantial support being provided by government to the energy sector.

Source: National Audit Office analysis of the 2023 National Infrastructure and Construction Pipeline

2.13 The NIC published *The Second National Infrastructure Assessment*, in October 2023, which showed overall investment will need to increase from an average of around £55 billion per year over the last decade to around £70 billion to £80 billion per year in the 2030s before reducing to £60 billion to £70 billion per year in the 2040s.¹⁹ The NIC also noted that successive governments have not stuck to a national infrastructure strategy. The previous national infrastructure strategy published in 2020 acknowledged that investors had faced uncertainty due to the government's lack of clarity on its infrastructure plans.

2.14 The government's 2050 net zero policy is a key driver of the new infrastructure investment. Various organisations, including the Office for Budget Responsibility (OBR), have also produced estimates on the investment required to achieve net zero. The OBR has estimated that the transition to net zero could cost the UK public finances 21% of debt to GDP by 2050.

2.15 Stakeholders we spoke to queried the level of detail in the infrastructure pipeline, the reliability of information and the status of projects – noting that these shortcomings were impacting investor confidence, the ability of the private sector to plan for the future and to target and win sufficient deals. Stakeholders also highlighted that a pipeline of sufficient size will help create a competitive market and that a regular and consistent pipeline was needed. Stakeholders noted that a new infrastructure strategy should include guidance on what the government can afford and what types of projects were suitable for the available financing models.

2.16 Stakeholders reported that the pipeline data collection and reporting (for current and upcoming projects) needed to be standardised and incorporate formal checkpoints, performance monitoring, and exploring options for government response when projects are not progressing as intended. The IPA told us that a new infrastructure pipeline will be delivered alongside the infrastructure strategy in late spring.

Access to specialist expertise

Lesson 3 – Public bodies need access to the appropriate skills and resources to support investment.

2.17 Using private finance to support investment requires public bodies to develop and maintain specialist commercial and financial skills. Our report *Lessons from PFI and other projects* highlighted that contracting authorities often had limited in-house skills available to make critical decisions on complex projects, which can place the public sector at a disadvantage.²⁰

¹⁹ National Infrastructure Commission, *The Second National Infrastructure Assessment*, October 2023, pp.16 (viewed 7 March 2025).

²⁰ Comptroller and Auditor General, *Lessons from PFI and other projects*, Session 2010–2012, HC 920, National Audit Office, April 2011.

2.18 These skills are particularly valuable in times of distress. Our report *Investigation into Bulb Energy* highlighted the importance of specialists from government and the sector regulator collaborating with other experts – including the administrators – in order to manage a complex process that succeeded in safeguarding customers and avoiding taxpayer loss following Bulb Energy’s insolvency.²¹

2.19 Building specialist skills takes time. Our 2022 report on *The creation of the UK Infrastructure Bank* found that UKIB and HMT aimed to set up UKIB as quickly as possible and initially relied on interim and temporary staff.²² Our 2017 report *Capability in the Civil Service* highlighted that every significant project should have an assessment of the capability required to deliver it and how that capability will be filled.²³ This should then support the approval of projects to start, or when major changes are required.

2.20 In 2017, the IPA launched a Project Delivery Capability Framework, which set out the job roles, capabilities and learning for project delivery professionals across government. In 2018, the government launched a contract management capability programme to provide training, development and accreditation for staff who manage contracts. Other capability and professions such as the Government Corporate Finance Profession continue to be developed across government, but some of the benefits have been slow to realise.

2.21 The government requires access to sufficient specialist expertise at reasonable costs to work across organisational boundaries to support technical, commercial and financial assessments and decision-making. In recognition of these challenges, the government has itself created functions and specialised delivery organisations with the purpose of being centres of expertise that other public sector organisations can draw from, for example, UKGI. Stakeholders from both the public and private sectors told us that it is challenging to maintain access to a pool of expertise unless there is sufficient new activity.

2.22 The government has announced that the 10-year infrastructure strategy will support Skills England in its assessment of where the skills gaps exist that will need to be addressed to successfully deliver key infrastructure projects.

21 Comptroller and Auditor General, *Investigation into Bulb Energy*, Session 2022-23, HC 1202, National Audit Office, March 2023.

22 See footnote 15.

23 Comptroller and Auditor General, *Capability in the civil service*, Session 2016-17, HC 919, National Audit Office, March 2017.

Part Three

Making the right decisions at policy and project levels

3.1 This part of the report sets out our lessons and expectations on making the right decisions at policy and project levels. It covers:

- value for money assessments;
- allocation of risk and return;
- cost of capital and expected returns for investors;
- accounting and classification considerations; and
- evaluation and continuous improvement.

Value for money assessments

Lesson 4 – Contracting authorities should apply robust and consistent criteria when assessing the business case for using private finance.

3.2 The suitability of private finance will depend on the size of projects, nature of assets being built, and the risks involved (including the extent of technological, construction and market risks). When the government considers using private finance in an infrastructure project, it also needs to consider affordability and the incremental costs and benefits that will be derived from using private capital.

3.3 Our 2018 *PFI and PF2* report highlighted that HM Treasury (HMT) did not consider the cost of government borrowing to be relevant in making financing decisions on Private Finance Initiative (PFI) and PF2 deals.²⁴ However, other countries, such as Germany and the United States, do compare the cost of private finance with government borrowing costs when assessing financing options like PFI.

3.4 The Autumn Budget 2024 introduced the *Financial Transaction Control Framework*, with the objective of using the principles of the framework to drive value for money by addressing market failures; securing risk-adjusted returns on investment and economic capital; minimising market distortion; demonstrating additionality; and evaluating the value for money of alternative options.²⁵ It is too early to assess whether the government's objective will be met.

3.5 There are no universal criteria to signpost whether public or private finance is the most appropriate for a specific infrastructure project, but a broad set of principles that are recognised by some government departments (in relation to the Specified Infrastructure Projects Regulations and Direct Procurement for Customers) provides some indicative characteristics that can be examined through the business case process.

- “New” to mitigate the risks of complications resulting from existing infrastructure.
- “Large” enough to make the upfront structuring cost worth it.
- “Stable” so that changes are minimal as recurring changes during the contract can be expensive.
- “Separable”, such that the assets being privately financed is independent of other assets and can be managed in isolation.

3.6 The funding and maintenance certainty of using private finance for infrastructure could be positive, but it can be detrimental to the wider network of infrastructure and services as it could reduce budgetary flexibilities for public authorities. The Organisation for Economic Co-operation and Development (OECD) notes that it has found no evidence of higher quality infrastructure being delivered in advanced OECD economies by using private finance, but its research shows that Public Private Partnerships (PPPs) are usually delivered on-time and on-budget.

Allocation of risk and return

Lesson 5 – Departments should assess risks, determine who is best placed to bear them, and design agreements that clearly establish the corresponding risk allocation, funding flows and flexibility to address uncertainty.

3.7 Not all risks can or should be transferred to the private sector because the cost of inappropriate risk transfer could be disproportionately high. Stakeholders told us that a lack of guidance in quantifying risk for PFI schemes, for instance, helped to fuel some misalignment between the additional costs, private sector return on investment and the actual level of risk incurred.

3.8 For example, overall risk for investors on PPP projects is low, because project revenues are based on the availability of assets, and the government, in effect, underwrites the payment. Moody's analysis found only 69 cases (2.9%) of default out of 2,386 PPP projects.²⁶

3.9 In other areas, the government has had to ensure that excessive risk does not deter private investment. Our report *Carbon Capture, Usage and Storage programme* highlighted that the private sector invested significantly in the Carbon Capture Usage and Storage programme (CCUS).²⁷ The Department for Energy Security & Net Zero attributed the scale of private sector investment to learning lessons from previous failed attempts to launch CCUS in the UK which supported the creation of business models that allocate costs and risks effectively.

3.10 In our report *Review of the Thames Tideway Tunnel* we highlighted that the Department for Environment, Food & Rural Affairs agreed a number of support packages which placed significant risks on the taxpayer, including compensation for discontinuation and a special administration offer agreement if Tideway was to go into special administration and remain there for 18 months.²⁸ In 2017, we highlighted the uncertainty around the full potential cost to the taxpayer. Ultimately, cost of finance was low as the risk was transferred to taxpayers (who were deemed better able to absorb them).

