

# 1. Introduction

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This Guidance Note draws together lessons that arise from reviewing a number of stand-alone case studies that explore different National Infrastructure Banks and related financing facilities (NIBs)<sup>3</sup>. Given that many of these have been around for several decades, whereas others have been very recently established, there is a range of stages of development. In considering how the NIB model has evolved, it is possible to show how it has been adapted to support the challenges faced in a variety of different policy contexts over time. These span the need to re-build public infrastructure destroyed in World War II, through to supporting national public-private partnership (PPP) initiatives, to, more recently, the need to decarbonise through supporting the growth of the green economy. Despite their differences, each represents a powerful policy tool for their respective governments.

## 1.1 DEFINING NIBS

A NIB can be defined as a wholly or partially, publicly-owned financial institution, set up to support government policies in the infrastructure space. Characteristics of NIBs, which can be used to define them, include:

- a major or exclusive focus on infrastructure through the provision of long-term capital, most typically debt, although several NIBs can now also offer equity and mezzanine products;
- government equity investment into the institution with paid-in capital (sometimes with additional callable capital), with or without additional budgetary appropriations;
- credit enhancement of a large proportion of any debt issues by the NIB, either through the provision of callable capital or else through explicit guarantees – without the host government providing a guarantee – charging a risk-commensurate fee; and
- the absence of deposit-taking and often the absence of any dividend payments<sup>4</sup>, with profits typically being used to build up reserves and the scale of the balance sheet.

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<sup>3</sup> For the purposes of this report, the acronym NIB refers to institutions with a primary focus on infrastructure, national development banks, and financing facilities with a significant proportion of their portfolio focused on infrastructure financing.

<sup>4</sup> There are exceptions to this, for example, the Infrastructure Development Company Limited (IDCOL) in Bangladesh pays dividends to the government.

This definition includes institutions and vehicles predominantly focused on the financing of domestic infrastructure companies and projects, including equity funds which meet the above criteria, not just providers of debt. The analysis therefore includes NIBs; sub-national infrastructure banks; other national investment or development banks which do not have infrastructure-specific mandates but have significant assets in infrastructure; and related financing facilities (for instance, vehicles established to mobilise private finance into the infrastructure sector, such as the National Investment and Infrastructure Fund (NIIF) in India and the Indonesia State-Owned Infrastructure Financing Company (PT Sarana Multi Infrastruktur (PT SMI)). The term does not, however, include multinational infrastructure banks, such as the Asian Infrastructure Investment Bank (AIIB), or government-owned pension funds that invest in infrastructure. The analysis is also largely focused on the domestic operations of each NIB, not the international roles which several of the larger and more established NIBs have also been mandated to pursue.

Throughout this Guidance Note, the acronym NIB is used to refer to national infrastructure banks, sub-national infrastructure banks, other national investment or development banks which do not have infrastructure-specific mandates but have significant assets in infrastructure, and other related financing facilities.

## 1.2 REASONS FOR CREATING A NIB

Reasons for creating an infrastructure bank can vary based on a country's context but some common motivations include:

- to attract private-sector finance, particularly institutional capital;
- to secure finance for sub-national projects that might otherwise struggle to obtain financial support;
- to focus development on a specific sector (e.g. energy, transport) or sub-sector (e.g. clean energy, surface transport)<sup>5</sup>; and

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<sup>5</sup> Direct or indirect support of economic growth in a specific area – such as strengthening national exports, natural resources, etc. – is also a common motivation, although more characteristic of national development banks than NIBs. KfW and BNDES are good examples of this.

- to create a centre of expertise around infrastructure.

Whilst there are often practical reasons for establishing a NIB focused on infrastructure, they are not without detractors. In particular, critics of such institutions argue that they:

- give too much control of public infrastructure to the private sector<sup>6</sup>;
- can crowd out private investment and lending (raising questions of additionality in some contexts);
- use their position to influence state or municipal governments into prioritising infrastructure over other areas; and
- benefit large corporate investors in projects rather than project end-users.

