

# Funding our future

The case for a UK infrastructure investment bank

September 2019



# Executive summary: should the UK set up an infrastructure investment bank?

Our lives depend on infrastructure and it is critical to a country's economic and social development. Better quality infrastructure will allow an economy to be more efficient while the right kind of new infrastructure will increase its productive capacity. As infrastructure deteriorates, many sectors of the economy lose their ability to operate efficiently.

The government's forthcoming National Infrastructure Strategy must address the UK's needs (as set out in the National Infrastructure Assessment)¹ by harnessing the potential of data and digital connectivity, building a low-cost, low-carbon energy system, and revolutionising the nation's road networks to increase the use of electric and autonomous vehicles. The government has identified rebuilding the national infrastructure as the first priority for a new economic plan², emphasising the need to address commuting delays, inadequate telecommunications and the need to decarbonise the economy.

But even in an advanced economy like the UK there is a tendency to underinvest. Often infrastructure can simply be a public good with no market provision or, more commonly, it creates benefits to society and the economy that are beyond solely the private returns that come from its ownership, leading to underprovision.

The UK invests around £60bn a year in infrastructure, split equally between government and the private sector. The government's share is a little above its target range of 1.0-1.2% of gross domestic product (GDP) and is set to rise as a result of announcements made in July 2019, as two important sources of finance draw to an end: loans from the European Investment Bank (EIB), due to Brexit; and Private Finance Initiative (PFI)/Private Finance 2 (PF2), due to government policy changes.

The UK needs to attract more private investment in infrastructure. Several mature economies have done so through an infrastructure investment bank (IIB) while the UK has benefited from successful publicly owned financial institutions, such as the Green Investment Bank (GIB) and the British Business Bank (BBB).

There are significant advantages to forming a UK IIB to fund parts of the infrastructure programme where government is now active. It would not crowd out private investment and lending but focus on non-standard projects or sectors that might otherwise struggle to obtain funding. At the same time it would provide an independent centre of expertise and technical advice and deliver an important 'halo' effect.<sup>3</sup>

In particular, an arm's length, operationally independent IIB would rapidly accumulate the expertise to make a substantial contribution to the Infrastructure and Project Authority's Transforming Infrastructure Performance initiative and ensure that investment is better aligned with desired long-term economic, social and environmental outcomes (beyond capital efficiency only).

The government would provide equity capital for a UK IIB, but the greater part of capital would be loans secured in the market. Similar to PFI, definitional questions are complex, and considerable thought is needed on how IIB loan liabilities could sit outside public sector net debt (PSND), much as those connected with the EIB have done.

The risk profile of UK IIB investments, government equity and possibly guarantees for particular loans would yield a low average cost of capital. Administrative costs would be covered through a small interest rate margin, allowing lending to clients at rates much lower than under PFI, though higher than on gilts or on loans made by the Public Works Loan Board (PWLB).

# Key issues when considering government intervention:

- Strategic objectives: Any intervention must be for the public good and consistent with wider government objectives, including growth and productivity, decarbonisation, and implementing the modern Industrial Strategy.
- Additionality: Government activity must address clear challenges for the market and avoid crowding out private investment.
- Risk: Any public finance impact and risks to the taxpayer must be considered and managed.

Adapted from Infrastructure Finance Review: consultation, HM Treasury, Infrastructure and Projects Authority, March 2019

#### UK IIB – what are the key benefits?

- Enables investment clearly aligned with the UK's strategic national investment priorities for infrastructure, working alongside the National Infrastructure Commission (NIC) and Infrastructure and Projects Authority (IPA) to deliver the National Infrastructure Delivery Plan (NIDP) and build up the project pipeline
- Provision of a long-term source of capital at low cost to fill the gap left by the European Investment Bank (EIB)
- Ensures delivery of difficult projects that have important and desirable economic, social and environmental outcomes. This is especially important in the context of the rebalancing agenda.
- Provides, as a result of its independence, policy stability outside the short political cycle, permitting long-term planning
- Independence enables the IIB to develop specific industry and finance expertise and analysis in-house. It can act as an independent centre of expertise and technical advice for government, providing innovation and experimentation platforms
- Supports emerging sectors and new technologies (as proven by the Green Investment Bank), helping to address risks and prove market viability, thereby crowding in private investment

# Why infrastructure matters

Infrastructure is critical to a country's economic and social development. It shapes our lives whether it's the water we drink and the energy we use, the digital communications on which we rely on to manage our professional and personal activities or the transport links that take us to work and enable businesses to reach their customers and suppliers.

Infrastructure either provides the basic facilities and services to drive direct economic activities (economic infrastructure) or indirectly helps economic activities (social infrastructure)<sup>4</sup>.

In the long run, economic growth and improvements in living standards are achieved through productivity growth. Better quality infrastructure will allow an economy to be more efficient while the right kind of new infrastructure will increase an economy's productive capacity. As infrastructure deteriorates, many sectors of the economy become less efficient.

### How does infrastructure contribute to economic growth?

- Improving the quantity and quality of infrastructure enables firms to lower costs (for example, lower energy costs) and opens up new markets as well as expanding existing ones, helping firms to achieve greater economies of scale
- Infrastructure can directly enable technological change. For example, broadband enables customers and suppliers to find one another and interact at a very low cost, improving the efficiency of a wide range of services
- Infrastructure is essential to the efficient working of labour and housing markets by allowing people to move easily, either via commuting or by moving home, to follow employment opportunities that match their skills
- Infrastructure enables cities and other population centres to form. Water, wastewater, waste removal, flood risk management, energy and transport are essential for cities to function
- An efficient infrastructure system is able to use space to a greater effect, increasing the benefits of spatial agglomeration that arise from the concentration of production, labour markets and consumers, thereby driving the growth of highly productive cities
- Infrastructure enables more efficient use of human capital and knowledge (a key factor input), particularly through enabling the mass exchange of data and other types of information electronically but also from enabling face-to-face interaction

# Why is infrastructure challenging to deliver?

Given the nature of infrastructure there is a tendency to underinvest, even in mature countries such as the UK with strong institutions.

Infrastructure assets can be private goods, public goods<sup>5</sup> or have properties that mean they are a mixture. Although some may be excludable and rivalrous (an increase in consumption by one person reduces the availability of the resource for another), others may be neither; hence, no market can exist for them to function privately.

Infrastructure also creates benefits to society and the economy (positive externalities) beyond the private returns that come from its ownership. In the case of public transport, there are the immediate advantages to the passenger but also reductions in  $\mathrm{CO}_2$  emissions, which generate health benefits from reduced pollution and enable labour markets to function more efficiently. This can lead to underprovision if left to the market because the social returns are likely to be much greater than the private returns generated by the operator.

Further, particularly in a world where technologies are changing so quickly, there is much uncertainty when planning schemes that often involve large upfront investments but returns can take decades to accrue.

