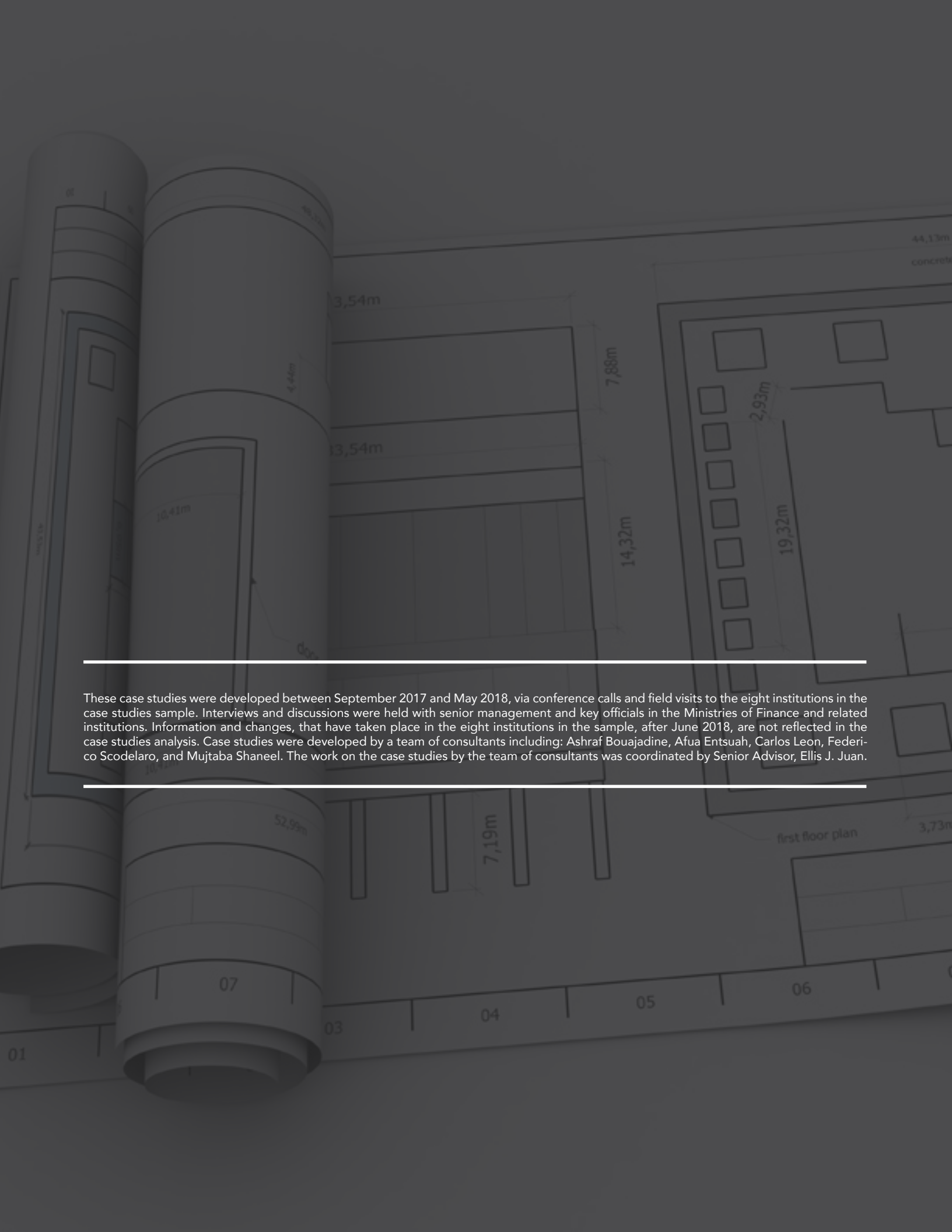




# Global Review of Public Infrastructure Funds

## VOLUME II. CASE STUDIES

(FEBRUARY 12, 2019)



These case studies were developed between September 2017 and May 2018, via conference calls and field visits to the eight institutions in the case studies sample. Interviews and discussions were held with senior management and key officials in the Ministries of Finance and related institutions. Information and changes, that have taken place in the eight institutions in the sample, after June 2018, are not reflected in the case studies analysis. Case studies were developed by a team of consultants including: Ashraf Boujadine, Afua Entsuah, Carlos Leon, Federico Scodelaro, and Mujtaba Shaneel. The work on the case studies by the team of consultants was coordinated by Senior Advisor, Ellis J. Juan.

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# FOREWORD

Access to sustainable infrastructure is critical to enabling economic opportunity and meeting the Sustainable Development Goals (SDGs) by 2030. But developing countries around the world continue to face challenges in financing sufficient infrastructure – estimated at 4.5 percent of GDP for lower and middle-income countries – to meet the SDGs, increase economic growth, and reduce poverty and inequality. Further, climate change has exacerbated these infrastructure investment needs, and the incremental cost to supply climate resilient and environmentally sustainable infrastructure ranges from 9 percent to 27 percent over and above total investment needs.

With COVID-19 pandemic impacting the whole world, public budgets are becoming even more constrained, and mobilising private investment into infrastructure becomes ever more critical than ever as countries exit the crisis stage of COVID-19 even more fiscally constrained. The current COVID-19 crisis is highlighting importance of two key objectives: (i) safeguarding delivery of essential infrastructure services (and related jobs), by supporting infrastructure service providers in the private and public sectors; and (ii) stimulating economic recovery through investment in labor-intensive and growth-enhancing infrastructure projects through Development Banks, public investment and PPPs. As countries use infrastructure investment as a post-crisis economic stimulus and to meet the SDGs, they need to do so by being informed by best practices, good governance, transparency, fiscal sustainability, and ensuring that all infrastructure investment – by both public and private – supports low-carbon pathways and strengthened resilience to both climate change and shocks like COVID pandemic. One of public policy instruments implemented by governments to encourage private finance has been the establishment of Public Infrastructure Funds (PIFs).

Given public sector fiscal constraints under normal circumstances, and increased levels given COVID pandemic and climate change challenges, leveraging additional sources of finance for infrastructure development will be critical to closing the infrastructure financing gap. Supplementing scarce public resources by sustainably leveraging private financing lies at the heart of the World Bank Group's approach for mobilizing finance for development, which encourages the pursuit of private sector financing solutions for infrastructure development. Implementing such an approach requires the design of effective public policy approaches and instruments to address market failures that may inhibit or restrict access to private finance.

There is no one-size-fits-all public policy approach to creating an appropriate enabling environment for private finance. The World Bank Group and other Multilateral Development Banks (MDBs) provide a broad range of support to address specific market failures within a country context, such as improving investment climates, increasing the availability of long-term local currency financing, maturing underdeveloped capital markets, and deepening project pipelines through robust public investment planning to enable efficient absorption and allocation of additional infrastructure investment.

One of the most common, but least written about, public policy instruments implemented by governments to encourage private finance has been the establishment of Public Infrastructure Funds (PIFs). At this point, readers may ask "what are PIFs?" One of the benefits of PIFs is that they are unique, adapted to meet specific country contexts, but conversely this can make them hard to accurately define. Put simply, they are a specific type of infrastructure financing fund that uses public resources to leverage much larger amounts of private financing for infrastructure development. Indeed, the quest to adequately answer the "what are PIFs?" question, and understand their design features and success factors, motivated the development of this World Bank Group report.

This report presents the findings of a global review of a cross-section of PIFs in Argentina, Bangladesh, Canada, Colombia, Ghana, India, Indonesia, and South Africa. These case studies provided a range of differentiated lessons learned given their geographical distribution, governance structures, institutional capacities, availability and types of financing products, and purposes. Information on the case studies was drawn from country visits, interviews, and further desk research based on publicly available reports and archives. Detailed write-ups of each case study are included as a complementary Volume II to this report.

This report is intended to provide a resource for World Bank Group colleagues and public sector officials to use when considering the establishment of a PIF. We hope that you will find the information and analysis in this report useful and practical. Ultimately, this report's goal is to improve the design and performance of PIFs, and to enhance their contribution to the financing and provision of infrastructure services.

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## **ACKNOWLEDGEMENTS**

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Funding for this publication was provided by the World Bank, IADB, and PPIAF. A multi-donor trust fund housed in the World Bank, PPIAF provides technical assistance to governments in developing countries. Its main goal is to create enabling environments through high-impact partnerships that facilitate private investment in infrastructure. For more information, visit [www.ppiaf.org](http://www.ppiaf.org).





# METHODOLOGY AND APPROACH OF THE GLOBAL REVIEW

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This Global Review examines current practices by developing countries in different regions of the world to create and support the evolution of public infrastructure funds (PIFs) as policy instruments to promote infrastructure development. The Global Review is based on the analysis of eight different case studies covering the most important developing regions in terms of infrastructure development needs (Asia, Africa, and Latin America) and one case study of a developed nation (Canada).

## PURPOSE AND SCOPE

This review has been conducted and written as a resource for public sector staff considering public infrastructure fund (PIF) initiatives in their respective countries. To that end, this paper provides a review of ongoing funds from a variety of geographic regions and their efficacy as a policy instrument in promoting infrastructure development. The scope of this research was centered around eight case studies with a breadth of different functions and localities to ensure a holistic understanding of the differences between funds given their structures, institutional capacities, availability and types of financing, and purposes. Seven of these case studies are in countries with distinct infrastructure development needs (i.e., India, Bangladesh, Indonesia, Ghana, Colombia, Argentina, and South Africa), and one covers a PIF in Canada, a developed country.

## METHOD AND APPROACH

Information and data for this paper was collected from publicly available reports and archives, as well as interviews with members of government related to PIFs and their functions and inceptions. In the former category, annual reports and generalized literature and studies regarding those PIFs studied were referenced. For those PIFs selected to be studied in greater detail, interviews and country visits were performed with senior officers and the respective CEO of each institution. As PIFs are dependent upon a variety of interlocked and corresponding government bodies, interviews were also performed with senior officers in the respective country's Ministry of Finance (or similar supervisory body). Beyond the initial visit and round of interviews, a number of conference calls were had to review and analyze related data and findings, and to hone in on key lessons and best practices. In those case studies wherein the World Bank and/or IFC played a supporting role (i.e., IIGF, GIIF, FDN), supplementary interviews were carried out with related senior officers in those organizations who were responsible for such operations.

In order to define, measure and compare the successes of PIF initiatives in the eight case studies, this paper focuses on the subject's capacity to leverage private finance and facilitate the use of public-private partnerships; as is consistent with the World Bank's "Maximize Finance for Development" approach.

## DEVELOPING COUNTRIES AND PIFS

As of the 2016 edition of the World Bank's World Development Indicators, countries have been categorized into four groups based on gross national income per capita: low-income countries (US\$1,025 or less); lower-middle-income countries (US\$1,026–US\$4,035); upper-middle-income countries (US\$4,036–US\$12,236); and high-income countries (US\$12,237+). Although this paper aims at aiding less developed countries (LDCs) in establishing PIFs, the lack of relevant experience with PIFs in lower income countries (except for Bangladesh), has moved research to those funds in middle and higher income countries. However, the author holds that lessons learned and best practices from this study are transferable to LDCs. This paper references countries as “developing economies” and “emerging economies” as a parallel to the World Bank's system of categorization.

## SELECTING THE PIFS FOR THE CASE STUDIES

Selecting the PIF for the case studies was based on geographical distribution, interest of the institution in participating in the global review, access to public information and range of product offering and scope of work. The team encountered some initial challenges when defining the sample. Mexico's Fondo Nacional de Infraestructura (FONADIN), a relatively recent (2008) infrastructure fund funded with the proceeds of the second wave of concessions for Mexico's toll road program, decided not to participate due to upcoming presidential elections in the country at the time of the research. Other relatively larger public infrastructure funds in Africa and Asia were difficult to access and feedback was not received within the established timeline to initiate field work. Thus, the team ended up with a sample of eight funds that provide a rich scope of activities and typology.

- Institutions that provided the full range of financial products supporting infrastructure finance (Colombia's Fondo de Desarrollo Nacional, FDN; Ghana Infrastructure Investment Fund, GIIF; India Infrastructure Finance Company Limited, IIFCL; and the Canada Infrastructure Bank, CIB).
- Institutions specialized in a single financial product line supporting private capital mobilization (Indonesia Infrastructure Guarantee Fund, IIGF).
- Institutions exclusively supporting subnational infrastructure finance (Argentina's Fondo Fiduciario Federal de Infraestructura Regional, FFFIR).
- Institutions specialized in providing support to a single infrastructure sector (Bangladesh's Infrastructure Development Company Limited, IDCOL).
- Institutions exclusively funded by international donors (Infrastructure Investment Programme for South Africa, IIPSA; Development Bank of South Africa).

The Global Review was written primarily for an audience of public sector staff considering PIF initiatives in their respective countries. It defines the success of a PIF via its capacity to optimize the leveraging of private financing, consistent with the World Bank approach, “Maximize Finance for Development.” It analyzes the PIFs' efforts and most efficient strategies to support public-private partnerships (PPPs). The Global Review is organized as follows:

**Volume I. Global Review of Public Infrastructure Funds: Challenges Ahead and Key Factors for Success.** Chapter 1 provides background on the relevance of sustainable infrastructure, the available funding sources, the challenge of financing infrastructure at adequate terms and conditions in emerging economies, and the need to maximize private capital mobilization. Chapter 2 defines the role of public infrastructure funds, discusses the role of public finance in infrastructure, and describes the associated fiscal management challenges. Chapter 3 summarizes the key financial instruments offered by public infrastructure funds. Chapter 4 defines the main challenges faced by PIFs in developing countries. Chapter 5 defines the key factors driving the success of PIFs and offers guidelines for the successful implementation of PIFs in developing countries.



**Volume II. Global Review of Public Infrastructure Funds: Case Studies.** Chapter 1 provides a global inventory and typology of public infrastructure funds. Chapter 2 introduces the eight case studies. The case studies follow. The eight case studies analyzed and included in this volume II are:

- Argentina, Fondo Fiduciario Federal para Infraestructura Regional (FFFIR)
- Bangladesh, Infrastructure Development Company Limited (IDCOL)
- Canada, Canada Infrastructure Bank (CIB)
- Colombia, Financiera de Desarrollo Nacional, FDN
- Ghana, Ghana Infrastructure Investment Fund (GIIF)
- India, India Infrastructure Investment Finance Company Limited (IIFCL)
- Indonesia, Indonesia Infrastructure Guarantee Fund (IIGF)
- South Africa, Infrastructure Investment Program for South Africa (IIPSA)

## FISCAL MANAGEMENT AND PUBLIC PRIVATE PARTNERSHIPS (PPP)

One of the key objectives of the global review is to analyze the impact of these institutions facilitating the use of PPPs and mobilizing private capital, consistent with the World Bank's MFFD. Concurrently, another relevant objective is to provide guidelines and lessons learned from past experiences to public sector officers in emerging countries considering adopting similar institutions (PIFs). When developing the document, and evaluating best practices that can better leverage private finance, while at the same time, keeping a sustainable fiscal management of the PIFs commitments, the authors encountered the "prevailing" dilemma between an aggressive PPP policy demanding strong public support (i.e., guarantees, subsidies, etc.) and a sustainable and rigorous fiscal policy.

Striking the right policy balance between the effectiveness and impact of PPPs, and the fiscal management of the created direct and contingent liabilities is a challenging exercise of public sector management. This document does not attempt to provide a solution for this delicate policy balance. It is not the main thrust of the global review. This document illustrates the use of different PIFs mechanisms to mobilize private capital (PPPs) and highlights the fiscal risks of inadequate management of the direct and contingent liabilities associated with a PPP program.



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This case study was developed between October 2017 and January 2018. It included a field visit to Buenos Aires, Argentina, from November 7 to November 10. The development of the case study is based on available public information as well as interviews with key senior management at the FFFIR and Senior Officers at the Ministry of Interior. The case study was written by Federico Scodelaro (IDB consultant), under the supervision of Ellis J. Juan (World Bank Senior Advisor coordinating the global review).

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# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT

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## **Argentina Case Study** **FFFIR—Federal Fiduciary Fund** **for Regional Infrastructure.** **Fondo Fiduciario Federal de** **Infraestructura Regional.**

## EXECUTIVE SUMMARY

The FFFIR (Fondo Fiduciario Federal de Infraestructura Regional, Federal Fiduciary Fund for Regional Infrastructure) is an Argentine infrastructure fund that lends to provinces. It is the only public infrastructure fund (PIF) in the sample that focuses exclusively on subnational entities.

It finances relatively small projects with high impact on local communities (such as street paving, and construction or upgrading of schools, water treatment plants, and public health units). The FFFIR is a decentralized and independent government entity.<sup>1</sup> It falls within the purview of the Ministry of Interior, which in Argentina is also responsible for urban development, housing, water and sanitation and public works. The FFFIR Fund lends directly to provinces (and through them to municipalities), using the revenues from tax co-participation funds (funds collected from federal taxes that are directly distributed to provinces) as collateral, thus resulting in a healthy loan portfolio with no defaults and/or delinquent accounts to date.

The FFFIR is a decentralized, non-bank financial institution capitalized from the proceeds of the privatization in 1997 of Banco Hipotecario Nacional (BHN), one of Argentina's leading mortgage lenders.<sup>2</sup> FFFIR does not have annual public budget support, and has achieved full cost-recovery status by charging its borrowers market-based interest rates and a fee for technical assistance, while maintaining a lean and efficient staffing structure.

The FFFIR is a public policy instrument for the Ministry of Interior to achieve its goals and objectives, and to develop and strengthen its relationship with subnational entities in a federal country. During its 20-year existence (1998–2017), the FFFIR has received the equivalent of US\$448 million in capitalization proceeds (amounting to nearly 40 percent of the BHN shares), and has on-lent to provinces an amount equivalent to US\$2 billion—a leverage ratio close to 5. It has no outstanding debt and has a solid financial standing.

The FFFIR was created by Law 24855 in August 1997. The Law also regulated the privatization of the Banco Hipotecario Nacional (BHN), establishing that the proceeds of the sales of shares of the institution would capitalize the newly created FFFIR. The proceeds of the sale were transferred to a Public Trust at Banco Nacion in 1998.<sup>3</sup> Banco Nacion acts as the Trustee of the FFFIR Trust, and the Government of Argentina (GOA) is the ultimate beneficiary. The Law establishes that 30 years after its creation, unless the law is modified, all assets of the FFFIR will revert back to the Government of Argentina.

Decree 924/97 (1997) created the FFFIR Assistance Fund (FAFFFIR) with the sole purpose of stipulating the ways in which the sale of the BHN shares (40 percent of the outstanding shares) should initially capitalize the FFFIR, and the ways in which the remaining BHN shares (60 percent of the outstanding shares) should be used to capitalize the FFFIR in ongoing operations (through the sale of shares, use as collateral for borrowing purposes, and so on). This body acts more like a FFFIR's oversight committee exclusively for issues related to the capitalization of the institution and the use of remaining BCN shares in FFFIR's trust at Banco Nacion.

The FFFIR was originally funded via the proceeds of BHN partial sale. The funding was adequate and the initial capitalization strategy was key to the relative success of the institution during years of volatility in the Argentine economy. Under current legislation, the extent of FFFIR's contingent liability on the Government of Argentina is capped at the extent of the value of the remaining BHN shares and the FFFIR's current equity position.

By December 2016, the FFFIR had a balance of approximately Arg\$9,000 million (equivalent to approx-

<sup>1</sup> Decentralized and independent government entities are referred to in the Argentine legal framework as autarchic institutions.

<sup>2</sup> BHN was the largest second-floor lender of mortgages in Argentina. It was very successful in the development of the local market for mortgage-backed securities in the 1990s. The government included BHN as an asset to be transfer to the private sector in the economic reform program of the mid-1990s.

<sup>3</sup> Banco Nacion is the state-owned largest bank in Argentina with multiple functions in local economic development and the stabilization of local financial markets. It is the preferred bank for public sector entities for their different commercial banking activities. It is a decentralized entity with financial autonomy and is not subject to the public law procurement process.



imately US\$512 million). The FFFIR is not leveraged. The current total debt (including labor, taxes, and other liabilities), is less than 9 percent of the total equity. Given this situation, the effective financing of the FFFIR is limited to its only source of funding, the amortization of capital and interest of the portfolio that is due each year. Given that the FFFIR portfolio has relatively short maturities, due the nature of the local infrastructure it finances (with tenors of 3 to 4 years), the annual credit capacity is approximately Arg\$1,200 million per year (equivalent to US\$80 million).

The main challenge facing the FFFIR is its limited credit capacity, far from the large investment needs in Argentina's ambitious infrastructure plan—which amounts to US\$ 132 billion (2017 infrastructure plan). The FFFIR has proven to be an efficient vehicle for subnational infrastructure financing, yet it is constrained by its capitalization options. The Ministry of Interior is currently considering different capitalization options to increase the lending limits of the FFFIR. These are described in the final section of this case study.

## 1. COUNTRY INFORMATION

### **Brief Description of Argentina**

Argentina is a federal constitutional republic located in South America, composed of 23 provinces and 1 autonomous city (the Autonomous City of Buenos Aires). It has a total population of around 44 million.

Due to its rich natural resources, a diversified industrial base, and an export-oriented agricultural sector, Argentina's economy is Latin America's third largest, and the second largest in South America, behind Brazil.

In 2016, economic activity and employment contracted, while inflation ran high. Economic activity fell by 2.3 percent, mainly because of a substantial contraction in investment and private consumption, which suffered from the decrease in real wages that resulted from a spike in inflation. Annual inflation was about 40 percent in 2016, driven by peso depreciation and the increase in energy tariffs, but decelerated rapidly in the second half of the year. Low economic activity and high inflation had a negative impact on labor markets, with formal employment falling by an estimated 1.4 percent.

2016 was a year of substantial economic reforms, led by the new administration, which took power in December 2015. The new administration adopted a more "market-driven" approach, differentiating itself from the previous administration. The government rapidly implemented various macroeconomic reforms and initiated a program of structural changes. These reforms include:

- Return to the international financial markets (March/April 2016). Argentina reached a major deal with holdout creditors at the beginning of April and successfully returned to the international financial markets, with a bond issuance of US\$6.5 billion.
- Reduction of export taxes (December 2015), mostly affecting agricultural goods including beef, wheat, and corn, while cutting the tariff on soybeans by 5 percentage points. The unwinding of taxes on agricultural exports comes as the administration is trying to rebuild international reserves, now at a nine-year low.
- Foreign exchange controls lifted after four years and the exchange rate unified (December 2015). Exporters and importers, as well as the public, are now able to buy foreign currency freely at a unique exchange rate without requiring an authorization from the Federal Tax Agency.
- Credibility of statistics (ongoing). The government declared a "statistical emergency" in December 2015 and the national Institute of Statistics (INDEC) was allowed to suspend the publication of statistics until the existing methodologies were revised. After almost six months, INDEC resumed reporting statistics on inflation, balance of payment, industrial production and construction activity. New monthly GDP figures were resumed at the end of June 2016. Poverty statistics were recently published after a three-year pause.

- Energy and transport subsidies were reduced while a social tariff for low-income users was kept low (March/April 2016). Electricity and gas tariffs were increased. The new scheme included price incentives to reduce energy consumption and a social tariff for every public service destined to low-income users. Transport subsidies were also reduced. The overall fiscal saving of these measures was initially estimated to be 0.9 percent of GDP.
- The government expanded the social safety net in the second quarter of 2016. The government expanded family allowances, which will now reach 4.1 million children, up from 2.9 million.

Fiscal targets for 2016 were not only met but exceeded. The primary federal fiscal deficit was 4.6 percent of GDP in 2016 – less than the official target of 4.8 percent, even though a fiscal stimulus was launched in the second half of the year. This compares to a primary deficit in 2015 of 4.0 percent of GDP. Fiscal targets were met mainly due to the success of the ongoing tax amnesty program launched by the government, which resulted in additional revenues of 1.3 percent of GDP, compensating for an overall decrease in tax pressure. The decrease in subsidies also generated fiscal savings of close to 0.7 percent of GDP. On the expenditure side, current spending rose due to increases of social plans to protect the vulnerable (such as child allowances) (an increase of 0.1 percent of GDP), changes to the pension system (+0.1 percent of GDP), and an increase in transfers to provinces (+0.5 percent of GDP). Capital expenditure fell by 0.4 percent of GDP, mostly in the first semester, as most ongoing public works came to a standstill during the transition to the new administration.

As some of the positive effects of recent reforms kick in, 2017 is expected to be a year of positive growth and declining inflation. Real wages and consumption are expected to recover as inflation decreases, and private investment is predicted to grow as private sector projects in the pipeline start to materialize. GDP is estimated to expand 2.9 percent in 2017. Economic growth is expected to be broad, coming from all sectors, led by agriculture. So far, GDP has grown 0.4 percent in Q1 2017 (year to year) and 2.7 percent in Q2 2017 (year to year).

## Demand for Infrastructure Investment

Infrastructure is a pillar of development, as it stimulates economic growth and competitiveness, and is essential to improving the quality of life and social and economic inclusion. Argentina has the difficult task of reducing the fiscal deficit and tax pressure while increasing infrastructure spending.

Between 2008 and 2013, Argentina invested less than 2 percent of its GDP in infrastructure, including public and private investment.<sup>4</sup> This compares to figures of about 4 percent of GDP in most industrialized nations, 5 percent in Japan, and 8.5 percent in China.

The infrastructure investment gap (stock) for the country has been estimated at over 10 percent of 2014 GDP. Infrastructure investments need to increase by at least 2 percent of the 2014 GDP, per year,<sup>5</sup> for a number of years, to bridge that gap.

A recent report by the G20<sup>6</sup> indicates that the infrastructure gap is about US\$358 billion. About two-thirds of the missing infrastructure is subnational infrastructure. The current administration is committed to making large investments in public infrastructure, which has been a central theme in the 2017 electoral year (for mid-term legislative elections).

<sup>4</sup> IDB, *Financiamiento de la infraestructura en América Latina y el Caribe: ¿Cómo, Cuánto y Quién?* (2015).

<sup>5</sup> IDB, *Sustainable Infrastructure for Competitiveness and Inclusive Growth* (2014).

<sup>6</sup> G20 Global Infrastructure Hub, *Global Infrastructure Outlook* (2017).



## Economic Outlook

Key macroeconomic indicators are summarized in table 1. Argentina's debt-to-GDP ratio is relatively low, at 26 percent of GDP, which leaves room for a gradual adjustment of fiscal accounts. However, Argentina's fiscal deficit remains high, and the country must rely substantially on credit markets, with issuances in 2016 that amounted to 4.4 percent of GDP. Issuances in early 2017 were for US\$7 billion in 5-year and 10-year bonds, carrying interest rates of 5.6 percent and 6.9 percent rates, respectively – nearly 200 basis points below levels in 2016. The regained access to international capital markets and the current low debt-to-GDP ratio should not be a substitute for sustained fiscal consolidation, which is essential to avoid a negative impact on the cost of financing and investor confidence.

Table 1. Key Macroeconomic Indicators, Argentina, 2014–17

	2014	2015	2016	2017 (est.)
GDP (current US\$ billions)	563.6	629.4	515.6	546.0
Real GDP growth rate	-2.5	2.6	-2.4	2.9
GDP per capita (current US\$)	13,113	14,201	11,747	12,344
Federal government primary balance (% of GDP)	-3.4	-4.0	-4.6	-4.2
Current account balance (% of GDP)	-1.4	-2.5	-2.4	-2.6
General government expenditures (% of GDP)	39.1	40.9	43.3	42.5
Central government gross debt (% of GDP)	40.8	37.7	47.3	48.6

Source: INDEC, Ministry of Finance, 2017.

## Climate Change Strategy

Vulnerability to climate change is significant for the economic development of Argentina, given the economy's very high dependence on agricultural output. The intensification of extreme events (intense rainfall, floods, droughts, and heat waves) could have very adverse economic and social consequences.

Aware of these risks, Argentina has been active in international forums related to climate change. The country has officially ratified the United Nations' Paris Agreement (COP 21) to mitigate climate change. This agreement seeks to limit average temperature rise to 2 degrees Celsius, compared to pre-industrial levels.

Argentina currently accounts for 0.9 percent of global greenhouse gas emissions. To put this number into perspective, neighboring Brazil emits 2.5 percent of global greenhouse gas emissions. In its Nationally Determined Contribution, the country has pledged to cut emissions 15 percent by 2030. It also indicated that it could cut emissions by 30 percent if it receives international support for mitigation investments.

Since the COP 21 Meeting in Paris, the country has increased its focus on renewable energy generation. In August 2016, it launched a bidding process (the first round of the RenovAr program) for renewable power generation totaling 1100 MW, including wind, solar, and biomass sources, using a guarantee facility from the World Bank (FODER). The program later expanded to a Round 1.5 (November 2016) for a total of 1280 MW of renewable generation, and Round 2 (August 2017) for 1200 MW of new

generation. The final goal of this program is to increase the share of renewable energy in the country's energy matrix to 25 percent.

## 2. Description of FFFIR

The main objectives of the Federal Fiduciary Fund for Regional Infrastructure (FFFIR) are to assist the Argentine provinces, including the Autonomous City of Buenos Aires, in financing economic and social infrastructure works that promote the intensive use of labor, national integration, the reduction of socioeconomic imbalances, and regional development and commercial exchange. The Fund's motto is "20 years financing regional development and employment generation."

### Rationale for the Selection of the FFFIR Fund Case Study

The FFFIR is a relatively small, boutique infrastructure fund. The main characteristic that sets it apart from other funds analyzed in this publication is the fact that it targets subnational entities (mostly provinces, and cities when the provinces act as guarantors).

The Fund has other distinctions that are worth mentioning:

- Its guarantee mechanism (tax co-participation funds). These are funds from federal taxes that the federal government transfers directly to provinces, acting as a guarantee (see box 1). The guarantee is executed automatically after a set period of time, which results in no defaults and no delinquency in the Fund's portfolio.
- The disbursement and auditing mechanisms. These guarantee the execution of public works more quickly than regular procurement of public works by the federal government.

#### Box 1. The Tax Co-Participation System

The federal co-participation of taxes was incorporated into Argentina's constitutional system with the constitutional reform of 1994. It aims to coordinate the distribution of federal tax revenues to the provinces. Under the co-participation arrangement, the federal government retains its portion and redistributes the rest among the provinces and the Autonomous City of Buenos Aires.

##### Origin of the System

Since the ratification of the National Constitution of 1853, Argentina has adopted a federalist system, which entails three levels of authority: national, provincial and municipal. The Constitution simultaneously empowers the nation and the provinces to collect indirect taxes. In practice, this entails a double taxation, since both the federal government and the provinces can tax the same activity.

The severe world economic crisis of 1929 led to a general retraction of international trade flows. In Argentina, the impact was severe. Because the tax regime was focused on taxes on foreign trade, the national public treasury began to run out of resources. Under these circumstances, all internal taxes were unified, and a distribution system was established.

In 1935, the first tax co-participation system was implemented. It had two levels of distribution. The primary distribution established the federal share. The federal government was left with 82 percent of the resources and the provinces with 17.5 percent. The secondary distribution defined the distribution among the provinces. 30 percent was made according to the population, 30 percent according to expenditure, 30 percent according to the total resources of the province (before the implementation of the system), and a 10 percent in equal parts among all the provinces.

A 1988 law, Law No. 23,548, defines the system of co-participation that is currently in force. It established a primary distribution of 42.34 percent for the nation and 54.36 percent for the provinces. It also set aside 2 percent that is distributed equally among the eight provinces with the lower population density and relatively less economic development, and 1 percent to the National Treasury Advance Fund (ATN).

## Distribution of Tax Co-Participation Funds

The Constitution states that objective distribution criteria must be adopted that reflect a direct relationship between the competencies, services, and functions of the federal government, the provincial governments, and the Autonomous City of Buenos Aires, and resources they will receive. The distribution criteria must also provide an equal and supportive distribution that aims to achieve an equivalent degree of development, quality of life, and equal opportunities throughout the nation.

Finally, the Constitution states that there will be no transfer of competences, services, and functions between levels of government without the respective reallocation of resources and approval by Congress, when applicable, and by the interested province or the city of Buenos Aires where appropriate.

## History of the FFFIR

Law No. 24,855, which created the FFFIR, was enacted on July 22, 1997. It established the FFFIR as the main instrument of the Regional Development and Employment Generation Program. The origin of the Fund lies in the privatization process for the Banco Hipotecario Nacional (BHN). The Fund owns 54 percent of BHN's outstanding shares, but retains only 35 percent of the voting power. See box 2 for further details on the process.

### Box 2. Background on Banco Hipotecario Nacional and Its Privatization Process

Banco Hipotecario S.A. (formerly Banco Hipotecario Nacional) is an Argentinean commercial bank, founded in 1886, and a leading mortgage lender. It has over 1,500 employees.

The privatization of Banco Hipotecario was proposed by the executive branch and approved with the passage of Law 24,855 by the national Congress in August 1997.

The bill to Congress proposed the creation of the Federal Fiduciary Fund for Regional Infrastructure to develop an intense infrastructure program in the provinces. The proposal called for financing this program with the proceeds of the privatization of Banco Hipotecario Nacional (BHN).

The reasoning behind the proposal was to capture the value and take advantage of the resources that the national government had extended to restructure BHN since 1990. The restructuring included the relaunch of mortgage credit lines (first as a wholesale bank, and then as a retail mortgage lender). This restructuring increased BHN's market share and its visibility. The experience proved that it was possible to achieve large-scale financing of the bank's mortgage operations, without having to rely on a deposit base – and thus, without the need for a large and widespread branch network.

The reorganization of the capital base, the return to BHN's direct contact with the banking public, and the successful experience in the securitization of its mortgage portfolio proved that the bank could successfully compete in the market. The transfer of the bank's property to private investors could reallocated state assets, without detriment to the bank's continued ability to provide housing financing for Argentines – thus continuing to fulfill its social function.

In order to ensure continuity of the bank's activity, as in other privatization operations, the bill provided for the "golden share" that gave the Government of Argentina, as a shareholder, veto power to block decisions that could be alter the object of the bank or the continuity of its socially beneficial activities in the country.

At that time, the needs of the regional economies required large investments in infrastructure. The bill proposed that the resources produced by the sale of the BHN to the private sector be allocated to the Federal Fiduciary Fund for Regional Infrastructure, to be created by the same law. Once the object of public policy to expand access to housing finance has been fulfilled without the need to commit new public resources, the bill called for the monetization (total or partial) of the bank's capital to be redirected to meet another objective of government policy.

In this conceptual framework, the bill was submitted to the national Congress and was approved.

Article 4 of the Law establishes the extra-budgetary nature of the FFFIR, placing it within the “National Non-Financial Public Sector.” The Fund is “a subject of public, federal and interjurisdictional nature, susceptible to acquiring rights and contracting obligations.”

Its primary function is to assist provinces, including the Autonomous City of Buenos Aires, in the financing of economic and social infrastructure works that are labor intensive, promote national integration and the reduction of socio-economic imbalances, and support regional development and commercial exchange.

The financing is distributed according to provincial quotas, which are assigned with the guidelines established in Law No. 23,548 of Federal Co-participation. In addition, there is a special quota of Arg\$100 million (US\$5.7 million) that is distributed equally among the eight provinces with the lower population density and lower relative development. The provincial jurisdictions guarantee their credits through the Federal Co-Participation Funds (funds from federal taxes that the federal government transfers directly to provinces).

**Size and Balance Sheet Analysis**

To date, the FFFIR Fund has financed 575 projects throughout the country. It is a relatively small Fund, with assets that totaled Arg\$8.92 billion (US\$512 million) as of December 31, 2016. With liabilities for Arg\$703 million (US\$40.4 million), the net equity is equivalent to Arg\$8.21 billion (US\$472 million).

Figure 1 shows the liquidity index and debt ratio for FFFIR for the 2011–17 period. While the liabilities remained stable in nominal terms in Argentine pesos, the valuation assets rose with the valuation of the outstanding BHN shares of the Fund.

**Figure 1. Liquidity Index and Debt Ratio for FFFIR**



Source: FFFIR, Annual Report 2016 (2017 figures are through June 30, 2017.)

Figure 2. Evolution of the Net Worth of the FFFIR, 2011–17



Source: FFFIR, Annual Report 2016 (2017 figures are through June 30, 2017.)

### Financial Performance

The financial resources of the FFFIR come from the initial capitalization (sale of the shares of Banco Hipotecario Nacional), the net results from its investments, the dividends received for outstanding shares of the Banco Hipotecario Nacional S.A., and the net revenue from lending to subnational jurisdictions.

In 2016, net revenue on the lending activity totaled Arg\$1.02 billion (US\$58.4 million). The net results from investments rose to Arg\$458 million (US\$26.3 million). When subtracting operational costs, the net result for the year was Arg\$1.32 billion (US\$76 million).

Given the guarantee mechanism (the co-participation funds from the federal government act as guarantee for the loans), the FFFIR Fund has a healthy portfolio with no defaults and no delinquent accounts.

The fiduciary fund is replenished from the proceeds of the loan repayment. This gives the FFFIR a relatively small lending capacity, which currently is estimated at around US\$60 million per year, based on debt repayment profile.

### 3. INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE

#### Institutional Structure

Law 24855, which created the FFFIR, also regulated the privatization of the Banco Hipotecario Nacional (BHN), establishing that the proceeds of the sales of shares of the Institution would capitalize the newly created FFFIR (see Table 2 for the FFFIR's capitalization schedule).<sup>7</sup> The proceeds of the sale were transferred to a Public Trust at Banco Nacion in 1998.<sup>8</sup> Banco Nacion acts as the Trustee of the FFFIR Trust, and the Government of Argentina (GOA) is the ultimate beneficiary. The Law establishes that 30 years after its creation, unless the law is modified, all assets of the FFFIR will revert to the Government of Argentina.

**Table 2. Capitalization of the Proceeds of the Sale of BHN Shares, 1998–2016**

Date	Amount (Arg\$)	Exchange Rate (Arg\$/US\$)	Amount (US\$)	Reason for Capitalization
31-Mar-98	\$200,960,882	1.00	\$200,960,882	Net result of loan with Credit Suisse First Boston
17-Mar-99	\$81,018,275	1.00	\$81,018,275	Net result from sale of shares and options of Banco Hipotecario (February 1999)
21-Apr-99	\$46,654,712	1.00	\$46,654,712	Dividend distribution (1997 exercise) from Banco Hipotecario
20-Dec-99	\$14,996,745	1.00	\$14,996,745	Dividend distribution (1998 exercise) from Banco Hipotecario
20-Dec-99	\$15,357,176	1.00	\$15,357,176	Dividend distribution (1998 exercise) from Banco Hipotecario
20-Mar-00	\$15,755,765	1.00	\$15,755,765	Dividend distribution (1998 exercise) from Banco Hipotecario
16-May-00	\$7,475,500	1.00	\$7,475,500	Dividend distribution (1998 exercise) from Banco Hipotecario
14-Aug-00	\$8,214,478	1.00	\$8,214,478	Dividend distribution (1998 exercise) from Banco Hipotecario
2-Jul-01	\$10,000,000	1.00	\$10,000,000	Swap with Banco Nacion, according to Framework Agreement dated 11-30-2000

<sup>7</sup> BHN was the largest second floor lender of mortgages in Argentina. It was very successful in the development of the mortgage backed securities local market in the 1990s. The government included BHN as an asset to be transferred to the private sector in the economic reform program of the mid-1990s.

<sup>8</sup> Banco Nacion is the state-owned largest bank in Argentina with multiple functions in the local economic development and the local financial market stabilization. It is the preferred bank for the public sector in their different commercial banking activities. It is a decentralized entity with financial autonomy and not subject to public law procurement process.



13-Aug-01	\$10,000,000	1.00	\$10,000,000	Swap with Banco Nacion, according to Framework Agreement dated 11-30-2000
3-Sep-01	\$10,000,000	1.00	\$10,000,000	Swap with Banco Nacion, according to Framework Agreement dated 11-30-2000
22-Feb-06	\$58,700,000	3.07	\$19,101,855	Net result from sale of shares in Feb 2004, by exercise of options sold by the Fund in Feb 1999
7-Nov-14	\$64,980,938	8.51	\$7,635,833	Dividend distribution (2010 and 2012 exercise) from Banco Hipotecario
15-Jun-16	\$21,030,105	13.75	\$1,530,019	Dividend distribution (1998 exercise) from Banco Hipotecario
15-Jul-16	\$ 369,895	14.95	\$ 24,742	Interest from dividend distribution (2013 exercise) from Banco Hipotecario
<b>Total</b>	<b>\$ 565,514,469</b>		<b>\$ 448,725,980</b>	<b>Total capitalization of FFFIR</b>

Source: FFFIR, Department of Finance and Administration, 2017

### **FFFIR Assistance Fund (FAFFFIR)**

Decree 924/97 (1997) created the FFFIR Assistance Fund (FAFFFIR) with the sole purpose of stipulating the ways in which the sale of the BHN shares (40 percent of the outstanding shares) should capitalize the FFFIR; and the ways in which the remaining BHN shares (60 percent of the outstanding shares) should be used to capitalize the FFFIR (through sale, use as collateral for borrowing purposes, and so on).

This body acts more like FFFIR's oversight committee exclusively for issues related to the capitalization of the institution and the use of remaining BCN shares in FFFIR's Trust at Banco Nacion. A flexible interpretation of the responsibilities and rights of FAFFFIR could designate this body as the lender of last resort to the Fund in the event of a liquidity and/or solvency crisis. However, the decree specifically addresses the issue of "lender of last resort." It exclusively deals with the powers to decide capitalization of the Fund via the use of remaining BNH shares in the Trust (through the use of dividends, the pledge of remaining shares as collateral, the sale of the shares, and so on). An interpretation of Decree No. 924/97 (based on previous legal opinions) is that systemic risks affecting the liquidity and solvency of the FFFIR are to be assessed and a solution provided by the FAFFFIR.

The Decree created the FAFFFIR Committee, represented by the Secretary of Provinces (Ministry of Interior), the Secretary of Public Works (Ministry of Interior), the Secretary of Finance (Ministry of Finance), and the Secretary for Legal Affairs (Ministry of Finance). The Secretary of Finance chairs the FAFFFIR Committee and has the final tie-breaking powers in cases when Committee members cast tie votes.

### **FFFIR's Structure**

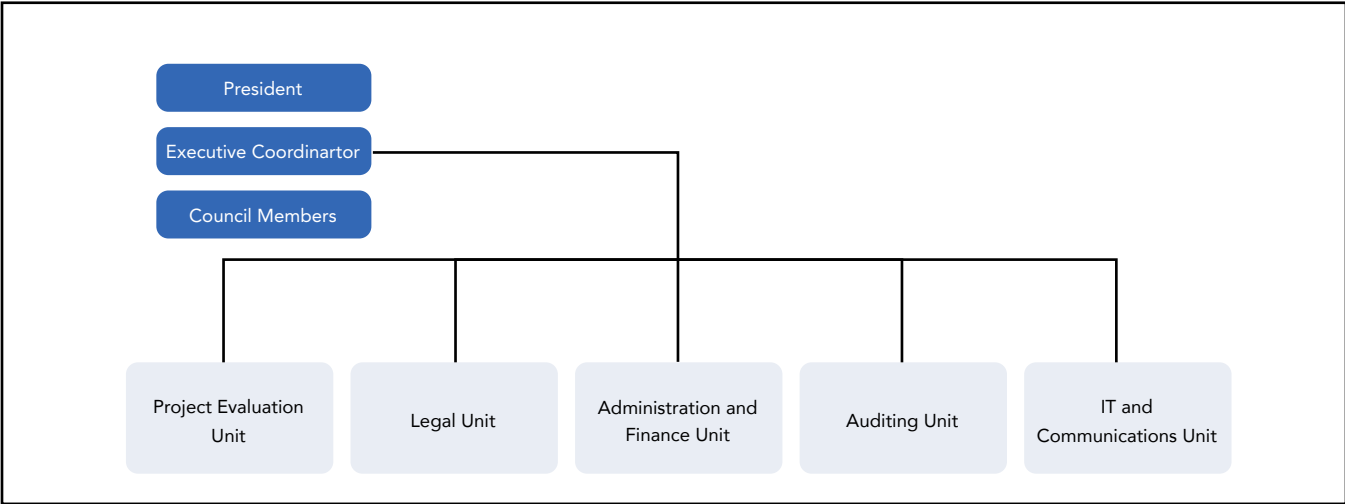
Decree 228/98 (1998) regulates the relationship between the Fund (FFFIR), the Trust (Proceeds from the sale of BHN), and the Trustee (Banco Nacion). It creates the governing body of the Fund, the Board of Administration (Consejo de Administracion). The Board of the FFFIR is composed of seven members

(Council Members)—five appointed by the executive branch of the federal government, and two appointed by the provinces. The Board is currently structured as follows:

- Chairman, Secretary of Provinces (Ministry of Interior)
- Chief Executive Officer (acts as a Director)
- Three External Directors (private sector)
- Secretary of the Board (FFFIR staff)

All new Directors were appointed at the start of the new administration in late 2015. FFFIR’s organization chart is presented in figure 3.

**Figure 3. FFFIR Organizational Chart**



The FFFIR functions as an autarchic, extra-budgetary institution of the federal government. Since its creation, the FFFIR has been transferred to different areas of the federal government, to adapt the regulations inherent to its operation and continue financing the economic and social infrastructure necessary for territorial integration and regional development. It worked under the following jurisdictions:

- 1997 to 2000: Under the Chief Cabinet Office (Jefatura de Gabinete de Ministros), the executive branch’s top-level ministerial dependency
- 2000 to 2001: Ministry of Infrastructure and Housing
- 2001 to 2003: Secretary General of the President’s Office
- 2003 to 2015: Ministry of Federal Planning, Public Investment and Services, which managed all the infrastructure investment during the successive Nestor and Cristina Kirchner presidencies.

The different assignments respond to the political nature of the Fund’s activity, given its importance as an instrument to work out relationships with the provinces by providing access to infrastructure funding at below-market rates. It currently resides within the domain of the Ministry of Interior, Public Works and Housing, as per Decree 212/15.

## Role of Banco Nacion

Banco Nacion is the Trustee of the proceeds from the sale of BCN shares (the capitalization of FFFIR), and it manages the Trust in accordance to the instructions of the FFFIR's Administrative Board. Besides this role, Banco Nacion acts as the treasury bank for the FFFIR's lending operations. This function plays an important role in the FFFIR's risk management, as well as in the general oversight and monitoring of the Fund disbursements.

Banco Nacion also acts as the custodian of all lending documents (*mutuos*) between FFFIR and the different Argentine provinces. This could become very important from the financial structuring viewpoint, if the Fund later decides to increase its capitalization and lending resources via securitization of its loan portfolio.

## Staffing

The FFFIR Fund currently employs 52 full-time staff and 7 contract workers, grouped under five management divisions (Project Evaluation, Legal, Administration and Finance, Information Technology, and Auditing), and seven departments within those divisions.

## Funding Mechanism

As discussed, the FFFIR is an extra-budgetary institution. Funding is determined by FAFFFIR exclusively from the BHN sales proceeds. The FFFIR is not included in the annual budget of the Ministry of Interior, and it does not receive supplementary budget support. It finances its operational costs from its own proceeds by imposing a 2 percent overhead on each lending transaction.

## FFFIR's Character as a Public Institution

Law 24855 and the two associated decrees (924/97, and 228/98) constitute the Fund's legal and institutional framework. Through different legal opinions and rulings throughout the Fund's existence (1998–2017), the following characteristics have come to define the FFFIR's conditions and character:

- It is considered a decentralized institution with its own governing body (the Administrative Board). It does not consolidate its balance sheet figures with those of the national government.
- It is considered a public institution within the domain of the Ministry of Interior (MOI). This Ministry currently holds the portfolios of Housing and Urban Development, Public Works, and Water and Sanitation.
- It is a non-financial institution, and as such, is not regulated by the legal framework for banks and financial institutions.
- It is an autarchic institution (that is, it is financially independent from the public budget process), with a sole capitalization action imbedded in Law 24855. Its financial statements are audited by external firms and published on their websites.
- It is not obliged to follow national government procurement policies, although it tries to adhere to such policies as much as possible.
- Its employees are not considered part of the public employee union (ATE). However, the Board has granted equivalency of social and economic benefits to FFFIR's employees to those of public sector employees.
- FFFIR's Administrative Board represents the Fund's highest level of authority and decision-making.

ing powers. The Government of Argentina through the Ministry of Interior appoints its Chairman. Today, the Chairmanship of the Fund falls under the Secretary or Provinces of the Ministry of the Interior. The Board meets regularly every two weeks and can communicate rapidly via e-mail and conference calls. All members are based in Buenos Aires.

## 4. FISCAL MANAGEMENT

### **Fiscal Management Rules**

As a decentralized, non-budgetary institution, the Fund does not consolidate nor is it included under fiscal management rules, budget, and debt targets.

However, since each loan operation needs the approval of the Treasury (Ministerio de Hacienda) and is contingent on the income from tax co-participation funds to the provinces, this type of subnational debt does follow the fiscal management rules and debt targets of the Government of Argentina.

The Fund is not linked to the public budget process.

### **Lender of Last Resort**

According to Decree 924/97 that created the FAFFIR (Assistance Fund to FFFIR), the extent of the government commitment to financially assist the Fund is capped at the execution value of the remaining shares of BHN.

The question arises, what would happen in the event that a systemic risk generated a financial shortcoming in the Fund (liquidity or solvency) that could not be covered by sale of the remaining shares? Under normal circumstances, it would be hard to imagine that the Government of Argentina would let the Fund go bankrupt. At the same time, this is a circumstance that most non-financial entities face with their respective governments.

### **Procurement Policies and Oversight**

The Fund is not obliged to follow public procurement mechanisms, although it tries to adhere to such mechanisms as much as possible.

However, clients (provinces) are subject to public procurement mechanisms in the contracting of the different urban infrastructure projects that utilize the Fund's resources. The Fund has the capacity to monitor and oversee those procurement mechanisms (public bidding processes). It has the capacity to cancel a loan if it believes that the province compromised the contracting of the project or committed mistakes or irregularities in procurement.

The FFFIR's oversight mechanism is embedded in Decree 924/97 via the creation of the FFFIR Assistance Fund (FAFFFIR), which represents the Ministry of Interior and the Ministry of Finance.

### **Risk Management Policies**

The risk management policy is de facto managed directly by the Treasury (Ministerio de Hacienda) in its loan approval process for FFFIR loans.

In addition, the FAFFFIR has the obligation to monitor the Fund's liquidity and solvency risk, and to evaluate the need for additional capitalization to face such risks.

In addition, the role of Banco Nacion and the individual disbursements accounts constitute an expedient and easy way to monitor the management of the Fund's assets.

### **Standardized IMF Reporting Requirements**

FFFIR Fund's reports and financial and fiscal information to the government do not necessarily reflect the standards of the International Monetary Fund (IMF). However, reports of the subnational debt by the Government of Argentina do reflect the IMF standards.

### **Contingent Liability Strategy**

Given the secured nature of the Fund's assets (loans)—tax co-participation funds are executed 30 days after a late payment is incurred by the provinces—there is no contingent liability strategy in place.

## **5. OFFERING OF FINANCIAL PRODUCTS**

### **Financial Products Offered by the Fund**

The FFFIR is focused solely on investment lending products (loans) for infrastructure financing for the provinces.

The FFFIR offers two types of loans: project-based loans, which apply to the financing of single works (such as a public building, a school, or a waste water treatment plant); and program-based loans, which apply when the loan finances a set of different, and usually interrelated, urban infrastructure projects.

### **Technical Assistance Support**

The Fund offers assistance in the review and evaluation of the detailed engineering design of the infrastructure works it finances. However, it does not finance pre-investment activities per se (such as the executive projects themselves, environmental impact assessments for infrastructure works, or preparation of bidding documents). The Fund does not have the capacity to provide full-fledged technical assistance (such as training, or funding pre-investment activities) to its clients. Provinces seek funding and present project proposals to the FFFIR when they have completed the pre-investment stage, at their own expense.

### **Pricing and Conditions**

The financial terms and conditions for FFFIR lending to provinces are as follow:

- Initiation of works: Within 12 months of the signing of a Lending Agreement (*Acuerdo Mutuo*)
- Financing period: Up to 10 years
- Grace period: 1 year
- Amortization period: 98 months (8.2 years)
- Loan repayment: 98 months (8.2 years).

In the current context of the local financial markets (relatively high inflation and high interest rates), pricing these types of infrastructure deals presents challenges. Currently, FFFIR uses the following pricing policy:

## Component A

- Construction Cost Index (as calculated by INDEC), with a maximum cap of 17 percent per year.<sup>9</sup>

## Component B

- Interest rate with a 10-year U.S. Treasury bill as the base rate: Currently at 2.8 percent per year.
- Spread (risk pricing): Currently at 3.7 percent per year.
- Total all-in pricing = 17 percent + 2.8 percent + 3.7 percent = 23.5 percent.
- A 2 percent upfront commission on each disbursement.

Due to the nature of the guarantee in each loan contract (use of tax co-participation funds), FFFIR does not have a loan pricing differential between clients (provinces).

Currently (in 2017), Argentina's Central Bank monetary policy is centered on targeting inflation. Domestic interest rates are relatively high. As an example, on November 7, 2017, the Central Bank raised the reference (interbank rate) to 28.75 percent for a one-year maturity. With these types of reference rates, it would be hard for provincial authorities to issue local debt in Argentina's financial markets with maturities between 5 to 8 years at rates below 36 percent per year (all-in costs). The pricing of FFFIR loans includes a relatively small subsidized component to promote infrastructure development.

Some provinces (like Chaco) are currently working with the Ministry of Finance (MOF) to issue local debt in U.S. dollars, given pricing differentials. The MOF recently issued (November 6th, 2007) US\$800 million worth of LETES (Treasury Bills). Half (US\$400 million) were issued with a 217 days' maturity at a yield of 2.84 percent. The other half (US\$400 million) were issued with a maturity of 371 days at a slightly higher yield. Although not explicit, provinces issuing U.S.-dollar-denominated debt instruments in the local markets have de facto sovereign coverage on the foreign exchange risk factor.

### **Technical Assistance (2 percent fee)**

Since its origin, the Fund has collected a 2 percent fee upfront on loan disbursements for technical assistance. The fee covers the Fund's operating costs for the monitoring and administration of the loans. It is not included in the overall pricing of the loan, and is charged as a 2 percent reduction on each loan disbursement (FFFIR disburses only 98 percent of each loan disbursement).

### **Lending Capacity**

As mentioned, the FFFIR is an autarchic decentralized institution that does not receive an annual budget allocation from central government for on-lending purposes. The level of disposable cash flows determines its yearly lending capacity from its operations and possible capitalization actions based on the disposition of the remaining BHN shares.

FFFIR's operating cash flows are based on:

#### Incoming cash flows

- Dividends from remaining ownership of BCN shares
- Interest earned in the lending portfolio
- Repayment of principal
- Yield (interest, dividend, and capital gains) on liquidity.

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<sup>9</sup> Currently, the Construction Cost Index (ICC) is around 22 percent per year (November 9, 2017).



### Outgoing cash flows

- Operating costs
- Loans disbursements
- Service payments to BCRA (the Central Bank) and Banco Nacion

Periodically (monthly), FFFIR’s Finance and Administration Department will submit to the Administrative Board a five-year calculation of the “available liquidity” in each semester, as a proxy to estimate lending capacity and limits to what the Board could approve in terms of new financings (see table 3).

Based on the liquidity report presented to the Board on September 30, 2017, the average lending capacity of the FFFIR in the period 2018–22 without new capitalization is the equivalent of US\$132 million per year with a dip in 2018 of only US\$46 million and a peak in 2022 of US\$325 million (assuming no new debt).

**Table 3. FFFIR, Liquidity Report at the End of Each Semester, 2017–22**

Semester Ending In:	Argentine Pesos (million)	US\$ Equivalent (million)
December 2017	2,267.0	129.4
June 2018	1,093.3	62.4
December 2018	660.2	37.7
June 2019	332.8	19.0
December 2019	371.0	21.2
June 2020	1,024.3	58.5
December 2020	1,636.6	93.4
June 2021	2,725.4	155.6
December 2021	3,660.4	208.9
June 2022	5,161.4	294.6
December 2022	6,734.8	384.4
Average lending capacity	2,333.6	133.2

Source: FFFIR, Department of Finance and Administration (assumes no new lending).

Note: An exchange rate of Arg\$17.52 pesos = US\$1.00 was used.

The liquidity report clearly indicates that, for the FFFIR to be consistent with the current Government of Argentina infrastructure plan and be able to play a role in carrying it out, the Fund’s capital base and lending capacity will need to increase.

## 6. FUND PERFORMANCE

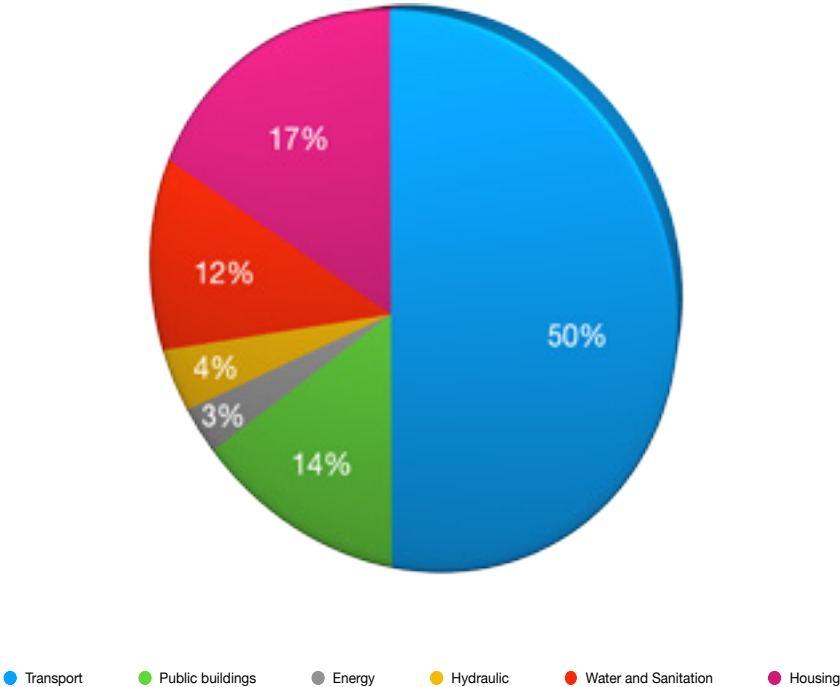
The FFFIR is a general infrastructure fund. The type of infrastructure projects it finances fall into six groups:

1. **Public buildings**—including infrastructure such as schools, hospitals, and health centers, community sports facilities, community centers, and even some transport and logistics infrastructure such as ports, bus stations, and airport terminals.
2. **Energy**—such as natural gas networks, high-voltage power transmission lines, and power station transformers.
3. **Hydraulic infrastructure**—including diversion canals for flood control, small dams and reservoirs, and coastal defenses.
4. **Water and sanitation**—such as aqueducts, potabilization plants, potable water distribution networks, sewerage networks, and municipal wastewater treatment plants.
5. **Housing and urbanization**—including housing projects, public service networks, parks, and lighting systems.
6. **Transport**—including construction or restoration of provincial roads or main thoroughfares in cities, bridges, and access roads to improve connectivity.

### Sector Distribution

As mentioned, FFFIR is a public non-financial institution within the domain of the Ministry of Interior. In a way, the Fund is a policy instrument to assist the Ministry of Interior in achieving its goals at the subnational level. As can be seen in Figure 4, 50 percent of the portfolio is concentrated on urban transport public works (pavement of streets and avenues, new intra-urban roads, connection and road distributors); 17 percent in basic infrastructure for housing projects; 14 percent in public buildings (schools, health units, offices, and the like); 16 percent in water and sanitation projects; and 3 percent in energy-related projects (small transformers and transmission units).

Figure 4. FFFIR’s Loan Portfolio Distributed by Sector

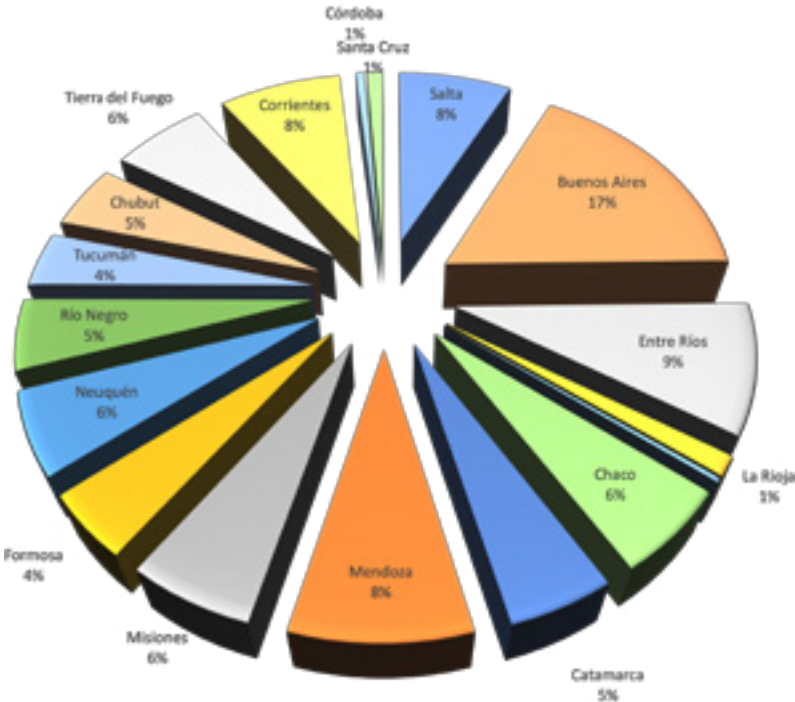


Source: FFFIR, Department of Finance and Administration, October 2017.

With the exception of the energy sector (3 percent), the rest of the distribution closely follows the priorities of the Ministry of Interior.

The Fund focuses its lending exclusively on subnational entities. The Fund’s geographic focus can be seen in Figure 5.

**Figure 5. FFFIR Geographic Focus of Investment Lending, 1997–2017**



The three largest provinces among those receiving funding (Buenos Aires, Cordoba and Mendoza) account for 26 percent of the funding. The geographic distribution seems consistent with the GDP contribution of each province.

**Portfolio Growth (1998–2017)**

In U.S. dollar terms (see Table 4), the FFFIR has been able to finance close to US\$2 billion worth of urban infrastructure at the subnational level in the 1998–2017 period. Based on a capitalization via the sale of BHN shares of close to US\$450 million, the leverage impact of the Fund has been nearly five times its initial capital. This ratio is even more important when considering that it was never funded from public budget resources, and that the capitalization of the Fund has occurred through an efficient use of privatization proceeds.

The Fund has had two peaks of activity: during its origin in 1999–2000, and after the new administration took power in late 2015. Another relatively important peak took place in the 2009–10 period—the initial years of the first term of Cristina Fernandez de Kirchner (CFK). During the last year of CFK’s second term (2015), the Fund had no activity. Low levels of activity also occurred in 2002, the year of the local

financial crisis and the abandonment of the US\$/Arg\$ fixed exchange rate.

Under a “business-as-usual” scenario, the expected growth of the Fund portfolio is relatively modest, ranging from US\$40 million to US\$100 million, depending on the speed of new loans and disbursements. The Fund, with its 52 employees and 7 consultants, and within the current institutional arrangements, has the capacity to process much more than the current expected range of new credit capacity.

**Table 4. Portfolio Growth Since Inception of the FFFIR through 2017**

Year	Financed Amount (Arg\$)	Financed Amount (US\$)
1998	\$68,684,065	\$68,684,065
1999	\$255,562,048	\$255,562,048
2000	\$115,255,527	\$115,255,527
2001	\$81,137,257	\$81,137,257
2002	\$25,227,093	\$7,058,126
2003	\$124,427,956	\$43,252,618
2004	\$134,654,996	\$45,941,340
2005	\$35,371,437	\$11,985,903
2006	\$101,927,312	\$33,095,224
2007	\$193,101,666	\$61,593,077
2008	\$173,955,321	\$56,938,171
2009	\$559,607,328	\$148,445,861
2010	\$591,607,917	\$153,839,978
2011	\$107,253,035	\$26,428,896
2012	\$17,737,698	\$4,280,892
2013	\$730,629,512	\$112,085,901
2014	\$317,832,570	\$39,381,768
2015	\$0	\$0
2016	\$3,316,537,562	\$224,691,522
2017	\$2,545,563,685	\$159,209,580
<b>Total</b>	<b>\$ 9,496,073,985</b>	<b>\$ 1,648,867,754</b>

Source: FFFIR, Department of Finance and Administration, October 2017. US\$ equivalent calculated based on Central Bank US\$ rate at the closing of each loan.

## 7. CLIMATE CHANGE CONSIDERATIONS

The Fund does not have a climate change policy regulating its credit activities, nor have the provinces, which tend to respond more to citizens' demands regarding urban infrastructure. The Fund has no special credit line for climate change investments nor does it differentiate between mitigation and adaptation investments.

Among the current portfolio of projects, there is no specific project with a focus on climate change, although some projects might include elements of mitigation (for example, street lighting projects that involve energy-efficient fixtures, or wastewater treatment projects that effectively contribute to the reduction of greenhouse gas emissions by proper disposal of sludge).

Given its staff and focus, the Fund currently has no technical capacities to finance small climate change investments such as renewable energy and energy efficiency. Under a new capitalization, this is certainly an area that should be considered, even if it requires recruiting some specialized staff.

## 8. RISK MANAGEMENT

### Characteristics of a Typical Loan Operation

The average loan size is close to US\$1.5 million, but ranges greatly, from US\$0.25 million to US\$20 million. This is an issue that relates to "project selectivity criteria," which will need to be addressed as the Fund matures in its role as a developer of infrastructure, given that loans below a certain threshold are better handled by local institutions in each province or by the private financial system.

The average tenor is close to eight years, including a grace period of one to two years for capital repayment. This is relatively short by international standards for infrastructure, but relatively long in the context of the local financial markets. Because of the nature of the projects (public sector with no real consumer cash flows to pay for the project), the eight-year period is more than adequate for the risk profile.

Projects have between a one-year to two-year execution and disbursement period. Provinces can spread payments for the investment in public works through a longer period than their current political appointment, and the Fund is protected by the tax co-participation guarantee.

### Credit Process

The process for completing a transaction consists of the following steps:

- **Step 1.** Requests for a project or program financing for urban and provincial infrastructure are sent directly by the governor of the province (beneficiary and ultimate client) directly to the Fund's Administrative Board.
- **Step 2.** The Board, before deciding on the request, instructs the following three departments to evaluate the project and provide a recommendation:
  - Project Evaluation
  - Finance and Administration
  - Legal.
- **Step 3.** Operating departments send their evaluation and recommendation to the Board. This body instructs the operating departments to start processing the new loan request, or denies the request based on the recommendations.
- **Step 4.** The Project Evaluation Department acts as the originating unit for documentation and project analysis purposes. The Finance and Administration Department evaluates and performs

the Treasury planning for the new loan under development. The Legal Department initiates work on the draft new loans (see Box 3).

- **Step 5.** Under the advisory and monitoring of the Project Evaluation Department, the client (the province and its executing unit) initiates consultation for a credit approval process with the Ministry of Treasury (Hacienda).<sup>10</sup>
- **Step 6.** The Ministry of Treasury performs the debt capacity analysis of the province and analyzes its ability to repay the loan. After this evaluation, it decides whether or not to approve the new loan. After the subnational credit evaluation is concluded, an instruction is sent to the FFFIR's Board.
- **Step 7.** FFFIR's Board decides whether to issue the new loan and defines loan conditions and pricing (as suggested by the Finance and Administration Department).
- **Step 8.** The loan documentation is sent to the client and a signing date is scheduled. After signature, a "disbursement account" per loan (and per project, in the case of programmatic loans) is opened at Banco Nacion. After signature, loan documents are sent to Banco Nacion as the custodian of these assets.<sup>11</sup>
- **Step 9.** The loan origination cycle ends, and loan disbursement and oversight and monitoring of the loan proceeds is initiated by the Project Evaluation Department.

The average time that elapses from the date of the initial request to loan documentation, is three months. Steps 5 and 6 at the Ministry of Treasury (which are outside the control of the FFFIR) are the critical paths of the cycle.

### Box 3. FFFIR's Loan Documentation and Disbursement Accounts (Banco Nacion)

The Fund manages two types of project loans (mutuos). One of them is project-based and applies exclusively to a single investment being financed (such as a public building, a school, or a waste water treatment plant). The other one is program-based and includes, for a given province, a set of different urban infrastructure projects. It is a multi-sector loan.

Three interesting features of these loan contracts are as follows:

**Disbursement accounts.** Each loan contract carries the obligation on the part of the client to open a disbursement account at the Banco Nacion (the Trustee of the FFFIRs funds). The client should open one account for a single project loan, or multiple accounts for a program loan. These disbursement accounts facilitate the oversight and monitoring of the loan execution and payments to contractors. They also minimize time delays and mitigate the risks of commingling and modifying the use of funds.

**Commitment fees.** FFFIR's loans do not carry a commitment fee for unused balances. The Fund has the prerogative to cancel the loan if, after the halfway point of the loan tenor has been reached, less than 50 percent of the funds have been disbursed. Generally, these types of issues are resolved before the loan is cancelled.

**Guarantee clause.** Each loan document has a guarantee clause indicating that, if after a set of defined remedies are implemented and the loan is still non-performing, FFFIR's loan will be serviced and repaid via the use of tax co-participation funds, directly managed by the Ministry of Treasury. Most of the outstanding loans are generally served by the provinces' current cash flows without liquidation of tax co-participation funds. There have only been two cases where the loans have been being serviced by co-participation funds (for the provinces of Tucuman and Santa Cruz). This feature makes the outstanding portfolio of the Fund a secured debt instrument.

<sup>10</sup> Early in 2017, the Ministry of Finance and Treasury was split into two separate ministries, Finance and Treasury. In principle, the Ministry of Finance will focus more on the external debt position and funding options for Argentina, and the Ministry of Treasury will concentrate more on the fiscal policy and fiscal affairs (including subnational debt). The separation of functions is ongoing.

<sup>11</sup> FFFIR has a programmatic loan option whereby it includes several small urban infrastructure projects (such as street maintenance or health infrastructure) under the same loan umbrella. This arrangement has proven very effective for purposes of credit origination.

## **Project Monitoring and Environmental and Social Safeguards**

In addition to the financial monitoring of disbursement accounts, there is a technical and environmental monitoring system in place, managed by the Project Evaluation Department. This department regularly carries out field visits to undertake monitoring and oversight of contractors and executing agencies.

The Fund also can (and does) oversee the public procurement processes followed by the provinces, as subnational entities must follow government procurement standards during project execution. The Fund can reject a credit request if it finds evidence of mistakes or irregularities by the provinces in the procurement process.

The Fund requests Environmental Impact Studies (EIS) on the project it finances. The provinces contract these EIS. Large projects usually involve a public consultation process, as per local regulations.

## **Digitizing Internal Processes and Meeting ISO 9001 Standards**

The Fund has been making progress in digitizing all internal processes and loan documentation and loan monitoring with its clients (the provinces). The only missing step at this stage is the use of a digital signature to formalize the electronic documentation process. The Fund is about to complete this step, but only two provinces (out of the 24) have done so.

Since 2016, the Fund has been working with a specialized consulting firm to attain ISO 9001 certification for its internal processes.<sup>12</sup> The Fund expects to achieve ISO certification by the third quarter of 2018.

The Fund's Comptroller's Office is responsible for the oversight of the institution's internal processes, as well as the management of the ISO project.

## **9. LESSONS LEARNED**

By December 2016, the FFFIR has a balance of approximately Arg\$9,000 million (equivalent to approximately US\$512 millions). The FFFIR is not leveraged. The current total debt load (including labor, taxes, and other liabilities) is less than 9 percent of total equity.

Given this situation, the effective financing of the FFFIR is limited to its only sources of funding, the amortization of capital and the interest on the portfolio that is due each year. Given that the FFFIR portfolio has relatively short average maturities (three to four years), the annual credit capacity is approximately Arg\$1,200 million per year (equivalent to US\$80 million).

FFFIR is a powerful policy instrument to achieve the Ministry of Interior's goals and objectives. Due to its current size and available credit capacity, its use is limited to relatively small projects. The FFFIR has correctly positioned itself as a financial agent for small volumes of urban infrastructure in intermediate cities (for example, schools and hospitals, rural roads, small water treatment plants, and street lighting and paving). Despite their relatively small size, those projects do have an impact at the local level. The sum of these impacts is probably large and can add substantially to the good relationships between the central government and the subnational governments – a key factor in a federal and decentralized country.

Over the years, FFFIR has developed a niche market position as an infrastructure lender for smaller projects. It is an agile decentralized institution with a high degree of autonomy, with a light regulatory

<sup>12</sup> ISO, the International Organization for Standardization, is an independent, nongovernmental international organization with a membership of 162 national standard bodies. ISO 9000 is the family of quality management systems standards designed to help organizations ensure that they meet the needs of customers and other stakeholders while meeting regulatory requirements.



framework and well-tuned internal processes. It has a relatively short decision-making process (close to those of private financial entities), and a slight cost competitive advantage (small subsidy) when compared to other local currency financing options.

From the financial point of view, the credits to provinces are supported by guarantees through the tax co-participation funds. This means that the FFFIR has a relatively healthy and good quality loan portfolio, and no defaults.