3.11 Our 2017 report on *Hinkley Point C* also noted that one of the key features of the contract was the government taking on price and demand risks by guaranteeing the price for electricity generated in return for the private sector retaining construction and volume risk.²⁹

3.12 Construction inflation has been different from inflation for the general economy as measured by the Consumer Price Index (CPI). The Infrastructure and Projects Authority (IPA) has consistently used GDP indices to adjust for inflation and compare time periods. In practice, the construction sector specific indices have been higher than GDP indices over recent periods. High global inflation since 2021, driven by volatile energy costs and economic pressures, affected infrastructure projects and their supply chains as well as the wider economy. Figure 7 in Appendix Three shows that the volatility of construction inflation is higher when compared with CPI.

3.13 Although we have not reviewed the Silvertown Tunnel project, a new road tunnel under the River Thames scheduled to open in spring 2025, stakeholders have highlighted that the tunnel is a good case study in which risks of construction costs and completion were allocated to the private sector, with Transport for London setting vehicle charges and retaining the risks of traffic volumes.

26 Moody's Investors Service, *Default and recovery rates for project finance bank loans, 1983–2021*, April 2023.

27 Comptroller and Auditor General, *Carbon Capture, Usage and Storage programme*, Session 2024–25, HC 120, National Audit Office, July 2024.

28 Comptroller and Auditor General, *Review of the Thames Tideway Tunnel*, Session 2016–17, HC 783, National Audit Office, March 2017.

29 Comptroller and Auditor General, *Hinkley Point C*, Session 2017–18, HC 40, National Audit Office, June 2017.

3.14 Transport for London told us that some inflation indexation was built into the contract for Silvertown Tunnel but that the majority of the inflation risk was retained by private sector partners who absorbed most of the inflationary cost increases seen in 2021 to 2023.

3.15 For the risks that are borne by central government, HMT's *The Orange Book: Management of Risk – Principles and Concepts* emphasises that strong leadership and a positive risk culture are critical for ensuring good risk management and successful project outcomes.³⁰

Cost of capital and expected returns for investors

Lesson 6 – The government should balance a desire to minimise the cost of finance against providing an attractive investment opportunity for investors.

3.16 Private finance is more expensive than public finance, because investors expect to earn a premium for risk taken. This can result in private investors receiving large returns when projects succeed or when the risks of a project are overestimated.

3.17 Our report on *Hinkley Point C* highlighted that the Contract for Difference used included a mechanism for sharing equity gains.³¹ If the rate of return on investment exceeded 11.4%, the company (the special purpose vehicle set up to deliver the project) will receive 70% of any gain above this level, and if rates are in excess of 13.5%, the company would receive 40% of any gain above that level. This mechanism ensured that the benefits were shared equitably.

3.18 The average return on investment of a sample of listed companies with involvement in the delivery of UK public infrastructure projects was 7.3% per year as of December 2024. However, at the time of the cancellation of PFI/PF2 for central government in October 2018, the average return per year was 8.9% (see Figure 8 in Appendix Three).

3.19 Following a period of low interest rates after the 2008 financial crisis and during the COVID-19 pandemic, interest rates returned to the long-term historical average between 2022 to 2024, and as of January 2025 was 4.75%. Between January 2003 and January 2025, the cost of using private finance relative to government borrowing was generally one to two percentage points above the cost of government bonds (also known as gilts), as illustrated in Figures 9 and 10 (Appendix Three).³²

³⁰ HM Treasury, *The Orange Book Management of Risk – Principles and Concepts*, November 2024.

³¹ See footnote 29.

³² The cost of private finance (reflected by the additional yield of corporate bonds over gilts) was usually one to two percentage points over gilts with some exceptions. The spread over gilts would reach over 2% during periods of shock to the market, such as the 2008 financial crisis or other significant events.

3.20 Before HMT redesigned the PFI model to increase the transparency of investor returns, examples of high investor returns on PFI projects attracted adverse publicity, impacting public confidence in PFIs. We found equity returns on some PFI projects as high as 30%, emphasising the need for a greater alignment between reward, performance and risk exposure. Private sector stakeholders told us that the government should be clear from the onset about support packages and compensation for termination that it is prepared to offer on projects as this will help with their decision-making.

Accounting and classification considerations

Lesson 7 – Project approvals and financing decisions should be based on commercial and operational objectives, and not to meet accounting classifications.

3.21 Historically, by number, most private finance projects have been off balance sheet and not included in public sector finance statistics including public sector net debt (PSND) and public sector net financial liabilities (PSNFL). Over time, the adoption of International Financial Reporting Standards in 2009 by the UK public sector have brought most financial commitments associated with PFI contracts onto the government department balance sheets, as reflected in the Whole of Government Accounts. However, this is not the case in public sector finance statistics, referred to as national accounts, (which follow European System of Accounts 2010) where the majority of PFI liabilities are off balance sheet and new financial models could create risks of “fiscal illusion”.³³

3.22 The Office for Budget Responsibility has commented that selecting or designing financial structures so that they are classified as ‘off balance sheet’ for the purpose of national accounts results in a fiscal illusion. We have also reported that shifting immediate costs off balance sheet while committing public funds to long-term obligations can obscure the future impact of government-funded PPP projects, as contracting authorities may overlook the eventual costs of maintaining or upgrading assets once they are handed back by the private sector.

3.23 The Autumn Budget 2024 highlighted the use of PSNFL to provide a more comprehensive view of the balance sheet. PSNFL is a broader measure than PSND and includes all financial assets and liabilities in the national accounts. The Whole of Government Accounts’ net liabilities measure goes further than PSNFL by including non-financial assets, unfunded public sector pension liabilities, provisions, and PFI contracts.

³³ European Commission, *European system of accounts ESA 2010*, June 2013.

3.24 Under HMT's *Green Book: appraisal and evaluation in central government*, when considering using private finance, the PPP option must be compared with a public sector delivery option: the public sector comparator.³⁴ The Green Book requires that the public sector comparator offers the same quality, quantity and asset maintenance duration, with the presumption that private financing and public procurement will have identical deliverables. The Green Book states that national accounts treatment should not be a reason for project approval.

3.25 HMT's framework of guidance supports government departments and public bodies to make investment decisions, but there is more to do to ensure that practices are driving the right behaviours and achieving the desired outcomes. These may require additional oversight responsibilities and scrutiny.

Evaluation and continuous improvement

Lesson 8 – The government should undertake comparable evaluations of publicly and privately financed infrastructure projects.

3.26 The government undertakes projects to deliver a range of objectives from supporting economic growth to making public services more efficient, but it does not routinely look at what happens after major projects are completed. The government determines the success of a project, and whether it represents value for money, by assessing if the value of the project justifies its cost. We have previously reported the importance of monitoring and evaluating, as it allows policy-makers to learn and helps them decide whether interventions should be continued, expanded, improved or stopped altogether.

3.27 Our report *Evaluating government spending* provides guidance for the assessment of evaluation arrangements in departments.³⁵ The report highlighted that, despite the government's commitment to evidence-based decision-making, much of government activity is either not evaluated robustly or not evaluated at all. The report noted that, out of the government's 108 most complex and strategically significant projects in its Government Major Projects Portfolio, only nine – representing 8% of £432 billion in spending – were evaluated robustly, while 77 (64% of spend) had no evaluation arrangements.

³⁴ HM Treasury, *The Green Book: appraisal and evaluation in central government*, 2022, pp. 64 (viewed on 7 March 2025).

³⁵ Comptroller and Auditor General, *Evaluating government spending*, Session 2021-22, HC 860, National Audit Office, December 2021.

3.28 Our previous reports have also highlighted the lack of systems to collect comparable data for similar projects using different procurement routes. Our January 2018 publication *PFI and PF2* highlighted the importance of understanding and quantifying the level of benefits.³⁶ In June 2018, the Committee of Public Accounts (PAC) requested that HMT and IPA publish data on the benefits of PFI.³⁷ The committee also asked both organisations to set out an approach to evaluating the value for money of operational PFI projects. In 2021, the IPA told the PAC that it was unable to conclude its evaluation. The IPA told us that this was because it was unable to make any meaningful conclusions from the data.³⁸

3.29 In addition to PFI, other private financing models have been introduced, and there have been no assessments of their merits relative to public procurement. In 2021, the government set up the Evaluation Task Force to support best practice in public policy evaluation across its departments. In 2022, the Task Force published the evaluation strategies setting out government departments' commitment to undertake and learn from evaluation activity.