These challenges are often addressed through government regulation or direct government provision of infrastructure (sometimes with a private sector partner), so government policy is decisive. But this exposes infrastructure investment decisions to short-term political considerations and government borrowing constraints that may hinder consistent long-term planning and investment.

The UK government is committed to addressing these issues and ensuring a shift towards collaborative working with industry.6 The focus is now on the wholelife performance of systems (beyond capital efficiency only), better integrating projects and programmes across traditional sector boundaries, using technology and innovation to drive more productive delivery and smarter operation of infrastructure assets and better definition of desired outcomes. Project 13, an industryled response to re-designing delivery models, also embeds these principles and advocates an enterprise approach rather than one set of traditional transactional arrangements. This will boost certainty and productivity in delivery and improve whole-life outcomes in operation and support of a more sustainable, innovative and highly skilled industry.7

In the UK it is worth highlighting three key issues when considering any government intervention in providing infrastructure:<sup>8</sup>

- The intervention must be for the public good and consistent with wider government objectives, including growth and productivity, decarbonisation, and implementing our modern Industrial Strategy
- Government activity must address clear challenges for the market and avoid crowding out private investment
- Any public finance impact and risks to the taxpayer must be considered and managed

# The UK's infrastructure needs

The government is expected to publish a comprehensive National Infrastructure Strategy later this year to respond directly to the National Infrastructure Commission's (NIC)<sup>9</sup> flagship National Infrastructure Assessment (NIA).<sup>10</sup>

The NIC concluded that, to meet the infrastructure needs of the 21st century, the UK must harness the potential of data and digital connectivity, build a low-cost, low-carbon energy system, and revolutionise the nation's road networks to increase the use of electric and autonomous vehicles.

The NIC also highlighted the need to invest in cities to unlock growth and productivity gains, and to act decisively to tackle flood risk and water shortages.

The assessment's core proposals include:

- Nationwide full fibre broadband by 2033
- Renewables to provide half of the UK's power by 2030.
- Three-quarters of plastic packaging to be recycled by 2030
- £43bn of stable long-term transport funding for regional cities
- Preparing for 100% electric vehicle sales by 2030
- Ensuring resilience to extreme drought through a further reduction in supply and demand
- A national standard of flood resilience for all communities by 2050

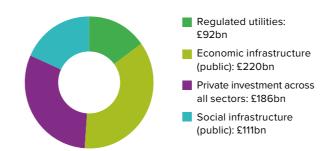
# What is the likely cost?

The Infrastructure and Projects Authority<sup>11</sup> – as part of the National Infrastructure Delivery Plan<sup>12</sup> – provides public and private infrastructure investment projections. It estimates that by 2027–2028 total infrastructure investment will be more than £600bn<sup>13</sup> (2017–2018 prices).

The NIA's proposals to meet the UK's needs between 2020 and 2050, developed in line with the fiscal remit set by government, provides a long-term funding guideline for public investment in economic infrastructure of between 1.0% and 1.2% of GDP (including existing government commitments, such as HS2). For infrastructure funded by the private sector where consumers ultimately meet the cost of any recommendations, the NIC has provided a transparent assessment of the overall impact on bills.

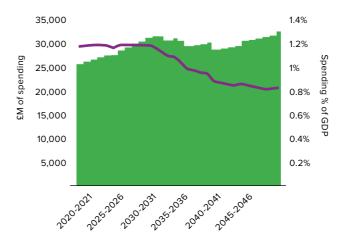
Overall capital expenditure by the government based on the funding profile to achieve the NIA's proposals is around £891.6bn (in 2018–2019 prices) between 2020–2021 and 2049–2050, or £29.9bn a year on average – similar to current levels of expenditure. However, over such a long forecasting period there is likely to be additional expenditure for unforeseen purposes.

# Projected public and private infrastructure investment from 2018–2019 to 2027–2028 by sector



Source: National Infrastructure and Construction Pipeline, Infrastructure and Projects Authority, November 2018

# Fiscal remit – project funding profile, 2020–2021 to 2049–2050



Source: National Infrastructure and Construction Pipeline, Infrastructure and Projects Authority, November 2018

"Britain's infrastructure must overcome major challenges if it is to meet the needs of future generations. Chief among these over the coming decades will be the threats posed to the country's prosperity and quality of life by congestion, lack of capacity and carbon."

Congestion, Capacity, Carbon: Priorities for National Infrastructure; Consultation on a National Infrastructure Assessment, 2017, p6

# How is UK infrastructure currently funded and financed?

The UK has developed a mixed-model approach using investment from both the public and private sectors. Infrastructure is ultimately paid for (funded) through consumer bills, user charging, taxation or a combination of these mechanisms.

These sources provide the revenues that will cover the costs for construction, operation and maintenance, but upfront capital investment (finance) is needed to start projects.

Around 50% of project funding (based on the National Infrastructure and Construction Pipeline) is from the public sector and 45% is from the private sector. This varies widely by sector: energy and utilities projects are almost entirely privately funded while the opposite is true in the transport and social sectors.

There are two broad ways to finance infrastructure – publicly or privately. The first generally uses public finance and the second generally uses private finance. But publicly owned infrastructure can be privately financed too (such as through a PFI).

Financing is important because the best solution creates the right incentives to design and deliver high-quality infrastructure. Risks are transferred to those best able to manage them and costs are reduced for taxpayers and consumers. The UK has a mixed record on achieving the optimal arrangements for financing infrastructure, with many successful examples such as the Thames Tideway Tunnel. But often, due to poor finance choices, project sponsors (and ultimately taxpayers and consumers) are left locked into expensive, inflexible contracts.<sup>14</sup>

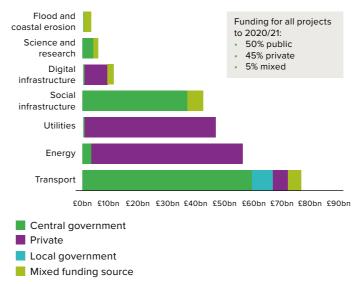
The matrix below looks at the relationships between the ultimate funding sources (the taxpayer or user bills) and the financing sources across the economic infrastructure sectors (which are categorised broadly into privately or publicly owned assets). This does not capture all potential scenarios but provides a general overview of the predominant funding and finance sources for each sector.