From the point of view of operations, the FFFIR seems to manage an effective business model for the level of transactions it handles. It has a relatively small staff structure (52 people), with a General Director (Executive Coordinating Counselor), three line managers (Project Evaluation, Finance and Administration, and Legal), and two support units (Audit and IT and Communications). Currently, the FFFIR is in the process of attaining ISO 9001 certification for its operational processes.

Also, from the point of view of operations, the Fund could use a better mechanism for initial project selection. As it stands now, the selection criteria, once initial definitions such as project size and sector have been fulfilled (related to the Ministry of Interior focus and mission) works on a “first come first serve” basis. A selection model where outcomes and impact variables are based more on priorities could greatly benefit the allocation of scarce public resources.

## 10. KEY CHALLENGES AHEAD

Some of the key lessons learned by FFFIR through the 20 plus years of experience could be summarized as the importance of being well capitalized for the beginning (through the proceeds of privatizing BHN), and the establishment of an independent governance scheme tailor-made to allow FFFIR to fulfill its original objective of supporting the development of regional infrastructure. FFFIR has been adapting its business model to the demands of relatively small-scale municipal infrastructure projects (such as urban renewal, street lighting, and rural roads). FFFIR has been successful in developing a rapid response and fast-track approval process that allows the institution to respond swiftly to market demands. Entering a new cycle of Argentina’s economic strategy under the current government (2016–2020), FFFIR is conscious of its needs to recapitalize the institution and to develop new business related to mobilizing more private capital for regional and municipal infrastructure.

The major challenge that the FFFIR faces is increasing its lending capacity to allow it to serve a larger share of the Argentina’s subnational infrastructure needs. Aware of this situation, the FFFIR (together with the Ministry of Interior) is currently considering new capitalization options.

### Recapitalization Options for FFFIR

The recapitalization options for FFFIR that could be explored include:

1. Sale or use as collateral of remaining BHN shares
2. Securitization of the current loan portfolio
3. Access to multilateral investment and financing
4. A new Argentine Fund for Productive Infrastructure (FIPA)
5. Adding financial products/changing processes.

The different options to restructure the balance of the FFFIR and improve its ability to place loans to the province are described next, along with some options to offer other products that could improve the mobilization of additional financing for subnational infrastructure. Some reforms to the internal processes of the FFFIR that could allow greater placement and expand market coverage are also discussed.

#### 1. **Sale or Use as Collateral of Remaining BHN Shares**

**Existing BHN shares in portfolio.** As of December 31, 2016, these shares were valued in the balance

sheets of the FFFIR at Arg\$3,175 million. This corresponded to a valuation of 3.5 pesos per share. In February 2017, these shares were listed on the market at 6.9 pesos per share. It is important to mention that the actions of the BHN have little movement (there is almost no “floating” because the larger block is a passive investment in the FFFIR), and therefore the quote is not representative.

- **Sale of BHN shares.** The sale of BHN shares held by FFFIR would have an important impact on the current shareholding structure of the BHN. For a block sale, a valuation should be determined (preferably associated with some auction mechanism). However, the specifics of the initial sale of BHN shares in 1997 to investors are proprietary, and there may be preferential rights or other restrictions on sale. On the other hand, the authors understand that the BHN (under private administration) is currently one of the major operators of one of the most important social programs in Argentina, PROCREAR (the Argentine Housing Credit Program). In light of these considerations, perhaps the option of selling to third parties at this time has complexities that will need to be evaluated more thoroughly.
  
- **Monetization of BHN shares.** Funding similar to the previous option (possibly with a small discount percentage) could be obtained by monetizing the value of BHN shares in the FFFIR balance sheet. There are several financial modalities to monetize the value of the shares. Among them are two relatively simple ways:
  - **Pledge of shares in a trust managed by financial institutions that would provide long-term borrowing to FFFIR.** The BHN shares would constitute the guarantee of repayment of the loan. A financial structure should be in place that could remedy a credit default by the FFFIR before it disposed of the shares.
  - **Transfer of BHN shares to a financial trust.** The trust would issue notes (bonds) in the local financial markets, using the shares in the trust as guarantee, and servicing the bond debt with the repayment of new loans issued.

There are advantages and disadvantages to both options; they would have to be evaluated in terms of transaction costs and from the legal point of view.

## 2. **Securitization of the Current Loan Portfolio**

The credit quality of the current portfolio is good (given its guarantee using tax co-participation funds). The loan portfolio then thus be transferred to a financial trust. This trust (as in the previous case) would issue short-term notes (bonds) for the duration of the current portfolio, which would fund the FFFIR's new operations. The pricing of these notes in the market would have to be below the average interest rates in the current portfolio with the provinces. This option could not be executed with subsidized credits.

**Credit line to the FFFIR.** Because the FFFIR is not leveraged, it has the capacity to absorb financing from the local market. This capacity, as well as the financial structuring conditions, would have to be explored based on the market's interest in this option.

All these capitalization options would have to be evaluated in terms of the FFFIR's financial efficiency and in terms of the legal complexity to determine the best way forward. Conservative calculations for these options indicate that the FFFIR could increase its credit capacity between 100 percent and 150 percent. This would result in increasing its annual capacity of US\$80 million today to US\$160 million–US\$200 million in a relatively short period.

### 3. **Access to Multilateral and Bilateral Investing and Financing**

Increasingly, multilateral organizations, through their financing windows for non-sovereign financing, have been interested in high-impact urban infrastructure projects at the local level, in the improvement of the competitiveness of subnational entities, and in the creation of jobs. Once financially restructured (recapitalized), the Fund could consider approaching multilateral organizations with an interest in the subnational market in Argentina, such as the World Bank, the International Finance Corporation, the Inter-American Development Bank, and/or the Corporación Andina de Fomento (CAF), to present the case for additional leverage of the FFFIR.

**Participation options.** Subject to the legal analysis of the FFFIR's situation vis-à-vis this type of investor, various options could be considered, ranging from participation as a partner in the capital, to long-term credit lines, through variations of financial products (such as preferred shares or quasi-equity options). The definition of more efficient options would go through a process of due diligence and conversations with the main multilateral organizations.

The participation of this type of organization in the structure of the FFFIR (under any of the possible options) would greatly strengthen the governance of the institution, and would strengthen its institutional capacity to structure and finance larger, more complex urban infrastructure projects. Such participation would greatly enhance the credibility of the infrastructure investment program at the subnational level.

### 4. **A New Argentina Fund for Productive Infrastructure (FIPA)**

Argentina is structuring a public-private investment fund, the Argentina Fund for Productive Infrastructure (FIPA), to finance productive infrastructure in provinces, along the lines of FFFIR. FIPA will prioritize investments in renewable energy, roads, and electric transmission projects. The Inter-American Development Bank (IDB) will participate with a contribution of between US\$350 million and US\$500 million through a loan or guarantee of ordinary capital, and the private sector investment arm of the IDB Group, IDB Invest, will make an additional contribution of US\$100 million. In addition, the FIPA will include the World Bank, the International Finance Corporation (IFC), and private investors.

The concept underlying this Fund is that the public sector will use its resources not to directly finance infrastructure projects, but to structure vehicles that attract the private sector to invest in them. Thus, it is designed so that international private investors will be the main source of financial contributions with the objective of maximizing the leverage of private resources. The FIPA will consist of a first layer of capital provided by the Government of Argentina, while the IFC, IDB Invest, and private investors will participate as lenders, obtaining a fixed return that will be determined during the preparation of the program, set according to market conditions. The IDB and the World Bank will provide a guaranteed stand-by facility to ensure the replacement of capital for a period of up to 14 years.

The Fund will be managed by a private manager who will act independently, and who will be responsible for performing due diligence in accordance with the eligibility and profitability criteria established in the Fund regulations and in compliance with the environmental and social requirements of the IDB Group and the World Bank Group. The Fund's administrator will be hired through a competitive selection process, and must have a proven ability to administer similar investment funds, raise funds from international investors, and manage renewable energy projects. Governance of the FIPA is to be agreed between the Ministry of Interior and the Ministry of Finance.

Technical details of the proposed new FIPA include the following:

- Funding will come from private institutional investors (globally) via the 144A market in the United States.<sup>13</sup> Citibank will act as the lead arranger for US\$1 billion in investments. Minimum

<sup>13</sup> Rule 144 is a regulation enforced by the U.S. Securities and Exchange Commission (SEC) that sets the conditions under which restricted, unregistered, and control securities can be sold or resold. Rule 144A amendment provides a safe harbor from the registration requirements

tranches will be US\$300 million each (according to “market economics”).

- The security package will be based on the pledge of provincial tax co-participation for provinces financing the underlying infrastructure projects from FIPA—like the one used by FFFIR.
- Underlying projects are public infrastructure projects at the provincial level—similar to FFFIR.
- The security package has a 20 percent first-loss guarantee (via a CAF credit line) to cover up to 20 percent of initial losses should provinces fail to make payments through the system of tax co-participation.

The suggested yield of the 144A instruments has been set at 6.625 to 6.750 percent in U.S. dollars by Citibank and CAF. Currently, the sovereign can issue debt in the international markets without guarantees at around 350 basis points above LIBOR. It is expected that the instrument will be rated 2 to 3 points above the prevailing sovereign rate (currently BB).

Further analysis will need to be performed to this financial structure. For fiscal management purposes, FIPA's public funding will be considered public debt. In this case, it would be difficult to support this mechanism as opposed to simply issuing sovereign debt to fund the FIPA. Due to its decentralized structure and internal dynamics, in the event FIPA is approved, the best operating mechanism to execute the funds will be the FFFIR, to use an existing service infrastructure and efficiently on-lend to provinces through a proven mechanism.

It is important to keep in mind that FIPA is still at the conceptual stage and is being refined. As of year-end 2017, it was not yet clear what international financial institutions would participate, and what its final financial structure would be.

## 5. **Adding Financial Products/Changing Processes**

Ideas for new business development include the following:

**Guarantees.** Once the FFFIR is recapitalized, it could analyze the development of financial guarantee products (such as a first-loss guarantee, partial guarantees, reimbursement guarantees, or last installments) as mechanisms to mobilize third-party financing (through commercial banking, investment funds, and the like) for subnational infrastructure, and thus further leverage FFFIR resources. This will be particularly relevant for the development of public-private partnerships (PPPs) at the subnational level. For this to occur, it would be necessary to comply with the process of having at least two local credit ratings for the FFFIR. Currently FFFIR is in the process of obtaining its first local credit rating.

**Direct financing to municipalities.** Today the FFFIR directly finances provinces, although several of the works cover municipal urban infrastructure. Even greater progress could be made in reducing the infrastructure investment gap if the FFFIR could lend directly to municipalities. These local government entities have difficulty accessing financial markets. Assuming that municipalities would be a market segment of interest to the Ministry of the Interior, Public Works and Housing, it would be necessary to analyze which modifications in the FFFIR statutes and in its operating regulations would be necessary to allow these operations.

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of the Securities Act of 1933 for certain private resales of restricted securities to qualified institutional investors.





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This case study was developed between October 2017 and March 2018. It included a field visit to Dhaka, Bangladesh, on February 23, 2018. The case study is based on available public information, as well as interviews with key senior management at IDCOL and BIIFL and senior officers at the Ministry of Finance. The case study was prepared by Ashraf Bouajina (World Bank Group consultant), with contributions by Federico Scodelaro (World Bank Group consultant), under the supervision of Ellis J. Juan (World Bank Senior Advisor coordinating the Global Review).

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# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT

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## **Bangladesh Case Study IDCOL—Infrastructure Development Company Limited**



## EXECUTIVE SUMMARY

Bangladesh's Infrastructure Development Company Limited (IDCOL) is one of the public infrastructure funds (PIFs) in the selected case studies with a relatively long operational period (more than 20 years). IDCOL is also the only case study of a PIF in a least developed country (LDC) in the Global Review sample. IDCOL was established on May 14, 1997, by the Government of Bangladesh (GOB) in fulfillment of the conditionality of a Private Sector Infrastructure Development Project (PSIDP) loan by the World Bank Group. IDCOL's mission is to promote economic development in Bangladesh by encouraging private sector investment in energy and infrastructure projects. Originally, IDCOL was conceptualized as a close-end fund with a temporary role in infrastructure development in the country, linked to the utilization of the World Bank credit line.<sup>14</sup> As the institution developed and the GOB opted to transfer other loans and credit lines to IDCOL to support infrastructure PPPs, the character of the institution evolved to become more open ended.

Given its mandate, IDCOL initiated its lending activities in the conventional energy sector because of that sector's finance readiness. As it evolved, IDCOL started lending in the renewable energy areas (solar house systems, solar irrigation pumps, solar mini-grids, bio-gas, and the like). Today, almost 80 percent of IDCOL's assets are concentrated in the energy sector, with 47 percent in renewable energy and 33 percent in conventional energy. Since IDCOL's inception, the Government of Bangladesh has not capitalized it at the levels required by its mandate. The government's initial capital contribution was only the equivalent of approximately US\$4 million. Remarkably, up until 2016, IDCOL performed well. Its return on equity (ROE) of more than 30 percent for the FY2012–FY2016 period was the highest of the PIFs sampled in the Global Review. However, a credit risk issue with IDCOL's flagship solar housing program in 2016 has had a severe impact on the level of its non-performing loans in this sector. IDCOL had to increase its level of provisioning, which depressed earnings and ROE. Today, IDCOL is weakly capitalized, with a leverage factor (total assets) of 14 times its equity base. Its equity base, as of 2016, was Tk5,971 million (approximately US\$75 million). The key challenges facing IDCOL include:

**Bangladesh's graduation to developing country status.** IDCOL is the only PIF in the sample exposed to the impact of the country "graduating" from least developed country (LDC) to developing country status. This process could have an important impact on access to "soft-term" financing and will eventually affect the cost of funding and return on equity. This issue makes the case strategically important in the sample.

**Capitalization and funding strategy.** IDCOL needs to improve its assets-to-equity ratio to strengthen its risk exposure under a systemic risk scenario. The high leverage of the Fund, planned in such a way early on given its "pass-through" nature, is not sustainable under a scenario of limited access to soft (very low-cost) funding. Up until now, there has not been a need to diversify funding at IDCOL. When new funding options were analyzed, these options could not compete in terms of financial costs with funding from development partners. The funding conditions (tenor and pricing) could change in the future after "graduation," although it would take years. It is in IDCOL's best interest to start now to develop new funding sources for its operations. From issuance of debt securities in the local financial markets, to initiating a process of accessing the private windows of developing partners (where government guarantees are not needed), IDCOL should actively explore such options. IDCOL has already initiated this funding strategy. Recently, it received a US\$526 million loan from the commercial window of the Asian Development Bank (ADB).

**IDCOL's role in supporting the development of local capital markets.** As with the PIFs examined in other country case studies, IDCOL needs to play a catalytic role promoting development of capital markets in its home country. IDCOL needs to be more proactive in the development of credit derivatives (partial credit and partial risk guarantees) through innovations in product offering, accompanied by a contingent liability strategy. By implementing these types of new instruments effectively, IDCOL will be able to maximize leverage of the private capital it can mobilize.

<sup>14</sup> This situation likely explains the GOB's relatively low capitalization of IDCOL initially (approximately US\$4 million).

**Diversifying while maintaining leadership in the renewable energy sector.** IDCOL faces a paradigm shift when looking ahead. With 80 percent asset concentration in the energy sector, the Fund needs to improve the risk management of its portfolio and increase diversification to other sectors. At the same time, IDCOL has a consolidated position as the lead lender in the energy sector in Bangladesh. Moreover, IDCOL is also the lead financier in the appreciated area of climate change-related investments (renewable energy and energy efficiency). In a post-graduation situation of the country, one of the few “soft” funding sources available at a global scale will be the climate change-related initiatives (including the Green Climate Fund, and climate change windows through multilateral agencies (MLAs) and bilateral agencies). It will be desirable for IDCOL to maintain this leadership position as a climate change financier to add a “soft” component to its future funding strategy for its operations in Bangladesh. IDCOL is well positioned to achieve this as the country’s first accredited agency under the Green Climate Fund.

**The role of Bangladesh Infrastructure Finance Fund Limited (BIFFL).** In contrast to IDCOL, the BIFFL has been strongly capitalized since its creation in 2011. This situation provides BIFFL with a competitive edge to more enthusiastically develop new risk mitigation products and become more innovative to support local capital market development and mobilize more private capital. Despite its original mandate to support public investment, BIFFL is very active in the public-private partnership (PPP) and private sector arena. Joint development work between BIFFL and IDCOL in financing structures and innovation, and joint underwriting, will help both institutions and will promote more private capital mobilization in Bangladesh infrastructure markets. Coordination and collaboration between both institutions will be critical for the development of PPPs in Bangladesh.

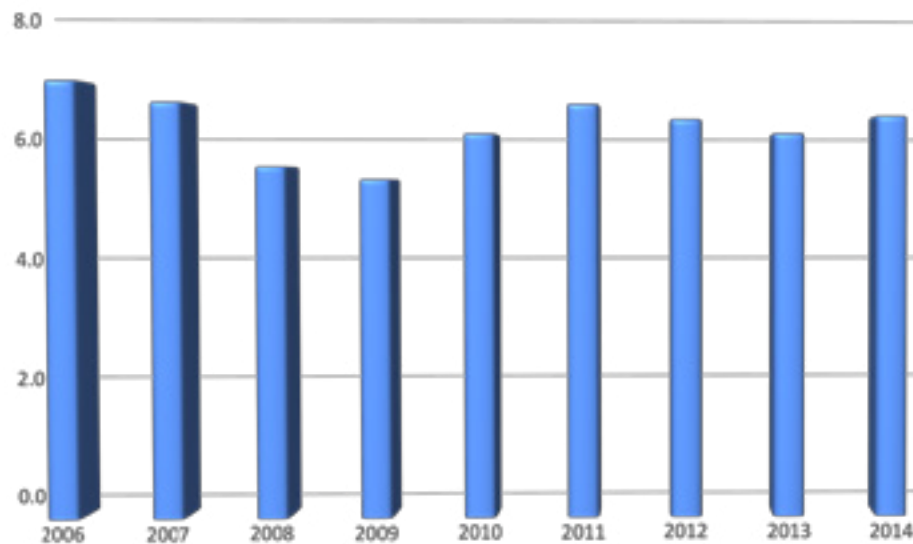
## 1. Country Information

### Brief Description of Bangladesh

Through reform efforts initiated in the 1990s, Bangladesh has been able to sustain significant economic and development progress in the recent years. Since 2010, annual GDP growth has averaged 6.4 percent (see **Figure 1**). GDP growth in 2018 is expected to be robust, at around 6.4 percent. This GDP growth is significantly higher than the median of 4.3 percent for other comparable economies (Ba3-credit rated). As a result, the size of Bangladesh’s economy nearly tripled and real GDP per capita increased by over 80 percent between 2007 and 2016. Gross national income (GNI) per capita increased from US\$100 in 1972 to US\$1,480 in 2017.

On January 1, 2016, the 17 Sustainable Development Goals (SDGs) to eliminate poverty, battle discrimination and unfairness, and meet the challenges of climate change came into force at an historic United Nations (UN) Summit. The SDGs follow the success of the Millennium Development Goals (MDGs) and aim to go further to end all forms of poverty. In 2015, Bangladesh was recognized as a role model in the achievement of MDGs. In the MDG Bangladesh Progress Report 2015, Bangladesh reported significant progress in the areas of poverty alleviation, ensuring food security, primary school enrolment, gender parity in primary and secondary level education, lowering the infant and under-five mortality rate and maternal mortality ratio, improving immunization coverage, and reducing the incidence of communicable diseases. As a result of all these efforts, in 2015, Bangladesh was designated a lower-middle-income country (as per World Bank Group standards) from a previous classification of “least developed.”

Figure 1. Bangladesh's Annual GDP Growth Rate



Source: <https://tradingeconomics.com/bangladesh/gdp-growth-annual>

Among sectors, growth has accelerated in recent years in the industry, manufacturing (large, medium, and small-scale), mining and quarrying, electricity, gas, and water supply sectors. However, growth in the agriculture sector has decelerated because of the decline in crop and horticulture growth. Growth in the construction sector decelerated marginally in 2016 compared to the growth rate of the previous calendar year.

Private consumption accounts for about 70 percent of total GDP and is a key contributor to Bangladesh's economy. Bangladesh has become the world's second largest exporter of ready-made garments after China. These exports accounted for nearly 85 percent of total goods exports in US dollar terms in 2016. Given Bangladesh's very low per capita income level and abundant labor supply, garment exports have thrived, based on the competitive advantage of low-cost labor. The trend is expected to continue as China is transitioning into higher-value goods, while Bangladesh preserves its cost competitiveness and improves its attractiveness to foreign direct investment (FDI).

Despite these achievements, Bangladesh also continues to face challenges of limited public services, weak institutions, and poor infrastructure, posing constraints to investments and growth. The recent years have also been marked with disastrous flooding. More than 1.3 million families, representing approximately 5.9 million people, have been affected, according to the Department of Disaster Management Situation Report of August 19, 2017. In addition, there has been a surge of Rohingya people fleeing across the border from Myanmar. A report from the UN-led Inter-Sector Coordination Group (ISCG), dated October 22, 2017, estimated that some 603,000 Rohingya refugees had crossed from Rakhine to Bangladesh since August 25, 2017.<sup>15</sup> Bangladesh is now home to almost 1 million Rohingya refugees.<sup>16</sup> On the political side, the country is preparing for parliamentary elections at the end of 2018 or early 2019.

<sup>15</sup> <http://www.presstv.com/Detail/2017/10/22/539540/Myanmar-Bangladesh-Rohingya-UN>

<sup>16</sup> [https://www.washingtonpost.com/news/worldviews/wp/2017/10/25/bangladesh-is-now-home-to-almost-1-million-rohingya-refugees/?utm\\_term=.9624563a4c2e](https://www.washingtonpost.com/news/worldviews/wp/2017/10/25/bangladesh-is-now-home-to-almost-1-million-rohingya-refugees/?utm_term=.9624563a4c2e)

**Table 1. Fast Facts About Bangladesh**

Indicator	2017 <sup>a</sup>	2016	2015	2014
Population (million)	164.9	162.9	161.2	159.4
GDP (current US\$ billion)	248.8	221.42 <sup>b</sup>	195.08	172.88
GDP per capita (current US\$)	1480	1029.60	971.60	922.2
GDP growth	7.28% <sup>c</sup>	7.11% <sup>d</sup>	6.55% <sup>e</sup>	6.06%
Poverty rate (%) (\$1.90/day 2011PPP)	18.5			
GINI coefficient	32.1			
Current account balance (% of GDP)	-0.6 <sup>f</sup>	1.9	1.5	0.8
Fiscal balance (% of GDP)	-5.0 <sup>f</sup>	-3.8	-3.9	-3.6
Debt (% of GDP)	32.5 <sup>f</sup>	31.2	31.5	31.9

Source: World Bank Group Country Snapshot 2017.

Note: PPP = purchasing power parity.

a. World Bank Group Country Snapshot 2017.

b. <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=BD>

c. <https://bdnews24.com/economy/2017/11/14/bangladeshs-economic-growth-hits-record-7.28-in-fy17>

d. <https://tradingeconomics.com/bangladesh/gdp-growth> + <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>

e. <https://tradingeconomics.com/bangladesh/gdp-growth>

f. World Bank estimate.

A recent UN mission to Bangladesh confirmed that the country is likely to meet the criteria for its “graduation” from least developed country (LDC) status (see box 1). There are three criteria to be met for this “graduation”: gross national income (GNI) per capita higher than US\$1,230; a Human Assets Index of 66 or above; and an Economic Vulnerability Index of 32 or below. While this transition might facilitate Bangladesh’s access to global financial markets and increase foreign direct investment, it also implies the loss of LDC-specific support funds (“soft” low-cost funds).

### Box 1. Bangladesh’s Graduation to Developing Country Status

Bangladesh, the largest least developed country (LDC) in terms of population and economic size, looks likely to leave the LDC category by 2024, propelled by better health and education, lower vulnerability, and an economic boom. A mission by the Secretariat of the UN Committee for Development Policy (CDP) to Dhaka in mid-October 2017 confirmed that the country is likely to be the first LDC to meet all three criteria for graduation by the time of the next CDP review in March 2018.

The CDP measures the LDC category on the basis of per capita income, a Human Assets Index, and an Economic Vulnerability Index. A country must exceed thresholds on two of the three criteria at two consecutive triennial reviews to be considered for graduation. Bangladesh looks likely to be the first LDC ever to graduate based on all three criteria. Bangladesh’s success comes on the back of

six straight years in which economic growth has exceeded 6 percent, culminating in some of the fastest growth rates in the world in recent years. Per capita gross national income using the World Bank Atlas method has outstripped the LDC average since 1996 and has recently risen above the threshold used by the CDP. The economy has developed largely based on textile and garment exports. Clothing forms a higher share of exports than in any other country. Remittances, natural gas, shipbuilding, and seafood, as well as information communications and pharmaceuticals, are all emerging sources of foreign exchange and economic growth.

Bangladesh's graduation will have some implications for the economy, although during the CDP mission many of the main stakeholders – including the government and private sector – confirmed that graduation would be a major step forward in the country's history and therefore an event to be welcomed. Official development assistance is a relatively small proportion of government expenditure and appears unlikely to decline solely based on LDC graduation – despite donors' official commitment to prioritize LDCs. The other special international support measures for LDCs, such as travel grants, reduced UN and peacekeeping budget commitments, and scholarships, are considered relatively unimportant given the size of the economy. Following graduation in 2024, the country would probably be given a three-year transition period before it lost duty-free, quota-free market access to the European Union under the Everything but Arms initiative for LDCs. After 2027, if it ratifies 27 conventions on human and labor rights, environment and governance, Bangladesh may be expected to gain access to the Generalized System of Preferences Plus (GSP+), giving it dedicated preferential tariff rates.

Source: United Nations, Committee for Development Policy, October 30, 2017.

### **Bangladesh's Demand for Infrastructure Investment**

Bangladesh has set itself the goal of becoming a middle-income country by 2021. However, its infrastructure sector is one of the most underdeveloped in Asia. To meet this ambitious goal, the World Bank estimates that Bangladesh needs to make an aggregate investment of US\$100 billion in the infrastructure sector to meet the requisite aggregate national growth. It also needs to raise its investment in infrastructure to around 10 percent of GDP.<sup>17</sup>

The transportation sector alone will require between US\$36 billion and US\$45 billion in investment. The power sector needs US\$9 billion over the next five years to raise generation and meet growing demands. Other priority sectors include water supply and sanitation, solid waste management, and telecommunications.<sup>18</sup>

To meet its economic growth target, and in the long term to reduce poverty rates, Bangladesh, like many developing economies, needs to facilitate investment in infrastructure. The Government of Bangladesh is highly aware of this need and has taken steps toward mitigating the infrastructure limitations by focusing primarily on infrastructure development. In its annual budget for FY2015/16, the government put an emphasis on investments in transport, energy, education and religion, physical infrastructure, water supply and housing, rural development, health, nutrition, and family planning, and agriculture.

<sup>17</sup> Annual Report 2016.

<sup>18</sup> World Bank Databank.

**Table 2. Infrastructure Indicators**

Indicator	Measure
Access to electricity (as of 2017) <sup>a</sup>	83% of population
Electric power consumption (as of 2017) <sup>a</sup>	433 kWh per capita
Improved water source (as of 2017) <sup>b</sup>	98% of population with access
Improved sanitation facilities (as of 2017) <sup>b</sup>	97% of population with access
Mobile cellular subscriptions (as of 2017) <sup>c</sup>	88.12 per 100 people
Internet users (as of 2017) <sup>d</sup>	48.89% of the population
Logistics Performance Index (as of 2016) <sup>e</sup>	2.66/5
Global Competitiveness Index Infrastructure Score (as of 2016–17) <sup>f</sup>	3.80/7

Sources: Bangladesh population from United Nations. Retrieved April 10, 2018 <http://www.worldometers.info/world-population/bangladesh-population/>

Note: The table is based on the latest available data.

a. M. Hossain, Director General of the Power Cell, in the Power Division of Ministry of Power, Energy and Mineral Resources (December 27, 2017 interview by A. R. Rasel, interviewer).

b. World Bank, “Precarious Progress: A Diagnostic of Water Supply, Sanitation.” September 25, 2018 blog. <http://blogs.worldbank.org/endpovertyinsouthasia/towards-cleaner-bangladesh-safe-water-sanitation-and-hygiene-all>.

c. Bangladesh Telecommunication Regulatory Commission. (2018). Mobile Phone Subscribers Bangladesh-December 2017. <http://www.btrc.gov.bd/content/mobile-phone-subscribers-bangladesh-december-2017>.

d. Bangladesh Telecommunication Regulatory Commission (BTRC). (2018). Internet Subscribers in Bangladesh-December 2017. <http://www.btrc.gov.bd/content/internet-subscribers-bangladesh-december-2017>.

e. World Bank. (2017). LPI Datasheet.

f. World Economic Forum. (2017). *The Global Competitiveness Report 2016–2017*. Geneva: World Economic Forum. The Global Competitiveness Index (GCI) is published in *The Global Competitiveness Report* and assesses the competitiveness landscape of 137 economies. The GCI Infrastructure Score is a component of the overall index and covers transport, electricity and telephony infrastructure.

Bangladesh ranks 99th out of 137 countries in overall competitiveness (106<sup>th</sup> the previous year, an improvement of seven places), per the World Economic Forum Global Competitiveness Index, with particularly weak sub scores for institutions (107 of 137) and infrastructure (111 of 137). Bangladesh’s inadequate supply of infrastructure is considered the second major constraint for doing business in the country according to the World Economic Forum. Bangladeshi authorities aim to address these issues by easing infrastructure gaps and improving the overall business climate, supported by multilateral and bilateral financial and technical assistance.

Infrastructure is a key constraint for the competitiveness of Bangladesh, but there is another facet to it. Bangladesh is located at the end of the fragile delta formed by the Ganges, Brahmaputra, and Meghna rivers, and is more exposed to tropical cyclones than any other country. It also experiences two-fifths of the world’s storm surges every year.<sup>19</sup>

According to the 2015 Climate Change Vulnerability Index, Bangladesh’s economy is more at risk to climate change than any other country. It is estimated that economic losses due to storms, monsoon flooding, and other climate-related events depress the GDP annually by 0.5 to 1 percent. Also, two-thirds of the country is less than five meters above sea level. The significant effects of climate change

<sup>19</sup> “Bangladesh. Building Resilience to Climate Change.” World Bank (2016).



also put a demand for infrastructure investment in areas such as climate resiliency, coastal defenses, resilient homes and emergency shelters, potable water infrastructure (to reduce saline water intrusion), and early warning systems.

However, the public sector alone cannot achieve the investment required in infrastructure. Part of the infrastructure investment in the near and medium term will have to come from the private sector. Consequently, the government has created several entities for private sector development, including the Privatization Commission and the Board of Investment, which then merged into a single organization called the Bangladesh Investment Development Authority.

In 2010, the GOB created the Policy and Strategy for PPPs and the creation of a PPP Office (PPPO) under the Prime Minister's Office. One of its responsibilities is to advise and oversee PPP projects. To this end, the PPPO has been publishing PPP process-related and sector-specific guidance documents. Another PPP unit based in the Ministry of Finance assesses the financial viability of projects and determines the level of government support. In 2011, the GOB created the Bangladesh Infrastructure Finance Fund Limited (BIFFL), a fund under the Ministry of Finance to finance PPP infrastructure projects (more on BIFFL later in this document). In 2015, the GOB enacted a new PPP law and in its FY2015/16 budget, the Government of Bangladesh created new public-private partnership (PPP) programs to implement large-scale infrastructure and energy projects.

## Energy Sector

Given the relevance of the energy sector in this case study (80 percent of IDCOL assets are energy related), a brief overview on the Bangladesh energy sector is included in this case study.

Dhaka, the capital city of Bangladesh, started its electrification process in 1901, only 19 years after New York and 13 years after London. In 1948, an Electricity Directorate was established in what was at the time East Pakistan, with a few Steam Turbines in Siddhirganj (maximum size 10MW), Chittagong, and the Khulna area. In 1962, a 40-MW Kaptai hydroelectric project was installed with a 132kV transmission line between Dhaka and Chittagong. In 1971, after Bangladesh's independence, only 3 percent of the population had access to electricity. In FY1975, the installed electricity generation capacity was at 667 MW, and by August 2016, it had grown to 12,780 MW, including the import of 600-MW from India (Figure 2).<sup>20</sup>

In 1997, when IDCOL was created, most the country's population did not have access to basic services and infrastructure to ensure minimum quality of life. A mere 14 percent of households had access to electricity, there were only 2 telephone lines per 1000 people, nearly 60 percent of the population lacked access to safe drinking water, and only 16 kilometers of paved roads were available for every 100 square kilometers of land area.<sup>21</sup> This lack of infrastructure was an impediment to the economic growth of the country; without electricity and roads, for example, it could not affordably produce goods for domestic consumption or competitive exports. Bangladesh needed to increase investment levels in infrastructure. In parallel, the government fiscal resources and the level of official development assistance (ODA) were declining. Private participation needed to be catalyzed toward targeted infrastructure sectors to achieve economic growth.

At the time, Bangladesh had a less than spotless track record in attracting private investment, capital markets were underdeveloped, and the creditworthiness of public sector utilities was problematic, among other issues. The potential of the energy sector, however, was evident. Therefore, the GOB, with the World Bank Group, introduced special mechanisms and vehicles to address financing constraints and render the sector and transactions more attractive and efficient. Several priority projects designed to address crippling energy deficiencies were identified. IDCOL was critical to channeling multilateral

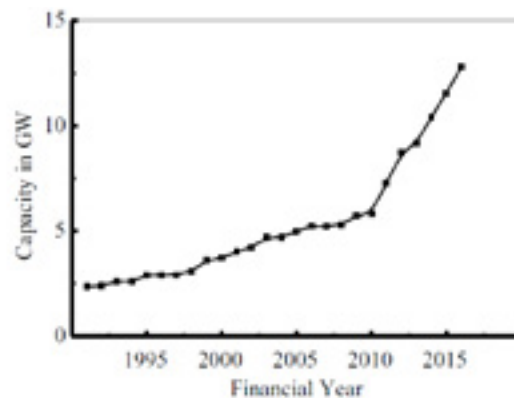
<sup>20</sup> A Review of Energy Sector of Bangladesh, Saiful Islam, Md. Ziaur Rahman Khan, 2017. Science-Direct, Energy Procedia 110 (2017), 1<sup>st</sup> International Conference on Energy and Power, ICEP2016, RMIT University, Melbourne, Australia.

<sup>21</sup> PSIDP PAD, World Bank, 1998.

development bank (MDB) funding to ease financing constraints and implement those projects.

Favorable government policies have attracted private investment and independent power producers (IPP). They are now producing 46 percent of total power in Bangladesh. The country is also importing power from India. From the time IDCOL was established, the World Bank has participated in its funding. In a 1998 report, it identified the need to initiate early transactions “in power generation (as independent power producers-IPPs), gas pipeline and transmission telecommunications,” and called for “a second wave of investment [in] ports, water supply and highway as they carry greater risks and will therefore, involve longer lead times and more substantial development work.”<sup>22</sup> The World Bank Group is currently the largest development partner of Bangladesh. Its engagement has increased significantly since 2012. At the end of FY2017, the total commitment of the World Bank Group’s International Development Association (IDA) stood at US\$9.3 billion (38 projects), up from US\$4 billion (27 projects) at the end of FY2012. The World Bank Group Country Partnership Framework (CPF) with Bangladesh for FY2016–FY2020 focuses on developing areas constraining growth and job creation, including energy and infrastructure.<sup>23</sup>

**Figure 2. Bangladesh, Energy Sector, Installed Capacity GW, 1995–2016**



Source: Review of Energy Sector of Bangladesh, Saiful Islam, Md. Ziaur Rahman Khan, 2017. Science-Direct, Energy Procedia 110 (2017), 1<sup>st</sup> International Conference on Energy and Power, ICEP2016, RMIT University, Melbourne, Australia.

### Description of the Local Financial Markets

Promoting financial growth and banking services like credit and deposit activities; financing for small enterprises, women and underprivileged; trade services; and green banking activities have been linked with higher quality of life, improved quality of education, faster poverty reduction, and employment generation. Banks and similar financial institutions play an important role in development. They provide “green” or “sustainable” lending, for example to infrastructure projects, extend financial services to entrepreneurs and enterprises, and support green investments to nudge the financial system to serve the environment. Bangladesh’s central bank, Bangladesh Bank, has committed to provide a US\$200 million “Green Transformation Fund” to support green transitions in the export-oriented textiles and leather industries, supplemented by another US\$300 million from the World Bank Group.

<sup>22</sup> PSIDP PAD, World Bank, 1998.

<sup>23</sup> World Bank Group Bangladesh Country Snapshot 2017.

**Table 3. Bangladesh Currency Equivalents**

Bangladeshi Taka (symbol: $\text{₳}$ or Tk - ISO code: BDT)		
Currency	Number equivalent	US\$ equivalent (1 US\$ = Tk83.04)
1 Bangladeshi taka	1 Bangladeshi taka = $\text{₳}$ 1 = Tk 1	US\$0.012
1 Tk Lakh	1 Lakh = $\text{₳}$ 100,000	US\$1,204
1 Tk Crore	1 Crore = 100 Lakhs = $\text{₳}$ 10 million	US\$120,370
1 Tk Lakh Crore	= $1 \times 10^{12}$	US\$1.203 billion

Note: Exchange rate as of March 2018.

The financial sector is therefore an effective instrument for achieving the SDGs in Bangladesh. It was the financial growth of the economy that transformed Bangladesh into a middle-income country. The government has issued its Seventh Five-Year Plan for the 2016–2020 period, where it included steps regarding financial inclusion.

**Table 4. Bangladesh Financial Sector, Economic Indicators, 2012–16**

Ratio	2012	2013	2014	2015	2016
ROA	0.6	0.9	0.7	0.8	0.7
ROE	7.8	10.7	8.1	9.4	9.7
Net Interest Margin	2.8	2.1	1.8	1.7	1.9
Interest Income to Total Assets	8.1	7.7	6.9	6.2	5.5
Net Interest Income to Total Assets	2.2	1.7	1.5	1.5	1.5
Non-interest Income to Total Assets	2.7	2.7	2.8	2.7	2.4
Non-interest expense to Total Income	42	47.1	46.5	48.6	53.3
Capital Adequacy Ratio	10.5	11.5	11.4	10.8	10.8
Classified Loans to Total Loans	10	8.9	9.7	8.8	9.2
Classified Loans to Capital	74.2	59.8	67.7	60.8	74.2
Provision to Classified Loans	44.4	61.6	56.2	51.8	49.4

Source: *Financial Stability Report 2016, Bangladesh Bank*

Economic indicators for the Bangladesh financial sector for 2012–16 are presented in table 4. Private sector credit growth grew by 15.7 percent in FY2017, while public sector bank borrowing declined. But government non-bank borrowing through National Savings Certificates (NSCs) exceeded the budgetary target. This has the positive impact of lowering inflationary pressure more than bank borrowing, and allowing greater room for bank borrowing by the private sector. On the down side, it hinders the much-needed development of the bond markets to mobilize savings for infrastructure and other long-term investments.

According to Bangladesh Bank's latest annual report (2015–16), the country's economy grew by 7.1 percent, exceeding the 7.0 percent growth target and the 6 percent growth trajectory. This strong growth was mainly supported by the industry and services sectors (see section 1). Driven by favorable food inflation, the annual average consumer price index (CPI) inflation rate continued to decline to 5.9 percent in June 2016. Meanwhile, exports grew by 8.9 percent, while, thanks to subdued global commodity prices, imports fell by 5.5 percent in FY2016. The current account surplus of US\$3.7 billion led to an overall balance of US\$5.0 billion, building net foreign assets, and foreign exchange reserves reached US\$30.2 billion at the end of FY2016.

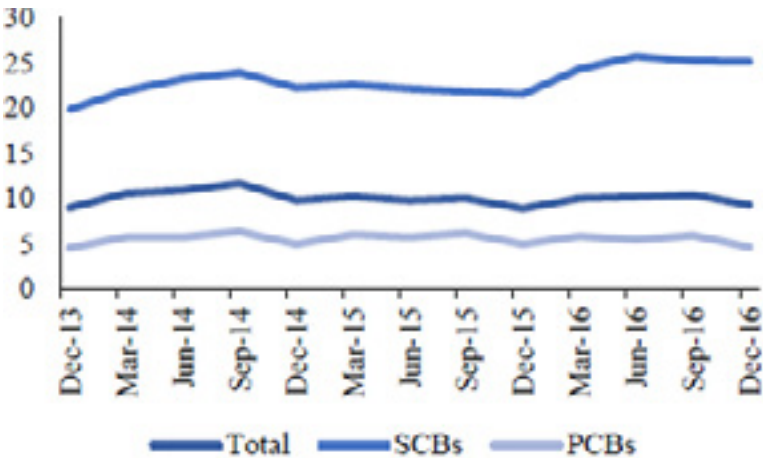
### Bank Markets

In contrast to its neighbor India, local bank markets in Bangladesh are dominated by the private sector. According to Bangladesh Bank, there are 57 scheduled banks in operation, of which 6 are state-owned commercial banks, 2 are specialized banks also owned by the GOB, and 40 are private commercial banks. In addition, other Islamic commercial private banks and international private banks operate within the country. They participate as lenders to selected infrastructure projects, with tenors ranging from 5 to 7 years without financial support by credit-worthy third parties. Some private banks, when lending

in consortiums with IDCOL or BIFFL, or with some type of government support, have lent up to 10 to 12 years. Most of the exposure is concentrated in the energy sector. Income tax rates are relatively low for financial institutions in Bangladesh, with a 45 percent gross income tax rate.

The Bangladeshi banking sector is struggling. Its overall capital adequacy ratio (CAR) is above the percent requirement of the Basel II framework. However, seven banks, mainly state-owned banks (SOBs), have failed to maintain the regulatory capital requirement. In 2016, the CAR of state-owned commercial banks (SCBs) and state-owned development banks (SDB) was 5.9 percent and -33.7 percent, respectively. The quality of banking assets also deteriorated. The gross non-performing loan (NPL) ratio increased to 9.2 percent in 2016 from 8.8 percent in 2015. When broken down, the NPL ratio for state-owned commercial banks increased by 3.6 percentage points, whereas it decreased by 0.6 percentage points for private commercial banks (PCBs) (Figure 3).

**Figure 3. Non-Performing Loans as a Percentage of Outstanding Loans**



Source: Bangladesh Development update.

Note: PCBs = private commercial banks; SCBs = state-owned commercial banks.

**Capital Markets**

Bond and equity markets in Bangladesh are underdeveloped. A broad base of institutional investors is lacking. The public pension fund system is unfunded, and private pension schemes are at a very early stage. The insurance companies, until very recently supervised by the Ministry of Commerce, are now under the supervision of the Ministry of Finance (MOF) and the financial institutions regulatory authorities. Their contribution as institutional investors is limited. There are no secondary bond markets, so the few instruments traded do not have liquidity, with the exemption of GOB securities. Development of local capital markets will be very important for infrastructure finance in Bangladesh. Adequate incentives (public policy, tax exemptions), and a more active role of public non-bank financial institutions (like IDCOL and BIFFL) could help broaden the investor base and deepen the markets.

## Public Institutions Supporting Infrastructure Finance

### **PPP Authority**

The PPP Authority is a central government entity under the Office of the Prime Minister, with the responsibility to promote and oversee the development of the PPP Program in Bangladesh. The Authority's support includes collaborating with line ministries to facilitate identification, development, and tendering of PPP projects to international standards. The PPP Authority works together with line ministries screening potential candidate projects for PPP, developing bidding documents, overseeing tendering to ensure transparency, facilitating finance, overseeing the commercial negotiation of the PPP contract, and monitoring the implementation phase. As of May 2017, its pipeline included 45 approved projects totaling US\$14 billion, and 33 projects under different stages of preparation totaling US\$7.5 billion.

### **Infrastructure Development Company Limited (IDCOL)**

A 1997 World Bank initiative to provide financial support to the early stages of the PPP Program in Bangladesh, IDCOL was initially funded with a symbolic contribution by the GOB (approximately US\$4 million equivalent) and a long-term loan from the World Bank in the amount of US\$225 million (see box 2). IDCOL provides long-term financing support to private sector energy and infrastructure projects. IDCOL was created as a non-bank financial entity, 100-percent owned by the Ministry of Finance (MOF), with capacities to develop debt, derivatives and equity products.

### **Bangladesh Infrastructure Finance Fund Limited (BIFFL)**

Given the future relevance of BIFFL in local infrastructure markets and its relatively strong balance sheet compared to IDCOL, the discussion that follows provides more information than usual about an institution that is not part of the case study.

BIFFL was created on March 21, 2011, in an attempt by the GOB to demonstrate strong support for infrastructure development in Bangladesh. Unlike the case of IDCOL, the GOB made a large initial capital contribution (Tk16 billion, equivalent to approximately US\$200 million at the prevailing exchange rate) with direct funding from the public budget. BIFFL's mandate was to provide a broad range of financial support (debt, derivatives, and equity products) to both the private and public infrastructure development in the country. BIFFL is today a 100-percent state-owned non-bank financial institution.

During the initial conceptualization of this Fund, the GOB considered the option of placing the capital contribution in IDCOL (which was already in operation), under a dedicated scheme that could also include public sector projects. Unfortunately, it was difficult to reach an agreement between IDCOL and the authorities regarding the policies to manage the institution with the additional funding. The GOB decided to set up a new fund and even to try the idea of hiring a specialized global fund manager to run the operations. Unfortunately, the global fund manager concept did not materialize, and it took three years for BIFFL to make its first loan disbursement, which it did for a power sector project in August 2014.

**Table 5. BIFFL Financial Performance, 2016**

Description	Tk million	US\$ million
<b>Assets</b>		
Cash and investments	13,917	176.4
Loans	7,791	98.7
Other	2,722	34.5
<b>Total assets</b>	<b>24,430</b>	<b>309.6</b>
<b>Liabilities and capital</b>		
Loans and credit lines	4.4	0.1
Other liabilities (deferred taxes)	2,435.8	30.9
<b>Total liabilities</b>	<b>2,440.2</b>	<b>31.0</b>
<b>Capital (paid-in + reserves)</b>	<b>21,990.0</b>	<b>278.61</b>
<b>Revenue</b>		
Interest from loan assets	412.6	5.2
Interest paid for BIFFL debt	36.2	0.5
<b>Net interest</b>	<b>376.9</b>	<b>4.7</b>
Other operating income (Treasury)	1,170.9	14.8
<b>Total revenue</b>	<b>1,547.3</b>	<b>19.6</b>
<b>Operating expenses</b>	<b>100.5</b>	<b>1.3</b>
<b>Profit before taxes and provisions</b>	<b>1,446.7</b>	<b>18.3</b>
<b>Net profit</b>	<b>773.4</b>	<b>9.8</b>
<b>Net profit to revenues (percent)</b>	<b>50%</b>	<b>50%</b>
<b>Operating costs to revenues (percent)</b>	<b>6%</b>	<b>6%</b>
<b>Net tax rate (percent)</b>	<b>40%</b>	<b>40%</b>
<b>Return on equity</b>	<b>3.5%</b>	<b>3.5%</b>

Source: BIFFL Annual Report 2016.

Note: Exchange rate BMT per US\$ = 78.91 (2016).



BIFFL is still an institution in the early part of its project cycle. Based on the latest available data (December 31, 2016), BIFFL still has a large unutilized leverage capacity (debt-to-equity ratio of 11 percent), which undoubtedly it has started to exploit. According to the CEO, Formanul Islam, during 2017, BIFFL approved more than 30 new infrastructure loans, and is currently negotiating with several international financial institutions (IFIs) for its funding strategy for 2018–22. IDCOL was instrumental during the first years of the BIFFL development stage.

Its cost structure, as of December 31, 2016, was still very light (6 percent of revenues) (table 5). This figure will increase as BIFFL increases its asset portfolio and expands product lines. Also, BIFFL is investing in relocating to new offices and developing new management information systems, which will have an impact on operational costs.

BIFFL offers a full range of debt and equity products to satisfy different market needs in infrastructure development. In the debt category, BIFFL offers senior loans, working capital loans, bridge financing, take-out financing, refinancing, mezzanine financing, and commercial paper. In the equity category, BIFFL offers common shares, preferred shares, and convertible debt. BIFFL is initiating its product development process for credit derivatives (guarantees). Still not sure of the range and types of guarantees. This is an area where BIFFL is likely to need technical support from IFIs.

In terms of sector exposure (based on data of December 31, 2016), BIFFL risk exposure is distributed as follows: energy (40 percent); economic zones and connectivity – public sector (35 percent); sustainable finance (10 percent); tourism infrastructure (8 percent); and other (7 percent). It has a more balanced distribution of sector exposure than IDCOL, although the energy sector also represents the lion's share. Despite this, given BIFFL's recent development, it is still too early to define what its future sector concentration will be. Its five-year strategic plan for 2017–22 is presented in table 6.

**Table 6. BIFFL Strategic Plan, 2017–22 (Tk Crore)**

	2017	2018	2019	2020	2021	Total
<b>Investments</b>						
Energy	500.0	625.0	781.3	976.6	1,220.7	4,103.5
Economic zones	330.0	412.5	515.6	644.5	805.7	2,708.3
Green energy	280.0	350.0	437.5	546.9	683.6	2,297.9
Connectivity	230.0	287.5	359.4	449.2	561.5	1,887.6
Other	309.0	386.0	483.2	603.8	754.5	2,535.7
<b>Total</b>	<b>1,649.0</b>	<b>2,061</b>	<b>2,577</b>	<b>3,221</b>	<b>4,026</b>	<b>13,533</b>
<b>Funding</b>						
Equity	2,000.0					2,000.0
Earnings and reserves	260.0	394.0	570.0	794.0	1,075.0	3,092.0

Local equity issuance		1,000.0				1,000.0
Multilateral agencies	160.0	640.0	800.0	1,200.0	1,200.0	4,000.0
Local bond issuance			400.0		400.0	800.0
Global bond issuance				400.0	400.0	800.0
PPP GOB allocation			400.0	400.0	400.0	1,200.0
Total	2,420.0	2,034.0	2,170.0	2,794.0	3,475.0	12,893.0

Source: BIFFL Annual Report, 2016.

Note: GOB = Government of Bangladesh.

Because BIFFL's balance sheet is still unleveraged and it counts on GOB financial support as a lender of last resort to guarantee international funding, BIFFL has an aggressive plan to become the most important financier for infrastructure development in Bangladesh. The plan calls for mobilizing financial resources amounting to Tk13,533 Crore for the 2017–21 period (equivalent to US\$1,633 million), for infrastructure development in the country. Considering that BIFFL's take in each transaction is an average of 30 percent of project cost, the five-year plan calls for a total mobilization of Tk45,110 Crore (equivalent to US\$5,443 million). Despite BIFFL's intention to diversify its sector risk, with this strategic plan, the energy sector (including green energy) will represent close to 45 percent of the institution's exposure in Bangladesh.

On the funding side, the plan is no less ambitious and includes an initial public offering (IPO) in Bangladesh local markets for Tk1,000 Crore for a capital increase, as well as four bond issuances (two local and two global) for Tk400 Crore each (equivalent to US\$48.3 million). In addition, the plan considers raising a total of Tk4,000 Crore from multilateral and bilateral institutions. As Bangladesh graduates from a least developed country (LDC) to a developing economy, access to these types of funds might become more difficult. Without a doubt, this is an ambitious program, both on the investment and the funding side, but it remains the strategic vision of the institution, nevertheless. Important human capital resources, information management systems, risk management systems, and strong governance will be needed to achieve at least part of the strategic plan. BIFFL is still in the early stages of the learning curve as an institution. Its loan portfolio is new, and construction on most projects has not yet been completed. As the loan portfolio matures and standard credit concerns start appearing, BIFFL should strengthen its risk management business model. If it eventually engages in the provision of guarantees, it would have to develop its own contingent liabilities systems.

Senior management is aware of the dimensions of the strategic plan and the need for resources. Senior management has initiated conversations with several IFIs to explore both the debt funding side, as well as the potential interest to participate in the equity ownership. We believe this is an important and positive step. Inclusion of an IFI in the equity ownership will provide BIFFL with access to good management, risk management systems, credit practices, and governance. It might even be more important to sequence the capital increase of BIFFL and initiate first with an IFI private capital subscription before considering a full-fledged IPO. Also, BIFFL must make a strategic decision to balance the trade-off between additional private capital and enjoying the sovereign rating umbrella as a 100 percent state-owned financial institution.

If well managed, and no major systemic risk affects Bangladesh, BIFFL will grow its business and will become a major key player in infrastructure finance in the country.

## **Infrastructure Promotion Financing Facility (IPFF)**

As part of its initiatives to support infrastructure development in Bangladesh, the World Bank created, via a long-term loan (38 years) approved in April 2017, a second tranche of a financing facility that operates as a special discount window at Bangladesh's central bank.

Bangladesh Bank (the central bank) has been implementing the Investment Promotion & Financing Facility Project (IPFF) on behalf of the Finance Division, Ministry of Finance, with the financial assistance of the World Bank Group's International Development Association (IDA). The main objectives of IPFF are to supplement the resources of Bangladesh financial markets to provide term finance for infrastructure and other investment projects beyond the capacity of local financial institutions; and to promote the role of private sector entrepreneurs in the development of capital projects, especially infrastructure.

Under IPFF, government approved private infrastructure development projects that are developed on a PPP basis are being financed through selected participating banks/financial institutions (PFIs). One of the main features of the Facility is that at least 30 percent of the cost of any approved project should be borne by the entrepreneurs' own resources and a maximum of 70 percent is to be provided as debt financing, of which 20 percent is to be provided by the participating financial institutions (PFIs) and the rest (80 percent) by IPFF. However, the PFIs are supposed to bear all commercial risks associated with the debt financing.

Under its first operation with World Bank support, "IPFF financed 11 small power plants that together generate over 550 MW electricity, three water treatment plants, an inland container depot, a fiber-optic cable network, and a dry dock."<sup>24</sup> Many of these projects have been co-financed with IDCOL.

The World Bank Group supported a second operation in 2017. The key conditions are as follows:

- **IDA credit:** US\$357 million equivalent, including a US\$257 million zero-interest credit and a US\$100 million scale-up facility.
- **Terms for US\$257 million credit:** Maturity = 38 years; grace period = 6 years.
- **Terms for US\$100 million scale-up facility:** Maturity = 30 years; grace period = 9 years.

As the World Bank stated in an April 5, 2017 press release announcing the second operation:

"Built on the success of a predecessor project, the Investment Promotion and Financing Facility (IPFF) II Project will continue enabling the participating local financial institutions to offer long-term funding to private companies to build infrastructure in various sectors including waste management, water treatment, energy saving equipment, container terminals, land ports, and bridges...The project will help participating local financial institutions to extend long-term credits for infrastructure ventures beyond the usual lending period of five to seven years. Eligible financial institutions can apply for IPFF II funding through Bangladesh Bank."<sup>25</sup>

The IPFF facility could also be used to support development of local capital markets. The availability of long-term financing could be structured as a "take-out" facility, where a financial agent will issue long-term bonds in the local markets, with a take-out option for bond holders in year 5, 6, or 7 of the overall maturity. If the project bond is performing well, it is likely that bondholders will not exercise the option and vice-versa. This arrangement would add needed incentives for the local capital markets to be developed.

<sup>24</sup> Press release, World Bank, Washington, April 5, 2017.

<sup>25</sup> Press release, World Bank, Washington, April 5, 2017.

## Country Credit Rating and a Brief History of Access to Global Financial Markets

Bangladesh's credit rating has been stable at Ba3, in the Moody's scale, for issuer and senior unsecured rating. This rating puts Bangladesh in the non-investment-grade category. Standard & Poor's rates Bangladesh (2017) at BB- with a stable outlook, also as non-investment grade. The non-investment grade rating imposes some restrictions to accessing long-term financing from global markets.

Moody's justified the rating decision by pointing to the robust and stable growth Bangladesh has been experiencing, and its macroeconomic stability, core credit strength, relatively low government debt burden, and its access to concessional funding.<sup>26</sup> However, the government has a very low revenue ratio (approximately 10 percent of GDP in FY2016, one of the lowest among Moody's-rated sovereigns) and very low institutional capacity (the country ranks in the 15th percentile of rated sovereigns for the World Bank Worldwide Governance Indicator scores on government effectiveness, rule of law, and control of corruption). These challenges constrain fiscal flexibility and the investment climate and competitiveness.

Bangladesh's rating on local currency bond and deposit ceilings has been stable at Baa3. The country also kept its Ba2 country ceiling for foreign currency debt and B1 country ceiling for foreign currency bank deposits. Most external sector indicators improved in 2016. In FY2016 (as of June 30), the outstanding external debt stock of Bangladesh had increased from US\$23,901.0 million to US\$25,962.7 million. However, the outstanding debt-to-GDP ratio declined that year by 0.6 percent (from 12.3 percent to 11.7 percent).<sup>27</sup> The current account balance as a percentage of GDP stood at 1.7 percent in FY2016, compared to 1.5 percent in FY2015.

Repayment of official external debt in FY2016 stood at US\$1,045 million (excluding repurchases from the International Monetary Fund, IMF), consisting of about US\$842 million for principal payments, and US\$202 million for interest payments. The total repayments decreased by US\$52 million (or 4.7 percent) from FY2015.

According to Moody's, improvements in the fiscal and infrastructure sectors could also improve the ratings. In the fiscal and operating environment, the GOB would benefit from fiscal reforms to generate more government revenue and improve debt affordability. In addition, developing critical transportation and power infrastructure, combined with meaningful improvements to the investment climate, could further raise Bangladesh's growth potential, with positive implications for its credit access and rating standing.

## Country Strategy with Respect to Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), Bangladesh is one of the most vulnerable nations to the impacts of global climate change in the coming decades. Consequently, the Government of Bangladesh has been taking several initiatives on the environmental front.

In 2009, the Bangladesh Ministry of Environment and Forests published the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). It relies on four major sources of funds for financing renewable energy investments in Bangladesh:

- **Bangladesh Climate Change Resilience Fund (BCCRF):** BCCRF was established in May 2010 with the signing of a Memorandum of Understanding between the Government of Bangladesh, development partners, and the World Bank Group. BCCRF was established with a grant of US\$ 170 million from the World Bank and financial support from the European Union and the governments of Australia, Denmark, Sweden, Switzerland, the United Kingdom, and the United States. The World Bank Group currently acts as project and trust fund manager.

<sup>26</sup> Global Credit Research, April 17, 2017.

<sup>27</sup> Bangladesh Bank Annual Report, 2015–2016.

Global Environment Facility (GEF): The GEF is a World Bank Group fund. Bangladesh currently has 40 projects with the GEF and has received US\$145.34 million in grant funding.

- **Pilot Program for Climate Resilience (PPCR):** The PPCR is a targeted program of the Strategic Climate Fund (SCF), which provides financing to pilot new development approaches or to scale up activities aimed at addressing specific climate change challenges. The SCF is part of the Climate Investment Funds (CIF) established by the World Bank Group and other regional development banks in July 2008.
- **Bangladesh Climate Change Trust Fund (BCCTF):** This is the Government of Bangladesh's own separate Climate Change Trust Fund. The domestic fund accounts for the greater share of overall climate expenditure of the GOB.

With support from the United Nations Environment Programme, the National Sustainable Development Strategy (SDS) was prepared in 2008 to meet the environmental challenges that Bangladesh faces on the path to development. It identifies five strategic priorities: (1) sustained economic growth, (2) development of priority sectors, (3) urban environment, (4) social security and protection, and environment, and (5) natural resources and disaster management.

IDCOL has been an important conduit in the implementation of the Government of Bangladesh renewable energy and climate change strategy. IDCOL has pioneered the fastest growing off-grid renewable energy initiative in the world. IDCOL started its Solar Home Systems (SHS) Program in 2003 with financial assistance from the World Bank Group and GEF (see box 2). Subsequently, several development partners have participated in the program by providing refinancing and grant support.<sup>28</sup>

## 2. DESCRIPTION OF IDCOL

### Rationale for the Selection of the IDCOL Case Study

IDCOL is one of the public infrastructure funds (PIFs) in the selected case studies with a relatively long operational period (more than 20 years). IDCOL is also the only case study of a least developed country in the Global Review sample. The Fund has a very important role in the development of energy infrastructure.

The team also looked at a newer institution, the Bangladesh Infrastructure Finance Fund Limited, which was launched in 2011, but opted to include the institution with the longest track record because it was easier to draw lessons and key guidelines from IDCOL 20-year experience. BIFFL disbursed its first loan in August 2014 and is still in the preliminary phase of its learning curve as an institution.

IDCOL is not only one of the oldest public infrastructure funds, but has focused on infrastructure and green energy, making it a pioneer in both domains. Its high participation in the energy and renewable sector is linked to a market and institutional failure in Bangladesh. In the early stages of the development of both PPPs and IDCOL as an institution, the private sector had a tough time structuring "financeable" infrastructure projects in sectors other than energy. The energy sector had a relatively well developed regulatory framework, payment risk on power purchase agreements (PPAs) were backstopped directly by the GOB, and some PPAs were denominated in hard currency. Similar developments have occurred in the renewable energy sector. The country also had huge needs for energy power development and energy access to its citizens, which mitigated the political risks associated with the sector.

### Fund Development

The Infrastructure Development Company Limited (IDCOL) was established on May 14, 1997 by the Government of Bangladesh in fulfilment of the conditionality of the Private Sector Infrastructure Devel-

<sup>28</sup> IDCOL had an initial target to finance 50,000 solar home systems (SHSs) in 2003. In actuality, IDCOL financed the installation of 1 million new SHS in 2012, 2 million SHS in 2013, and 3 million SHS in 2014. In 2016, 4.09 million SHS were installed all over Bangladesh, which replaced around 8.2 million of kerosene lamps and therefore reduced 919,775 tons of carbon dioxide (CO<sub>2</sub>) per year. IDCOL has a target to finance 6 million SHS by 2021. The SHS Program constituted 67 percent of the IDCOL's interest income in 2016.

opment Project (PSIDP) loan by the World Bank Group (box 2). IDCOL's mission is to promote economic development in Bangladesh by encouraging private sector investment in energy and infrastructure projects. Originally, IDCOL was conceptualized as a close-end fund with a temporary role in the development of infrastructure, linked to the utilization of the World Bank credit line.<sup>29</sup> As the institution developed and the GOB opted to transfer other loans and credit lines to IDCOL to support infrastructure PPPs, the character of the institution evolved toward becoming more open ended.

IDCOL is fully owned by the Minister of Finance. It reports directly to the Economic Relations Divisions (ERD), one of the MOF's four divisions (the other three are Finance, Bank and Financial Institutions, and Internal Resources). ERD is one of the important divisions of the GOB. It mobilizes external resources for the socioeconomic development of the country. ERD leads as the focal point of the government for interfacing with development partners as well as for coordination of all external assistance inflows into the country. It assesses the needs for external assistance, devises strategy for negotiations and mobilizing foreign assistance, formalizes and enables aid mobilization through signing of loans and grant agreements, and determines and executes external economic policy.

IDCOL is a non-bank financial institution with a mandate to support private sector infrastructure, renewable energy, and energy efficiency projects, including PPPs. It has the capacity to offer both debt- and equity-related products as well as derivatives. IDCOL does not depend on public budget support. After the initial capitalization, the MOF only capitalized the institution in 2006 (Tk250 million) and 2007 (Tk100 million). Capital increases at IDCOL after the MOF's initial contribution have all been done via retained earnings. IDCOL is a "self-funded" institution with financial autonomy. This definition of "autonomy" needs to be qualified by the fact that most of its funding has come and still comes from development partners (multilateral agencies, MLAs, and bilateral agencies) within the sovereign window. This is an important factor to consider given the upcoming graduation of Bangladesh from least developed country to developing country. Given that today the largest proportion of IDCOL funding is still government guaranteed, IDCOL could be considered a "pass-through" fund targeting infrastructure investments in the country (the subsection on IDCOL funding will develop this concept).

### **Box 2. The World Bank's Private Sector Infrastructure Development Project (PSIDP) Loan**

The objective of the Private Sector Infrastructure Development Project (PSIDP) was to support Bangladesh in developing a modern and efficient infrastructure by promoting private sector participation in the investment, operation, ownership, and maintenance of infrastructure facilities. The project aimed to proactively develop, and market equity and debt financing for viable private sector infrastructure subprojects.

To achieve this, the World Bank granted a US\$225 million long-term debt facility for the Government of Bangladesh (GOB) to offer as a line of credit to the then newly created IDCOL. This project included technical assistance of US\$7 million for investment advisory services to strengthen IDCOL's capacity in project financing.

The key loan conditions included several effectiveness conditions relating to IDCOL. IDCOL had to select an investment advisory services provider satisfactory to the World Bank Group's International Development Association (IDA), and select a full-time Chief Executive Officer. The GOB and IDCOL also had to develop an Agency and Administration Agreement acceptable to IDA.

Further, IDCOL had to agree to comply with several covenants for the loan to be implemented. First, it had to prepare and submit for IDA's approval an Operations Manual and the approved Agency and Administration Agreement and Investment Advisory Agreement. The Operations Manual must be suitably updated periodically to reflect changes and new guidelines and procedures. Second, IDCOL, through appropriate provisions in the Operations Manual, must ensure that its financial and accounting standards meet the requirements of the World Bank and that periodic audits are conducted as per the provisions contained in the Project Agreement. Third, for subprojects, IDCOL must follow

29 This situation likely explains the GOB's relatively low capitalization of IDCOL initially (approximately US\$4 million).



the process laid down in the Operations Manual and the Project Agreement, especially the stages at which IDA approval or review is required.

Source: World Bank, Bangladesh, PSIDP Loan, IEG Review, 2007.

The Company was licensed by the Bangladesh Bank as a non-bank financial institution (NBF) on January 5, 1998. As such, it operates under regulatory supervision of Bangladesh's central bank. IDCOL participates in the development of medium- to large-scale infrastructure and renewable energy projects in Bangladesh. The Company remains the market leader in private sector energy and infrastructure financing in Bangladesh (Table 7).

**Table 7. Milestones in IDCOL's Development, 1998–2016**

2016	
30-Nov	Financed the first PPP project in healthcare sector of Bangladesh-Sandor Dialysis Services Bangladesh Private Ltd.
2015	
Jan-Mar	Three solar PV based mini-grid projects under IDCOL financing went into commercial operation
2-Apr	IDCOL received the first ever Clean Development Mechanism (CDM) fund in Bangladesh under the United Nations Framework Convention on Climate Change (UNFCCC)
12-Apr	Financing of the first solar based mini-grid project
2009	
28-Oct	Extending Tk260 million to Fiber@Home Ltd. for setting up the first nationwide telecommunication transmission network of Bangladesh
26-Nov	Signing of financing agreement for US\$18 million with the Islamic Development Bank under Improving Rural Households Livelihood through Solar Energy Project
20-Dec	Financing of the first solar based irrigation project
2006	
5-Jan	Financing of the first ever land ports operated through the private sector on Build, Operate and Transfer (BOT) arrangement
2002	
16-Jul	Signing of project agreement with the International Development Association (IDA) under Rural Electrification and Renewable Energy Development Project (REREDP)
16-Jul	Signing of financing agreement for US\$7 million with the Global Environmental Facility (GEF) under the REREDP
2001	

11-Apr	Financing of the first Independent Power Plant (IPP) project—450 MW Meghnaghat Power Ltd.
<b>1998</b>	
5-Jan	Licensing from Bangladesh Bank as NBF
<b>1997</b>	
14-May	Incorporation of the company
14-May	Signing of Project Agreement for US\$225 million with the International Development Association (IDA) under Private Sector Infrastructure Development Project (PSIDP)

Source: IDCOL's Annual Report, 2016

### Financial Performance

To better understand the recent financial performance of IDCOL, it is very important to understand the depth of its activities in the renewable sector, in particularly in the Solar Home System (SHS) Program (box 3).

#### Box 3. IDCOL's Solar Home System (SHS) Program

IDCOL started its Solar Home System (SHS) Program in 2003 with an initial target to finance 50,000 solar home systems (SHSs) with financial assistance from the World Bank Group and the Global Environment Facility (GEF). Subsequently, several development partners participated in the program by providing refinancing and grant support. IDCOL's SHS program is partly funded by the Rural Electrification and Renewable Energy Development Project (REREDP) of the World Bank Group's International Development Association. The SHS program represents 49 percent of the overall renewable energy portfolio of IDCOL.

IDCOL offers soft loans with maturities of ten years with a two-year grace period at 6 percent per year interest to the participating organizations (POs) for the development of rural infrastructure. The households buy solar home systems either with cash or on credit, while the participating organizations extend loans to the households for purchase of SHSs. The loan tenor varies from one to five years, and the interest rate varies from 8 percent to 15 percent per year. The SHS program is implemented through 56 participating organizations (non-governmental organizations and/or micro finance institutions) that select project areas and potential customers, extend loans, install the systems, monitor their performance, and provide maintenance support. About 4.14 million SHSs had been installed as of December 2017. IDCOL has a target to finance 6 million SHSs by 2021. IDCOL has worked with many relevant bilateral and multilateral agencies to implement the SHS Program, including the World Bank, the Asian Development Bank, and the German Development Bank, KfW.

Source: IDCOL Annual Report, 2017

For a least developed country with high levels of poverty and exclusion in rural areas, access to electricity became one of the few effective strategies to increase access to a needed public service. IDCOL and Bangladesh's SHS program has been a resounding success. It has been lauded in the international financial community as the world's largest program. Its nearly 4.2 million installations have improved the

lives of more than 20 million people. By many standards, Bangladesh’s SHS has become a model to be analyzed and implemented in other LDCs around the world.

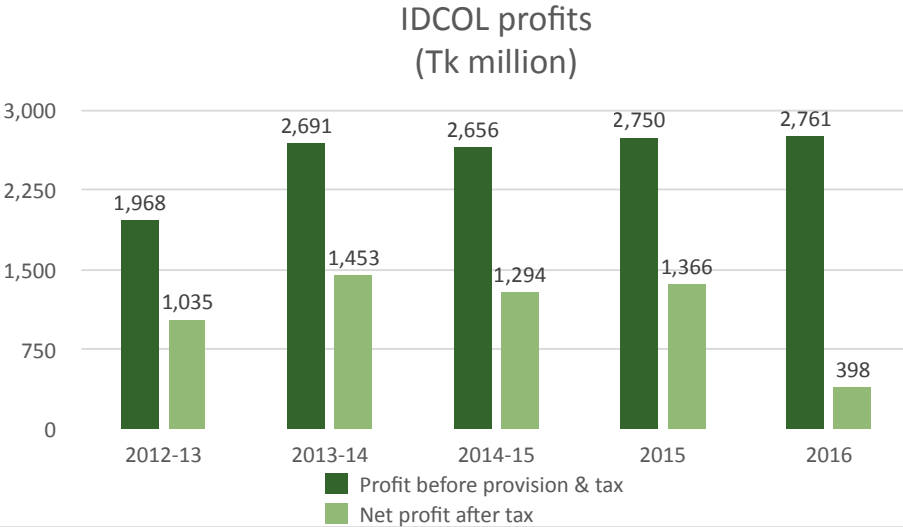
Unfortunately, from the financing viewpoint, and from the viewpoint of the repayment capacity of the households and partner organizations benefiting from IDCOL’s soft loan, the financial history has not kept pace with the technical success of energy access to the poor. Some 85 percent of all the SHS installations were implemented via nongovernmental organizations (NGOs, partner organizations). Bangladesh has a relatively good experience utilizing NGOs for small amounts of credit to small-scale entrepreneurs, to promote women’s development and social development. In the case of IDCOL, a large percentage of these SHS credits did not have an adequate security package. Debt service payment has not been performing as expected, and credit recovery has some institutional issues in the execution stage. The bottom line is that IDCOL, which until recently had one of the best ratios for non-performing assets in local financial markets, is experiencing an increase in these assets, and had to increase the amount of provisioning in FY2016 and FY2017. This decreased the net profit and the return on equity in 2016, in a departure from IDCOL’s excellent performance in previous years.

Three external events hurt the performance of the SHS Program: rapid grid expansion in rural areas; free access to SHS by a parallel government program; and sale of poor-quality SHS by vendors outside the IDCOL Program. IDCOL will manage the SHS debt repayment situation (see section 8, on risk management), and will learn from the experience to improve and enhance these types of programs in the future.

However, the experience is affecting senior management’s strategic views for future years, and a re-evaluation of the strategy in the renewables and energy efficiency sectors will take place. IDCOL has concluded that the business opportunities in wind energy are limited for technical reasons (lack of wind in a scale to make it attractive), while large solar farms are not feasible because of land regulatory issues.<sup>30</sup> IDCOL is now basing its sector strategy in sectors with easier financing and debt service capacity, such as solar irrigation pumps, solar mini-grids, rooftop solar panels, improved cook stoves, and bio-mass.

Until FY2016, IDCOL enjoyed a relatively strong financial performance (Figure 3). In FY2016, profit before tax was equivalent to Tk2,761 million (approximately US\$35 million). However, net profit after tax and provision in 2016 was substantially lower, at Tk398 million, given the impact of increases provisioning of the SHS assets.