³⁶ See footnote 24.

³⁷ House of Commons Committee of Public Accounts, *Private Finance Initiatives*, Forty-Sixth Report of Session 2017-19, June 2018.

³⁸ HM Treasury, *Treasury Minutes Progress Report Update of the Government responses to the Committee of Public Accounts on Sessions 2010-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-19, 2019 and 2019-21*, CP 424, pp. 63-64, May 2021.

Part Four

Adopting a commercial strategy to deliver successful outcomes

4.1 This part of the report sets out our lessons and expectations on adopting a commercial strategy to deliver successful outcomes categorised under four headings:

- efficient procurement selection processes;
- effective contract management;
- appropriate government response to supplier failure; and
- asset availability, renewal and contract expiry.

Efficient procurement selection process

Lesson 9 – Contracting authorities should adopt an efficient procurement process that is competitive and avoids undue delay.

4.2 In our report *Improving the PFI tendering process* we noted that the private sector was being selective in bidding for projects partly due to the lengthy tendering periods and high bid costs. In recognition of lengthy tendering, HM Treasury (HMT) reformed the Private Finance Initiative (PFI) model and capped the tendering process at 18 months.³⁹

4.3 The tender process is often a mix of documentation, reviews and decision-making, all scheduled into a timeline of events. Our 2024 report *Efficiency in government procurement of common goods and services* highlighted that the fragmentation of public procurement has resulted in duplication and higher bid costs for suppliers, and consequently delays in the procurement system.⁴⁰

39 Comptroller and Auditor General, *Improving the PFI tendering process*, Session 2006-07, HC 149, National Audit Office, March 2007.

40 Comptroller and Auditor General, *Efficiency in government procurement of common goods and services*, Session 2024-25, HC 116, National Audit Office, July 2024.

4.4 Our recent discussions with stakeholders highlighted that high costs for potential suppliers in putting together bids continue to be a deterrent for bidding on some government programmes. The Organisation for Economic Co-operation and Development (OECD) told us that some public authorities in Europe use incentives (such as reimbursing a portion of bid costs for unsuccessful bidders) to improve the pool of bidders and encourage competition.

4.5 In 2025, the OECD found that transparent and competitive procurement rules significantly lowered contractual prices. A competitive environment can increase the trust of citizens and the private sector in the public procurement system, as it fosters integrity and reduces the risks of unfair market practices.

4.6 Our 2023 report *Lessons learned: competition in public procurement* highlighted steps for decision-makers to consider when running a procurement, to help maximise the benefits of effective competition.⁴¹ Our guidance *Managing the commercial lifecycle* also sets out the National Audit Office's (NAO's) framework for managing the commercial lifecycle, including considerations for maximising competition and engagement with the market.⁴²

Effective contract management

Lesson 10 – Public bodies should actively monitor and review performance even when projects are privately financed and run.

4.7 Our 2020 report *Managing PFI assets and services as contracts end* noted that one of the underlying principles of the PFI model is that it is designed to be self-monitoring, with the special purpose vehicle (SPV) company responsible for reviewing performance and reporting back to the contracting authority.⁴³ However, this does not preclude authorities from having appropriate access to data and information to support monitoring PFI projects to ensure the SPV is meeting the contractual obligations.

4.8 Our report *Making Changes in Operational PFI Projects* highlighted that some contracting authorities employed no full-time contract manager for contracts that demanded annual payments of up to £10 million to the private sector.⁴⁴ The Public Accounts Committee in 2021 highlighted a high level of demand for contract management skills in comparison with its short supply.

41 Comptroller and Auditor General, *Lessons learned: competition in public procurement*, Session 2022-23, HC 1664, National Audit Office, July 2023.

42 National Audit Office, *Managing the commercial lifecycle*, February 2025.

43 Comptroller and Auditor General, *Managing PFI assets and services as contracts end*, Session 2019–2021, HC 369, National Audit Office, June 2020.

44 Comptroller and Auditor General, *Making changes in Operational PFI Projects*, Session 2007-08, HC 205, National Audit Office, January 2008.

4.9 The 2023 IPA-commissioned *White Fraiser Report*, on the status of behaviours, relationships and disputes in the PFI sector, noted a tendency for some investors to maintain a thin resource model, relying on subcontractors to manage operational and maintenance issues.⁴⁵ The report highlighted how some private companies did not invest sufficiently in systems necessary to self-report and were using cordial relationships with contracting authorities to manage a lack of contractual compliance. Additionally, the report noted that an under-resourced contract management function in a contracting authority can detract from a project's delivery.

4.10 In 2018, the government launched a contract management capability programme to provide training, development and accreditation for the many thousands of staff who manage contracts, often as part of their main role.

4.11 Managing long-term contracts can be challenging. To ensure successful outcomes, the government needs an appropriate strategy to address sector-specific skills shortages – including on delivery, supplier engagement, negotiation, scrutiny, evaluation and reporting. Contracting authorities should make use of available guidance and functional standards to support their delivery of programmes. Our good practice guidance *Managing the commercial lifecycle* draws on 20 years of NAO reports to provide focused advice on how to best manage each part of the commercial lifecycle.⁴⁶ The government's *Contract management professional standards* guidance is aimed at civil servants who work with third-party suppliers or contracts.⁴⁷

Appropriate government response to supplier failure

Lesson 11 – Contingency plans should include protections and alternative options when public services are at risk.

4.12 While we have identified examples of successful public sector infrastructure projects delivered by the private sector, there will inevitably be instances of project or contractor failure. Our 2020 report *Investigation into the rescue of Carillion's PFI hospital contracts* highlighted that HMT, the Cabinet Office, the Department of Health & Social Care and NHS Improvement had to step in with public funds to complete two hospital projects which Carillion started but could not complete after it went into liquidation.⁴⁸

45 Infrastructure and Projects Authority, *White Fraiser Report*, July 2023 (viewed 07 March 2025).

46 See footnote 42.

47 Cabinet Office, *Contract management professional standards*, July 2019 (viewed 07 March 2025).

48 Comptroller and Auditor General, *Investigation into the rescue of Carillion's PFI hospital contracts*, Session 2019-20, HC 23, National Audit Office, January 2020.

4.13 When a provider of critical public services fails, the government may intervene to ensure continuity of essential public services and to minimise harm to consumers and taxpayers. The Special Administration Regime (SAR) and Supplier of Last Resort (SoLR) processes are established models of interventions tailored to different scenarios. Our 2023 report *Investigation into Bulb Energy* highlighted that, while other energy supplier failures had been managed using the SoLR process – whereby customers were moved to an alternative supplier – it was deemed appropriate by the government to use a SAR for the first time in order to protect Bulb’s 1.5 million customers.⁴⁹

4.14 ISG Limited (ISG), a key government construction supplier, went into administration in September 2024. The government reported that, following the lessons from Carillion Plc’s failure, it developed policies in the Sourcing Playbook which were then implemented across government. The government had been monitoring ISG for months as it developed a rescue package to recapitalise its business. In parallel, departments developed their contingency plans in preparedness for a failure to minimise the impact, and instigated engagement with potential replacement suppliers.

4.15 Consideration should be given to the strength of the contractual mechanisms around the risk transfer as the government is the ultimate rescuer when private partners fail. Our guidance *Monitoring and responding to companies in distress* sets out several elements to consider and questions to support the monitoring, preparedness and response to company distress situations.⁵⁰ The IPA has also published *Navigating the risks of PFI project distress* to provide guidance to PFI contract Senior Responsible Owners and contract managers to support their assessment and management of project risks.⁵¹

4.16 Preparation is critical to the success of these interventions. For Bulb Energy, advance scenario testing by the then Department for Business, Energy & Industrial Strategy (now the Department for Energy Security and Net & Zero), HMT and Ofgem led to the creation of an operational handbook with templates for initiating a SAR. Additionally, rehearsals, independent and ‘critical friend’ reviews helped refine readiness for intervention.

Asset maintenance, renewal and contract expiry

Lesson 12 – Public bodies must manage contracts across their whole lifecycle, including planning for the decommissioning of assets, extension of contracts, and re-procurement or taking over the operation of the asset.

49 Comptroller and Auditor General, *Investigation into Bulb Energy*, Session 2022-23, HC 1202, National Audit Office, March 2023.