# Market participants (publicly and privately owned infrastructure)

	Funding					
	Paid for by taxpayer			Paid for by user (consumer)		
Sectors (ownership)	Energy (largely private)			Electricity networks	Electricity generation	
	Comms (private)				Cable networks, broadband, telecoms	
	Transport (largely public)	Most road and rail infrastructure	Some rolling stock, PPP roads.	Regulated airports	Rail operators, other airports, some rolling stock, most major ports	
	Water (private)	Most coastal flood defences		Most water and sewerage		
	Water (private)	Municipal waste facilities	Municipal waste facilities		Commercial waste facilities	
	Financing	Conventional capital procurement	Public/private	Economically regulated private industry	Other private industry	
		Upfront investment made by public capital	Upfront investment made by private finance			

Source: Adapted from National Infrastructure Delivery Plan, funding and finance supplement, December 2016

# Funding mix of the infrastructure and construction pipeline, 2017–2018 to 2020–2021



Source: National Infrastructure and Construction Pipeline, Infrastructure and Projects Authority. January 2018

The table overleaf is an overview of the main sources of finance for funding infrastructure categorised by whether they tend to support publicly or privately owned assets. When government acts directly in the market (through guarantees, co-investment funds and lending directly), working alongside commercial investors, it is looking to crowd in investment, in order to support development of a new technology.

"Infrastructure
typically requires
large upfront
investment
('financing')
followed by a
long period in
which these costs,
plus ongoing
maintenance and
operational costs,
are repaid by
users or taxpayers
('funding')."

"Choosing and designing infrastructure", National Infrastructure Assessment, National Infrastructure Commission, July 2018

#### UK - existing sources of finance

Finance source	Key characteristics	
Public sector finance (tax and government bonds)	<ul> <li>Significant role in financing infrastructure. In several areas public sector finances almost all infrastructure investment. Upfront costs are met by existing revenues or borrowing through government bonds.</li> <li>Comes from central government departments, local authorities or arm's length delivery bodies.</li> <li>Public spending makes up the majority of investment in roads, rail, flood and social infrastructure in the UK's infrastructure and construction pipeline.</li> <li>In addition, loans from the government are made from the Public Works Loan Board (PWLB) to UK public bodies and the Infrastructure Finance Unit (TIFU), which was set up to offer direct loans to infrastructure projects after the financial crisis.</li> <li>Public finance will appear on the public sector balance sheet in measures of public sector net debt.</li> </ul>	
Project finance vehicles	<ul> <li>Private financing for public infrastructure projects involves the government borrowing money from private investors to pay for specific projects.</li> <li>A well-known form of project finance was the PFI (see box, below).</li> <li>Investors, including banks, insurers, pension funds and private equity firms, provide private finance. Investments by banks declined after the financial crisis, but institutional investors such as insurers and pension funds have become more interested in backing infrastructure projects.</li> <li>Project finance deals will involve many different sources of debt. Offshore wind project deals, for example, often involve multiple banks, the EIB, export credit agencies and institutional debt.</li> <li>Although national accounting rules are complex, depending on project risk allocation, some PFI structures will be classified as finance leases and contribute to public sector net debt (see below).</li> </ul>	
Regulated asset base (RAB) model (corporate finance)  (applies to energy transmission and distribution; water; some communications and some airports)	<ul> <li>World-leading regulatory framework that protects consumers, rewards efficiency and innovation, and gives confidence to investors.</li> <li>Accounts for 20% of the National Infrastructure Pipeline.</li> <li>Investment is financed and delivered by private companies (raised through corporate finance on to company balance sheets) through established independent economic regulation.</li> <li>Offers investors the comfort of a long-term rate of return – set by the relevant regulator – based on the value of their regulated asset base. Investors typically secure their return through the bills paid by consumers.</li> <li>Regulated firms can access both debt and equity at lower cost.</li> <li>Price regulation regimes set by the water services regulation authority, Ofwat, and for gas and electricity, Ofgem, are among the most stable and predictable in the world, with highest score credit ratings of AAA with Moody's Investor's Services.</li> <li>Generally, RAB-based financing does not contribute to public sector net debt if equity is held by the private sector.</li> </ul>	
UK Guarantees Scheme (form of public sector financial support)	<ul> <li>Can help to stimulate private investment, especially in riskier projects where private investors may be unable to mitigate specific risks or insure themselves against them.</li> <li>Works by offering a government-backed guarantee to help infrastructure projects access debt finance if they have been unable to raise backing in the financial markets. It guarantees the principal and interest payments on infrastructure debt issued by the borrower to banks or investors.</li> <li>The scheme is demand-led: it operates where needed and does not crowd out the market.</li> <li>Operates on a commercial basis, with borrowers paying a fee for the guarantee. Projects must be commercially sound to qualify for a guarantee, with a risk profile and revenue stream that make commercial lending viable.</li> <li>Other projects have pre-qualified for guarantees and been supported through the financing process, but have ultimately raised finance privately on the market. In these cases the scheme can help to crowd in investment through its involvement, even if it is not ultimately required.</li> <li>Under the scheme, the UK can issue up to £40bn of guarantees in total and is open until at least 2026.</li> <li>To date it has issued £1.8bn of guarantees to projects worth £4bn.</li> <li>Open to 'nationally significant' infrastructure projects only.</li> <li>The guarantees do not hit the balance sheet unless called, while fees reduce borrowing in the near term. If fees are set at an appropriate rate, the scheme may not harm sustainability overall. But, with fees generally paid upfront and the cost of any guarantees only likely to hit later, they can flatter the finances in the short to medium term.</li> </ul>	
Contracts for difference (CfD) scheme (form of public sector financial support)	<ul> <li>Government's main mechanism for supporting low-carbon electricity generation.</li> <li>Incentivises investment in renewable energy by providing developers of projects with high upfront costs and long lifetimes with direct protection from volatile wholesale prices, and protects consumers from paying increased support costs when electricity prices are high.</li> </ul>	
UK Guarantees Scheme (form of public sector financial support)	<ul> <li>Government established funds in new, emerging sectors to catalyse activity and develop markets.         The aim is to crowd in other market participants and to demonstrate a track record for these new technologies. In these cases the government acts as a cornerstone investor, but involves private sector fund managers to make investment decisions.     </li> <li>Examples include the Digital Infrastructure Investment Fund (DIIF), the Charging Infrastructure Investment Fund (CIIF) and the Clean Growth Fund.</li> </ul>	

# Market participants (publicly and privately owned infrastructure)

Finance source	Key characteristics
Banks	<ul> <li>Provide debt for infrastructure projects. Around 30%-40% of financing for medium and large infrastructure deals comes from commercial bank loans.<sup>15</sup></li> </ul>
European Investment Bank (EIB)	<ul> <li>Lending arm of the EU.</li> <li>Works alongside investors and banks, operating as a source of long-term debt financing and expertise.</li> <li>The EIB has been a significant source of finance for UK infrastructure projects – see below.</li> </ul>
British Business Bank	<ul> <li>UK government-owned bank, established in 2014 to support access to finance for small and medium-sized enterprises.</li> <li>Does not invest or lend directly but works with financing partners, such as banks.</li> </ul>
Other institutional investors	<ul> <li>Pension funds, insurance companies or sovereign wealth funds.</li> <li>Often need to generate immediate returns</li> </ul>
Government institutional investors	Domestic pension funds, including through the local government pension pools, which are now operational and have confirmed increased allocations to infrastructure investment.
Specialist institutional investors	<ul> <li>In-house skills to invest directly in assets including 'greenfield assets', where user demand is unproven such as new toll roads.</li> <li>Investing directly means specialist investors will usually undertake active oversight of projects.</li> </ul>

Source: Mott MacDonald, various.