**Figure 3. IDCOL Profits, FY2012–FY2016 (Tk million)**

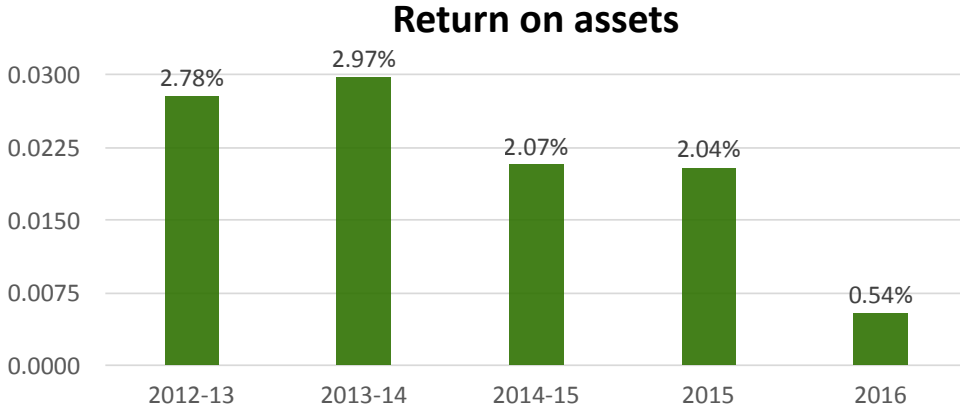


Source: IDCOL Annual Report, 2016

<sup>30</sup> In Bangladesh, neither agricultural land nor public sector land can be used for solar farms. This restricts the investment to only non-agricultural private land. On top of these restrictions, land documentation and title are complex.

Even with 9 percent increase in its asset base from FY 2012 to FY 2016 IDCOL’s profitability indicators fared well, with the ROA at 0.54 percent in FY2016 (Figure 4). However, this is 1.5 percent less than the results six months earlier (as of December 31, 2015). The expansion in the asset base of the company is expected to enable it to reap the benefits in the form of enhanced returns in the years to come.

**Figure 4. IDCOL Revenue and Return on Assets, FY2012–FY2016**



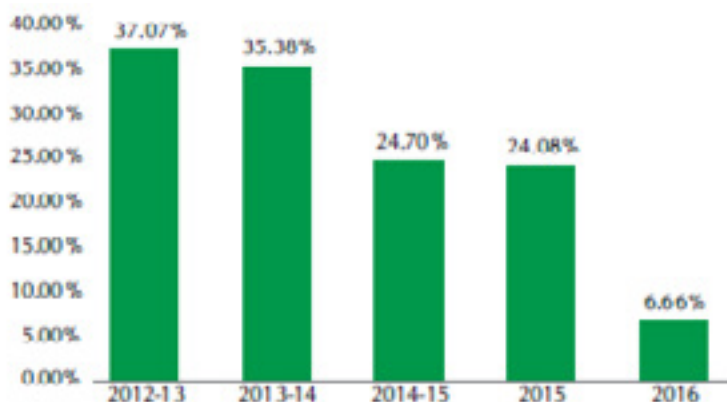
Source: IDCOL Annual Report, 2016.

IDCOL’s total revenue of IDCOL was Tk4,509 million in FY2016 (generated mostly from Tk738 million from interest income from infrastructure projects; Tk1,657 million from interest income from renewable energy projects; Tk1,730 million from interest income from short-term investments; Tk98.8 million from fee income from project finance; and Tk102.7 million from fee income from renewable energy projects). In 2016, operating expenses rose 4.5 percent (Tk9 million) due to an expansion in organizational capacity and introduction of competitive pay structure in IDCOL. The company’s operating and interest expenses were Tk1,747.7 million and profit before tax and provision was Tk2,761 million. Provision of Tk1,221 million has been made for loans and advances and Tk1,142 million for tax. Net profit after tax for the 2016 calendar year was Tk398 million.

The Board of IDCOL has proposed to pay Tk200 million as cash dividends to the government and the capitalization of Tk500 million to increase IDCOL’s paid-in capital from Tk5,000 million to Tk5,500 million, leaving a balance of Tk271 million as retained earnings to be carried forward to FY2017.

IDCOL has shown a robust evolution of ROE performance (Figure 5). Not many PIFs in our sample have could achieve ROEs exceeding 10 percent to 12 percent. From 2012 to 2015, IDCOL has an average ROE of 30 percent, dropping to 6.7 percent in 2016 (due to the provisioning of SHS assets). As mentioned, another factor explaining the strong ROE performance is that IDCOL is currently undercapitalized, with total assets of Tk73,028 million (approximately US\$925 million) and net equity of Tk5,971 million (approximately US\$75 million). This is equivalent to an asset-to-equity ratio larger than 14, above the international standard for financial institutions.

**Figure 5. IDCOL Return on Equity, FY2012 – FY2016**



Source: IDCOL, Annual Report, 2016.

### **Performing and Non-performing Assets**

As mentioned, 2015 and 2016 were years where the issues of inadequate security packages and weak debt repayment of some of the SHS assets increased the percentage of non-performing assets and with it, the provision levels charged during those periods. The average collection rate was 91.80 percent from 2014 to 2016.<sup>31</sup> IDCOL follows Bangladesh Bank’s guidelines and rules on loan classification and provisioning.

The level of non-performing loans (NPLs) increased sharply from 1.58 percent of the total portfolio in 2014 to 9.45 percent in 2016 (Figure 6). In today’s local financial markets, banks have an average of 10 percent of non-performing loans. This situation, however, should not be grounds for complacency in the case of IDCOL. First, IDCOL has a strong reputation in the marketplace and must continue fulfilling its development role. Second, IDCOL is not well capitalized, which means that an NPL ratio of 9.45 percent presents vulnerabilities (mostly to the GOB).<sup>32</sup>

**Figure 6. Gross Non-Performing Loans (percent)**



Source: IDCOL Annual Report 2016.

<sup>31</sup> IDCOL Senior Management, 2018.

<sup>32</sup> As per Bangladesh Bank circulars (FID Circular no. 08 dated 03 August 2002 and FID Circular no. 03 dated 03 March 2006), a general provision at 1 percent for standard loans and 5 percent for special mention accounts (SMA) loans should be maintained, regardless of objective evidence of impairment. Specific provision for substandard loans, doubtful loans, and bad loans/losses should be provided at 20 percent, 50 percent, and 100 percent, respectively, for loans and advances, depending on the duration they have been overdue. A general provision of 1 percent should be provided for all off-balance sheet exposure. Such provision policies are not specifically in line with those prescribed by BAS 39 (Bangladesh Accounting Standards).

IDCOL faces some regulatory and sustainability (capitalization) challenges in the near future. In 2016 IDCOL hired the services of Deloitte to develop its future strategic and business plan and tackle some of these challenges. The Board approved the new Strategic Plan in 2017. In addition, IDCOL is exploring new funding sources, in addition to the current use of IFI credit lines through MOF, and bilaterally negotiating with the IFIs and commercial credit lines in this regard.

**Table 8. IDCOL's Financial Performance, 2012–16 (Tk million)**

	2012–13	2013–14	2014–15	2015	2016
Short-term investment	9,337	13,932	22,111	24,900	27,069
Loan portfolio	24,513	29,115	35,973	36,964	41,017
Other assets	3,374	5,796	4,369	5,116	4,942
<b>Total assets</b>	<b>37,224</b>	<b>48,843</b>	<b>62,453</b>	<b>66,980</b>	<b>73,028</b>
Total liabilities	34,431	44,737	57,213	61,307	67,057
<b>Total equity</b>	<b>2,793</b>	<b>4,106</b>	<b>5,240</b>	<b>5,673</b>	<b>5,971</b>
Income statement					
<b>Total revenue</b>	<b>2,851</b>	<b>3,870</b>	<b>4,097</b>	<b>4,324</b>	<b>4,509</b>
Operating income	2,123	2,826	2,825	2,950	2,970
Operating expenses	156	135	170	200	209
Financial expenses	727	1,044	1,272	1,373	1,539
Profit before provision & tax <sup>a</sup>	1,968	2,691	2,656	2,750	2,761
<b>Net profit after tax</b>	<b>1,035</b>	<b>1,453</b>	<b>1,294</b>	<b>1,366</b>	<b>398</b>
Financial ratios					
Debt-equity ratio	11.33	10.17	10.06	9.86	10.35
Return on assets (%)	<b>2.78%</b>	<b>2.97%</b>	<b>2.07%</b>	<b>2.04%</b>	<b>0.54%</b>
Return on investment (%)	4.16%	4.99%	3.60%	3.70%	0.97%
<b>Return on equity (%)</b>	<b>37.07%</b>	<b>35.38%</b>	<b>24.70%</b>	<b>24.08%</b>	<b>6.66%</b>



Profit margin (%)	36.31%	37.54%	31.59%	31.54%	8.82%
Operation costs (%)	7.35%	4.78%	6.00%	6.78%	7.04%
Earnings per share (Tk)	20.71	29.05	25.88	27.32	7.96
Gross non-performing loans (%)	0.81%	0.80%	1.58%	6.22%	9.45%
Number of shares	17,200,000	26,000,000	38,500,000	50,000,000	50,000,000
Paid-in capital	1,720	2,600	3,850	5,000	5,000
Shareholders' equity	2,793	4,106	5,240	5,673	5,971
<b>Exchange rate, Tk per US\$</b>	<b>77.75</b>	<b>77.64</b>	<b>77.73</b>	<b>78.42</b>	<b>78.91</b>

Source: IDCOL Annual Reports, Bangladesh Bank, 2018.

a. Corporate tax rates are relatively high in Bangladesh (40 percent to 45 percent). IDCOL is classified as a non-bank financial institution and pays a 42.5 percent tax rate, similar to other banks and financial institutions.

### 3. INSTITUTIONAL ARRANGEMENT AND GOVERNANCE

#### Institutional Framework

IDCOL is under the supervision of the Economic Relations Division (ERD) of the Ministry of Finance (MOF). IDCOL management reports to its Board of Directors, which is chaired by the Secretary of the ERD as the principal stakeholder (Table 9).

**Table 9. IDCOL's Shareholder Structure**

Name	Number of Shares	Percent of Shares
Economic Relations Division, MOF	49,999,000	99.9980%
Mr. Kazi Shofiqul Azam	550	0.00110%
Ms. Suraiya Begum ndc	50	0.00010%
Mr. Mahbub Ahmed	50	0.00010%
Dr. Ahmad Kaikaus	50	0.00010%
Ms. Nihad Kabir	50	0.00010%
Mr. Abdul Haque	50	0.00010%
Mr. Waliur Rahman Bhuiyan	10	0.00002%
Mr. Hedayetullah Al Mamoon ndc	50	0.00010%
Mr. Md. Mozammel Haque Khan	50	0.00010%
Mr. Md Nojibur Rahman	50	0.00010%
Mr. Mahmood Malik	40	0.00008%
<b>Total</b>	<b>50,000,000</b>	<b>100%</b>

Source: IDCOL, 2016 Annual Report.

IDCOL is managed by a nine-member independent Board of Directors comprising senior government officials, prominent private sector practitioners, and a full-time Executive Director and Chief Executive Officer. The government, upon initiative of the MOF, appoints relevant representatives of the private sector. There are no requirements for specific line ministries to be represented. Private sector representatives are nominated by the ERD as and when needed, with no specific timeline or requirement for rotation.

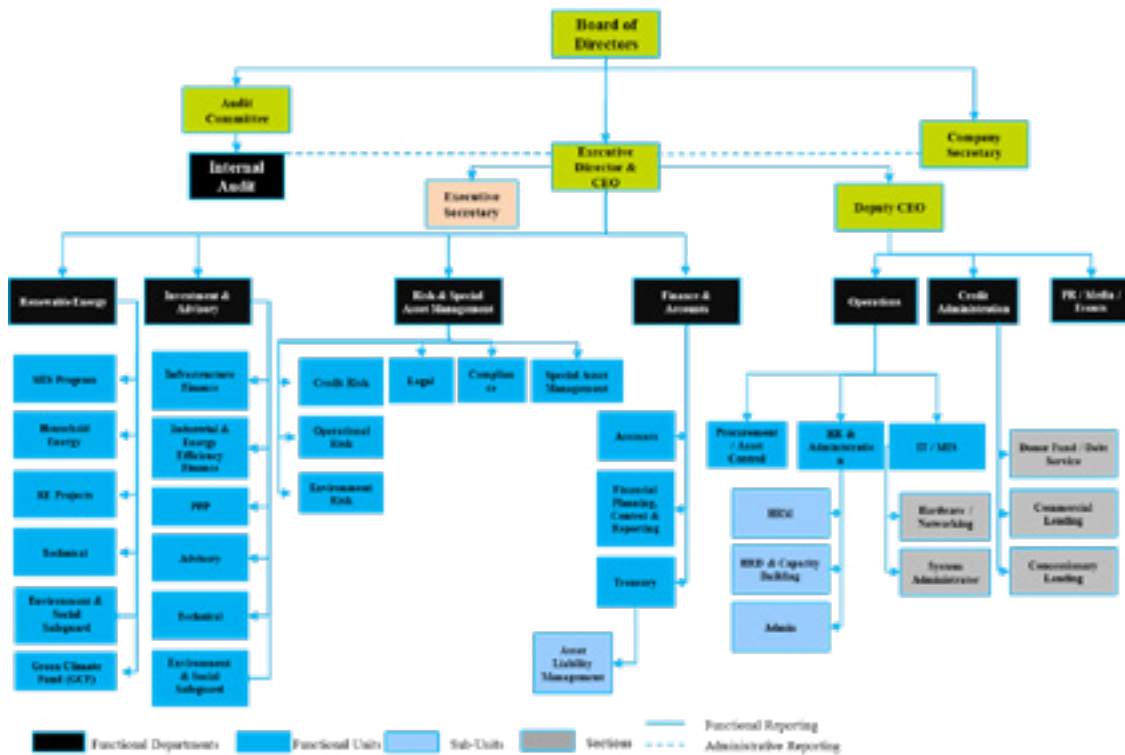
### Staff and Training

IDCOL has a small and multi-skilled work force comprising financial and market analysts, engineers, lawyers, IT experts, accountants, and environmental and social safeguard specialists. They work in several departments:

- Renewable Energy
- Investment and Advisory
- Risk and Special Asset Management
- Finance and Accounts
- Operations
- Credit Administration
- Public Relations, Media and Events.

IDCOL’s staff structure is presented in Figure 7.

**Figure 7. Official IDCOL Staff Structure**



Source: IDCOL Senior Management, April 2018.

IDCOL has gone through several reshufflings in attempts to put the right internal structures and processes in place, investing in employee development and engagement, and supporting business growth and development. IDCOL has seen rapid and significant growth over the past five fiscal years, with overall staff numbers increasing from 106 to 346 since FY2011.

IDCOL follows a competitive hiring process with publication of all vacancies in leading newspapers and online job sites, shortlisting candidates. For entry-level positions, candidates must pass a test administered by a university. IDCOL has undertaken some capacity building of its employees through on-the-job and external trainings, seminars, and workshops, and some “exposure visit programs.”

## Funding Mechanisms

### **Loans and Technical Assistance from Development Partners**

IDCOL was created to generate private sector development and participation from development partners. IDCOL does not receive direct funding from the government. It receives most of its funding from development partners: namely, the World Bank Group, Asian Development Bank (ADB), Japan International Cooperation Agency (JICA), German Development Bank (KfW), U.K. Department for International Development (DFID), Islamic Development Bank (IsDB), German Development Cooperation (GIZ), United States Agency for International Development (USAID), and SNV-Netherlands Development Organization (table 10). Since its creation, IDCOL was conceptualized as a pass-through agency through which the MOF can channel loans and non-reimbursable technical assistance to promote PPP development in infrastructure sectors in Bangladesh.

IDCOL services the loans from development partners, paying principal and interest. The loans carry a sovereign guarantee through the MOF. On top of servicing the loans, IDCOL pays a fee and foreign exchange risk protection to the MOF (estimated by IDCOL senior management to be between 300 and 500 basis points). The loan transfer mechanism operates via the execution of a Tripartite Agreement between the development partner, MOF, and IDCOL. This Agreement specifies the roles and responsibilities of each party. In addition, there is an Agent-Project Agreement between the development partner and IDCOL addressing the implementation of the loan (its objective, reporting requirements, procurement rules, and so on). IDCOL, ADB, and the MOF signed a new US\$526 long-term loan in FY2016 US\$500 million came from the ADB’s commercial window). IDCOL adheres to each development partner procurement rules to execute each loan.

The broad terms of financing are negotiated between IDCOL, ERD (MOF), and the development partner institution. Loan agreements are co-signed by the development partner institution and ERD. Loan agreements are provided under the sovereign window of the development partners and as such bear the sovereign guarantee of the GOB. After the agreement between ERD and the development partner is reached, a Subsidiary Loan Agreement is signed between IDCOL and the Finance Division (MOF).

**Table 10. “Soft” Loans Received from Development Partners (Tk million)**

	31-Dec-15	31-Dec-16
Loans received from:		
World Bank Group	58,011.8	75,303.1
KfW-NDBMP	1,221.6	4,125.2
SNV - Netherlands Development Organization	4,125.2	1,221.6

Total value at cost (a)	63,358.7	80,649.9
Accumulated amortization:		
World Bank Group	23,393.3	32,231.3
KfW-NDBMP	614.4	3,012.0
SNV - Netherlands Development Organization	2,851.5	765.4
Total amortization (b)	26,858.9	36,008.7
Written-down value (a - b)	36,499.8	44,641.2

Source: IDCOL, Annual Report 2015–2016. Soft refers here to loans at better than market conditions.

### **Access to IPFF**

IDCOL can access an allocation from a special discount window (the Infrastructure Promotion Financing Facility, IPFF) at the central bank (Bangladesh Bank) by signing an ad hoc agreement. This can be used for refinancing and take-out purposes.

### **Local Bank and Bond Markets**

IDCOL can access local bank markets and bond markets. However, IDCOL currently does not use this type of funding, given the financial cost and market implications. Currently, IDCOL does not enjoy the possibility of issuing tax-exempt bonds as an incentive mechanism to attract private capital for infrastructure development.

## **4. FISCAL MANAGEMENT**

### **Fiscal Management Rules**

Per IDCOL management and ERD, the Fund is not included under the government’s fiscal rules or budget and/or debt targets. The loans guaranteed by the GOB are included in the debt targets with IMF.

While IDCOL is fully owned by the Economic Relations Division of the Ministry of Finance, IDCOL operates as a non-bank financial institution (NBFI) under regulatory supervision of Bangladesh Bank, the central bank of Bangladesh. As an NBFI, it is an autonomous financial institution, and does not consolidate its financial results with the Government of Bangladesh or any other entity, except in the case of loans received from development partners, for which the GOB bears the full responsibility for repayment (IDCOL has been servicing these loans through the MOF). Although it is an independent entity, IDCOL reports to its Board, which is chaired by the Secretary of the Economic Relations Division (ERD) of the Ministry of Finance (MOF), as the principal stakeholder in IDCOL. The Secretary of the ERD reports directly to the Finance Minister.

### **Lender of Last Resort**

Because IDCOL is fully owned by the GOB through the MOF, the public sector of Bangladesh acts as the lender of last resort to IDCOL.

### **Procurement Policies and Oversight**

As a non-bank, financial institution, IDCOL must adhere to regulations from the central bank (Bangladesh Bank) and the reporting requirements of the ERD/MOF and development partners.

Per IDCOL management and ERD, the Fund is not included under the government’s fiscal rules, budget and/or debt target of the government, with the exception of the loans and other contributions made by development partners that are guaranteed by the GOB and signed by the MOF, and consolidate in the government fiscal accounting.

**Risk Management Policies**

The Fund has a risk management system in place (see section 8) for the funding exposure of IDCOL’s operations.

**Contingent Liability Strategy**

During the team’s conversations with IDCOL senior management and ERD, it was not explicit that either institution has a contingent liability strategy in place. IDCOL, so far, have not developed credit derivatives products (guarantees and the like), which require a contingent liability strategy.

IDCOL also provides US dollar-denominated loans to local infrastructure projects such as independent power producers (IPPs) in the energy sector. This is a rather risk-prone action that would require having a contingent liability strategy in place. IDCOL, with some rationale, claims that most of the power purchase agreements with the Bangladesh Power Development Board (BPDB) are based in U.S. dollars.<sup>33</sup> The foreign exchange risk arises because consumers pay electricity tariffs in local currency. IDCOL claims that BPDB is a fully state-owned public entity backstop by the Ministry of Energy, with clauses in the IPPs contracts that guarantee tax waivers, along with currency availability and convertibility. BPDB is currently a loss-making SOE. Despite the backstopping of the GOB, in the event of systemic risk in Bangladesh, there is a contingent risk that debt could not be serviced in hard currency.

**5. OFFERING OF FINANCIAL PRODUCTS**

**Senior Loans and Other Products**

IDCOL’s primary objective is to promote significant participation of the private sector in investment and operation, ownership, and maintenance of new infrastructure facilities. To that end, IDCOL attempts to bridge the financing gap for developing medium- and large-scale infrastructure and renewable energy projects in Bangladesh. IDCOL provides its lending to commercially viable projects (Independent Power Producers, IPPs) on a market basis. IDCOL only provides grant and concessionary credit to private sector projects (in the areas of renewable energy) to make the proposed projects financially viable. As a lender, IDCOL receives credit requests from the private sector and grants credit depending on the credit assessment (see section 8) and the benefits the project offers the nation. Senior loans are the financial product most utilized by IDCOL. Senior loan conditions are summarized in Table 11.

**Table 11. Senior Loan Conditions**

Description	US\$ Loan	Tk Loan
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<sup>33</sup> The Bangladesh Power Development Board (BPDB) was created as a public-sector organization to boost the country’s power sector after the emergence of Bangladesh as an independent state in 1972. The organization is responsible for planning and developing the nation’s power infrastructure and for operating much of its power generation facilities. The BPDB is responsible for the major portion of generation and distribution of electricity, mainly in urban areas of the country. The Board is now under the Power Division of the [Bangladesh Ministry of Power, Energy and Mineral Resources](#). It acts as the off-taker in IPPs in Bangladesh.

Single borrower/group exposure	Maximum US\$100 million or equivalent Tk	
Single project exposure	Maximum 60%– 80% of the total project cost (depending on the sector)	
Tenure	Maximum of 15 years, including grace period	Maximum of 15 years, including grace period
Grace period	Maximum of 3 years	Maximum of 3 years
Interest rate	Market rate	Market rate

Source: IDCOL senior management, 2018.

In addition to senior loans, IDCOL has limited investments in bonds, working capital facilities, and preferred shares. IDCOL also channels grants to eligible projects. IDCOL offers loans in three types of sectors and services: infrastructure and PPPs; renewable energy; and energy efficiency. IDCOL also recently started providing investment advisory services. As of December 2016, IDCOL was the market leader in private sector energy financing in Bangladesh. IDCOL recently undertook a diversification strategy to increase its infrastructure investment. It added social and tourism infrastructure and infrastructure backward linkage projects to its eligible sector for financing and increased its efforts in energy efficiency. As of September 2017, IDCOL's portfolio was broken down as follows:

- Renewable energy = 52 percent
- Infrastructure = 43 percent (including some investments in the power sector)
- Energy efficiency = 5 percent.

## Hard Currency Loans

Under the infrastructure window, IDCOL provides long-term multicurrency (Tk and US\$) loans to medium- and large-scale viable projects owned and operated by the private sector within the eligible sectors. To be eligible for IDCOL funding, projects must be included in the GOB's priority sector and use proven technology. Infrastructure sectors in the current priority sectors include power generation telecommunications, information and communication technology, ports, social infrastructure, gas and gas-related infrastructure, water supply, toll roads and bridges, shipyards and shipbuilding, hotel and tourism, mass transportation systems, and urban environmental services.

## Portfolio Evolution

In FY2016, infrastructure and PPP investments grew significantly, by about 43 percent over the previous year, with disbursements reaching Tk6,340 million.<sup>34</sup> The portfolio includes financing to relatively large infrastructure projects. For example, IDCOL disbursed US\$30 million in the 110-MW HFO (residual fuel oil)-based power plant of Summit Barishal Power Limited and US\$15 million in the 55-MW HFO-based power plant of Summit Narayanganj Power Unit II Limited. Selected infrastructure projects financed by IDCOL include:

- Summit Barishal Power Limited, a 110-MW HFO-fired power plant in Rupatali, Barisal.
- Doreen Hotels and Resorts Limited, operating the Four Points Sheraton Dhaka at Gulshan, IDCOL's first tourism endeavor.
- Sandor Dialysis Services Bangladesh Private Limited at the National Institute of Kidney Disease and Urology (NIKDU), the first PPP project in Bangladesh's health care sector.
- A liquified petroleum gas (LPG) storage, bottling, and distribution plant by Sena Kalyan Sangstha at Mongla, Bagerhat with a storage capacity of 7,000 MT.

<sup>34</sup> The exchange rate as of February 2018 was US\$1 = Tk81.3928; Tk1 = US\$0.0123.



Regarding public-private partnerships (PPPs), IDCOL provided a loan of Tk90 million to the Dialysis Center of Sandor Dialysis Services Bangladesh Private Limited at the National Institute of Kidney Diseases and Urology (NIKDU) and Chittagong Medical College Hospital (CMCH), in Chittagong. The borrower for this project was Sandor Dialysis Services Bangladesh Private Limited. The project's sponsor is Sandor Medicaids Private Limited India. The center started its commercial operations on November 30, 2016 at NIKDU (first phase). The center will provide low-cost dialysis services to patients who cannot afford to pay and affordable dialysis to affluent patients, while ensuring the same service quality. Real-time software will help doctors monitor patients worldwide.

**Table 12. Fee Structure for Infrastructure Loans**

Type of fee	Fee Details
Letter of intent (for bidding purpose)/loan application fee	US\$ loan: US\$500 for loan amounting to < US\$10 million US\$1,000 for loan amounting to US\$10 to US\$20 million US\$5,000 for loan amounting to > US\$20 million Tk loan: Tk25,000 for loan amounting to < Tk500 million Tk50,000 for loan amounting to Tk500 to Tk1,000 million Tk100,000 for loan amounting to > Tk1,000 million
Due diligence fee	Up to 0.20% on the loan amount
Upfront fee/participation fee	Up to 2.00% on the loan amount
Commitment fee	Up to 0.75% p.a.
Arrangement fee	Up to 2.00% on the total financing arranged
Agency/monitoring fee	US\$ loan: Up to US\$30,000 p.a. Tk loan: Up to Tk2,000,000 p.a.
Prepayment fee	Up to 2.00% on the amount prepaid
Loan cancellation fee	Up to 1.00% of the cancelled amount (for US\$ loans only)
Waiver fee	Up to US\$10,000 (for US\$ loans only)

Source: IDCOL Senior Management, 2018.

### **Renewable Energy Projects**

Under its renewable energy program, IDCOL contributes toward the objective of mitigating climate change with initiatives that reduce carbon dioxide emissions, avoid locking in long-lived high-carbon capital/infrastructure, and increase household access to low-emission energy. IDCOL's Solar Energy Program has the mission of fulfilling basic electricity requirements in the rural areas of Bangladesh and supplementing that government's vision of "Electricity for All" by 2020.

- *Solar Home System (SHS) Program.* This program is described in section 2 on IDCOL's financial performance, and Box 3.
- *Solar Irrigation Pumps.* Under this IDCOL program, 321 solar irrigation pumps have been installed as of December 2016. They are benefiting more than 9,800 farmers who live in off-grid rural areas of Bangladesh. This in turn contributes to food security by increasing agricultural yields during Bangladesh's dry season. This program receives support from JICA.
- *Solar PV-Based Mini-Grids.* IDCOL works alongside the Ministry of Power, Energy, and Mineral

Resources (MPEMR) to identify areas where grid expansion is unlikely in the foreseeable future, and to entice private mini-grid developers to participate in these areas. IDCOL has created a prepaid meter system-based solar mini-grid service from which rural beneficiaries are purchasing electricity. This helps them better monitor their energy consumption and motivates them to conserve energy, thus reducing waste.

- *Improved Cook Stoves (ICS) Program.* Improved cook stoves (ICS) and biogas stoves in lieu of traditional stoves save considerable amounts of biomass cooking fuels. They have very significant environmental and health benefits, especially for women and children.
- IDCOL launched the Improved Cook Stove (ICS) Program in May 2013 with the initial target to install 1 million ICSs across the country by 2018. Under the program, IDCOL provides grant and technical assistance to its partner organizations (POs) for their institutional development. With other activities supported by IDA creating demand and facilitating the development of supply chains, households are expected to buy the improved cook stoves from the partner organizations with cash.
- *Household Biogas and Bio-fertilizer.* IDCOL has been implementing its domestic biogas program in Bangladesh since 2006 with support from SNV Netherlands, KfW—and, since 2012, the World Bank Group—with the goal of establishing a sustainable and commercial biogas sector in Bangladesh. The program builds biogas plants and makes available the gas produced in these plants for cooking purposes and lighting of rural households. In addition, the slurry byproduct of biogas plants is a very good organic fertilizer, and can be used by local farmers to maintain soil fertility and increase crop production.

As of June 2017, IDCOL had provided loans for the construction of more than 46,200 biogas plants all over the country through its 45 partner organizations (POs). IDCOL goes through a competitive tendering process to select the POs, mainly nongovernmental organizations, micro-finance institutions, and/or private companies. The POs are expected to install the biogas plants and receive cash for gas payments by households.

The program is estimated to have saved 44,300 tons of firewood every year, with a value of US\$3.7 million, and to have reduced the use of 39,300 tons of chemical fertilizer, with a value of US\$9.3 million, by producing 274,000 tons of organic fertilizer. The program is also estimated to reduce the use of 1,400 tons of kerosene every year.

- *Other Renewable Energy Projects.* With the support of the World Bank Group, IDCOL extends loans to small-scale renewable energy-based power plants and irrigation pumps under the Remote Area Power Supply System (including solar PV-based micro-grid projects, biomass gasification-based power projects, biogas-based power plants, solar-powered solutions for telecom BTS (based transceiver station), solar-powered transportation, rooftop solar systems, solar cold storage and dryers, battery charging stations, and community biogas projects). In 2016, IDCOL partially financed an existing solar photovoltaic (PV)-based mini-grid projects, two new bioelectricity plants of UIAL and UKAL, along with two existing bioelectricity plants and 75 solar PV-based irrigation pumps, operated by Bright Green Energy Foundation, Global Resource Augmentation and Management, Solargao Ltd, RHECO, Resource Development Foundation, and Rahimafrooz Renewable Energy Ltd. (RREL).

## Energy Efficiency

IDCOL has initiated a diversification strategy, shifting its focus from power projects to infrastructure and energy efficiency. To that end, in addition to the Improved Cook Stove Program, its energy efficient promotion efforts include:

- *The Green Brick Program*: This effort will gradually replace all traditional brick kilns in the country with modern and environmentally friendly energy-efficient brick kilns.
- *Energy-Efficient Boilers and Industrial Machinery and Manufacturing of Energy-Efficient Components and Appliances*: After introducing the use of energy-efficient LED lights in the country through its Solar Home System (SHS) Program, IDCOL is now working toward enabling people to conserve and make efficient use of scarce energy resources at a larger scale. IDCOL has taken initiatives to introduce energy-efficient appliances (such as fans, televisions, and refrigerators) under its solar mini-grid projects with a view to enable people to do more with less energy.

JICA has been IDCOL's main partner in its energy-efficiency projects and programs.

### Advisory Services

A new Investment Advisory Unit has been established and became operational in 2016 under IDCOL's Investment Department. The Unit has two main objectives: to invest in PPPs developed by the PPP Authority of Bangladesh and to provide transaction, corporate, investment, and other advisory services. The Advisory Unit aids contracting agencies (sector ministers, SOEs, other public sector agencies), as well as the private sector.<sup>35</sup>

IDCOL has established an advisory wing with the objective of providing knowledge support to various local/foreign institutions on infrastructure projects, renewable energy projects, and public-private partnerships. It offers investment advisory services and conducts financial, technical, legal, and environmental due diligences on infrastructure projects. IDCOL is planning to provide additional advisory services, including in such areas as debt and equity financing options, business valuation and modeling, corporate restructuring, and mergers and acquisitions.

IDCOL signed two Memorandums of Understanding (MoUs) with the Bangladesh Infrastructure Finance Fund Limited (BIFFL) and IDLC Finance Limited to provide project due diligence support and another MOU to provide advisory services on the design and launch of new financial products for suppliers under the IDCOL Solar Home System (SHS) Program. IDCOL has also provided advisory support to Acorn Infrastructure Services Ltd. (AISL) and Green Energy Limited.

In addition, IDCOL has participated in two competitive bids to provide advisory services. The first was in partnership with Quality Growth Services Pvt. Limited of India to provide consultation and training to obtain OHSAS 18001:2007 certification for 163 sites operated by Bangladesh Power Development Board (BPDB). The other was in partnership with Royal Haskoning DHV of Netherlands to provide transaction advisory services for the PPP Authority of Bangladesh.

## 6. SECTOR FOCUS

Whether renewable energy, infrastructure, or energy efficiency, IDCOL's primary focus has been energy and power. Overall, it has invested US\$266 million in conventional power generation in 14 power plants, ranging from lease power plants to IPPs, engine-based to combined cycle, and HSD to natural gas. IDCOL's lending generates more than 1,665 MW of electricity. IDCOL funds 11.1 percent of the national electricity generation in Bangladesh. Through its renewable energy intervention, IDCOL has provided access to clean electricity to more than 18 million people in rural areas, covering about 12 percent of the total population.

<sup>35</sup> Since 1999, IDCOL has organized various workshops, seminars, and training courses for the capacity building of its industry stakeholders. To date, IDCOL has trained more than 1,400 professionals under its Training and Capacity Building Program. It has arranged 23 project finance and 18 financial modelling training courses, as well as various capacity-building workshops, such as those for the Investment in Energy-Efficient Brick Project and the Financing Utility Scale Solar Project, and for Industrial Energy Efficiency.

In the infrastructure sector, the focus has also been primarily on power and energy. However, IDCOL recently launched a sector diversification strategy. Consequently, in 2016, the infrastructure loan portfolio grew 48 percent from Tk11.14 billion to Tk16.46 billion and several sectors grew in IDCOL's portfolio (such as ports and IT and services; see **Table 14**).

**Table 14. IDCOL's Loan Portfolio by Sector (Tk million)**

	FY2012	FY2013	FY2014	FY2015	FY2016
Overall loan portfolio	24,513	29,115	35,973	36,964	41,017
Power	2,904	3,850	9,612	9,282	12,320
Ports	82	101	96	95	844
Telecommunication	968	434	593	490	92
IT and services	299	229	139	139	350
Renewable energy	20,074	24,261	25,177	25,746	24,490
Other	186	239	355	1,211	2,921

Source: IDCOL, Annual Report, 2016.

In keeping with IDCOL's sector diversification strategy, IDCOL made its first investment in the tourism sector in 2016, disbursing US\$20 million to Doreen Hotels & Resorts Limited, under the Four Points Sheraton brand. IDCOL engaged in its first PPP operation in the health care sector in 2016 with a loan of Tk90 million to the Dialysis Center of Sandor Dialysis Services Bangladesh Private Limited at the National Institute of Kidney Diseases and Urology (NIKDU) in Chittagong. IDCOL also initiated due diligence for several industrial energy-efficiency projects, including a vertical roller mill cement manufacturing plant at Mongla, Bagerhat.

## 7. CLIMATE CHANGE CONSIDERATIONS

Because of Bangladesh's enhanced vulnerability to climate change, the Government of Bangladesh has put in place several incentives for key stakeholders to take initiatives on the environmental front. Four major sources of funds for financing renewable energy investments have been introduced in Bangladesh (see section 1). Most of the programs under these funds are being implemented by IDCOL, which has been an important conduit in the implementation of the Government of Bangladesh's renewable energy and climate change strategy.

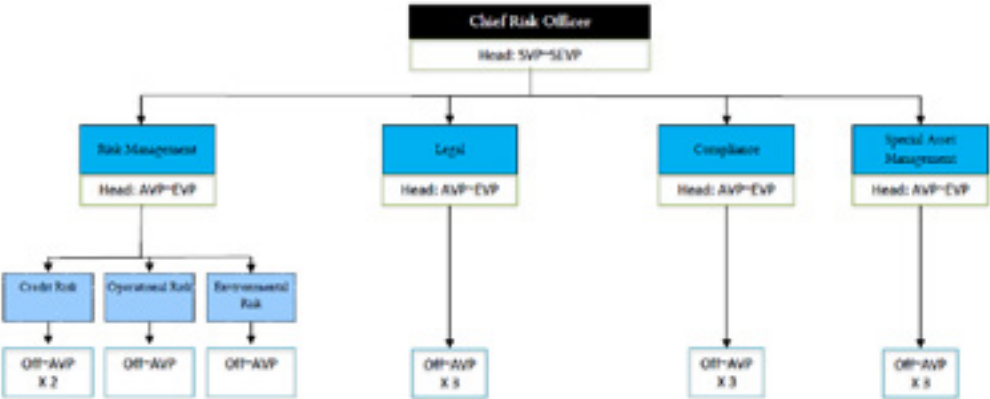
IDCOL specializes in "green financing," participating in policies and efforts that encourage the development of a more sustainable economy. More than half of its loans fund sustainable development projects and initiatives and environmental products. Most of IDCOL's investments are climate mitigation investments through its renewable energy projects and its energy-efficiency program. Each of the projects under IDCOL's renewable energy and energy efficiency initiatives (see details in section 5) contribute toward the objectives of reducing carbon dioxide emissions, reducing greenhouse gas emissions by reducing the use of fossil fuels, avoiding lock-in of long-lived high-carbon capital and infrastructure, and increasing household access to sustainable low-emission energy services. Currently, IDCOL does not have any special financing incentives to promote climate change-related investments.

## 8. RISK MANAGEMENT

IDCOL recognizes the importance of effective risk management to ensure the financial sustainability of its operations. Several departments are under the direct supervision of IDCOL's Executive Director and CEO (such as renewable energy, investments, and advisory), in particular, the Risk Management and

Special Asset Management Departments. The Chief Risk Officer oversees the Risk Management, Legal, Compliance, and Special Asset Management units (Figure 9) and reports to IDCOL’s Executive Director and CEO.

Figure 9. Risk Management Department Organigram



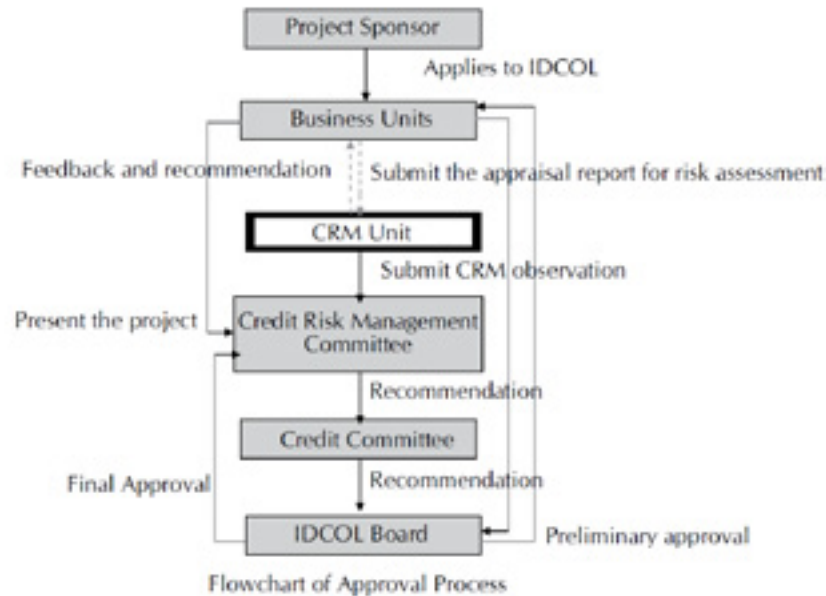
Source: IDCOL Management, 2017.

**Management of Credit Risk**

IDCOL has set up a Credit Risk Management (CRM) Unit within the Risk Management Department. The CRM Unit undertakes risk assessment, identifying risks and probable steps to mitigate those risks. A separate Credit Risk Management Committee has been developed, comprised of IDCOL’s top-level management. IDCOL has established a credit approval system to be followed when considering private sector applications (Figure 10).

Once the private sector sponsor applies for a credit line with IDCOL’s appropriate department, the business units perform detailed due diligence before presenting the project to the CRM Committee. After receiving recommendations from the CRM Unit and the Credit Risk Management Committee, the Credit Committee present their risk assessment and recommendations. Once the project is approved, then, it can be considered by the Board of Directors. The Board has the ultimate authority to approve or decline any credit proposal and to delegate authority to the management. The responsibility is segregated between origination of business and approval of the transaction to maintain the independence and integrity of the credit decision-making process.

Figure 10. Credit Approval Process



Source: IDCOL management, 2016.

The CRM Unit's responsibilities are to carry out the credit risk assessment, the post-approval monitoring, and the post-disbursement monitoring. The post-approval monitoring consists of monitoring the financed projects over its tenor (through quarterly reporting) to predict upcoming risks and to take possible measures to reduce or avoid risk. During the post-disbursement monitoring, IDCOL monitors the health of the portfolio health through quarterly reports on overdue and documentation status so that overdue loans can be predicted and controlled.

IDCOL has drafted a comprehensive CRM framework to define its guidelines regarding the lending process, credit risk assessment strategy (risk identification, measurement, grading, and reporting), and mitigation techniques. IDCOL adopted the Bangladesh Bank guideline on Credit Risk Management dated July 21, 2005 and incorporated internal policies taking into consideration industry best practices, including the risk management criteria of its development partners. Box 4 describes the systems in place to deal with other risks besides credit risk.

#### Box 4. Risk Management Systems at IDCOL

A well-structured and proactive risk management system is working within IDCOL to address and manage the risks relating to credit, market, liquidity, and operations, along with the guidelines for managing core risks of financial institutions issued by the central bank, Bangladesh Bank (via FID Circular No. 10, dated September 18, 2005). Besides credit risk discussed in the main text, IDCOL monitors the following types of risk.

**Market risk.** Market risk arises from the fluctuation of returns caused by the macroeconomic factors that also affect the overall performance of the financial markets and organization. IDCOL's Asset Liability Management Committee reviews the market trends in interest rates and matches the interest risks of the assets so that IDCOL can meet its obligations without generating any losses. The Committee also ensures that IDCOL has appropriate capital to cover potential losses from exposures to changes in interest rates. IDCOL management makes sure that lending and borrowing currency will always be same so that company does not have to bear any foreign currency risk. **Liquidity risk.** IDCOL has established strategies, policies, and practices to manage liquidity risk in accordance with its risk tolerance and to ensure sufficient liquidity. IDCOL's Asset Liability Management Committee (ALCO)



actively monitors and controls liquidity risk exposures.

Operational risk. Managing operational risks requires timely and accurate information as well as a strong control culture. IDCOL has established an internal control and compliance unit to address operational risks and to frame and implement policies to deal with such risks. IDCOL also provides training to build capacity among its staff to manage operational risks, ensures active participation of the senior management in identifying and mitigating key operational risks, maintains proactive communication between its revenue-producing units and its independent control and support functions, and has built a network of systems to facilitate the collection of data used to analyze and assess its operational risk exposure. Money laundering risk. A separate Central Compliance Unit (CCU) of IDCOL has been established that is responsible for managing money laundering risks, following Guidance Notes on the Prevention of Money Laundering and Terrorist Financing issued by Bangladesh Bank. Information technology and communication risk. IDCOL has a full-fledged department that ensures adequate IT (information technology) and MIS (management information systems) infrastructure and its security. It aligns the MIS with the strategic direction of the Company, while mitigating the risks associated with incorrect deployment and use of information technology. Source: Auditor Notes to the Financial Highlights in the IDCOL Annual Report, 2015–2016.

## 9. CREDIT RATING OF THE INSTITUTION

The leading credit rating company in Bangladesh, the Credit Rating Agency of Bangladesh (CRAB), rates IDCOL. CRAB is a technical partner of ICRA Limited, the Indian credit rating agency originally started as a joint venture between Moody's and commercial banks. The latest credit rating report, issued in December 2017, granted IDCOL a long-term rating of AA1 (a downgrade from the previous year's rating of AAA); a short-term rating of ST1 (the same as the previous year); and a stable outlook. This rating is valid until mid-2018. These are local currency ratings to allow local financing for infrastructure projects.

According to their CRAB rating, IDCOL currently has a very strong capacity to meet its financial commitments. These commitments are judged to be of very high quality, subject to very low credit risk. Per CRAB's current rating, IDCOL's strengths include stable liquidity and strong pre-tax earnings.<sup>36</sup>

The Basel II capital adequacy requirements have been implemented in the non-bank financial institution (NBFI) sector in Bangladesh since January 2012. Bangladesh Bank has issued prudential guidelines on capital adequacy and market discipline to promote international best practices and make the assessment of capital of NBFIs such as IDCOL more risk based. NBFIs are required to maintain a minimum capital adequacy ratio of 10 percent, with at least 5.0 percent in core capital.

IDCOL's capital adequacy was found to be adequate by the rating agency (Table 15). Its paid-in capital steadily increased between 2012 and 2015 and stagnated in 2016. In June 2017, the Annual General Meeting of the Shareholders of IDCOL was asked to consider an increase of IDCOL's paid-in capital to Tk5,500 million. IDCOL's assets are composed of loans and advances. Its loan portfolio grew by 24 percent in FY2015, and 48 percent in 2016. Although IDCOL's non-performing loans ratios are lower than those of most banks and industry peers, IDCOL's non-performing loans are increasing, which affects asset quality. Based on CRAB's rating report, IDCOL's ability to survive problems in the future was 7.5 percent in FY2015 (calculated on its pre-provision profit to net loans), which indicates that 7.5 percent of performing loans can be written off without charging on reserves and equity. The FY2015 rating was down from 9.3 percent in FY2014.

<sup>36</sup> "Use of Credit Rating Information of Domestic Credit Rating Agencies for Public–Private Partnership Projects in Infrastructure in Bangladesh," ADB, February 2014.

**Table 15. Capital Adequacy and Asset Quality Indicators (Tk million)**

	2012–13	2013–14	2014–15	2015	2016
Overall loan portfolio	24,513	29,115	35,973	36,964	41,017
Gross non-performing loans (%)	0.81%	0.80%	1.58%	6.22%	9.45%
Paid-in capital	1,720	2,600	3,850	5,000	5,000

Source: CRAB 2017

On top of IDCOL's continued growth in its loan portfolio, its net interest income from loans and advances experienced strong growth of 51 percent in 2016, making up for the previous moderate growth of 9.1 percent in 2015. Overall, earnings were satisfactory, with interest income mainly coming from income from advances made to renewable projects (67 percent of interest income) and infrastructure loans (31 percent).

According to a 2016 assessment by the Asian Development Bank, IDCOL's diversification strategy is believed to be mitigating its portfolio concentration risk.<sup>37</sup> IDCOL has added new sectors under its infrastructure umbrella, and increased its focus on energy efficiency, public-private partnerships, and advisory services. Within its renewable energy activities, IDCOL has broadened investments toward solar-based irrigation and solar-powered mini-grids.

IDCOL has continuous access to stable long-term funding through multilateral development institution loans, mainly through the World Bank Group, ADB, and JICA. This means that IDCOL does not have to depend on short-term financing. IDCOL's liquidity profile shows a positive liquidity gap in all the periods within five years (and negative liquidity beyond that). IDCOL is exposed mainly to market, credit, and operational risks. To ensure that IDCOL has adequate capital to cover potential losses from its exposure to changes in interest rates, IDCOL reviews the market trend of interest rates and matches the interest risks of assets so that it can meet its obligations without generating any losses. To avoid foreign currency risks, IDCOL ensures that its lending and borrowing are in the same currency (US dollars or Bangladesh taka).

## 10. FUND PERFORMANCE

Unlike other public infrastructure funds in the Global Review sample, IDCOL was undercapitalized from the start. The GOB's initial capital contribution (estimated to be the equivalent of US\$4 million) was set up under the strategy of a "pass-through" type of non-bank financial institution to provide an institutional mechanism to channel the proceeds of World Bank loan (a Private Sector Infrastructure Development Project loan for US\$225 million) to support private infrastructure development in Bangladesh (see box 2). IDCOL has played a catalytic role in Bangladesh's financial sector via capacity building support to local banks, project developers, and government agencies. It has also brought dynamism, innovation, and efficiency in the financing structuring in the energy sector.

IDCOL, building on good financial performance during its initial years, has been capitalizing the institution via retained earnings. Today, IDCOL has a net equity contribution of Tk5,971 million (equivalent to approximately US\$75 million). From the lower initial base, this is to be considered a very strong performance. Give the relatively small size of the equity base, when compared to an assets base of Tk73,028 million (equivalent to approximately US\$925 million), IDCOL's return on equity (ROE) had

<sup>37</sup> IDCOL Financial Analysis, ADB, 2016.

a stellar performance until the 2015–16 period, when the increase in provisioning curbed the return. IDCOL has the highest average ROE of the sample of case studies in the Global Review of PIFs. This is especially striking given that IDCOL has also paid dividends and income taxes to shareholders. If these amounts (dividends and taxes) were added to the net contribution to equity holders, the ROEs would be even higher.

The increase in provisioning in the last fiscal period where information is available (FY2015–FY2016), due to some difficulties with the SHS loan portfolio, have imparted an important lesson. IDCOL is in the process of improving the credit quality of this portfolio. IDCOL has played, and is likely to continue to play, a very important role in the development of the energy sector—initially, in the more traditional non-renewable energy sector, and recently in the renewable and energy efficiency sectors.

## 11. LESSONS LEARNED

Until 2014, when BIIFL initiated loan operations in the infrastructure sectors, IDCOL was the predominant local player in infrastructure finance in Bangladesh. Throughout the last 20 years, IDCOL has learned several lessons that have improved its risk management strategy, as well as its early involvement upstream with project development.

- **Credit quality of the SHS portfolio.** The SHS was an off-grid rural electrification program, executed via small-scale domestic financing through participating organizations (NGOs). An important lesson was the success of the business model from the operational viewpoint (reaching 4.14 million homes), but its credit risk weakness in the security package of each financing. IDCOL is currently working to improve this situation, given its continued commitment to renewable and energy efficiency, where similar operational models (based on NGO participation) will need to be utilized.
- **Risk management (early diversification).** In the early stages of the development of PPPs in Bangladesh, the few transactions that were financeable and could have a big impact on the country's development were energy related. These transactions were based on global-standard power purchase agreements backstopped by the GOB. It was normal that most of the portfolio was concentrated in these types of transactions. Later, the natural expansion of IDCOL into several types of renewable energy assets and energy-efficiency assets, although understandable from a business viewpoint, ended up increasing the concentration in the energy sector to undesired levels from a risk management perspective. IDCOL, as of the end of FY2016, had close to 80 percent of its exposure in the Bangladesh energy sector. The implications for risk are even higher because part of the energy asset portfolio is denominated in US dollars. A systemic risk in the country affecting exchange rates and inflation could have a negative impact on the Fund's performance. The Fund is aware of this issue and has already taken important measures to diversify its portfolio.
- **Involvement in upstream project development.** As in many other developing countries, making the transition between infrastructure needs and financeable projects is not easy. Contracting agencies, as well as local private sector, lack the knowledge, skills, and pre-investment funding to prepare good-quality PPP projects that are financially attractive. IDCOL has understood this lesson. Two years ago, it created an investment advisory unit to build the capacity of its clients, but also to assist them in project preparation.

## 12. KEY CHALLENGES AHEAD

IDCOL, like the rest of the public sector in Bangladesh, must prepare for the business implications that the process of “graduating” from least developed country (LDCs) to developing country status will have on its operations. The Fund's access to IDA-type soft (very low-cost) funding could slowly start evolving to the type of funding more in line to developing economies. This situation will not manifest immediately, and it will take years to materialize. Despite this, it is in IDCOL's best interest to start preparing for this eventuality.

The key challenges facing IDCOL include the following:

### **1. Capitalization and Funding Strategy**

IDCOL needs to improve its assets-to-equity ratio to strengthen its risk exposure under a systemic risk scenario. The Fund's high leverage, planned in such a way early on given its "pass-through" nature, is not sustainable under a scenario of limited access to soft (very low-cost) funding. Up until now there has not been a need to diversify funding at IDCOL. When new funding options were analyzed, these options could not compete in terms of financial costs with development partners funding. The funding conditions (tenor and pricing) are likely to change in a "graduation scenario." It is in IDCOL's best interest to start now developing new funding sources for its operations. IDCOL should actively explore options ranging from issuance of debt securities in the local financial markets to initiating a process of accessing the private windows of development partners (where government guarantees are not needed). No doubt these options will bear a higher all-in cost for financing infrastructure in Bangladesh, but this is likely one of the outcomes of the "graduation" process.

In addition, while majority government ownership is desirable, given the short-term implications for its credit rating and funding costs, IDCOL should actively explore incorporating into its equity ownership structure international financial institutions and private banks experienced in various infrastructure sectors. The GOB could still maintain majority control of the shareholdings of the company (for example, a 60 percent share), but allow new partners to be incorporated (for example, a 40 percent share). New partners will improve corporate governance and bring in new management expertise, information management systems, and risk management systems, and better options for funding sources. Also, new partners would inject needed new equity to strengthen IDCOL's balance sheet.

### **2. IDCOL's Role Supporting Local Capital Market Development**

As with the public infrastructure funds examined in other country case studies, IDCOL needs to play a catalytic role promoting development of capital markets in its home country. IDCOL needs to be more proactive in the development of credit derivatives (partial credit and partial risk guarantees, mezzanine financing, take-out financing, and the like) through innovations in product offerings, accompanied by a contingent liability strategy. By implementing these types of new instruments effectively, IDCOL will be able to maximize leverage of the private capital it can mobilize and improve use of its balance sheet. Innovation with these types of instruments will help improve the efficiency of capital use.

### **3. Diversifying While Maintaining Leadership in the Renewable Energy Sector**

IDCOL faces a paradigm shift when looking ahead. With an 80 percent asset concentration in the energy sector, the Fund needs to improve the risk management of its portfolio and increase diversification to other sectors. At the same time, IDCOL has consolidated its position as the lead lender in the energy sector. Moreover, IDCOL is also the lead financier in the appreciated area of climate change-related investments (renewable energy and energy efficiency). As Bangladesh graduates from least-developed country status, one of the few "soft" funding sources available in a global scale will be climate change-related initiatives (including the Green Climate Fund, climate change windows through multilateral agencies (MLAs) and bilateral agencies). IDCOL should keep this leadership position as a climate change financier to add a "soft" component to its future funding strategy for its operations in Bangladesh.

### **4. Working with BIIFL**

In contrast to IDCOL, BIIFL has been strongly capitalized since its creation in 2011. This situation provides BIIFL with a competitive edge to more enthusiastically develop new risk mitigation products and become more innovative to support local capital market development and mobilize more private capital. Despite its original mandate to support public investment, BIIFL is very active in the PPP and

private sector arena.


There might be a natural temptation to consider BIFL as a competitor in the financing of infrastructure PPPs. However, comparing balance sheets and future perspectives, it seems in the best interest of IDCOL to consider BIFL as a “partner” rather than a “competitor.” Joint development work in financing structures and innovation, and joint underwriting, will help both institutions and will promote more private capital mobilization in Bangladesh infrastructure markets. The trend has already begun, as IDCOL and BIFL have co-financed several projects.

#### **5. Engaging in Strategic Planning (ROE)**

It will be virtually impossible to maintain average rates of 30 percent ROE in the future. Too many factors (including increases in the cost of funding, leveraging, provisioning, and portfolio concentration) make maintaining this level very unlikely. It is in the best interest of IDCOL to undertake strategic planning and initiate a communication strategy with stakeholders to define IDCOL for the years ahead. Adequate planning and timely communication will help ensure further growth for IDCOL.







This case study was developed between October 15, 2017, and March 31, 2018. It draws on meeting with Finance Canada, Infrastructure Canada, the CIB Transition Office, and PPP Canada in early November, 2017, as well as a meeting with KPMG's Infrastructure Advisory team in Toronto and a conference call with the concerned partner at Deloitte Canada. The stakeholders were again consulted for updates on the Canada Infrastructure Bank in February 2018. The case was written by Mujtaba Shaneel, Consultant to the World Bank, under the supervision of Ellis J. Juan, Coordinator of the Global Review of Public Infrastructure Funds.

# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT

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(SEPTEMBER 26, 2018)

## **Canada**

### **The Canadian Infrastructure Bank (CIB)**

## Executive Summary

Canada's experience with infrastructure financing highlights that even a country with a developed economy and mature financial markets must continue to evolve its approach to infrastructure finance and development. The Canadian infrastructure finance story moves from the need to involve private financing in infrastructure to create fiscal space to one where the national government created a fund to encourage different strata of government to undertake public-private partnerships (PPPs), mainly on the government pay model.<sup>38</sup> This was regarded as a successful intervention mechanism to encourage PPPs in infrastructure. Recently, the Canadian government formed the Canada Infrastructure Bank (CIB), whose main aim is to develop the financial market for revenue-generating infrastructure projects. CIB's development will also showcase the challenges that a country faces in moving from a government pay model to a user pay model. Moreover, both institutions will use different instruments to support and facilitate financial close, which provides interesting observations about accounting treatment of very similar intervention if they are structured as different instruments.

CIB is different from the other seven case studies in the Global Review of Public Infrastructure Funds (PIFs). Its mission—to invest in infrastructure projects that have revenue potential and are in the public interest—is different. It is also recently created (in April 2017) and is still under development. CIB is building on the success of previous Canada PIFs such as the P3 Canada Fund and Canada Strategic Infrastructure Fund. The Board of Directors and the Chair have been appointed, but the search for key management positions such as the CEO, CFO, and CIO is underway (as of March 31, 2018). CIB is a Crown corporation wholly owned by the Government of Canada (GOC). It is a non-bank financial institution, under private sector corporate laws. It will consolidate with Canada's public sector for fiscal management purposes and the GOC acts as the lender of the last resort.

Perhaps the most interesting feature of this case study coming from a developed country with a successful track record in infrastructure development and PPP transactions is the fact that it still uses public sector funds to support infrastructure development—albeit in situations where the market presents some challenges. Even in Canada, where capital market development is at a mature stage when compared with developing countries in the Global Review (Argentina, Bangladesh, Colombia, Ghana, India, Indonesia, South Africa), there is still need for public sector intervention to support better and more infrastructure development. The difference is that while in less developed countries the infrastructure challenge is still focused on getting the right model for public sector intervention in basic economic infrastructure (transport, energy, water and sanitation, and so on), Canada is focusing on the third wave of PPP transactions, with an important shift toward social infrastructure and complex economic infrastructure undertakings.

### 1. Country Information and Rationale for Selection of CIB

Canada is one of the G7 economies and is the tenth largest economy in the world, with a nominal GDP of US\$1.6 trillion. In the summer of 2017, Canada had the fastest growing economy among the G7 nations, according to the International Monetary Fund, although 2018 growth is expected to be lower.<sup>39</sup> The Canadian economy tends toward cyclical growth as it is closely linked to commodity prices. Finch, S&P, and Moody's all rate Canada AAA with a stable outlook.<sup>40</sup> Canada also has a low debt-to-GDP ratio compared to other developed economies, at around 60 percent of GDP. Canada has vibrant financial markets with a stable commercial banking sector that is dominated by six local banks.<sup>41</sup> Canada also has a mature mutual fund and pension fund industry that has invested in innovative products and infrastructure sectors around the world.<sup>42</sup> Canadian pension funds have parked over US\$50 billion in

38 In a government pay model, the government, as a sponsor of the PPP, assumes demand risks and pays directly to the concessionaire based on performance (examples include shadow tolls roads and infrastructure projects based exclusively on availability payments).

39 <https://beta.theglobeandmail.com/report-on-business/economy/growth/imf-maintains-global-growth-forecasts-china-eurozone-revised-higher/article35779415/?ref=http://www.theglobeandmail.com&as> (accessed October 20, 2017).

40 <https://www.safec.ca/information-economic-indicators-g8-countries>.  
<https://tradingeconomics.com/canada/rating>.

41 <http://www.fin.gc.ca/toc/1995/fctshsum95-eng.asp>.

42 <http://business.financialpost.com/news/canadas-pension-funds-eye-greenfield-federal-infrastructure-investments>.

infrastructure investment around the globe, amounting to around 7 percent of their total assets under management.<sup>43</sup>

Canada is the second largest country in the world by land mass and has a population of 35.15 million.<sup>44</sup> Around 80 percent of the Canadian population lives within 100 miles of the border with the United States. As much as this pattern has to do with economic integration with the United States and harsh weather further north, the lack of advanced infrastructure facilities in the northern parts of the country also plays a central role in concentrating the population near the southern border. The concentration of the population has led to unaffordable housing and extreme pressure on municipal and social services. If Canada is to move into the future as a major global power, the country must grow across its length and breadth. Moreover, global warming may provide an opportunity to grow in the northern parts of the country as those areas might have milder conditions.<sup>45</sup>

Almost 60 percent of Canada's core public infrastructure is owned and maintained by municipal governments. According to survey results, the total value of core municipal infrastructure assets is estimated at \$1.1 trillion dollars, or about \$80,000 per household. One-third of the Canadian municipal infrastructure is in fair, poor, or very poor condition, which increases the risk of service disruption. To replace/upgrade poor and very poor condition facilities, there is an immediate need of Can\$93 billion (US\$74.4 billion).<sup>46</sup> Couple this need with the fact that Canada's population is growing 1.2 percent annually due to immigration, which puts further pressure on existing infrastructure; hence, the need for investment in infrastructure is urgent.<sup>47</sup> Overall, Canada spent 4.1 percent of GDP on infrastructure, on average, between 2010 and 2014, as compared to an OECD average of 3.5 percent during the same period.<sup>48</sup> While the Canadian government has been investing more in infrastructure than its peers, the need to invest more is still great.

Canada is strongly committed to the Paris Agreement on climate change that leads the world toward a low-carbon, climate-resilient economy. Canada is also committed to supporting the poorest and most vulnerable countries to adapt to the adverse effects of climate change and is doing its part to mobilize critical investments that will achieve sustained reductions in emissions in developing countries. The Government of Canada has joined with its provinces and territories to take action on climate change by putting a price on carbon emission to reduce pollution. Canada is also in the process of setting up a Low Carbon Economy Trust of Can\$2 billion (US\$1.6 billion) to fund projects that reduce carbon.

As to private investment in infrastructure, the first wave of PPPs in Canada happened in the 1990s and the early 2000s.<sup>49</sup> These included projects such as the development of the Royal Ottawa Hospital, the Confederation Bridge linking Prince Edward Island and New Brunswick, the toll road connecting Fredericton and Moncton, water treatment plants, and schools. During the first wave, PPPs were commonly planned directly by government departments and seen as a strategy to continue building high-quality public infrastructure without adding direct public debt. As such, project planners sought to privately fund a significant share of the cost of public infrastructure projects by raising new money through user fees or large upfront lease payments. For example, the government purposely structured the PPP to realize off-balance sheet accounting in the Confederation Bridge project. Early PPPs in Canada faced scrutiny from academics, auditors, stakeholders, and the media that was focused on the lack of a sound methodology for project selection, limited government expertise to execute complex concessions, poor

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<https://hoopp.com/docs/default-source/newsroom-library/research/top-10-pension-funds-in-canada.pdf?sfvrsn=6>.

43 "Pension Fund Investment in Infrastructure: A Comparison between Australia and Canada," by George Inderst and Raffaele Della Croce, OECD Working Papers on Finance, Insurance and Private Pensions No. 32, 2013.

44 <http://www.statcan.gc.ca/pub/12-581-x/2017000/pop-eng.htm>.

45 <http://www.cbc.ca/news/technology/climate-change-economy-1.3282446>.

<https://beta.theglobeandmail.com/news/national/canada-to-gain-nice-days-under-climate-change-study/article33653666/?ref=http://www.theglobeandmail.com&>.

46 Canadian Infrastructure Report Card 2016.

47 <https://www.statcan.gc.ca/pub/11-630-x/11-630-x2014001-eng.htm>.

48 "Myths of Infrastructure Spending in Canada," Fraser Institute, March 2017, figure 7.

49 "Public-Private Partnerships in Canada: Reflections on Twenty Years of Practice," by Matti Siemiatycki, 2015, *Canadian Public Administration* 58 (3, September): 343–62.

transparency, high financing costs, loss of public control over infrastructure assets, public opposition to high user fees, and contract instability that led to renegotiation or termination for a few concessions.

The experience of the first wave of PPPs in Canada has been pivotal in shaping the structure of the second wave of PPP projects.<sup>50</sup> By the early 2000s, there was reasonable evidence to highlight the limitations of the PPP modality for infrastructure development. Around the same time, Liberal Party governments were elected in Canada's three largest provinces (Ontario, Quebec, and British Columbia) with parliamentary majorities on a platform to reform public administration through innovative public management approach and experimentation with alternative models of service delivery. The second wave of PPPs was a response to the administrative processes and project outcomes that were not meeting expectations. The incoming politicians had an electoral mandate for change and an interest in revamping PPP mechanisms to make them more politically acceptable. In 2002, the province of British Columbia introduced a Capital Asset Management Framework. Later governments implemented a "PPP first" approach. These initiatives included policies requiring PPPs to be considered for all infrastructure projects over a specified cost benchmark and the formation of specialized PPP cells within government units with an exclusive mandate to develop PPP projects. Canada's provincial governments have been the leading users of PPPs to deliver hospitals, roads, bridges, educational facilities, and waste treatment plants. The largest number of PPPs has been delivered in Ontario, British Columbia, Alberta, and Quebec, in that order, while the other six provinces and three territories have been less consistent in their application of PPPs.

Achieving value for money has been identified as the primary rationale during the second wave of PPPs. Value for money (VfM) is defined as the cost savings that are achieved when delivering a public infrastructure project through a PPP model as compared to a traditional government-led procurement approach. Proposed drivers of value for money in Canadian PPPs include enhanced upfront project planning; incentive-based bundled contracts that encourage on-time and on-budget delivery; innovative facility designs that improve the user experience and save costs; and the use of concessions that provide whole project life-cycle costing and the allocation of project risks to the party that is best able to manage them, such that governments are protected in case of large cost overruns, demand shortfalls, or construction delays. The second phase's emphasis on VfM represents a departure from the first wave of PPPs in Canada, in that it downplays the rationales of using PPPs to bring in new private money to pay for costly public infrastructure or capitalizing on off-balance sheet accounting. The elementary approach to the second wave of PPPs has been to implement policy procedures and develop public discourse that emphasizes this procurement model as a driver of VfM.

The second wave of PPPs has been defined as a major successful case—although it needs to be highlighted that these deals were largely based on a government pay model. At the federal level, the P3 Canada Fund played an important role of a catalyst and support in developing PPPs all over Canada (for details, see Box 1). The Government of Canada has now decided to launch the Canada Infrastructure Bank (CIB), which will support and invest in projects based on their commercial viability and revenue potential. This will be a departure from the prevailing government pay model. Experts and analysts have labeled this change the likely third wave of PPPs in Canada.

## **2. CIB PROVIDES A GREAT EXAMPLE OF HOW THE PUBLIC INFRASTRUCTURE FUNDS MARKET HAS EVOLVED IN A DEVELOPED COUNTRY WITH AN ADVANCED PPP SET-UP. THE TRANSITION FROM THE P3 CANADA FUND TO CIB PROVIDES AN INTERESTING EXAMPLE TO PPP PRACTITIONERS, INFRASTRUCTURE SPECIALISTS, AND POLICY MAKERS.**

### **Description of the Canada Infrastructure Bank**

After the Liberal Party took charge of the government after winning a majority in the fall of 2015, it launched the Investing in Canada plan. Under this plan, the Government of Canada is making new investments in infrastructure by more than doubling funding in infrastructure development. Specifically,

<sup>50</sup> Siemiatycki 2015.

the federal government is investing more than Can\$180 billion (US\$144 billion) over twelve years in five main infrastructure priorities areas: public transit infrastructure; green infrastructure; social infrastructure; trade and transportation infrastructure; and infrastructure for rural and northern communities.

As part of the Investing in Canada plan, the Government of Canada is in the process of setting up CIB. The idea is to utilize some government resources to leverage much more resources from the private sector, especially through PPPs, for infrastructure projects that are revenue generating. CIB's formation is considered the third wave of private infrastructure investment in Canada.

In this wave, the Government of Canada believes that the additional projects CIB invests in will contribute to long-term economic growth and support job creation. These investments will also help Canada achieve the goals of lowering green house gases (GHG) emissions and building communities that are socially inclusive. CIB will be an additional tool to build new infrastructure development by attracting private sector and institutional investors to support the transformational infrastructure that Canada needs. From green energy to trade and transportation, the idea is that CIB will help public funds go further by enabling investment in projects that deliver a social return, as well as an economic one. This arrangement will keep grant funds for projects like community centers that require public funding. CIB will be capitalized by Can\$35 billion<sup>51</sup> (equivalent to US\$28 billion) from the Canadian government budget funds. Can\$15 (US\$12 billion) billion will be sourced from the Can\$180+ billion slated for the Investing in Canada infrastructure plan, including Can\$5 billion for public transit systems; Can\$5 billion for trade and transportation corridors; and Can\$5 billion for green infrastructure projects that reduce GHG emissions, deliver clean air and safe water systems, and promote renewable power.

CIB will also serve as a center of expertise on infrastructure projects in which private sector or institutional investors are making a significant investment. It will promote evidence-based decision making and advise all strata of government on the design of revenue-generating projects, and analyze data to help governments make better decisions about infrastructure investments.

### **Box 1. Infrastructure Support Funds in Canada**

Several infrastructure support funds have been created in Canada to develop infrastructure, most of them providing upfront grants to public sector projects. These funds created a vibrant infrastructure market in Canada, and CIB can build on that. In particular, the P3 Canada Fund provides a remarkable example of a public investment fund that was able to act as a catalyst to attract private finance for infrastructure development. These funds are discussed next.

#### **P3 Canada Fund**

The P3 Canada Fund was created to improve the delivery of public infrastructure and provide better value, timeliness, and accountability by increasing the effective use of public-private partnerships (P3s). It was designed to incentivize innovation and encourage inexperienced governments to consider P3s in public infrastructure procurements. It was the first infrastructure funding program in Canada that directly targeted P3s. It was a Government of Canada fund that supported subnational governments to undertake PPPs by providing up to 25 percent of project costs at substantial completion of the project. PPP Canada invested over Can\$1.3 billion (just over US\$1 billion) in 25 large or complex infrastructure projects across Canada in a variety of asset classes. Based on official estimates, these P3s have combined capital costs of over Can\$6.6 billion and have resulted in savings of approximately Can\$1.7 billion compared to traditional procurement approaches. The Government of Canada has taken a policy decision to transfer the P3 Canada Fund to Infrastructure Canada because the P3 Canada Fund has been disbanded with the formation of Canada Infrastructure Bank. Infrastructure Canada will continue to monitor the projects that were provided grants from the P3 Canada Fund, but no new disbursements will be made from the fund. The P3 Canada Fund provided a successful and interesting case

51 <http://www.infrastructure.gc.ca/CIB-BIC/index-eng.html>.



study of a public infrastructure fund that was able to successfully encourage subnational governments to use PPP as a procurement methodology.

Source: <http://www.p3canada.ca/en/p3-canada-fund/the-p3-canada-fund/>.

#### **Canada Strategic Infrastructure Fund**

The Canada Strategic Infrastructure Fund (CSIF), which received funding in the 2001, 2003, and 2006 federal budgets, is a cost-sharing contribution program for strategic infrastructure projects. To date, funding has been approved to support 83 projects. Investments are directed to projects of major national and regional significance and are to be made in areas that are vital to sustaining economic growth and supporting an enhanced quality of life for Canadians. The CSIF is delivered through negotiated agreements with provincial, territorial, or local governments, private partners, or non-governmental organizations (NGOs). Contribution agreements are tailored based on the project requirements. The Canada Strategic Infrastructure Act outlines the prime categories of investments in projects that involve fixed capital assets that are used or operated for the benefit of the public.

Source: [http://www.feddevontario.gc.ca/eic/site/723.nsf/eng/h\\_00105.html](http://www.feddevontario.gc.ca/eic/site/723.nsf/eng/h_00105.html)

<http://www.infrastructure.gc.ca/prog/csif-fcis-eng.html>

<https://www.tbs-sct.gc.ca/hidb-bdih/initiative-eng.aspx?Hi=53>

#### **Subnational and Other Infrastructure Funds**

Provincial governments have also developed their own funds to support infrastructure development. Most of these funds support the selected project or/and program in the form of grants. Examples include the Ontario Community Infrastructure Fund, the British Columbia Infrastructure Planning Grant Program, the Clean Water and Wastewater Fund, the Alberta Basic Municipal Transportation Grant, the Alberta Strategic Transportation Infrastructure Program, the Alberta Municipal Sustainability Initiative, the Alberta Public Transit Infrastructure Fund, the Provincial Territorial Infrastructure Component, and the New Building Canada Fund, among others.

Source: <https://www.ontario.ca/page/infrastructure-funding-small-communities> (accessed November 21, 2017).

[http://www.cscd.gov.bc.ca/lgd/infra/infrastructure\\_grants/index.htm](http://www.cscd.gov.bc.ca/lgd/infra/infrastructure_grants/index.htm) (accessed November 21, 2017).

<http://municipalaffairs.alberta.ca/municipalgrants-infrastructure> (accessed November 21, 2017).

<https://www.saskatchewan.ca/government/municipal-administration/funding-finances-and-asset-management/funding/nbcf> (accessed November 21, 2017).