50 National Audit Office, *Monitoring and responding to companies in distress*, October 2023.

51 Infrastructure and Projects Authority, *Navigating the risks of PFI project distress*, March 2025.

4.17 Our 2020 report *Managing PFI assets and services as contracts end* highlighted that the public sector does not take a strategic or consistent approach to managing PFI contracts as they end, and risks failing to secure value for money during expiry negotiations with the private sector.⁵² Around one-quarter of respondents from central government and local bodies (including the NHS) to a survey stated that contracts did not contain any information on how and in what condition assets should be returned. Poorly drafted clauses open to interpretation resulted in differing views between authorities and PFI providers.

4.18 Public sector bodies are due to pay £136 billion in charges up until 2052-53 for all 665 ongoing PFI contracts (see **Figure 3**). Half of these contracts are set to expire within the next decade, marking a period of transition of a significant number of assets to the public sector.

4.19 In 2020, the Infrastructure and Projects Authority (IPA) setup the PFI Centre of Excellence to provide expert support and advice to contracting authorities. The IPA also established the PFI Contract Management Programme in the same year to support contracting authorities managing their PFI contracts through the operational and expiry phases.

4.20 Our discussions with stakeholders identified that some progress has been made, but much remains unchanged, with public bodies continuing to show a lack of preparedness for contract expiry, particularly for long-term contracts.

4.21 In 2022, the IPA published practical guidance for contracting authorities on managing PFI expiry and service transition. The guidance is supplemented by a toolkit of additional materials to support authorities in managing expiry. Additionally, in 2023, IPA published *A Guide to PFI Expiry Health Checks* to support contracting authorities in assessing their readiness for PFI expiry and a further guidance *PFI Asset Condition Playbook* was released in March 2025.^{53,54}

4.22 Contractual arrangements should reflect the lifecycle needs of the project to avoid unanticipated costs or service disruptions. Contracting authorities should run mandatory surveys prior to contract expiry and further surveys at regular intervals to provide a basis to agree rectification and lifecycle investment programmes.

52 See footnote 43.

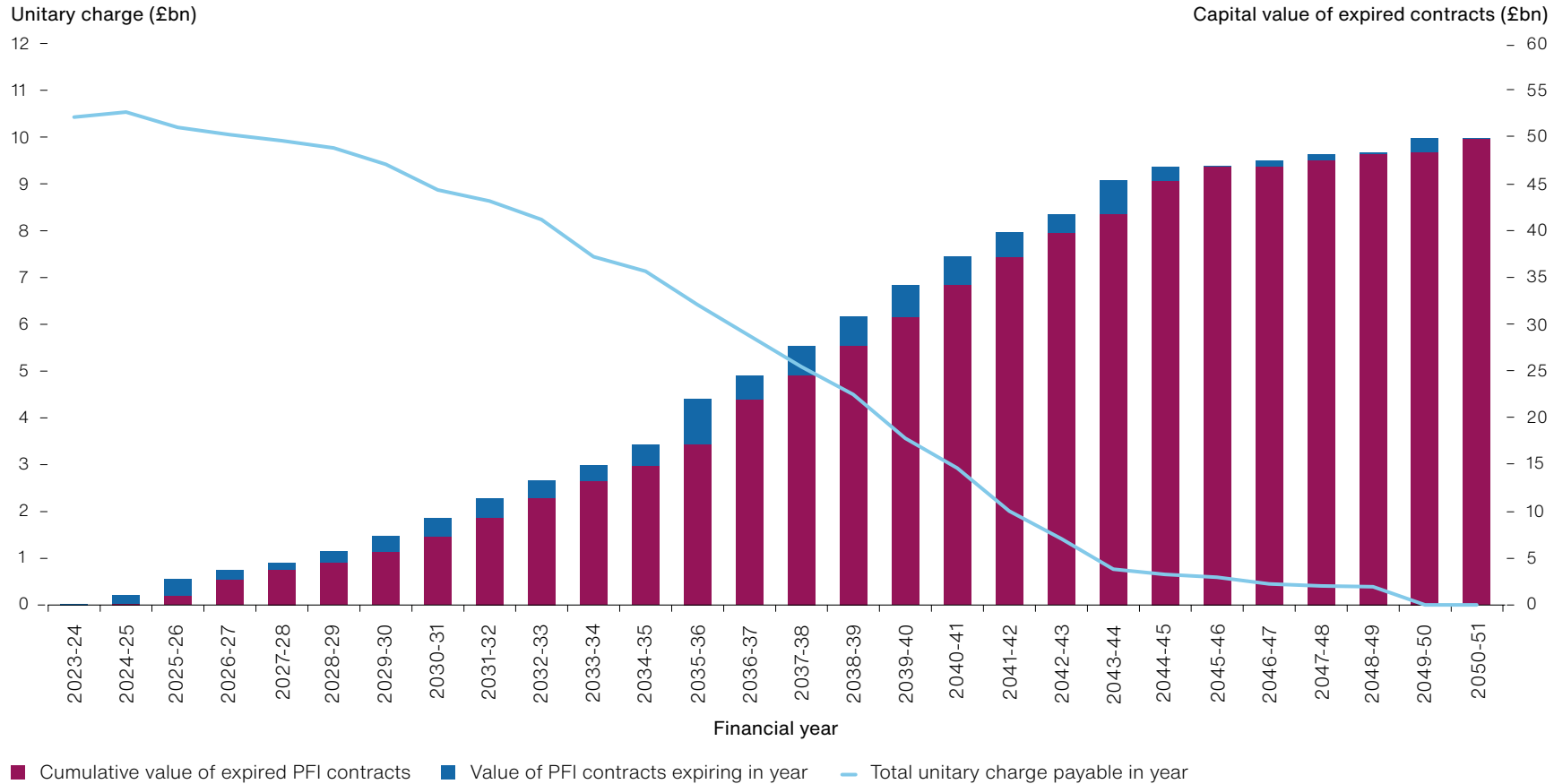
53 Infrastructure and Projects Authority, *A Guide to PFI Expiry Health Checks*, July 2023.

54 Infrastructure and Projects Authority, *PFI Asset Condition Playbook*, March 2025.

Figure 3

The expiry profile of Private Finance Initiative (PFI) assets from 2023-24 to 2050-51

More than 300 PFI contracts are due to expire within the next decade, with a significant number of assets being transferred to the public sector



Notes

- 1 The cumulative value of expired contracts represents the assets which will become part of the government's operating capital budget – meaning that the government needs to prepare for PFI contracts expiring each year and budget for the newly inherited assets.
- 2 When the public sector procures an asset using PFI, a private company – a special purpose vehicle (SPV) – is formed and it raises finance from debt and equity investors to pay for construction. Once the asset is constructed and available for use, the taxpayer makes 'unitary charge' payments to the SPV over the contract term, usually 25 to 30 years. This charge includes debt and interest repayments, shareholder dividends, asset maintenance, and in some cases other services like cleaning. These payments will be agreed at the start of the contract and some or all of them will be linked to inflation.

Source: National Audit Office analysis of HM Treasury data

Appendix One

Our audit approach

Our scope

- 1** We draw lessons from our previous work and incorporate additional insights from discussions with stakeholders.
- 2** We do not evaluate whether specific projects have delivered value for money. Our observations are not exhaustive, and we do not cover all models of private financing used for public infrastructure. Our scope excludes forms of private finance that are not commonly used for public infrastructure (for instance, venture capital) and wider policies which may influence financing decisions such as planning, regulation, and regional development.

Our evidence base

- 3** We conducted our fieldwork between September 2024 and January 2025. We drew on a variety of evidence sources and National Audit Office (NAO) internal expertise, including in financial audit, major projects and data analytics.

Document review

- 4** We used our knowledge management tools and internal expertise to identify and review over 140 NAO reports.
- 5** We extracted recommendations from NAO reports we reviewed dating from 1997 to 2025. The recommendations were grouped into three main categories covering lessons related to government's delivery of infrastructure and getting more from the use of private finance (see **Figure 4**). We also show the proportion of themes which fall under each of the categories.