# Private Finance Initiative (PFI) – motivated by the need to be off balance sheet?

Launched in 1992, the Private Finance Initiative became the most common way to privately finance public assets in the UK.

Under these contracts the private sector would build and/or maintain infrastructure assets in return for annual payments that typically continued for about 30 years. The intention was to transfer risks to the private sector. Depending on their design they could be either on or off balance sheet. The fiscal impact could be recorded as the project was built (on balance sheet) or over a longer period as annual payments were made (off balance sheet).

PFI arrangements were widely used in the early 2000s when the 'sustainable investment rule' target of keeping public sector net debt (PSND) below 40% of GDP was subject to limited headroom. The Whole of Government Accounts<sup>16</sup> reports PFI capital liabilities of £39bn, while PSND includes only £6bn on balance sheet in the national accounts.

By 2010, the use of PFI had declined significantly due to the financial crisis and controversy over the cost of the deals. In 2012, the government launched Private Finance 2 (PF2) in a renewed attempt to stimulate private finance. PFI and PF2 contracts have been used to fund the building of schools, hospitals and other infrastructure, but their use has declined significantly – 86% of PFI and PF2 contracts were signed before 2010.

The government announced in the 2018 Budget that it would no longer use PF2. Arguably, this was partly due to the collapse of infrastructure firm Carillion in early 2018 but more importantly in reaction to the criticism of PFI and PF2 by the House of Commons' Public Accounts Committee<sup>17</sup> for their inflexibility. The Office for Budget Responsibility also identified the initiatives as a fiscal risk to government.<sup>18</sup>

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Critics of PFI argue that, although it provided initial gain to the Treasury as a vehicle to fund public infrastructure off balance sheet, it was at the expense of high ongoing costs to the institutions at the front line due to inflexible contracts (necessitating variations). In addition, offshore funds have bought up about half of the equity in PFI and PF2 projects so that the projects' owners are increasingly remote from the public service being delivered.<sup>19</sup>

The government will continue to support private investment in infrastructure through a range of successful established tools, such as contracts for difference, the regulated asset base model and the UK Guarantees Scheme.

# How important has the EIB been for financing UK infrastructure?

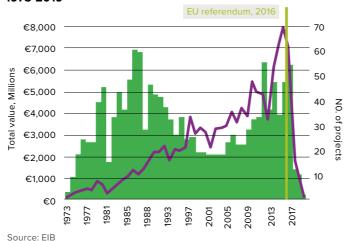
The EIB is the lending arm of the EU and aims to develop the bloc's internal market. It focuses on four key areas: innovation and skills, small business, infrastructure and climate/environment.

In 2015 the total value of commitments<sup>20</sup> it provided to the UK peaked at €7.8bn across 47 projects, amounting to about one-third of total government financing of UK infrastructure.<sup>21</sup>

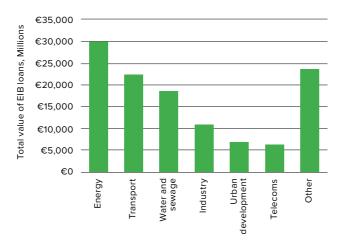
Since the EU referendum and the triggering of Article 50, only €1.8bn (12 projects) in 2017, €932M (10 projects) in 2018 and €63.5M (two projects) so far in 2019 have been committed by the EIB to the UK.<sup>22</sup> This is a decline of 75% between 2008 and 2018.23 Similar rates of decline have been noted for loans from the European Investment Fund (EIF), which is part of the EIB and focuses on SMEs. This is largely related to uncertainty over how contracts will be governed after the UK's departure from the EU and the EIB adding guarantees to loans as a result of Brexit. The extent of this decline suggests that it is likely that there will be a financing gap in the UK for projects that have previously benefited from investment by the EIB and EIF,<sup>24</sup> with the private sector unable to scale up quickly enough to cover this gap or be able to provide finance on similar terms to the EIB.

The EIB has financed major energy projects, transport and water and sewerage. More than one quarter of the loans have gone to the energy sector. Much of this has been aligned to promoting sustainable sources of energy and the success of the UK's offshore wind industry is often cited as an example of the EIB's active involvement in effectively 'de-risking' these projects and encouraging private sector investment.

# EIB loans to the UK – number of projects and total value, 1973-2019



# EIB loans to the UK - by sector, 1973-2017



Types of projects include

- Helping to de-risk the UK's offshore wind industry
- Major transport projects including Crossrail, London Overground, and the Underground and Docklands Light Railway extensions and expansion of Greater Manchester's Metrolink
- Severn Trent's investment programmes for drinking water and wastewater treatment
- Thames Tideway Tunnel
- Affordable Housing Finance programme affordable homes in Glasgow, Wigan, Scarborough, Bradford and Cambridge
- Higher education funding towards campus development and the expansion or upgrading of research and teaching facilities

Source: EIB, categories are taken from the EIB's own classification of projects. 'Other' includes composite infrastructure, credit lines, solid waste, education and health.

EIB financing - key advantages

Finance source	Key characteristics		
Provision of cheaper, long-term financing	<ul> <li>Given the public guarantee it has from the EU member states, as well as the returns generated from previous projects and its record of successfully supporting projects across Europe, the EIB has an AAA credit rating, enabling it to borrow cheaply on capital markets</li> <li>Not required to operate on a profit-making basis – can provide finance for projects more cheaply than commercial lenders</li> <li>Focus on long-term finance also allows it to fill a gap that may otherwise be left unfilled by the private sector</li> </ul>		
	Losing access to the EIB would almost certainly increase the cost of capital in different sectors of the UK economy and could render some future projects no longer commercially viable. Similarly, if the EIF withdraws from the UK market, small businesses may find it more difficult to access affordable finance.		
Independent expertise and due diligence	<ul> <li>Helps to crowd in private investment, which is an explicit objective of the EIB.</li> <li>Large in-house expertise of finance professionals, engineers, economists and environmental experts – effective due-diligence.</li> <li>Provides stamp of approval and a positive signal to the market, thereby encouraging additional investment from the private sector.</li> </ul>		
	Independent expertise and high-quality due diligence of the EIB and EIF are essential for crowding in private investment.		
Other	<ul> <li>Flexibility of its contracts – helps to manage interest rate risk.</li> <li>Previous returns generated from other projects help to de-risk projects and encourage private sector investment.</li> <li>It has a clear mandate and priorities that enable the EIB to assist in specific markets, such as affordable housing and higher education, where the payback periods are long or the financial returns are unattractive.</li> <li>Despite the UK, collectively with EU member states, having liabilities, the lending is off balance sheet and does not appear on the UK PSNB.</li> </ul>		

Source: Brexit: The European Investment Bank, House of Lords, January 2019

Before the referendum on EU membership the EIB accounted for a large proportion of the UK's overall infrastructure financing. This was because of its ability to provide cheap and long-term financing and encourage additional investment from the private sector. EIB funding has directly helped to address some of the key sources of market failure that cause underprovision of financing, such as unproven technologies, a high level of 'greenfield'<sup>25</sup> risk or wider economic and social outcomes beyond those benefits that can be easily captured. The EIB has helped to 'de-risk' projects, which has proved particularly important in new markets, and facilitating access to finance for SMEs.