In preparing a Guidance Note for countries that might be considering either setting up a new NIB or optimising the performance of an existing NIB, it is important that these risks are recognised and dealt with as far as possible, in their governance arrangements.

In choosing a range of different case studies, the aim is also to illustrate how the motivations for creating NIBs and corresponding challenges have been addressed. Following World War II, there were immense challenges to reconstruct physical infrastructure, including, but not limited to, roads, railways, bridges, power and water utilities, as well as housing. Particularly in countries such as (the then) West Germany and Japan, this required significant amounts of financial resources, which needed to be channelled systematically into the rebuilding of such assets. In the case of the former, initially the plan was for the Marshall Aid used to finance reconstruction to be paid back. At the same time, Kreditanstalt für Wiederaufbau (KfW) was established as the West German Government's main financing arm. In the post-war period, infrastructure financing in most of the world was seen as the responsibility of national and sub-national public sector bodies.

In the decades that followed, NIBs, such as KfW and the Development Bank of Japan (DBJ), as well as others in Europe faced with the responsibility of financing infrastructure to underpin post-war economic recovery, were focused not only on the mobilisation of the large-scale resources required for infrastructure, but also doing so on a basis that maximised affordability. To deal with the affordability challenge, they provided long-term debt capital to spread out the lumpy capital costs over many years at interest rates which were below those that commercial lenders could offer.

During the 1950s through to the 1980s, this approach, used to support the provision of publicly-owned infrastructure, was adopted in many more countries, including in Brazil in 1952, when the National Bank for Economic and Social Development (BNDES) was established, and in South Africa in 1983, when the Development Bank of Southern Africa (DBSA) was set up.

Since about 1990, however, as governments increasingly began to divest infrastructure assets, growing attention has been turned to private financing of infrastructure and how this can be achieved most efficiently and effectively. Whilst affordability challenges remain commonplace in most countries (in terms of the limitations faced by governments and customers in paying for services), there has been a concurrent need for local credit and capital markets to supply the necessary finance for policies of privatisation and the establishment of greenfield PPPs to deliver new infrastructure capacity. Where these policies have been adopted, many governments have tasked their existing NIBs with facilitating the mobilisation of private capital, whereas other governments have established different types of NIBs for such purposes.

To varying degrees, depending upon the breadth, depth and sophistication of national financial markets, this has created challenges in terms of:

- **Credit and capital markets** being able to provide capital as efficiently (cheaply) to the private sector as they can to governments, and in general, being able to offer the required long-term tenors, especially as regards commercial banks; and

<sup>6</sup> In many privatisation structures and some PPP structures, the government hands over significant control over the project to the private sector.

- A need for human and financial resources to enable the **development and preparation of projects**, which have subsequently been bid out to private sector operators and investors (as well as the need to create the necessary legal and regulatory frameworks).

In emerging markets with limited financial market development, both challenges have been typically problematic, with national credit and capital markets simply not being able to provide the long-term financing required. The only long-term capital available has been in foreign currencies, typically provided by international Development Finance Institutions (DFIs), or where projects have been able to access international foreign exchange markets. However, financing in foreign currencies can create problems of currency mismatches where project/utility revenues are received solely in local currency, whereas financing obligations are in a foreign currency<sup>7</sup>. This mismatch exposes those paying for the infrastructure services to potential exchange rate depreciation risks or higher prices due to hedging costs.

Given these challenges, NIBs have been asked to help mobilise financial resources, particularly local currency ones. Part of their contribution has involved raising and then on-lending local currency-denominated capital at cost efficient rates. However, even this has involved NIBs having to build new skills in credit evaluation, given the very different nature of credit operations undertaken on a risk basis, rather than where government is the ultimate borrower. In the case of the latter, the public sector is responsible for repaying the debt; in the former, there is a reliance on the ability of the business or project to generate sufficient cash to repay the loan. Greater understanding of project risk has also been accompanied by a move into the provision of equity and mezzanine finance.