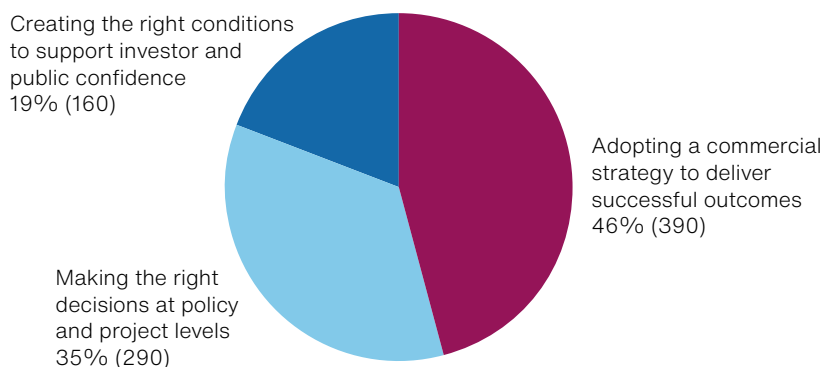
Workshops and interviews

- 6** We interviewed public and private sector stakeholders to understand the work they had done to support government departments to achieve value for money when using private finance (as opposed to public procurement) to deliver infrastructure.

Figure 4

National Audit Office lessons and expectations on using private finance, grouped into three key considerations

A total of 840 recommendations were identified from over 140 reports, with almost half relating to a need for government to adopt a commercial strategy to deliver successful outcomes

**Notes**

- 1 We reviewed over 140 reports from our back catalogue (1997 to 2025) with some relevance to the use of private finance for infrastructure.
- 2 We used themes and key findings from each report, and also used artificial intelligence to perform an automated analysis in parallel, to supplement the findings.

Source: National Audit Office analysis of its back catalogue of reports

7 We held three workshops in October 2024 that involved representatives from government and the private sector with experience and knowledge of Public Private Partnerships (PPPs). We used the workshops to challenge and refine our lessons and to test whether they were realistic and relevant.

8 **Figure 5** overleaf details the organisations represented in our workshops and interviews.

Quantitative analysis

9 We analysed publicly available and licensed financial datasets to draw insights on the cost of private finance and other relevant topic areas. Data sources include: the London Stock Exchange Group Workspace to access market data; Companies House; the Office for Budget Responsibility (OBR); the Office for National Statistics (ONS); Bank of England; HM Treasury (HMT) and the Infrastructure and Projects Authority (IPA).

10 The output and methodology of our analysis on market data and inflation is set out in Appendix Three. Below is our methodology on how we examined the: infrastructure pipeline; the current Private Finance Initiative (PFI) asset base; and public sector net investment (PSNI).

Figure 5

Organisations the National Audit Office engaged with during fieldwork

Forty-seven organisations were represented across focus groups and in interviews hosted to collect views

Public	Private	Others
Cabinet Office	Affinitext	The Future Governance Forum
Community Health Partnerships	Agilia Infrastructure Partners	Institution of Civil Engineers
Crown Commercial Service	Amey Limited	Institute for Collaborative Working
Department for Business & Trade	Association of Infrastructure Investors in Public Private Partnerships	Institute of Chartered Accountants in England and Wales
Department for Energy Security & Net Zero	Aviva Investors	Major Projects Association
Department for Environment, Food & Rural Affairs	Bazalgette Tunnel Limited (Tideway)	Organisation for Economic Co-operation and Development
Department for Transport	Bouygues	Stanford Long-Term Investing, Stanford University USA
Education and Skills Funding Agency	CK Infrastructure	
HM Treasury	Clifford Chance	
Homes England	Deloitte LLP	
Infrastructure and Projects Authority	Devonshires	
Local Government Pension Scheme	GLIL Infrastructure	
Local Partnerships	Global Counsel	
National Wealth Fund	Global Infrastructure Investor Association	
Ofwat	King's College London	
Regulator of Social Housing	KPMG LLP	
Single Source Regulations Office	Mercer	
Transport for London	Moody's Ratings	
UK Government Investments	NatWest	
	P2G Contract Support LLP	
	PFM Financial Advisors	

Note

1 Some stakeholders did not necessarily engage with us on behalf of their organisations but were subject matter experts. We have recorded the organisations they worked for or were affiliated with at the time of the engagement.

Source: National Audit Office analysis of study stakeholders

Infrastructure pipeline

11 We analysed the National Infrastructure and Construction Pipeline 2023 published by the IPA in February 2024, covering a period up to summer 2023. The National Infrastructure and Construction Pipeline includes projects and programmes distributed across the UK, however, the majority of the value of the pipeline relates to activity in England. This is because a large proportion of infrastructure spending in Scotland, Wales and Northern Ireland is the responsibility of each devolved administration. This analysis was carried out to understand what proportion of planned investment in infrastructure was being privately or publicly delivered, and in which sectors.

12 The total profiled spend from 2023-24 onwards was aggregated for every infrastructure project in the pipeline and categorised depending on what proportion of the infrastructure was being publicly or privately financed as well as whether the infrastructure was classified as economic or social infrastructure (we define what is social and economic infrastructure in Appendix Four).

13 There are limitations on the information provided by the pipeline, these include: the collection of the data is a manual process; the status of projects is unclear from the pipeline; the pipeline is a snapshot in time, so disparities can occur between the pipeline and a project's own figures; the pipeline only reports confirmed spending at the time of collection and is not representative of all UK infrastructure investment; the IPA does not analyse past performance or do any analysis over time, as the data are too inconsistent to compare year on year pipeline publications; project costs can be reported in both nominal and real terms; and the pipeline was not published for the years 2019, 2020 and 2022.

14 The following are additional caveats relating to the treatment of the data:

- Experimental ONS data indicate that the digital market is £8 billion larger than the official statistics suggest. This £8 billion is therefore not captured in our analysis.
- The data relating to private investment in social infrastructure is a lower range estimate. This is because we have removed most private investment in schools and further education, as the planned investment was found to relate to school and non-school capital expenditure on projects not captured by public allocations and announcements. If we were to include those figures, then the £3 billion of privately delivered social infrastructure becomes £11 billion.
- Some capital expenditure figures relating to road and rail investment were presented as ranges in the pipeline. We have taken the midpoint between these ranges for the purpose of summing all planned investment.

Analysis of current PFI asset base

15 We analysed data from the latest *PFI and PF2 projects: 2024 Summary Data* provided by HMT and the IPA. The dataset contains data on current PFI projects as of 31 March 2024.

16 We used this dataset to understand the current PFI asset base since PFI was the most used investment framework (by number of projects) in the UK to deliver privately financed infrastructure projects. We drew on data relating to the remaining unitary charges that need to be paid on existing PFI projects, the number of assets (measured by capital value of assets) expiring each year, the total number of active projects, and the total capital value of all these projects. We also analysed what proportion of the infrastructure delivered was social or economic infrastructure.

17 On the value of assets whose contracts were expiring and the remaining unitary charges, these were categorised based on how much was being paid in charges per year and what contracts were expiring in that same year.

18 We categorised whether the infrastructure was classified as economic or social infrastructure and reported on what proportion of PFI assets were social or economic infrastructure.

Public sector net investment

19 Data relating to PSNI were sourced from the OBR. We plotted these data to illustrate how the value of public investment in infrastructure (as a percentage of GDP) had changed on average since the retiring of restrictions on the use of private finance for infrastructure. The data cover the period 1970 to 2030 with the data from 2024-25 to 2030 being a forecast.

20 PSNI consists of three main elements: the largest being gross fixed capital formation, which is the net acquisition of fixed assets (such as roads and buildings) by the public sector, as well as a significant amount of research and development spending. Depreciation of assets is the second largest component. The remainder consists almost entirely of capital grants to and from the private sector and some of these grants (for example, grants for social housing) will be used to increase fixed assets in the private sector.