The other key advantage has been that, despite the UK's shared liabilities with other EU member states for EIB loans, the liabilities remain off the public sector's balance sheet and are outside PSNB.

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It is highly unlikely that the UK can remain a member of the EIB after it leaves the EU. There might be an opportunity to explore a deeper bilateral relationship through a UK EIB subsidiary or establish a new multilateral development bank, which could co-operate with the EIB on cross-border European projects.

# How might an IIB work in the UK?

The UK government, in light of the UK leaving the EU and therefore membership of the EIB, launched a consultation on how best to support private investment in infrastructure in March 2019.<sup>26</sup>

This includes understanding how the private sector can fill any infrastructure finance gap, particularly on large-scale and longer-term projects, as well as existing government means to support the supply of infrastructure finance and the effectiveness of the current institutional framework.

# Most importantly, it states:

"In the event that the UK loses access to the EIB, [is there agreement] with the NIC that the government should establish a new, operationally independent, UK infrastructure finance institution? If so, what should its mandate be, and how should its governance be structured?"

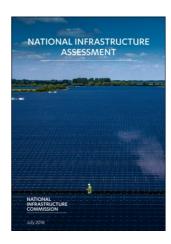
As set out in the House of Lords paper, "the loss of EIB funding after [Brexit] will have different effects on different sectors of the economy. Utilities such as water and sewerage may be able readily to access alternative sources of finance, albeit at an increased cost. More innovative projects, or those that fall within the EIB's broader social mandate, may struggle to raise money in the private sector"<sup>27</sup>.

As set out in the same report there are several measures that could be investigated to fill the potential financing gap. They include:

- UK Guarantees Scheme (UKGS) including extending the scheme to projects that may not meet the current threshold of being 'nationally significant' and allowing it to offer different financing options. The Institution of Civil Engineers (ICE)<sup>28</sup> highlighted the possibility of using the UKGS to support the capital requirements of a new bank with the potential to remain off balance sheet.
- Public Works Loan Board (PWLB) consider changes to loan facilities, such as offering loans at a discount on its standard concessionary rate.
- British Business Bank (BBB) and SME financing in the 2017 Autumn Budget, the chancellor committed £2.5bn for patient capital<sup>29</sup> to the BBB. There is also evidence that the BBB is increasingly acting as a cornerstone investor that crowds in private investment but the bank would need to scale up quickly to fill the gap left by the EIB.



The House of Lords European Union Committee published Brexit: The European Investment Bank, January 2019



The National Infrastructure Commission published its inaugural National Infrastructure Assessment, July 2018 "The (NIC recommendations) will require a combination of public and private financing. Financing itself is not in short supply. However, state financing institutions can help to encourage private investment and catalyse activity in new markets. The European Investment Bank does some of this, but there is a risk that access may be lost following the UK's exit from the EU. A UK infrastructure finance institution, focused on specific objectives, should be established if access to the European Investment Bank ceases after the UK exits the EU."

National Infrastructure Assessment, National Infrastructure Commission, July 2018, p14

# How effective have IIBs been elsewhere?

There are examples of IIBs across emerging markets and high-income countries, including some with extensive history and others that have been established more recently.

The recent report by the Global Infrastructure Hub<sup>30</sup> provided a compressive assessment of 11 national IIBs and more limited reviews of others. These examined lessons learned and how such institutions can play a unique role in supporting government objectives and policies to deliver quality infrastructure in line with desired national economic and social outcomes.

Using this study, the case studies from page 11 onwards profile the rationale, structure and key lessons of various national IIBs, with a focus on Canada, Germany, Japan, Australia, the US and the UK (the Green Investment Bank). This review shows that national IIBs have been successful at leveraging in private sector capital and providing a high level of 'additionality'. There are clearly a number of key success factors, the most critical being sound governance to ensure a focus on additionality, independent operational management from government and transparency and accountability.

# Additionality

Additionality is the particular support or input that national IIBs bring to an investment project that is not available from commercial sources of finance. This is a guiding principle to ensure support for the private sector makes a contribution beyond that available on the market and does not crowd out other private sector actors.

Common ways in which the involvement is considered additional is if longer-term financing is not available on reasonable terms and conditions or interventions contribute to better project outcomes that would not have been required or offered by commercial financiers (such as mitigating non-financial risks, including country, regulatory, project, economic cycle or political). Additionality could also be achieved by helping projects and clients achieve higher standards than would have been required by the market, such as through sharing expertise on better corporate governance or above 'business as usual' environmental or inclusion standards.

Using the international evidence and the review of existing arrangements (above), what are the strengths, weaknesses, opportunities and threats (SWOT) of the UK adopting a IIB and the key success factors?

# Strengths

**SWOT** analysis

- Aligned with clearly defined strategic national priorities
- Provides long-term source of capital at low cost due to government backing (various types)
- Ensure infrastructure projects (particularly sub-national ones) that are desirable across a range of economic, social and environmental outcomes are delivered that might otherwise struggle
- Independence and policy stability outside the short-term political cycle (enables 'long-termism' of such an institution)
- Ability to develop specific industry and finance expertise and analysis in-house (security over the medium-term)
- Independent centre of expertise and technical advice for government – can provide innovation and experimentation platforms
- 'Halo' effect that comes from participation due to market perceptions of accordance with government policy
- Emerging sectors and new technologies help address risks and prove market viability and 'crowds-in' private investment

#### eaknesses

 Potential to crowd out private investment and lending (reducing additionality) – need for a tightly defined mandate

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- Use position to influence national or regional governments into prioritising infrastructure over other areas
- Difficulty in ensuring project end-users benefit and not only corporate investors in projects
- · Costs and administrative complexity to set up

#### Opportunities

- Potential to create assets and generate income for UK could provide equity and require a return on it (similar to EIB which is a profitable institution)
- To build an inventory of infrastructure projects for government projects for government – provides a platform to build on the IPA project pipeline
- Ability to respond to and benefit from new (mid-2019) plans to accelerate infrastructure provision
- Counter-cyclical function provides ability to continue investing throughout economic cycle, including downturns
- Platform to develop a role in providing other types of support e.g project preperation and development
- Help address wider social and distributional outcomes, e.g. green NIBs have helped to address barriers that prevent low-income households adopting clean technologies
- Planned towards becoming privatised can be set up purely commercial organisation with final intent being privatisation
- An independent institution could be merged with other public institutions involved in the provision of finance – to become 'one-stop shop'