### **3. INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE**

CIB was created through an Act of Parliament in April 2017.<sup>52</sup> As an arm's length Crown Corporation, the Bank will be led by a Chief Executive Officer and governed by a Chair and Board of Directors. A Crown corporation is a government organization that operates with a private organizational structure but usually has a combination of commercial and public policy objectives. A parent Crown corporation is wholly owned directly by the Government and is established through legislation, letters patent, or articles of incorporation under the Canada Business Corporations Act. In Canada, wholly owned subsidiaries report to their parent Crown corporations, except those that have been directed by the Government to report as a parent Crown corporation. CIB will be accountable to Parliament through the responsible Minister for Infrastructure & Communities. Among the accountability measures:

- CIB will seek the Government's approval of its corporate plan annually.
- CIB will be tabling the CIB annual report in Parliament.
- CIB will be audited by the Auditor General and a third-party private sector auditor appointed annually by the Government.
- The responsible Minister and Parliament will review CIB's operations every five years.

<sup>52</sup> <http://www.parl.ca/DocumentViewer/en/42-1/bill/C-44/first-reading#enH12005>.

Infrastructure Canada has set up its own CIB Transition Office, which is responsible for the transition from PPP Canada to the Canada Infrastructure Bank and setting up CIB. The CIB Transition Office is working with Deloitte Canada in developing CIB's business plan and corporate structure. Ms. Janice Fukakusa was appointed Chair of CIB. She is a corporate director and former Chief Administrative Officer and Chief Financial Officer of Royal Bank of Canada, from which she retired in January 2017. Recently, a 10-member Board of Directors was also appointed by the Government of Canada and includes professionals from different fields (including public and corporate sectors) from all over Canada.<sup>53</sup> The Government of Canada started the process for hiring a Chief Executive Officer (CEO) in the fall of 2017; however, the process has been relaunched and for the time being the Chair has been appointed as the interim CEO. The appointments are being made through a competitive and advertised process. Initially, CIB is likely to have 50 staff, which will increase to 100 staff members over the next few years. The absolute deadline to make the Canadian Infrastructure Bank operational is March 31, 2018. In order to operationalize CIB on a priority basis, the Board has appointed Mr. Bruno Guilmette as the interim Chief Investment Officer (CIO). He will step down from his position as a member of the CIB Board while serving as the interim CIO.<sup>54</sup>

CIB's predecessor, the P3 Canada Fund, was also a Crown corporation under the custody of Finance Canada. P3 Canada was headed by a CEO and was divided into different departments, including project development, finance, and human resources.

#### 4. OFFERING OF FINANCIAL PRODUCTS

In our discussions with the CIB Transition Office team at Infrastructure Canada and their advisors, they highlighted that CIB management will take the final decisions on financial products. However, in the business plan they are looking at options of quasi-equity or subordinated debt as a means of inducing project financiers to invest in the projects. From an accounting perspective, these new forms of support will be registered as government investments/assets. This contrasts with the support provided by the P3 Canada Fund, which was considered a liability/grant because up to 25 percent was structured as grant funding on substantial completion of the project. The new proposed structure can lead to value creation for the government and financing support in projects where there are residual revenues. A good example is the 407 ETR highway, which was privatized by the Government of Ontario in 1998. The actual toll revenue has been around 50 percent more than the estimated revenue at the time of its privatization. The Government of Ontario did not have any financial stake in the project, but if it had any interest in the form of quasi-equity or subordinated debt, that investment would have yielded an excellent return while providing a financial cushion in the transaction structure.

To illustrate the new financial products through an example, consider a toll road project. Assume that the project has lower revenues than required if the project raises capital from the market. The project has a cost of Can\$1 billion. To make the project viable on current revenue estimates, the private party is injecting 20 percent equity. Commercial debt is 50 percent, while CIB injects 30 percent as a soft loan (subordinated debt). The government has multiple ways of structuring its soft loan to that the project not only becomes viable but the project's marketability will also improve.

CIB's intervention makes the project viable. It would not have been viable with an 80:20 or 70:30 debt-to-equity ratio. Two options through which government can achieve this objective are by charging lower interest than the market rate and accruing interest in case of a cash crunch, or structuring repayment of principal in an innovative manner.

<sup>53</sup> For further information on the composition of the Board of Directors and profiles of Directors, please visit <http://www.infrastructure.gc.ca/CIB-BIC/bio-eng.html>.

<sup>54</sup> On May 24, 2018, the Government of Canada announced the appointment of Pierre Lavallee as CEO of Canada Infrastructure Bank. He was formerly senior managing director and global head of investment partnerships for the Canada Pension Plan Investment Board (CPPIB) (*Star Business Journal*, Toronto).

Table 1. Illustrative Comparison of Toll Road with and without PIF intervention

Financial Projections of a Plain Vanilla Financial Structure										
	C\$	Percentage								
Project Cost	1,000,000,000	100%								
Commercial Debt	700,000,000	70%								
Equity	300,000,000	30%								
Cumulative growth rate		3%								
Interest rate		5%								
Operations & Maintenance as a % of revenue		10%								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual days	365									
Traffic AADT*	18,000									
Revenue per vehicle	15									
Annual revenue	98,550,000	101,506,500	104,551,695	107,688,246	110,918,893	114,246,460	117,673,854	121,204,069	124,840,192	128,585,397
O&M Expenses	9,855,000	10,150,650	10,455,170	10,768,825	11,091,889	11,424,646	11,767,385	12,120,407	12,484,019	12,858,540
Debt Repayment	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000
Interest payment	35,000,000	31,500,000	28,000,000	24,500,000	21,000,000	17,500,000	14,000,000	10,500,000	7,000,000	3,500,000
Change in cash balance at year end	(16,305,000)	(10,144,150)	(3,903,475)	2,419,421	8,827,004	15,321,814	21,906,468	28,583,662	35,356,172	42,226,858

Source: Author's own calculations, 2018

Table 2. Financial Projections of a Subordinated Debt-Supported Structure

	C\$	Percentage								
Project Cost	1,000,000,000	100%								
Commercial Debt	500,000,000	50%								
Equity	200,000,000	20%								
Subordinated Debt	300,000,000	30%								
Cumulative growth rate		3%								
Interest rate on commercial debt		5%								
Interest rate on subordinated debt		2%								
Operations & Maintenance as a % of revenue		10%								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Annual days	365									
Traffic AADT*	18,000									
Revenue per vehicle	15									
Annual revenue	98,550,000	101,506,500	104,551,695	107,688,246	110,918,893	114,246,460	117,673,854	121,204,069	124,840,192	128,585,397
O&M Expenses	9,855,000	10,150,650	10,455,170	10,768,825	11,091,889	11,424,646	11,767,385	12,120,407	12,484,019	12,858,540
Debt Repayment	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
Commercial Debt Interest payment	25,000,000	22,500,000	20,000,000	17,500,000	15,000,000	12,500,000	10,000,000	7,500,000	5,000,000	2,500,000
Subordinated Debt Interest payment	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000
Change in cash balance at year end	7,695,000	12,855,850	18,096,526	23,419,421	28,827,004	34,321,814	39,906,468	45,583,662	51,356,172	57,226,858

\*AADT=Annual Average Daily Traffic

Source: Author's own calculations, 2018

As evident from the example, an intervention through subordinated debt or quasi-equity can turn projects that are not otherwise viable into bankable projects. The transaction has other positive effects:

- It will increase the market for private parties because the equity injection requirement is lower.
- The debt market will have much higher appetite for financing because it has a cushion in case of default.
- The risk pricing (equity risk premium and cost of commercial debt) will be lower due to the extra cushion provided by the government, which will lead to cost savings and financial efficiency.
- Grants and revenue support flows might be subject to taxes, such as a turnover tax.
- In contrast to a grant, this arrangement will be recorded as an investment in the government books. If the revenue estimates are higher than the estimated numbers, then subordinated debt will yield a return for the government (as would have been the case in the 407 ETR project).
- The more competitive environment both during bidding and financial close will lead to better VfM for the government.

Box 2 presents another example.

### **Box 2. Case Study from the P3 Canada Fund – Regina Wastewater Treatment Plant**

Regina is the capital of Saskatchewan province. The Wastewater Treatment Plant project increased Regina's wastewater treatment capacity and modernized the facility. This was done by upgrading the primary and secondary treatment processes, and also involved the construction of a new tertiary treatment process. The new system provides treatment capacity for a population of 258,000 and significantly reduces the amounts of ammonia, nitrogen, phosphorous, E. Coli, and suspended solids entering the water system. As a P3, this contract transferred significant risks to the private sector over the entire life cycle of the project, as evident from the project VFM report. The private sector was deemed responsible for Design-Build-Finance-Operate-Maintain of the Wastewater Treatment Plant over a 30-year period. Based on the criteria in the Request for Proposal (RFP), the preferred bidder for the project was identified by calculating the total cost on a net present value (NPV) of the financial offers. The bidder with the lowest cost financial offer on an NPV basis was EPCOR Saskatchewan Water Partners, with a financial offer equivalent to Can\$333.66 million (NPV was Can\$138 million). Based on the financial support framework of the P3 Canada Fund, the project received a grant of Can\$43.5 million at substantial completion of the facility.

Source: City of Regina Wastewater Treatment Plant Expansion & Upgrade Project Value for Money Report, Deloitte, July 2014, <http://www.p3canada.ca/~media/english/resources-library/files/regina%20wwtp%20vfm.pdf> (accessed February 25, 2018). <http://www.p3canada.ca/en/about-p3s/project-map/regina-wastewater-treatment-plant/>

## **5. SECTOR FOCUS**

CIB will be open to all infrastructure investments. In our discussions with different infrastructure stakeholders, it was highlighted that it is likely that CIB will focus more on public transit systems, trade corridors, green infrastructure, public housing, and transportation. It will be open to all tiers of governments and it is likely that the fund allocation will be on the basis of population of each province, as compared to the P3 Canada Fund where the fund allocation was through an application and screening process based on the merit of the proposal. A detailed portfolio and sector analysis is not possible because CIB is not yet operational.

## **6. CLIMATE CHANGE CONSIDERATIONS**

The Government of Canada was one of the chief sponsors of the Paris Accord on Climate Change. In line with that commitment, the Government of Canada has earmarked Can\$5 billion specifically for green infrastructure, which will include projects that reduce GHG emissions, deliver clean air and safe water systems, and promote renewable power. CIB will have a dedicated portion of investment for green projects.

## **7. FISCAL MANAGEMENT**

CIB will be an arm's-length corporate entity, which will be independent and will make financial decisions independently. However, it will present its annual business plan every year to Finance Canada (the Ministry of Finance) and Parliament and must get permission from the Minister of Finance before issuing any guarantees.

CIB will be accountable to Parliament through the Minister of Infrastructure and Communities, which is CIB's designated Minister. The Minister will table in Parliament a summary of CIB's corporate plan and budgets annually, along with its annual report. Both a private sector auditor and the Auditor General of Canada will audit CIB. The designated Minister and Parliament will review the operations of CIB and the CIB Act every five years. The designated Minister, with the concurrence of the Minister of Finance, will recommend the approval of CIB's corporate plan by the Governor in Council and financial budgets

by the Treasury Board. The CIB Act provides that the Minister of Finance may pay to CIB, out of the Consolidated Revenue Fund, amounts of not more than Can\$35 billion (US\$28 billion) in the aggregate, and approve any loan guarantees that CIB would provide.

As a Crown corporation, CIB's accounts will be consolidated with the Government of Canada's Public Accounts that are published annually. The consolidation exercise of Crown corporations and other dependent entities started on the recommendation of the third Report of the Public Accounts Committee in 1963.<sup>55</sup> Later, the Treasury Board Secretariat of Canada expanded this recommendation to include other reporting entities that are also considered part of the Government reporting entity system. Information obtained is used to prepare annual financial statements and notes in the Public Accounts of Canada, for disclosure by the Government of Canada and Crown corporations. In accordance with Section 63 of the Financial Administration Act and Section 64 of the Financial Administration Act, the Receiver General of Canada requests financial information on a quarterly basis from all the Crown corporations. The reporting entity of the Government of Canada includes all the government organizations that comprise the legal entity of the Government, as well as other government organizations, including Crown corporations, which are separate legal entities but are government controlled (Box 3).

### **Box 3. Crown Corporations Reporting and Consolidation**

For financial reporting purposes, control is defined as the power to govern the financial and operating policies of an organization, with the expected benefits from the organization's activities or the risk of liability being assumed by the government. Consolidated Crown corporations and other entities are those that rely on Government of Canada funding as their principal source of revenue. Consolidation involves the combination of the accounts of these Crown corporations and other entities on a line-by-line accounting and elimination of interorganizational balances and transactions. Before these balances and transactions can be eliminated, the consolidated Crown corporations and other entities' accounts must be adjusted with the Government's accounts. Therefore, a detailed breakdown of assets, liabilities, revenues, and expenses, along with notes on accounting policy changes, are required to facilitate the conversion of the consolidated Crown corporations and other entities' account balances and transactions to the Government's accounting basis. Summaries of the financial position of Crown corporations and other government business enterprises are also included in a note to the consolidated financial statements of the Government of Canada. Additional summary information is presented for all consolidated Crown corporations and other entities, as well as enterprise Crown corporations and other government business enterprises in the Public Accounts of Canada. The Crown corporations generally follow either Canadian Public Sector Accounting Standards or International Financial Reporting Standards for accounting and reporting purposes.<sup>18</sup>

## **8. CREDIT POLICIES AND RISK ALLOCATION**

Specifically, CIB will invest in infrastructure projects that have revenue-generating potential and are in the public interest. It will also serve as a center of expertise on infrastructure projects in which the private sector or institutional investors are making a significant investment. It will foster evidence-based decision making, advise all levels of government on the design of revenue-generating projects, and analyze data to help governments make better decisions about infrastructure investments. As P3 Canada is being disbanded, CIB will also play a major role as a champion and facilitator of PPPs across Canada, for which it is envisaged that it will have an advisory and research wing. It is likely that the credit policies and risk allocation will be based on the above-mentioned principles.

The P3 Canada Fund was never rated by a rating agency because it was a Crown corporation and was regarded as AAA rated, like the Government of Canada. CIB is structured as an arm's-length Crown corporation as well, so it is likely that it will also have AAA rating, considering that all the guarantees it

<sup>55</sup> <https://www.tpsgc-pwgsc.gc.ca/recgen/manuels-manuals/chap18/02-eng.html> (accessed February 5, 2018).

issues will be sanctioned by Finance Canada.

## 9. PORTFOLIO ANALYSIS

As discussed, initially the portfolio of CIB will be concentrated on public transit, transportation/trade, and green projects. However, it is likely that over time other sectors will also take a portion of the portfolio. Social housing is one area that has been highlighted as a strong potential candidate for CIB's support. The P3 Canada Fund provides a reference case for portfolio analysis. It concentrated mainly on public transit (8 projects, 32 percent); road infrastructure (6 projects, 24 percent); and wastewater treatment (6 projects, 24 percent).<sup>56</sup>

## 10. KEY CHALLENGES AHEAD

It is evident from the previous discussion that the first challenge is to make CIB fully operational as soon as possible, as P3 Canada along with its support fund have been disbanded. The next major challenge will be to hire the best candidates and develop the guidelines/rules for the institution, and implement the first few transactions successfully. It is vital that the first few projects that CIB undertakes are successfully concluded to develop confidence in CIB's institutional status. A huge task for CIB is to exceed the success of second wave of PPPs in Canada and the work of P3 Canada. This requires not only establishing CIB but a leap of faith from both the public sector and the private sector, as well as investing in projects that will have certain amount of demand risk for the private party. This will be a major challenge considering that recently a major toll bridge project on the St. Lawrence River (Quebec) initially transferred the toll risk to the private party but gradually transferred the toll risk to the government—and eventually the toll was completely abolished at public demand. It is exciting to follow how CIB will usher in a new wave of infrastructure with an eye on revenue-generating projects. The evolution of private investment in infrastructure, PPPs, and public infrastructure funds in Canada is an extremely interesting story for the rest of the world to follow and learn from.

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<sup>56</sup> <http://www.p3canada.ca/en/about-p3s/project-map/?page=3as> (accessed January 4, 2018).





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This case study was developed between October 15, 2017, and March 31, 2018. It draws on meeting with Finance Canada, Infrastructure Canada, the CIB Transition Office, and PPP Canada in early November, 2017, as well as a meeting with KPMG's Infrastructure Advisory team in Toronto and a conference call with the concerned partner at Deloitte Canada. The stakeholders were again consulted for updates on the Canada Infrastructure Bank in February 2018. The case was written by Mujtaba Shaneel, Consultant to the World Bank, under the supervision of Ellis J. Juan, Coordinator of the Global Review of Public Infrastructure Funds.

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# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT (August 9, 2018)

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## **Colombia Case Study**

## **Financiera de Desarrollo Nacional (FDN)**

## EXECUTIVE SUMMARY

Colombia's national development bank, *Financiera de Desarrollo Nacional (FDN)*, is a full-fledged financial institution with capacities to lend, invest, and take deposits from the public. Today it acts as a specialized financial institution with a range of lending, advising, and investing activities that places it somewhere between a strategic investment fund and a development bank (focusing on infrastructure). FDN is incorporated as a full commercial bank and is supervised by the competent regulatory authorities in Colombia (*Superintendencia Financiera de Colombia, SFC*). It was created in 2011 through the conversion of another financial institution, the *Financiera Energética Nacional (FEN)*, that had promoted the development of energy infrastructure since the 1980s.<sup>57</sup> By 2015, FDN had become a mixed state-owned financial institution with ownership distributed between the Ministry of Finance (MOF), with 66 percent of the shareholdings, and three international financial institutions (IFIs)—the International Finance Corporation (IFC), the Development Bank of Latin America (CAF), and Sumitomo Bank—with 34 percent of the shareholdings.<sup>58</sup> It is a decentralized institution, with financial autonomy, and with a profitability target established by the IFIs ownership of 10 percent to 12 percent return on equity (ROE). The Shareholders' Agreement and Bylaws provide the institution with robust corporate governance.

FDN operations were first funded using the liquid assets on the FEN balance sheet. Later, the Government of Colombia (GOC) decided to further fund FDN by using the proceeds of the privatization of ISAGEN (the state-owned energy enterprise for power generation). A total of Col\$5.8 billion (equivalent to US\$2 billion today) was invested in FDN through debt and equity (Col\$5.1 billion in senior and subordinated bonds and Col\$0.7 billion in equity).<sup>59</sup>

FDN is a relatively young institution; the first loan was signed in 2015. Since then, it has played a pivotal role in the development of the fourth generation of the national road programs in Colombia (the 4G Program). FDN has a strong governance model promoted by the ownership of IFIs in the entity. Operational assets (loans) as of December 31, 2017, amounted to approximately Col\$467 billion, equivalent to approximately US\$162 million.<sup>60</sup> In addition to the loan-related assets, FDN has approximately Col\$784 billion in credit enhancements (unutilized liquidity lines), and Col\$1,000 billion in undisbursed loans (both equivalent to US\$622 million).<sup>61</sup> Despite the relatively limited number of approved transactions (18 as of December 31, 2017), FDN is already having an impact on Colombia's infrastructure finance, considering the leverage ratio of its credit enhancements.

By the end of 2018, FDN will be committing financing to seven additional toll road projects in the 4G concession program, increasing the average size of each operation from US\$57 million to US\$134 million. Throughout 2018, FDN will also be increasing its role as a financial advisor. It currently is supporting nine different infrastructure projects with a total investment amount of US\$8.1 billion, including the subway system for Bogotá.

FDN is a highly innovative institution in the field of risk mitigation for the infrastructure sector. It has a very robust senior management team with strong experience in local and global financial markets. The institution also plays a leading role in the development of financial markets for funding infrastructure in Colombia. FDN has acted to improve its risk profile and local and international investors' understanding of Colombia's infrastructure assets. It has also provided credit enhancements to three bond issues to assist placement of Colombia infrastructure bonds in the international capital markets. It is both deepening local financial markets and broadening the investor base outside Colombia. FDN plays a catalytic role supporting infrastructure development in Colombia with sound risk management criteria and strong corporate governance.

<sup>57</sup> Colombia had an energy crisis in the 1980s that prompted the creation of FEN as the government-owned financial institution to support generation and transmission investments.

<sup>58</sup> The ownership also includes other minority shareholders (less than 1 percent). A new capitalization of the institution was completed on January 2018, changing the shareholding structure. The government increased its participation to 73 percent, reducing IFIs' participation to 26.4 percent.

<sup>59</sup> One billion in Colombia is equivalent (idiomatically) to one trillion in the United States.

<sup>60</sup> Audited preliminary figures from the FDN's Vice President of Planning, calculated at the exchange rate of Col\$2,868 per U.S. dollar.

<sup>61</sup> FDN's Vice President of Strategic Development estimates that the leverage ratio of the unutilized liquidity lines is 4 or more.



## 1. COUNTRY INFORMATION

### Brief Description of Colombia

Colombia is a presidential republic. Every four years, the 32 departments and capital district hold elections for president, state's governors, municipal mayors, senators, and representatives. Colombia has a population of 47.6 million, with 77 percent living in urban areas, and almost half of the total population living in six cities (Bogotá, 9.7 million; Medellín, 3.9 million; Cali, 2.6 million; Barranquilla, 1.9 million; Bucaramanga, 1.2 million; and Cartagena, 1.1 million). By 2030 around 10 million more people are expected to join this urban population, challenging the government's capacities to provide public services and infrastructure.

The Colombian economy is the fourth largest in Latin America, with a GDP of US\$285.5 billion as of 2016. Colombia's open policy on free trade, with more than 15 trade agreements, gives it access to developed markets in North America, Europe, and Asia. Its fiscal policy is defined in a fiscal medium-term framework, keeping public finance sound with macroeconomic projections. As the second largest exporter of coffee and flowers and the fourth largest exporter of coal in the world, and as the fourth largest oil producer in Latin America, Colombia is highly sensitive to changes in commodity prices. Since 2016 the economy has slowed down, mainly because of the fall in oil prices, a depreciation in the currency, and an increase in inflation (which peaked at 9 percent in July 2016). Colombia has maintained a steady growth rate of 4.7 percent for the past decade.<sup>62</sup>

Oil revenues are a major source of the government's income and the country's foreign currency supply. The fall in oil prices has seriously constrained the government's budget: Current (2017) receipts are five times lower than the level in 2014 (US\$6 billion). This has generated fiscal stress that led to tax reform in December 2016, reducing corporate taxes to encourage investment, and increasing the value added tax (VAT) rate.

According to the International Monetary Fund (IMF),<sup>63</sup> Colombia enjoys a favorable outlook supported by the Peace Agreement, the tax reform, and the infrastructure agenda of the authorities. In the medium term, potential growth will be driven by the following factors:

- **The Peace Agreement.**<sup>64</sup> This will support growth by improving security and reducing infrastructure and social gaps in the regions most affected by the conflict. The agreement is expected to improve medium-term growth by up to 0.5 percentage points of GDP.
- **The 4G Infrastructure Agenda.** The reduction in the highway infrastructure gap will boost private investment by giving new exporters access to markets. Also, the Post-4G Program announced last year by the president aims to connect the whole country to reduce transportation costs.
- **The Reduction of Tariff and Non-Tariff Barriers.** The government can boost trade through the reduction of tariffs and the improvement of commercial procedures. Although Colombia has 15 commercial agreements in force (bilateral and multilateral),<sup>65</sup> the weight of its trade volume to GDP has not change significantly since the 1990s, remaining around 30 percent of GDP.<sup>66</sup>

62 International Monetary Fund (IMF), World Economic Outlook database, 2017.

63 IMF, Country Report 17/138: 2017 Article IV Colombia.

64 The Colombian Peace Process refers to the peace process between the Colombian government of President Juan Manuel Santos and the Revolutionary Armed Forces of Colombia (FARC-EP) to bring an end to the conflict in Colombia. The Peace Agreement was successfully signed on January 19, 2016, with the announcement of a trilateral mechanism comprised of the Government of Colombia, FARC, and the United Nations, for the verification and monitoring of a final ceasefire, cessation of hostilities, and surrender of weapons.

65 See <http://www.tlc.gov.co/>.

66 By contrast, in the 10 years after Mexico and Honduras signed a trade agreement with the United States, their trade volume increased dramatically from 30 percent of GDP in the mid-1990s to 80 percent of GDP in the mid-2000s.

## Demand for Infrastructure Investment

Infrastructure gaps remain large in Colombia, constraining productivity growth and contributing to wide regional disparities. The World Bank estimates that some US\$40 billion in infrastructure investment is needed across the country over the next ten years just to keep pace with the average GDP growth and social indicators. Infrastructure investment in Colombia has traditionally been supported by the public sector, whose financing has averaged 4.3 percent of GDP for the past eight years, while private sector financing has averaged 2.7 percent of GDP (Figure 1).<sup>67</sup> However, traditional sources cannot meet the financing needs for new projects, raising the need for public-private partnerships and innovative financial instruments that help mobilize private capital for public infrastructure.

In 2017, the World Economic Forum<sup>68</sup> ranked Colombia 109 out of 137 countries for the overall quality of infrastructure, below other Latin American countries such as Chile (35), Panama (38), Ecuador (49), and Mexico (71). The lack of proper infrastructure has also damaged economic activity, according to the World Bank Enterprise Survey.<sup>69</sup> Some 26 percent of the firms in Colombia identified transport infrastructure as a major source of extra costs—above the average for Latin America (22.3 percent) and developing countries (19.1 percent).

In order to speed up investment levels, the government commissioned an independent Infrastructure Commission in 2011 to analyze the current state of infrastructure in the country and the main bottlenecks in the development of infrastructure projects. (see Box 1). Additional actions have been taken by the government to speed up investment in recent years. Notably, a Vice-Ministry of Infrastructure (Decrees 087-088 of 2011), a National Infrastructure Agency-ANI (Decree 4165 of November 2011), and a National Development Bank (Financiera de Desarrollo Nacional, FDN) have been created. A new Public-Private Partnerships Law was passed to make regulation friendlier for private investment in infrastructure projects, and to better distribute risks between the public and private sector. A new Infrastructure Law (Law 1682 of 2013), to remove bottlenecks created by the expropriation of land for infrastructure projects, and a new regulation on environment licensing (Decree 2041 of 2014) were also approved.

### Box 1. The Infrastructure Commission and the CONPES Recommendations

With the advent of a new government in 2011–14, infrastructure development became a key public policy to promote growth and competitiveness. The new government created a Presidential Commission in 2011 to analyze the challenges of infrastructure development. The Commission, assisted by the Inter-American Development Bank, delivered its final report to the President in October 2012.<sup>a</sup> This report, together with the approval of the public sector budget allocation to the road infrastructure sector (CONPES 3760) in August 2013, were the key public policy actions that created the 4G Program (the fourth generation of road infrastructure). The CONPES document also identified the main bottlenecks in the development of infrastructure projects. The Commission analyzed processes, guidelines, and regulations of the different institutions involved in the projects cycle and made several recommendations to make the development of infrastructure projects more efficient.

<sup>67</sup> Infralataam Database.

<sup>68</sup> World Economic Forum, Global Competitiveness Index 2017–2018.

<sup>69</sup> World Bank, Enterprise Surveys, Colombia 2010.

### Map B1.1 Current and Planned Road Concessions

The recommendations in the CONPES document focused mainly on:

Changing the institutional arrangement to speed up the development of infrastructure projects.

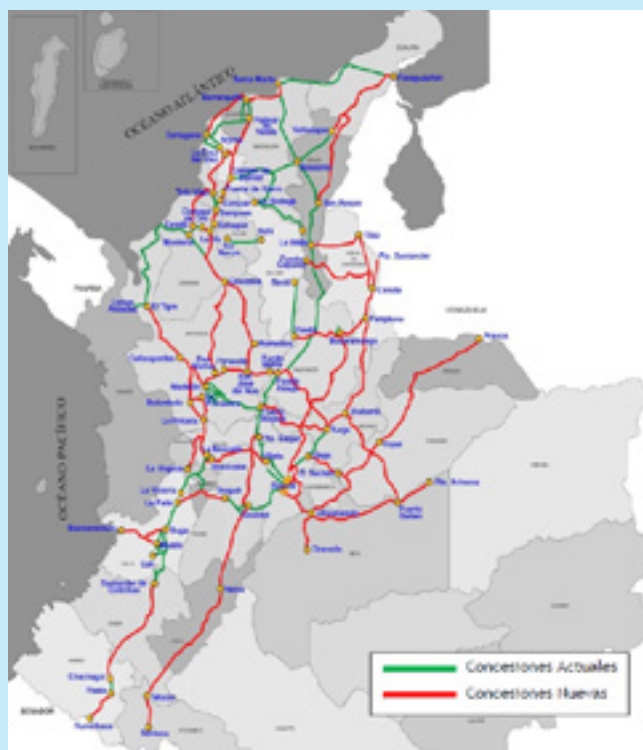
Setting the risk policy guidelines in the 4G Program between private and public sector.

Using the resources from the sale of ISAGEN (the state-owned enterprise for power generation) to support the 4G Program.

Instructing FDN to support the 4G Program with financing instruments or guarantees.

Promoting competitive bids in the procurement of 4G projects.

The National Planning Department (DNP) has followed through on these recommendations.



The document also harmonizes the processes from the different departments involved in the development of 4G projects: the National Planning Department (DNP), the Ministry of Finance (MoF), the Ministry of Transport, the Ministry of Environment and Sustainable Development, the National Infrastructure Agency (ANI), the Ministry of Interior, and the National Authority of Environmental Licenses.

Source: CONPES, Consejo Nacional de Política Económica y Social (National Advisory Board of Social and Economic Policies).

a. Comisión de Infraestructura, Informe Presidencial, October 15, 2012.

## The 4G Program

The Fourth Generation (4G) program envisions a US\$16 billion investment to build over 4,400 miles of new roads, 88 miles of tunnels, and 94 miles of bridges before the end of the decade. The program involves concessions for over 20 highways and roads. In the past few years, the project's first two phases granted 19 of the 31 concessions. The 4G Program is expected to reduce transport costs by 28 percent, increase GDP by 1.5 percent per year once completed (and by as much as 3.0 percent during construction), and generate significant benefits for improved trade, job creation, and business growth. However, there have been issues with financing the third and fourth phases of project, due in part to lower global oil prices and dwindling government revenue, as well as implementation challenges.



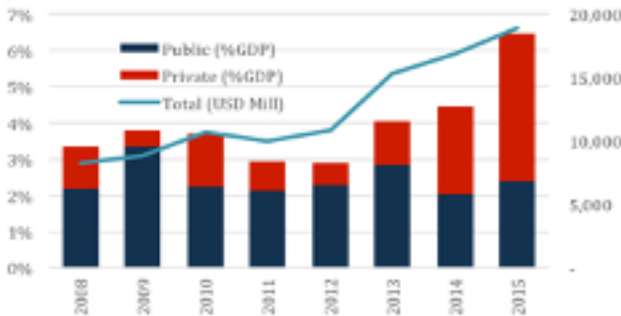
In addition to the financing issues, the 4G Program has been experiencing a very difficult project cycle, from project preparation to technical completion. In a recent report, Standard & Poor’s evaluated the progress of the 4G Program and concluded that the following factors were impediments: complex technical design requiring tunnels, viaducts, bridges, and the like, given Colombia’s geography and topography; concentration among a few contractors/concessionaires and the relatively limited experience of local companies; the vulnerability of the technical execution of projects to climate change because of extremes in the rainy season and flooding; and barriers in the regulatory framework governing the execution of 4G projects, which the report recommended should be corrected to mitigate delays and the risk of cost over-runs. The report also noted that sector diversification would help mitigate this risk.

In November 2016, the government announced the preparation of a new Master Plan for Intermodal Transport (the Post-4G Program), which consists of a 20-year transportation infrastructure development strategy that will integrate the whole country, reducing transport costs and thus increasing the competitiveness of firms. This plan initially considers 65 projects with an approximate value of Col\$50 billion (around US\$17 billion), translating into more than 20,000 kilometers of road networks, 31 interventions in airports, investments in five rivers, and almost 1,800 kilometers of railway network. In addition to the projects considered in this new post-4G Program, an important part of the second and third wave of the existing 4G Program still lacks around Col\$30 billion (around US\$10.2 billion) in funding. As the third and the fourth wave of projects from the 4G Program are procured, the expertise that Colombia has gained in terms of institutional strengthening, technical capacity, modernization of the legal framework, and recognition from the international financial markets is worth highlighting, since it will be relevant in implementing the Post-4G Program and forging the nation’s development path.

Financial Markets

Infrastructure financing needs in Colombia are met mainly by commercial banks and non-bank finance companies (corporaciones financieras). However, the increase in sector-concentration risk in the banking system and emerging regulatory constraints from Basel III will restrict banks’ ability to fully finance the 4G Program. Therefore, the success of the road infrastructure (4G) and the Intermodal Transport Program (post-4G) hinges on mobilizing institutional investors, especially local pension funds, which not only have the capacity to invest in local currency but also benefit from the long tenors and inflation indexation inherent in toll-road assets, and can tap both local and international capital markets. Total assets from the financial institutions have increased in Colombia, reaching Col\$1.556 billion (US\$518 billion) in November 2017. Banking institutions are the main holders of these assets (39 percent), followed by fiduciary institutions (31 percent), pension funds (16 percent), insurance institutions (4.6 percent), special government institutions (4.4 percent), and others (5 percent).

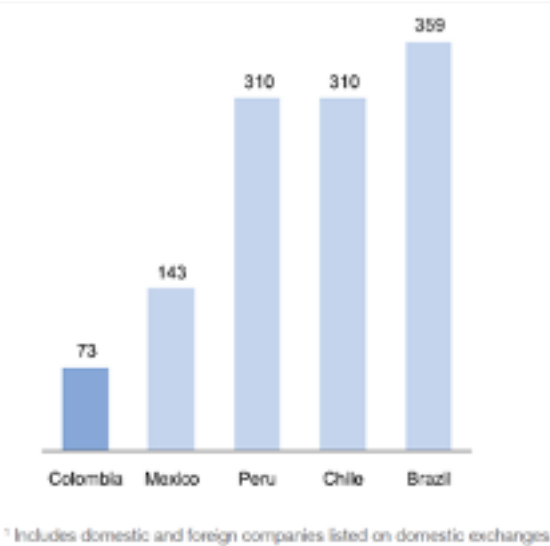
Figure 1. Investment in Economic Infrastructure



Source: Standard and Poor’s, 2017.

Activity in government debt and equity markets dominates Colombia’s capital markets, with the corporate bond market trailing behind. The government bond market has flourished since its development in the 1990s and is widely perceived to be a well-functioning and liquid market. In contrast, several major obstacles impede the further development and growth of Colombia’s corporate bond market and equity market. Although issuances have risen in recent years, the corporate bond market remains underdeveloped, has low liquidity, and is dominated by financial sector issues.

**Figure 2. Number of Companies Listed in Latin American and Caribbean Exchanges**



Source: Federacion Inter-Americana de Bolsas, FIAR, 2014

Overall, the total number of listed companies in Colombia remains significantly lower than regional peers (Figure 2). Only 73 companies are listed on Colombia’s stock exchange. They have a total value of US\$153 billion, compared to 143 in Mexico (US\$481 billion) and 310 in Chile (US\$233 billion). The concentration of ownership in Colombia is quite high. A majority of Colombian companies are controlled either by a single person or a group of persons and family businesses. Gaps in corporate governance and transparency increase the costs of capital market financing and have discouraged some investors from using the capital market. Colombian investors tend to suffer from what is known as the “AAA Bias,” whereby investors are reluctant to buy securities with less than an AAA rating, hindering access to smaller and riskier businesses.<sup>70</sup> Promoting issuer education, addressing the burden and cost of issuance versus bank funding, and improving corporate governance are key challenges for the development of Colombia’s capital markets.

Pensions funds would also play a major role in financing infrastructure programs. In 2014, the government modified the investment regime for the pension funds, allowing them to increase their participation in the 4G Program. With this reform, in 2015 SUAM–Credicorp structured the first debt fund to promote infrastructure projects with a financial closure of Col\$1.39 billion (US\$463 million). In addition, the Development Bank of Latin America (CAF) joined Ashmore Group and structured a second debt fund with a financial closure of Col\$1.4 billion (US\$466 million). Those funds facilitated the first investment in infrastructure projects by Colombian pension funds. Black Rock has also participated actively in a debt fund with a financial closure of Col\$0.840 billion (approximately US\$300 million). FDN led the fundraising efforts, not only participating as investor in the three funds but establishing standards and best practices for this new asset class.

Regional integration is also starting to play a role in the development of local capital markets. In this

<sup>70</sup> OECD, 2016, *Colombia: Review of the Financial System*.

regard, not only Colombian pension funds can invest in infrastructure projects, but through the Pacific Alliance (which includes Mexico, Peru, Chile, and Colombia), pension funds from Mexico can invest up to 20 percent of their resources in the 4G Program tax free.

FDN will also play a leading role in financing infrastructure. As discussed in the sections that follow, its participation has been key for the success in financial closures for 4G projects through the use of international markets (see Box 5). FDN's status and banking license allows them to fund themselves under a broader definition of funding source. FDN would be key in the mobilization of private capital both from local as well as international investors, through funded and unfunded products.<sup>71</sup>

By global standards, local financial markets in Colombia are underdeveloped. Compared to its larger neighbors, the Colombian equity market amounts to 4 percent of the Brazilian market, 22 percent of the Mexico market, and 57 percent of the Chilean market.<sup>72</sup> This represents an extraordinary opportunity for an institution like FDN to play a significant role in the development of local financial markets.

## Economic Outlook

While the growth rate decelerated considerably in the last three years, closing 2017 with a growth rate of 1.7 percent (below the 4.1 percent ten-year average growth rate), the IMF forecast shows a modest recovery in the economic activity in the next three years, although not reaching the past levels of average growth. Likewise, since 2013 the gross debt of the general government has increased considerably from 37.8 percent of GDP in 2013 to 50.6 percent of GDP just two years later in 2015 (see Table 1).

**Table 1. Key Macroeconomic Indicators, 2010–20**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
GDP real growth (%)	4.0	6.6	4.0	4.9	4.4	3.1	2.0	1.7	2.8	3.6	3.7
Inflation (%)	2.3	3.4	3.2	2.0	2.9	5.0	7.5	4.3	3.3	3.0	3.0
Unemployment rate (%)	11.8	10.8	10.4	9.7	9.1	8.9	9.2	9.3	9.2	9.1	9.0
General government deficit (% of GDP)	-3.3	-2.0	0.1	-0.9	-1.8	-3.4	-3.0	-3.2	-2.8	-1.9	-1.0
General government net debt (% of GDP)	28.4	27.1	24.9	27.0	33.2	42.2	40.5	40.5	41.1	40.6	39.3
General government gross	36.4	35.7	34.1	37.8	43.7	50.6	50.2	48.5	48.6	47.5	45.5
Current account balance (% of GDP)	-3.0	-2.9	-3.1	-3.3	-5.2	-6.4	-4.3	-3.8	-3.6	-3.5	-3.3

Source: IMF World Economic Outlook, October 2017. The shaded cells represent IMF's estimations.

In general terms, the IMF's forecasts point toward a normalization in average levels of macroeconomic indicators: a decent decrease in unemployment and the inflation rate (which peaked in 2016 due to the depreciation of the exchange rate); a government deficit of around 1 percent of GDP; and debt levels gradually adjusting down. Factors that could lower these prospects are related to the performance of the tax reform, the uncertainty in the price of the commodities, and exchange rate variations.

## Country Credit Rating

<sup>71</sup> Funded products are those financial operations that require a cash disbursement to the contracting entity (loans). Unfunded products are those financial operations that do not require an upfront cash disbursement (liquidity lines, guarantees).

<sup>72</sup> Federación Inter-Americana de Bolsas, FIAS, 2013.

The sovereign long-term rating is in the range of BBB stable (FitchRatings) to BBB- stable (S&P). The combination of weaker-than-expected growth in 2017 and the partial reliance on extraordinary income to compensate for the poor performance of the 2016 tax reform, as well as lower commodity prices, led S&P to downgrade Colombia’s rating in December 2017 one notch down to BBB- with a stable perspective. Factors that could lead to a negative or positive rating change are summarized in Box 2.

**Box 2. Colombia’s Credit Rating Outlook**

Factors that could lead to <b>negative</b> rating change	Factors that could lead to <b>positive</b> rating change
<p>If there are signs of deterioration in Colombia’s access to external market financing, even as the country’s narrow net external debt burden is expected to slowly decline from high levels.</p> <p>If the fiscal deficit fails to sufficiently decline and net general government debt to GDP rises more than expected, which could reflect, among other things, higher spending associated with implementation of the peace accords or further underperformance of the tax reform.</p> <p>If an unforeseen reversal in the peace process could also weaken growth prospects and exacerbate Colombia’s weakened external profile.</p> <p>Persistent period of low economic growth that undermines fiscal performance.</p>	<p>If the narrow net external debt burden declines more markedly than expected, falling below 100 percent of current account receipts (CAR).</p> <p>If the fiscal deficit declines and the net general government debt and interest burdens improve more quickly than expected, with a possible rise in the country’s trend growth.</p> <p>Fiscal consolidation that results in a significant reduction of the public debt burden.</p> <p>Higher growth prospects that supports improved debt dynamics and improves Colombia’s income gap.</p>
<p>Reemergence of large external imbalances that lead to continued increase in the external debt burden.</p> <p>Failure to reduce the fiscal deficit and stabilize the government’s debt burden.</p>	

Source: Standard and Poor’s, 2017.

The BBB stable rating from Fitch Ratings reflects Colombia’s long track record of credible, flexible, and consistent macroeconomic policies as well as a record of macroeconomic and financial stability. Colombia’s ratings are constrained by high dependence on commodity revenues, limited fiscal flexibility, and structural constraints in terms of low GDP per capita and weak governance indicators compared to peers. Colombia’s economy has adjusted to the sharp fall in oil prices and terms of trade have started to improve. After widening to 6.4 percent of GDP in 2015, the current account deficit fell to 4.3 percent in 2016. It is expected to fall further to 3.8 percent of GDP in 2017, largely due to a pick-up in exports driven in part by higher average oil prices as well as solid performance of nontraditional exports. Inflation fell to within the central bank’s 3+/-1 percent target in 2017, after rising to nearly 9 percent in July 2016, partly as a result of the sharp depreciation of the peso. Year-end inflation is expected to continue to fall to 3.6 percent in 2018. However, the economic adjustment has entailed an extended sharp slow-down in growth. Colombia’s economy is expected to grow by just 1.9 percent in 2017 after growing by 2 percent in 2016. Fitch forecasts an acceleration in growth in 2018 to 2.8 percent as public infrastructure spending picks up and domestic demand improves due to cuts in interest rates.

## Climate Change Strategy

Climate change is placing new demands on Colombia's infrastructure. According to the National Planning Department, between 2006 and 2014 there were 21,594 emergencies in the country generated by natural disasters, affecting one-quarter of Colombia's population (12.3 million people). To meet the challenge of natural disasters and climate change, the country has developed a National Policy on Climate Change (NPCC) that aims to implement an agenda focused on lowering carbon emissions and reducing the risks associated with the effects of climate change.

To reach this goal, the NPCC aims to change the incentives in the market to influence public and private actors to integrate steps to adapt to or mitigate the effects of greenhouse gases. Decree 298 of 2016 establishes the National System of Climate Change (SISCLIMA).<sup>73</sup> It aims to:

- Coordinate the commitments and efforts of national, regional, local, and international actors to mitigate and adapt to climate change.
- Integrate climate change plans and strategies with efforts to promote economic, social, and environmental development, taking into account the priorities to achieve sustained economic growth, eradicate poverty, and promote the sustainability of natural resources.
- Coordinate public and private initiatives in the various economic sectors and civil society.
- Identify and take advantage of opportunities and mechanisms to better adapt to climate change and reduce greenhouse gas emissions.
- Help reduce the vulnerability of the population most affected by the effects of climate change in Colombia.
- Encourage citizen participation to deal with the phenomena of climate change.
- Promote GHG adaptation and mitigation measures.
- Harmonize criteria and mechanisms for the evaluation and monitoring of commitments and duties in matters of adaptation and mitigation.

The SISCLIMA's framework also takes into consideration the following norms:

- The National Plan of Adaptation to Climate Change (PNACC)
- The Colombian Low Carbon Development Strategy (ECDBC)
- The National Strategy for the Reduction of Emissions due to Deforestation and Forest Degradation of Colombia (ENREDD+)
- The Strategy for Financial Protection against Disasters.

In addition, the government has taken various actions to diversify its power generation matrix away from its current mix of 63.9 percent for hydraulic energy, 26.3 percent for natural gas, 4.8 percent for coal, and 5 percent from other sources.<sup>74</sup> These actions are reflected in Law 1715 (2014), which authorized the integration of unconventional renewable energy (wind, solar, and biomass) into the national energy system. The Ministry of Mines and Energy announced the first renewable-energy auction would take place between the second semester of 2018 and the first semester of 2019. Law 1715 is expected to lead to the generation of 3,000 MW of additional electricity through unconventional schemes of renewable energy within 10 years.

<sup>73</sup> See [www.cambioclimatico.gov.co](http://www.cambioclimatico.gov.co).

<sup>74</sup> Unidad de Planeación Minero-Energética, 2015. Plan Energético Nacional Colombia: Ideario Energético 2050.

## 2. DESCRIPTION OF FDN

### Origins of FDN (Infrastructure Program, 2011–18)

During the 1980s and 1990s, Colombia experienced a serious shortage of energy resources, which was impairing the country's growth and competitiveness. In response to this crisis, the Government of Colombia created a 100 percent state-owned development bank to fund and support development of the energy generation and transmission infrastructure. The Financiera Eléctrica Nacional (FEN) was launched in 1982 under the oversight of the Ministry of Mines and Energy. FEN had a broad mandate within the energy sector and enjoyed a wide-ranging banking license that allowed it to perform as a full-fledged bank. FEN played a catalytic role promoting investments in the energy sector. By the 2000s, FEN had already fulfilled its mandate and began to "shrink" as a state-owned financial institution.

Colombia in 2011 had a large infrastructure gap that was impairing the country's connectivity, growth and competitiveness. The adverse effects of climate change, in the form of recent flooding, had made the situation worse. The new government created a Presidential Commission in 2011 to analyze the challenges of infrastructure development. The Commission, assisted by the Inter-American Development Bank, delivered its final report to the President on October 2012.<sup>75</sup> This report, together with the approval of the CONPES No. 3760 (public sector budget allocation to the road infrastructure sector) in August 13, 2013, were the key public policy actions that created the 4G Program (the fourth generation of road development in Colombia), and the National Agency for Infrastructure (Agencia Nacional de Infraestructura, ANI).<sup>76</sup> This institution, under the Ministry of Transport, is responsible for the development of concessions via public-private partnerships (PPPs) for transport infrastructure in Colombia.

As part of the institutional framework supporting the development of the 4G Program, the GOC included the creation of a development bank for the sector (along the lines of the creation of FEN in the 1980s). By 2011, FEN had a very limited asset portfolio and only 20 staff. The GOC decided to use FEN's structure to host a new financial institution to support the 4G Program, the Financiera de Desarrollo Nacional (FDN). Via Presidential Decree No. 4174 of November 3, 2011, FEN was converted into FDN with a very broad mandate to support national development in any strategic sector of importance for the GOC.<sup>77</sup> The initial understanding was for FDN to focus on the provision of support for the 4G national road programs and infrastructure more broadly.

The conversion of FEN into FDN allowed the institution to continue to enjoy license banking privileges (FDN's banking license is one of the broadest in Colombia's financial markets), as well as the balance sheet of the previous FEN. FDN was created as a 100 percent state-owned financial institution that could act as a full-fledged bank in Colombia. In April 2013 a Chief Executive Officer (CEO) was appointed to run FDN (Clemente del Valle, formerly of the World Bank, and former Chairman of Colombia's Securities and Exchange Commission, Super-Valores). From 2013 to 2015, the shareholding structure and corporate governance conversion of FEN into FDN took place. These changes allowed FDN to include as shareholders the Development Bank of Latin America (CAF) and the International Finance Corporation (IFC), reducing the government's stake to 73 percent. A new seasoned management team was brought in to run FDN. Senior management came directly from previous senior jobs in private financial institutions and multilateral institutions. Senior managers are relatively young, ranging between 40 and 55 years old. Operational changes also took place, information systems were upgraded, and new procurement procedures and new credit analysis and risk management systems were implemented. Recruiting of the rest of the team was also initiated. FDN has one of the best senior management teams in the domestic financial markets.

<sup>75</sup> Comisión de Infraestructura, Informe Presidencial, October 15, 2012.

<sup>76</sup> CONPES, Consejo Nacional de Política y Desarrollo Social, Dirección Nacional de Planeación.

<sup>77</sup> During 2011 and 2012, the Presidency of Colombia had special powers that allow the issuance of presidential decrees with similar legal strength than that of a Law.



## Funding Strategy

After initially using the assets in FEN's balance sheet, FEN was funded through the partial proceeds of the privatization of ISAGEN (the state-owned enterprise for power generation), sold in 2016 to Brookfield Asset Management (57.6 percent). Of the total proceeds of Col\$6.5 billion (approximately US\$2.8 billion), the GOC allocated Col\$5.8 billion to capitalize FDN (approximately US\$2.0 billion).<sup>78</sup>

Proceeds of ISAGEN's privatization were used to increase FDN's lending capacity. These resources were received through three transactions:

- **Subordinated debt bond issuance.** In 2016, FDN placed two subordinated bonds totaling Col\$2.5 billion. These bonds were all bought by the Cuenta Especial Fondes, an account managed by the MOF with the proceeds of ISAGEN's privatization. Because of the bond's subordinated status, these amounts are technically considered to be part of FDN's equity.
- **Senior debt bond issuance.** In 2017, FDN placed a senior bond in the amount of approximately Col\$2.7 billion. Cuenta Especial Fondes also bought this bond. This bond is not considered to be part of FDN's equity. It is senior to the subordinated bonds.
- **Capitalization.** In 2017, the MOF added Col\$0.86 billion (equivalent to approximately US\$400 million) in capital to FDN.

FDN's status and banking license allows it to fund itself under the broader definition of funding sources. It can issue debt in both local and international markets. FDN can also increase capital via initial public offerings (IPOs) in both local and international markets. It can incorporate another private partner through a capital increase. It can manage funds on behalf of third parties and can even accept deposits. An important feature, in terms of the funding strategy, is that because FDN is majority-owned by the GOC, it enjoys the sovereign credit rating—which for Colombia is investment grade (BBB/BBB-) at international levels by Fitch Ratings and S&P, and investment grade (AAA) at the local level by Fitch Ratings—for credit enhancement purposes.

## Financial Performance, 2014–17

FDN has financed or participated with guarantees and liquidity lines in 14 new projects since its creation in 2011. As shown in Table 2, FDN's total assets increased sharply in 2016 because of the sale of ISAGEN and the government's mandate that made FDN the beneficiary of those resources through two bond issues: one in 2016 (for Col\$2.5 trillion, or approximately US\$800 million) and one in 2017. This injection of resources gives FDN substantial liquidity and is expected to allow the expansion of its financing to support the 4G Program (as well as to support the strategy for a diversified portfolio in other sectors of the economy).

<sup>78</sup> This strategy is similar to the one used by the Government of Argentina with FFFIR (Fondo Fiduciario Federal de Infraestructura Regional) (Federal Trust Fund for Regional Infrastructure).

Table 2. FDN Balance Sheet, 2014–17, US\$ million

	2014	2015	2016	2017
<b>Assets</b>				
Cash and investments	245.21	193.03	985.11	2,174.10
Net portfolio	52.21	49.86	88.31	151.91
Other assets	31.02	21.38	22.13	27.72
<b>Total assets</b>	<b>328.45</b>	<b>264.26</b>	<b>1,095.55</b>	<b>2,353.73</b>
<b>Liabilities</b>				
Subordinated bonds	-	-	820.63	848.89
Senior debt	-	-	-	906.48
Other	4.59	10.76	32.46	39.14
<b>Total liabilities</b>	<b>4.59</b>	<b>10.76</b>	<b>853.09</b>	<b>1,794.51</b>
<b>Equity</b>				
Shareholders' equity	223	176.42	160.03	360.00
Reserves	76	37.74	33.55	45.09
Surplus/deficit	19	39.15	35.49	139.53
Results	5	0.20	13.39	14.61
<b>Total equity</b>	<b>324</b>	<b>253.51</b>	<b>242.46</b>	<b>559.22</b>
Exchange rate, Col\$/US\$ (annual average)	2,001	2,746	3,053	2,951

Source: FDN, Annual Reports; average exchange rate, Banco Republica.

FDN also has a line in its financial statements for contingent commitments (undisbursed financial operations), to complement the asset and liabilities amounts (Table 3). As is the case for other public investment funds (PIFs) in other countries, from an accounting viewpoint, these commitments are reflected outside the balance sheet as an auditor's note.

**Table 3. FDN Balance Sheet, Contingent Commitments, 2014–17, US\$ million**

	2014	2015	2016	2017
Senior debt	0.0	0.0	115.5	311.1
Bridge financing	0.0	0.0	0.0	34.6
Liquidity lines	0.0	0.0	256.9	265.7
Guarantees	0.0	0.0	0.0	96.3
Debt funds	0.0	36.4	31.7	52.7
<b>Total</b>	<b>0.0</b>	<b>36.4</b>	<b>404.1</b>	<b>760.4</b>

Source: FDN, Annual Reports, Average Exchange Rate (Banco Republica).

On the operating side (Table 4), FDN has had some challenges developing the income from loan operations, due to the slow pace of the financial and technical completion of 4G road infrastructure projects. After the capital injection, revenues from treasury operations have substantially increased, given the levels of liquidity experienced by FDN. The institution also generates operating income from the provision of advisory services and project pipeline development, which FDN offers on a cost-recovery basis.

Return on assets (ROA) has averaged 1.4 percent during the 2014–17 period, which is not far from the average of 2 percent for financial institutions in Colombia. Likewise, FDN's return on equity (ROE) was 3.1 percent in 2017, below the average of 14.4 percent that other domestic financial institutions reported in 2016, but understandable given the build up period of FDN, the very large capitalization made at the end of 2017, and its development character.

**Table 4. FDN Operating Results, 2014–17, US\$ million or percent**

	2014	2015	2016	2017
<b>Operating income</b>				
Treasury	9.73	6.90	56.45	89.92
Loans	6.39	4.99	5.50	12.42
Loans fees	-	-	11.21	13.21
Advisory services	2.17	5.33	3.37	10.45
Other	6.37	5.70	3.82	2.62
<b>Total</b>	<b>24.67</b>	<b>22.92</b>	<b>80.35</b>	<b>128.62</b>
<b>Operating costs</b>				
Staff costs	1.49	4.24	5.59	7.49

Funding cost	0.17	0.21	41.35	74.71
Other	14.98	9.31	10.50	20.30
<b>Total</b>	<b>16.64</b>	<b>13.75</b>	<b>57.45</b>	<b>102.50</b>
Operating profits	8.02	9.16	22.90	26.11
Income/expense from non-operating activities	1.13	0.86	0.44	0.27
Profits before taxes	9.15	10.03	23.34	26.38
Taxes	(3.81)	(7.14)	(7.15)	(8.88)
<b>Net profit</b>	<b>5.34</b>	<b>2.89</b>	<b>16.19</b>	<b>17.50</b>
Return on assets (ROA)	1.6%	1.1%	1.5%	0.7%
Return on equity (ROE)	1.6%	1.1%	6.7%	3.1%
Exchange rate (annual average), Col\$/US\$	2,001	2,746	3,053	2,951

Source: FDN, Annual Reports, Average Exchange Rate (Banco Republica).

Given its short history in providing both funded and unfunded financial products, the relatively long gestation period of infrastructure projects, and the relatively large initial capitalization (approximately US\$2 billion), FDN today is a very liquid institution with close to Col\$4 billion (approximately US\$1.5 billion) under treasury management. The funding strategy in the near term is not a priority for senior management. Use of the current liquidity is subject to FDN's future business strategy and depends on how FDN defines its business model. More funding products will consume more liquidity and vice versa. This is an important strategic challenge that will be dealt with later in this case study.

Treasury management is currently the biggest contributor to the ROE of FDN. In 2017, total treasury income represented 70 percent of all of FDN's operating revenues (Col\$265 billion, equivalent to about US\$90 million).

### 3. INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE

#### Incorporation of International Financial Institutions (IFIs) in FDN's Ownership Structure

Part of the government's strategy to provide FDN, within the aegis of state ownership, with financial autonomy, strong governance, and protection from political interference was to incorporate ownership from leading IFIs into the capital structure. In 2014, FDN initiated the process of incorporating IFIs in its capital structure. By year-end 2014, the MOF had a 73 percent stake, followed by IFC with 17.68 percent, and CAF with 8.84 percent. In 2015, IFC sold half of its ownership to Sumitomo-Mitsui Bank. The current ownership structure is summarized in Table 5.

**Table 5. FDN's Ownership Structure as of December 31, 2017**

Shareholder	No. of shares	Percent
Ministry of Finance and Public Credit (MOF)	7,794,391	73.37
International Finance Corporation (IFC)	944,186	8.88
Sumitomo Mitsui Banking Corporation	944,186	8.88
Development Bank of Latin America (CAF)	919,060	8.65
Minority shareholders	21,580	0.22
Shares repurchased	122	-
<b>Total</b>	<b>10,623,525</b>	<b>100%</b>

Source: FDN, Annual Report, 2017.

The incorporation of IFIs and the completion of two important governance instruments (the Bylaws and the Shareholders' Agreement) added significant value to the establishment of FDN as the prime government-owned financial entity supporting infrastructure development in Colombia, but under a private sector-type of governance. The IFIs' contribution has been significant in the areas of management information systems, risk management systems, credit analysis, procurement process, and business strategy. IFIs, particularly the World Bank and IFC, played a significant role in mentoring the transition of FDN from a start-up venture to a full-fledged financial institution as a strategic investment fund.

FDN's Bylaws and Shareholder's Agreement include important provisions that have helped strengthen FDN's governance and significantly mitigate the risks of political interference. The most significant provisions include the following:

- Appointment of CEO and senior management
- Risk allocation policies and approvals limits
- Balance sheet oversight and management
- Procurement process
- Compensation policies
- Long-term business strategy
- Capital increase provisions via Initial Public Offerings (IPOs)
- Treasury management
- Profitability objectives
- Investment and Risk Management Committees.

One of the most sensitive and transformative provisions is the agreement on the profitability objectives. The Shareholder's Agreement indicates the need for a profitability goal. Later, the Board of Directors established a medium-term target rate of return on equity of 10 percent to 12 percent. This provision does a good job balancing the "positive" debate between the development goals and the profit-making objectives of a public institution. It is because of this current provision that in the spectrum between a strategic investment fund and a development bank, the authors consider FDN to be closer to the definition of a strategic investment fund.

### **FDN's Legal Structure and Institutional Framework**

FDN opened up its capital as a financial institution when it incorporated the IFIs' ownership in 2014–15. According to the current public sector legislation in Colombia, once state ownership falls below 90 percent, the institution is no longer considered to be subject to the public sector procurement legal framework, nor are its staff considered civil servants. This change has two important impacts on FDN's governance:

- FDN can (and has) developed its private regime procurement process.
- FDN can (and has) developed its own human resource policy for hiring and compensation.

FDN is a financial institution under the oversight of the MOF. It reports periodically to the MOF's Public Accounts Unit. Despite this arrangement, MOF is not involved in, nor does it influence, the day-to-day management of the institution.

Because FDN is a financial institution, the Superintendence of Finance (SOF) supervises FDN. For securities and new products to be offered to the public, FDN adheres to the Colombian Stock Exchange regulations (AMV, Autoregulador del Mercado de Valores en Colombia). Because FDN is still considered a state-owned financial institution, it must comply with other government regulations and processes. Among the most important are Law 1712 on public transparency, which requires FDN to adhere to public information guidelines of its activities; the General Comptroller, in its audit function of public processes and functions; and the General Accounting Office (GAO), to which FDN submits the necessary reporting for fiscal consolidation purposes.

FDN is considered a decentralized institution. It is not part of the public sector budget process, nor is it dependent on budget sources for its funding. FDN is financially autonomous. Its banking license allows the institution to raise funding from financial markets under a broad definition.

### **Governance of FDN**

**Bylaws and Shareholders' Agreement.** These two company instruments provide FDN with corporate governance, similar to any other private sector entity acting as a full-fledged financial entity. The Shareholders' Assembly is the institution's highest governing body. The largest shareholder (MOF) appoints the Chairman of the Board. The Board of Directors selects the CEO. The appointment of the CEO must have the non-objection of IFC and CAF.

**Board of Directors.** The Bylaws and Shareholder's Agreement stipulate the following structure (as of December 31, 2017) for the Board:

- Three members appointed by the GOC, currently served by:
  - Paula Ximena Acosta (Deputy Minister of Finance)
  - Dimitri Zaninovich Victoria (General Director of the ANI)
  - Luis Eduardo Arango Varón (Director of Public Credit).



- Three independent members appointed by GOC with no objection from IFIs, currently served by:
  - o Alberto Gutiérrez Bernal (Chairman of the Board of Directors)<sup>79</sup>
  - o Guillermo Perry Rubio (Former Minister of Finance and Public Credit)
  - o Luisa Fernanda Lafaurie Rivera (President of Oleoducto Central, Ocesa).
- Three members appointed by IFIs, currently served by:
  - o Maria Carolina España Orlandi (CAF Representative in Colombia)
  - o Jorge Londoño Saldarriaga (IFC, ex-CEO BanColombia)
  - o Luis Fernando Perdigón Sistiva (Head of Project Finance, Sumitomo).

The Board meets once a month under normal conditions, and on-as-needed basis for special circumstances. The Board representation is individual and nontransferable. Most decisions are by qualifying quorum, although some strategic decisions need the no objection vote of the IFIs representatives.

Board Committees. Most of the relevant decisions affecting the financial performance of the institution and its future are managed via Board Committees with the active participation of Committee members.

- *Investment Committee.* As in many other financial institutions, all lending, guarantee, and investment decisions and operations must be analyzed and evaluated by the Investment Committee. This Committee meets regularly. One of the board members representing IFC or CAF must be present for deliberations to proceed. The Investment Committee presents the Board of Directors with different analyses of proposals it has evaluated for its final approval.
- *Risk Committee.* This is the highest level of authority in FDN to manage credit, liquidity, market, assets and liabilities risks; operational risks; and norms and procedures to comply with regulations from the Superintendence of Finance. This Committee meets three times a year.
- *Audit Committee.* This is the Board mechanism to oversee internal controls and the fulfillment of such controls. It also has the capacity to initiate a process to improve, streamline, or reduce internal controls and procedures. This Committee meets four times a year.
- *Governance and Compensation Committee.* This is the Board mechanism to oversee FDN's human resource policy, compensation schemes, staff development, and promotions. This Committee meets on average three times a year. In addition, it analyzes all issues pertaining to the corporate governance of the institution.

**Senior management.** In addition to the CEO, the Board of Directors appoints senior managers. In some of the more strategic appointments, such as the CEO, Chief Financial Officer (CFO), Legal Counsel, Commercial Vice President of Operations (VO), and Credit and Risk Management Vice President (VP), both IFC and CAF must submit their no objection before a candidate is selected.

For-profit mandate. The ROE target level is set at the Board level. As mentioned, the profitability goal of a ROE between 10 percent and 12 percent annually clearly strengthens the institution's corporate governance. Defining the ROE target level periodically becomes a challenging exercise when trying to meet FDN's multiple objectives as a development institution.

<sup>79</sup> Alberto Gutierrez is also the Chairman of the Tituladora Colombia (a mixed capital state-owned securitization firm).

### Box 3. Key Changes to FDN’s Governance after Adopting the New Equity Structure

The change in ownership structure prompted the need to redefine FDN’s Bylaws. These changes were aimed at increasing the entity’s independence from the Government of Colombia and strengthening FDN’s corporate governance. The key changes are summarized in the table that follows.

Topic	Before capitalization	After capitalization
Type of corporation	State-owned financial institution under the government’s procurement procedures for industrial and commercial services.	State-owned financial institution under a private regime (with the MOF holding between 50 percent and 90 percent of the corporation equity).
Labor regime	Public regime with two public employees (President and the Internal Control Chief) and the rest of the staff as official employees.	Private regime for all the staff according to the Labor Code. Official employees that are still working in FDN remain civil servants.
CEO	Designated by the President.	Designated by the Board of Directors.
Board of Directors	Established by law. Two independent members proposed by the Shareholders Assembly were included.	Composition defined by FDN’s statutes and chosen entirely by the equity holders. By 2017, greater participation from nongovernment officials was established in order to increase the institution’s independence.
Legal regime	Industrial and Commercial State regime (Law 489 from 1989).	The Commercial Code is applied in its entirety.
Human resources policy	Public employees subject to the General Disciplinary Code and to the disciplinary norms of the Office of the Attorney General.	Employees subject to internal disciplinary code, which is not subject to the Office of the Attorney General.
Fiscal control	Executed by the Government General Accounting Office (GAO).	Executed by the Government General Accounting Office (GAO).
Staff policy	Private regime applying general principles of the public service.	Not modified. Private regime applying general principles of the public service.
Internal control	Under Law 87. The Chief of the area was designated by the President.	Per the statutes, this is a responsibility of the Board of Directors. The Chief of the area is designated by the Board of Directors and reports only to them.

Board of Directors' Committees	There are three committees by statute: credit, audit, and corporate governance.	There are four committees by the new statutes: audit and risk; investment; remunerations and promotions; and corporate governance.
Remuneration	By decree and according with the policies from the Administrative Department of the Public Office.	Board of Directors define the salary policy and the variable benefit for CEO and VPs.
Organizational chart	Defined by decree according to the Administrative Department of the Public Office.	Determined by the Board of Directors up to the second line of management, and then determined by the CEO.
Accounting	Accounts are consolidated at the GAO level (because FDN is majority-owned by the government ).	Accounts are consolidated at the GAO level (because FDN is majority-owned by the government).
Oversight and control	Superintendence of Finance.	Superintendence of Finance.

Source: FDN, Legal Department, 2017.

## Procurement and Information Systems

As mentioned, FDN has developed its own procurement regime, given its decentralized legal framework. For operations with IFI funding (both reimbursable and nonreimbursable), FDN adheres to the IFI procurement rules. However, FDN believes that the Electronic Colombian Public Sector Procurement System (SECOP) has been improved in several ways and is testing its use in selected cases.

- FDN has developed its own procurement manual. Different levels of authority are assigned for the procurement of goods and services, depending on the amounts under contract (number of minimum salaries). Several levels of authority are involved from a management procurement committee (headed by the CEO) to the Board of Directors. Any contract over 4,000 minimum salaries (in 2017, this amounted to Col\$737,717, equivalent to approximately US\$1 million) needs to be approved by the Board of Directors.
- FDN inherited the management information systems of its predecessor (FEN). For the past four years, FDN has been investing heavily in modernizing its management information systems (SAP). Nearly 60 percent of FDN's information systems—including asset/liability management, treasury risk management, portfolio management, and unified accounts planning –plan unico de cuentas (PUC)—have been fully digitized.

### Staff Structure

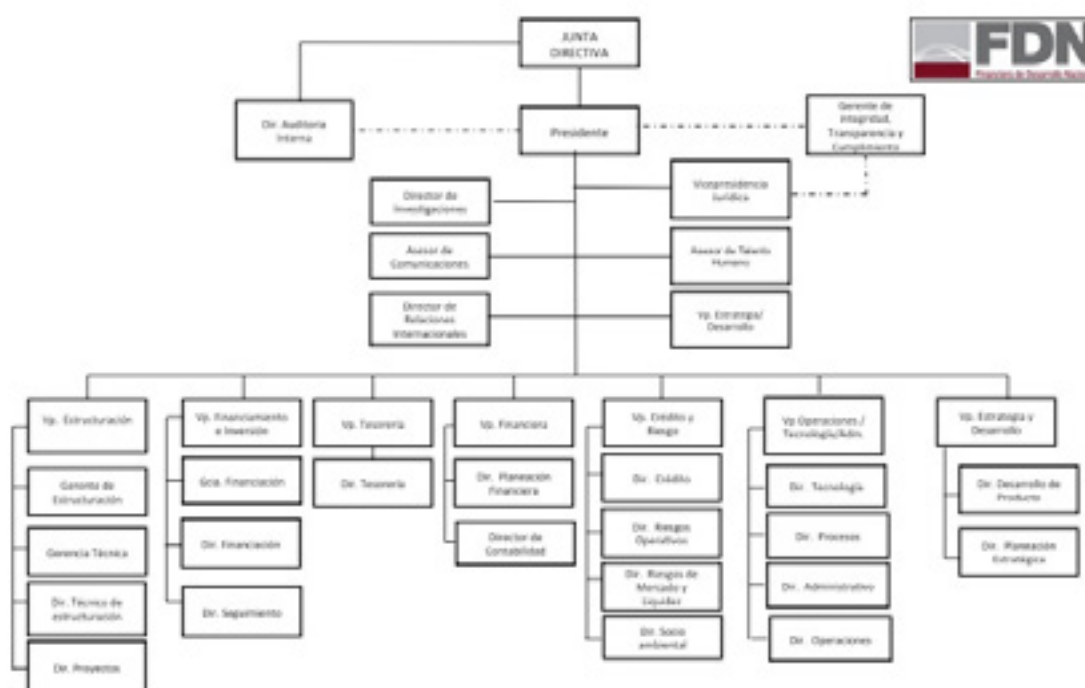
FDN had 125 staff as of December 31, 2017 (Figure 3), distributed as follows:

Chairman and CEO	06
CFO	12
VP Advisory Services	15
VP Business Origination	16
VP Treasury	06
VP Credit and Risk Management	14

VP Strategy and New Product Development	10
VP Operations, Technology and Back Office	25
Chief Legal Counsel and Secretary General	09
Others	12

In terms of number of staff, the relative ratio between staff and assets is very consistent with other cases analyzed in the region. FDN staff is relative younger than other analyzed institutions, with an average age between 25 and 50 years old.

Figure 3. FDN Staff Structure, December 31, 2017



Source: FDN, Human Resources, December 2017.

#### 4. FISCAL MANAGEMENT

- **Is FDN included under the fiscal rules, budget process, and/or debt target?**

FDN is a fully decentralized entity with financial autonomy and thus is not included under the fiscal rules and budget allocation process. However, as a full-fledged financial entity majority owned by the state, FDN has obligations to report to the General Accounting Office (GOA). At the GOA level, FDN's asset and liabilities figures are consolidated as part of the central government accounting process. The GOA reports directly to the Presidency of the Republic of Colombia.

- **Does the public sector act as the lender of last resort?**

The ratings agencies (S&P, as well as others) interpret GOC participation in FDN, at 73.4 percent, as a very strong likelihood of extraordinary government support if needed (S&P, December 5, 2017). The authors believe that under current public policy environment, the GOC is the lender of last resort to FDN.

- **Do the public sector procurement and oversight mechanisms apply to FDN?**

As described in the governance section, public sector procurement does not apply to FDN. Oversight mechanisms of the GAO and the National Comptroller do apply to FDN.

- **What is the link between FDN and the public budget process?**

There is no link between FDN and the public budget process.

- **Does FDN or its parent institutions (such as the Ministry of Finance) have a risk management policy in place for public funding exposure?**

Yes. Please refer to Section 8 on risk management.

- **Does FDN report all its fiscal information per IMF's Government Finance Statistics Manual and Fiscal Transparency Code?**

FDN does not report information to the IMF. Its figures are consolidated at the GAO level. GAO does follow IMF procedures and requirements when reporting consolidated figures.

- **Is there a contingent liability strategy or policy guideline in place?**

Yes, particularly in the case of non-funded products. The contingent liabilities strategy is described in the section on liquidity lines.

- **What are the fiscal reporting and oversight mechanisms?**

As a financial institution, FDN is regulated by the Superintendence of Finance. For securities and new products to be offered to the public, FDN adheres to the regulations of the Colombian Stock Exchange (Autoregulador del Mercado de Valores en Colombia, AMV). Despite its "mixed capital" status, FDN as a state-owned financial institution must comply with other government regulations and processes. Among the most important are Law 1712 of Public Transparency, which requires FDN to adhere to public information guidelines of its activities; the General Comptroller in its audit function of public processes and functions; and the General Accounting Office (GAO). The necessary reporting is submitted to GAO for fiscal consolidation purposes. Also, as a participant in local capital markets, FDN must adhere to the regulations of the Colombian Stock Exchange.

## 5. OFFERINGS OF FINANCIAL PRODUCTS

FDN is still at the early stages of the product development curve. FDN closed its first operation in 2015, and by December 31, 2017, had committed 11 funded operations and 7 unfunded operations.<sup>80</sup> By any standard for new PIFs, this is a very good record. Still, FDN needs to mature and further develop new financial products tailor-made to fit the needs of infrastructure investors in Colombia. Pricing of the funded and unfunded products is market based according to the financial and credit risk profile of the project.

### Funded Products

**Senior debt.** Most of FDN's commitments have been in this category and have been used to finance a portion of the 4G road Program. With disbursed loans of approximately US\$195 million, and approximately US\$350 million in undisbursed loans as of December 31, 2017, and based on eight operations,

<sup>80</sup> As of December 31, 2017, FDN had closed 7 senior debt loans (3 of them to 4G projects), 5 liquidity lines (to 4G projects), 2 guarantees (to 4G projects), 1 bridge financing, and 3 debt funds, for a total of 18 transactions.





the average exposure per project is approximately US\$68 million.<sup>81</sup> This is on the high side for a country the size of Colombia. The relatively large size is related to FDN's "development" role, the lack of a wider investor base for infrastructure in Colombia, and the institution's learning curve.