NIBs have also occasionally played a role in helping to improve the bankability of project pipelines, especially through resourcing project preparation activities, as well as supporting capacity-building activities, for instance those targeted at asset management and maintenance, particularly at the sub-national level<sup>8</sup>.

In some instances, for example, in the case of BNDES in Brazil, this has led to the development of centres of expertise within NIBs. In the case of the recently-established Canada Infrastructure Bank (CIB), the CIB has been made custodian of the national pipeline of PPP projects.

New institutions have also been established in emerging markets, such as the NIIF in India, and PT SMI and PT Indonesia Infrastructure Finance (PT IIF) in Indonesia. This has also been the case in some more developed markets, with both Australia and, as mentioned, Canada having also recently established NIBs. In Australia, through the Northern Australia Infrastructure Facility (NAIF), there has been a specific focus on supporting PPPs in the most challenging national contexts, such as those in geographically remote areas, especially where there are under-privileged communities.

In India, the NIIF has recently added an equity financing capability to the credit capabilities of existing NIBs, such as the Indian Infrastructure Finance Company. Similarly, in Indonesia, PT SMI and PT IIF can both provide equity, supplementing debt capabilities. A particular niche that NIBs such as the China Development Bank (CDB) have been able to fill is that of being able to raise longer-term local currency financing, including potentially from institutional investors that can be on-lent across their portfolios. Many new NIBs that have emerged in developing countries, for instance, the Infrastructure Development Company Limited (IDCOL) in Bangladesh, were capitalised by sovereign International Development Association (IDA) and other credits provided to host governments by International Financial Institutions and then on-lent to the NIB.

More recently, climate change challenges have had implications for infrastructure finance. Whilst funding for such infrastructure has been a mix of user charges and subsidy payments (whether from tax-payers or bill-payers), much of the finance has typically been private, whereby private investors and lenders have had to deal with new technology and construction risks (such as in the case of off-shore wind). Again, either the operations of existing NIBs have been expanded to address these challenges, for example KfW, the DBSA and BNDES, or else new NIBs have been established, such as the Green Investment Bank (GIB) in the UK and the Clean Energy Finance Corporation (CEFC) in Australia.

<sup>7</sup> Some infrastructure projects will have some revenues in foreign currency, for example, ports and airports.

<sup>8</sup> See related GI Hub report on Governmental Processes Facilitating Infrastructure Project Preparation, available at <https://www.gihub.org>. Another related product is the GI Hub Infrastructure Project Pipeline, available at <https://pipeline.gihub.org/>.

### 1.3 GUIDANCE NOTE PURPOSE

In developing a Guidance Note for countries seeking to set up NIBs or looking to reform existing ones, it is useful to assess their role in light of the challenges and motivations outlined previously. This includes not only their products but also their capital-raising operations and how they have sought to work with private finance providers in evolving and more complex financial markets. From this, it is possible to identify good practice in the provision of financial products which mobilise third-party private capital, and assistance to line ministries in project preparation, together with appropriate strategic focus; appropriate institutional and governance structures; and performance monitoring which can help maximise their relevancy, efficiency, effectiveness, impact and sustainability.

#### 1.3.1 Choice of case studies

In order to explore how different types of NIBs have sought to address these issues, 11 case studies have been chosen (selected from the approximately 250 NIBs currently active). In selecting the case studies, age of institution, size, products offered, sector focus and geography were considered in order to capture a range of contexts and experiences. In addition to these 11 case study institutions, several other NIBs which illustrate particular points are also referenced.

All of the examples demonstrate that NIBs are, essentially, public sector institutions, in light of their ownership and the role of government in appointing the board of directors. Key aspects of the ownership and governance of the chosen case studies are set out in Table 1.1 below.