#### Throatc

- UK PSND rules pressures to exclude the bank's liabilities and how this could be overcome. This may also induce government to sell the institution in the future, weakening its ability to address market failures
- Too much control handed to the private sector potentially becomes similar to a PPI structure where private sector has too much control of public infrastructure and delivery driven by capital efficiency
- Need to consider EU State aid rules (which the UK may choose to respect in any future relationship) – which could limit the design of a national infrastructure institution

# Success factors (to overcome weaknesses and threats)

- Strong governance and legal arrangements to ensure no competing with the private sector (ensuring additionality)
- Strong relationship with policymakers
- Ability to finance at scale and at low cost
- Flexibility to consider carefully the split between debt and equity (so able to leverage as much private sector investment as possible)
- Focus on high value added opportunities (but also higher risk) where gaps in the market

# Conclusion: should the UK look to adopt an IIB?

The overwhelming evidence suggests that if Brexit goes ahead, the UK should look to form an IIB to invest in those parts of the infrastructure programme where government is now active.

There are several clear strengths:

- The institution can be aligned with the UK's strategic national investment priorities for infrastructure
- It will provide a long-term source of capital at low cost to fill the gap left by the EIB
- It will ensure that projects that might stall, but which have important and desirable economic, social and environmental outcomes, will be delivered, especially important in the context of sub-national economics and the rebalancing agenda
- An independent institution would enable policy stability outside the short political cycle, enabling long-term planning. The institution would have a 'halo' effect that comes from participation due to market perceptions of accordance with government policy
- An independent institution would also provide the ability to develop specific industry and finance expertise and analysis in-house. This could be constrained within government but provide the security through revenue funding over the medium term to invest in such skills (particularly in new sectors and technologies)
- This expertise would enable the institution to act as an independent centre of expertise and technical advice for government, which could provide innovation and experimentation platforms

- The institution could be powerful in emerging sectors and new technologies (as proven by the GIB), helping to address risks and prove market viability, thereby crowding in private investment
- An institution could align neatly with current government initiatives and organisations, including the NIC and IPA, and assist with the NIDP, including the project pipeline and assisting with the technical assurance to provide more bankable projects

A UK IIB would focus strongly on additionality and on non-standard projects or sectors that might otherwise struggle for financial support, particularly those with much wider positive economic, social and environmental outcomes.

# Key issues when considering government intervention:

- Strategic objectives: Any intervention must be for the public good and consistent with wider government objectives, including growth and productivity, decarbonisation, and implementing the modern Industrial Strategy.
- Additionality: Government activity must address clear challenges for the market and avoid crowding out private investment.
- Risk: Any public finance impact and risks to the taxpayer must be considered and managed.

Adapted from Infrastructure Finance Review: consultation, HM Treasury, Infrastructure and Projects Authority, March 2019 An important UK IIB objective would be to finance the expansion of infrastructure investment while allowing government to remain within the 1.0–1.2% of GDP mandate. This would imply a balance sheet total of several billions within a few years of formation, given current government expenditure is around £30bn a year.

The reasons for forming an entity separate from government would be those suggested by the Treasury:

"There should be clear perceived advantage in establishing a new organisation, such as separating implementation from policy making; demonstrating the integrity of independent assessment; establishing a specialist identity for a professional skill; or introducing a measure of commercial discipline."

Managing Public Money, para 7.2.2, HM Treasury, July 2013

In particular, an arm's-length, operationally independent IIB would rapidly accumulate the expertise to make a substantial contribution to the IPA's Transforming Infrastructure Performance initiative and ensure that investment is better aligned against desired long-term economic, social and environmental outcomes (beyond capital efficiency only).

The government would provide IIB equity capital, but the greater part of capital would be loans secured in the market. Although, as with PFI, definitional questions are complex, the judgement of this paper is that UK IIB loan liabilities would sit outside public sector net debt.

The risk profile of UK IIB investments, government equity and, possibly, guarantees for particular loans, would yield a low average cost of capital. Administrative costs would be covered through a small interest rate margin, allowing lending to clients at rates much lower than under PFI, though higher than on gilts or on PWLB loans.

# National IIBs – case studies

# The Connecticut Green Bank (CGB), US, 2011

### Rationale and mandate

- The CGB uses public funds to attract private capital into the deployment of clean energy in the state.
   The aim is to create low-cost, long-term sustainable finance to maximise the use of public funds.
- Set up to support the state's energy strategy to achieve cleaner, less expensive and more reliable sources of energy while creating jobs and supporting local economic development.
- Supports implementation of public policy on clean energy in Connecticut by attracting and deploying private capital to finance the achievement of those goals.

# Structure and scope

- Quasi-public agency created by state legislation and governed by a board of directors.
- Senior members of the board are political appointees while other positions are elected by the sitting members.
- Alongside funds the CGB receives from the state of Connecticut, the bank has access to and expects to pursue US federal funds. The CGB can also issue revenue bonds to support its investments and to participate in joint ventures and PPPs.
- Provides technical assistance on a range of issues and can provide funding for project level technical assistance and feasibility studies.
- Reported that state government decisions to cut funding have undermined its ability to deliver clean energy programmes.

# Key lessons for the UK

- Regarded as a leading example of effective local green bank initiatives – crowded in an extra \$6 in private investment for every \$1 of public funding.
- Importance of developing internal expertise in clean energy which other commercial investors may not have achieved.
- Been able to take a more flexible approach to risk than institutional capital.
- By mitigating project risks, the CGB helped to demonstrate emerging technologies and develop the market to a point where private capital is willing to invest.
- Sub-national facilities may have more limited resources that require greater efficiency.
- Efficiency boosted by the requirement to invest in programmes that generate reasonable returns and allow the institutions to be operationally sustainable over time.
- Played an important role in addressing distributional issues, such as barriers that prevent low-income homeowners from adopting clean technologies, including the actual or perceived higher risk of default.

# Kreditanstalt Für Wiederaufbau (KfW), Germany, 1948

# Rationale and mandate

- Initially focused on reconstructing German economy after the second world war.
- Extensively diversified since in the 1970s it refocused on domestic production and in the 1990s (after reunification) on development of eastern Germany.
- Mandate today improve the economic, social and ecological living conditions around the world on behalf of Germany.
- Agent and centre of technical expertise for both the federal and state governments.
- Provides a policy piloting and implementation, monitoring and dialogue platform directly with government.

# Structure and scope

- Statutory federal government guarantee (80% owned by central government, 20% by the states of Germany).
- Public agency with unremunerated equity provided by its public shareholders.
- Capital market financing accounts for 81% of KfW's financing.
- Constrained by the mandate in the KfW law and not allowed to compete with commercial banks.
- Funders include institutional and retail sources (domestic and international).
- Work can be divided into domestic production, export and project finance and development finance.
- Follows a thematic structure and not a major financier of domestic infrastructure on a municipal level.
- Grown rapidly in recent years and by the end of 2017 it was Germany's third largest commercial bank with total assets reported as €472.3bn.
- Sixth largest global bond issuer.