**Financial arranger role.** Conscious of the need to better use the FDN balance sheet to mobilize funding from the banking market, FDN is developing its capacities to act as co-arranger and lead arranger in syndicated bank transactions. FDN is currently considering a co-arranging role with an international financial institution for a public-private partnership (PPP) road project under the 4G Program. The IFI will take the lead role coordinating international bank participation, and FDN will take a lead role coordinating local bank participation.

**Capital market development role.** FDN performs a catalytic role using its different financial products to mitigate investors' risks and improve understanding of infrastructure development in Colombia. It can sometimes act as an anchor investor, to provide comfort to investors with relatively low knowledge of Colombia via investments in a project bond. Notably, FDN has invested US\$160 million in 144 A project bonds to finance 4G road projects.<sup>82</sup> In other cases, FDN can provide a credit enhancement to a 144 A (private placement), to improve the credit structure of the instrument and broaden the investor base for Colombia's infrastructure development. Boxes 5, 6, and 7 illustrate this important role.

#### Box 4. 4G Concessions Supported by FDN

Antioquia–Bolívar, US\$488 million financing, Ruta del Mar

The road concession between Antioquia and Bolívar covers a 300-mile long highway connecting the northwest region of the country. In December 2017, the road concession reached financial closing. It is the first public-private partnership (PPP) project within the 4G Program structured as a private initiative. Total financing was for the equivalent of US\$488 million, but was denominated in Colombian peso, structured via 26-year UVR-denominated notes.<sup>30</sup> This is one of the first 4G-related transactions to be placed in a local currency-indexed instrument in international markets (144 A). FDN played a crucial role as an anchor investor in this transaction. FDN participation in the project was instrumented via Col\$400,000 million in senior debt; Col\$246,655 million in guarantees; and Col\$45,000 million in the 144 A bond.

Cartagena–Barranquilla

This is a concession for a 146.6-KM road between two key cities in the Colombian Caribbean region. It covers 43.6 KM of new construction and 103 KM of rehabilitation. It includes 33 different bridges and a 4.7 KM viaduct over the Ciénega de la Virgen in Cartagena. Total project costs were estimated at Col\$1,709,364 million. Financing for the project was structured as follows: US dollar-denominated bonds for the equivalent of Col\$438,000 million; UVR-denominated bonds for the equivalent of Col\$427,000 million, senior debt in UVR denominated-bonds for the equivalent of Col\$135,000 million; (Colombian peso-denominated senior debt (two tranches) for Col\$550,000 million; and a liquidity line provided by FDN for the equivalent of Col\$217,500 million.

Source: Global Legal Chronicle, January 2018, and FDN Planning Department, April 2018-10-24.

Note: UVR (Unidad de Valor Real, Units of Real Value) is a non-circulating index currency that is continuously adjusted to reflect the real value of the currency. It is mostly used for issuance of public and private debt.

**Equity-related products.** Given the level of the financing gap, FDN must be active in mobilizing equity

<sup>81</sup> Based on an exchange rate of Col\$2,951 per US\$, as of December 31, 2017.

<sup>82</sup> Rule 144 is a regulation enforced by the U.S. Securities and Exchange Commission (SEC) that sets the conditions under which restricted, unregistered, and control securities can be sold or resold. Rule 144A amendment provides a safe harbor from the registration requirements of the Securities Act of 1933 for certain private resales of restricted securities to qualified institutional investors.

as well as debt. FDN's equity strategy seeks to attract institutional and strategic investors. FDN is developing two initiatives. First, investors can invest as limited partners (LPs). They can invest in local equity blind pool funds, with the purpose of supporting the closure of these funds with FDN's institutional seal. FDN expects to give equity support to projects and sponsors and to strengthen the corporate governance of local companies, among others. Second, FDN plans to create and manage a long-term co-investment platform in cooperation with an international partner, along with the Colombian pension funds (AFPs). This initiative is aligned with the long-term investment strategies of the AFPs, and will give them access to knowledge and experience. FDN's equity strategy is complemented with the development of quasi-equity products, like subordinated debt. The objective is to offer this product to sponsors of the 4G Program that need more flexibility in their capital structure to get the financial closing. The World Bank is supporting this initiative.

## Non-Funded Products

**Liquidity lines.** This is currently the most popular non-funded product in FDN's portfolio. As of December 2017, FDN had five of these types of operations with a contingent liability equivalent to Col\$784 billion (approximately US\$274 million).<sup>83</sup> It consists of an approved credit line connected to a concession contract. Use of the credit line is contingent upon some events taking place. The credit line acts as an additional cash reserve to improve the credit strength of the financing structure.

The FDN liquidity line supports events of default by the Contracting Authority (ANI). It is a product used in 4G concession contracts. The liquidity line is de facto a partial risk guarantee covering the following events of payment or delays in payment by the Contracting Authority (that is, regulatory risk): delays in the execution of the right of way; cost overruns above and beyond ANI's contract estimates, not linked to concessionaire responsibility; delays in the processing of the availability payment; and traffic differentials (less traffic than originally included in the concession as the baseline). The market has found these products extremely useful, increasing the credit rating of the transaction. Liquidity lines are subordinated in nature and can be used as a "rolling" feature.

### Box 5. Conexión Pacífico 3 4G Highway Project

In September 2014, Conexión Pacífico 3 was granted a 25-year concession with the Contracting Authority (ANI) for the construction, rehabilitation, operation, and maintenance of several roads connecting three key regions in Colombia (Valle del Cauca, Antioquia, and Eje Cafetero) with the port of Buenaventura on the Pacific Coast. This is a blend of a brownfield and greenfield project encompassing 144 KM, including a 3.4-KM tunnel, and 1.7 KM of bridges and viaducts linking the regions of Antioquia, Caldas, and Risaralda. The hybrid project finance amounts to US\$650 million, including US\$440 million for the engineering (design), procurement, and construction (EPC) portion.

The hybrid financing includes a US\$260 million tranche of 144 A bonds with an 8.25 percent yield, a US\$140 million (397 million) UVR-denominated bond, and an additional bank tranche. FDN played a crucial role in the transaction by providing credit enhancement (a liquidity line) to the Facility. The financing was structured by Goldman Sachs and was rated BBB- (investment grade) in global markets.

Source: Bonds and Loans, March 14, 2017.

**Equity guarantees.** Unlike the practice in other markets, where the equity injection usually occurs first before any additional financing, the 4G Program and the Colombian market allow for other types of options. Equity contributions could be *pari passu* with lending, and could even come at the end of the

<sup>83</sup> These liquidity lines, given their contingent character, are not reflected in FDN's balance sheet. They only show in the notes to the financial statements.

financing in some cases. This is a rather tough risk for some banks and investors; equity holders risk facing liquidity issues after committing to an equity injection. FDN's equity guarantee mitigates this risk for banks and investors by supporting (under pre-agreed conditions) the sponsor's equity component. This product has not been as widely used as the liquidity lines. Only one small transaction had occurred as of December 31, 2017.

### Pricing Non-Funded Products

FDN follows best market practice when pricing the liquidity lines and equity guarantees. The FDN Finance Group uses an adaptation of Moody's methodology for partial credit guarantees.<sup>84</sup> For a given concession project, FDN estimates the probability of a call of the liquidity line throughout the life of the project. FDN estimates the probability of loss (value) of such a call and calculates the net present value. With this number, FDN structures the pricing of the liquidity line. Under current conditions, an FDN liquidity line is priced at 350 basis points. This is almost in line with the current spread of a senior 25-year \$Col-denominated loan. Liquidity lines today are attractively priced for FDN and will help later boost the institution's ROE.

Given its broad mandate, FDN has the potential to develop a whole range of new products from straight equity investments (given that FDN can take equity risks) all the way to structured credit derivatives. To capitalize on this potential, senior management created the VP for Strategic Planning and Product Development. The new product development team is working on the development of a new string of equity- and debt-based products (partial credit guarantees, liquidity lines facilities, risk capital funds), as well as Col\$-denominated credit lines for international investors and financial institutions with interest in local infrastructure projects.

### Technical Assistance Products

FDN offers independent advisory services (not linked to a specific finance operation) to subnational agencies in Colombia (state-owned enterprises, municipalities, departments, and sector ministries). Advisory services are mostly related to financial structuring (making infrastructure projects financially viable), and with strategic transaction planning (pre-investment analysis associated with sector and project design and strategic development). Advisory services are offered on a cost-recovery basis via a blend of retainers and success fees.

The advisory services take advantage of FDN's private procurement regime in outsourcing key components (specialized knowledge, market studies, legal structuring), thus improving delivery and efficiency. Due to FDN's public sector character (that is, its majority ownership by the MOF), contracting agencies can engage FDN's advisory services directly (without the restrictive public sector procurement laws).

The advisory services department receives non-reimbursable funding from different donors and IFIs to support feasibility studies for infrastructure projects. The Public-Private Infrastructure Advisory Facility (PPIAF), the Economic Cooperation and Development Division of the Swiss State Secretariat for Economic Affairs (SECO), CAF, IDB, Export Development Canada (EDC), and Exim Bank Korea are included among the donors. FDN's advisory program is a very important source of project pipeline for the Institution. This origination activity is an important component of FDN's diversification strategy. Some samples of FDN advisory work include:

- **Electricaribe (EC).** EC is the energy utility for the northern coast of Colombia (Cartagena, Barranquilla, and Santa Marta). The utility was privatized in 1998 to Union Fenosa. During the 2012–16 period, the utility started confronting serious technical challenges and operational difficulties. In November 2016, the GOC through the Superintendence of Public Services (SSPD) intervened with EC and is currently in charge. In early 2017, the SSPD retained the services of FDN to assist it with the restructuring and eventual sale of the utility.

<sup>84</sup> Moody's rating methodology for the financial guarantee industry, 2009.

- **Bogotá Subway.** FDN was hired in 2014 by the municipality of Bogotá to coordinate the preinvestment project work as well as the financial structuring of the subway system. At that time, the only construction option under consideration was underground. In 2016, after the local elections of December 2015, the new mayor asked FDN to consider another construction option, above ground. The municipality of Bogotá has honored the 2014 contract with FDN, and FDN continues to provide the advisory services. Continuity in this case has played a significant role in cost saving and rapid response.
- **Ministry of Transport (MOT).** FDN has advised the MOT, ANI, and INVIAS (the National Roads Institute) in the development of the Inter-Modal Master Plan for 2018–22. The work has been published as one of FDN’s publications. This strategic plan for transport development in Colombia will serve as the pipeline for originating projects in the sector for FDN.

## Mobilization of Private Capital

FDN is also playing an important role in the mobilization of private capital from both local and international investors. Some examples follow.

**Credit lines in pesos to IFIs interested in taking on Colombia’s infrastructure risk.** As in many other markets, foreign exchange risk continues to be the most important restriction for IFIs to take on infrastructure project risk. In 2017, FDN promoted a modification of the Central Bank (Banco de la República) regulation for Col\$ loans to foreign financial institutions that effectively lower the financing costs. FDN is currently hosting negotiations with CAF, IDB, and ICO (Instituto de Credito Oficial, Spain), as well as other private sector banks, to provide these institutions with Col\$-denominated long-term credit lines to on-lend to local infrastructure projects (such as 4G road projects, PPPs, and renewable energy projects). If developed, these operations will achieve two important objectives: to increase the number of financial players providing long-term funding to infrastructure in Colombia, and to improve FDN’s risk profile (which will be important in the event the GOC ownership is diluted).

**Global debt funds’ access to Colombia’s capital markets.** Recent changes in tax legislation (lowering the withholding tax from 30 percent to 14 percent) and FDN’s active lobbying of the Superintendence of Finance in 2016 have allowed four global players to create debt funds in Colombia to fund infrastructure. Three funds—Black Rock (USA), Sura-CreditCorp, and CAF-Ashmore—already have local offices and operations in Colombia. FDN estimates their potential participation in the local market to be the peso equivalent of US\$1.2 billion.

**Risk Capital Fund (4G).** Together with the stock exchange (BVC) and ANI, FDN is currently developing a new capital risk instrument (Fund) to allow the retailing of infrastructure projects to local small size investors via the sale of participation in the fund. If successful, this mechanism will achieve two important objectives: to attract a new market segment of investors to 4G projects, and to mitigate the political risk of the underlying asset (4G concession) by broadening the investor universe. FDN is actively working on the adaptation of financial market regulations to launch this new product in late 2018 or early 2019.

## 6. SECTOR FOCUS

As of December 31, 2017, FDN’s asset portfolio (excluding treasury investments and advisory services) was 75 percent concentrated in the national road transport program (4G). Other assets (25 percent) included the energy sector, other transport subsectors, water and sanitation, and other areas. FDN asset portfolio should reach 45 percent in other sectors by 2022 (excluding treasury investments and advisory services). This target was established in the Shareholders Agreement and was included in the Business Plan, given the need to have a diversified sector exposure (especially for credit rating

reasons in the event that the GOC reduces its ownership). Efforts are being made to expand exposure in sectors such as energy renewables and energy efficiency, airports and ports, water and sanitation, and coastal adaptation.

### Box 6. Colombia's Renewable Energy and Energy Efficiency Program, 2018–22

FDN is the advisor and potential financier for the Renewable Energy and Energy Efficiency Program, under the leadership of the Ministry of Mines and Energy. Recently, the Ministry announced the first renewable energy auction. FDN will be advising and creating the financing packages for this auction. As part of the future energy matrix policies, the Ministry will likely increase the share of renewable energy (already relatively high in Colombia) by another 25 percent with respect to the current base. The Ministry recently approved the technical and financial feasibility of 11 energy projects with a total value of US\$540 million (€442 million).

The sustainable development schemes in the different regions of the country include small hydropower plants, renewable and energy efficiency projects, and the expansion plans of network operators in the departments of Antioquia, Caldas, Norte de Santander, and Risaralda. During field visits for this report, the government highlighted the Norte de Santander's Power Plants Expansion Plan, which will improve the quality of the service in the region, and the Luzma small hydropower plant, located in an area most affected by the armed conflict (ZOMAC), at Antioquia department. This sector represents an important opportunity for FDN to diversify its portfolio and generate attractive clean energy assets.

Source: Ministry of Mines and Energy, January 2017.

## 7. CLIMATE CHANGE CONSIDERATIONS

FDN is advising the Ministry of Mines and Energy on the new energy renewables and energy efficiency program (see Box 6). As part of its diversification strategy, FDN will actively pursue financing the projects resulting from the first auction, scheduled to take place in May 2018. FDN is currently working with the World Bank and other donors to develop a financial facility to provide risk mitigation products to climate change investments in Colombia. The facility will have pricing incentives to promote implementation of climate-related investments. The products will be partial guarantees to support the counterparty risk in a renewable energy project (the power purchase agreement commitments). Those guarantees will help renewable energy projects become bankable and will mobilize additional private capital to climate change-related projects.

## 8. RISK MANAGEMENT

FDN has several structures in place to manage risk:

- **IFIs in the ownership structure of FDN**, have played a significant role in the development of the credit analysis and risk management systems.
- **Credit and investment commitment approvals.** FDN has developed a four-tier credit approval process for its financial operations (for both funded and unfunded products).
- **Screening Committee.** This is a management committee where staff from the Originating Department and the Credit Department sit down together and discuss the merits of the project,

the potential exposure, and pricing for the institution. This committee meets regularly and as often as needed. It is a first instance to screen and improve the project pipeline that will demand more credit analysis and scrutiny.

- **Credit Committee (internal).** This is a senior management committee where projects are evaluated after credit analysis and before being presented for recommendation to the Investment Committee at the Board level.
- **Investment Committee of the Board.** This is the most important governance level within day-to-day operations. It is where all the credit and investment decisions are taken. As in many other financial institutions, all lending, guarantee and investment operations must be recommended to the Board for approval by the Investment Committee. This Committee meets regularly.
- **Board of Directors.** This is the highest governance level responsible for the approval of all lending, guarantee, and investment operations.

## Risk Management

- **Credit risk (SARC).** FDN, as an institution supervised by the Superintendence of Finance, must comply with the design, development, and application of the Credit Risk Management System (SARC). The SARC developed by FDN contains clear and precise policies and procedures that define the criteria and the way in which the entity evaluates, assumes, qualifies, controls, and covers its credit risk. To carry out these tasks, FDN's management team has adopted special policies and mechanisms to adequately manage credit risk.
- **Market risk (SARM).** FDN must also comply with the requirements of the Basic Financial Accounting Rules sponsored by the Central Bank and supported by the Colombian Stock Exchange regulations (AMV, Autoregulador del Mercado de Valores en Colombia). The market risk management system (Sistema de Administración de Riesgos de Mercado, SARM) is utilized for all treasury operations, with oversight from the Board of Directors. The system was improved in 2016, after the capital injection of Col\$2.5 billion, introducing mark-to-market methodology and value fluctuation to interest rate movements and other key macro dynamics.
- **Liquidity risk (SARL, Sistema de Administración de Riesgos de Liquidez).** FDN must also comply with the requirements in the financial and accounting rules with respect to liquidity. As with the market risk management system, improvements to the liquidity risk management system were introduced in 2016 after FDN's capital injection.
- **Environmental risk.** In addition to adhering to the IFIs' environmental guidelines in operations funded by these institutions, FDN has developed its own environmental risk management system. The system has been developed in accordance with international norm ISO 14001, and the 2012 interpretation notes prepared by IFC for financial intermediaries.
- **Other risks.** Besides these four key risk management systems, FDN also has an operational risk management system, and a money laundering and terrorism risk management system.

## 9. CREDIT RATING OF THE INSTITUTION

S&P in its latest report (December 5, 2017) rated FDN as a global BBB with negative outlook. This is in the same rating as the sovereign rating, and the negative outlook is related to Colombia and not



FDN as an institution. The key weaknesses that S&P highlighted in its report were related to the high concentration in the road transport sector, the slow implementation of the 4G Program, and the limited business opportunities in sectors different from infrastructure in Colombia. Key strengths were related to: FDN's critical role in infrastructure development, and therefore the very strong likelihood of government support in case of financial stress, its solid operating revenue, and its strong liquidity position.

### Standard and Poor's Rating

The S&P Global Ratings for December 5, 2017 stated:

"The issuer credit rating on Financiera de Desarrollo Nacional S.A. (FDN) reflects our assessment of an extremely high likelihood of extraordinary government support, based on our GRE criteria. The bank's 'bb' SACP [Stand-Alone Credit Profile] is based on its limited business position, and lack of diversity in its business activities, with a small product range. Moreover, FDN's high-risk concentration by sector and single-name exposure limits our assessment of its risk position. Counterbalancing these negative rating factors, the bank's SACP also reflects its very sound capital and earnings levels due to a projected RAC ratio of around 16.5 percent, on average, during 2018 and 2019. In addition, its stable funding levels—supported by its financial obligations, with tenors of 10 years and 19 years—along with its adequate liquidity due to the absence of short-term debt maturities, continue to support the ratings."

"Our rating on FDN continues to reflect our view of an extremely high likelihood of extraordinary government support thanks to FDN's GRE status, given our assessment of the following characteristics:

- Very strong link with the government that currently owns 67.5 percent of the bank and will continue to exert a strong influence on it. We expect the government to remain FDN's main shareholder and we assume the same prioritization for the next government.
- Critical role in Colombia's economic development strategy, supporting the government in meeting key economic objectives in financing large infrastructure projects. FDN's priority is to support the 4G-road concessions program. The combination of FDN's 'bb' SACP and the extremely high likelihood of government support provide three-notch uplift to the 'BBB' issuer credit rating."

### Fitch Rating

In November 2017 Report, Fitch maintained the BBB rating for FDN. Key drivers for this rating were: sovereign support due to majority government ownership; FDN's role in mobilizing financing for the 4G Program; Strong Ordinary Shareholder Support as a result of the investment made by the government after the privatization of ISAGEN; and robust financial performance driven by strong liquidity position.

## 10. FDN'S PERFORMANCE

The maturity of FDN's loan and credit enhancement (liquidity lines) portfolio is still in the early stages of development. Projects reached financial closure only in the 2015–17 period and are still under construction. It is relatively meaningless to analyze the performance of FDN operations right now. The Treasury VP adequately manages their liquidity levels, and FDN's ROE is improving (it was 3.1 percent in 2017). As its portfolio matures, and credit risk events start triggering use of the liquidity lines, FDN will need to develop a contingent liability strategy for a "healthy" risk management of its balance sheet.

### 2018 Developments

In the first months of 2018, there were several important advances for FDN and for the Colombian in-

frastructure. In the 4G Program, two additional financial closures were achieved, reaching 12 closures. The Chirajara–Villavicencio project received total financing of Col\$1.6 billion: FDN has a 25 percent participation through a 10-year mini-perm credit, local banks had a 50 percent participation, and the remaining 25 percent was carried out through the debt fund SUAM-Credicorp, for a term of 20-years.

By the end of 2018, FDN expects to participate in seven more projects in the 4G Program, increasing the average size of each operation from US\$57 million to US\$134 million, promoting syndications and supporting key sponsors. Financial closures are expected for 19 of 30 projects, and diversification is set to increase. FDN will increase its participation, and international players along with key institutional investors will have an estimated participation of 54 percent of the total financing.

In the advisory area, FDN is structuring nine projects with a total value of US\$8.1 billion. One of these projects, the Metro de Bogotá Project, is the largest infrastructure project to be developed in the country under the contracting model that FDN has recommended. The model consists of a concession that includes the construction of civil works and the incorporation of trains and railway systems, as well as its partial financing, and long-term operation and maintenance. This project is currently finalizing the contract structure and the bidding process. Other areas where FDN is participating in an advisory role include educational infrastructure, urban mobility, and the development of programs for intermodal transport and renewable energy.

## 11. LESSONS LEARNED AND KEY CHALLENGES AHEAD

FDN has started its first cycle as an institution with strong footing. As a young institution, FDN still faces some important challenges. Some of them are related to the external circumstances not under its control, while others are related to future choices where options need to be carefully evaluated.

### Short-term Challenges

**New political scenario.** Colombia will hold presidential elections in May 27, 2018. The electoral field currently offers plenty of options and candidates. It is likely that potential candidates and options will be narrowed down in the next two to three months. However, based on current circumstances, it does not seem possible that a solid winner will emerge in the first round. Polls show that most likely, there will be a second round with the two strongest candidates in June 17, 2018. Maintaining FDN's strong corporate governance and its independence from political influence in the next presidential term (2018–22) is probably the most important short-term risk. This becomes more sensitive given FDN's liquidity levels. Fortunately, the IFIs' ownership in the institution will mitigate this risk.

**Slow pace of project completion in the 4G Program.** The national road program has been experiencing a difficult project cycle, from project preparation to financial completion to technical completion. In a recent report (May 19, 2017), Standard & Poor's evaluated the progress of the 4G Program and concluded that the following four factors were impairing the development of 4G projects: complex technical design given Colombia's topography and geography; concentration among a few contractors/concessionaires; the vulnerability of the technical execution of projects to climate change because of extremes in the rainy season and flooding; and barriers in the regulatory framework governing the execution of 4G projects, which the report recommended should be improved to mitigate delays and the risk of cost overruns. This risk is not under FDN's control. Sector diversification would help mitigate this risk.





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This case study was developed between September 2017 and April 2018. The development of the case study is based on available public information as well as interviews with senior management at the GIF and officials from the Ministry of Finance. The case study was written by Afua Entsuah (World Bank Consultant), under the supervision of Ellis J. Juan (World Bank Senior Advisor coordinating the Global Review of Public Infrastructure Funds).

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# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT

(September 12, 2018)

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## **Ghana Case Study**

### **GIIF – GHANA INFRASTRUCTURE INVESTMENT FUND**

## EXECUTIVE SUMMARY

The Ghana Infrastructure Investment Fund (GIIF) is a non-bank financial entity, 100 percent owned by the Government of Ghana (GOG) via the Ministry of Finance (MoF). It was created via an Act of Parliament in late 2014. The initial period was dedicated to organizing the original funding, recruiting staff, and finding office space. In 2016, Ghana held elections, with unfavorable results for the incumbent party (NDC, National Democratic Congress). The new party (NPP, New Patriotic Party) assumed responsibilities in early 2017. As is normal in these types of political transitions, the new government took some time to review and decide on the best course of action for the continuity of GIIF. The Fund was initially capitalized with US\$250 million from the proceeds of a sovereign bond placed in the eurobond market. Additional sources of funding were allotted to GIIF per the Act, including a percentage of the existing value added tax (VAT) and the Annual Budget Funding Account (ABFA). As of March 30, 2017, these additional resources had only materialized in 2015 and 2016 in amounts lower than determined in the Act.

In May 2017, a new chief executive officer (CEO), Solomon Asamoah, was appointed, and a new independent Board of Directors was elected.<sup>86</sup> In 2017, the funding strategy for GIIF was also modified by the new Minister of Finance (MoF). The recently created Fund was instructed to evolve as soon as possible toward total financial autonomy and independence from public budget sources. GIIF is currently working with UK consultants, Lion's Head Consulting,<sup>87</sup> funded by the Public-Private Infrastructure Advisory Facility (PPIAF) to develop its strategic plan, and within it, the new funding strategy.

GIIF is still in the very early stages of development.<sup>88</sup> It currently has only three officers responsible for the day-to-day operations—the CEO, the Chief Financial Officer (CFO), and a Senior Investment Officer—plus five clerical positions. GIIF needs to navigate through its development process as an institution (that is, as a public infrastructure fund, PIF) at a very rapid pace. GIIF subcontracts a portion of its work, but this strategy has limits when there are only three senior officers. Implementation of processes, systems, and asset management will be slow and difficult under this staff structure. GIIF has launched a search process for 12 new positions. This is likely to take some time. This case study is very relevant for the Global Review of PIFs because GIIF is the youngest institution in the sample, and one that clearly illustrates the rationale to tap multilateral institutions for guidance and recommendations in the complex field of infrastructure finance.

Despite its early stage, the challenges that GIIF faces looking ahead are very common to most PIFs in the developing world. The way in which these challenges are addressed will determine the future performance of GIIF as a public infrastructure fund. The institution needs to become financially independent in the near term. With the existing capital and at the current rate of project origination and disbursement, GIIF will require new funding in the 2019–20 period. GIIF needs to develop and implement a new funding strategy as soon as possible.

When addressing the new funding strategy, it would be in GIIF's best interest to explore including in the equity ownership strategic investors, such as development financial institutions (DFIs). The strategic investors could assist in the funding strategy with their own resources, but could also provide management experience in such areas as information systems, credit and risk management systems, and treasury operations, and strengthen the governance of the institution. The recent changes in MoF directives regarding GIIF's financial autonomy provide the institutional framework for a fast-track incorporation of a strategic investor. The Fund will need to strike a balance between accessing financial support from DFIs (which will require financial prudence and a healthy balance sheet) with the need to reach certain operational milestones to build a learning curve.

**GIIF and other financial institutions lend to local infrastructure projects in hard currency (U.S. dollars).**

<sup>86</sup> Solomon Asamoah, a Ghanaian national, formerly worked at the International Finance Corporation (IFC), the Development Bank of Southern Africa, the Africa Finance Corporation (Nigeria), and the African Development Bank, where he was Vice President for Infrastructure, Private Sector and Regional Integration.

<sup>87</sup> <http://www.lions-headconsulting.com/>

<sup>88</sup> As of April 30, 2018, GIIF has reached financial closure for two operations: a US\$30 million participation in a US\$ 200 million financing for a new airport terminal at Kotoka International Airport; and a US\$8 million investment (debt and equity) in a tourism project in Atuabo.



Local financial markets are underdeveloped and do not offer long-term local currency financing with adequate conditions. Local practice determines that if the underlying concession contract is expressed in hard currency, these foreign exchange risks are matched. As experience has shown, denomination of contracts (such as power purchase agreements and off-take contracts) in foreign currency does not mitigate these types of risks. On the contrary, in the event of systemic risks that affect exchange rates, these foreign exchange risks are not easily transferable to the end-users or lenders. Demonstrating that these foreign exchange risks are well covered will be critical for the Fund to attain a solid credit rating.<sup>89</sup>

GIIF needs to develop a more robust system to manage the risk of mismatch between assets and liabilities, particularly if, as the current origination project pipeline projects, by 2019 the Fund has the potential to have US\$200 million in loan assets and the equivalent of US\$250 million to US\$300 million in local currency (cedis) in its capital base. Demonstrating that these types of risks are fully covered will be critical for the Fund to attain a solid credit rating. As GIIF becomes mature and starts developing credit derivatives, such as guarantees and similar instruments, the institution will need to strengthen its risk management framework. In particular, it will need to develop a strong contingent liability management system that can assess credit derivatives risks, and assess them as a financial insurer as opposed to a financial lender.

Project preparation capacities are weak in most of the contracting agencies. As in many other case studies, this represents a serious challenge to the mobilization of private capital for infrastructure development. GIIF would like to become an active player in the project preparation and capacity-building aspects of infrastructure development in Ghana. Contracting agencies in Ghana will need the advisory support to prepare “good” financeable projects, and GIIF could benefit from securing a financeable inventory of infrastructure projects. In addition, by providing this type of advisory service, GIIF will strengthen its role as preferred partner for infrastructure development with both private and public sector sponsors.<sup>90</sup>

The Fund has an important role to play in promoting the development of local financial markets, which are much needed in Ghana. GIIF will need to develop new financial products and risk mitigation mechanisms to increase the size of the investor’s market willing to finance infrastructure development; improve local currency lending conditions and mitigate use of U.S. dollar-financing in sectors that do not generate U.S. dollars; and increase the leverage impact of restricted funding resources for Ghana.

GIIF, today, is a good effort by the Government of Ghana to support infrastructure development. While this initiative faces many uncertainties, its success as an institution to leverage private sector funds and skills into infrastructure projects in Ghana could become a blueprint for other such initiatives in emerging economies. It is in the best interest of the GoG and its development partners to support this initiative in its development phase. It would be very important for GIIF’s success to implement Lion’s Head Consulting’s recommendations regarding the funding strategy and strategic plan and initiate a second phase of technical assistance to expand the equity shareholders base and improve risk management systems and new product development.

## 1. COUNTRY INFORMATION

### Brief Description of Ghana

Ghana sits on the west coast of Africa bordered by Togo, Côte d’Ivoire, and Burkina Faso. Its population of 28 million is young. Like many of its regional neighbors, Ghana is a factor-driven economy reliant on agriculture and unprocessed natural resources, with exports concentrated primarily in gold, cocoa, and crude petroleum. The country’s reliance on natural resources subjects it to global economic cycles,

<sup>89</sup> During the 2016–17 period, the Ministry of Finance ordered the “nationalization” of GIIF capital funds from U.S. dollars to Ghanaian cedis. This “political” decision is understandable based on the provision of confidence to Ghana’s financial markets. However, it is not best strategy in terms of GIIF’s risk management objectives. It would increase the future mismatch between assets and liabilities, if U.S. dollar lending continues to be a practice in Ghana.

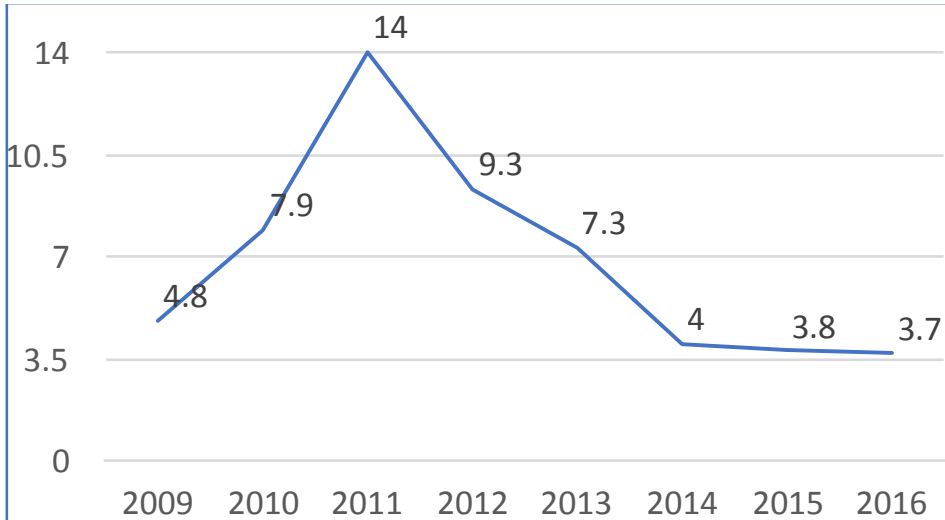
<sup>90</sup> GIIF, together with the Government of Ghana, could build a strong case for donor grant financing to fund a project preparation facility managed by the Fund. Solid advice from the technical assistance units of development finance institutions will be needed.



exchange rate volatility, and commodity price fluctuations, as mostly recently witnessed from 2012 to 2015, when gold and oil prices fell by one-third and two-thirds, respectively.<sup>91</sup> Construction and services account for more than half of Ghana’s output, and most jobs in the country are in the informal sector.

From a global perspective, Ghana has been a regional leader of stability and democratic governance. The country has been continually commended for its stability as a two-party democracy since 1992, when democracy was restored. Since then, it has held seven elections generally accepted to be free and fair, and has undergone three transitions of power from one political party to another, the most recent of which occurred following the December 2016 elections. Accordingly, Ghana has benefited from its regional reputation through inflows of private sector participation, as well as significant donor activity. For the two decades leading up to 2011, Ghana experienced strong and broadly inclusive growth (Figure 1). Notably, during the 2001–11 period, GDP growth rates increased from 4 percent to 14 percent, and significant improvements were made in poverty and social indicators. In July 2011, the country formally attained lower-middle-income status.

**Figure 1. Annual Real GDP Growth, 2009–17**



Source: 2018 Annual Budget.

Following this period, the country was not able to sustain growth because of macroeconomic instability, lower economic activity, and declining competitiveness in key sectors such as services, agriculture, and industry.<sup>92</sup> Growth subsequently declined sharply from 9.3 percent in 2012 to 3.8 percent in 2015. Excessive spending, particularly on the country’s large public sector wage bill and costly energy subsidies, drove the fiscal deficit to 12 percent of GDP in 2012.<sup>93</sup> Persistently large fiscal and external imbalances since 2012 have created significant challenges in the economy. The country’s public debt rose to 73 percent of GDP in 2016 because of prolonged fiscal deficits and currency depreciation.

Although oil production grew over this period, non-oil growth was gravely affected by inconsistent power supply as Ghana experienced a major energy crisis in 2015–16. High import costs and high interest rates due to the weakened currency stifled private sector growth. Given Ghana’s lack of diversification, the country was impacted by external shocks. Moreover, a series of credit rating downgrades starting in 2013 increased the cost of external borrowing.

To address the country’s critical macroeconomic situation, in 2014 the Government of Ghana initiated

91 Ghana, World Bank Group 2017 Policy Notes.  
 92 Ghana, World Bank Group 2017 Policy Notes.  
 93 Ghana, World Bank Group 2017 Policy Notes.

ed a homegrown strategy of fiscal consolidation, which was subsequently supported by a three-year US\$918 million Extended Credit Facility (ECF) program with the International Monetary Fund (IMF) in April 2015. Initial results of the program to restore debt sustainability and macroeconomic stability saw positive results, including the narrowing of fiscal deficit from 10.1 percent of GDP to 6.3 percent from 2014 to 2015. However, progress was not maintained, and in 2016 Ghana missed its fiscal target by a large margin (8.7 percent of GDP, compared to the target of 5.3 percent) due to revenue shortfalls and excess spending related to election expenditures.

Following the 2016 elections, encouraging signs have been seen from the country's half-year fiscal performance as well as the new government's expressed commitment to macroeconomic stability, fiscal discipline, and an ambitious reform agenda. In addition, in August 2017, the government was granted a one-year extension to its three-year IMF program. Going forward, Ghana's economic success will rely on the government's ability to sustain its economic stabilization program.

With no further major negative terms-of-trade shocks, improved stability in prices and the exchange rate, as well as continued improvements in the electricity supply, the World Bank predicts that Ghana's growth prospects are expected to improve in the medium term. The World Bank's Economic Prospects Report for 2018 predicts an 8.3 percent growth rate for the country. The oil and gas sector is expected to be the primary growth driver, while the non-oil sector is expected to post modest growth over the medium term. Ghana will, however, face several long-term challenges, including budget rigidities, which will limit the government's ability to respond to internal and external shocks; legacy debt and lack of much-needed reforms, particularly related to energy state-owned enterprises (SOEs), which pose fiscal contingent liability risks and risks to the financial sector; and weak commodity prices and capital flows, which will continue to be major downside risks for Ghana's economic outlook.

## Oil Exports

Ghana's projected growth for 2018 is largely driven by increased production of oil and gas, which is expected to boost exports.

Ghana's first discovery of offshore hydrocarbon reserves took place in June 2007 with the discovery of Ghana's Jubilee Oilfield as well as other oilfields. Oil production began at the end of 2010. As of 2016, production stood at about 100,000 barrels of oil and 80Mscf/d (thousand standard cubic feet) of natural gas a day. Ghana ranked 44<sup>th</sup> globally in terms crude oil production per day. Once development of Ghana's three existing fields—Jubilee, Tweneboa Enyenra Ntomme (TEN), and Sankofa—is complete, production could reach 200,000–250,000 barrels a day by 2020, in the absence of new developments.<sup>94</sup> The 2017 Petroleum Annual Report places the country's total petroleum receipts at US\$362.58 million, which represents a significant increase from earnings of US\$172.9 million in the same period in 2016.<sup>95</sup> Oil production for 2018 is projected to be 53.25 million barrels (or 145,887 barrels a day), which is expected to bring in receipts of US\$669.41 million. In 2016, crude petroleum was Ghana's fourth largest export, representing 9 percent of the country's total exports of US\$10.5 billion.<sup>96</sup> Crude petroleum and refined petroleum made up 1 percent of the country's US\$11 billion in imports in 2016.

Given the nascent stage of Ghana's oil and gas sector, there is a lack of domestic capacity to provide a range of services to multinational oil companies commercializing offshore petroleum reserves. Although onshore services are further developed, these are still not entirely established. Local content mandates from the Government of Ghana (GoG) have established minimum levels of local participation by Ghanaian companies, with some portions of the sector requiring at least 10 percent of equity to be held by Ghanaian firms. Thus, joint ventures with foreign partners that bring technology and trans-

<sup>94</sup> World Bank Group 2017 Policy Notes on Ghana.

<sup>95</sup> Total petroleum receipts (proceeds from liftings and other petroleum receipts) as of September 2017. The 2017 Annual Report on the Petroleum Funds covers January to September. A reconciliation report will be published by the end of the first quarter of 2018 to give a full-year account on the collection, management, and use of petroleum revenue in 2017. The reconciliation report had yet to be published online as of the writing of this case.

<sup>96</sup> Ghana's four largest exports in 2016 were represented by gold (US\$4.43 billion), cocoa beans (US\$1.89 billion), coconuts, brazil nuts and cashews (US\$987 million), and crude petroleum (US\$960 million), per the MIT Media Atlas.

fer knowledge are sought after within the sector. Local participation is restricted not only by lack of technical experience and expertise, but also by the size of Ghana's banking sector. In 2014, the state-owned regulator, Ghana National Petroleum Corporation (GNPC), estimated the development costs of Jubilee, TEN, and Sankofa at an average of about US\$6 billion per project—which is approximately equivalent to half the entire assets of the Ghanaian banking sector.<sup>97</sup>

The low-price environment within the oil sector in 2015 and 2016 two years ago had a short-term detrimental effect on Ghana's oil revenues, as well as the country's ability to attract additional investment to the sector. Investment appetite in Ghana's western waters was also subdued due to the country's maritime border dispute with Côte d'Ivoire, which was not resolved until September 2017. Although the ruling was favorable for Ghana, during the three years of the court case, by court order, no new oil wells were allowed in the disputed area. Nonetheless, given large untapped deposits and the stabilization and upward trend of oil prices, the GNPC forecasts that the value of the Ghanaian oil and gas industry will treble by 2022.

### **Demand for Infrastructure Investment**

Ghana's growth over the last two and a half decades has resulted in an increase in urbanization and a widening of the middle class. This growth has increased the demand for new and better-quality infrastructure. At the launch of the National Policy on Public Private Partnerships (PPPs) in 2011, Ghana was reported to have an infrastructure deficit that would require sustained spending of at least US\$1.5 billion per year.<sup>98</sup>

A recent study commissioned by the Ministry of Finance in 2016 concluded that Ghana's total infrastructure finance demand was US\$81 billion through 2026.<sup>99</sup> As shown in Figure 2, the transport sector (including Roads and Highways and Ports, Airports and Railways), together with the Power, Health, and Water and Sanitation sectors account for most the demand. Through 2026, the study estimates that the Government of Ghana would require investment of US\$7.3 billion per year to meet its economic targets, the most significant of which is achieving an average GDP growth rate higher than 5 percent to 7 percent per year, as outlined in the Ghana Shared Growth and Development Agenda II.<sup>100</sup> If Ghana can meet this total demand projection, it would be spending at least 13.5 percent of its projected GDP on infrastructure through 2026.<sup>101</sup>

97 "The Challenges Facing the Ghanaian Oil Industry," The Economist Intelligence Unit, September 15, 2015. [http://country.eiu.com/article.aspx?articleid=323538416&Country=Ghana&topic=Economy\\_1](http://country.eiu.com/article.aspx?articleid=323538416&Country=Ghana&topic=Economy_1)

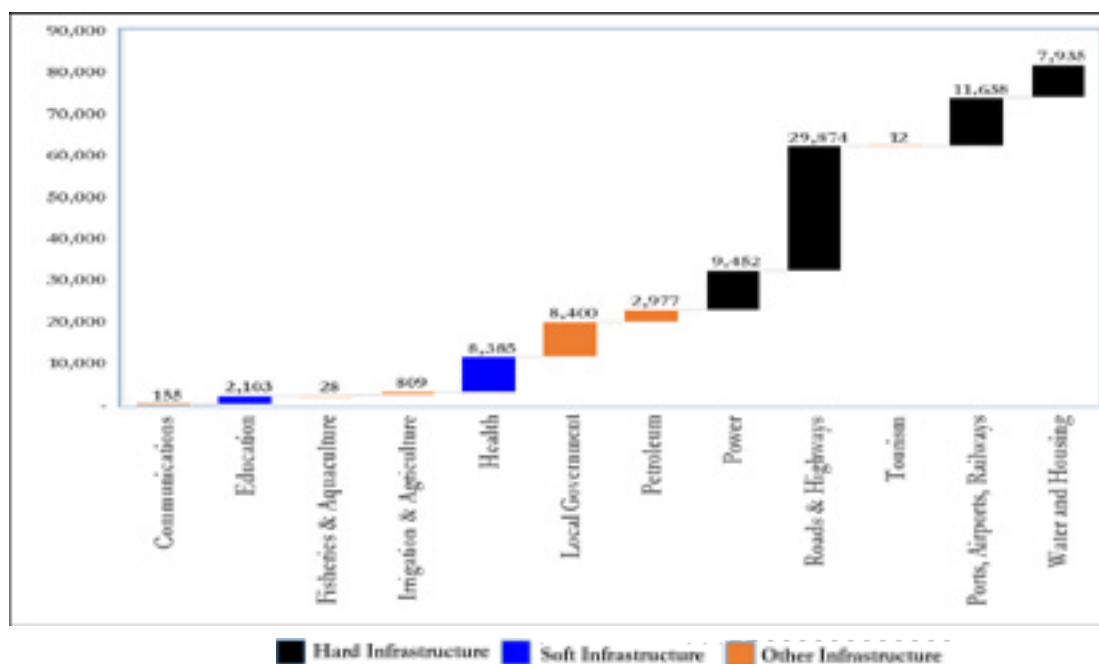
98 Ghana's 2011 National Policy on Public-Private Partnerships.

99 Ghana Infrastructure Financing Gap Analysis, Castalia Strategic Advisors, August 2016.

100 Ghana Infrastructure Financing Gap Analysis, Castalia Strategic Advisors, August 2016.

101 Ghana Infrastructure Financing Gap Analysis, Castalia Strategic Advisors, August 2016.

Figure 2. Demand for Infrastructure Financing, 2016–26 (US\$ million)



Source: Ghana Infrastructure Financing Gap Analysis, 2016.

The study concluded that Ghana has an infrastructure finance gap of US\$3.9 billion to US\$5.5 billion per year through 2026.<sup>102</sup> Of the three primary sources of finance—government, donors and development finance institutions, and the private sector—the study draws some notable conclusions:

- Ghana’s current fiscal outlook suggests that the government will not have free cash flows available for new debt service until 2024–25.
- Donor contribution to infrastructure financing will decrease between 2016–26 as Ghana has graduated from low-income to middle-income status.
- The private sector is expected to increase investment through 2026 compared to the previous decade; the Ghana Infrastructure Investment Fund can play a key role in facilitating this.

Currently, Ghana ranks 103 of 137 countries under the infrastructure pillar on the Global Competitiveness Index (GCI). The World Bank’s Private Participation in Infrastructure (PPI) database lists only 27 projects having reached financial close between 1990 and 2017; the largest proportion of projects are within the electricity and information and communication technology (ICT) subsectors (each representing 10 projects). For Ghana to reach a comparable infrastructure endowment to other middle-income countries in the region, Ghana must increase the role of private sector participation in the provision of infrastructure.

### PPP Program

Ghana’s central public-private partnership (PPP) program attributes its beginnings to the establishment of the Project & Financial Analysis Unit within the MoF in 2007. The unit was established with the support of the UK Department of International Development (DFID) to structure PPP/Project Finance Initiative (PFI) projects. In 2009, a PPP Diagnostic Study was conducted with assistance from PPIAF

<sup>102</sup> The analysis covered both physical infrastructure categories (long-lived engineered structures and facilities, including public utilities, public works, and transport infrastructure) and social infrastructure (health care and education, the services provided, and the facilities they are provided in). Along with these traditional infrastructure categories, the study also assessed financing demand for other core industries like petroleum, tourism, agriculture and fisheries, as well as for economic infrastructure.

(World Bank), which led to the establishment in 2010 of the Public Investment Division (PID) to serve as the focal point for PPPs. Subsequently, the GoG launched the National Policy on PPPs in 2011 to guide project preparation, approval processes, and implementation of PPP projects in Ghana.

Following the launch of the National Policy on PPPs in 2011, the World Bank further supported the GoG with a US\$30 million lending project in 2012. The project’s objectives included improving Ghana’s legislative, institutional, financial, fiduciary, and technical frameworks to generate a pipeline of bankable PPP projects. The project was initially conceptualized as a two-phased project. Phase I aimed to prepare the legal framework and build capacity within the MoF and contracting agencies (CAs) to identify, evaluate, develop, implement, and manage PPPs, while preparing transactions through the support of Transaction Advisory Services. Phase II of the project, which has now been discontinued, aimed to providing catalytic financing to assist in bringing bankable transactions under Phase I to financial close.<sup>103</sup> The creation of the Ghana Infrastructure Investment Fund (GIIF) through the passage of the Act in 2014 was a suitable mechanism to support transactions prepared under Phase I in lieu of the discontinued second phase. Given the GoG’s desire to set up the Fund, the World Bank through PPIAF provided technical advisory support for the setting up of the Fund.

Although the Public Investment Division (PID) is the focal point for Ghana’s PPP program, the Division also manages and coordinates the strategic direction for public investments. PID has four subunits, as shown in Figure 2. It is currently overseeing 12 projects directly under the World Bank project within the transport, youth and sports, local government, and roads sectors. Although hundreds of projects are officially registered with the Division, only ten projects are currently receiving active supervision. This is due to the lack of resources available for contracting agencies to hire transaction advisors.

**Figure 3. Public Investment Division Organizational Structure**



Source: Improving Transparency and Accountability in PPPs, Disclosure Diagnostic Report: Ghana.

Although the government has identified PPPs as an important vehicle in the delivery of infrastructure and other social services, there are challenges hindering PPP implementation. The most noteworthy is the lack of a legislative and regulatory environment supporting PPPs. Currently, the main policy document that governs PPPs in Ghana is the National PPP Policy of 2011. Supplementary legislation and policies—including the Public Investment Management (PIM) Policy, 2015; the Public Procurement Act (PPA), 2003, as amended by the Public Procurement (Amendment) Act, 2016 (Act 914); and the Public

103 This could have been through the Financial Intermediary Loan (FIL) and Viability Gap Scheme (VGS) mechanisms.

Financial Management (PFM) Act, 2016—also help guide the PPP process. Although a PPP bill has been submitted twice to Cabinet and reached the consideration stage in Parliament in 2016, the bill was not passed. The draft law is currently in Cabinet, following resubmission in October 2017.

Ghana also lacks regulations, guidelines, and standard documents, such as standardized Request for Qualifications (RFQs), Request for Proposals (RFPs), and model Concession Agreements that would help streamline project development procedures, save time, reduce development and administrative costs, and improve the overall delivery services, as noted by the World Bank PPP team. In the absence of established laws, rules, and frameworks, reliance on a case-by-case approach in the structuring of PPP projects is inevitable and costly to government.

Moreover, the implementation capacity of the PPP program in Ghana needs significant improvement. Unlike global best practice, the central PPP implementation agency, through the PID, is not a dedicated, full-time PPP agency, and implementation is hindered by bureaucratic processes and procedures within the MoF. Additionally, the PID struggles with a shortage of staff with the requisite technical skills and experience. The World Bank highlights that lack of key staff and periodic reassignment and rotation of civil service personnel does not allow for knowledge and expertise to be accumulated and capacity and institutional memory to be built within the PID.

Given the novelty of the PPP concept in Ghana, it has taken several years for CAs as well as the political officials to appreciate and support a new way of procurement in the form of PPPs. Ghana’s PPP program has yet to receive full political support from the highest levels of government, particularly in ensuring that transactions follow due process of competitive procurement, and economic assessment. Since the launch of the program, the PID has had to contend with some CAs acting independently of the PPP policy or opting out of the PPP process altogether. This has been the case primarily with highly profitable authorities and those with a history of successfully procuring large infrastructure projects, including the Ghana Ports and Harbors Authority (GPHA), Ghana Airport Company Limited (GACL), and other state-owned enterprises (SOEs). The current institutional framework for PPPs is presented in Table 1.

**Table 1. Institutional Framework for PPPs**

Institution	Nature of institution and role in the PPP process
Contracting agency	The contracting agency represents Municipal and District Assemblies (MDAs), Metropolitan, Municipal and District Assemblies (MMDAs), or other authorities under the government that participate in the PPP process. These entities are encouraged, where appropriate, to establish Project Management Units to assist in project identification, needs and options analysis, concept origination, contract management, monitoring, reporting, and evaluation.
National Development Planning Commission	With the assistance of contracting agencies, the Commission prepares the National Infrastructure Plan (NIP), which is the plan from which every PPP project must emanate. If the project is not included in the NIP, the project must seek approval from the National Development Planning Commission (NDPC).
Ministry of Trade and Industry	The ministry ensures the participation of Ghanaian small and medium enterprises (SMEs) in the PPP process through capacity-building activities and the promotion of PPPs among SMEs.
Debt Management Division, Ministry of Finance	This division ensures the fiscal sustainability of PPP projects for the government, considering the direct and contingent liabilities that arise from each PPP project.
Budget Division, Ministry of Finance	This division ensures that PPPs are duly represented in the annual budgeting exercise, specifically ensuring that payments to be incurred by MDAs under a PPP contract are consistent with the national budget. <sup>a</sup>



Institution	Nature of institution and role in the PPP process
General Assembly of the MMDAs	The General Assembly acts as the approving authority for MMDAs requesting to undertake a PPP project, where the total estimated cost does not exceed 0.5 million in the case of district assemblies, 1 million in the case of municipal assemblies, and 2 million in the case of metropolitan assemblies.
PPP Approval Committee	This committee is the approval body for contracting agencies seeking to undertake PPPs whose estimated project costs do not exceed 50 million, and for PPPs undertaken by MMDAs with total estimated project costs exceeding 2 million. The committee is comprised of: the Minister of Finance (as Chair); the Chairperson of NDPC; the Minister of Justice; the Attorney General; the Minister of Trade and Industry; the Chief Executive of the Ghana Investment Promotion Centre; the Chief Executive of the Public Procurement Authority; and the minister or head of the contracting agency.
Cabinet	The Cabinet is the approving authority for PPPs that require the government to comply with Article 174 or 181 of the Constitution. In addition, the Cabinet must approve and recommend for Parliamentary approval PPPs whose estimated project cost exceeds 50 million.
Parliament	The Parliament is the final approval authority for PPP projects that require the government to comply with Article 174 or 181 of the Constitution. It is also the final approving authority for PPPs whose estimated project cost exceeds 50 million.
Attorney General's Department and the Legal Division in the Ministry of Finance	These two legal bodies together ensure that all PPP agreements conform to Ghanaian law.

Source: Improving Transparency and Accountability in PPPs, Disclosure Diagnostic Report: Ghana.

a. Currently, the division does not report to the Cabinet on contingent liabilities arising from PPPs. However, as per Section 15 (2)(e) of the Public Financial Management Act, 2015, the fiscal strategy document shared with the Cabinet for approval must include contingent liabilities, and the annual budget must also include contingent liabilities related to PPPs, as per Section 21 (5)(v).

## Description of the Local Financial Markets

Ghana's financial sector has grown, with assets increasing from 48 percent of GDP in 2010 to 68 percent of GDP in 2015. The sector is dominated by the banking industry, with the insurance and pension industries still at a nascent stage.

The total banking-sector-assets-to-GDP ratio as of September 2017 was 50 percent. Ghana has 34 licensed banks (17 classified as domestically controlled, while the remaining 17 are foreign controlled).<sup>104</sup> Ghana's banking industry remained liquid and profitable in 2017, with total assets increasing from 81.22 billion in December 2016 to 93.22 billion in December 2017. The average after-tax profitability, measured by return on equity, was 16.7 percent in December 2017 (down from 22.1 percent in December 2015). The sector is also concentrated, with the five largest banks owning 40 percent of total assets as of 2015, down from 46 percent in 2013. The entry of Nigerian and other foreign banks has contributed to the decline in market concentration. Assessment of the industry's investment portfolio in 2017 revealed the continued preference of the sector for longer-dated securities relative to shorter-dated bills. The share of securities in total investments increased from 20 percent in December 2016 to 41.4 percent in December 2017, while the share of bills declined from 78.1 percent to 57.1 percent.

A key risk to the sector continues to be the high level of non-performing loans (NPLs). The ratio of NPLs increased from 14 percent in October 2015 to 22.7 percent in December 2017, due in large part to Ghana's macroeconomic environment and particularly the legacy debt of energy SOEs. However, the Bank of Ghana expects NPL ratios to improve as banks repair their balance sheets and tighten credit risk management practices.

<sup>104</sup> Bank of Ghana, Banking Sector Report, January 2018.

The outlook for the banking sector is positive, particularly following restructuring to reduce debts owed by energy-related SOEs to banks. In October 2017, Ghana issued a seven-year and ten-year energy bond to repay debts owed by power utilities. The total amount raised was 4.8 billion, which represented 80 percent of the government's target of 6 billion. The bond transaction was listed and traded on the Ghana Stock Exchange (GSE) and gave the opportunity for local investors to participate in a long-term issuance. The 2018 Annual Budget notes that proceeds of the bond issuance have already assisted in reducing the energy sector debt by almost half, as well as helped reduced NPLs. Another significant change to the sector includes the new Bank of Ghana minimum paid-in capital requirement of 400 million by December 31, 2018, which will likely lead to some consolidation within the sector. A cleaning up of the sector also took place in 2017 and 2018, as several banks were taken over or went into administration.<sup>105</sup> More banks may follow.

Although the market saw some recovery in 2017, real credit growth had slowed down due to rising interest rates and credit risk in previous years. Total bank credit grew by 6 percent in 2015 year-on-year, which is a significant decrease from 28 percent in 2014. The breakdown of credit recipients in 2015 was as follows: commerce and finance (26 percent); services (22 percent); and electricity, water and gas sectors (16 percent). The breakdown in 2017 was slightly different: commerce and finance (25 percent); services (21 percent); and construction (11 percent). Lending rates are notoriously high in Ghana. The average lending interest rate increased from 28 percent in October 2015 to 32 percent in October 2016. Interest rates and spreads on loans to small borrowers (including SMEs) are above these market averages because of the perceived risk of dealing with such borrowers and given the opportunities for alternative business, such as lending to the government. The share of bank credit to the private sector increased from 85.1 percent in December 2016 to 91.1 percent in December 2017, of which the majority is to domestic private enterprises. Notably, industry credit to the public sector, including the central government, public institutions, and public enterprises, declined from 14.9 percent in December 2016 to 8.9 percent in December 2017.

The financing market is constrained, with limited availability of long-term finance, both local and international, to support the country's infrastructure pipeline. Some of the challenges of the banking sector include the general mismatch of end-user tariffs and revenue from infrastructure assets in local currency and lending in hard currency, which is favored by banks due to high interest rates in local currency. Other challenges include the lack of capacity and experience of local commercial banks to appraise and finance PPP projects on a limited recourse basis, as well as short tenors, which run between five and seven years. The government acknowledges the need to strengthen the pensions, insurance, and securities industries to provide long-term capital for the economy. This need was featured in the 2018 Budget Statement. Overall, Ghana's local capital markets solutions are not developed to leverage private investment in infrastructure PPP projects.

The Ghana Stock Exchange was established in July 1989, although trading did not begin until November 1990. The GSE had a market capitalization of 52.7 billion at the end of December 2016, with 43 listed firms. The 2018 Annual Budget noted that total market capitalization of the GSE to GDP as of September 2017 was 30 percent. Government bonds continue to dominate the market, as Treasury bills account for half of the overall bids on the GSE. The exchange performed extremely well in 2017 due to the improved macroeconomic environment, with a decline in inflation and interest rates as well as stabilization of the currency. However, in the two previous years, the GSE recorded a negative return because of local instability, and high inflation and interest rates, as well as unstable power supply, which disrupted the manufacturing sector. The banking sector is a solid anchor for the growth of the GSE. Thus, declining profits in 2015 and 2016 due to credit exposure to the energy sector and heightened NPLs impaired the performance of the GSE.

Ghana's pension funds industry has been growing rapidly, but with most of the assets in government securities and term deposits. In assessing the participation of pension funds in large infrastructure deals,

<sup>105</sup> The Bank of Ghana revoked the licenses of UT Bank and Capital Bank in August 2017 because they became insolvent and approved the Purchase and Assumption Agreement of Ghana Commercial Bank (GCB) to take over both banks. The Bank of Ghana also took over the assets and management of uniBank in March 2018 because it became insolvent.

GIIF's management made the authors aware that pension funds do not participate in infrastructure. One area of possible engagement with pension funds that GIIF will consider is the sale of packaged deals that have passed the construction phase. This was deemed more feasible than general corporate bond issuances.

The expansion of the middle class in Ghana, as well as increased public awareness of safety and security, strong regulation, and the expansion of products such as mobile insurance, have led to the growth of the insurance industry. Nonetheless, penetration remains very low in the sector, at less than 2 percent of GDP, according to the National Insurance Commission 2016 Annual Report.

### Country Credit Rating and a Brief History of Access to Global Financial Markets

Ghana's current credit ratings are shown in Table 2. Overall, the ratings reflect several factors, including vulnerabilities faced by a large fiscal overrun in 2016, high government debt and low affordability of debt, weaknesses in public finances, and the country's low GDP per capita. However, the ratings also reflect the more recent positive effect of increases in gold and oil exports, which have helped narrow Ghana's trade balance and stabilize the country's current account deficit; recent reductions in external imbalances; as well as the new government's commitment to macroeconomic stability. In its last review, Fitch specifically highlighted Ghana's medium-term growth potential and the expectation for non-oil domestic output to continue to grow as the country's energy situation improves and banks continue to clear NPLs from their balance sheets.

Table 2. Country Credit Ratings

Rating agency	Rating (Outlook)
Moody's (as of September 23, 2016)	B3 (Stable)
Fitch (as of May 12, 2017)	B (Stable)
S&P (as of October 6, 2017)	B- (Positive)

Source: Moody's, Fitch and S&P Reports.

Since 2007, Ghana has gone to the global financial market five times for a total of US\$4.5 billion, as noted in Table 3.<sup>106</sup> The Government's capital market strategy has focused on reducing short-term debt, funding budget support, and implementing its liability management strategy through buy-back operations and tender offers.<sup>107</sup>

Table 3. Summary of Central Government U.S. Dollar Bond Operations

Date of issue	Issuer	Ratings (Moody's, S&P, Fitch)	Tenor (years)	Maturity date	Issue size (US\$ million)	Coupon	Mid yield	Mid spread (bps)
2007	Ghana	B3, B-, B	10	Oct-17	750.99	8.5	3.29	521
2013	Ghana	B3, B-, B	10	Aug-23	1,000.00	7.88	8.08	(21)
2014	Ghana	B3, B-, B	10	Jan-26	1,000.00	8.13	8.32	(19)
2015	Ghana	B3, B-, B	15	Sep-22	1,000.00	10.75	7.35	190

<sup>106</sup> Annual Debt Management Report for the Year 2016. <http://www.mofep.gov.gh/sites/default/files/highlights/2016%20ANNUAL%20DEBT%20MANAGEMENT%20REPORT.pdf>

<sup>107</sup> Annual Debt Management Report for the Year 2016.

2016	Ghana	B1, N.A/BB-	5	Oct-30	750.00	9.25	8.53	222
	<b>Total</b>				<b>4,500.00</b>			
2016	Ghana	N.A	2	Oct-18	94.64	6	5.08	92
2017	Ghana	N.A	3	Nov-20	221.4	6.75		
	<b>Total</b>				<b>4,594.64</b>			

Source: MoF, Public Debt Management, 2017.

Note: bps = basis points.

For the government's fourth eurobond issuance in 2015, Ghana obtained a World Bank Policy-Based Guarantee (PBG), the first in Sub-Saharan Africa. GoG raised such a significant amount of debt during an unstable macroeconomic outlook due to the World Bank's US\$400M policy-based guarantee (PBG) to backstop the debt issuance. Without the PBG, Ghana's access to the required terms (long tenor, lower cost) in the capital markets would have had to wait until the benefits of Ghana's stabilization program were realized, which might not have coincided with the timing of the GoG's need to access the markets.<sup>108</sup> The PBG backstops principal and coupon payments on a first-loss basis; it is designed to ensure timely interest payments and/or principal by making guarantee support available until the bond is redeemed. The guarantee structure is set up such that the World Bank will pay missed interest or principal payments under the bond up to US\$400 million (see Table 4).<sup>109</sup> Another contributing factor to the success of the issuance was the government's outlined plans to establish the GIIF.<sup>110</sup> This issuance was done primarily to refinance short-term (90-day to 2-year) domestic debt bearing an interest rate of 25 percent.

**Table 4. Policy-Based Guarantee (PBG) Transaction Term Sheet**

## Transaction Term Sheet

Term Sheet	
Issuer:	The Republic of Ghana
Size:	US\$1bn
Type:	Senior Unsecured
Format:	Rule 144A / Regulation S
Guarantee:	IDA guarantee of 40% of notional amount at issue, rolling coupon and principal
Tenor:	15-year final maturity with 14-year WAL
Issuer Ratings:	B3 (Moody's) / B (S&P) / B (Fitch)
Note Ratings:	B1 (Moody's) / BB- (Fitch)
Coupon:	10.750%
Maturity:	14 <sup>th</sup> October 2030
Settlement:	14 <sup>th</sup> October 2015
Redemption:	Three equal instalments in Oct-26, Oct-29 and Oct-30
Use:	The proceeds of this IDA-guaranteed bond are exclusively earmarked for refinancing a portion of Ghana's high-interest rate near-term domestic debt
Denominations:	US\$200,000 x 1,000
Governing Law:	English
Listing:	Irish Stock Exchange
Barclays Role:	Joint Lead Manager

Source: Ministry of Finance, 2015.

<sup>108</sup> World Bank First Macroeconomic Stability for Competitiveness and Growth Development Policy Financing Project Document. <http://documents.worldbank.org/curated/en/279011468190138826/pdf/95284-PGD-P133664-P155550-IDA-R2015-0168-1-Box391456B-OUO-9.pdf>.

<sup>109</sup> <http://www.worldbank.org/en/news/feature/2015/11/18/new-world-bank-guarantee-helps-ghana-secure-us1billion-15-year-bond>.

<sup>110</sup> Ghana Infrastructure Financing Gap Analysis, Castalia Strategic Advisors, August 2016.

The GoG has been exploring cheaper ways to raise debt to retire maturing debt, pay interest on debt, and fund infrastructure projects. In 2016, the government issued its first ever U.S. dollar-denominated domestic bond for investors residing in Ghana and Ghanaians living abroad. The bond raised US\$94.64 million, compared to the government's target of US\$50 million. As noted by the Central Bank, the rationale for the bond was to explore alternative sources of meeting the GoG's financing needs and to deepen the capital market. The dollar bond provides the government with a cheaper financing option compared to local bonds, which carry average interest rate of 24 percent. The shortened tenor for this initial bond was in line with the fact that this was government's debut issuance and aimed to test the appetite of the market.<sup>111</sup> Given the success for initial issuance, the government issued its second dollar-domestic bond in November 2017 and raised US\$221.4 million. The bond's maturity is three years at a 6.25 percent yield.

## Climate Change Strategy

Ghana's strides to mainstream climate change into its development agenda is demonstrated in the integration of climate change themes into the Ghana Shared Growth and Development Agenda I & II (GSGDA 2010–2017). The strategy acknowledges climate change as a major challenge to growth and sustainable development, and also recognizes the ways in which climate change can erode the country's development gains.

Aside from the inclusion of climate change considerations within its development agenda, Ghana created an integrated response to climate change through the launch of the National Climate Change Policy (NCCP) in 2014. The NCCP was launched under the National Climate Change Committee (NCCC), which was set up in 2009 by the President and is hosted under the Ministry of Environment, Science, Technology, and Innovation (MESTI).<sup>112</sup> The vision of the NCCP is "to ensure a climate resilient and climate compatible economy while achieving sustainable development through equitable low carbon economic growth for Ghana." The policy provides clear avenues for combating the effects of climate change and creating opportunities for a green economy in five prioritized policy areas: agriculture and food security; disaster preparedness and response; natural resource management; equitable social development; and energy, industrial and infrastructural development. These policy areas are addressed through seven systemic pillars: governance and coordination; capacity building; science, technology and innovation; finance; international cooperation; information, communication and education; and monitoring and reporting.

Ghana is a participant within the global community in the fight against climate change. It is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and is represented at the annual Conference of Parties (CoP) meetings. Ghana signed the Paris Agreement on Climate Change on April 22, 2016, and ratified the agreement on September 21, 2016.<sup>113</sup> Ghana previously signed the UNFCCC on June 12, 1992, and ratified it on September 6, 1995, and ratified the Kyoto Protocol on May 20, 2003.<sup>114</sup> Ghana submitted its Intended Nationally Determined Contribution (INDC) on September 23, 2015, to the UNFCCC. The entire program includes 20 mitigation and 11 adaptation programs of action in seven priority economic sectors, which will be implemented between 2020 and 2030.<sup>115</sup> Ghana anticipates that it will need US\$22.6 billion in investments from domestic and international public and private sources to finance these actions.<sup>116</sup>

Although Ghana has mainstreamed climate change considerations into its development agenda, has developed a high-level policy document for climate change (among other national strategies and action plans), and is a signatory to the UNFCCC, the country has yet to see full integration of a climate change agenda into the economy. This is due in part to the lack of resource mobilization from the national

111 Central Securities Depository. <https://www.csd.com.gh/market-info/market-news/13352-first.html>.

112 The NCCC is made up of representatives from the Ministries, Departments and Agencies (MDAs), Parliamentarians, civil society organizations (CSOs), research institutions, the private sector, and development partners.

113 UNFCCC. [http://unfccc.int/paris\\_agreement/items/9444.php](http://unfccc.int/paris_agreement/items/9444.php).

114 UNFCCC. [http://unfccc.int/tools\\_xml/country\\_GH.html](http://unfccc.int/tools_xml/country_GH.html)

115 [http://www4.unfccc.int/ndcregistry/PublishedDocuments/Ghana%20First/GH\\_INDC\\_2392015.pdf](http://www4.unfccc.int/ndcregistry/PublishedDocuments/Ghana%20First/GH_INDC_2392015.pdf)

116 [http://www4.unfccc.int/ndcregistry/PublishedDocuments/Ghana%20First/GH\\_INDC\\_2392015.pdf](http://www4.unfccc.int/ndcregistry/PublishedDocuments/Ghana%20First/GH_INDC_2392015.pdf).



budget to heavily invest in climate change given the country's macroeconomic environment and fiscal commitments. There have been investment efforts from donor partners with respect to climate change adaptation and mitigation; however, these efforts have been limited and the sustainability of these efforts generally requires a level of knowledge, skill, and commitment that is often lacking across all levels of government.

## 2. DESCRIPTION OF GIIF

### Rationale for Including GIIF in the Global Review of PIFs

GIIF is the youngest institution in the Global Review sample. It still lacks a track record, but shows some early promise. Financial statements since its creation have not been audited and are not yet publicly available. It does not have a credit rating. Processes and systems have been designed but are still being implemented. The GoG has appointed a talented Ghanaian, who has had a successful career in financial development institutions in the region. It currently has a very weak staff structure with only three senior officers in charge of developing the Fund. GIIF is a case that illustrates the challenges in lower-income developing countries and highlights the relevance of the study being conducted by the World Bank in partnership with PPIAF to develop adequate policy advice to countries promoting public infrastructure funds.

The World Bank via PPIAF has supported the Fund's setup through an initial technical advisory project, which produced a comprehensive set of policies and guidelines on the Fund's governance and operational structure, based on international best practice and consistent with Ghana's fiscal reform actions. The World Bank/PPIAF commenced its second phase of technical support to the Fund in May 2017. The second phase objectives are to deliver a five-year business plan for the Fund and a strategy for raising private capital, based on the policy recommendations from Phase I.<sup>117</sup>

### History of GIIF

The demand for new infrastructure and improvements is critical to sustain urbanization and economic growth in Ghana. Infrastructure is a key priority for the government to fulfill its development agenda, as well as attain the Sustainable Development Goals (SDGs). As is the norm in developing countries, public funding is not sufficient to meet the country's infrastructure investment needs, given macroeconomic constraints. Although private sector participation has been identified as a plausible option to fill in the financing gap, the development of PPPs in Ghana still lacks the required track record to attract global investors, and there are few successful transactions.

Several issues constrain Ghana's financial system from supporting investment in infrastructure. For instance, the availability of long-term financing to support Ghana's infrastructure pipeline is limited. Although local banks provide stable local currency debt financing to align with projects that generate local currency revenues, the capacity of these banks to provide financing to the levels required for large infrastructure projects is relatively small. Some projects whose tariff contracts have a U.S. dollar-denominated tariff base are funded in U.S. dollars, utilizing this arrangement as an "implicit hedge" of sorts. This creates a mismatch of assets and liabilities in the financial system that could trigger undesired consequences in the event of systemic risk (a large devaluation). There is also a lack of experience in project financing in Ghana, and this creates capacity issues within the commercial financing market and makes it more difficult for Ghana to attract financing from international financiers.<sup>118</sup>

In response to these constraints, the GoG searched for innovative mechanisms to close the infrastructure financing gap in the country. One such way was through GIIF, which was created through the GIIF Act, 2014, Act 877, which was passed on July 21, 2014, and approved by the President on August 15, 2014. The Act established GIIF as a body corporate (non-bank financial institution depending on public sector budget) wholly owned by the Republic of Ghana whose mandate is to mobilize, manage, coordinate, and provide financial resources for investments in a diversified portfolio of infrastructure projects for national development.<sup>119</sup>

117 Consultancy work being implemented through Lion's Head Consultants.

118 PPIAF Ghana Infrastructure Investment Fund Technical Assistance application, 2015.

119 GIIF Act, Section II



After the passage of the GIIF Act in 2014, the first Board of Directors was inaugurated on February 11, 2015. It took some time for GIIF to initiate recruiting of staff and finding office space, in addition to managing the initial capital funding. In 2016, Ghana held elections. The results in late 2016 were not favorable to the incumbent party (NDC, National Democratic Congress). The new party (NPP, New Patriotic Party) assumed responsibilities in early 2017. As is normal in these types of political transitions, the new government took some time to review and decide on best course of action for the continuity of GIIF. In 2017, GIIF achieved several milestones:

1. In April 2017, a new Advisory Committee and a new Board of Directors were sworn in.
2. In April 2017, GIIF's first substantive CEO was appointed.
3. GIIF approved, committed, and disbursed its first investment (an airport project) under the new Board.
4. GIIF approved five further projects of strategic national importance (two power projects, a port expansion project, one hospitality project, and an ICT fiber optic project).
5. GIIF signed strategic partnership agreements and memoranda of understanding (MOUs) with institutions such as Ithmar Capital (Morocco), Stanbic Bank (Ghana), and Meridiam SAS (France), the China-Africa Development Fund, and the Commonwealth Development Corporation (CDC).