Appendix Two

Infrastructure investment frameworks

Figure 6

Recent and current infrastructure investment frameworks

The government has used various forms of investment frameworks to attract private capital

Models of private finance	Description
Public Private Partnerships (PPPs)	
Private Finance Initiative (PFI)	PFI was a government-funded PPP model used in the UK between 1992 and 2018. It involves a contracting authority entering a long-term contract with a private company (known as a special purpose vehicle (SPV)) created to take responsibility for the design, finance, build and operation of public infrastructure. Once the asset is available for use, the contracting authority pays a periodic charge over the length of the contract, typically 25 to 30 years. Contract payments cover the principal and interest on the loan and costs for operating and maintaining the asset. According to HM Treasury (HMT) data, as of 31 March 2024, there were 665 PFI contracts with a capital value of £50 billion, predominantly for health and education facilities.
Local Improvement Finance Trust (LIFT)	LIFT was introduced in 2001 for primary and community healthcare facilities. LIFTs are joint ventures with the private sector where the public sector typically holds a 40% stake. The projects are jointly managed, with shared benefits. There are limited publicly available data on the LIFT portfolio, but an estimate of its usage indicates at least £2.5 billion worth of investment for 350 health facilities. ¹
Mutual Investment Model (MIM)	MIM was introduced by the Welsh Government in 2017 as an improvement on PFI. The model includes community benefits such as the creation of apprenticeships in local communities. It also gives the public sector a right to appoint a director to the board of the SPV so that its interests are represented. The Welsh Government is currently delivering three projects through the model in the transport, health and education sectors with a total capital value of £1.4 billion, and a whole life cost of £2.3 billion.
Concession contracts	These are user-funded PPP contracts which typically grant a private sector party the exclusive rights to build, operate and maintain a ring-fenced asset. The private sector investors recover their investment through user charges for services. Silvertown Tunnel is an example of where this model has been used.
Non-Profit Distributing (NPD) PPP model	The Scottish Government used the NPD model between 2005 and 2019 as an alternative to PFI in Scotland. It was designed to address uncapped equity returns associated with the PFI model and limit returns to a rate set in an open competitive procurement, with surplus profits reinvested into the public sector. The Scottish Government signed 15 NPD contracts worth a total of £2.0 billion in the education, health and transport sectors.

Figure 6 *continued*

Recent and current infrastructure investment frameworks

Models of private finance	Description
Contractual arrangements	
Contract for Difference (CfD)	<p>CfD is the government's main mechanism for supporting new low-carbon power infrastructure. It provides a wholesale price guarantee for electricity generators, typically for a 15-year period. When wholesale prices for electricity vary, the government either pays a subsidy up to the guaranteed 'strike' price, or the generator pays back any surplus above the strike price. This gives generators revenue certainty. The government has run a series of competitive auctions to establish market clearing 'strike' prices. The Low Carbon Contracts Company (LCCC) is a government-owned company which serves as the contractual counterparty between generators and the government. The total net fair value liability (which represents the best estimate of the payments which LCCC will be committed to make when the generators supply low carbon electricity) of all CfD contracts including Hinkley Point C is £89.2 billion.</p> <p>Other models such as the Feed-in Tariff and Renewables Obligation Certificate preceded CfD.</p>
Direct Procurement for Customers (DPC)	Ofwat introduced the DPC model for water companies in England and Wales to attract private finance in the delivery of large water infrastructure projects. In the DPC model, water companies run competitive procurements for projects that are worth over £200 million and are sufficiently discrete to be delivered and operated by a third party. In 2024, Ofwat listed 23 DPC projects with a whole life cost of £31.0 billion. ²
Specified Infrastructure Project Regulations (SIPR)	Like DPC, a water or wastewater company competitively tenders for the delivery of a major infrastructure project for a third party who will design, build, finance and in some cases operate or maintain the asset. Ofwat's PR24 final determinations listed three reservoir projects (Fens, Lincolnshire and South East Strategic Resource Option) that are to be delivered via the SIPR model with a whole life total expenditure of £15.8 billion. ²
Financial transactions	
Debt and grants	The government supports the affordable homes sector with grants in addition to the debt housing providers raise to cover the cost of construction and maintenance. Most housing providers are not-for-profit and there is limited equity investment. The government committed at least £22.7 billion under multiple Affordable Homes Programme grant schemes between 2011 to 2026.
Financial guarantees	HMT launched the UK Guarantees scheme for infrastructure in 2012 to avoid delays to investment in projects that may have stalled because of adverse credit conditions. The scheme provided a guarantee to lenders and bond holders to help projects access finance and attract pension funds and other institutional investors. According to published data, when the scheme was suspended in 2017, HMT had issued guarantees worth £1.8 billion for nine infrastructure projects under the scheme, including Hinkley Point C.
Economic regulation	
Regulated Asset Base (RAB)	The RAB model allows a private sector provider to charge users a regulated price for utilities such as water, including an element in bills to fund new investment. This is different from the PFI model, where payment starts only after construction and the asset is available for use. The RAB model enables investors to share some of the project's construction and operating risks with users and recoup costs from the start of the project. Notable examples of infrastructure projects that used the RAB model include Heathrow Terminal 5 (£4.3 billion) and Sizewell C nuclear power station (estimated at £20 billion).

Notes

- 1 UK Parliament, *NHS Local Improvement Finance Trust*, May 2021. Available at: <https://questions-statements.parliament.uk/written-questions/detail/2021-05-24/HL464>.
- 2 Ofwat, *PR24 final determinations: Major projects development and delivery*, February 2025. Available at: <https://www.ofwat.gov.uk/wp-content/uploads/2024/12/11.-PR24-final-determinations-Major-Projects-development-and-delivery.pdf>.

Source: National Audit Office analysis of publicly available data

Appendix Three

Markets data

1 This appendix provides charts that help illustrate the cost of using private finance over public sector borrowing. The charts show that the cost of private finance is more expensive than public borrowing when considering both the interest payable on loans/bonds and the required equity returns by private investors in these infrastructure projects. The appendix contains charts on the following areas:

- Consumer Price Index (CPI) versus construction and infrastructure costs. (**Figure 7** on pages 42 and 43);
- Equity returns by listed companies with involvement in the delivery of UK public infrastructure projects, March 2007 to December 2024 (**Figure 8** on pages 44 and 45);
- Cost of gilts versus corporate bonds from January 2003 to January 2025 (**Figure 9** on page 47); and
- The difference in the yield of corporate bonds, including those issued by companies that have delivered UK public infrastructure, compared to gilts, January 2003 to January 2025 (**Figure 10** on page 48).

Other forms of private finance, including private credit, are not included in this appendix due to lack of available data sources.

Methodology: Figure 7

2 We used Office for National Statistics (ONS) data for CPI and construction output price indices for new infrastructure and all construction (including new work, maintenance and repairs). We plotted these data to illustrate how construction related inflation is more volatile than CPI inflation, which is used to measure general inflation. These data cover the period January 2014 to September 2024.

3 CPI is calculated every month by the ONS, who check the prices of about 700 items designed to represent what people buy on average. The overall price is known as CPI. To calculate the rate of inflation, the ONS compares the CPI with what it was a year ago. The change in the price level over the year is the rate of inflation.

Figure 7

Consumer Price Index (CPI) and construction inflation indices for the UK, January 2014 to September 2024

Inflation relating to all construction and new infrastructure has historically been more volatile than CPI



Figure 7 *continued*

Consumer Price Index (CPI) and construction inflation indices for the UK, January 2014 to September 2024

Notes

- 1 The Consumer Price Index (CPI) is the measure of the aggregate price of the goods and services people buy on average. The change in the price level over the year is the rate of inflation.
- 2 All construction (new work, repair and maintenance) and new infrastructure inflation indices are based on input costs such as the cost of materials and labour, categorised by types of construction projects.
- 3 Inflation data on CPI, all construction and new infrastructure are recorded as a percentage change over 12 months and are not seasonally adjusted.

Source: National Audit Office analysis of Office for National Statistics data

4 The Construction Output Price Indices is compiled by the ONS and provides a best estimate of inflation within the UK construction industry. All construction (new work, repair and maintenance) and new infrastructure inflation indices are based on input costs, which are materials, labour and plant hire, weighted together for a selection of types of construction projects, with a mark-up being applied to account for profit by the construction firm.

Methodology: Figure 8

5 We used the London Stock Exchange Group (LSEG) platform to draw data on the total shareholder return and market capitalisation of a sample of companies who have been involved in the delivery of UK public infrastructure. This was to show the additional cost of private finance over government borrowing when considering equity returns to investors.

6 Annualised total shareholder return tells you what the average return is per year of an investment over a period, starting from a specific date. In this case, the Initial Public Offering (IPO) date (which is when a company becomes publicly listed) was used to calculate the yearly total shareholder returns since that point, which assumes the shares are purchased and owned since the IPO and any dividends are reinvested to purchase additional shares of the same companies at the closing price on the dividend ex-date (which is the cut-off date for dividend eligibility).

7 We then created an index based on a sample of companies by using the weighted annualised shareholder return, (weighted by market capitalisation) to see how the sector has performed.