**Table 1.1: Case study institutions' ownership and governance**

Institution	Company type	Ownership	Board members	Supervision and regulation
<b>BNDES Brazil</b>	Federal public company	Wholly owned federal entity <sup>9</sup>	Appointed by the President of Brazil	Central Bank of Brazil
<b>CDB China</b>	DFI, Status of a Ministry	Wholly owned by the government, of which: 36.54 percent Ministry of Finance (MoF); 24.68 percent Subsidiary of China sovereign wealth fund; 27.19 percent subsidiary of the State Administration for Foreign Exchange; 1.5 percent National Council for Social Security Fund	Four appointed from government agencies, six appointed by equity shareholders, the other three are Executive Directors, including the Chairman and Vice Chairman of CDB	People's Bank of China
<b>CEFC Australia</b>	Corporate Commonwealth entity	Government-owned	Government-approved appointees	Accountable to parliament through ministers
<b>Connecticut Green Bank (CGB) United States</b>	Quasi-public agency created by state legislation	Government-owned	Board has 11 voting and two non-voting members The Chairperson of the Board is appointed by the Governor. Remaining members appointed by the general assembly	State legislator

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<sup>9</sup> Sponsored by the Ministry of Development, Industry and Foreign Trade

Institution	Company type	Ownership	Board members	Supervision and regulation
<b>CIB Canada</b>	Crown corporation	Wholly owned by the federal government	Appointed by cabinet on minister's recommendation	Parliament through the Minister of Infrastructure and Communities
<b>DBJ Japan</b>	Corporation	Wholly owned by MoF. In the process of privatising.	Appointed by MoF	MoF
<b>DBSA South Africa</b>	Specific legal and regulatory status	Government-owned	Appointed by minister of finance, 10 members are independent non-executives	Government/ Treasury
<b>GIB United Kingdom</b>	Public company	100 percent of shares held by UK government until 2017 <sup>10</sup>	Largely independent board, Department of Business, Innovation and Skills <sup>11</sup> could appoint chair	Government
<b>KfW Germany</b>	Public law institution	80 percent federal government, 20 percent federal states	Appointed by supervisory board of German ministers	German MoF,
<b>NIIF India</b>	Trust	Initially 100 percent government ownership, now 49 percent, remaining 51 percent are third-party capital	Board of Directors: shareholder representatives and independent directors; No representatives from government or investors on the Investment Committee	Governing council: government, investors' experts
<b>PT SMI Indonesia</b>	Non-bank financial institution limited liability company, state-owned enterprise	100 percent owned by government	Appointed by the MoF	Regulated by the MoF

Source: CEPA analysis of country case studies.

<sup>10</sup> In 2017, the GIB was sold to Australia's Macquarie Group.

<sup>11</sup> The Department of Business, Innovation and Skills no longer exists. Its successor is the Department of Business, Energy and Industrial Strategy.

It is also important to recognise that the roles and mandates of different NIBs can change over their lifetimes, albeit often subtly. This is set out in the choice of case studies listed in Table 1.2 below. There is also considerable difference in how individual NIBs have anticipated change and proactively adjusted, or have been crisis driven, depending on their governance arrangements.