GIIF reported its first approved investment of US\$30 million to the Ghana Airports Company Limited (GACL) on June 19, 2017. This corporate loan supports the GACL Capital Investment Program, which involves the development of a new terminal at Ghana's only international airport, Kotoka International Airport (KIA) in Accra, as well as rehabilitation and upgrade of other airports and aerodromes managed by GACL, including Kumasi, Tamale, Ho, and Wa Airports.<sup>120</sup> The Program's loan facility involved a commercial tranche and a development finance institution (DFI) tranche. The commercial tranche was syndicated between eight financial institutions and closed in 2015. The DFI tranche was made up of the African Development Bank (AfDB), the Development Bank of Southern Africa (DBSA), and GIIF.<sup>121</sup>

## Funding Mechanisms

**2015–16.** GIIF was initially capitalized with US\$250 million from the proceeds of Ghana's 2014 euro-bond issuance. As outlined in Section V of the GIIF Act (Box 1), additional sources of funding are supposed to come from portions of the existing value added tax (VAT) and portions of the Annual Budget Funding Allocation, as well as additional sources of revenue. GIIF was originally conceptualized as an institution dependent on public budget allocation.

GIIF's Q1:2018 status report highlights that the VAT amounts unpaid to it in 2015 and 2016 were 963 million and 965 million, respectively. In 2017, no allocation from VAT was made. The second annual source of government allocations to be made to GIIF was up to 25 percent of the Annual Budget Funding Amount (ABFA), a portion of the petroleum revenue meant for amortization and infrastructure development as well as other funds that Parliament may decide upon. In 2015 and 2016, the amounts received by GIIF were only US\$51 million and US\$17 million. In 2017, only US\$7 million was allocated from the ABFA to GIIF.

### Box 1. Ghana Infrastructure Investment Fund Act, 2014 Section V

(1) The sources of money for the Fund are:

(a) an amount of money equivalent to two and one-half percentage points of the existing Value Added Tax revenue;

(b) an amount of money not exceeding twenty-five percent of Annual Budget Funding Amount to be

<sup>120</sup> GIIF Media Press Release, June 19, 2017. <http://www.ghwebs.com/giif/mediaroom/press-releases/item/11-ghana-infrastructure-investment-fund-approves-us-30-million-corporate-loan-to-ghana-airports-company-limited.html>

<sup>121</sup> GIIF Media Press Release, June 19, 2017.

- applied to amortization and direct infrastructure expenditure;
- (c) repayment inflows of moneys on-lent by the Ministry of Finance to government ministries, departments and agencies or state-owned enterprises, for capital project or infrastructure development;
  - (d) proceeds from the disposal of state-owned equity investment;
  - (e) grants, donations, gifts and other voluntary contributions to the Fund;
  - (f) fees or other moneys earned by the Fund in pursuance of its functions under this Act;
  - (g) money that accrues to the Fund from investment made by the Fund;
  - (h) moneys borrowed and raised from local and international capital market or from its affiliates;
  - (i) money that may become lawfully payable to the Fund or any other property that may become lawfully vested in the Board for the Fund; and
  - (j) any other moneys that the Minister with the approval of Parliament determines to be paid into the Fund
- (2) The sources of moneys under paragraphs (a) and (b) of subsection (a) designated for the Fund shall be due for payment into the Fund from the 1st of January 2015.

Source: GIIF Investment Act, 2015.

**After 2017.** The newly appointed Minister for Finance has given new instructions to GIIF regarding its funding strategy. GIIF has been instructed to evolve as soon as possible toward total financial autonomy and independence from public budget sources. This implies that under current circumstances, GIIF should not be dependent on public sector budget. It should not include the 2.5 percent VAT contribution and portions of the ABFA as part of its funding. This decision changes the configuration of GIIF completely. It would also eventually require an amendment to the original Act. GIIF is currently working with the PPIAF-funded consultants in the development of its strategic plan, and within it, the new funding strategy.

## Financial Performance

GIIF's financial statements for 2015–17 are still undergoing an audit by the Ghana Auditor General. GIIF believes the financial statements will be ready by April 2018. Given the early stages of the Fund's development, the authors considered that current financial statements with limited lending activity will not be very relevant to assess GIIF's performance. However, there are some financial parameters that are worth highlighting. GIIF was fully funded up to US\$250 million in 2014. The only loan operation was approved on June 19, 2017, for US\$30 million (Ghana Airports Company Ltd.) and has been fully disbursed. The Fund has been accumulating revenues via interest earned on the initial funding. As in some other case studies, interest earned between the period of initial funding and the ramp-up of loan operations constitutes an important cash flow contribution to its capitalization. GIIF's senior management estimate that the current asset size of the Fund is approximately US\$300 million. GIIF has not yet received a credit rating. It would need to complete the audited financial statements and develop a solid operational track record for this purpose.

Originally, GIIF's funding was being held in hard currency. This strategy could protect the Fund in the event of a large devaluation. It could also mitigate some of the foreign exposure when lending in US dollars. However, a political decision was taken soon after inception in 2015 to convert GIIF's funds into local currency (cedis). The authors understand the political logic of the decision, but from a treasury

management viewpoint it was probably better to convert portions of the funding into local currency, leaving the rest in hard currency as a protective measure.

## **New Capitalization Needs**

GIIF has been working intensively to develop a project pipeline. Senior management understands the importance for the credit rating process and its new funding strategy of developing a solid track record. GIIF currently has five different equity and loan investments it is working to close, in addition to the Ghana Airports Company Limited investment and the Maaha Beach Resort investment. One is financing a port expansion project, two are financing independent generation projects in the power sector, one is in the tourism industry, and one is in the telecommunications industry. All the operations are with the private sector. GIIF management understands that given the uniqueness of GIIF, it will likely be necessary to build a track record of solid transactions completed before it will be able to raise new funding from other sources. Any prospective funder in GIIF would also likely wish to perform due diligence on these early investments to ascertain the GIIF's credibility. This would help GIIF establish credibility as a trusted partner for private investors, a step in the right direction for the Fund's strategic planning.

If the five new investments materialize (senior management is confident they will materialize by the end of the calendar year), it will be an unprecedented achievement for such a young institution, especially in the difficult sector of infrastructure where many institutions are struggling to close any such projects in Ghana. These investments would also represent commitments of US\$187.5 million. Disbursements of these commitments are likely to stretch to two or three more years. However, by the end of 2018, the Fund will be 75 percent committed. With that level of commitment, GIIF would need to have ready its new funding strategy. The strategy is likely to include important support from development financial institutions (DFIs), in the form of both debt and equity. This type of DFI support normally has a one-to-two-year cycle. At the same time, the DFI support will require audited financial statements, a solid operational track record, a credit rating, and risk management and information systems and processes in place. Capitalizing the Fund (via debt or equity) in 2019–20 is one of the most important challenges GIIF is facing today. Senior management is aware of the situation and hopes to start conversations with DFIs soon (after the technical advisory second phase is completed).

## **U.S. Dollar Exposure**

The seven investments described in the previous section are U.S.-dollar-based. While there is obviously some currency mismatch as GIIF funds are being currently held in local currency and are exchanged at spot rates when disbursements take place, there are some mitigating factors as all the projects effectively charge in US-dollar-linked prices. The authors understand the rationale, but as already mentioned, lending in US dollars because end-user tariffs are linked to U.S. dollars, under the "implicit hedge" rationale, is a risky financial decision for a Fund in the early stages. Furthermore, these types of operations for an institution fully funded in cedis must pose some treasury challenges, unless loan operations are only expressed in USD, but cash flows only take place in local currency. As seen in many other cases, particularly in Latin America and the Caribbean, U.S. dollar lending to sectors that do not generate U.S. dollars (such as energy, water and sanitation, and urban transport) created a "mirage effect" because local tariffs were based in U.S. dollars. This mechanism worked effectively until systemic risks affected foreign exchange rates and devaluation could not be translated to end-users or lenders. In most of the cases, governments had to step in and act as the de facto "lenders of last resort" and bail out the investors. In other cases, lenders and investors had to bear the bulk of the devaluation impact, with the foreseen bankruptcy consequences.

In the recently completed investment policy guidelines (approved in April 2017), when referring to currency operations, the Fund has used the following statement: "The Fund will operate a dual currency

system using both the United States Dollar and the Ghana Cedis. The Fund will strive for a currency matching of assets and liabilities meaning Dollar investments will be financed from Dollar capital and Cedi deals from Cedi capital. However, the Fund’s Board of Directors can allow a mismatch only after being satisfied that sufficient measures have been undertaken to hedge risks that could arise from such mismatches as per the Fund’s asset and liability management policy.”<sup>122</sup>

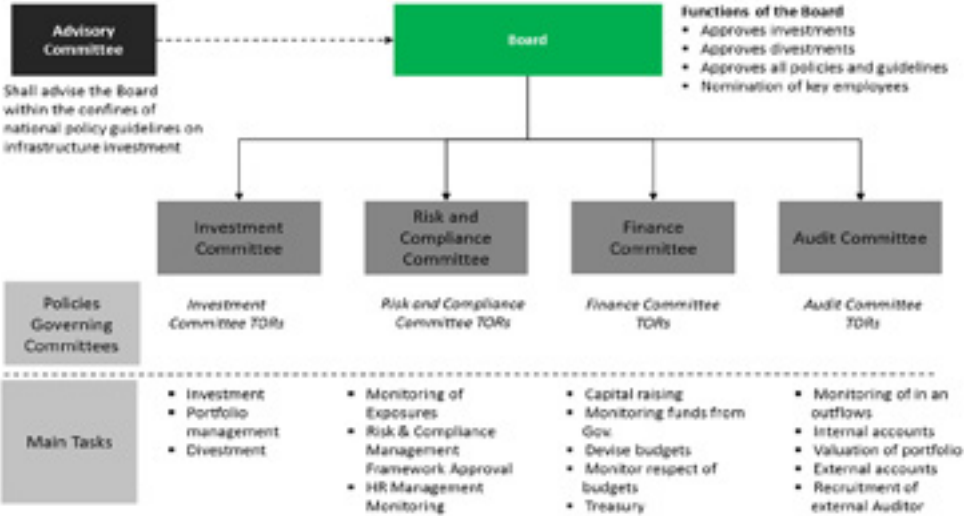
GIIF today holds its entire capital base in local currency. Its 2018–19 pipeline of transactions is mostly based in U.S. dollar loans. Despite the enabling policy guidelines to operate under a dual currency system, GIIF will face an important mismatch in assets and liabilities if the pipeline materializes. The authors believe that as part of the funding strategy, GIIF will make its best efforts to obtain new funding from DFIs and others in hard currency (U.S. dollars). However, the process of implementing the funding strategy and successfully obtaining U.S. dollar funding could take some time. While this process takes place, the Fund is running important currency mismatch risks.

**3. INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE**

**Institutional Structure**

In accordance with the 2014 GIIF Act, GIIF is a body corporate or statutory corporation with perpetual succession and a common seal that can sue and be sued. The Fund’s broad governance structure is outlined in the Act. The Fund shall have an Advisory Committee that will advise the Board on behalf of the GoG with regard to national policy guidance on infrastructure investment, and the Board shall be responsible for attaining the objectives of the Fund, making operational policy, and supervising management of the Fund. The third layer of the organization is the management and officers of the Fund, who oversee the day-to-day functioning of the Fund under the policy direction and programs approved by the Board. GIIF’s proposed organizational structure and governing guidelines at full capacity are outlined in Figure 4.

**Figures 4. GIIF Governance Structure**



Source: Lion’s Head Consulting, 2017.

**Reporting Lines within National Government**

In accordance with Section IV of the GIIF Act, the Fund shall be independent in the performance of its

122 GIIF, Investment Policy Guidelines, approved by the Board on April 6, 2017.

functions. However, it shall be accountable to the Minister of Finance on the achievement of its objectives and compliance, as set out in the Act and in the guidelines of the Fund.

Given that the Fund is wholly owned by the GoG, members of the Board are appointed by the President in accordance with Article 70 of the Constitution. In addition, as established within the GIFF Act, the Advisory Committee shall be comprised of the following members: the Chairperson, who is the Minister of Finance; the Governor of the Bank of Ghana; the Director-General of the National Development Planning Commission; and two persons from the private sector to be appointed by the President in accordance with Article 70 of the Constitution. The Fund's current Board Members and Advisory Committee members are outlined in Table 5.

**Table 5. Members of the Board and Advisory Committee**

Members of the Fund's Board	Members of the Fund's Advisory Committee
<b>Chairperson</b> – Prof. Christopher Ameyaw Akumfi	<b>Chairperson</b> – Minister for Finance
<b>Chief Executive Officer</b> – Mr. Solomon Asamoah	<b>Member</b> – Governor of Bank of Ghana
<b>Member</b> – Mr. Tweneboah Kodua Fokuo	<b>Member</b> – Director General of the National Development Planning Commission
<b>Member</b> – Ms. Yvonne Sowah	<b>Member</b> – Ms. Patience Akyianu – MD, Barclays Bank
<b>Member</b> – Mr. Kofi Boakye	<b>Member</b> – Dr. Ernestina Fredua Anto
<b>Member</b> – Ms. Cecilia Gambrah	
<b>Member</b> – Mr. Agyenim Boateng	
<b>Member</b> – Mr. Yaw Odame	
<b>Member</b> – Ms. Nana Afua Kyerewaa Ababio	

Source: GIFF's senior management, 2017–18.

## Staff and Training

Currently, the Fund has eight staff employees: Chief Executive Officer (CEO); Deputy CEO and Chief Financial Officer (CFO); Principal Investment Officer; Senior Finance Manager; Admin/HR Assistant; Office Manager; Analyst; and Driver. Recruitment is ongoing for additional 12 staff positions, which include investment officers, legal staff, analysts and IT personnel. Once the Fund is fully operational, it plans to have a team of about 30 staff.

## Appointment of Chairman, CEO, and CFO

The appointment of the CEO took place following a competitive global search. Presidential approval for the appointment of the CEO took place in April 2017, in accordance with Article 195 of the Constitution. GIFF's CEO, Solomon Asamoah, is an investment professional with over 25 years of experience originating and executing transactions in both development and developing markets. Before assuming his role as CEO, Mr. Asamoah served as Vice President for Infrastructure, Private Sector and Regional

Integration at the African Development Bank. Other previous positions held include Deputy CEO and Chief Investment Officer of the Africa Finance Corporation (AFC); Vice President for Private Sector and International Investments at the Development Bank of Southern Africa (DBSA); and Special Assistant to the Executive Vice President of the International Finance Corporation (IFC) and Managing Director of the World Bank.

The Chief Risk Officer (CRO) and the Chief Investment Officer (CIO) positions have yet to be filled, and until they are, senior management will “double up” on duties. For example, the Fund’s CEO currently serves as the CIO. However, once candidates have been selected, these positions will need approval by the Board of Directors. In accordance with Article 195 of the Ghana Constitution, Ghana’s President has the power to appoint other staff that are necessary for the proper and effective performance of the functions of the Fund. However, this authority can be delegated by the President to the Board.

In terms of training for staff, the Fund does not have a corporate training plan in place now. However, there is budget available for individuals to seek training opportunities, as appropriate. Thus far, no staff member has taken up this opportunity.

#### 4. OFFERING OF FINANCIAL PRODUCTS

##### **Types of Financial Products Offered by the Fund**

Per the GIIF Act, GIIF was given one of the broadest ranges of financial products to be offered in support of infrastructure development in Ghana. GIIF can provide the full range of options from debt to equity to credit derivatives. Table 6 illustrates the range and depth of GIIF’s potential product offerings. As an institution in the early stages of development and with a very limited professional staff, GIIF is still in the product development stage. However, for the first six investments it has kept it simple with debt and equity instruments only being utilized to date. The rationale for GIIF’s equity interest is strong. Apart from the strong financial returns obtainable, GIIF’s equity presence in a private infrastructure project could help the implementation of the “last mile” project requirement (regulations, permits, licenses, and so on). In addition, many projects usually suffer from a lack of equity, so GIIF will be filling a strategic gap, and will look to play a constructive governance role through a Board seat. At the same time, GIIF could later benefit from successful project implementation by selling its participation at a premium. It could, in theory, consider selling via Ghana’s incipient capital markets, performing a role of market promoter, as do many other public infrastructure funds in other countries.

As GIIF matures, it will be very important to allocate resources to the development of credit derivatives (partial credit and risk guarantees, first loss guarantees, and the like). Leverage impact and promotion of local capital market development will be more effective using credit derivatives. As seen in other case studies, the leverage could increase to four or five times the amount of the risk exposure taken by the Fund. GIIF will need assistance in this area. Not only does it need a good operational track record to enter into this business line, but it would also need a stronger capital base and the development of a contingent liability management system.



**Table 6. GIFF Products**

<p><b>Senior debt products</b></p>	<p>The Fund may provide senior debt either on a stand-alone basis or with one or more co-lenders. The Fund can be a co-lender by joining a predetermined group of co-lenders in a project or through a syndicated deal, structured and negotiated by one or more lead arranger(s) who then share with other co-lenders in the syndicate. The Fund may choose to play the lead role in a syndicated transaction or choose to join in a transaction arranged by a reputable institution.</p>
<p><b>Subordinated debt products</b></p>	<p>The Fund may extend loans that are subordinated to the prior payment of other debt of the beneficiary or subordinated in repayment in the event of the beneficiary's bankruptcy or liquidation (or both). The Fund will require a negative pledge undertaking by the beneficiary to prevent any action that could further subordinate the debt provided by the Fund. The Fund will also require that subordinated loans be backed by appropriate guarantee or security. Such credit enhancements need to be granted and perfected before the first disbursement of the loan.</p>
<p><b>Bridge financing</b></p>	<p>The Fund may offer bridge financing on customary terms to investees on the basis that such financing will either be converted to a term loan consistent with the Fund's investment policy or will be refinanced by another longer-term loan from a third-party financier. Bridge financing will be subject to special provisions regarding project quality and security. Bridge financing will be available only to projects with a better than average risk profile (based on the existing portfolio).</p>
<p><b>Direct equity products</b></p>	<p>The Fund will make direct equity investments in projects or companies investing in eligible sectors. The investment may take a variety of forms, including: a) provision of sponsor equity required to catalyze additional funding to a project within the eligible sectors; or b) subscriptions to ordinary shares or preference shares (or a combination of both) in a project company not necessarily sponsored by the Fund.</p> <p>The Fund may choose to provide equity investments with one or more co-investors. The Fund could perform a lead role in such transactions or could consider joining a syndicate arranged by a reputable institution. In instances where the Fund is an equity-only participant in a project, it is understood that return on equity may be deferred until project debt has been serviced and/or retired.</p> <p>The Fund normally invests with the objective of being an investor for the long term (longer than seven years), but it may, in exceptional cases, be an investor for the medium term (three to seven years). The Fund should incorporate appropriate and credible exit strategies into its investment proposal, designed so that it may exit when a reasonable price can be achieved, and it is satisfied that its role has been accomplished.</p>

<b>Indirect equity investments</b>	The Fund may selectively make equity investments through financial intermediaries, such as equity funds, choosing those managed by professional managers with a minimum of a three-year track-record in infrastructure financing in Africa focusing on eligible sectors as defined in the Investment Policy Strategy (IPS). The Fund will take an active role in training external fund managers with less than five years' experience.
<b>Refinancing</b>	<p>The Fund will offer debt refinancing to eligible projects. The debt to be refinanced should not include a prior portion of the Fund's debt on a project unless the prior debt was a bridge finance. Refinancing projects must meet the same project selection criteria as other projects.</p> <p>In instances where the Fund invests both equity and debt in the same project or related projects, it is subject to the exposure limits and provisions of the Investment Policy Strategy (IPS). The investment appraisal and monitoring guidelines of the Fund provide guidelines and procedures to be adhered to to manage any conflict of interest that would arise.</p>
<b>Risk Mitigating Instruments</b>	GIIF may offer credit enhancement products such as partial credit risk guarantees, payment guarantees (to guarantee payment obligations of government off-takers), and refinancing guarantees.
<b>Management Services</b>	The Fund has the right to manage assets entrusted to the Fund. The Fund will offer asset management services or other forms of services as pre-agreed from time to time and in line with the Investment Policy Strategy (IPS).

Source: GIIF's senior management, 2017–18, based on GIIF Investment Policy Strategy, 2017.

## **Project Preparation (Technical Assistance)**

As has been the norm in all the case studies done for developing countries, Ghana also suffers from weak capacities at contracting agencies (CAs) such as line ministries, state-owned enterprises, and public agencies to be able to prepare good and financeable infrastructure projects (whether public projects or PPPs). Capacities at the central PPP Unit at the MoF are also limited. This situation limits the origination of a project pipeline for the Fund, which could in turn hamper GIIF's efforts to promote infrastructure development in the country. In time, GIIF's senior management plans to set up a Project Preparation Unit within the Fund to provide technical assistance services to CAs in the structuring of infrastructure projects (public or PPPs).

The authors believe that such strategy is a must in a country like Ghana. GIIF will need to have access to resources outside its own balance sheet to face the challenge of providing good technical advice to contracting agencies. Besides having the capacities (institutional and financial) to attract and pay experienced staff, GIIF will need to have access to donor funding earmarked for this purpose. Good project preparation capacities will help GIIF in its strategic pursuit of becoming the partner of choice of both private and public sector for infrastructure development projects in Ghana.

## **Pricing and Conditions**

GIIF's terms and conditions for financing apply market-based principles. They consider the commercial and macroeconomic risks of each project, the cost of the funds to GIIF, and the need to earn an appropriate return. Per GIIF's Investment Policy Strategy (IPS), the Fund's pricing will evolve with changes in local and international capital markets. However, it shall not be set below market rates where they are available, in order not to crowd out the private investors. GIIF may extend longer tenors than the private vehicles ordinarily can.

Section 2 discussed the issue of multiple currency financing and the authors' views on the potential risk mismatch of such strategy. Part of the reason for the market demand of U.S. dollar financing is the underdevelopment of local financial markets. Local currency financing is very expensive for the needed tenors, or even nonexistent (for tenors longer than seven or eight years). For tenors between five and seven years, cedi financing could carry interest rates between 20 percent and 30 percent. Few infrastructure projects can generate rate of return with such a high cost of capital. Even at tenors of eight years, some infrastructure projects cannot fully repay the capital. In these cases, project sponsors prefer the eight-year U.S. dollar financing and refinance at maturity. They prefer to run the refinancing risk in hard currency and avoid the high cedi interest rates.

Except for in the case of bridge financing, GIIF will invest long term. Tenors for debt investments will be between five and twenty years. In addition, GIIF can apply a grace period to a borrower's principal when a debt instrument is provided. Grace periods will vary from project to project, but cannot exceed 24 months from the date of disbursement. GIIF allows the practice of co-financing through loan participation and loan syndications. GIIF has set a hurdle rate at 2.5 percent real return in U.S. dollars, and the real return target of 5 percent in U.S. dollars (net of operating costs).

## **Analysis of the Breakdown of Products in the Fund's Portfolio**

As of March 31, 2018, GIIF's portfolio and pipeline is comprised of seven investments, of which two have been fully disbursed or partially disbursed (the Ghana Airport Company Limited Capital Investment Program and the Maaha Beach Resort, respectively). Table 7 outlines the Fund's portfolio and pipeline deals.

Table 7. GIIF Portfolio and Pipeline Deals

Project name	Sector	Amount approved per instrument (senior debt, equity, etc.)		Total project cost
		Debt	Equity	
Ghana Airports Company Limited Capital Investment Program <sup>a</sup>	Transportation	US\$30 million	n.a.	US\$450 million
Maaha Beach Resort <sup>a</sup>	Tourism	US\$4 million	US\$4 million	US\$16.7 million
Western Corridor Fibre Project	Telecommunications, media, and ICT	US\$26 million	US\$8 million	US\$ 42 million
Atuabo Power Project	Energy	US\$15 million	US\$15 million	US\$70 million
Takoradi Port Expansion Project(s)	Transportation	US\$42 million	US\$23 million	US\$450 million
Rotan Power Project	Energy	n.a.	US\$5.5 million	US\$1 billion
Platinum Plaza Project	Tourism	n.a.	US\$15 million	US\$116 million
	<b>Subtotal</b>	<b>US\$117 million</b>	<b>US\$70.5 million</b>	
	<b>Total</b>	<b>US\$187.5 million</b>		

Source: GIIF, 2018.

Note: n.a. = not applicable.

a. Projects have been fully or partially disbursed.

## 5. SECTOR FOCUS

As discussed, the Act creating GIIF provides the institution with one of the broadest mandates seen in the Global Review. The Fund can invest in almost all economic and social infrastructure sectors. It can invest in public sector projects, private sector projects, and PPPs. It can lend to subnational entities. Infrastructure or infrastructure-related projects that are eligible for support under GIIF are classified into sectors under two categories: economic infrastructure, or those sectors that contain infrastructure that promotes economic activity; and social infrastructure, or those sectors that include infrastructure that accommodates social services.

- **Economic infrastructure sectors:** Energy; transportation; telecommunications, media and ICT; agribusiness; heavy industry; oil and gas; mining and associated services; and tourism.
- **Social infrastructure sectors:** Health; education; water/waste services; social housing; sports and cultural centers; and municipal and local government facilities.

### Breakdown of the Portfolio by Sector

Currently, the portfolio of seven projects includes two committed projects and five pipeline projects,

which are comprised of both equity and debt investments in the transportation sector (2); tourism sector (2); energy sector (2); and telecommunications (1). These projects represent four regions: Greater Accra, Western, Northern and Volta region. They are summarized in Table 8.

**Table 8. Current Projects by Sector, Type of Financing, and Region**

Project	Description and financing
Ghana Airport Company Ltd (GACL) Capital Investment Program	<p>The GACL program involves the development of a new terminal at Kotoka International Airport (KIA) in Accra and rehabilitation and upgrade of other airports and aerodromes managed by GACL, including Kumasi, Tamale, Ho and Wa Airports. This project has been fully disbursed.</p> <p>Debt: US\$30 million</p>
Maaha Beach Resort	<p>3-star multipurpose beach resort with 121 rooms at Anokyi near Atuabo in the Ellembele District of the Western Region of Ghana. This project has partially been disbursed.</p> <p>Debt: US\$4 million</p> <p>Equity: US\$4 million – Percentage ownership: 12.75%</p>
Atuabo Power Project	<p>The project consists of the development, financing, construction and operation of the first phase of a 31-MW open/simple-cycle gas turbine power plant to be located at Atuabo, in the Western Region.</p> <p>Debt: US\$15 million</p> <p>Equity: US\$15 million – Percentage ownership: 45%</p>
Rotan Power Ltd	<p>The project involves the development of a combined cycle gas turbine capable of generating 660MW of electric power at Aboadze in an existing power enclave in the Shama District of the Western Region.</p> <p>Project Development</p> <p>Equity: US\$5.5 million – Percentage ownership: 10%</p>
Takoradi Port Expansion Project	<p>The project entails the expansion of the inland container depot, and development, finance, construction, and operation of a new container handling terminal and multipurpose terminal under a concession agreement with the Ghana Ports and Harbours Authority (GPHA).</p> <p>Debt: US\$42 million</p> <p>Equity: US\$23 million</p>

Western Corridor Fiber Optic Project	<p>The project involves the development, finance, construction, and operation of an ultra-modern backhaul/broadband communication infrastructure, involving the laying of 881 km of in-land fiber optic cables for an extensive broadband network through Takoradi–Atuabo–Kumasi–Sunyani and Ho–Akosombo, as well as the upgrading of that existing 973 km OPGW Gridco Fibre Network to connect Accra–Akosombo–Cape Coast– Takoradi–Kumasi–Kintampo.</p> <p>Debt: US\$26 million</p> <p>Equity: US\$8 million – Percentage ownership: 40%</p>
Platinum Plaza Project	<p>The project involves the designing, development, finance, construction, and operation of a 5-star upscale business hotel and serviced apartments at Airport City 1 within the development scheme of GACL.</p> <p>Equity: US\$15 million – Percentage ownership: 41%</p>

Source: GIIF, 2018.

## Project Types

Per GIIF’s Investment Policy Strategy, the Fund may invest in non-recourse or limited recourse projects for public or private infrastructure or infrastructure-related investments; commercially viable infrastructure projects of state-owned enterprises; as well as partnerships in infrastructure projects through strategic investment vehicles such as special purpose vehicles, joint ventures or public private partnership arrangements. The Fund may also invest in projects where the Fund has full recourse to the beneficiary’s assets, where the proceeds are used to develop an infrastructure project by the beneficiary. The Fund may also provide a loan with the credit support of a third party (for example, recourse to designated assets, the balance sheet of the sponsor, a bank guarantee, or other risk enhancement provided by a public entity). Furthermore, the Fund may invest as a limited partner in investment funds focused on eligible infrastructure sectors in Ghana.

## 5. GIIF’S STRATEGIC PLAN

Ghana faces significant challenges in financing much-needed infrastructure. While acknowledging the limitations of government to finance all of Ghana’s infrastructure needs, the GoG developed an investment vehicle, GIIF, to leverage capital from other sources for infrastructure development in Ghana. To support the GoG, a technical assistance project was launched by the World Bank (supported by PPIAF) in 2015. The two-phased project sought first to understand the demand for GIIF’s services and determine an optimal structure for the Fund, and second to help the government develop the Fund. The deliverables of Phase I were regulations for an appropriate governance structure, as well as policies and procedures in line with international best-practice. The key policy deliverable was the development of the Fund’s Investment Policy Strategy. Table 9 outlines the policy and guidelines developed under Phase I and outlines the key features of each. All policies and procedures were approved by the Board. The deliverables for Phase II included the development of a business plan and financial model for the Fund.



PPIAF contracted external consultants, Lion’s Head Consulting, to undertake the engagement. The first phase was executed from February 2015 to December 2016, and the second phase commenced in May 2017 and was completed in April 2018.

**Table 9. Policy Framework Completed under Phase I**

Policy or Guidelines	Key Features
Investment Policy Statement	<ul style="list-style-type: none"> <li>▪ Defines Investment Strategy (Sectors, Products etc.)</li> <li>▪ Defines broad exposure limits</li> </ul>
Investment Guidelines	<ul style="list-style-type: none"> <li>▪ Lay-out Investment Process and Documentation</li> <li>▪ Include Project Submission and Due Diligence Guidelines</li> </ul>
Risk Management Policy	<ul style="list-style-type: none"> <li>▪ Establishes Risk Management Framework (incl. internal rating system)</li> </ul>
Management Incentive Policy	<ul style="list-style-type: none"> <li>▪ Defines Incentive Based Compensation of Fund Management Team</li> </ul>
Fund of Funds Investment Guidelines	<ul style="list-style-type: none"> <li>▪ Defines Investment Process for Fund of Funds investments</li> <li>▪ Outlines due diligence and ongoing support</li> </ul>
Portfolio Management Policy	<ul style="list-style-type: none"> <li>▪ Defines ongoing monitoring and support for direct investments</li> </ul>
Human Resource Manual	<ul style="list-style-type: none"> <li>▪ Defines processes for hiring and management of staff</li> </ul>
Valuation Policy	<ul style="list-style-type: none"> <li>▪ Defines the process and methodology for valuing on-going investments</li> </ul>
Communication Policy	<ul style="list-style-type: none"> <li>▪ Defines the roles and responsibilities of Fund staff in terms of external and internal communication</li> </ul>
ESG Policy	<ul style="list-style-type: none"> <li>▪ Sets as guiding principles the relevant IFC and World Bank guidelines: e.g. Equator Principles</li> </ul>
Committee Terms of References	<ul style="list-style-type: none"> <li>▪ Defines processes and memberships for major committees of the Fund</li> </ul>
Asset and Liability Management Policy, Treasury Policy, Liquidity Policy	<ul style="list-style-type: none"> <li>▪ Define processes for management of all investments including cash positions in terms of liquidity and asset and liability matching.</li> </ul>

Source: Lion’s Head Consulting Phase I Completion Report.

Under Phase II of its engagement, Lion’s Head Consulting developed a comprehensive business plan for GIIF as well as a financial model projected over 25 years. Other activities under Phase II included further analysis of product offerings for GIIF, as well as options for raising capital from the private sector. To determine the Fund’s financial viability, the financial model captures the Fund’s portfolio pipeline, and future fundraising and investment, as well as investment and return calculations for debt, equity, and unfunded instruments. The financial model is summarized in Table 10. As of March 2018, Lion’s Head Consulting’s draft financial model produced the following key outcomes after 25 years of operation:

- Fund internal rate of return (IRR): 18.4 percent
- Total debt raised: US\$1.1 billion
- Final book value: US\$5.47 billion
- Final cash balance: US\$2.78 billion
- Minimum cash balance: US\$24.2 million
- Maximum leverage (debt/equity): 74 percent
- Average default rate: 16 percent.

The Fund’s financial projections are based on the following assumptions:

- The Fund looks to raise US\$750 million by 2022 and US\$1.1 billion by 2026.
- The debt terms are expected to approach a spread of 450 basis points (bps) over LIBOR with a 10-year tenor and a 1-year grace period. However, with an increased track record and familiarity with the market, the cost of debt is projected to decrease and settle at 350 bps over LIBOR for

the final debt raised in 2026, with tenors rising to 15 years.

- The model assumes that 100 percent of investment returns are reinvested into the Fund.
- Debt investments are amortizing after a defined grace period, while equity investments begin paying dividends after 5 years.
- GIIIF's revenues will be in the form of cash and rolled-up coupons from debt and equity investments, as well as guarantee fees.

**Table 10. GIIIF's Financial Model (US\$ thousand)**

<b>Income statement</b>	<b>FY2017</b>	<b>FY2018</b>	<b>FY2019</b>	<b>FY2020</b>	<b>FY2021</b>	<b>FY2022</b>	<b>FY2023</b>
<b>Total net revenues</b>	--	12,434	9,841	14,631	64,849	118,475	176,747
Total transaction costs	--	2,574	2,856	1,405	4,348	5,593	4,635
Total operating costs	1,719	5,944	6,057	6,194	6,335	6,480	7,496
Total interest expense	--	--	--	(16,250)	(16,250)	(14,219)	(42,188)
Profit before tax	(1,719)	3,916	927	(9,218)	37,915	92,183	122,429
Net income	(1,719)	3,916	927	(9,218)	37,915	92,183	122,429
<b>Balance sheet</b>	<b>FY2017</b>	<b>FY2018</b>	<b>FY2019</b>	<b>FY2020</b>	<b>FY2021</b>	<b>FY2022</b>	<b>FY2023</b>
Current assets	212,281	173,197	332,589	556,828	466,331	631,801	604,658
Investments	36,000	82,600	173,685	189,778	286,490	406,504	499,375
<b>Total assets</b>	<b>248,281</b>	<b>255,797</b>	<b>506,274</b>	<b>746,606</b>	<b>752,822</b>	<b>1,038,305</b>	<b>1,104,033</b>
Equity	250,000	250,000	250,000	250,000	250,000	250,000	250,000
Retained earnings	(1,719)	2,197	3,124	(6,094)	31,822	124,005	246,433
Guarantee liability	--	3,600	3,150	2,700	2,250	1,800	1,350
Total Debt	--	--	250,000	500,000	468,750	662,500	606,250
<b>Total liabilities and equity</b>	<b>248,281</b>	<b>255,797</b>	<b>506,274</b>	<b>746,606</b>	<b>752,822</b>	<b>1,038,305</b>	<b>1,104,033</b>

Cash flow statement	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	
Cash from operations	(1,719)	3,916	1,985	(9,585)	(4,814)	(2,724)	(24,686)
Cash from investing activities	(36,000)	(46,600)	(92,143)	(18,566)	(99,550)	(124,550)	(99,550)
Cash from financing activities	250,000	--	250,000	250,000	(31,250)	193,750	(56,250)
<b>Cash for the year (net of debt)</b>	212,281	(42,684)	(90,158)	(28,151)	(135,614)	(183,524)	(180,486)
<b>Cash for the year</b>	212,281	(42,684)	159,842	221,849	(135,614)	66,476	(180,486)
Cash B/f	--	212,281	169,597	329,439	551,288	415,674	482,151
Cash c/d	212,281	169,597	329,439	551,288	415,674	482,151	301,665

Source: Lion's Head Consulting 2018.

Note: These are projected figures based on the assumptions of the external consultant. They do not reflect figures from financial statements. B/f = brought forward (from prior year); c/d = carried down (at the end of year).

## 6. FISCAL MANAGEMENT

- Is the Fund included under the fiscal rules, budget and/or debt target?**  
 GIIF is fully owned by the MoF and as such consolidates with the GoG fiscal numbers with respect to fiscal rules and targeting. Since Ghana has been in a program with the International Monetary Fund (IMF) since 2015, it is very probable that because the Fund does consolidate, the MoF changed the original funding policy that had GIIF depending on public sector budget allocation.
- Does the public-sector act as the lender of last resort?**  
 GIIF is currently owned 100 percent by the GoG, so there is some implicit backing of the institution. However, GIIF's loans and investments are not explicitly guaranteed by the MoF, meaning that any bad debts or impairments (as well as any eventual borrowings by GIIF) will not necessarily be supported by the MoF. Implicitly, however, in the event of systemic risk, the MoF does act as the "lender of last resort" to the Fund.
- Does the public-sector procurement and oversight mechanism apply to the Fund?**  
 Yes, GIIF adheres to the public procurement process of state-owned institutions in Ghana. It has certain flexibility with respect to staff rules because employees of the Fund are not considered civil servants.
- Description of the link between the Fund and the public budget process.**  
 As mentioned in Section 2, currently, after the change in GIIF's funding strategy by the MoF, the Fund is not dependent on public sector resources. However, the Act that created GIIF has not yet been amended. Under the Act, the GoG would contribute every year from the public budget process an amount equivalent to 2.5 percent of the value-added tax, as well as portions of the Annual Budget Funding Account (ABFA). Until the Act is amended, GIIF is dependent on public budget resources.

- **Does the Fund or its parent institutions (such as the Ministry of Finance) have a risk management policy in place for public funding exposure?**  
It does not seem as though the MoF has a risk management policy in place for GIIF. GIIF has developed a risk management policy approved by its Board in 2017. GIIF is a very young institution still in the development phase. The underdevelopment of the local financial markets in Ghana has put pressure on the Fund to allow for dual currency financing (in U.S. dollars and cedi). GIIF is currently a 100 percent cedi-funded institution. There seems to be a lack of a mechanism to manage the mismatch between assets and liabilities when operating in two currencies.
- **Does the Fund report all its fiscal information per IMF’s Government Finance Statistics Manual and Fiscal Transparency Code?**  
GIIF does report periodically to MoF. The numbers consolidate with the GoG fiscal management numbers and reports to IMF as per their standards.
- **Is there a contingent liability strategy or policy guideline in place?**  
Neither the MOF nor the GIIF has a contingent liability strategy in place for infrastructure development government obligations. GIIF has only closed two loan operations in U.S. dollars for 38 million. As the Fund matures and starts offering guarantees, GIIF’s senior management is committed to strengthening its risk management procedures and creating a contingent liability mechanism.
- **What are the fiscal reporting and oversight mechanisms?**  
GIIF reports periodically its progress and financial results to MoF. The Minister of Finance is the Chairman of the Fund’s Advisory Board, which provides strategic guidance.

## 7. CLIMATE CHANGE CONSIDERATIONS

The Act establishing GIIF does not include special consideration for climate change nor does GIIF have a current strategy to incorporate such a specific investment approach in the immediate future. However, the Fund is open to discussion. Currently, any type of climate change consideration in GIIF’s investments will occur through the Fund’s consideration of environmental and social issues in the selection of its investments. In terms of climate change-focused investments, GIIF does not foresee differentiating between investments related to climate change mitigation and investment related to climate change adaptation.

## 8. RISK MANAGEMENT

GIIF is still in the process of implementing its risk management framework. GIIF’s risk management framework is guided by its Risk Management Policy, which is approved by the Board. GIIF’s risk management policy recommends three lines of defense: Front Office, Risk and Compliance Department, and Audit. The first line of defense resides with the GIIF staff, as they are responsible for assessing potential investments based on the risk limits and guidelines set out by the Fund. The second line of defense lies within the Risk and Compliance Department, which is responsible for dissemination, sensitization and compliance of the Risk Management Policy. The third line of defense is the internal audit mechanism, which is the Fund’s independent oversight function that reviews the first and second line of defense and offers recommendations for change. GIIF’s Risk Management Policy is approved by the Board and is subject to revision on an annual or more frequent basis, as is required by business, market, or regulatory changes.

The Fund will maintain a Risk Appetite Statement (RAS), which is a strategic-level management tool that outlines GIIF’s appetite for risk at both the Fund and sub-Fund levels for all the main risk types. The Risk Appetite Statement is approved by the Board and provides the foundation for which risk limits at an operational level are developed.

At the operational level, GIIF’s risk rating process quantifies the risks to the Fund’s operation and monitors the identified risk in relation to GIIF’s overall risk appetite. The risk categories used to assess proposed projects are outlined in Table 11. Detailed descriptions of the associated risk rating system for each risk category can be found in the Fund’s Risk Management Policy. GIIF will maintain a risk rating system that will be updated periodically and will be assessed through scenario analyses. In the event of a breach to the Risk Appetite Statement or a risk limit, where a preapproved exemption does not exist, the occurrence must be escalated to the Chief Risk Officer (CRO) as well as the Investment Committee for review and remedial action.

**Table 11. GIIF Risk Categories**

Type of risk	Description/Purpose
Environmental and social risk	Generating an investee profile for a range of environmental and social risks to quantify positive and negative impact.
Credit risk	Assessing creditworthiness and probability of loss as well as loss given default.
Market risk	Understanding sector-specific and broader market factors that would affect the performance of the Fund.
Country risk	Capturing extraneous political/governmental risk and other risk of force majeure.
Development risk	Calculating loss of economic value due to adverse changes in the development of a project.
Operational risk	Maintaining an understanding of internal GIIF risks and their potential effect on the performance of the Fund.
Reputational risk	Recognizing the possibility for reputational damage in media and as a result of investments/other Fund activity.
Funding and liquidity risk	Planning asset and liability management to ensure prudent approach to maintaining liquidity buffers and other risk-mitigating processes.

Source: Lion’s Head Consulting, Proposed Risk Management System, 2017–18.

## 8. CREDIT RATING OF THE INSTITUTION

Given its early stages of development, GIIF does not yet have a credit rating. The Fund needs to complete the audit of its financial statements (2015–17), and will also need to develop a better track record of operations and fully implement the risk management framework, information systems, and asset management models. For this, GIIF needs to ramp up the amount of talent in the institution (currently three officers), and get to financial closing in the five transactions under development. During this process (two to three years), GIIF must maintain good financial behavior and avoid any risk to its reputation. The achievement of a solid credit rating (at least in local currency) will be key to GIIF’s funding strategy. This is an area where the Fund could use some earmarked technical assistance.

## 9. LESSONS LEARNED AND KEY CHALLENGES AHEAD

### Early Stages of Development

GIIF was created in July 2014, but because of elections and the political transition in late 2016, the

Fund's more realistic start was in 2017. GIIF has closed two investments to date. With this limited operational experience, it is difficult to draw lessons learned. However, senior management has rightly indicated two relevant factors to recognize in its first year of operation:

- **Low profile.** GIIF believes that in the early stages of the development of its operational experience, it is key to maintain a low profile as an institution, avoiding all possibilities of reputational risk. Rather than promote an aggressive offering of the Fund's financial support to infrastructure, it is wiser to focus on the institutional strengthening of GIIF, implement the internal processes and safeguards to be able to operate efficiently, and spend time profiling and selecting investment opportunities.
- **Highly selective initial investments.** In two to three years, GIIF will be judged by the impact and quality of its initial investments. The market assessment of these initial investments will influence strategic issues affecting the Fund's future, such as its credit rating, access to long-term funding, and trust by private investors. It is very important that the Fund selects the initial investments it will be financing under full financial and economic scrutiny. It is very relevant for the future of the Fund that GIIF avoids at all cost political interference and being "seduced" by the political establishment into quick decisions for politically motivated projects. After all, GIIF is today a fully funded institution with the cedi equivalent of approximately US\$300 million in cash. This fact, in any developing country, for a fully state-owned financial institution, constitutes an important political temptation.

Despite its early stages, the challenges that GIIF faces are very common to most of other PIFs in the developing world. The way in which the following challenges are addressed will determine the future performance of GIIF as a public infrastructure fund.

### Future Funding Strategy

Ghana will demand US\$81 billion in infrastructure in the 2018–26 period, according to the MoF's recent study on infrastructure demand. This was the rationale for creating the National Policy on PPPs. Ghana will need, at a minimum, to sustain public infrastructure investment of US\$1.5 billion per year. The amount of required yearly public sector infrastructure spending is five times the current capitalization of the GIIF. Even under a heavily scrutinized project and credit analysis process, GIIF will commit its current capitalization in a very short period. Considering that the Fund already has US\$34 million committed, and currently has five different infrastructure projects in preparation with accumulated commitments of US\$187.5 million, GIIF would be 75 percent committed by end-2018.

With the change of public policy considerations by the MOF in its the funding strategy for the Fund, the GIIF is obliged in the very near term to find new funding sources. GIIF, under the sponsorship of PPIAF, is already working with consultants Lion's Head (UK) in the development of the Fund's Strategic Plan and Funding Strategy.

The Strategic Plan, scheduled for delivery at the end of April 2018, is a very important piece of the implementation of GIIF's new funding strategy. However, it is only the initial piece. GIIF will need to strengthen its institutional capacities by:

- Beefing up the staff structure with talent and expertise. As mentioned, with only three officers, even subcontracting all the analytical and procedural work at the Fund with vendors has its limits. There is only so much supervision and oversight that three persons can perform on the subcontracted work.
- The consultants (Lion's Head) completed the first phase of the institutional support assignment



to GIIF (policies, systems, and procedures to operate the Fund) in 2017, and the Board has approved each policy document. The package of proposed processes and policies comprising GIIF's institutional framework included: asset and liability management policy; liquidity policy; treasury policy; environmental safeguards; external funds management policy; human resource policy; investment guidelines; risk management policies; valuation policies; and terms of reference for the structuring of the different management committees (treasury, investment, risk, and so on). All this advisory work needs to be implemented now and the staff responsible for the oversight need to be hired and trained.

- Closing successfully in most of the five projects under consideration in its pipeline is necessary for GIIF to build a solid operational track record. These five projects are all sponsored by the private sector. Some of them include the presence of a foreign investor. GIIF has the opportunity, as it is still in the early stages, to build a solid reputation as the “preferred” partner for infrastructure development in Ghana.
- GIIF will require a solid credit rating in local currency, particularly as it evolves toward financial autonomy. This is a work in process as GIIF moves to consolidate as a financial institution in Ghana. As it stands now, the 100 percent ownership by the GoG, and its implicit “lender-of-last-resort” role, would play positively in granting GIIF the same global credit rating of the sovereign. At the same time, the change in the MoF funding strategy toward GIIF needs to be documented by an amendment in the original Act, that clearly states the Fund's complete independence from the national budget process (giving up access to the 2.5 percent of the VAT revenues). Rating agencies might interpret the decision negatively given the early stage of the institution's development.

Access to new funding is probably the most important challenge that GIIF faces in the short term. To access loan and/or equity financing from DFIs, GIIF needs to achieve many milestones that without clarity in the future funding will be difficult to reach. It is a classic case of the “chicken-and-egg” dilemma. The authors estimate that GIIF could use some solid advice from the technical assistance units of development finance institutions (DFIs) in the Fund's pursuit of an effective funding strategy for 2019–21.

### **Governance (Incorporating DFIs in the Equity Ownership)**

In the process of compiling the PIF Global Review, one of the important lessons learned has been the importance of early involvement by development finance institutions in the equity ownership of the institution. DFI participation has fulfilled many roles that have facilitated the development of public infrastructure funds in the early stages. DFIs have brought access to long-term financing sources and international prestige. More importantly, DFIs have brought strong governance procedures by way of credit and risk management processes, procurement procedures, investment guidelines, contingent liability management, and strong shareholders agreements limiting the discretion of the public sector partner. DFI equity ownership mitigates the risk of political interference and biased project selection.

GIIF's senior management is conscious of the Fund's current limitations, and would like to explore a strategy to incorporate at least one DFI in the equity structure of the Fund within the next 18 months. The authors believe that, as difficult as it seems now, the incorporation of a DFI in GIIF's equity structure is a strategy worth pursuing. In this area, as well, the authors believe that solid advice from DFIs' technical assistance units will be needed.

### **Project Preparation Facility**

GIIF's senior management views on the need to become an active player in the project preparation and capacity-building aspects of infrastructure development in Ghana are sound. Contracting agencies in

Ghana will need the advisory support to prepare “good” financeable projects, and GIIF could benefit from securing a financeable inventory of infrastructure projects. In addition, providing this type of advisory service, GIIF will strengthen its role as preferred partner for infrastructure development with both private and public sector sponsors.

To develop this advisory role, GIIF will require strong human resource talent and access to soft funding. Based on the experience of other PIFs, the authors believe that GIIF together with the GOG could build a strong case for donor grant financing to fund a project preparation facility managed by the Fund. This would allow GIIF a degree of freedom in project selection and would solidify its position as an infrastructure finance player. In this area, too, the authors believe that solid advice from DFIs’ technical assistance units will be needed.

### **Development of Local Financial Markets (New Product Development)**

Ghana’s local financial markets are still underdeveloped. This situation is contributing to the increase of mismatch risk among local financial institutions. This mismatch of loans expressed in U.S. dollars for projects that can only generate local currency (cedis), coined in the 1990s as the “capital sin” in developing countries, is only increasing in Ghana.

As other case studies in the Global Review have shown, one of the most important roles that public infrastructure funds perform is to promote the development of local financial markets. Because of their own business interests (as opposed to a focused policy decision), PIFs push for the incorporation of new local investors in the infrastructure finance product category, and for the attraction of global institutional investors into their local capital markets. By developing risk mitigation products (credit derivatives, guarantees, liquidity lines, and the like), PIFs improve the risk-and-return profile of a specific infrastructure investment, increasing investors’ market appetite and potential.

In later stages of its development, GIIF will need to develop new risk mitigation products adapted to the Ghana financial markets. This will allow the Fund to achieve two objectives: to increase the size of the investor’s market willing to finance infrastructure development; and to increase the leverage impact of restricted funding resources for Ghana. The second objective will be critical for GIIF’s effective financial performance. As in the previous challenges, the authors believe that solid advice from DFIs’ technical assistance units will be needed.

### **Risk Management Process (Management of Contingent Liabilities)**

GIIF needs to develop a more robust system to manage the mismatch risk between assets and liabilities, particularly as it goes into 2019 with the potential to have US\$200 million in loan assets and the equivalent of US\$250 million to US\$300 million in cedis on the equity side. Demonstrating that these mismatch risks are fully covered will be critical for GIIF to attain a solid credit rating.

As GIIF becomes mature and starts developing credit derivatives such as guarantees, the institution will need to strengthen its risk management framework. It will need to develop a strong contingent liability management system that can assess credit derivatives risks and assess them as a financial insurer, as opposed to a financial lender. As mentioned, the authors believe that solid advice from DFIs’ technical assistance units will be needed.



This case study was developed between October 2017 and April 2018. It included a field visit to New Delhi, India from February 19 to February 21, 2018. The development of the case study is based on available public information as well as interviews with key senior management at the IIFCL and Senior Officers at the Ministry of Finance. Contributions to the case study were made by Ashraf Boujadine (World Bank Consultant) and Federico Scodelaro (World Bank Consultant), under the supervision of Ellis J. Juan (World Bank Senior Advisor coordinating the Global Review).

# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT

(September 12, 2018)

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## **India Case Study**

### **INDIA INFRASTRUCTURE FINANCE COMPANY LIMITED, IIFCL**

## EXECUTIVE SUMMARY

The India Infrastructure Finance Company Limited (IIFCL) is a public infrastructure fund (PIF) wholly owned by the Government of India (GOI). It is a non-bank financial institution with state-owned corporation status. It is a decentralized entity with financial autonomy. IIFCL was created in January 2006 to provide long-term finance to viable infrastructure projects through the Scheme for Financing Viable Infrastructure Projects, using a special purpose vehicle called India Infrastructure Finance Company Ltd. (abbreviated as SIFTI). IIFCL prioritizes public-private partnership investments and mobilization of private capital. With a balance sheet in excess of the equivalent of US\$6 billion (2017), it is one of the largest PIFs in the developing world.

India has large infrastructure demands to accommodate economic growth, urbanization trends, and more recently, needs for climate change mitigation and adaptation. It is estimated that India will require US\$4.5 trillion in infrastructure investments between now and 2040.<sup>123</sup> IIFCL plays a catalytic role in helping mobilize needed funding resources from both public and private capital sources. IIFCL has been innovative in providing creative financial solutions to make infrastructure investments viable. It offers a wide range of financial products and subsidiaries to support long-term financing to infrastructure projects. IIFCL is one of the few PIFs included in the Global Review that has different vehicles to assist local infrastructure development: IIFC (UK) Ltd provides foreign currency loans for the foreign component of infrastructure projects; IIFCL Asset Management Company Ltd mobilizes local capital market funding; and IIFCL Projects Ltd provides advisory services to contracting agencies and external clients to develop infrastructure projects. IIFCL offers a range of credit derivative products (subordinated debt, first loss partial credit guarantees) that assist in the mobilization of private capital. IIFCL has the largest and most ambitious range of product offerings surveyed in the Global Review.

The main challenge facing the IIFCL is that, even with all the relative success the institution has enjoyed in the last 12 years, its total contribution to infrastructure finance in India is low when compared with the total needs of the country. IIFCL's funding disbursements, from inception to date, to infrastructure development in India amount to the equivalent of US\$8.8 billion from its balance sheet, and approximately US\$40 billion when considering the leverage impact attracting other financiers (equivalent to the total project costs). These numbers are very large when compared with the sample of case studies in the Global Review, but very small when compared to the size of the India's infrastructure market. To better meet the challenge, IIFCL needs to dramatically increase the financial efficiency in the use of its resources, as well as its leveraging capacities. This will require a two-pronged approach by IIFCL. The first prong is to expand and develop the credit enhancement business line, partnering on a longer-term basis with international financial institutions (IFIs) and selected private institutions with an interest in capital markets in India for infrastructure. The second prong is to coordinate efforts with GOI policy-makers and regulators to support a healthy and robust development of capital markets in India.

As IIFCL's Chairman noted in a November 9, 2017 letter to shareholders: "Higher level of economic growth necessitates commensurate increase in infrastructure, as infrastructure sector has strong forward and backward linkages with other sectors of the economy. However, India's infrastructure sector has been reeling under various issues. These include lack of adequate low-cost long-term financing, limited equity & over-leveraged balance sheets of developers, delays in approvals and clearances, delays in land acquisition, incorrect projections in some cases due to inadequate due diligence etc. Of the several challenges faced by the sector, funding remains a key challenge for India and needs to be tackled urgently."

### 1. COUNTRY INFORMATION

#### Brief Description of India

India is the world's sixth-largest economy by nominal GDP – behind France, the United Kingdom, Ger-

<sup>123</sup> Global Infrastructure Hub, 2017, Global Infrastructure Outlook.

many, Japan, China, and the United States. It is the third-largest economy by purchasing power parity (PPP) behind the United States and China.<sup>124</sup>

India continues to be one of the fastest-growing economies in the world. Before the 1990s, growth was low and stable, ranging from 3 percent to 4 percent per year. In the 1990s, India went through an economic liberalization coupled with dismantling of the licensing regime, which led to much higher GDP growth (averaging 7 percent–9 percent in the 1990s and currently at 6 percent–7 percent annually). The stable growth indicates India's sustained economic momentum. The Indian economy has recorded strong growth in recent years, helped by a large terms of trade gain, positive policy actions including implementation of key structural reforms, a return to normal monsoon rainfall, and reduced external vulnerabilities.<sup>125</sup> Economic growth for FY2017/18 is projected to be 7.2 percent (see Table 6).

**Table 6. Economic Indicators, FY2013/14–FY2017/18**

	2013/14	2014/15	2015/16	2016/17	2017/18 estimated
Growth (in percent)					
Real GDP (at market prices)	6.6	7.2	7.6	6.6	7.2
Saving and investment (percent of GDP)					
Gross saving	33.0	33.0	31.3	30.0	29.9
Gross investment	34.7	34.2	32.4	31.1	31.3
Fiscal position (percent of GDP)					
Central government overall balance	-4.6	-4.2	-4.1	-3.8	-3.7
General government overall balance	-7.6	-7.3	-7.0	-6.8	-6.6
General government debt	68.0	68.3	69.8	69.7	68.6
Structural balance (% of potential GDP)	-7.5	-7.2	-6.9	-6.7	-6.5
Structural primary balance (% of potential GDP)	-2.8	-2.5	-2.0	-1.8	-1.7
Balance of payments (US\$ billion)					
Current account balance	-32.3	-26.8	-22.1	-24.1	-34.0
(In percent of GDP)	-1.7	-1.3	-1.1	-1.1	-1.4
Foreign direct investment, net ("–" signifies inflow)	-21.6	-31.3	-36.0	-38.1	-40.2
Portfolio investment, net (equity and debt, "–" signifies inflow)	-4.8	-42.2	4.1	-2.7	-13.9
Overall balance	-15.5	-61.4	-17.9	-15.4	-29.4
External indicators					
Gross reserves (US\$ billion, end-period)	304.2	341.6	360.2	375.6	404.9

<sup>124</sup> World Bank Databank, 2018.

<sup>125</sup> India: 2017 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for India, IMF, February 22, 2017.



(In months of imports)	6.7	8.5	8.6	8.1	7.9
External debt (US\$ billion, end-period)	446.2	474.7	485.0	512.3	553.2
External debt (percent of GDP, end-period)	23.9	23.3	23.4	22.9	22.7
Of which: Short-term debt	9.9	9.1	9.3	9.3	9.0
Ratio of gross reserves to short-term debt (end-period)	1.7	1.8	1.9	1.8	1.8
Debt service ratio	5.9	7.6	8.8	7.8	7.9
Fiscal balance (percent of GDP) <sup>a</sup>	-4.3	-4.0	-3.9	-3.5	-3.5

Source: World Bank Data Bank, 2018.

Note: Data are for fiscal years (FY). The fiscal year runs from April to March.

India's macroeconomic fundamentals remained strong in FY2016/17, with inflation under control. However, rising international crude oil prices and volatility in the exchange rate, along with the U.S. Federal Reserve interest rate hikes and Brexit, have generated uncertainty. The rupee emerged as one of the best performing currencies in emerging market economies.

GDP growth in Q2:FY2017/18 is estimated at 6.3 percent, compared to the same period in the previous year. The best performing economic sectors in 2017 were manufacturing, electricity, gas, water supply, hotels, transport, communication, and services related to broadcasting. They each registered growth of over 6 percent in Q2:FY2017/18. India's service sector is one of the fastest growing in the world and the largest contributor to national GDP. It has been experiencing an annual growth rate of more than 9 percent since 2001 and contributed 53.66 percent of the country's GDP in 2017.

Before the January–March 2017 quarter, India was the fastest growing economy in the world. The slowdown in that quarter caused India to cede the title to China, which grew at 6.9 percent. The slowdown was largely due to the demonetization, which reduced economic activities in both the formal and informal sectors (see Box 1).

#### Box 1. Demonetization, India's 2016 Cash Crisis

In an attempt to fight tax evasion and counterfeiting and to crack down on illegal cash holdings ("black money"), the GOI announced on November 8, 2016 that its 500-rupee and 1000-rupee notes would no longer be legal tender. The measure went into effect immediately after the announcement, although people could deposit their notes by the end of the year, when new 500-rupee and 1,000-rupee notes would be issued.

The move caused large disruptions in the everyday lives of millions of inhabitants. At the time when demonetization was announced, the banned bills made up more than 80 percent of the currency in circulation. In an economy in which 90 percent of the transactions are in cash, and where more than half the population lacks a bank account, the government decision resulted in chaos, with long queues of citizens waiting in line at banks and ATMs to get cash for their daily needs.

The effects of demonetization are still controversial. After the crisis was over, the Central Bank reported that 99 percent of the 500-rupee and 1,000-rupee notes that were demonetized (worth Rs15.28 trillion) returned to the banking system, indicating that the government failed in its aim of eliminating black money from the economy.

The Indian economy has slowed considerably since demonetization. GDP growth for Q1:2017 was 6.1 percent, versus a forecast of 7.1 percent. In Q2, it slowed to 5.7 percent. For the entire fiscal year,

GDP growth was 7.2 percent. Sectors like real estate, manufacturing, and finance have been under stress since demonetization.

Demonetization has had several positive aspects. The use of bank accounts has greatly increased, as has the mobilization into the financial system of large volumes of currency that were previously idle. The adoption of digital wallets for day-to-day transactions has accelerated. And tax payments have increased; 9.1 million new taxpayers have been added to the payroll – an increase that has been credited to demonetization.

Source: Authors' own analysis based on information from media sources (e.g., BBC, The Economist, etc.)

In early 2018, a new scandal threatened growth once again. One of India's largest banks, the state-owned Punjab National Bank, has been involved in a major fraud operation linked to using letters of undertaking (guarantees) for a private consortium of companies in the jewelry business, without an analysis of credit limits and collateral security. In addition, these operations were either not recorded in the core banking system or were recorded at lower amounts than those actually granted. The total amount of the fraud is estimated, at the time of writing, to be the equivalent of US\$1.77 billion, but there are fears that it could be larger.<sup>126</sup> The February 19, 2018 market correction of the capitalization value of local banks was close to Rs2.1 Lakh Crore (approximately US\$3 billion) (see table 2). The effects that this fraud operation could have on the financial system health are as yet unknown.

**Table 2. Indian Currency Equivalents**

Indian rupee (symbol: code: Rs)		
Currency	Number Equivalent	US\$ Equivalent (US\$1 = Rs64.1)
1 Indian rupee	1 Indian rupee = 1 = Re1	US\$0.02
1 Lakh	1 Lakh = 100,000	US\$1,560
1 Crore	1 Crore = 100 Lakhs = 10 million	US\$156,000
1 Lakh Crore	= $1 \times 10^{12}$	US\$1.56 billion

Source: Trading Economics India, February 2018

With 1.324 billion people, India is the second most populous country in the world after China. Despite its high GDP and sustained economic growth, India's per capita GDP is relatively low, standing at US\$1,613 in 2015 (in current US\$).<sup>127</sup> Rising growth has been followed by an increased strain on natural and physical resources.

India has set ambitious growth and development goals. These include the eradication of poverty; food security and nutrition; universal access to energy, education, health, water, sanitation, and employment; and sustainable urbanization. India aims to raise its Human Development Index (HDI) value from its current level of 0.609 to 0.90 by 2030.

### India's Demand for Infrastructure Investment

Higher economic growth needs a commensurate increase in infrastructure spending. According to the 2017 Global Infrastructure Outlook report by Global Infrastructure Hub, India will need to invest US\$4.5

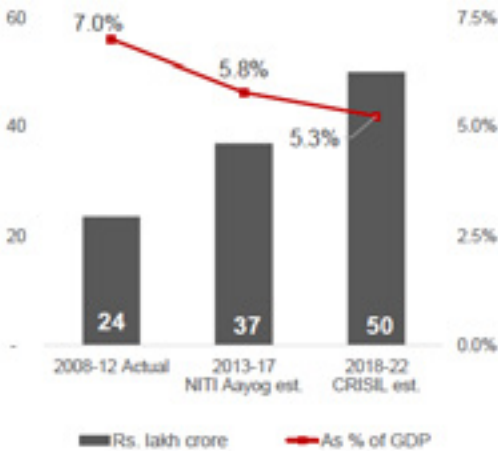
<sup>126</sup> Reserve Bank of India (RBI).

<sup>127</sup> World Bank Databank.

trillion by 2040 for infrastructure – the second largest infrastructure market in Asia after China. Rising income levels and economic prosperity are expected to drive demand for infrastructure investment over the next two decades.

The CRISIL Infrastructure Yearbook 2017 (issued by S&P) estimates a need for an infrastructure investment of Rs50 Lakh Crore (US\$752 billion) between 2018 and 2022, with about 30 percent of this amount needed for the power sector, 20 percent for highways, 16 percent for railways, and 11 percent for the urban sector (Figure 1).

**Figure 1. Infrastructure Spending as a Percentage of GDP**



Source: 2017 CRISIL Infrastructure Yearbook (S&P).

In the World Economic Forum’s Global Competitiveness rankings, India improved from 71<sup>st</sup> in 2014–15, to 55<sup>th</sup> in 2015–16, to 40<sup>th</sup> in 2017–18. Its score improved across most pillars of competitiveness, but it is particularly striking for the infrastructure pillar, improving 15 places from 81<sup>st</sup> in 2015–16 to 66<sup>th</sup> in 2017–18.

Despite this improvement in infrastructure stock, there is still a large gap to cover. India’s constantly growing population, increasing at 1.2 percent annually, places a strain on the country’s natural resources and physical infrastructure and overall sustainability. Significant growth in population constrains the availability of land for agricultural production, and will aggravate demand for food, energy, water, social services, and the related infrastructure.

In addition to overall population growth, the urbanization rate also puts pressure on the infrastructure stock. The populations of Mumbai and Delhi, already the two largest metropolises in India, rose by 3.1 percent and 4.1 percent, respectively, in the 2011 census, when compared to the previous 2001 census.<sup>128</sup> Urban infrastructure markets generated by this phenomenon are massive. According to a McKinsey analysis, India will need to add 700 million–900 million square meters of floor space annually and 350–400 kilometers of metropolitan railways and subways each year until 2025 to meet this urbanization demand.<sup>129</sup>

According to the *Global Competitiveness Report 2017–18*, inadequate supply of infrastructure is the fourth impediment to doing business in India (behind corruption, access to financing, and tax rates).

<sup>128</sup> World Bank Databank.

<sup>129</sup> R. Dobbs and S. Sankhe, “Comparing Urbanization in China and India,” McKinsey & Company, <https://www.mckinsey.com/featured-insights/urbanization/comparing-urbanization-in-china-and-india>.

Pressures on India's fragile infrastructure increased when India's economic growth rate accelerated in the 1990s, as infrastructure development grew at a slower pace. Infrastructure came to be regarded as a major constraint in sustaining the growth process and in attracting foreign investment in India. A higher level of economic growth will demand more and better infrastructure. The infrastructure sector faces a variety of challenges, such as adequate long-term financing, limited risk capital (equity), highly leveraged developers, regulatory hurdles (with respect to rights of ways, expropriation, rebalancing of tariffs, and so on), and weak project preparation.<sup>130</sup>

India faces very high infrastructure demands to reach sustainability levels in basic services (Table 3). About 30 percent of India's population is poor, 20 percent lack proper housing, 92 million people lack access to safe drinking water, and 74 million households lack access to grid-based electricity. An additional 20 million households are underserved, receiving less than four hours of electricity each day. Ensuring access to basic infrastructure for all is a priority for the Government of India.

Regarding roads, only 17 percent of the highway network complies with the four-lane standards. The remainder is comprised of two-lane (53 percent) and single-lane highways (17 percent). In the railways sector, India also faces important challenges (outdated technology, saturated routes, and slow average speeds).<sup>131</sup> Similarly, ports and airports are highly congested and are plagued by operating inefficiencies.

**Table 3. Infrastructure Indicators for the Provision of Basic Services**

Indicator	Score
Access to electricity (as of 2014)	79.17 (% of population)
Electric power consumption (as of 2014)	805.6 kWh per capita
Improved water source (as of 2015)	94.1% of population with access
Improved sanitation facilities (as of 2015)	39.6% of population with access
Mobile cellular subscriptions (as of 2016)	86.95 per 100 people
Internet users (as of 2016)	29.55% of the population
Logistics performance index (as of 2016)	3.42/5
Global Competitiveness Index Infrastructure Score (as of 2015–16) <sup>a</sup>	4.2/7

Source: World Bank Databank, 2014–16.

a. The Global Competitiveness Index (GCI) is published in the *Global Competitiveness Report* and assesses the competitiveness landscape of 140 economies. The GCI Infrastructure Score is a component of the overall index and covers transport, electricity, and telephony infrastructure.

Public-private partnerships (PPPs) have only recently started being used more frequently for infrastructure financing in India. According to the PPP India Database, while less than 100 PPP projects were awarded in the 20<sup>th</sup> century, the trend has accelerated, with 150 PPP projects awarded cumulatively by November 2006, 758 projects by 2011, and 1,339 PPP projects by March 2014. There is an increasing acceptance of the PPP model, catalyzed by policy reforms and innovative PPP structures. In addition, IFCI was founded in 2006, in what is marked as the start of Phase III in the PPP evolution

<sup>130</sup> IFCI 2017 Annual Report.

<sup>131</sup> The average speed is 22 kilometers per hour for freight trains and 50 kilometers per hour for passenger trains.

process. IIFCL played an instrumental role in enabling the expansion of the PPP model. The evolution of PPPs in India is shown in Figure 2.

**Figure 2. Evolution of Public-Private Partnerships in India**



Source: ADB, PPP India Database and Ernst & Young as of March 31, 2014

**Description of the Local Financial Markets**

The Indian financial system has remained broadly stable in terms of GDP. Its size has grown more than twice the size of the country’s GDP since 2011.<sup>132</sup> However, India’s banking sector does not reflect the same strength because of continuous deterioration in asset quality and low profitability and liquidity. Access to financing has been described as the second biggest constraint to doing business in India (after corruption) according to the *Global Competitiveness Report 2017–2018*.

According to the Reserve Bank of India (RBI) *Financial Stability Report*,<sup>133</sup> the gross non-performing advances (GNPAs) ratio for scheduled commercial banks (SCBs)<sup>134</sup> increased sharply to 9.6 percent by the end of March 2017, up 2 percent compared to the previous year. According to the same report, the stressed advances ratio<sup>135</sup> of schedule commercial banks, which stands at 12 percent, declined between September 2016 and March 2017 because of improvements in the agriculture, services, and retail sectors. The overall proportion of loans classed as non-performing went from 4 percent to 9 percent in two years.<sup>136</sup> Consequently, banks credit growth slowed from 9 percent to 7.4 percent during FY2016/17,

132 Financial Sector Assessment for India, October 2017, World Bank Group, Finance & Markets Global Practice.  
 133 RBI *Financial Stability Report*, June 2017.  
 134 This information is from <https://www.google.com/search?q=scheduled+commercial+banks&ie=utf-8&oe=utf-8&client=firefox-b-1-ab> By default, all public sector banks are commercial. The term “scheduled bank” refers to a bank that is listed in the 2nd Schedule of the Reserve Bank of India Act, 1934. Banks not under this Schedule are called non-scheduled banks. Scheduled banks are usually private, foreign, and nationalized banks operating in India.  
 135 This information is from <https://www.indianeconomy.net/splclassroom/what-is-stressed-assets/>. Stressed assets = Non-performing asset + Restructured loans + Written-off assets.  
 136 *Global Competitiveness Report 2017-18*.

while the debt capital markets gained traction.<sup>137</sup> While credit intermediation by public sector banks (PSBs) has retrenched, the financial system diversified by moving transactions to non-banking financial companies (NBFCs) and mutual funds, whose credit intermediation increased significantly, albeit from a low base.

### **Banking Market**

Banks are the main players in the Indian financial system. Banks account for 60 percent of financial system assets, 70 percent of which are held by public sector banks.<sup>138</sup> The market is fairly monolithic, with little differentiation among players.

Banks' share in credit flows fell from 50 percent in FY2015/16 to 38 percent in FY2016/17, as corporates increased private debt placements and issued commercial paper, replacing bank funding with market sources.<sup>139</sup>

### **Capital Markets**

Capital markets in India are still underdeveloped when considering the finance demands and needs. Commercial banks have typically been the dominant player in the financial markets, accounting for nearly 51 percent of the volume, followed by asset management companies managing mutual funds (AMC-MFs), non-banking financial companies (NBFCs), all-India financial institutions (AIFIs), insurance companies, and housing finance companies (HFCs). The key providers of funds in debt markets are the state-owned Life Insurance Corporation (LIC) and the Employees' Provident Fund, which dominate insurance and pensions, respectively.

In particular, there are few institutions working with the infrastructure market, and no targeted products (such as infrastructure bonds) for this market. Credit growth to the infrastructure sector fell by 6 percent in FY2016/17, a 10.4 percent point drop from the previous fiscal year's growth of 4.4 percent.<sup>140</sup> RBI conducted a stress test in 2017 to ascertain credit risk arising from exposure to the infrastructure sector (specifically, in the areas of power, transport, and telecommunications). This credit stress test showed that shocks to the infrastructure segment have a considerable effect on the profitability of banks. The most severe shock (10 percent of restructured standard advances becoming non-performing assets and moving to the loss category) would eliminate the recorded profits of FY2016/17 (see Figure 3).

137 *RBI Financial Stability Report*, June 2017.