Figure 8

Equity returns by listed companies with involvement in the delivery of UK public infrastructure projects, March 2007 to December 2024

As of December 2024, these companies have made an average annual return of 7.3% since their Initial Public Offering (IPO)

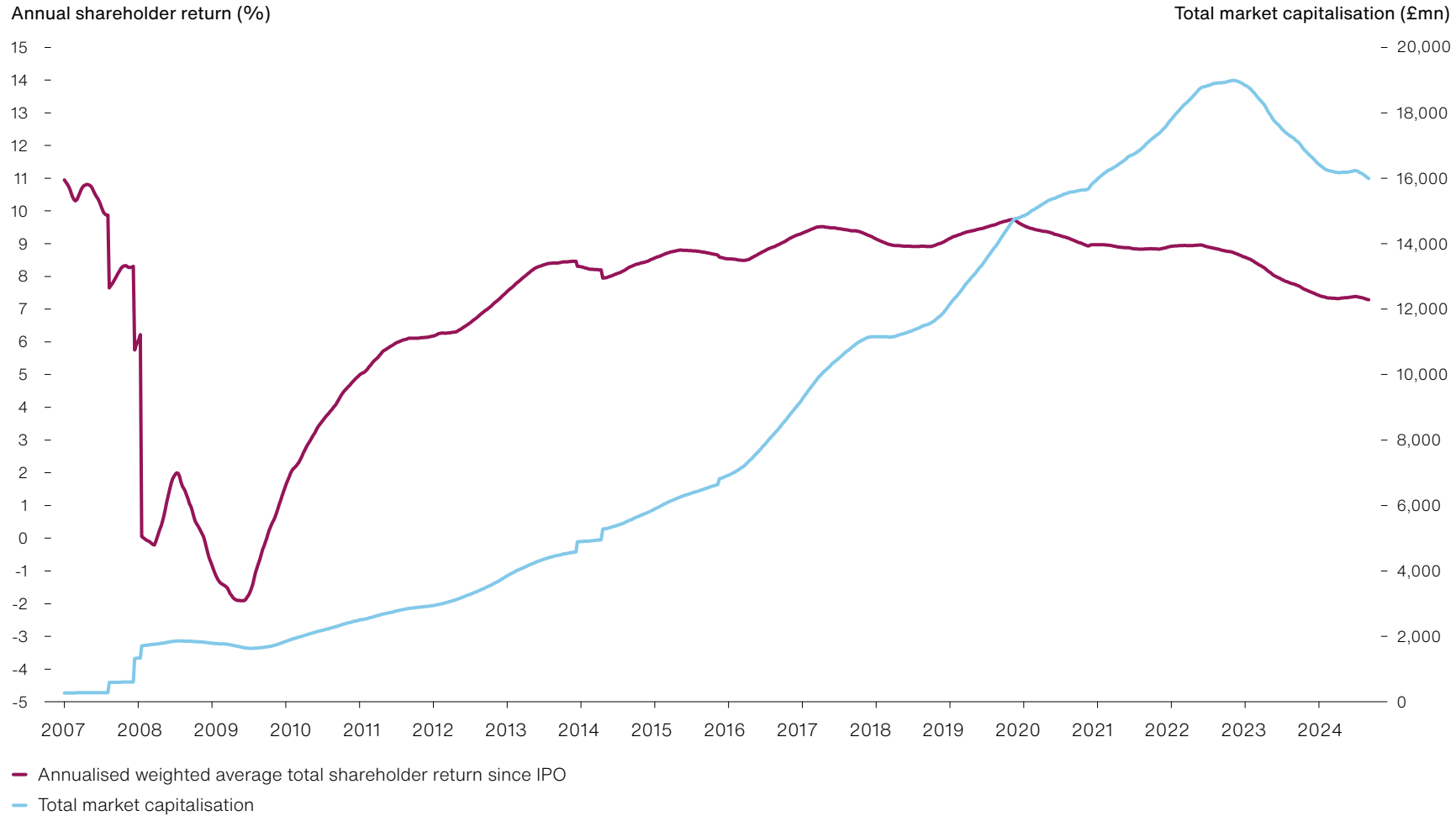


Figure 8 *continued*

Equity returns by listed companies with involvement in the delivery of UK public infrastructure projects, March 2007 to December 2024

Notes

- 1 The index was built using total shareholder returns and market capitalisation of comparable companies selected based on their involvement in the delivery of UK public infrastructure.
- 2 The annualised total shareholder return in the figure shows what the average return is per year of an investment since the Initial Public Offering (IPO) date (which is when a company becomes publicly listed).
- 3 Market capitalisation shows how much a company is worth as determined by the total market value of all outstanding shares. This is used to determine the size of a company or sector.
- 4 During and in the year after the financial crisis, average annual returns dropped to as low as -1.9%. However, by 2018 when PFI was retired by central government, these companies had averaged returns of 8.9% per year. While the average return as of December 2024 is 7.3% a year, some companies have made higher returns and some lower.

Source: National Audit Office analysis of London Stock Exchange Group Workspace data

8 The index was built using total shareholder returns and market capitalisation from the following companies: HICL Infrastructure plc (HICL.L), 3I Infrastructure plc (3IN.L), Renewables Infrastructure Group Ltd (TRIG.L), International Public Partnerships Ltd (INPP.L), Tetragon Financial Group Ltd (TFG.AS), Sequoia Economic Infrastructure Income Fund Ltd (SEQI.L) and Greencoat UK Wind plc (UKWG.L). These companies were selected based on their involvement in the delivery of UK public infrastructure. We drew on peer analysis data from the LSEG Workspace to identify these comparable companies.

9 We converted the data on total shareholder return and market capitalisation on each company to a one-year moving average to reduce the effect of volatility and sudden movements in share price in the short term after IPO on the figure. Therefore, the data on the total shareholder return and market capitalisation for the first year after the IPO of each company were not plotted. Despite this, the chart still measures returns from when the IPO occurred and accounts for all share price movements and any dividends, including in the first year.

10 Our data coverage is up to 31 December 2024, with the commencement period being one year after the IPO of the selected companies to maintain consistency. The first company had its IPO on 29 March 2006, but the data was plotted from 30 March 2007.

Methodology: Figures 9 and 10

11 To compare the costs of private versus public financing, we used the LSEG platform to draw data on the average yield on gilts and the average yield of non-financial A and BBB rated (investment grade) corporate bonds and examined their spread over gilts. The data covered the period of January 2003 to January 2025.

12 The indices we used for these bonds include the iBoxx GBP Gilts 10+ for data on gilt yields (.IBBGB014C). This gilt index reflects the performance of Sterling-denominated (GBP) investment grade debt issued by the UK central government which have a maturity of 10 years or more.

13 We also used iBoxx GBP non-financials A 10+ (.IBBGB0194) and iBoxx GBP non-financials BBB 10+ (.IBBGB01AC) for A rated and BBB rated corporate bonds. The corporate bond indices used reflect the performance of Sterling-denominated (GBP) investment grade debt with a maturity of 10 years or more, across those investment grades, issued by public and private corporations. The indices also excluded the influence of bonds issued by banks, insurance, financial services and real estate corporations. This was so that the indices were more comparable to the bonds issued by companies involved in delivering public infrastructure as non-financial bonds include sectors such as: renewable energy; construction and materials; and utilities.

14 We plotted the Bank of England base rate in **Figure 9** against the average yields of these bonds to illustrate how the yield on bonds move with the base rate.

15 In addition, we drew on data relating to the issue spread over gilts for a sample of corporate bonds issued in the UK by companies in the sectors we examined. The gilts used to determine the spread had comparable maturity dates to the corporate bonds issued. The corporate bonds used were:

- four bonds issued by special purpose vehicles (SPVs) relating to the building of hospitals in the UK through the Private Finance Initiative;
- 12 bonds issued by companies building offshore wind farms in the UK (typically delivered via Contracts for Difference schemes);
- 31 bonds issued by affordable/social housing providers; and
- one bond issued in relation to the Thames Tideway Tunnel.

There was one loan relating to the Silvertown Tunnel.

16 The following are caveats relating to **Figure 10** on page 48:

- Three of the four bonds issued by the SPVs delivering hospitals were inflation-indexed, meaning the returns to lenders would adjust to inflation. As a result, the issue spread over gilts is lower as the risk relating to inflation on interest returns has been mitigated.