# Key lessons for the UK

 Major strategic player in the transformation of the German economy, particularly in supporting exports, renewable energy and energy efficiency, as well as SMEs, innovation and social infrastructure, such as housing and communal facilities.

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- Due to its legal tax-free status, public ownership, unremunerated equity and competitive positioning, it is an efficient and effective mobiliser of long-term resources from global capital markets. Coupled with federal budget funds, it allows largescale lending at below market rates.
- It has evolved in line with public policy priorities: post-war recovery, exports, restructuring, clean energy and public goods.
- Independent centre of expertise and technical advice for government; can provide innovation and experimentation platforms.
- Strong governance and legal arrangements are in place and a group strategy reflects the public ownership interests. Domestic banking operations are regulated so as not to compete with the private sector.
- Importance of strong relationship with policymakers, combined with the ability to finance at scale and low cost. This is a key reason why the bank has been effective and efficient.
- Provided economic stimulus packages when required, such as after the financial crisis.

## Rationale and mandate

- Aims to attract more finance into the clean energy sector and support the government's commitments to reduce carbon emissions.
- Uses government funding to invest in and support clean energy projects, plus innovative start-up companies through a dedicated innovation fund.
- Mechanism to mobilise investment in renewable energy, low emissions and energy efficiency projects and technologies. Also to finance Australia's clean energy sector using financial products and structures to address the barriers inhibiting investment.
- CEFC should make commercial investment decisions, though it can offer concessional finance terms, say with regard to positive externalities and public policy outcomes.

# Structure and scope

- CEFC is a corporate commonwealth of Australia entity and the government is the sole shareholder (providing the only source of capital).
- Governing board acts independently of the Australian government although all board members are government-approved appointees.
- Aims to provide dialogue with project developers, and is willing to use its specialist expertise in green sectors to act as a 'sounding board' in structuring bankable projects.
- No formal role in project development activities that can be supported through technical assistance.
- CEFC targets positive financial returns from its portfolio and aims to be self-sustaining over time.

# Key lessons for the UK

- Played an important role, through working with investors and project developers, in showing that clean energy projects can be commercially viable.
- Strong understanding of risks and opportunities that the market finds difficult to assess – sharing its sector expertise and crowding in private investment.
- Tight charter and a commercial board have been required to provide the necessary high standard of governance.

# Canada Infrastructure Bank (CIB), Canada, 2018

# Rationale and mandate

- Provides low-cost financing and support to projects where there is a clear lack of capital. There is a focus on providing government risk capital to mainly greenfield projects or expansion of public-private partnerships (PPPs) if it is believed the private sector will have little interest.
- Develop a pipeline of projects and potential investment opportunities (across government levels).
- Act as a centre of expertise on infrastructure projects involving private sector investment

# Structure and scope

- Wholly owned by the federal government but operated at arm's length.
- Will invest through debt, equity or other innovative tools.
- Can provide finance at below market rates or on subordinated terms<sup>31</sup> in order to attract private sector investment to projects that would otherwise not be viable.

# Key lessons for the UK

- Provides a platform for building an inventory of infrastructure projects (such as the IPA pipeline).
- Flexibility to hire qualified employees with the commercial experience and professional skills needed to enable the bank to execute its mandate (arm's length).
- Arm's-length structure should enable the independence required to be a credible commercial counterparty with investors, and to make recommendations based on commercial assessments and analysis.

# Development Bank of Japan (DBJ), Japan, 1951

# Rationale and mandate

- Originally provided finance and support for important domestic industries as part of the post-war recovery and with a focus on providing long-term credit to infrastructure projects.
- From the 1970s to the 1990s became more concerned with sustainability objectives and its support was extended to new projects (such as wind power).
- In 1999, a new DBJ was formed with a mandate to support community development, environmental conservation and sustainability, and technological and economic growth.
- In 2008, the bank was dissolved and re-established with provision for the eventual privatisation of the DBJ, although this ambition has stalled, largely due to the Fukushima nuclear disaster.
- In 2015, legislation was passed that mandates DBJ to utilise investment and loan functions to take all possible measures to supply funds to deal with large-scale disasters and economic crises, to promote the supply of growth capital to revitalise regional economies, and to reinforce the competitiveness of enterprises.

# Structure and scope

- Wholly owned and regulated by the Japanese Ministry of Finance (MoF).
- Privatisation plans are on hold due to concerns around wider economic conditions, the provision of longterm credit to small businesses, and the bank's crisis response objectives.
- Commercial set-up and arm's length from government but its ownership, legal and regulatory structure clearly reflects that the bank is a tool of public policy (for example, funding and bond issuance policies need to be approved by the MoF).
- Provides equity, debt and guarantee products.
- Also provides advisory services and often acts as a lead arranger in putting together project finance packages.
- No role in supporting the development of a national pipeline of projects.

# Key lessons for the UK

 Undertaken primary financings which are refinanced when the asset is operational. The DBJ finances the riskier construction phase of the project but enables transfer of risk to the private sector later.

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- Avoided crowding out private capital by focusing on higher value-added (but also higher-risk) services where there are gaps in the market (such as structured financing and mezzanine financing).
- DBJ does issue uncovered bonds, relying on its own credit ratings (part of a move towards privatisation).
- Developed significant expertise in renewable energy sectors.

# Green Investment Bank (GIB), UK, 2012

#### Rationale and mandate

- Established to accelerate the UK's transition to a greener, stronger economy and address the investment gap identified for green infrastructure.
- Key market gaps impeding investment included: temporary limits in company and bank balance sheets after the 2008 financial crisis; a limited number of investors willing to take on the uncertainty associated with projects without precedent or a track record of results; and a lack of stability in long-term government policy on the green economy.
- GIB provided finance on fully commercial terms rather than acting as a public funding platform. Additionality was a core part of the GIB's mandate.
- Always envisaged that the GIB would eventually be transferred to the private sector.
- June 2015 government decided that further public funding was not affordable and announced plans to bring private capital into the GIB to give it freedom to access much greater volumes of capital.
- Sold majority stake in 2017 to private investors (£1.6bn) but the government retained a stake in a small number of assets.
- Role was to be both green and profitable, using its sector-specific expertise to assess the risks associated with green projects accurately and give co-investors confidence to commit finance.
- Initial strategic priority sectors were offshore wind, commercial and industrial waste, energy from waste and non-domestic energy efficiency.