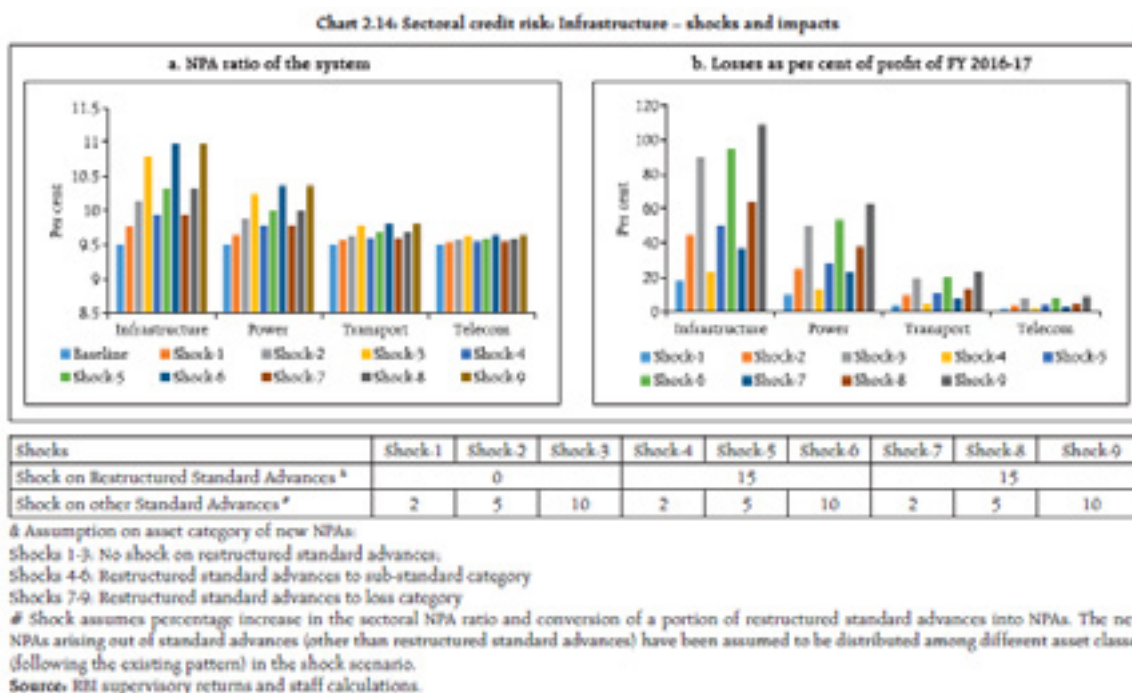
138 World Bank-IMF Financial Sector Assessment, October 2017.

139 World Bank-IMF Financial Sector Assessment, October 2017.

140 RBI Annual report.



**Figure 3. Infrastructure Credit Risk**



Source: RBI *Financial Stability Report*, June 2017.

IIFCL is one of the few institutions providing partial credit guarantees in the market. There is no secondary market in India, although the development of the new National Investment and Infrastructure Fund (NIIF) seeks to fill this gap. Institutional investors such as pension funds and insurance companies are limited to acquiring only AA-rated infrastructure assets (local rating).

### **Policies and Institutions**

The GOI and RBI are conscious of the challenges facing the infrastructure sector, and have been taking proactive steps, such as the development of Infrastructure Debt Funds (IDFs). IDFs complement bank finance for infrastructure as either NBFCs or trusts/mutual funds.

With six IDFs now in operation, the leveraged debt amount (US\$1.94 billion) remains below financing needs. The GOI also recently rolled out its regulatory framework for infrastructure investment trusts (InvITs). They are defined as pooled trust equity investment vehicles to securitize cash flows from operating infrastructure projects. This should free up long-term investment capital and attract long-term institutional investors, along with a favorable tax treatment.<sup>141</sup> RBI has also allowed companies in the infrastructure sector to raise external commercial borrowings with a maturity of at least five years to US\$750 million for borrowing under automatic route. The Securities and Exchange Board of India (SEBI) has allowed foreign investors to invest in units of real estate investment trusts (REITs), InvITs, and corporate bonds under default.

### **Public Institutions Supporting Infrastructure Finance**

Since 2006, when India relaunched its PPP program, several efforts have been made to provide financial support to the infrastructure sector, including cross-sector funds and sector-specific funds. These instruments are briefly described next.

141 World Bank-IMF Financial Sector Assessment, October 2017.

- **Cross-sector infrastructure funds.** The IIFCL, the subject of this case study, is an example of a cross-sectoral infrastructure fund. IIFCL was created in 2006 to provide financial support to infrastructure PPPs at both the national and subnational levels in India.
- **Sector-specific infrastructure funds.** India has developed several non-bank financial institutions to provide financial support to specific sectors. Two interesting examples are the Power Finance Corporation and the Rural Electrification Corporation.
  - o The Power Finance Corporation was incorporated in 1986 as a non-banking financial institution. It specializes in the power sector, where it holds 20 percent of the market share in transactions for generation, transmission, and distribution projects. It has a lean and professionally managed structure, with a strong asset quality and low administrative costs, and is ISO 9001 certified.
  - o The Rural Electrification Corporation is also a state-owned entity created in 1969, during a severe drought, to enable the use of energized agricultural pump-sets for irrigation of agricultural lands, thus reducing the weather risks of food production. It now promotes rural electrification projects across India. It also provides consultancy, project monitoring, and technical appraisal support for projects.
- **National Investment and Infrastructure Fund (NIIF).** This newly created facility (announced in 2015) is jointly owned by the Government of India and investors from India and abroad. While still under development, its objective is to enhance infrastructure financing in India. It was set up as a Trust, to raise debt to invest in the equity of infrastructure finance companies – a sort of “fund of funds.” It also retains the ability to make direct investments as required. Its first investment was made in January 2018.
- **Credit Enhancement Fund.** The Credit Enhancement Fund, proposed by the Ministry of Finance (MoF) in the 2017 budget, may be operational by the end of FY2018. It will help raise the credit rating of bonds floated by infrastructure finance companies and facilitate investments from long-term investors. The Fund will be anchored by IIFCL.

As the Ministry of Finance explained, “To ease the flow of institutional credit to infrastructure projects, what the government has been thinking in this regard is credit enhancement. IIFCL is playing a lead role in that proposed institution. Raising the credit rating of these companies would help easier access to institutional financing.”<sup>142</sup> This is an important public policy step to support development of local capital markets and to steer part of that liquidity toward the long-term funding of needed infrastructure.

### Country Credit Rating and Access to Global Financial Markets

India’s sovereign rating was upgraded by Moody’s in November 2017, moving to Baa2 for the first time since 2004 (Baa3). The outlook on the rating was also changed from positive to stable. Moody’s also upgraded India’s local currency senior unsecured rating to Baa2 from Baa3 and its short-term local currency rating to P-2 from P-3.

Moody’s raised India’s long-term foreign-currency bond ceiling from Baa2 to Baa1, and the long-term foreign-currency bank deposit ceiling from Baa3 to Baa2. The short-term foreign-currency bond ceiling remains unchanged at P-2, and the short-term foreign-currency bank deposit ceiling has been raised to P-2 from P-3. The long-term local currency deposit and bond ceilings remain unchanged at A1.

While the GOI considered the recognition to be an overdue correction, some investors found it surprising, given that India recently surrendered its status as the world’s fastest-growing major economy to China amid sweeping policy change. Moody’s has justified its decision because of the country’s continued progress on a wide-ranging program of economic and institutional reforms, its high growth potential, and its large and stable financing base for government debt.

Most of the economic and institutional reforms are underway. Moody’s consider the reforms implemented to date to be advancing the government’s objectives of improving the business climate, enhancing

<sup>142</sup> Ministry of Finance (MOF), *Indian News Express*, January 6, 2018.

productivity, stimulating foreign and domestic investment, ultimately fostering strong and sustainable growth, and improving global competitiveness.

India still suffers from a high debt burden (68 percent of GDP in 2016) – significantly higher than the Baa median of 44 percent. The impact of this high debt load is mitigated by the increase in private savings available to finance government debt. This has enabled the government to lengthen the maturity of its debt stock over time. The weighted average maturity on the outstanding stock of debt now stands at 10.65 years, and more than 90 percent is owed to domestic institutions and denominated in rupees. Notwithstanding the mitigating factors that support fiscal sustainability, the high public debt burden remains an important constraint in India and it will not diminish rapidly. India's debt-to-GDP ratio should rise by about 1 percent in FY2017 and is likely to remain broadly stable in the next few years, before falling gradually as nominal GDP growth continues and measures enhancing the public spending efficiency takes effect.

Regarding institutional reforms, the GOI's efforts to curb corruption, improve transparency and accountability, formalize economic activity, and improve tax collection and administration (through demonetization and other means) will strengthen India's institutions and strengthen policy credibility.

A key weakness in India's sovereign credit profile lies in its banking system. In response, the GOI has undertaken reforms toward a comprehensive recapitalization of public sector banks (PSBs) and a resolution addressing non-performing loans (NPLs). The rating is expected to go up if the GOI manages to alleviate its general debt burden, through increased government revenues combined with a reduction in expenditures.

### **Country Strategy with Respect to Climate Change**

India has set ambitious goals to achieve sustainability and economic efficiency. Rapid economic development is needed to ensure that India's infrastructure can meet the demands of its growing population. However, climate change needs to be considered in economic growth and development strategies. This is even more the case in the water, agriculture, and forestry sectors of the Indian economy.

India has enacted several measures to counter climate challenges. These include the National Environmental Policy in 2006, which defines the use market measures for environmental regulatory action, and the launch of the National Action Plan for Climate Change (NAPCC) in 2008, which includes eight missions to promote India's climate change mitigation and adaptation efforts. In its twelfth Five-Year Plan, for 2012–17, the GOI set the framework for implementing the NAPCC.

India has signed the United Nations Framework Convention on Climate Change and acceded to the Kyoto Protocol in 2002. The Clean Development Mechanism (CDM), which was established under the Kyoto Protocol, has been very successful in India. CDM allows a country that has committed to emission reductions under the Protocol to implement an emission reduction project, which earns the country certified emission reduction (CER) credits. Since 2005, India has been registering the second highest number of projects for any country.

India also ratified the Paris Agreement, setting an ambitious goal of increasing its renewable power capacity five-fold in seven years, which would make India a clean energy leader. Specifically, it pledged to increase its renewable power capacity to 175 gigawatts by 2022, with 100 GW of solar, 60 GW of wind, 10 GW of bioenergy, and 5 GW of small hydro. India has also set year-on-year targets, which chart a roadmap to achieve the 2022 goal. According to the World Resources Institute, India already exceeded its annual target for wind power in FY2017 (5.5 GW instead of 4 GW) (Figure 4). However, while India increased its new solar capacity 50 percent over the previous year, it has fallen short of its solar target, adding 5.5 GW of new capacity against its 12 GW annual target.<sup>143</sup>

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143 <http://www.wri.org/blog/2017/05/achieving-indias-ambitious-renewable-energy-goals-progress-report>.

**Figure 4. India's Wind Energy Capacity Achievements (2013–17) and Targets (2017–22)**



Source: World Resources Institute blog, <http://www.wri.org/blog/2017/05/achieving-indias-ambitious-renewable-energy-goals-progress-report>.

India's Nationally Determined Contribution (NDC) presents four climate change mitigation goals: (a) reduce the emissions intensity of its GDP by 33 percent–35 percent by 2030 from 2005 levels (and by 20 percent–25 percent between by 2020); (b) achieve about 40 percent cumulative electric power installed capacity from non-fossil-fuel-based energy resources by 2030; (c) create an additional carbon sink of 2.5 billion–3 billion tons CO<sub>2</sub> equivalent through additional forest and tree cover by 2030; and (d) propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation.

Due to the budgetary constraints India is facing, it has been using a mix of private sector mechanisms together with fiscal instruments and regulatory interventions to mobilize finance for climate-change-related activities.

India has set up two types of market-based mechanisms (MBMs): the Perform, Achieve, Trade (PAT) scheme and the Renewable Energy Certificate (REC) scheme:

- The PAT scheme focuses on energy efficiency by setting emission allowances and issuing tradable energy saving certificates (ESCerts), creating a mechanism similar to cap-and-trade for the industries that account for a majority of emissions.
- The REC mechanism focuses on enforcing the state government's obligation to purchase a certain minimum amount of renewable energy.

The Indian government has highlighted the importance of making existing market-based mechanisms more effective in mobilizing a large amount of resources to meet its ambitious NDC targets.

To build domestic capacity to undertake development actions with low-carbon emissions within the country, the Indian government also set up two important funds:

- The National Clean Energy Fund (NCEF) is a carbon pricing mechanism based on the “polluter pays” principle. It came into effect in July 2010. It acts as a carbon tax for coal to encourage the development of clean energy. The 2016–17 rate was Rs400 per ton on coal, whether domestically produced or imported.
- The National Adaptation Fund (NAF) on Climate Change supports climate change adaptation requirements in the country.

The World Bank Group has been active in supporting India’s climate change mitigation objectives through multiple complementary initiatives, including the multinational Partnership for Market Readiness (PMR). The PMR provides grant-based support to assess, prepare, and implement market-based carbon pricing mechanisms. India submitted its expression of interest to the Partnership Assembly (PA) to participate in the PMR in 2012, and was later incorporated as an active member.

With the PMR’s support, the World Bank has provided non-lending technical assistance (NLTA) to help formulate the discussion and preparatory work to scale up climate change efforts. The NLTA was successfully implemented. As a result, the GOI recently submitted its market readiness proposal (MRP) to obtain a PMR implementation grant to achieve some of its ambitious plans for its market-based mechanisms. India’s MRP includes elements such as linking carbon markets and ensuring private sector buy-in for a new market-based mechanism, which would allow it to leverage complementarities across different World Bank initiatives. The successful execution of India’s climate change agenda will further increase pressure (through green investment) on the country’s demand for infrastructure.

## 2. DESCRIPTION OF IIFCL

### Rationale for the Selection of This Case Study

India Infrastructure Finance Company Limited (IIFCL) is wholly owned by the Government of India (GOI). It was set up in 2006 to provide long-term financial assistance to viable infrastructure projects. With a balance sheet exceeding US\$6 billion, IIFCL is one of the largest PIFs in emerging markets today.

IIFCL was, arguably, the first-of-its-kind government-owned institution that borrowed from the market and international financial institutions, managing the risks in such a way as to limit the impact on GOI’s fiscal management. It has been lauded as a success as it played and continues to play a catalytic role in mobilizing a flow of private capital toward infrastructure projects.

IIFCL is considered one of the factors contributing to India’s doubling its total investment in infrastructure between the two recent Five-Year Plans (the Tenth and Eleventh), and to increasing the share of infrastructure in GDP from 5 percent to 7 percent. IIFCL has assisted India in becoming the highest recipient of PPP infrastructure investments in recent years.

### Genesis for the Fund Development

As mentioned in Section 1, India faces critical needs for large investments in infrastructure to accelerate inclusive growth, alleviate poverty, and improve the quality of life of its inhabitants. In the past, infrastructure projects were financed solely from the limited resources of the public sector and suffered from inadequate capacity and poor quality of service.

To mobilize the necessary private investment to sustain its infrastructure needs, the government aimed to create an attractive policy and regulatory framework for private capital. In its Tenth Five-Year Plan (2002–07), the government aimed for US\$240 billion in investment in infrastructure. This goal doubled

to US\$500 billion by the Eleventh Plan (2007–12), with a strong emphasis on private capital. To achieve this, the first step was implementing public-private partnerships (PPP) in key sectors like transport and power.

To roll out the PPP initiative efficiently, the government put in place several enabling measures. They set up an institutional framework to appraise and approve PPP projects and created standard key PPP documents, which followed international best practices. On top of these institutional changes, there was a need to introduce a vehicle that would allow long-term debt for PPP projects to be mobilized in different infrastructure sectors. India realized that domestic financial institutions lacked the capacity and instruments to provide long-term debt for projects.

IIFCL was created as a government-owned financial institution with the mandate to provide about 30 percent of PPP debt, with the remaining 70 percent to be financed by the regular banking system. This vehicle was intended to address the various regulatory and other restrictions; raise long-tenure funds from the market at economic cost and on the scale required; and lend to PPP projects while keeping the intermediation costs to a bare minimum. IIFCL was incorporated in 2006 as a sui-generis company. In 2013, it was registered as a non-banking finance company with the Reserve Bank of India. To ensure that IIFCL delivered on its mandate, a detailed framework was set out to guide its processes for mobilizing resources and selecting projects, as well as modes of lending and the loan approval processes.

During the period of the Eleventh Five-Year Plan (2007–12), private investment increased from 22 percent to about 37 percent of the total investment in infrastructure. All these initiatives resulted in India being recognized as the largest recipient of PPP infrastructure investments during 2008–12, as reported by the Public-Private Infrastructure Advisory Facility (PPIAF).



**Table 4. India's Public-Private Partnership (PPP) Performance to Date**

Total PPP Projects	879 Reaching Financial Closure Since 1990
Total investment in PPP	US\$234,872 total investment committed to PPPs since 1990 (US\$ million)
Active PPP projects	837 under construction or operation
Active investment in PPP	US\$220,547 total investment in active PPPs (US\$ million)

Source: PPP Knowledge Lab, the World Bank Group, 2017.

## History

The Government of India set up IIFCL in 2006 as a special purpose vehicle called India Infrastructure Finance Company Ltd (IIFCL).

In March 2012, the Cabinet Committee on Infrastructure approved the Harmonized List of infrastructure Sub-sectors, which specifies the sectors eligible for financial assistance from IIFCL. These include transportation, energy, water, sanitation, telecommunications, and social and commercial infrastructure.

The Reserve Bank of India has issued a Certificate of Registration to IIFCL, allowing the Company to carry on the business of non-banking financial company/non-deposit-infrastructure finance company.

As IIFCL has matured in its role as a catalyst for private sector investment in infrastructure in India, its organizational structure has adapted to new product development. IIFCL currently has three subsidiaries. One unit conducts hard currency lending to cover the imported capital component of infrastructure projects. An asset management company promotes and develops local capital markets. An infrastructure advisory arm assists public sector, contracting agencies, and private sector companies in the structuring and syndication of infrastructure projects and transactions. A more detailed analysis of these three units appears in Section 5.

## Financial Performance

With total assets close to US\$6.6 billion (Rs4,216,678 Lakh), IIFCL is one the largest PIFs analyzed in this Global Review. However, its financial performance during the 2017 fiscal year was relatively weak (profits amounted to 1.7 percent of total revenues), mainly due to an increased provision for non-performing assets of Rs55,978 Lakh (US\$87 million) (table 5).

However, a large component of the increase in the provisioning of IIFCL was due to new requirements by the regulator (Reserve Bank of India, RBI) to increase provisioning of standard assets from 0.30 percent in FY2015/16 to 0.35 percent in FY 2016/17. This new RBI requirement also included an increase in the provisioning of restructured assets from 4.25 percent (FY2015/16) to 5 percent (FY2016/17), and the shortening of the period to consider an asset to be non-performing (NPA) from 6 months to 3 months.

Also, 2017 was the year that demonetization affected local financial markets, creating a level of uncertainty that did not improve the financial condition of non-performing assets. Despite a challenging business environment, IIFCL was able to contain gross non-performing assets to 7.8 percent as of March 2017, when non-performing assets in the rest of the banking system increased to 9.6 percent.

**Table 5. IIFCL Key Financial Indicators as of March 31, 2017 (Rs Lakh, unless otherwise indicated)**

	March 31, 2017	March 31, 2016
Assets	4,215,678	4,227,399
Liabilities	3,473,283	3,500,931
Net worth	742,395	726,468
Revenue:	<b>390,264</b>	<b>465,944</b>
From operations	375,094	421,097
Other income	15,170	44,847
Expenses:	<b>348,858</b>	<b>364,492</b>
Operating costs	60,003 <sup>a</sup>	12,393
Financial costs	220,461	266,095
Other expenses	68,394	86,004
Profit before tax	41,406	96,453
Taxes	34,616	49,603
Net profit (Rs Lakh)	<b>6,790</b>	<b>46,850</b>
As a % of revenues	1.7%	10.0%
As a % of assets	0.1%	1.1%
Average US\$/Rs exchange rate	67.15	65.49
Net profit (US\$ million)	<b>10.11</b>	<b>71.54</b>
Return on equity (percent)	<b>0.91%</b>	<b>6.45%</b>

Source: IIFCL Annual Report 2017.

a. Provision

increased from Rs12,368 Lakh in 2016 to Rs55,978 Lakh in 2017.

### 3. INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE

#### Institutional Structure and Reporting Lines within the National Government

IIFCL is a state-owned enterprise (SOE) under the Ministry of Finance (MoF). IIFCL's activities (mainly borrowing and lending/credit activities) are governed by a government-approved special purpose vehicle called India Infrastructure Finance Company Ltd. (abbreviated as SIFTI). In addition, as a non-banking finance company registered with the RBI, IIFCL needs to comply with the various rules and regulations issued by the RBI from time to time. Also, because its debt securities are listed on the stock exchanges, it must comply with the norms and procedures established by the Securities and Exchange Board of India (SEBI), the regulator for India's securities market. The Ministry of Finance represents the shareholdings of the government and it is the main representative at the Board level.

## Shareholder Structure

IIFCL is 100 percent owned by the Government of India. The shareholders are the President, the Ministry of Finance (MoF), and separate dependencies of the MoF (table 6).

**Table 6. IIFCL Shareholding Structure**

Shareholder's Name	Shares Held (as of Nov. 17, 2017)
The Honorable President of India <sup>a</sup>	410,23,16,223
Shri Ashok Kumar Dogra <sup>b</sup> Deputy Secretary, Department of Financial Services, Ministry of Finance	1
ShriGulab Singh <sup>b</sup> Deputy Secretary, Department of Financial Services, Ministry of Finance	1
Shri S.R Mehar <sup>b</sup> Deputy Secretary, Department of Financial Services, Ministry of Finance	1
Shri Sanjay Kumar <sup>b</sup> Deputy Secretary, Department of Financial Services, Ministry of Finance	1
ShriManoj Kumar Mishra <sup>b</sup> Under Secretary, Department of Financial Services, Ministry of Finance	1
Shri V.V.S Kharayat <sup>b</sup> Under Secretary, Department of Financial Services, Ministry of Finance	1
ShriGovind Ram <sup>b</sup> Under Secretary, Department of Financial Services, Ministry of Finance	1
<b>Total</b>	<b>410,23,16,230</b>

Source: IIFCL web site as of February 2018.

a. Under the legal framework in India for SOEs, their business development is always conducted in the name of the country's president.

b. As a representative of the Government of India.

## Board of Directors

The Board of Directors is composed of representatives of the Ministry of Finance and the National Bank. The composition of the Board as of March 31, 2017 is shown in Table 7.

**Table 7. Composition of IIFCL Board of Directors**

Name and Designation	Category
Shri Pankaj Jain Joint Secretary, Dept. of Financial Services, Ministry of Finance	Managing Director
Shri Kumar V Pratap Joint Secretary (Infrastructure, Policy, Finance, and Energy), Ministry of Finance	Government Nominee Director
Shri. Praveen Mahto Adviser (PAMD/PPPAU) in the NITI Aayog	Government Nominee Director
Shri. Rajeev Rishi Chairman and Managing Director of Central Bank of India	Scheduled Commercial Bank Nominee Director
Shri. Sunil Mehta Managing Director & CEO of Punjab National Bank	Scheduled Commercial Bank Nominee Director
Source: IIFCL website (accessed April 2018).	

### Board Committees

The Board functions as a full Board or through various committees constituted to oversee specific operational areas. Each committee of the Board is guided by its terms of reference, which define the committee's composition, scope, and powers. The committees meet at regular intervals, focus on specific areas, and make informed decisions within the authority delegated to them.

As of March 31, 2017, the Board had the following eight committees:

- Audit Committee
- Management & Investment Committee
- Risk Management Committee
- Asset Liability Management Committee
- Corporate Social Responsibility Committee
- Remuneration and Nomination Committee
- Stakeholder Relationship Committee
- IT Strategy Committee.

### Appointment of a Managing Director

The Prime Minister's Office appoints the Managing Director on the recommendation from the Appointments Committee of the Cabinet. The appointment is normally for a period of three years.

### Staff and Training

IIFCL has a total staff of 92 employees spread among eight departments:

- Accounting
- Human Resources

- Credit and Takeout, Project Monitoring
- Information Technology
- Business Development
- Risk Management
- NPA Management
- Environment and Social Safeguards Management Unit (ESMU)

ESMU was a result of the development of an Environmental and Social Safeguards Framework (ESSF) in 2007, with assistance from the Asian Development Bank. The ESMU oversees the implementation of the Framework, provides safeguards assistance in project development, prepares due diligence reports, and performs annual audits to ensure compliance with environmental and social safeguards. The total staff number (92) does not include the staff working in the three subsidiaries, which include an additional 35 staff. The organizational chart is shown in Figure 5.

**Figure 5. IIFCL Organization Chart**



Source:

IIFCL website (accessed April 2018).

**Procurement Systems**

As a 100-percent government-owned institution, IIFCL must adhere to the public sector procurement laws. This requirement is somewhat mitigated in the case of loan execution when IIFCL is part of a consortium of several financial institutions. IIFCL staff are not considered civil servants. However, IIFCL staff are public sector employees and thus must adhere to practices and regulations of India’s public sector. There is some flexibility in IIFCL’s salary scale and working conditions, but they are not equivalent to those in private financial institutions.

**Funding Mechanisms**

Since its creation in 2006, IIFCL’s funding strategy has been based on three sources:

1. Shareholder equity via capital injections from the MoF.

2. Domestic borrowing (rupee debt) via local capital markets (bond issuance).
3. Funding from multilateral development banks (MDBs).

IIFCL raises funds, as and when required for on-lending, in consultation with the Department of Financial Services at the Ministry of Finance. IIFCL is not dependent on regular budget allocations, other than the capital injections.

**Shareholder equity.** The Government of India (GOI) provides equity funding to IIFCL. It also acts as the sole guarantor for IIFCL borrowings from MDBs such as Asian Development Bank and World Bank. The extent of guarantees to be provided is set by the Ministry of Finance, within the limits of the Fiscal Responsibility and Budget Management Act. IIFCL services the MDB debt and carries it on its own balance sheet. IIFCL pays a guarantee fee to the MoF for the use of the sovereign guarantee.

**Domestic borrowing via local capital markets.** The company has so far raised Rs32,573 Crore (around US\$4,900 million) from domestic markets through a mix of instruments comprised of domestic taxable bonds, tax-free bonds, taxi-incentive infrastructure bonds (with typical maturities of 10 or more years), and long-term loans from Life Insurance Corporation of India and the National Small Savings Fund of India.

**MDBs funding.** IIFCL has established strong relationships with multilateral development banks. It currently has committed lines of credit from the Asian Development Bank (ADB), the World Bank Group (WBG), KfW, the European Investment Bank (EIB), and the Japanese Cooperation Agency (JICA). All these borrowings are done with the guarantee of the Government of India. When using financial resources from MDBs, IIFCL adheres to their procurement standards. IIFCL actively manages the foreign exchange risk related to its foreign debt exposure. As a financial institution, IIFCL must comply with RBI regulations regarding foreign debt, and their Treasury department usually hedges up to 75 percent of the debt repayment exposure. Because the GOI acts as a lender of last resort via its sovereign guarantee, IIFCL foreign debt is rated as India sovereign debt (BBB investment grade by S&P, on the global scale).

A breakdown of IIFCL's funding by source, equity, and borrowing is presented in Table 8.

**Table 8. IIFCL's Funding Sources, Equity, and Borrowings Breakdown (Rs Lakh)**

Funding Source		March 2017	March 2016
1.	Share capital	4,00,232	3,90,000
2.	Reserves and surplus	3,42,163	3,36,468
3.	<b>Shareholders' funds</b>	<b>7,42,395</b>	<b>7,26,468</b>
4.	Secured bonds	14,94,898	14,94,918
5.	Unsecured bonds	3,60,000	4,10,000
6.	Unsecured loans	12,53,596	12,19,345
7.	Short-term secured loan from banks	89,666	1,70,028
8.	<b>Total borrowings</b>	<b>31,98,161</b>	<b>32,94,291</b>

Source: IIFCL Finance Department.

Note: Rs 10 Lakh = Rs1 million (equivalent to US\$15,610 as of December 2017). Funding sources 4 and 5 are fully guaranteed by the Government of India.



## 4. FISCAL MANAGEMENT

### Fiscal Management Rules

The loans provided by multilateral agencies (MLAs) to IIFCL are fully guaranteed by the GOI (MoF). These loans are accounted for in the sovereign window of MLAs. As such, the loan amounts are included in the debt target exercise for India. However, as previously mentioned, the loans are serviced by IIFCL and carried on their books. IIFCL pays a guarantee fee commission to the MoF.

The IIFCL does not consolidate from an operational point of view with the GOI because it is an autonomous financial institution with no dependence on standard allocations of the public sector budget. IIFCL acts as a self-funded non-bank financial institution. It is not dependent on the public sector budget process, except in the cases of guarantee support for multilateral loans, and in the new capital injections.

### Lender of Last Resort

The GOI acts as a lender of last resort. Because IIFCL is fully owned by the Government of India via the Ministry of Finance, the GOI acts as the lender of last resort in the events of solvency and liquidity risks. Capitalization of the IIFCL so far has been done via resource allocation from the MoF.

### Procurement Policies and Oversight

As referenced before, IIFCL, as a fully government-owned financial institution, is subject to India's public procurement regime. IIFCL must comply with the reporting norms and procedures set by the Indian financial market regulators—the Reserve Bank of India (RBI) and the Securities and Exchange Board of India (SEBI). IIFCL also complies with the government-approved special purpose vehicle called India Infrastructure Finance Company Ltd. (abbreviated as SIFTI). Further, it reports periodically to the Department of Financial Services (DFS) at the MoF. IIFCL does not report directly to the International Monetary Fund (IMF) (as per the IMF's Government Finance Statistics Manual and Fiscal Transparency Code).

### Risk Management Policies

Both the MoF and the IIFCL have a risk management policy in place. IIFCL's risk management policy is more closely analyzed in Section 8.

### Contingent Liability Strategy

IIFCL has a risk-based pricing mechanism for arriving at a guarantee fee for credit enhancements (partial credit guarantees). IIFCL's contingent liability strategy is based on such mechanisms. It was set up with the assistance of the Asian Development Bank (ADB).

## 5. OFFERING OF FINANCIAL PRODUCTS

### IIFCL Group of Companies

As the infrastructure finance market in India has evolved, IIFCL has adapted and offered new products and solutions to its clients via the creation of different subsidiaries. This has been a solid move by IIFCL to demonstrate, during its 12 years of existence, the capacity to develop new financial products that further promote the development of the local financial markets. IIFCL Group is comprised of the main

fund (IIFCL) and three subsidiary companies that were formed later, as the main fund became successful and new instruments for support to infrastructure investment were needed (see Figure 6).

- **India Infrastructure Finance Company (UK) (IIFC-UK).** After the initial success of IIFCL, the company set up its first subsidiary, India Infrastructure Finance Company (UK). It was incorporated in February 2008 to lend to Indian companies implementing infrastructure projects in India, or to co-finance their external commercial borrowings for such projects, solely for capital expenditure outside India. This company was created with a US\$5 billion credit line from India's foreign reserves. It provides acquisition finance (hard currency lending) for the imported capital component of infrastructure projects in India. It engages by directly paying the foreign supplier and creating an infrastructure asset in India (a liability of the PPP project company). Foreign exchange risk is borne directly by the PPP project, and indirectly by IIFCL (as the parent company). IIFC-UK consolidates its operations with IIFCL. The parent company manages the foreign exchange risk via market mechanisms.
- **IIFCL Projects Limited.** In February 2012, IIFCL set up IIFCL Projects Limited to provide advisory services to contracting agencies (central, state, or local government agencies and state-owned enterprises, or SOEs), as well as private sector companies for the promotion and development of infrastructure in India. The company provides infrastructure advisory services, financial advisory services, transaction advisory services, project structuring, appraisal, and syndications for the entire spectrum of infrastructure sectors including roads; highway projects; ports; airports; inland waterways/inland ports; water supply projects; irrigation projects; water treatment systems; sanitation and sewerage systems or solid waste management systems; telecommunication services; industrial parks or special economic zones; power; construction for preservation and storage of processed agro-products; and construction of educational institutions and hospitals. IIFCL Projects charges a fee to clients for the provision of its advisory services.
- **IIFCL Asset Management Company Limited (IAMCL).** IIFCL has also established IAMCL, which manages the IIFCL Mutual Fund product line. The Mutual Fund product line aims to provide investment opportunities to domestic and overseas investors for long-term infrastructure debt in India's infrastructure sector. IAMCL aims to act as an asset management company for Infrastructure Debt Fund(s) (IDF) set up as mutual funds. These are product lines that will stimulate development of local capital markets, improving their depth and eventual liquidity through the promotion of secondary trading (see section, "Description of the Local Financial Markets").

The GOI has recently approved the incorporation of the assets of the **Irrigation and Water Resources Finance Company Limited (IWRFC)** into IIFCL. Under this scheme, IWRFC has ceased to exist as a separate entity and has become an integral part of IIFCL. IWRFC provided financial support to water and irrigation projects in India. The composition of the IIFCL Group is shown in Figure 6.

Figure 6. IIFCL Group



Source: IIFCL, Annual Report, 2017

Note: IDF = Infrastructure Debt Funds; infra = infrastructure.

## IIFCL Product Offering

IIFCL provides two types of financial products: lending products (senior debt, subordinated debt, take out finance, and refinancing); and credit derivatives (partial credit guarantees).

### Lending Products

IIFCL has provided direct lending to projects through:

- **Senior debt.** As part of a consortium, IIFCL takes an exposure of up to 20 percent of the total project cost (including subordinated debt, if any). In case of PPP projects that have a provision of compulsory buyback by the authority on termination, IIFCL may offer a loan with a tenor longer than other lenders and remain sole lender, if necessary, after other lenders are paid out. Normally IIFCL will be participating in consortia of different lenders (other public and private banks, and other financial intermediaries), and will adhere to the market pricing practice of the consortium. On average, the equity component of PPP projects financed by IIFCL is between 25 percent and 30 percent of project costs. The average maturity of IIFCL's senior debt is at least 10 years for its clients (whether private sector, public sector, or PPPs).
- **Subordinated debt.** IIFCL provides subordinated debt up to 10 percent of the project cost (as part of its exposure of up to 20 percent of the total project cost). This type of debt is typically treated as quasi-equity by lenders.

In FY2016/17, IIFCL allocated an additional Rs9,548.65 Crore (US\$1,435 million) for its 51 new projects that have not yet achieved financial closure ("gross sanctions"),<sup>144</sup> bringing the cumulative sanctions to projects before financial closure to Rs77,431.41 Crore (US\$1,164 million), spanning a total of 442 infrastructure projects (Table 9).

<sup>144</sup> "Net sanction" amount is the allocated loan amount in the case of projects that have achieved financial closure and excludes cancelled loans. "Gross sanction" refers to the amount allocated for projects that have not achieved financial closure. "Sanction" refers to "loan approvals," different from disbursement. Sanctions refers to the amount approved for the loan (loan approvals), as opposed to the amount disbursed. The difference between gross sanctions and net sanctions is a function of loan cancellations and any decrease in loan size between the time of approval and the time of financial closure.

**Table 9. Cumulative Gross Sanctions under Direct Lending, by Sector, as of March 31, 2017 (Rs Crore)**

Sector	No. of projects	Project Cost	Gross Sanctions
Road	229	252,696.08	35,037.65
Power	139	328,343.97	31,918.47
Airport	3	27,701.00	2,530.00
Port	17	22,048.96	3,138.56
Urban infrastructure	12	47,426.10	3,658.16
Railway	3	3,193.69	638.54
Pooled Municipal Debt Obligations (PMDO)	38	8,602.13	260.02
Telecom	1	3,750.00	250.00
Total	442	693,761.93	77,431.41

Source: IIFCL, Annual Report, 2017

Under direct lending, IIFCL allocated Rs51,261.26 Crore (US\$7,705 million) to 351 post-financial closure projects ("net sanctions")<sup>145</sup> (see Table 10).

**Table 10. Cumulative Net Sanctions under Direct Lending, by Sector as of March 31, 2017 (Rs Crore)**

Sector	No. of Projects	Project Cost	Net Sanctions
Road	191	209,400.40	24,488.37
Power	106	224,158.79	22,476.23
Airport	3	27,701.00	1,228.00
Port	13	15,730.10	2,156.52
Urban infrastructure	7	1,801.52	332.16
Railway	1	600.00	120.00
Pooled Municipal Debt Obligations (PMDO)	29	5,649.03	209.97
Telecom	1	3,750.00	250.00
Total	351	488,790.84	51,261.26

Source: IIFCL, Annual Report, 2017

In IIFCL's 12 years of existence, loan disbursements versus loan approvals (sanctions) have averaged 50 percent. This relatively low average disbursement is explained by the following factors: delays experienced in the project development phase (because of such issues as rights of way or land acquisition);

<sup>145</sup> "Net sanction" amount is the allocated amount in case of projects which have achieved financial closure.

the relatively long construction period of infrastructure projects; and the relatively high mortality rate of some infrastructure projects that fail to materialize for different reasons. The downturn of infrastructure development in India in 2015–16, due to financial market restrictions (non-performing assets) has also decreased the loan disbursement ratio.

### Takeout Finance

As part of IIFCL’s efforts to strengthen local financial markets and to facilitate incremental lending to the infrastructure sector, the Takeout Finance Scheme (TFS) was developed in 2012. The concept was to provide the bank market with an instrument that could help local banks participating in infrastructure better manage their assets and liabilities mismatch and their exposure limits to on-lend to infrastructure projects. Under this scheme, IIFCL can lend up to 30 percent of the total project cost (including direct lending). Disbursement in the case of takeout finance generally takes place one year after the actual commercial operation date (COD). IIFCL’s Takeout Finance Scheme follows a transparent non-discriminatory and nondiscretionary external project rating-based pricing mechanism for the takeout of infrastructure loans. TFS products are priced according to market price and a risk-weighted allocation mechanism. TFS products are more focused on “brownfield” projects.

Overall, IIFCL has sanctioned (allocated) Rs23,970.49 Crore (approximately US\$3,603 million) to 105 projects under the TFS (Table 11). In FY2016/17, under the Takeout Finance Scheme, IIFCL sanctioned an additional Rs4,310.93 Crore (approximately US\$648 million) for 15 new projects that have not yet reached financial closure (gross sanctions).

**Table 11. Cumulative Gross Sanctions under Takeout Finance, by Sector, as of March 31, 2017 (Rs Crore)**

Sector	No. of Projects	Project Cost	Gross Sanctions
Road	51	54,818.94	7,468.05
Power	41	95,392.82	11,184.68
Airport	2	15,777.00	1,911.14
Port	9	15,271.48	3,380.17
Urban infrastructure	2	107.11	26.45
Total	105	181,367.35	23,970.49

Source: IIFCL, Annual Report, 2017

Some 68 projects, amounting to Rs17,820 Crore (approximately US\$2,680 million), have achieved financial closure (net sanctions) under the TFS (Table 17).

**Table 17. Cumulative Net Sanctions under Takeout Finance as of March 31, 2017 (Rs Crore)**

Sector	No. of Projects	Project Cost	Net Sanctions
Road	27	33,715	4,892
Power	31	60,771	8,995
Airport	2	15,777	1,736
Port	6	10,271	2,170

Urban infrastructure	2	107	26
Total	68	120,642	17,820

Source: IIFCL, Annual Report, 2017

## Refinancing

As a mechanism to support local financial markets, and as part of the fiscal stimulus package, IIFCL raised funds via tax-free bonds from 2009 to 2014. These funds were used to provide refinancing to banks and other eligible financial institutions for their loans to infrastructure projects for which competitive bids were submitted on or after January 31, 2009. IIFCL was permitted to raise Rs10,000 Crore (US\$1,503 million) during 2008–09. As per the tenor and terms of the tax-free bonds, the bonds were redeemed to the investors in January 2014 and March 2014.

IIFCL did not engage in refinancing in FY2016/17 because eligible banks and financial institutions did not find it viable to raise resources from IIFCL under the refinancing scheme (the market has become more liquid). However, in FY2017/18, and because of the liquidity impact of the demonetization scheme, IIFCL resumed refinancing. The MoF eliminated the tax-exempt status of the bonds, but utilizing its other funding sources, IIFCL has been assisting local financial markets through this refinancing scheme. IIFCL is now authorized by regulators to refinance infrastructure assets rated A or higher, in the local rating scale (previously, the standard was AAA).

## Credit Enhancement Scheme

To push the development of local capital markets further, IIFCL launched the Credit Enhancement Scheme in 2012, with the objective of enabling infrastructure projects to raise funds from alternative sources other than the commercial bank market. Under the Credit Enhancement Scheme, IIFCL provides partial credit guarantees to back bonds issued by infrastructure companies to refinance existing loans. The partial guarantee enhances the credit rating of the bonds to AA or higher. In this way (through the AA local credit rating), institutional investors can acquire such assets and adhere to the Securities Exchange regulation. IIFCL can undertake credit enhancement to the extent of 20 percent of total project cost (40 percent of the total project cost with a back-stop guarantor), subject to a maximum of 50 percent of the total amount of the bond issue and the quantum of guarantee required to enhance the rating to the desired level. IIFCL uses a risk-based pricing mechanism to determine the guarantee fee to be charged the borrowers. For IIFCL to consider a partial credit guarantee, one important credit risk precondition is that the underlying infrastructure project (asset) must be at least BBB-rated in local currency without the credit enhancement.

In FY2015/16, IIFCL issued its first two bonds, amounting to Rs578 Crore (US\$87 million). The total cumulative guarantee from IIFCL for these transactions was Rs163 Crore (US\$24.5 million, or approximately 28 percent) (Box 2). This arrangement has helped reduce the cost of funding for such projects because the pricing mechanism is market-linked, based on the issuer's credit rating. The Asian Development Bank was also involved as a back-stop guarantor to IIFCL in both these transactions.

In 2016/17, IIFCL proposed new bond issuances for seven different projects under its Credit Enhancement Scheme, with a cumulative proposed bond issue of up to Rs1,976 Crore (US\$297 million) and proposed an IIFCL Guarantee of Rs512 Crore (US\$77 million, or approximately 26 percent). Looking ahead, this is probably the product line with larger leverage potential for infrastructure development in India. This will especially be the case if IIFCL can leverage the development of this product by co-guaranteeing with the new institution under development, the Credit Enhancement Fund.



## Box 2. Renewable Energy Credit Enhanced Bond, Wednesday, September 23, 2015, New Delhi

“ReNew Power Ventures Pvt. Ltd., one of India’s largest clean energy companies and the India Infrastructure Finance Company Limited (IIFCL) today announced the issuance of India’s first infrastructure bond issuance Credit Enhanced by IIFCL. The transaction involves the issuance of Bonds to the extent of Rs 451 Crore by ReNew Wind Energy Ltd., a subsidiary of ReNew Power Ventures Pvt. Ltd., for replacement of the existing debt of the infrastructure project company. This issuance of ReNew Wind Energy Ltd. for its 84.65 MW wind power project in Maharashtra is the first successful credit enhanced bond issue by IIFCL in the country. The bond is proposed to be listed on WDM segment of the National Stock Exchange. With this transaction, ReNew Power could avail not only elongated maturity of debt but has also reduced the cost of debt substantially, thus paving the way for entire sector to look at this product and raise long term funds at a lower cost. This issuance would open-up the bonds markets to infrastructure projects which are currently facing challenges in raising of long term funds at lower cost of capital from the Banking sector, which has been their traditional source of funding so far. IIFCL’s Credit Enhancement enables enhancement in the credit rating of the bond issue and mobilization of fixed cost long term funds from the Indian Debt Capital Markets. The Asian Development Bank (ADB) has given a back-stop guarantee of 50 percent to IIFCL in this transaction.”

Source: Renew Power, press release, September 23, 2015

### Portfolio and Average Transaction Size

According to data in the latest IIFCL Annual Report (as of March 31, 2017), portfolio and average figures for each of IIFCL’s financial offerings were as follows:

- In the direct loan category (net sanctions), IIFCL has approved 351 projects with a total asset size of Rs51,261.26 Crore (US\$7.7 billion). This represents an average of US\$22 million per project.
- In the takeout finance category (net sanctions), IIFCL has approved 68 projects with a total asset size of Rs17,820 Crore (US\$2.7 billion). This represents an average of US\$39.4 million per project.
- In the credit enhancement category (net sanctions), IIFCL has approved 7 projects with a total guarantee amount of Rs512 Crore (US\$77 million). This represents an average of US\$11 million per transaction.

## 6. SECTOR FOCUS

IIFCL focuses on infrastructure projects (as defined by the Ministry of Finance under the Harmonised Master List of Infrastructure Sub-sectors from time to time) in the following sectors:

- Transport. This includes road, bridges, railways, seaports, airports, inland waterways, and urban transport.
- Power, including generation, transmission, and distribution.
- Urban infrastructure. which consists of water supply and treatment; sewage collection; treatment and disposal systems; solid waste management; and other physical infrastructure in urban areas.

- Gas pipelines.
- Buildings, including educational institutions, hospitals, convention centers, hotels, cold-storage chains, and soil testing laboratories.
- Telecommunications.

The Government of India has recently assigned “infrastructure” status to sports infrastructure and affordable housing. These areas might be the source of future projects with IIFCL. The institution portfolio has been centered mostly around transport (roads, airport, ports), power, and urban infrastructure.

IIFCL participates in a Pooled Municipal Debt Obligations (PMDO) Facilities to support urban infrastructure PPPs (Box 3).

### **Box 3. The Pooled Municipal Debt Obligations (PMDO) Facility**

In 2008, IIFCL, IL&FS, IDBI Bank, Canara Bank, and other lenders set up a Pooled Municipal Debt Obligations Facility (PMDO) to finance urban infrastructure projects on a PPP basis. These projects include development of common infrastructure for small and medium enterprises (SMEs), solid waste management, power generation, wastewater treatment, and other urban infrastructure facilities such as city bus transport.

Currently, PMDO has funding of Rs5,000 Crore (US\$750 million), committed by 16 lenders. IIFCL has committed Rs391 Crore (US\$58 million) as its share in the facility. As of March 31, 2017, the cumulative net sanctions of IIFCL under the Facility had increased to Rs210 Crore, and cumulative disbursements stood at Rs151 Crore. The PMDO is active in all the same sectors as IIFCL. Because IIFCL is part of its own facility with an independent budget, it is accounted for separately.

Source: IIFCL’s senior management, 2017–18.

### **Breakdown of the Portfolio by Sector**

Under its different schemes, the IIFCF Group’s cumulative disbursements at the end of March 2017 stood at Rs55,966.43 Crore (US\$8,400 million), including total refinancing of Rs6,256.00 Crore (US\$940 million) and takeout finance of Rs14,856.08 Crore (US\$2,233 million) (Table 13).<sup>146</sup>

<sup>146</sup> The difference between total disbursements of US\$8.4 billion and total assets of US\$6.6 billion is explained because the disbursement total in Table 13 is cumulative since inception. The total assets number is the volume of existing assets today. Some of the loans (or portions of the loans) have been repaid.

**Table13. Sector-Wide Cumulative Disbursements as of March 31, 2017****(Rs Crore, unless otherwise Indicated)**

	Sector	No. of Proj- ects	Project Cost	Amount Dis- bursed	Sector Fo- cus (%US\$/ US\$)
Direct lending	Road	174	187,717	17,257	42.3%
	Power	87	210,328	15,316	47.4%
	Airport	2	25,801	845	5.8 %
	Port	9	9,039	736	2.1 %
	Urban Infrastructure	7	1,801	275	0.4 %
	Railway	1	600	22	0.1 %
	PMDO	27	4,744	151	1.1 %
	Telecommunications	1	3,750	248	0.8%
	Total (A)	308	443,783	34,854	100 %
Takeout finance	Road	22	30,534	4,114	29.3 %
	Power	22	48,849	7,242	46.9 %
	Airport	5	15,777	1,484	15.1 %
	Port	5	8,952	1,987	8.6 %
	Urban Infrastructure	2	107	26	0.1 %
	Total (B)	56	104,219	14,856	100 %
	Subtotal (A+B)				<b>49,710</b>
Refinance (C)				<b>6,256</b>	
Grand total (A+B+C)				<b>55,966</b>	

Source: IIFCL, Annual Report, 2017

**Public-Private Partnerships (PPP) Projects**

In line with its mandate, IIFCL gives overriding priority to public-private partnership (PPP) infrastructure projects. This is reflected in the number of PPP projects IIFCL has supported. As of March 31, 2017, under direct lending, IIFCL had sanctioned (allocated) financial assistance to set up 311 PPP projects, constituting 77 percent of the 404 projects IIFCL had sanctioned (excluding those under PMDO) (Table 14).

**Table14. Projects Gross Sanctioned Under Direct Lending, by Sector (Excluding PMDO) as of March 31, 2017 (Number of projects)**

Sector	PPP	Non- PPP	Public Sector Undertaking
Road	228	Nil	1
Power	56	78	5

Airport	3	Nil	Nil
Port	14	3	Nil
Urban infrastructure	8	1	3
Others	2	1	1
Total	311	83	10

Source: IIFCL, Annual Report, 2017.

Note: PMDO = Pooled Municipal Debt Obligations.

## 7. CLIMATE CHANGE CONSIDERATIONS

IIFCL is active in the financing of climate-related infrastructure projects. However, IIFCL does not have a financial incentive policy to provide soft conditions to loans and guarantees supporting climate change investments.

### IIFCL Renewable Energy Projects

IIFCL has had an active focus on renewable energy or energy-efficient facilities. It has sanctioned (allocated) about Rs5,400 Crore (US\$812 million) for renewable energy projects (with a combined capacity of about 3,800 MW) under direct lending and takeout finance schemes as of March 2017. IIFCL also sanctioned credit enhancement to seven renewable energy projects to enable bond issuance of over Rs2,900 Crore (US\$436 million) as of March 2017.

In total, IIFCL has sanctioned approximately Rs8,300 Crore (US\$1,247 million) for renewable energy projects out of its total disbursement of Rs55,966 Crore (US\$8,412 million). Renewable energy projects represent close to 15 percent of the Fund's overall disbursements.

### Climate Change Mitigation through Corporate Social Responsibility

IIFCL has established a Corporate Social Responsibility (CSR) Department, with health, promotion of sports, and green energy as main focus areas. Projects implemented under the CSR initiative of IIFCL are reaching out to 24 states in the country and cover diverse areas and beneficiaries requiring social intervention. In FY2016/17, IIFCL, through its CSR initiative, successfully installed 1,000 solar LED street lights (with 1,000 more planned), developed the first smart village in northeast India (Borsimaluguri), and distributed 35,000 solar home lighting systems to families in districts most in need in India.

### Subsidiaries' Work on Climate Change

In FY 2016/17, IIFCL enabled financial closure for various private sector clients in the renewable energy sector. IAMCL (asset management) has recently obtained approval from the IIFCL Board of Directors to launch its Alternative Investment Fund (AIF), dedicated to funding the green sector (including solar and wind energy, waste-to-energy, and water and sanitation). It is expected to launch in 2018.

## 8. RISK MANAGEMENT

Like many other public infrastructure funds, IIFCL is exposed to different risks inherent to financial institutions, including credit risk, interest rate risk, liquidity risk, and foreign exchange risk. IIFCL has set up a comprehensive risk policy framework to better manage company risks in compliance with industry regulatory requirements and best practices.<sup>147</sup>

<sup>147</sup> This section is based on the discussion of IIFCL's Annual Report, 2016–17. IIFCL senior management could not disclose additional details of their risk management and contingent liabilities practices.

The Board has created two instruments: the Risk Management Committee and the Asset Liability Management Committee (ALCO). Through these two instruments, the Board reviews IIFCL performance and monitors the progress of different risk parameters periodically. IIFCL uses a risk management model (RAM). IIFCL has developed software to conduct risk assessments and rate infrastructure projects according to their risks, considering sector-specific policies, regulations, and business risk parameters. The internal risk rating of the projects is approved by the Rating Committee (senior management).

Credit risk is evaluated on a quarterly basis supported by: asset portfolio analysis, portfolio spread analysis, and portfolio stress testing under different scenarios. The portfolio risk assessment report is presented to the Risk Management Committee on a quarterly basis. IIFCL has an internal risk-based pricing policy for projects in which it assumes the lead lending role.

The asset liability management framework includes periodic analysis of the long-term liquidity profile of assets receipts and debt service obligations. Liquidity risk is monitored with the help of the liquidity gap analysis. Interest rate risk is managed by analysis of interest rate sensitivity gaps. In line with compliance to RBI guidelines, IIFCL needs to maintain a capital-risk-adjusted-ratio (CRAR) of at least 12 percent. IIFCL had a CRAR of 19.20 percent as of March 31, 2017.

## 9. CREDIT RATING OF THE INSTITUTION

*The three main credit rating agencies in India (registered under the SEBI, Securities and Exchange Board) are: CRISIL (S&P Global); ICRA (formerly a joint venture of Moody's); and India Ratings & Research (Fitch Group).*

**Table 1515** summarizes the credit ratings by these agencies for some of the largest instruments IIFCL has issued.

**Table 15. Credit Rating of Various IIFCL Instruments**

Rating agency	Instrument type	Size of issue	Rating / Outlook
CRISIL	GOI guaranteed bonds	Rs 1,200 Crore (US\$180 million)	AAA (Stable outlook)
ICRA	Long-term tax-free/taxable bonds program	Rs 18,000 Crore (US\$2,700 million)	AAA (Stable outlook)
	GOI guaranteed bonds	Rs 1,600 Crore (US\$240 million)	AAA (Stable outlook)
India Ratings & Research	Long-term bonds	Rs 15,400 Crore (US\$2,315 million)	AAA (Stable outlook)

Source: IIFCL, Department of Strategic Planning, 2018

There is consensus among the rating agencies about the high grade of the instruments issued by IIFCL. The three main reasons cited for the high rating are the following:

**Support from GOI.** IIFCL's sovereign ownership and its strategic role as facilitator of infrastructure development in the country give the institution a strong backing. The support from GOI, in the form of periodic capital infusions, government representation on its Board, and financial guarantees on its borrowings are positive signs that the rating agencies value when grading the notes.

**IIFCL as a public policy institution.** As such, it is regarded as an entity financing commercially viable infrastructure projects and promoting public-private partnerships. Given that infrastructure deficit will

remain a key factor for India's economic growth, rating agencies believe that IIFCL will continue playing an important role in the infrastructure finance market.

**Diversified funding mix.** Also important for the credit rating agencies is the diversified funding, with a mix comprising of bonds (~60 percent) and loans from multilateral agencies such as the World Bank, the Asian Development Bank, and KfW (~40 percent).

The main concern raised in the rating profiles is the decrease in asset quality, marked by a sharp increase of the gross non-performing assets (GNPAs) as of September 30, 2017 to 8.6 percent, up from 7.8 percent in March 31, 2017. However, the net non-performing assets remain stable. IIFCL's portfolio vulnerability remains relatively high, given the stress in the infrastructure sector.

## 10. IIFCL'S PERFORMANCE

IIFCL has played a catalytic role in the mobilization of long-term financing to infrastructure development in India. Nonetheless, with infrastructure demands in the hundreds of billions of dollars in the forthcoming years, IIFCL's total contribution, as measured by accumulated disbursements of US\$8.8 billion, is relatively small in the scheme of things. Even considering the leverage effect of IIFCL funding (averaging 4 to 5 times, assuming a 70:30 debt-equity ratio of infrastructure projects and IIFCL's contribution to be 20 percent of the total project cost), the total amount of funding mobilized since inception is estimated to be US\$40 billion. This is certainly the largest impact in terms of volume in the sample of Public Infrastructure Funds analyzed in the Global Review, but still far short of the US\$4.5 trillion in infrastructure demands India faces through 2040.

IIFCL is adequately capitalized today (with a CRAR of 19.20 percent). Thus, subsequent increases of capital to address new infrastructure finance needs in the country are not of concern. During the last year (FY 2016/17), net operating results were compromised by the increase in provisions and the increase in non-performing assets. As explained in Section 2, this situation was prompted by regulatory changes as well as a decrease in the downward revision of country's future growth rate. Both return on assets and return on equity have been affected.

IIFCL has been evolving to become one of the key players in infrastructure finance in India. IIFCL has been accommodating its business lines and product offering to "fit" the needs of a market of the size and complexity of India. IIFCL understood early on the challenge faced by developing countries with an abundance of infrastructure needs and ideas, but with a scarcity of well-structured and financeable infrastructure projects. It has developed a full-fledged advisory unit to assist its clients (contracting agencies and private sector), with the important task of converting "ideas" into "financeable" projects. IIFCL has understood the importance of local capital markets development to improve leverage capacities and increase the total amount of financial resources available for infrastructure development in India. IIFCL has developed a full-fledged asset management company to promote infrastructure development funds via mutual fund structures, to access India's institutional investor base.

IIFCL will need to expand and improve the credit enhancement business (partial credit guarantees) to improve the financial efficiency of its own resource base and to augment its leverage capacity. IIFCL has an extraordinary opportunity of further deepening and expanding local infrastructure finance in India.



## 11. LESSONS LEARNED

The lessons learned by IIFCL during its 12 years financing infrastructure in India can be grouped into two main categories: the challenges and difficulties of preparing solid and financeable PPP projects, and the inherent risks in the early stages of project development; and the importance of establishing well-developed and smartly regulated local capital markets.

### Development of PPP Transactions

Since 2006, the GOI has made significant efforts to improve and strengthen the regulatory framework governing infrastructure development and PPP transactions in India. Despite these improvements, most infrastructure transactions—such as those in the power, roads, railway, and airports sector, as well as most urban infrastructure—have long gestation periods. From the initial idea, to feasibility, engineering, operational design, bidding documents, legal structuring, and legal arrangements, this gestation period can extend from one to two years (for a water treatment plan) to seven to ten years (for an irrigation dam, a hydropower project, or a railway). Challenges such as rights of way, land acquisition (expropriation), environmental safeguards, or resettlement can take years to resolve. Once the project preparation stage is completed, long-term financing must be obtained and the construction phase must be initiated. Again, depending on the sector type, this could take an additional two to five years. Managing the uncertainties during this long gestation period requires important management skills and the development of monitoring processes and information systems. Investing in the development of internal capacities to provide technical assistance and advisory services to clients to improve the preparation of PPP projects seems a worthy investment for an institution like IIFCL in developing markets.

### Development of Local Financial Markets

Funding for infrastructure will always be limited in India, given the huge demands and the additional investments needed to meet the challenges of climate change and urbanization. IIFCL has learned that the only way to increase the financial efficiency of its own funding to promote infrastructure development is through the development of healthy local financial and capital markets, to mobilize additional private capital. This will also have a catalytic role in attracting foreign investment to leverage additional resources. IIFCL has clearly understood this lesson and has adapted its business model and role accordingly.

## 12. Key Challenges Ahead

*“As a specialized infrastructure financing institution in India, IIFCL continues to support and finance the infrastructure sector in the country. While road and power sectors continue to dominate IIFCL’s lending portfolio, it is also important to expand the scope of lending by covering sectors other than road and power. Since the supply of commercially viable PPP projects has been weak, IIFCL needs to focus on products that cater to Brown-field projects. IIFCL also needs to diversify its source of funds to be competitive. The business environment in which IIFCL operates is a challenging one. IIFCL aims to arrest the rise in stressed assets by regular monitoring and due diligence. IIFCL is now evolving as a lead financier and is gathering capacities to act as a specialist appraisal institution as well. Given the huge financing needs of the sector, IIFCL’s contribution needs to grow much larger over the coming years. In addition to financing the sector, IIFCL has also been continuously providing policy support to the Government on key aspects of infrastructure financing. IIFCL endeavors to continue to play a key role in the promotion, development and financing of infrastructure sector in India.”*

—S. Kaushik, Chairman, Letter to Shareholders, November 9, 2017

IIFCL faces a two-fold challenge to maintain its role as the predominant catalyst for mobilizing private

capital for the development of India's infrastructure:

- **Development of local capital markets.** IIFCL needs to develop the products to promote the sophistication, investor education, and liquidity that local capital markets need to become important financiers of infrastructure development. However, IIFCL will not be able to single-handedly convert an underdeveloped market into a developed market. IIFCL will need to coordinate with policymakers and regulators to take the necessary actions to further stimulate development of India's local capital markets. Smart regulation, coupled with smart monitoring, is needed to substantially reduce the levels of misbehavior and lax governance of some of the actors in the financial markets. Public sector ownership of financial institutions needs to decrease, to create the space for new actors with new types of governance.
- **IIFCL's evolution.** IIFCL needs to continue adapting to the new market needs and to the investment requirements of new actors (including institutional investors and foreign investors). IIFCL needs to continue investing heavily in the best talent and resources to develop the products required to increase financial efficiency and leverage. In particular, it needs to expand the credit enhancement area; invest in developing new types of risk guarantees; develop real-time contingent liabilities systems to help better manage the asset and liability side; and continue procuring longer-term partnerships with international financial institutions dedicated to providing credit enhancement to deepen and enlarge capital markets in India.

In addition, IIFCL will need to improve its asset management model to substantially reduce the level of non-performing assets. It should also diversify its portfolio, reducing the concentration in the roads and energy sectors. If IIFCL can manage these challenges efficiently, it will not only continue to be a lead financier in India's infrastructure, but it will play a strategic role for the Government of India as a promoter of local capital markets.



This case study was developed between January 1, 2018, and March 31, 2018. It includes several conference calls with IIGF senior management, as well as interviews with World Bank officers in the Guarantee Group. The development of the case benefited from extensive publicly available information as well as World Bank previous experience as a supporting institution. The case study was written by Ellis J. Juan (World Bank Senior Advisor coordinating the Global Review of Public Infrastructure Funds).

# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT (August 14, 2018)

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## **Indonesia Case Study**

### **IINDONESIA INFRASTRUCTURE GUARANTEE FUND (IIGF)**



## EXECUTIVE SUMMARY

The Indonesia Infrastructure Guarantee Fund (IIFG)<sup>148</sup> is one of several financing mechanisms implemented by the Government of Indonesia to support public-private partnership (PPP) infrastructure projects. IIFG focuses exclusively in providing credit derivatives (guarantees) to improve the risk profile of a project and ease mobilization of private capital to finance such project. IIFG guarantees are partial risk guarantees that cover only the payment and political risks arising from the commitments by contracting agencies (state-owned enterprises, sector ministries, public sector agencies, and subnational governments) in a PPP structure in the local markets.<sup>149</sup> The Government of Indonesia (GOI) has one of the world's more robust schemes to facilitate PPPs, and several public-sector institutions play a role. As part of this scheme, IIFG fulfills a very important role improving the credit rating of a PPP structure, relying on off-take contract payments (such as energy sales) and other important commitments (including termination payments and rights-of-way) from contracting agencies. IIFG is in its seventh year of operations since its creation in 2010. As of December 31, 2017, IIFG had appraised 19 projects and signed 15 guarantee agreements for a project value of Rp176 trillion and guarantee coverage of Rp36 trillion. IIFG guarantees are in local currency (rupiah, Rp) and they help develop local financial markets to provide long-term funding to infrastructure projects.

When implementing PPP infrastructure projects, IIFG has full support from GOI via the Ministry of Finance (MOF) and the endorsement of the sovereign credit rating at both the national and global levels. With the assistance of international financial institutions, IIFG has developed its operating manuals, management information systems, and risk management systems. These actions have helped IIFG strengthen its corporate governance. In 2010, IIFG created its own technical assistance arm (the IIFG Institute) to provide training and institutional capacity building to contracting agencies in the areas of PPP arrangements and infrastructure finance. It has also developed a university network to support the development of Indonesia infrastructure, to leverage the capacity building and training for PPP development.

IIFG is in the early stages of development as a government-owned financial institution that specializes in the provision of partial risk guarantees. The current (2017) contingent exposure to contracting agencies' risk in PPP transactions is Rp36 trillion (equivalent to US\$2.7 billion). IIFG has an equity value of approximately US\$665 million. It enjoys currently relatively high levels of liquidity. In the 2015–17 period, some of the guarantee transactions reached financial closure, and the institution has started to generate an attractive level of operating revenues. In June 2017, the MOF approved, via a ministerial decree, an increase in IIFG's limit to take risk exposures up to a maximum of 10 times its capital (equivalent to approximately US\$6.7 billion). With each guarantee leveraging 3 to 4 times the amount in private capital, on average, the impact of IIFG in infrastructure development will increase significantly.

Nonetheless, Indonesia faces a gap in infrastructure investments estimated at US\$1.5 trillion. Given the size of these infrastructure demands, IIFG will face constraints in becoming a key player in Indonesian markets. As a state-owned enterprise 100 percent owned by the MOF, the Ministry always has the possibility of issuing co-guarantees with IIFG to increase the size of transactions and exposure.

However, as IIFG matures and becomes more specialized, it will face important challenges to remain relevant in the context of Indonesia's infrastructure development. The challenges are twofold. The first is associated with the financial capacity of IIFG and the management of its contingent liabilities, which affects its liquidity. IIFG needs to carefully migrate from a "financier business model" to an "insurance business model." The second challenge is associated with the "crowding out" role of contracting agencies in Indonesia. The GOI needs to develop better policy incentives to support the adoption of PPP

<sup>148</sup> IIFG is also known as PT Penjaminan Infrastruktur Indonesia (Persero).

<sup>149</sup> A contracting agency (CA) is the government's representative or partner in the public-private partnership (PPP). It can be a ministry, government institution, local government, state-owned enterprise, or local government-owned enterprise that is responsible for providing infrastructure in accordance with the law.

mechanisms by the contracting agencies in Indonesia. This would guarantee the pipeline and the relevance for IIGF's continued business.

As a way forward, it is perhaps in the government's best interest to continue capitalizing IIGF, considering options of adding private sector investors with knowledge of the guarantee business, but maintaining majority ownership.

As a provider of guarantees to cover the payment risk of contracting agencies, IIGF plays a singular role in improving the chances of long-term financing in local currency for PPP projects. IIGF's knowledge arm, the IIGF Institute, plays an important role building necessary institutional capacity in the contracting agencies. Lack of institutional capacity is a very common challenge in developing countries in need of dynamic PPP programs. IIGF is a specialized institution that has no completely similar counterpart in other developing countries (some public infrastructure funds in other countries provide similar products, but none does so with the specialized focus of IIGF). It is an experience that could be replicated in other emerging markets.

## 1. COUNTRY INFORMATION

### Brief Description of Indonesia

Indonesia, the Archipelago Economy (as dubbed by McKinsey Global Institute) is the world's sixteenth largest economy, with a GDP of US\$932.3 billion (2016)—considerably larger than neighbors Malaysia (US\$296.4 billion) (2016) and Singapore (US\$297 billion) (2016).<sup>150</sup> It is the world's fourth most populous country, with more than 261 million people distributed over 13,000 islands representing an area of 1.9 million square kilometers. With a GDP per capita of US\$3,570, it is considered a middle-income country.

Indonesia is rapidly urbanizing, with 53 percent of the people today living in urban areas, compared to 15 percent in 1950. This figure is expected to increase to 71 percent by 2030, with important implications in consumption patterns and demands on public services (infrastructure). Local service delivery performance needs to improve to accommodate the continuous increase in the urbanization rate. New cities will need to be created to absorb the equivalent of 32 million new people migrating to urban centers. GDP generated by cities will increase from the current 74 percent of the total to 86 percent by 2030. Emerging cities such as Pekanbaru, Pontianak, Karawang, Makassar, and Balikpapan will grow faster, at an estimated annual rate of 7 percent.<sup>151</sup>

Indonesia is a fast-growing economy (it is fifth fastest growing among G-20 economies), averaging 5.28 percent growth annually between 2000 and 2017, with an all-time high of 7.16 percent in the fourth quarter of 2004 and a record low of 1.56 percent in the fourth quarter of 2001. GDP increased in the third quarter of 2017 by 5.1 percent, lower than expected by Indonesia authorities, but still one of the highest rates in the world. However, to be able to make an impact on poverty rates and inclusion, Indonesia needs to accelerate economic growth. This continues to be a matter of concern, given the reform-minded policies of the current government and a relatively favorable external environment.<sup>152</sup>

GDP growth is expected to improve slightly in 2018 to 5.3 percent, driven by strong investment growth and a modest recovery in consumption. Annual inflation is expected to average around 3.5 percent for 2018, assuming that no further important adjustments are reflected in energy prices. Strong macroeconomic management, coupled with tax policy and central administration reforms, will help stabilize the fiscal deficit target around 2.2 percent of GDP. Such adjustments will provide a small addition to fiscal space in the short term. Fiscal space is one of the long-term challenges in Indonesia to increase needed

<sup>150</sup> World Bank figures, 2017.

<sup>151</sup> McKinsey Institute, *The Archipelago Economy: Unleashing Indonesia's Potential*, 2012.

<sup>152</sup> World Bank, Indonesia Quarterly Report, September 2017/ Trading Economics, 2017.



investments in infrastructure. Risks to this outlook include volatility in global financial markets and slower-than-expected growth in private consumption.

## Infrastructure Demand and the PPP Framework

In a fast-growing economy that is also rapidly urbanizing, infrastructure demands are very large. Moreover, Indonesia has a large infrastructure deficit built up from years of underinvestment. Altogether, it has one of the highest demands for infrastructure among emerging markets. Capital stocks per capita in Indonesia are one-third of the average of emerging economies. This gap is one of the most important restrictions to economic growth and to meeting poverty reduction targets facing the country today.

The World Bank estimates that Indonesia faces a gap in infrastructure assets of US\$1.5 trillion. Recognizing the importance of this constraint to the Indonesian economy, the Government of Indonesia (GOI) has targeted public budget support of US\$400 billion in the 2015–19 period (amounting to slightly less than one-third of the infrastructure gap) to transport, water, energy, and other key sectors.<sup>153</sup>

Mobilizing private capital to reduce the infrastructure gap is a priority for the government. Unfortunately, Indonesia suffers from the same infrastructure market access restrictions as many emerging market economies:

- A complex regulatory framework governing PPP-type transactions. Indonesia has many laws, regulations, and decrees governing private sector participation in infrastructure. There is no “umbrella” PPP law that governs all transactions. This situation creates misperceptions and differing interpretations concerning the application of sector laws and PPP regulations. Public service tariff regulation, as in many emerging economies, is poorly designed and does not reflect full cost recovery in many cases. Such regulation inhibits private sector interest in investing in a particular sector or requires an important component of subsidy payment (such as a service payment or availability payment), which increases the project’s risk profile. Land acquisition and expropriation of rights of way for infrastructure development have also presented important challenges for private investors. New legislation passed in December 2011 to modernize the land expropriation framework for public works and PPPs has somewhat improved this situation.
- In 2002, Indonesia experienced a significant degree of decentralization with the passage of the State Finance Law, transferring decision-making powers to subnational authorities (490 local governments).<sup>154</sup> This has added an additional layer of complexity to the legal framework in key infrastructure sectors such as water and sanitation, electricity, and urban transport.
- **Inadequate project preparation (huge needs but inadequate well-accepted projects).** For any infrastructure project to be able to reach financial closure (the stage when all the conditions of a financing agreement are fulfilled before funds are initially made available), there is a need to invest smartly in the preparation of the project. This entails developing the feasibility and technical studies, the financial model, the legal framework (especially in cases where there is a need for a special purpose vehicle to service the debt on a project cash flow basis), contracting arrangements, and so on. Projects without proper preparation are only good ideas and most likely will fail to materialize. This is the case in many emerging countries, and especially so in Indonesia, because an important number of PPP projects are originated with contracting agencies (CAs),

<sup>153</sup> World Bank, Indonesia Economic Quarterly, September 2017.

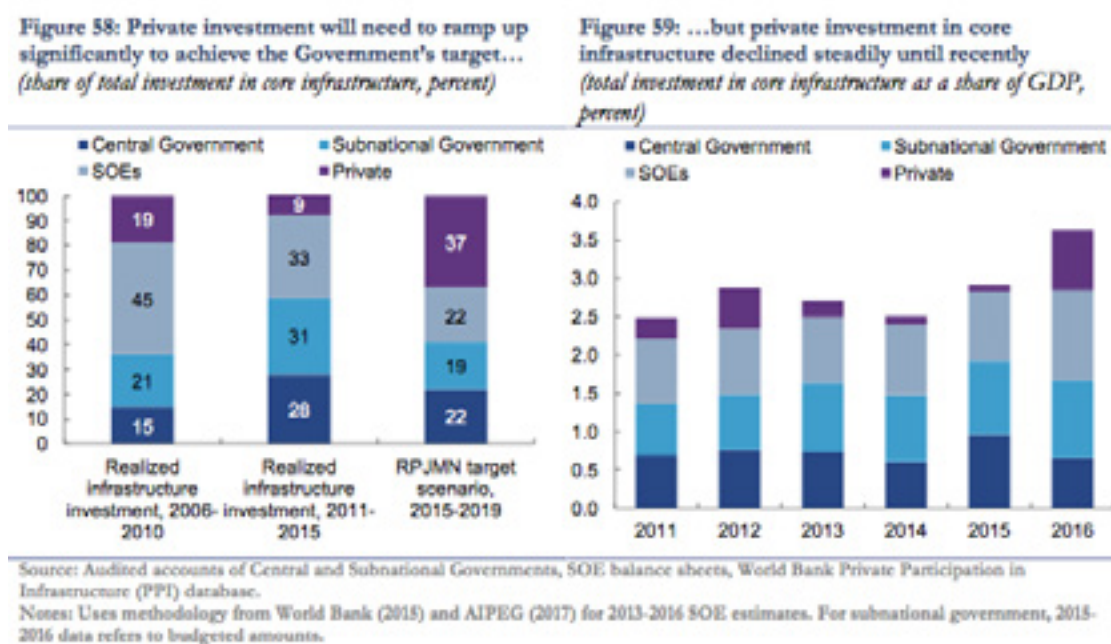
<sup>154</sup> This decentralization largely entailed the creation of democratic authority and decision-making powers. Government finance, however, still remains largely centralized. Provinces and local authorities receive an equitable share of national revenue based on a formula for the division of revenue, but local authorities do not really possess a tax base of their own. Since 2010, local authorities have been able to levy property taxes. At the local government level, not much expenditure has been directed to infrastructure investment, but there are proposals currently that at least 20 percent of local expenditure should go toward infrastructure investment. As discussed further below, it is important to note that subnational governments are not obliged to follow central government rules for PPPs. They must do so only in cases where central government guarantees or fiscal support is sought (OECD, Indonesia, Review of Regulatory Reform, 2012).

which have limited institutional capacity. The Ministry of Finance has issued a kind of facility, called a PDF (project development facility), that allocates some funds to engage professional parties that help CAs develop well-prepared projects and accompany CAs in the bidding process, from developing Requests for Proposals (RFPs), to establishing Bidding Parameters, to selecting the winning bidder. IIGF is now applying this PDF to help CAs deal with PPP infrastructure projects.