Figure 9

Cost of gilts versus corporate bonds, January 2003 to January 2025

The Bank of England base rate had been between 0.10% and 0.75% for 13 years (March 2009 to April 2022) but was 4.75% in January 2025



Notes

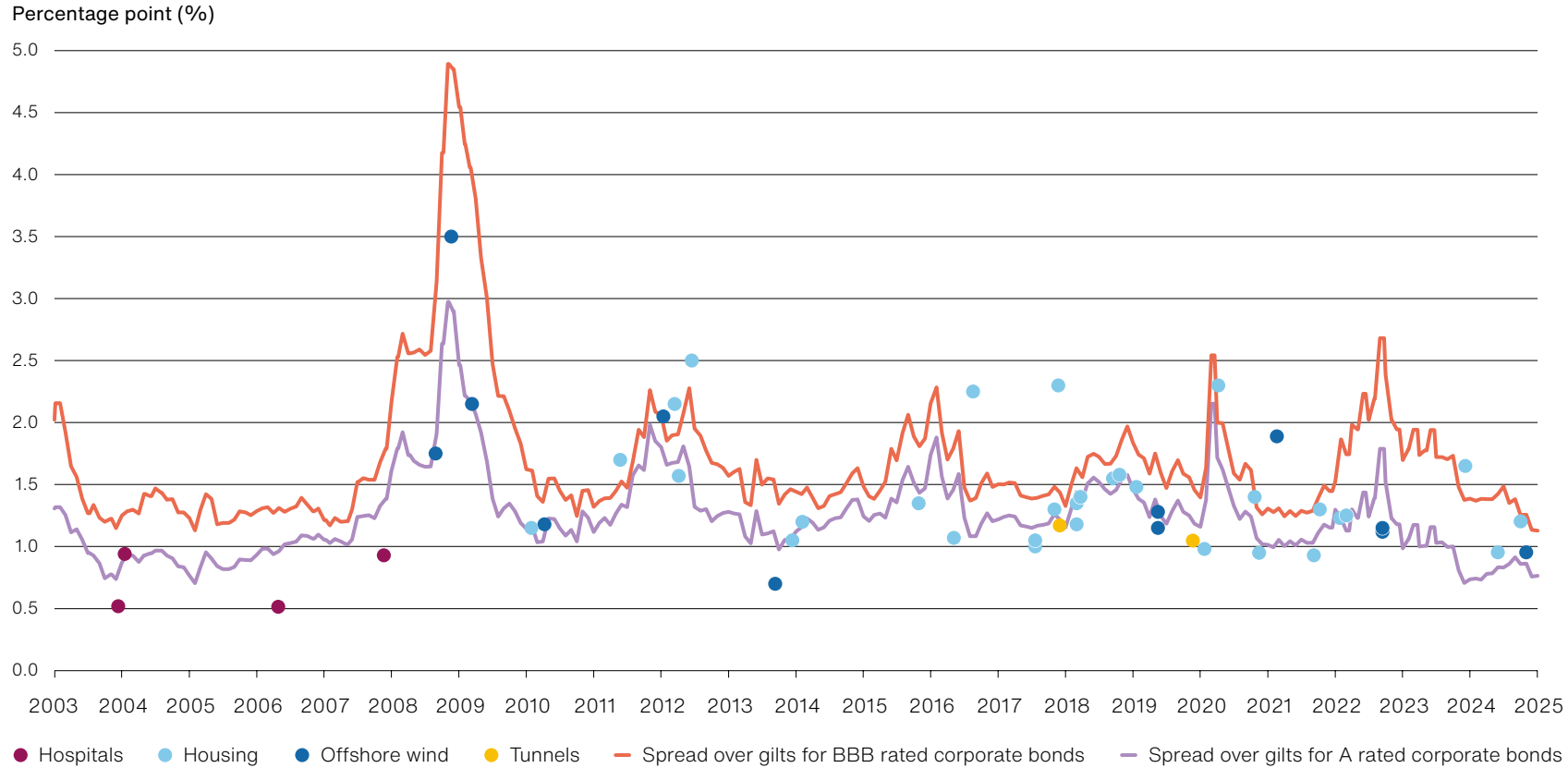
- 1 Gilts data shown are iBoxx GBP Gilts 10+.
- 2 Corporate bond data shown are iBoxx GBP (non-financials) A and BBB 10+.
- 3 The Bank of England sets the base rate which determines the interest rate payable to commercial banks that hold money with the Bank of England. It influences the rates commercial banks charge people to borrow money or pay on their savings. The Bank of England will change the base rate to meet the target that the government sets to keep inflation low and stable.
- 4 Not all private finance uses iBoxx GBP as a proxy for finance costs. Some use bank financing rather than capital markets.

Source: National Audit Office analysis of London Stock Exchange Group Workspace and Bank of England data

Figure 10

The difference in the yield of corporate bonds, including those issued by companies that have delivered UK public infrastructure, compared to gilts, January 2003 to January 2025

The yield on corporate bonds are usually one to two percentage points higher than gilts, therefore the cost of raising private finance is more expensive than public borrowing



Notes

- 1 Zero represents the baseline cost of public borrowing, which is represented by the average yield of government gilts issued by the UK central government (iBoxx GBP Gilts 10+). Corporate bonds (iBoxx GBP (non-financials) A and BBB 10+) use the yield on gilts as the benchmark baseline (this is the risk-free rate) so everything above zero is the additional cost of raising private finance over public borrowing (spread over gilts).
- 2 The data points relating to hospitals (four), housing (31), tunnels (two) and offshore wind (12), represent the spread over gilts for a sample of bonds issued in the UK by companies delivering UK public infrastructure.

Source: National Audit Office analysis of London Stock Exchange Group Workspace data and Companies House

Appendix Four

Glossary

Term	Definition
Bonds	A bond is a fixed-income instrument representing a loan made by an investor to a borrower, typically a corporation or government. The borrower agrees to pay the investor periodic interest payments and to return the principal amount at a specified maturity date.
Contracting authority	<p>This is defined in section 2(1) of the 2023 Procurement Act as either a public authority, which is a 'person' that is wholly or mainly funded out of public funds, or subject to public authority oversight, and does not operate on a commercial basis. In the case of a utilities contract, this includes a public authority, public undertaking or private utility, other than an excluded authority.</p> <p>A 'public undertaking' is defined as a person who is subject to public authority oversight, and operates on a commercial basis. A 'private utility' is defined as a person that is not a public authority or public undertaking, and carries out a utility activity.</p> <p>Note: Under the 2015 Regulations, 'contracting authorities' means the State, regional or local authorities, bodies governed by public law or associations formed by one or more such authorities or one or more such bodies governed by public law, and includes central government authorities, but does not include His Majesty in his private capacity.</p>
Economic infrastructure	Economic infrastructure includes infrastructure that falls into the following categories: broadband/communications; electricity and gas transmission; energy; flood/coastal defence; science and research; transport; and water and sewerage.
Grants	Government grants are non-repayable funds provided by the government to support specific projects, initiatives or activities that align with public policy objectives.

Term	Definition
Government guarantees	Government guarantees are commitments made by the government to cover certain risks associated with private sector investments in public infrastructure projects. These guarantees can take various forms, such as commitments by the government to service the debt obligations of a private investor in case of default. This helps in making the project more attractive to investors by reducing the perceived financial risk. It could also be a performance guarantee where the government compensates the private investor if the project does not meet certain performance criteria. This can include guarantees related to demand, revenue, or operational performance. Guarantees increase investor confidence, demonstrate government support, and can lower the cost of capital.
Public sector net debt (PSND)	PSND represents the amount of debt owed to private sector organisations, including overseas institutions, at a point in time, net of liquid financial assets such as foreign exchange reserves and cash deposits. It is a measure of the overall stock of government debt accumulated over time and it indicates the long-term financial position of the public sector.
Public sector net investment (PSNI)	PSNI consists of three main elements, the largest being gross fixed capital formation, which is the net acquisition of fixed assets (such as roads and buildings) by the public sector, as well as a significant amount of research and development spending. Depreciation of assets is the second largest component. The remainder consists almost entirely of capital grants to and from the private sector, with some of these grants (for example, grants for social housing) used to increase fixed assets in the private sector.
Social infrastructure	Social Infrastructure includes infrastructure relating to: borders and policing; defence; education; health and social care; housing and regeneration; justice; tax and customs; and work and pensions.
Special purpose vehicle (SPV)	A legal entity created specifically to manage a particular infrastructure project. The SPV is responsible for raising finance, managing the project, and entering into contracts with the public sector client, thereby isolating financial risk from the parent companies.

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