**Table 1.2: The rationale for establishment and current mandates of the case study NIBs**

Institution	Rationale for establishment	Present mandate/key developments
<b>KfW Germany 1948</b>	To provide financing for the reconstruction of post-war Germany	To improve economic, social and ecological living conditions. KfW is now a group of entities; KfW IPEX-Bank GmbH was spun off in 2008 and the German Investment Corporation (Deutsche Investitions- und Entwicklungsgesellschaft or DEG) was created to support the private sector in developing countries. Domestically, KfW has focused on small and medium-sized enterprises (SMEs), provision of social infrastructure and renewables.
<b>DBJ Japan 1951</b>	To finance and support development of important domestic industries as part of post-war recovery	To contribute to the smooth supply of long-term business funds and to the sophistication of financial functions
<b>BNDES Brazil 1952</b>	To implement and carry out the Federal Government's investment policy	To support programs, projects, construction and services related to the country's economic and social development. Original agency converted to state-owned enterprise (SOE) in 1971 and then a group structure in 1982 with BNDES Participacoes (BNDES Investments), FINAME and BNDES Ltd. Since 2015, BNDES has focused on catalysing third-party capital, driven in part by the removal of fiscal support.
<b>DBSA South Africa 1983</b>	To advance the development impact in the region, originally as part of apartheid era homeland system	To expand access to development finance, to integrate and implement sustainable development solutions, to improve quality of life through the development of social infrastructure, support of economic growth and regional integration, and to promote the sustainable use of scarce resources. Now in transition after losses at sub-national level led to government equity injection.
<b>CDB China 1994</b>	To finance and implement the Chinese government's domestic economic development strategy	To enhance national competitiveness and improve people's livelihood, the CDB is a policy bank that is largely domestic, but activities range from the sub-national level to international. It is a major developer of capital markets and promoter of CNY internationalisation. Originally set up as implementation arm of State Planning Council but converted to joint stock corporation in 2008 and DFI in 2015. Operations accelerated after global financial crisis in 2008. Major problems of non-performing loans at sub-national level in late 1990s gradually worked out using asset management companies and shift to more commercial business model.
<b>PT SMI Indonesia 2009</b>	To catalyse Indonesian infrastructure development after years of low investment	Part of major reform programme to address stagnation following Asian financial crisis in 1998; low infrastructure investment levels in early 2000s led to an enhanced status of the MoF and a series of funds and facilities being established. PT SMI was one of these, and was established in 2009. PT IIF was then established in 2010 to act more in the private sector space, but also provide equity, FDI and support for capital market development; PT IIF is seen as complementary, in which PT SMI has a 30 percent stake.

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Institution	Rationale for establishment	Present mandate/key developments
<b>CGB USA 2011</b>	To support the Governor's and Legislature's energy strategy to achieve cleaner, less expensive, and more reliable sources of energy while creating jobs and supporting local economic development	To work with private-sector investors to create low-cost, long-term sustainable financing to maximise the use of public funds for clean energy.
<b>CEFC Australia 2012</b>	To facilitate increased flows of finance into clean energy and energy efficiency sectors, and support the government's commitments to carbon emissions reductions	To mobilise investment in renewable energy, low-emissions and energy efficiency projects and technologies in Australia, and to finance Australia's clean energy sector.
<b>GIB UK 2012</b>	To accelerate the UK's transition to a greener, stronger economy	To reduce greenhouse gas emissions, advance efficiency in the use of natural resources, protect/enhance the natural environment and biodiversity; to promote environmental sustainability. Privatised through a trade sale to Macquarie in 2017.
<b>NIIF India 2015</b>	To address long-term financing needs of the Indian infrastructure sector	To maximise economic impact through infrastructure development in commercially viable projects.
<b>CIB Canada 2017</b>	To provide low-cost financing for new infrastructure projects, and support where a lack of capital represented a barrier to progressing infrastructure projects	To invest in revenue-generating infrastructure projects of public interest; attract private sector and institutional investment; to build a portfolio of investments contributing to Canada's greenhouse gas reduction goals.

Source: CEPA analysis of country case studies.

#### 1.4 STRUCTURE OF THE GUIDANCE NOTE

The evolving role of NIBs will be analysed by considering:

- the traditional NIB model and how this has evolved over time to meet different policy requirements (Section 3);
- the role of NIBs in supporting PPPs and the different capabilities required for this, in both developed and emerging markets (Section 4);
- how NIBs have been used to support renewables and other climate change initiatives (Section 5); and
- what can be concluded with regards to major lessons learned and NIB good practice (Section 6).

The report is accompanied by a series of Annexes:

- **Annex A** – sets out some key concepts necessary to understanding the role of NIBs;
- **Annexes B through L** – present the 11 stand-alone case studies; and
- **Annex M** – lists the sources consulted in the presentation of the report.