# Structure and scope

- GIB was a public company established under the Companies Act but the government was its sole shareholder until the sale in 2017.
- GIB was not permitted to borrow funds from the capital markets.
- It was exempt from some of the Treasury's annual budgeting rules.
- Structure provided for the level of control the UK government needed over the GIB's operational principles and investment mandate but allowed freedoms to pursue commercial terms and co-invest alongside private capital.
- GIB had a set of operating principles forming part
  of its wider mandate, including green objectives
  and sustainable finances, enduring impact,
  strategic alignment with government, operational
  independence from government, partnership with
  the private sector, and an obligation to minimise
  market distortions.
- Flexibility to invest across the full capital structure, from debt to mezzanine debt and equity, although it does not offer guarantees to help projects to access debt finance.
- Allowed to invest in the construction of new projects or in the refinancing of existing ones if there was a benefit in creating a secondary market.
- GIB could invest directly in large projects or programmes and indirectly in smaller ones through funds or developer partnerships. The fund of funds business allowed GIB to invest in a higher volume of smaller projects.
- It also acted as fund manager and general partner in a fund management business to manage the investment of third-party capital in green infrastructure projects, called GIB Offshore Wind Fund.
- No mandate to undertake project preparation or technical assistance but did commission reports to review technologies.
- Assisted project sponsors to develop bankable projects in a similar way that other banks or financial institutions would.
- GIB now operates as the Green Investment Group and continues to finance green projects in the UK but with no government funding.
- The GIB's green purpose was protected by government through a special share, which is held by Green Purposes Company Ltd (GPC). The organisation's primary power as a special stakeholder is to approve or veto any proposed amendment to the green purposes.

# Key lessons for the UK

- By March 2017, GIB had leveraged around £2.50 of private capital for every £1 invested.
- To be an enduring institution that mobilises thirdparty funding, the bank must invest in transactions with appropriate risk/reward characteristics.
- Need to carefully consider the split between debt and equity. GIB was the most capitalised bank in the world with 100% equity but if it had borrowed on its balance sheet, this would have saved government money being invested directly and could have mobilised further third-party funding.
- Medium-term commitment of funds was important government also provided an operating budget and GIB could then undertake decisions on resources.
- Clear focus on relatively narrow and well-defined sectors is important – this forced GIB to focus on how to mobilise funds into these specific sectors, hiring experts in the field and undertaking market analysis. In the case of offshore wind, GIB could look over the longer term and spend more time when other institutions decided it was too difficult or risky.
- Investments should be market led the actual mix of investments developed from working with the markets and following extensive market engagement rather than seeking to force markets to go a specific way. This relied on the correct mix of finance and industry expertise to ensure that the bank could undertake any kind of transaction.
- A significant government stake can improve mobilisation – the 'halo' effect of government ownership helped to attract other funders into transactions. For renewables, which rely on stable government policies, it provided comfort. Some banks thought that if the government-owned entity invested in a transaction, the government may support the underlying project if it ran into difficulty in order to prevent the GIB losing money. In reality, the government was under no obligation to do either but the market perceived there was a benefit to the GIB's involvement in a transaction.
- Focused on speculative, early-stage technologies and, once a sector was established, it should exit (that is when market-based finance became available).

#### References

- 1. National Infrastructure Assessment, National Infrastructure Commission, July 2018.
- 2. As set out in the Spending Round 2019: Chancellor Sajid Javid's Speech, 4th September 2019.
- 3. That is UK IIB participation can help to address investor and especially lender concerns, especially in new types of projects where their associated risks can inhibit private investment.
- 4. Infrastructure within this paper follows the broad definition as set out by the IPA and NIC in the National Infrastructure Delivery Plan 2016-2021 and the National Infrastructure Assessment (background papers) and includes economic infrastructure and key social infrastructure (schools, hospitals and prisons).
- 5. A public good is a product that one individual can consume without reducing its availability to others and from which no one is deprived. The main characteristics are that they are non-excludable (benefits cannot be confined solely to those who have paid for it), non-rivalry (consumption by one does not restrict consumption for others) and non-rejectable (collective supply for all means it cannot be rejected by people). Given these characteristics they will often not be provided by the market and represent a form of market failure.
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- 7. For more information see: www.p13.org.uk/ [Accessed: 24.07.2019].
- Infrastructure Finance Review: consultation, HM Treasury, Infrastructure and Projects Authority, March 2019.
- 9. The NIC is an executive agency, sponsored by HM Treasury.
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- 12. National Infrastructure Delivery Plan 2016-2021, Infrastructure and Projects Authority, March 2016.
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- 17. Private Finance Initiatives, Public Accounts Committee, June 2018.
- 18. Fiscal Risks Report, Office for Budget Responsibility, July 2017.
- 19. As set out in Private Finance Initiatives, Public Accounts Committee, June 2018.
- 20. Refers to signature date of committed loans, accessible at: www.eib.org/en/projects/loans/index.htm
- 21. Government infrastructure investment in 2015 was estimated at £18.7bn in 2015, using experimental infrastructure statistics, ONS, August 2018. Clearly this is investment drawn down in 2015 rather than funding commitments but gives an impression as to the scale of EIB investment in 2015.

- 22. Financed Projects, EIB, 2019 (based on signature date).
- 23. Committed loans in 2008 amounted to €3.8bn but by 2018 were €932m.
- 24. Brexit: The European Investment Bank, House of Lords, January 2019.
- 25. Greenfield projects are primary investments where user demand is unproven, such as new toll roads.
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- 27. Brexit: The European Investment Bank, House of Lords, January 2019.
- 28. State of the Nation 2018: Infrastructure Investment, Institution of Civil Engineers, October 2018.
- 29. Patient capital can be considered equity or debt whose providers aim to capture benefits specific to long-term investments and who maintain their investment even in the face of adverse short-term conditions.
- 30. Guidance Note on National Infrastructure Banks and Similar Financing Facilities, Global Infrastructure Hub, June 2019. Available at: www.gihub.org/nibs [Accessed: 24/07/2019].
- 31. Subordinated terms refers to debt which ranks after other debts in a structure in an event of liquidation, and can only be paid after claims of senior creditors have been met.

#### Glossary

Reference	Acronym
British Business Bank	BBB
Charging Infrastructure Investment Fund	CIIF
Digital Infrastructure Investment Fund	DIIF
European Investment Bank	EIB
European Investment Fund	EIF
Green Investment Bank	GIB
Infrastructure Investment Bank	IIB
Infrastructure and Projects Authority	IPA
National Infrastructure Assessment	NIA
National Infrastructure Commission	NIC
National Infrastructure Delivery Plan	NIDP
Private Finance 2	PF2
Private Finance Initiative	PFI
Public sector net debt	PSND
Public Works Loan Board	PWLB
Regulated asset base	RAB

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# Talk to us:

**Paul Hammond** 

Global practice leader for infrastructure development and economics paul.hammond@mottmac.com +44 (0)16 1914 8849

Miriam Ferrari

Principal consultant miriam.ferrari@mottmac.com +44 (0)16 1641 7020

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