- **The big role of state-owned enterprises (SOEs) in the provision of public services.** The Government of Indonesia has relied heavily on SOEs to execute infrastructure investments and accelerate economic growth. It is estimated that SOEs today account for at least one-third of total infrastructure investments. This predominance of SOEs in selected sectors has crowded out the private sector. Preferential access to finance and direct assignment of projects to SOEs, vis-à-vis the private sector, are two of the most common mechanisms.
- **The lack of depth of the local financial markets.** In many infrastructure projects, private sector participation could play a value added role, generating cash flows in local currency. In order to avoid foreign currency risk, these projects should be financed with local currency funds. Indonesian local debt and capital markets are relatively young and there is still limited availability for long-term rupiah financing.

As a share of the overall infrastructure investments, private sector participation in Indonesia has declined from an average of 19 percent in the 2006–10 period (0.8 percent of GDP) to an average of 9 percent in the 2011–15 period (0.2 percent of GDP) (Figure 1).

Figure 1. Private Investment, Mobilizing Private Capital



Source: Figures from World Bank, Indonesia Economic Quarterly, September 2017, Mobilizing Private Capital for Infrastructure Development.

In the 2010–17 period, the GOI made efforts to streamline the governing regulatory framework and provided a financial support mechanism to PPP projects not seen in many developing countries. A recent report by Public Private Infrastructure Advisory Facility (PPIAF) of the World Bank categorizes Indonesia's PPP framework as very solid but facing some challenges (Box 1).

### Box 1. PPIAF's Impact Assessment of the Indonesia PPP Framework

In a May 2017 report, the World Bank's Public Private Infrastructure Advisory Facility (PPIAF) stated:

"The Indonesian PPP framework is exceptionally strong and in line with global best practices, and there is an emerging pipeline of PPPs that have utilized the various tools and institutions that form the PPP Framework. The enabling framework now contains many critical tools: infrastructure planning provides a visible and clear long term Capital Plan (235 projects) combined with a shorter-term Priority Capital Plan (30 projects); a PPP Unit has been established; and a new Infrastructure Guarantee Fund provides guarantees for government obligations, which greatly offsets the previous negative track record of the Indonesian government in PPP contractual arrangements. In addition, a Viability Gap Financing tool enables the use of government grants to improve the financial viability of projects; a Project Development Fund assists in project preparation and delivery; and a state-owned development bank, SMI, has been established to assist in arranging local currency financing and leadership for local banks. Nevertheless, despite the availability of these tools, the track record of projects reaching financial close is limited, essentially due to a lack of project planning and preparation in the line ministries and within the central agencies within government, and to a lack of coordination of framework tools across government. A serious upstream issue is the lack of formal procurement options analysis (POA) which assess value-for-money in a PPP as compared to public works, with the consequences (a) projects can commence procurement without full government commitment to reach financial closing as expeditiously as possible; (b) projects can enter the market that are unattractive to the private sector; and (c) Indonesia can incur long-term financial obligations that are not recorded on the government's financial statements. These issues are limiting the appeal of the Indonesia market to major private sector infrastructure proponents."

Source: PPIAF, Impact Assessment of the Indonesia PPP Framework, May 2017.

### Infrastructure Competitiveness

According to the most recent *Global Competitiveness Report* (2017) of the World Economic Forum (WEF) Indonesia ranks 36 out of 137 countries, an improvement of 9 positions from 2016. However, in the Infrastructure Sub-Index, Indonesia ranks 52nd out of 137 countries. A breakdown of Indonesia's Infrastructure Sub-Index is presented in Table 1.

Table 1. Indonesia's Ranking on the Infrastructure Sub-Index of the Global Competitiveness Index

Category	Rank (out of 137 countries)	Value (top value of 7)
Quality of roads	68	4.1
Quality of railways	64	4.1
Quality of port infrastructure	72	4.0
Quality of air transport infra.	51	4.8
Available airline seats/KM	14	3,299.0 (million KM per week)
Quality of electricity supply	86	4.4
Mobile cellular subscriptions	18	149.1 (per 100 people)
Fixed telephone lines	104	4 (per 100 people)
<b>Overall Infrastructure Index</b>	<b>52</b>	<b>4.5</b>

Source: World Economic Forum, 2017.

If the air transport sector and the intense penetration of mobile phones are excluded from the average

value calculation, the overall index of infrastructure quality for basic physical infrastructure in Indonesia would most likely fall 10 to 15 places to 62–67. This number probably better represents the current state of infrastructure in Indonesia.

## Local Financial Markets

Despite efforts to ease regulation and provide incentives to further develop Indonesia’s financial markets, these markets remain small when compared to Indonesia’s regional peers.<sup>155</sup> The ratio of financial sector assets (bank credit, equity market capitalization, and bonds) to GDP was 103 percent in 2013, compared to 194 percent of GDP for the Philippines, and over 300 percent of GDP for Malaysia, Singapore, and Thailand.<sup>156</sup>

The banking sector is very segmented, limiting the availability of infrastructure lending. The state-owned banks such as BNI, BRI, and Mandiri have prioritized lending to SOEs and strong corporates. Larger private banks and foreign banks are highly selective of the projects and corporate names they lend to. This situation is squeezing available long-term funding for private (and PPP) infrastructure projects in Indonesia. There is a lack of structured finance options in the rupiah markets, and most local financiers rely on corporate credit with recourse to the corporate names. Non-recourse finance is limited in the banking market.

The local bond market has been developing. The infrastructure sector is already the second largest issuer, with 16 percent of the total outstanding bonds in 2016. Currently, however, the bond market is available only for large and strong corporate names, making issuances for new infrastructure projects and/or relatively unknown sponsors difficult. The use of structured bonds from special purpose vehicles (SPVs) that rely solely on project cash flows is limited.

On the demand side of the bond markets, Indonesia has a relatively solid and growing base of institutional investors (pension funds, the social security system, and life insurance companies) with appetite to take longer-term infrastructure risks. However, this segment, although growing, is small compared to neighboring countries (equivalent in Indonesia to 12.3 percent of GDP and approximately US\$110 billion).<sup>157</sup>

Securitization as a structured finance mechanism (that relies on non-recourse project revenues to service the debt) is still not fully developed. A legal framework governing securitization was passed in 2008. Until 2016, only mortgage-backed securities were able to use the securitization mechanism. Infrastructure funds have not been fully developed as a mechanism to pool different investors to invest in several infrastructure projects and diversify the risk.<sup>158</sup>

The Government of Indonesia, aware of the financing challenges for privately sponsored infrastructure, has developed several mechanisms to support PPP development in Indonesia. A description of available financing support windows within the GOI follows.

- **Project Development Fund, Ministry of Finance.** This fund extends grant financing to SOEs and contracting authorities, among others, to support the hiring of professional transaction advisors for project preparation of infrastructure projects slated to be developed as PPPs.

<sup>155</sup> “Compared to our region, our financial penetration is shockingly low, slightly better than that of Vietnam,” Sri Mulyani, Minister of Finance, Bank of Indonesia, stated in 2016.

<sup>156</sup> Asian Development Bank, Financial Sector Assessment, 2015.

<sup>157</sup> Indonesia currently has more than US\$95 billion in assets under management. Finance and Central Banks Meeting, Vietnam, October 2017.

<sup>158</sup> World Bank, Indonesia Quarterly Report, September 2017.

- **Viability Gap Fund, Ministry of Finance.** This fund contributes a portion of the development and construction costs of a PPP project that has high economic returns but under current circumstances is not financially viable without a capital subsidy.
- **Indonesia Infrastructure Finance (IIF).** PT Indonesia Infrastructure Finance (IIF) is a private non-bank financial institution that aims to be a catalyst to accelerate and improve private participation in infrastructure development in Indonesia. It provides infrastructure financing and advisory services. It is managed professionally and focuses on commercially viable infrastructure projects. IIF was established by the Government of Indonesia (Ministry of Finance) along with the World Bank, the Asian Development Bank (ADB), and other multilateral institutions, in accordance with the Regulation of the Minister of Finance of the Republic of Indonesia (PMK) No 100 of 2009 regarding Infrastructure Financing Company. IIF was launched on August 6, 2010, through the Decree of the Minister of Finance (KMK) No 439/KM.10/2010. It provides fund-based products such as long-term loans and non-fund-based products such as guarantees, and other services relating to infrastructure projects.<sup>159</sup> The IIF began with a diversified ownership structure that today includes: an SOE, SMI (Indonesia Infrastructure Finance), with 30 percent; the Asian Development Bank (20 percent); IFC (20 percent); KfW (15 percent); and Mitsui Bank, SMBE (15 percent). The company is funded via loans and equity from international financial institutions and shareholders. It was rated AAA by S&P in 2015. By December 31, 2016, it held nearly US\$800 million in assets on its balance sheet.
- **Indonesia Infrastructure Guarantee Fund (IIGF), credit derivatives.** IIGF provides guarantees for the financial obligations of the contracting agencies under a CA or PPP contract to mitigate contractual risks stemming from the government's actions and inactions. These include breach of contract by the CA, delays in obtaining permits/licenses, changes in the law, and so forth. Since the Fund's capital is still limited, the guarantees are backed by co-guarantors, including the World Bank, as well as by the MOF when necessary. IIGF was set up in 2010 with the aim to provide guarantees for PPP projects. IIGF is fully owned by the MOF and as such consolidates its accounts with the Government of Indonesia and enjoys its sovereign credit rating (BBB- at the global scale as of August 2017, according to Fitch ratings).
- **Availability payment scheme, sector ministries and regional authorities.** This is payment by a sector ministry or regional authority to a private entity or project for the provision of infrastructure services. Such services must comply with the requirements and quality standards in a PPP agreement.
- **Land Acquisition Revolving Fund (LARF), Ministry of Public Works.** Once land is shortlisted for a project, the cost of acquiring land tends to increase gradually as the landowner begins to expect a price higher than the prevalent market rate for the land. To manage the potential risk of increasing land acquisition costs, the Land Fund was created. The Fund covers the risk of increasing cost of land acquisition above a certain level and provides bridging loans for investors in a toll road to buy land.<sup>160</sup>

In addition to these windows, the Government of Indonesia has two very important units that support PPP development and management of contingent liabilities in Indonesia. These are the Public Private Central Partnership Unit under Bappenas (the Ministry of National Development), and the Risk Management Unit under the MOF.

<sup>159</sup> In its operations, IIF applies best practices based on international standards in its credit, risk management and all aspects of its corporate governance, and in implementing international social and environmental protection standards to ensure sustainability of infrastructure development in Indonesia. IIF also puts a strong focus on recruiting the best talents at all levels to deliver the best solution to its clients and at the same time enhancing Project Finance knowledge that may not be fully developed in its market. Supported by the strong capitalization from the shareholders as well as long-term subordinated loans from the World Bank and the Asian Development Bank, IIF has a sound basis to provide solutions for financing infrastructure development in Indonesia ([www.IIF.org](http://www.IIF.org)).

<sup>160</sup> Indonesia Infrastructure Landscape, Price Waterhouse, 2014.



## Credit Rating

Standard and Poor's (S&P) upgraded Indonesia's sovereign credit rating in May 2017 to investment grade category, from BB+ to BBB- with a stable outlook. The GOI's focus on realistic budgeting has lowered the risks of future deficits, improving the country's fiscal stability. More recently, on December 21, 2017, Fitch also upgraded Indonesia's sovereign credit rating to BBB from BBB- with a stable outlook, praising Indonesia's current direction of macroeconomic and monetary policies. These upgrades are good news for the infrastructure finance market in Indonesia that might in the not-so-distant future enjoy an easing of access to international capital flows.

## Climate Change Strategy

Indonesia is the world's fifth largest emitter of green-house gases and the largest contributor of forest-based emissions. Indonesia is a very important player in the efforts to reduce global warming. It is a key signatory of the 2015 Paris Agreement on Climate Change. Indonesia submitted its first national climate action plan (National Determined Contributions, NDC) to the United Nations in 2016.<sup>161</sup> In the plan, Indonesia committed to reducing its greenhouse gas emissions by 29 percent by 2030 (against a base case scenario of business as usual).

The two most important climate change actions for Indonesia in the forthcoming years are: a politically sensitive moratorium on new forest and peat land concessions, together with stronger land use regulations and rehabilitation of degraded forest land; and promoting a more aggressive renewable energy mix.<sup>162</sup>

## 2. DESCRIPTION OF IIGF

### Rationale for Selection for This Study

IIGF is one of the few PIFs that focuses exclusively on the provision of guarantees to improve the financial risk profile of PPPs, allowing them to access long-term funding. IIGF is also a public policy response to the challenges faced by private investors when attempting to raise long-term local currency financing for infrastructure projects. This is a consistent challenge faced by private investors in most emerging market economies. It is more acute in less developed economies.

### Framework for Use of Public Infrastructure Funds in Indonesia

As mentioned, the GOI recognizes the challenges in enticing a larger participation of private capital into infrastructure development. Private sector participation in new infrastructure investments has decreased from 0.8 percent of GDP (2006–10) to 0.2 percent of GDP (2011–15). Based on the huge needs of infrastructure development in the country and the important role assigned to the private sector, the GOI has developed a very strong framework of different PIFs for specific support to PPPs and private capital. From the provision of capital subsidies to make projects financeable (the Viability Gap Fund) to the provision of credit guarantees to improve the risk profile of a particular project (the Indonesia Infrastructure Guarantee Fund), the GOI has developed institutions to increase private sector participation

<sup>161</sup> The Paris Agreement requests each country to outline and communicate its post-2020 climate actions, known as their Nationally Determined Contributions (NDCs). Together, these climate actions determine whether the world will achieve the long-term goals of the Paris Agreement, will reach a global peak of greenhouse gas (GHG) emissions as soon as possible, and will undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of this century. It is understood that the peaking of emissions will take longer for developing country parties, and that emission reductions are undertaken on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty, which are critical development priorities for many developing countries.

<sup>162</sup> World Resource Institute, WRI, October 2017.



in infrastructure development in the country.

## Rationale for Development of IIGF

As stated by IIGF in its vision, the Fund is to become a guarantee provider that plays a pivotal role in attracting private capital for infrastructure development to accelerate Indonesia's economic growth ([www.iigf.co.id](http://www.iigf.co.id)). The main focus of the guarantees provided by the Fund is to cover contractual risks in PPP transactions linked to the contracting agencies.

IIGF's mission is to improve the credit-worthiness of infrastructure projects in Indonesia by providing guarantee products through a transparent process, and to provide such products with a solid capital base and professional management. Among its four main objectives, IIGF specifically makes a reference to: establishing a consistent and clear appraisal and claim framework for guarantees; improving governance and transparency; facilitating the flow of deals for government agencies with the private sector; and ringfencing government contingent liabilities and thus mitigating their impact on the public sector budget.

## History

The GOI established IIGF on December 30, 2009, as a state-owned enterprise via an initial capital contribution of Rp1 trillion.<sup>163</sup> The GOI owns 100 percent of IIGF and is represented by the Ministry of Finance. Operations were initiated at IIGF in May 2010. In December 2010, the GOI made an additional capital contribution of Rp1 trillion to IIGF. In March 2011, IIGF published its risk allocation guidelines and guarantee provision guidelines, creating the risk management framework for the institution. On October 6, 2011, the first guarantee agreement for a PPP project (Central Java, Batang, Fired Coal Power Plant) was signed.<sup>164</sup> On December 31, 2011, the GOI increased its capital contribution to IIGF by another Rp1.5 trillion.

On December 17, 2012, the GOI increased its capital contribution into IIGF by a further Rp1 trillion, bringing IIGF's capital base to Rp4.5 trillion. In 2013, IIGF received US\$25 million as a long-term loan from the World Bank to backstop the provision of guarantees and strengthen the Fund's institutional capacities. In addition, the World Bank's Multilateral Investment Guarantee Agency (MIGA) approved a co-guarantee commitment with IIGF for the equivalent of US\$50 million for the Bandar Lampung Clean Water Project. In 2015 and 2016, IIGF accelerated the pace of new guarantees approvals for infrastructure projects in the energy, transport, water and sanitation, and telecommunication sectors.

In October 2010, IIGF created the IIGF Institute with the objective of supporting knowledge development in the areas of economic regulation, private provision of infrastructure, and facilitating investments. The Institute also disseminates best international practices and acts as the training center for public contracting agencies staff in these areas. In addition, the Institute caters to local academic institutions (it has a vast network of communications with several universities), as well reaching out to the media in Indonesia.

## Size and Financial Performance

Key financial indicators from 2012 to 2016 are presented in Table 2.

<sup>163</sup> At the average exchange rate in 2009 (US\$1 equivalent to Rp9,402), the initial capital contribution was approximately equivalent to US\$106 million.

<sup>164</sup> It was a joint guarantee facility provided by IIGF with the MOF.

**Table 2. IIGF, Key Financial Indicators (Rp million)**

	2016	2015	2014	2013	2012
Assets	8,924,429	7,381,407	5,521,810	5,196,468	4,966,837
Liabilities	100,566	94,294	70,246	48,478	49,720
Equity	8,823,863	7,287,113	5,451,564	5,147,990	4,917,117
Revenues	821,108	533,064	529,992	392,961	312,240
Costs	315,946	213,973	207,383	165,562	111,555
Profit (before tax)	505,160	319,091	322,609	229,399	154,528
Net profit	502,446	339,455	346,043	249,760	157,141
Average exchange rate (Rp per US\$)	13,272.44	13,333.92	11,835.91	10,394.65	9,329.20

Source: IIGF, Annual Reports, 2015 AND 2016 (exchange rates are based on OANDA historical exchange rates).

At the end of fiscal year 2015, IIGF had assets approximately equivalent to US\$554 million (compared to a capital contribution by the GOI between 2009 and 2015 of approximately US\$450 million, calculated at the average exchange rate). Given the young profile of the investment projects supported by IIGF, no major calls on guarantees have been executed, implying that capital stock has not been utilized.

Accounting standards in Indonesia do not require the contingent liability associated with a partial risk guarantee contract to be accounted for above the line. These contingent liabilities are stated below the line of the financial statements as a general note. Guarantee amounts are expressed in the financial statements only in cases where it has been declared that the underlying infrastructure project is facing difficulties, and that a claim (on the guarantee contract) is about to be made.

In 2015, IIGF generated revenues (through guarantee fees and financial returns of the equity invested in Treasury operations) approximately equivalent to US\$40 million. On the operating costs side, total expenses amounted to approximately US\$16 million, providing a net profit before tax of US\$24 million. In terms of return on equity, the Fund operations yielded an annual return of 4.4 percent.

2016 was a year of consolidation for IIGF as the GOI guarantor of choice for payment risk for contracting agencies. Operations increased, generating a better return and operating revenues. By the end of 2016, IIGF was involved in 16 different infrastructure transactions with a total project value of Rp80.10 trillion, which shows a solid origination pipeline.<sup>165</sup>

<sup>165</sup> Two of those projects were valued at US\$4.04 billion in the Annual Report. These amounts are not included in the total of Rp80.1 trillion.

IIGF shows strong levels of liquidity (Table 3). This is to be expected, given the early stages of its business development. There are still no calls on the guarantees provided. Most of the active projects have only reached financial closure in the 2015–17 period.

**Table 3. IIGF, Key Financial Indicators, Cash Flow Movements (Rp million)**

	2016	2015	2014	2013	2012
Cash flow from operating activities <sup>a</sup>	520,377	273,399	317,795	212,207	179,653
Cash flow from investing activities <sup>b</sup>	(255,498)	(974,250)	(738,397)	(1,740,531)	(1,064,620)
Cash flow from financing activities <sup>c</sup>	1,013,825	1,511,641	8,643	(310)	999,222
<b>Change in cash flows</b>	<b>1,278,704</b>	<b>810,790</b>	<b>(411,958)</b>	<b>(1,528,634)</b>	<b>114,255</b>
Cash at the start of the year	1,616,841	806,051	1,218,010	2,746,643	2,632,388
Cash at the end of the year	2,895,545	1,616,841	806,051	1,218,010	2,746,643
<b>Average exchange rate (Rp per US\$)</b>	<b>13,272.44</b>	<b>13,333.92</b>	<b>11,835.91</b>	<b>10,394.65</b>	<b>9,329.20</b>

Source: IIGF, Annual Report 2015 (exchange rates are based on OANDA historical exchange rates)

Note:

- a. Cash flow from operating activities are from fund management and guarantee fees.
- b. Cash flow from investing activities are the capital injections from MOF.
- c. Cash flow from financing activities are the results from debt management (financial costs).

IIGF is still in the early stages of development of a guarantee financial institution. Its return on equity (ROE) and return on assets (ROA) are basically the same (Table 4), given that most of the capitalization has not yet been converted into financially closed guarantee contracts. This is normal for this type of institution when in the phase of building assets in the portfolio. As of December 2017 (unaudited figures), IIGF has an average return on Treasury income (short- and medium-term investments) equivalent to 227 basis points above the GOI cost of funds.

Liabilities represent only 1 percent of IIGF's capital structure, consistent with its young status and lack of leverage. Short-term interest rates in Indonesia averaged about 6.5 percent per year for deposits. Given IIGF's high liquidity and the ramp-up period to generate assets, the ROE of 6.5 percent reflects a very conservative goal. Some of the investment policy restrictions of SOEs in Indonesia also probably explain the relatively low ROE ratio.

**Table 4. IIGF, Key Financial Indicators (percent)**

Description	2016	2015	2014	2013	2012
Net operating margin	61.5	60.0	60.9	77.5	64.4
Net income margin	61.2	63.7	65.3	63.6	68.3
<b>Return on equity (ROE)</b>	<b>6.5</b>	<b>6.0</b>	<b>6.5</b>	<b>5.0</b>	<b>5.5</b>
Return on assets (ROA)	6.5	5.8	6.5	5.0	5.3
Operating expense/income	23.0	21	20	22	16

Source: IIGF Annual reports 2015 and 2016.

### 3. INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE

#### Institutional Framework

IIGF is a state-owned enterprise under the Ministry of Finance, which establishes oversight of the Fund via the Department of Budget, Finance, and Risk Management. IIGF was established in accordance with the following regulatory framework: (a) Presidential Regulation No. 38 of 2015 defining cooperation between government and private sector entities in the provision of infrastructure services; (b) Presidential Regulation No. 78 of 2010, on the type of guarantees provided to PPPs via IIGF; (c) MOF Regulation No. 260/PMK011 of 2010 on the technical guidelines for the provision of guarantees to PPP projects; and (d) National Procurement Board Regulation No. 19 of 2015 on procurement procedures between government entities and private sector.

IIGF is part of the government's efforts to accelerate infrastructure development in Indonesia, by providing contingency support/guarantee for the risks caused by the government's action or inaction that could harm the economic feasibility of the PPP project. IIGF is a public sector institution that follows public sector procurement rules and consolidates its accounts with the GOI via the MOF. The World Bank has extended strong support to IIGF since its origins to strengthen the institution and improve its governance (Box 2).

#### Box 2. The World Bank and IIGF

The World Bank has provided robust advisory services to the GOI in the design and development of a guarantee fund to support infrastructure development in Indonesia since 2005.

In 2013, IIGF received a US\$25 million long-term loan from the World Bank to support the provision of guarantees backstop by the credit line. In parallel, the World Bank also provided a US\$4.6 technical assistance loan to create the Indonesia Infrastructure Guarantee Fund Project (IGFP). IFGP has been assisting IIGF in the strengthening of the Fund's capacities in project appraisal, the design of guarantees, risk management techniques, and governance and transparency. Through this support, IIGF has developed a standardized, world-class set of operational norms and procedures, as well as standards to appraise guarantees and corporate governance standards. This assistance has helped build the institutional capacity of IIGF as well as its credibility and reputation in the market place.

Source: Author's analysis, 2018

## Reporting Lines within the National Government

As mentioned, IIGF reports to the MOF via the Department of Budget, Finance, and Risk Management. The MOF acts as the entity's de facto regulator. It chairs the Audit Committee. The MOF has established a guarantee limit for IIGF of no more than 10 times its capital. In situations where the transaction (guarantee) requires additional capital leverage given its size, MOF provides a co-guarantee with IIGF to make the transaction possible.

## Corporate Governance

IIGF has a two-tier governance system via a Board of Directors for day-to-day oversight of the Fund (management) and a Board of Commissioners for the strategic guidance (senior public sector officers). The Audit Committee is a supporting body of the Board of Commissioners and plays an important role in improving the Board of Directors' effectiveness in oversight of the organization. The Board of Directors meets twice a month, while the Board of Commissioners meets once a month.

IIGF has implemented a Good Corporate Governance (GCG) mechanism to increase information transparency and accountability to support business processes and decision-making and to serve as a check-and-balance mechanism. With this GCG in place and active, IIGF will be able to drive long-term corporate performance and establish trust between the Fund and stakeholders as to how to operate and grow sustainably.

The implementation of IIGF Good Corporate Governance is guided by transparency, independence, fairness, and accountability principles. IIGF is fully committed to implementing good corporate governance at all levels and organizations based on various terms and conditions associated with the implementation of GCG by the Board of Directors and Board of Commissioners.

In 2006, IIGF published supporting documents of GCG based on the Indonesia Code of Corporate Governance issued by the National Governance Policy Committee and applicable regulation:

- A Code of Conduct that serves as a guideline for corporate behavior in performing daily duties and dealing with stakeholders.
- A Board Manual that regulates the relationship mechanism between the General Meeting of Shareholders as a corporate governance organ, the Board of Commissioners, and the Board of Directors and its supporting organs.

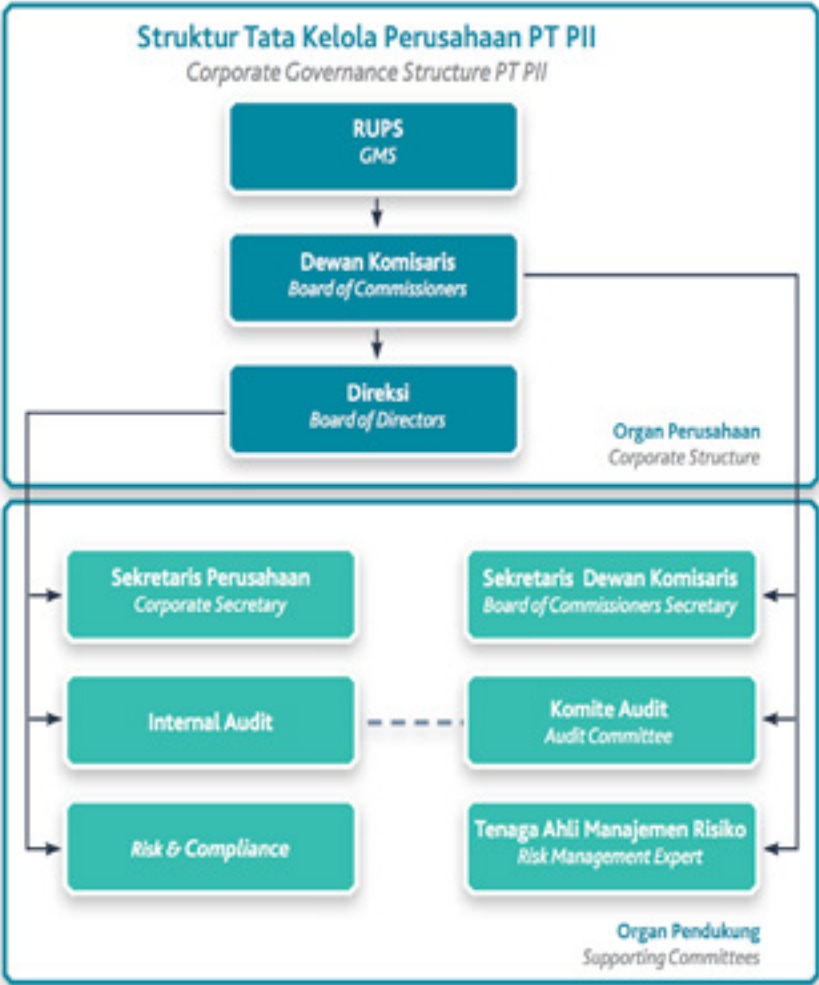
Pursuant to Law Number 40 of 2007, Chapter I on General Provisions Article 1, the corporate structure consists of the General Meetings of Shareholders, the Board of Directors, and the Board of Commissioners.

- The General Meetings of Shareholders (GMS) is a corporate structure with distinctive authority that is not delegated to either the Board of Directors or the Board of Commissioners under limits specified in the Law and/or Articles of Association.
- The Board of Commissioners is in charge of supervising and/or acting per the Articles of Association and providing advice to the Board of Directors.
- The Board of Directors has full authority and responsibility for the Company's management for the Company's interest per the purposes and objectives of the Company, in accordance with provisions in the Articles of Association.

The corporate structure plays a vital role in the success of implementing the GCG mechanism. The corporate structure is carried out per provisions in the Law, Articles of Association, and other regulations based on the principle that every structure has independence in carrying out its duties and fulfilling its

function and responsibilities for the Fund’s interest. The Board of Commissioners and Board of Directors have established Supporting Committees that help the BOC and BOD ensure that good corporate governance is well implemented and achieves its targets (Figure 2).

Figure 2. Supporting Committees Serving the Board of Commissioners and Board of Directors



Source: IIGF, Annual Report 2016.

The local representative of PricewaterhouseCoopers in Jakarta audits IIGF financial statements and accounting information. IIGF must comply with the directives of the Financial Accounting Standard Board of the Indonesian Institute of Accounting (DSAKIAI).

**Appointment of Chairman and CEO**

The Chairman and CEO are appointed by the MOF. The Minister of Finance, Sri Mulyani, officially appointed Armand Hermawan as President Director of PT Penjaminan Infrastruktur Indonesia (Perse-ro) (IIGF). It is stated in the Decree of the Minister of Finance of the Republic of Indonesia No. 885 /



KMK.06 / 2017 on the Transfer of Duties and Appointment of Members of the Board of Directors of the Indonesian Infrastructure PT Penjaminan Infrastruktur, which was established on November 27, 2017.

## Staff Structure

IIGF has a staff structure of 91 persons (74 staff and 17 long-term consultants) (Table 5). IIGF has a career development and training program for staff. IIGF staff enjoy the benefits of public sector employees, including a retirement program. The number of staff is consistent with other public infrastructure funds analyzed in the case studies.

**Table 5. IIGF Staff Structure and Staff Profile**

Komposisi Karyawan Berdasarkan Jabatan/Employee profile by Position Level				
Kategori Jabatan Position Category	2015		2016	
	Jumlah/ Total	%	Jumlah/ Total	%
Staff	24	32.0%	23	25.3%
Junior Manager (AM-M)	9	12.0%	21	23.1%
Middle Manager (DSM-AVP)	17	22.7%	17	18.7%
Senior Manager (VP-SVP)	24	32.0%	30	33.0%
Executive Manager (EVP)	1	1.3%	0	0.0%
<b>Jumlah/Total</b>	<b>75</b>	<b>100.0%</b>	<b>91</b>	<b>100.0%</b>

Komposisi Karyawan Berdasarkan Pendidikan/Employee profile by education				
Jenjang Pendidikan Education Level	2015		2016	
	Jumlah/ Total	%	Jumlah/ Total	%
Doktor (S3) /Ph.D Degree	4	5.3%	4	4.4%
Pasca Sarjana (S2)/Post Graduate	26	34.7%	32	35.2%
Sarjana (S1) & Diploma/ Bachelor Degree & Diploma	45	60.0%	55	60.4%
<b>Jumlah/Total</b>	<b>75</b>	<b>100.0%</b>	<b>91</b>	<b>100.0%</b>

Source: IIGF, Annual Report 2016.

## Funding Mechanisms

IIGF has been funded by the GOI through the MOF, with a capital contribution equivalent to Rp4.5 trillion in the 2010–15 period. In addition, IIGF has received long-term loans to backstop the provision of guarantees for PPPs in Indonesia from various international financial institutions. IIGF also has the capacity to co-guarantee selected operations together with the GOI (MOF) and other multilateral institutions such as MIGA. The co-guarantee increases IIGF's capacity to support higher volumes of risk. IIGF can issue debt in the local markets, but so far has not used this mechanism. IIGF can also access global financial markets on the basis of the MOF credit rating and support.

## Contracting Agencies

IIGF was set up to provide financial support to commitments by Indonesia's contracting agencies in PPP transactions (off-take agreements, termination fees, land acquisition, regulatory risks, and the like).

Contracting agencies (sector ministries, state-owned enterprises, public agencies, subnational governments) are IIGF's first-tier clients.

## The IIGF Institute

Aware of the need to build institutional capacities among contracting agencies to process and promote infrastructure development via PPPs, IIGF started to provide knowledge support to contracting agencies in the PPP area in 2010. In January 15, 2015, IIGF created the IIGF Institute as a knowledge institution (Box 3). The Institute provides capacity building and knowledge transfer to contracting agencies in the areas of infrastructure project evaluation, project preparation, and project implementation via PPP models.

### Box 3. The IIGF Institute: Vision, Objectives, and the University Network

#### Objectives

"To be a credible institution and resource center that disseminate knowledge and best practices on the development of infrastructure in Indonesia."

"To support abilities, skills, and knowledge management related to the provision of public infrastructure services based on good governance and competitiveness to support the long-term growth of Indonesia."

"To contribute substantively in providing policy recommendations, improving regulation and knowledge support to the government to improve the public policy and regulations related to the infrastructure development."

"To provide relevant information and best international practices for the development of infrastructure in Indonesia with a relevant multi-disciplinary study."

"To encourage communication and networking between public and private sectors on infrastructure industry in Indonesia."

"University Network for Indonesia Infrastructure Development (UNIID) is a forum for academia in a form of formal meeting to exchange information, share the experience, and harmonize the policy related to the development of infrastructure in Indonesia. IIGF, through IIGF Institute, facilitated the establishment of UNIID on December 16th, 2016 as a part of IIGF's national seminar on Infrastructure for People. While becoming a forum for academia in research and education activities related to infrastructure, UNIID is also expected to become a media between academia for sustainable communication especially in analyzing cases of infrastructure projects. Thus, UNIID shall provide valuable inputs for stakeholders in the field of infrastructure, particularly governments, investors, banks, pushing toward the speedy delivery of Indonesia's infrastructure."

Source: IIGF Institute 2016 Annual Report.

## 4. FISCAL MANAGEMENT

- **Is the Fund included under the fiscal rules, budget, and/or debt target?**

IIGF's role in infrastructure development has an upper limit based on the amount of government equity injected to IIGF. Also, whenever IIGF pays claims to private parties, IIGF has the right to be paid back by the CAs. Therefore, IIGF would need a kind of bridging fund to cover the period after IIGF pays the claim until IIGF receives repayment back from CAs.

- **Does the public-sector act as the lender of last resort?**

If the CAs fail to repay IIGF, IIGF may enter in discussions with MOF to settle the payment of CAs receivables. Thus, the Ministry of Finance/Government of Indonesia may be considered the de facto lender of last resort.

- **Do the public-sector procurement and oversight mechanisms apply to the Fund?**

Yes, public sector procurement rules apply to IIGF. MOF exerts its oversight via the Board of Commissioners and the Audit Committee.

- **What is the link between the Fund and the public budget process?**

IIGF has a degree of financial autonomy because its operating costs are not funded via the public budget process. IIGF generates its own revenues to cover operational costs. However, the capitalization of IIGF by the MOF is part of the public sector budget process.

- **Does the Fund or its parent institutions (such as the Ministry of Finance) have a risk management policy in place for public funding exposure?**

IIGF consolidates its accounts with the MOF. The Ministry, as IIGF's parent institution, has a well-developed system to manage contingent liabilities. Indonesia, along with Australia and Brazil, is one of the three countries that provide a comprehensive statement of fiscal risks alongside their budget. Indonesia has done so since 2008. The fiscal risks statement, presented in one concise report, covers a broad range of significant risks, not just contingent liabilities. For example, the 2009 Budget Report provided information on sensitivities to macroeconomic assumptions associated with government debt as well as risks stemming from the state of infrastructure development; budget fluctuations; state-owned enterprises (SOEs); the sensitivities of SOEs to changes in oil prices, exchange rates and interest rates; the financial sector; liabilities from pension plans and the old-age allowance for civil servants; fiscal decentralization; legal claims on the government; membership in international financial institutions; and natural disasters, among others. The Financial Note of National Budget for 2016 provides information about the medium-term budget plan, fiscal risk, and fiscal development. It is worth noting that for the first time, the Financial Note for the 2016 Budget includes a chapter solely devoted to fiscal risk, indicating the government's commitments to describe contingent liabilities and how to manage them.

- **Is there a contingent liability strategy or policy guideline in place?**

IIGF consolidates its accounts with the MOF through the Debt Management Office (DMO). In 2014–15, the contingent liabilities unit at the Directorate General of Financing and Risk Management (DGFRM) in the MOF established a risk analysis and measurement framework and examined how the insights from this analysis would influence the design and implementation of risk management tools. From 2012 to 2016, the World Bank, through the Government Debt and Risk Management Program (GDRM), assisted the DGFRM team in transferring know-how to assist the Indonesia Debt Management Office (DMO). The DMO developed scorecards in the electricity and water sectors.

In 2016, the MOF issued a regulation specifying the actions to be taken when a guarantee claim is triggered or when a guarantee is requested by an SOE. As a final step in the implementation process, the DMO is rolling out the scorecard to other infrastructure sectors, including toll roads, railways, bridges, and ports. This is just one more step in making the Indonesian economy more resilient to financial shocks.

The contingent liabilities unit at the DGFRM is going through an iterative process covering four different steps in the risk analysis and measurement framework. In setting up a context-specific framework, DGFRM draws upon experiences from other countries through a peer-to-peer

group dialogue including risk managers at the World Bank and third-party information (such as rating methodologies by rating agencies). DGFRM then integrates these insights to capture the idiosyncrasies in Indonesia.

The World Bank Group has been supporting DGFRM in improving its risk management practices concerning contingent liabilities since October 2012. Contingent liabilities risk management constitutes one of three components of the Government Debt and Risk Management technical assistance program between the World Bank and Indonesia, which is funded by the Swiss State Secretariat of Economic Affairs (SECO). The risk analysis and measurement framework developed by DGFRM currently focuses on explicit government guarantees (Box 4), but the approach and insights from designing a risk analysis system could be quite easily amended to include risks from other types of contingent liabilities, such as on-lending and implicit contingent liabilities to SOEs and sub-nationals.

#### **Box 4. The Contingent Liabilities Risk Management System for Guarantees**

The World Bank, in a 2016 report, “Contingent Liabilities Risk Management,” explained:

“Guarantee beneficiaries are mostly owned and/or controlled by the government and hence risk exposure to the government from these entities comprises various types of fiscal risks, including volatility in dividends paid, their ability to provide essential public services, and implicit contingent liabilities (such as default on non-guaranteed debt). The risk exposure in scope for DGFRM, however, is risks from explicit government credit and investment guarantees.”

“Credit guarantees are extended to the power sector (i.e. PLN) through Fast Track Program Phase 1 (FTP1) and to the water sector through the Clean Water Availability Program. These guarantees insure default risk of beneficiaries (PLN and water utilities) in corporate finance lending. Investment guarantees can be extended to the power sector through FTP2 and to PPPs in various sectors through the Indonesia Infrastructure Guarantee Fund (IIGF). Investment guarantees protect investors against the termination risk caused by the materialization of political risk in project finance deals. Investment guarantees are also extended to independent power producers (IPPs) to guarantee the off-take of electricity at a pre-set tariff by PLN (see Figure 3.9). Under this scheme, if PLN fails to pay for electricity delivered by IPPs in accordance with an off-take agreement, the government’s guarantee is called and the government is obliged to make payments to IPPs to cover PLN’s shortfall. DGFRM defines a credit event as an unexpected payment by the government to the beneficiary entity which would otherwise not be able to meet a debt service payment or a situation where the government takes over the full amount of guaranteed debt.”

Source: World Bank, Policy Research Working Paper 7538, by Fritz Florian, 2016.

- **What are the fiscal reporting and oversight mechanisms?** IIGF reports its financial position to the Budget and Contingent Liabilities Department of the MOF. The Ministry exercises its oversight mechanisms via the Board of Commissioners and the Audit Committee. The conditions and characteristics of the guarantee product (the partial risk guarantee) must comply with regulations from Indonesia’s Central Bank.

## **5. OFFERING OF FINANCIAL PRODUCTS**

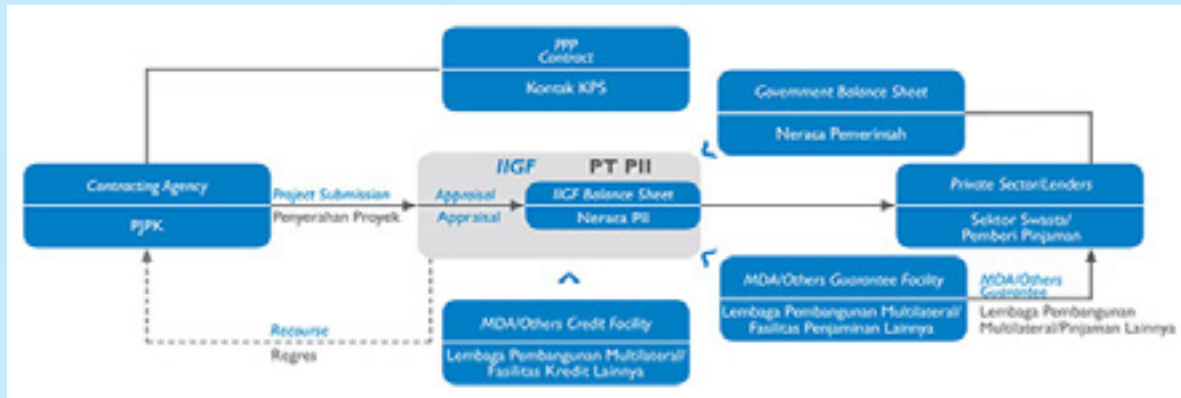
IIGF was created to guarantee the commitments of the GOI’s contracting agencies in PPPs transactions. The GOI was aware that public sector entities play a crucial role in the development of PPP infrastructure transactions in the country, particularly in sectors such as energy, transport, water and sanitation, and solid waste, traditionally dominated by large SOEs. For example, if the de-

velopment of an independent power producer (IPP) was contingent upon the electricity utility (SOE) buying the energy at a given price and conditions (through an off-take contract), IIGF would guarantee (back stop) the payment commitment of the public utility. In the event that the electric utility failed to pay and guarantee conditions were met, IIGF would honor the SOE payment.

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#### Box 5. IIGF Guarantee Definition

IIGF's scope of guarantees are the financial obligations of contracting agency under the PPP contract. These obligations are based on a proper risk allocation. The figure below illustrates the guarantee mechanism.



Source: IIGF Operations, 2017.

The IIGF guarantee is intended to guarantee political risk of both the central and local government as a contracting agency to provide certainty and comfort for investors. The availability of an IIGF guarantee can increase the certainty of the private sector's participation and financing for infrastructure development in Indonesia. IIGF's guarantee product falls broadly in the category of partial risk guarantees.

As the basis for implementing PPPs, the government issued Presidential Regulation Number 38 Year 2015 regarding Public Private Partnership in the Provision of Infrastructure. PPPs are intended to provide sustainable financing for the provision of infrastructure using private funding to accomplish the effective, accurate, efficient, and prompt provision of quality infrastructure and to create an investment environment that promotes private sector participation in the provision of infrastructure based on principles of good corporate governance. The Minister/Head of Institution/Head of Region initiates the provision of infrastructure to be developed in partnership with the private sector through a PPP scheme.

The IIGF guarantee can improve the creditworthiness of an infrastructure project, which could result in lower cost of financing thus ensure private financing to infrastructure projects.

For the government as the project owner, the IIGF guarantee can improve the certainty of private sector participation and financing for infrastructure development in Indonesia. In addition, by establishing a good

Contractually, the Independent Power Producer (IPP) is responsible for the design, construction, financing, and operation and maintenance of the electricity generating facility (the plant). It transfers ownership of the assets to the government at the end of the concession period. The electricity generated by the plant is then sold by the IPP to the PLN (Power Utility) as the state-owned company (BUMN) in an electricity sector and as the contracting agency in a Power Purchase Agreement (PPA). The PLN as the single off-taker pays for the electricity to the Project Company on a periodic basis, using a take-or-pay arrangement during the PPA. Thus, the credibility of the PLN in serving the financial obligation has always been the greatest risk. PLTU Batang Project is an example of an electricity PPP that is currently under preparation for construction.

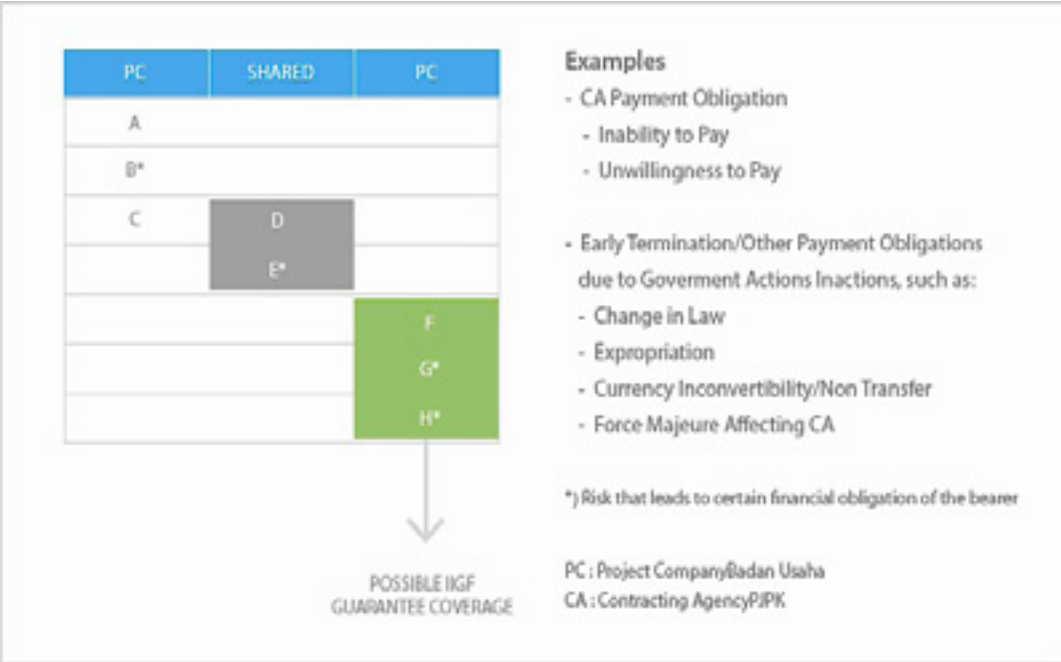
transaction structure, IIGF increases the certainty of a successful transaction with the investor that will lead to the development of quality and efficient infrastructure. IIGF as an infrastructure guarantee business entity also assists the GOI/Ministry of Finance in ring-fencing government contingent liabilities and minimizing the direct shock (“sudden shock”) to the state budget of infrastructure projects per respective regulations.

For the private sector, the IIGF guarantee can reduce exposure to political risk in the eyes of investors and creditors, and thus can lower the cost of financing associated with the investment in infrastructure projects.

IIGF plays several important roles in supporting infrastructure development, including:

- Improving the creditworthiness and quality of PPP infrastructure projects by establishing clear and consistent appraisal and claim frameworks for guarantees.
- Strengthening the governance and transparency of guarantee provisions.
- Facilitating the deal flow for contracting agencies (ministries, SOEs, regional governments) by providing guarantees to well-structured PPPs.
- Ringfencing government contingent liabilities to minimize the impact to the state budget.
- Acting as guarantor to the private sector for any infrastructure risk arisen as the result of any government action or inaction that may result in financial loss for a PPP infrastructure project, such as a delay in issuing licenses and permits, a change in regulations, failure to adjust tariffs, failure of network/facility integration, and other risks covered or allocated to the government in the PPP contract (Figure 3).

Figure 3. IIGF, Risk Coverage in a PPP Agreement



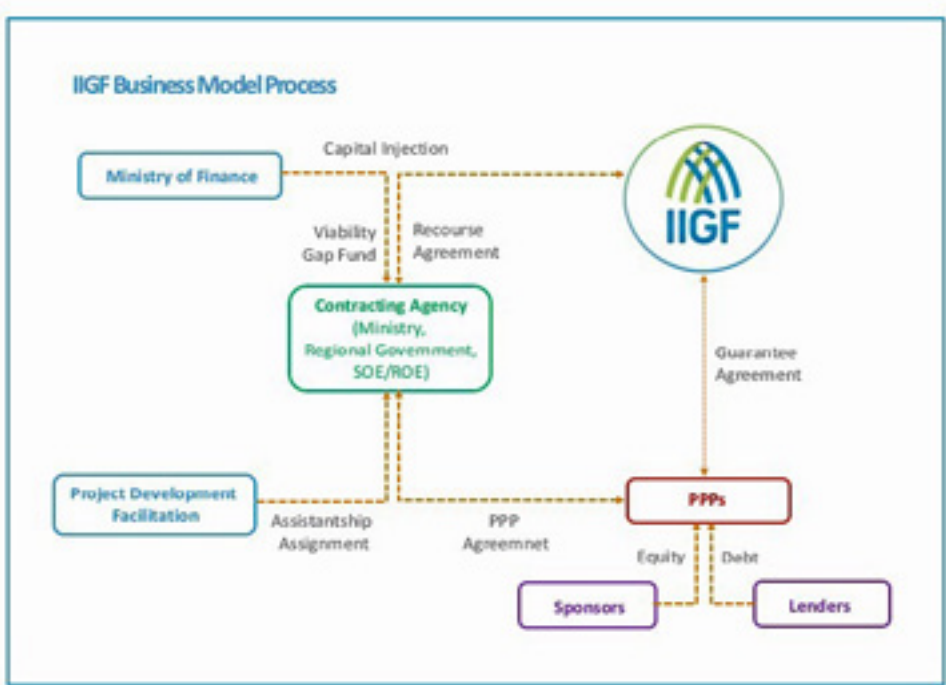
Source: IIGF Operations, 2017.



IIGF’s guarantee capacity is a function of its capital base (currently about Rp4.5 trillion) and the co-guarantee capacity of its owner (MOF) and its partners when co-guaranteeing with institutions such as the World Bank. Currently, the average size of guarantee coverage per transaction is Rp2.4 trillion (equivalent to US\$180 million). By any global standard, these are very large guarantee contracts. Guarantees are provided in local currency (rupiah).

Figure 4 presents IIGF’s business model.

**Figure 4. IIGF’s Business Model, Including Relationships with Other Government Providers of Financing Support**



Source: IIGF Operations, 2017.

**Pricing and Conditions**

IIGF prices its guarantee products based on four criteria: the length of exposure; the risk profile of the underlying infrastructure project; the probability of the event occurrence; and a stress test of the transaction. The guarantee product (the partial risk guarantee) carries an upfront fee (currently marked at 100 basis points) and an annual margin per transaction adjusted to the four criteria. Currently, the average annual margin per transaction fluctuates between 100 basis points and 250 basis points.

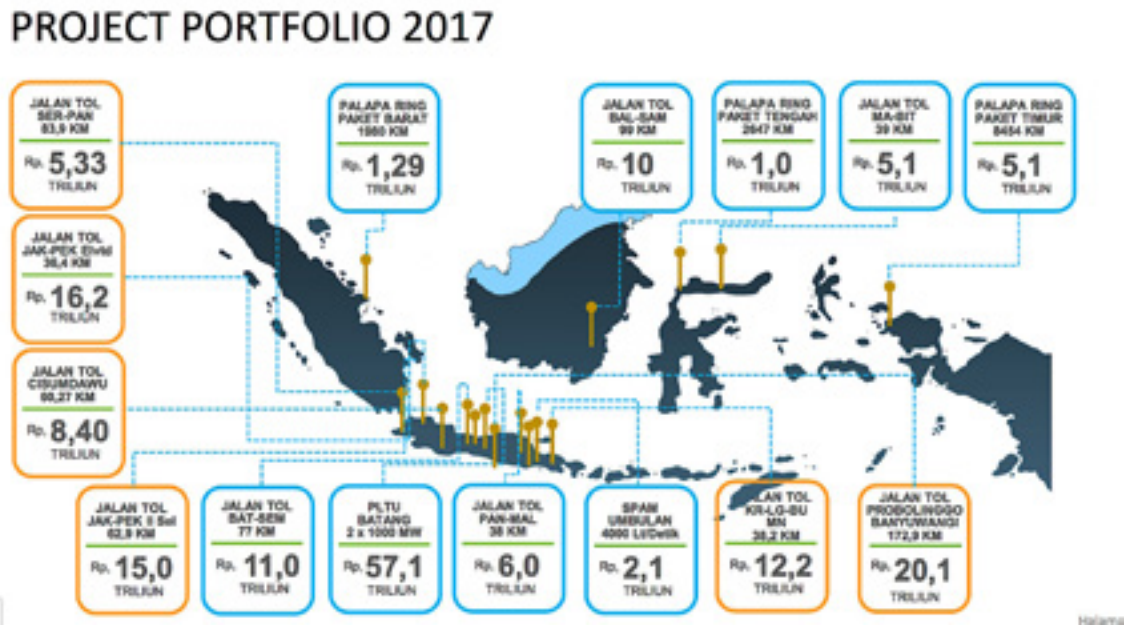
**IIGF Guarantee Portfolio**

As of December 31, 2017, (unaudited figures), IIGF had signed 15 different guarantee contracts supporting payment risk from contractual agencies (including availability payment and power purchase agreements). These contracts amounted to Rp36 trillion (approximately US\$2.7 billion) of guarantee coverage. Project costs associated with these guarantee underwritings amounted to Rp176 trillion (equivalent to US\$13.2 billion). The leverage ratio of these guarantee contracts was close to 3.85, like the ratio of

nearly 4 in other public infrastructure funds surveyed in this Global Review.

Most of the current underwritten guarantee contracts are concentrated in the road transport and power sector (Map 1). IIGF currently has a pipeline of infrastructure projects that will diversify the risks into sectors such as ports, airports, water treatment, and social infrastructure. Their current total project cost is nearly Rp210 trillion (equivalent to US\$15.3 billion).

Map 1. Project Portfolio, 2017



Source: IIGF presentation to senior management, January 2018.

### Partial Risk Guarantee Recourse

Each guarantee agreement has a counter-guarantee agreement with the contracting authority whose payment risk IIGF is covering. The terms and conditions of the counter-guarantee agreement were not available to the author. However, it should be expected that the terms and conditions of the counter-guarantee agreement will “mirror” the terms and conditions of the guarantee contract.

From the GOI’s perspective, the risk (contingent liability) in the partial risk contract underwritten by IIGF and the risk in the counter-guarantee agreement with the contracting agency is one and the same given the state ownership of both IIGF and the contracting agency. IIGF could be conceptualized as a “more credible” provider of risk mitigation to the private sector than a contracting agency, given its current capitalization. If IIGF is kept well capitalized, in the event of large systemic risk affecting Indonesia, infrastructure projects supported by the institution will continue performing. If the systemic risk continues for several years, then IIGF’s financial sustainability could be affected. This justifies the evolution of IIGF to an “insurance business model” with the strengthening of its contingent liability practice.

### 6. SECTOR FOCUS

An infrastructure project that can be guaranteed by IIGF must be a public-private partnership project

that complies with Presidential Regulation No. 38 Year 2015 Concerning Cooperation between Government and Business Entities in Infrastructure Provision. The project must be technically and financially feasible, and follow laws and regulations related to its respective sector(s). Most economic and social infrastructure sectors are eligible. During its initial “ramp up” phase, IIGF has concentrated its portfolio in the energy and road transport sector. The future pipeline of Rp210 trillion (equivalent to US\$15.3 billion) is more diversified. In addition to energy and road transport, it includes the following sectors: ports and airport infrastructure; water and sanitation; solid waste management; railways; and social infrastructure (hospitals, correctional facilities, and the like).

## 7. CLIMATE CHANGE CONSIDERATIONS

IIGF is actively supporting energy renewables, energy efficiency, and other climate change related projects. However, IIGF does not have a dedicated climate change incentive policy to promote these types of investments over other infrastructure-related investments.

## 8. RISK MANAGEMENT

As part of its development process as a financial institution, IIGF has developed a full risk management system for the business and operations of the institution. It has created a Risk and Compliance Division (RAC), which is responsible for the oversight of the risk management system and reports directly to the Board of Directors. RAC developed IIGF’s Enterprise Risk Management System (ERC) using the framework provided by the Committee of the Sponsoring Organizations (COSO) of the Treadway Commission and ISO 31000:2009.

### Risk Management

Senior management stated in IIGF’s 2016 Annual Report:

“IIGF is established by The Republic of Indonesia Government as an institution to support infrastructure provision acceleration under Public Private Partnership (PPP) scheme in Indonesia. Main role of IIGF is as provider of contingent support for PPP infrastructure project by providing guarantee on contractual risk related with Government’s action, improving quality of PPP transaction and supporting formal and accountable approach in PPP implementation with its presence as single provider for infrastructure guarantee provision. In carrying out this function, IIGF is regulated to consider risk allocation. PPP implementation in Indonesia these years indicates that risk allocation becomes a very important factor in determining success of a PPP project. Failure of PPP project in identifying, measuring and allocating risks that brought previous PPP project failed to fulfill the expected target both related with purpose to improve service quality and price efficiency. As a SOE, IIGF is committed to implement entire law and policy issued by Minister of SOE, including GCG implementation policy in SOE, among others, to implement Risk Management appropriately. The risk management is done by identifying risk, perform risk evaluation, the risk mitigation as well as risk monitoring and reporting.”

**Regulatory risk.** As an SOE, IIGF is subject to changes in legislation and regulations that could affect its capacities to act as an efficient provider of guarantees. IIGF considers that the way to mitigate this risk is to make sure its role in Indonesia’s infrastructure development is well understood and the provision of partial risk guarantees is contributing to the mobilization of private capital in PPP transactions.

**Financial risk.** IIGF defines financial risk as the inability to: achieve revenue targets (fees and margins); mobilize additional funding (debt markets or equity holders); and prevent losses in their investment portfolio (Treasury management). This risk is mitigated by meeting revenue targets and developing a solid pipeline of projects, by maintaining prudent investment policies, and by keeping markets and shareholders informed of IIGF business plans and future strategies.

**Guarantee exposure risk.** This is the risk of a call on a guarantee with the sponsor once the guarantee is triggered. The mechanism for paying guarantee claims did not exist until 2017. Risk mitigation in this case is a function of strong analytical work on the probabilities of occurrence of an event, and the exposure amounts. This is the most important risk for a financial institution in the credit derivatives business. This risk is not currently very important for IIGF, given the relatively young nature of its business. Guarantees on the 16 completed transactions are still in the early years of project completion and operational start-up. As IIGF matures, this risk will become more important and a full-fledged contingent liability management system will be required.

**Infrastructure guarantee risks (risks related to contracting agencies).** IIGF's guarantee covers the financial obligations of the contracting agency (CA) under a PPP agreement. The CA must establish a budget allocation and its financial mechanism to ensure the fulfillment of its financial obligations. IIGF's decision to provide a guarantee for risks in a PPP project is made after it evaluates the conformity of the draft PPP Agreement with its risk allocation principles (reflected in IIGF's Risk Allocation Guidelines), as described below and in Box 6.

IIGF defines "guarantee infrastructure coverage" as the CA's financial obligations under the PPP contract, when payment default could be triggered by the following events: action or inaction of the CA or other government entity in matters that are authorized by law or PPP regulations; a policy of the CA or another government entity; the unilateral decision of CA or another government entity; the inability of the CA to perform an obligation assigned to it specified in the PPP agreement (breach of contract).

IIGF has developed an extensive risk management system covering the risk definition (category) and risk allocation of CAs in PPP agreements. The Fund has devised a relatively robust risk matrix analysis per sector and per type of PPP structure (including BOT, BOOT, availability-based payments, operations and maintenance) (Box 6). The system develops risk categories and risk allocation matrixes for [18] different infrastructure sectors, ranging from the more traditional sectors of power generation, toll roads and waste management to less traditional sectors such as health infrastructure and correctional facilities.

#### **Box 6. Risk Allocation Guidelines for PPP Projects**

In order to improve the creditworthiness of infrastructure projects as an effort to encourage private sector participation in the provision of infrastructure, the government guarantee can be granted to infrastructure projects provided under PPP scheme, as just recently stipulated in Presidential Regulation No. 38 year 2015 on cooperation among Government and private entity in the provision of infrastructure (replace Presidential Regulation No. 67 of 2005 and its amendment) ("PPP Regulation"). As stated in the regulations, the provision of government guarantees may be given by the Minister of Finance (MOF) through a Government established entity to provide infrastructure guarantees (Business Entity for Infrastructure Guarantee). Based on Government Regulation No. 35 Year 2009, IIGF is established through state capital injection with the purpose of providing guarantees to infrastructure.

Provision of infrastructure guarantee through IIGF is regulated further through the Presidential Regulation No. 78 of 2010 on Infrastructure Guarantees for Public Private Partnership Projects through the Infrastructure Guarantee Entity for ("Presidential Regulation 78/2010"), and Minister of Finance Decree No. 260/PMK.011/2010 on Implementation Guidelines for Infrastructure Guarantees in PPP Projects ("MOFD 260/2010"). In this book, these regulations are defined as "Infrastructure Guar-

antee Regulation". Further, the Government through the Minister of Finance Regulation No. 223/PMK.011/2012 has issued regulation about providing feasibility support (viability gap fund) as a form of Government support for the project that economically viable but has limited financial feasibility. Lastly, the Government, through the Minister of Finance Regulation No. 190/PMK.08/2015 about the payment of the availability of services in cooperation between the Government and business entities in the provision of infrastructure.

Clause 11 of MOFD 260/2010 mandates IIGF to develop a guideline on infrastructure risk category and its allocation between the public and private sector ("Guideline for Risk Category and Risk Allocation" or simply "Risk Guideline"), as a key reference for the CA in developing PPP contracts, as well as preparing and proposing Guarantee Application Package (GAP) to IIGF, and for investors and financiers in assessing their investment and financing in Indonesia opportunities PPP project. It is important to note that during implementation, some risk allocations may have variations to what have been outlined in this Guideline, as they are subject to actual project and/or sector specific conditions, the generally accepted practice, sectoral regulatory contexts or agreed commercial position between the parties.

The Risk Guideline is developed through consultation with key stakeholders, e.g. MOF, Bappenas, BKPM, agencies, and other parties with competencies in the field of infrastructure risk. This guideline is also part of publication series by IIGF and is complementary to the IIGF Guarantee Provision Guideline. This document serves as key references for IIGF in assessing the viability of the GAP submitted by the CAs to IIGF.

Source: IIGF, Risk Allocation Guidelines for PPP Projects, 2017.

In 2016, with support from PricewaterhouseCoopers (PwC), IIGF developed a risk-based capital model to strengthen its risk management strategy. The risk-based capital model is structured around six different phases or stages that provide a framework for the analysis within a timeline. The phases are:

- Understanding the context, key risks, and possible scenarios
- Identifying risk scenarios (from standard to "stress test" and "perfect storm" types)
- Determining values and boundaries of each scenario
- Quantifying via the risk capital model the lower and higher boundaries of each scenario
- Discussing results on the key risks and scenarios with stakeholders
- Developing a control cycle dashboard.

The risk-based capital model is currently being applied to manage and understand IIGF's risk exposure to the different infrastructure projects the Fund is supporting.

## 9. CREDIT RATING OF THE INSTITUTION

IIGF enjoys Indonesia's sovereign rating of Indonesia of BBB- and positive outlook at the global level, which were reaffirmed in August 2017 (Box 7). As a fully owned financial SOE under the MOF, rating agencies almost automatically interpret the GOI to be the lender of last resort to IIGF and as such, the Fund enjoys the sovereign rating.

## Box 7. Fitch Ratings of IIGF, August 2017

“Fitch Ratings has affirmed PT Penjaminan Infrastruktur Indonesia (Persero)’s Long-Term Foreign- and Local-Currency Issuer Default Ratings (IDR) at ‘BBB-’ and Short-Term Foreign-Currency IDR at ‘F3’. The Long-Term Outlook is Positive. The company is also known by its English name, Indonesia Infrastructure Guarantee Fund (IIGF). IIGF’s ratings are credit linked and equalized to those of Indonesia (BBB-/Positive/F3), reflecting its status as a wholly owned state corporation and important role in providing guarantees for Indonesian public-private partnership (PPP) infrastructure projects, which is a priority sector for the government. Fitch believes there is a high probability of the company receiving extraordinary government support, if needed. Key rating driver is its SOE status and Government Recourse: IIGF is wholly owned by the government. Under Presidential Regulation 78/2010, and further elaborated by ministerial regulation 8/2016, the Ministry of Finance (MOF) is required under a recourse agreement to set-off any payments IIGF may be required to make under any called guarantees and allocate sufficient budgetary resources for payment. This mechanism reinforces the company’s link with the government and the legal status is assessed as “Stronger” given the recourse agreement. Strong State Control: IIGF reports directly to the MOF and is overseen by a three-member board of commissioners, all of whom are appointed by the MOF. The MOF approves IIGF’s annual budgets, long-term plans and board composition at the general shareholder meeting. IIGF is also audited by the state auditor every three years.”

“In August 2017, the MOF passed a regulation to limit IIGF’s gearing ratio to 10x equity; the ratio is currently at 3.2x. Ongoing State Funding: IIGF’s total paid-up capital from the MOF reached IDR7 trillion as at end-2016 and a further IDR1 trillion is expected in 2017. The company also has a two-step loan from the International Bank for Reconstruction and Development with a 20-year maturity. The loan, totaling IDR 35.8 billion, is received by the government then relented to IIGF. The integration attribute has been assessed as “Midrange”, as the company only receives limited government funding. Moderate Strategic Importance: IIGF’s role is to attract wider private-sector participation in Indonesia’s PPP projects by providing guarantees. There is a significant investment need that cannot be financed solely from the national budget. IIGF is the government’s sole representative in issuing guarantees in this sector. Increased Activity: IIGF extended the sectors that are eligible for guarantees to 19 in 2016, from eight previously, following a presidential decree. Operations picked up in 2016 when IIGF issued nine guarantees for various Indonesian projects, including power, information and communication technology, water and toll roads. This allowed IIGF to book commission income for the first time. Additional revenue includes interest earned on liquid investments. Strong Liquidity: IIGF’s main risks - given the nature of its activities - are guarantees it has issued. These amounted to IDR19.5 trillion at end-2016. IIGF’s liquidity from capital injections is entirely invested in short-term securities or bank deposits. If additional liquidity is needed to meet called guarantees, IIGF says it can obtain a short-term facility from a bank or approach the MOF for additional capital. RATING SENSITIVITIES An upgrade of Indonesia and continued strong implicit sovereign support could trigger a rating upgrade. A downgrade of Indonesia’s rating or changes to IIGF’s status due to a dilution of MOF’s ownership or weakening of control could trigger a rating downgrade.”

Source: Fitch Ratings report, August 18, 2017.

The single most important sensitivity to IIGF rating would be the dilution of MOF and GOI ownership in the Fund.

## 10. FUND PERFORMANCE

As with many other new institutions, IIGF has taken some time to develop its pipeline and its operations. The authors believe the institution has already passed the initial phase of its product cycle as a



guarantor, and is initiating its mature phase. During this initial period IIGF's performance as a non-bank financial institution has been relatively good.

IIGF will face new challenges as the PPP projects it has guaranteed start reaching project completion and begin their operations. As in any other guarantee business, there will be calls on the partial risk guarantees covering contracting agencies' risk that will test the strength of IIGF's risk management systems (contingent liabilities) and the credit quality of the guarantee reimbursement agreements with the contracting agencies.

## 11. LESSONS LEARNED

As in many other case studies surveyed in this Global Review, the main lesson to be drawn from IIGF's activities is the need for the Fund to engage more in "upstream" project origination activities, as the only way to secure a healthy transaction pipeline and to share knowledge of the complexities of project structuring with contracting agencies.

- **Incentives for contracting agencies (CAs).** IIGF needs to work closely with the GOI and in particular, the MOF, to establish the right incentives mechanisms for CAs to adopt PPP structures when feasible for infrastructure development in Indonesia. Some of Indonesia's CAs are large state-owned enterprises and large public agencies with a tendency to act independently and pursue the shortest route for infrastructure development. PPP transactions are usually more complex to structure and more time-consuming, which sometimes might not appear to be the best "fit" for CAs. Adequate public policy incentives such as budget support to conduct evaluations and easier regulatory mechanisms, could promote better use of PPPs as a procurement instrument.
- **Project preparation (pre-investment) soft funding.** Increasing the availability of soft pre-investment financing for contracting agencies will stimulate selection of PPP procurement mechanisms as the preferred option for infrastructure development. The MOF already has a project development fund that provides this type of financing, but it needs to be scaled up to increase its impact.
- **PPP and risk mitigation capacity building.** As part of the effort to engage more effectively in the "upstream" phase of infrastructure development, IIGF considers provision of adequate knowledge transfer and training to contracting agencies and other stakeholders a key component of its business strategy. The better the understanding of PPP transactions, risk mitigation products, and project finance structuring, the easier it will be to develop a robust pipeline of guarantee transactions. The creation and further development of the IIGF Institute is part of the Fund's strategy in this regard.

## 12. KEY CHALLENGES AHEAD

As IIGF's partial risk guarantee portfolio matures and infrastructure projects are completed and initiate their operations and standard business cycle, risks will start arising in some of the projects, and calls on guarantees and their impact on balance sheet and financial results will materialize. IIGF needs to start planning for a more mature phase of its business in the following areas:

**Financial sustainability and liquidity risk.** Currently, while in the early stages of its development, the Fund is well capitalized, with equity of more than Rp8.8 trillion (equivalent to approximately US\$665 million). The current guarantee exposure (as of December 2017) is Rp36 trillion (equivalent to approximately US\$2.7 billion) in projects in the early stages of their development phase. Going forward, and with a current ceiling on total exposure equivalent to 10 times equity, IIGF will need to more carefully

address the sustainability and liquidity risk in the event of systemic risk in Indonesia's underlying fundamentals. Today, IIGF has an exposure-to-equity ratio of nearly 4. To increase this ratio and be close to the limit of 10 times set by the MOF, IIGF needs to strengthen the following areas:

- **Risk management (contingent liabilities).** It would be in IIGF's best interest to initiate development of a contingent liabilities system, including asset dynamic valuation and probability analysis on the expected "calls" on guarantees. The management of contingent liabilities could easily pick up from the current work with PWC of the risk-based capital model.
- **Project monitoring system.** The contingent liabilities system should include a project monitoring system in real time that will feed into the determination of the probabilities analysis. This system would allow IIGF senior management to monitor the adequacy of the level of the Fund's guarantee exposure with its capitalization levels and the possible impact on liquidity risks.
- **Pricing.** The contingent liabilities system could feed into the partial risk guarantee pricing mechanisms, allowing IIGF to have better differentiated pricing in the provision of its risk mitigation products (weighted by the underlying project risk and contracting agency risk).

**Transition from a non-bank financial institution business model to an insurance business model.** As IIGF's guarantee portfolio expands and matures, the Fund will need to transition its business model to better resemble an insurance business model. This would strengthen IIGF's risk management practices and would mitigate the exposure of its business to systemic risks, such as the one that impaired the global financial guarantee industry in 2007/08 during the mortgage-backed securities crisis. IIGF will need to explore the following areas:

- **Opening-up the equity ownership to private partners.** The inclusion of a private entity specialized in financial guarantees and insurance could complement and ease the transition of IIGF to a new business model while it expands. Inclusion of private partners in the equity ownership would strengthen the Fund's governance and help modernize risk management and other information systems. Such a step would have to be carefully analyzed to balance the strong government support that IIGF currently has ("lender of last resort") that allows the institution to enjoy a global investment grade credit rating and access to long-term financing.
- **Diversifying the guarantee portfolio.** It is in IIGF's best interest to quickly transition from the current heavy concentration in road transport to a more balanced portfolio that would ease the development and implementation of the risk management and contingent liabilities system. It would also improve the Fund's risk profile.





This case study was developed between October 2017 and April 2018. It included two field visits to South Africa. The development of the case study is based on available public information as well as interviews with key senior management at IIPSA and the EU Delegation to South Africa. The case study was written by Afua Entsuah (World Bank Group Consultant), under the supervision of Ellis J. Juan (World Bank Senior Advisor coordinating the Global Review of Public Infrastructure Funds).

# GLOBAL REVIEW OF PUBLIC INFRASTRUCTURE FUNDS (PIFS) FACILITATING PPP DEVELOPMENT

(September 26, 2018)

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## **South Africa Case Study**

### **IIPSA – the Infrastructure Investment Program for South Africa**



## EXECUTIVE SUMMARY

The Infrastructure Investment Program for South Africa (IIPSA) is a very different case from the rest of the cases in the Global Review sample. IIPSA is solely funded by the European Union (EU) to provide grant financing to leverage additional long-term financing from international financial institutions to develop infrastructure in South Africa and in the Southern Africa Development Community (SADC) region. As such, IIPSA is neither a financial institution nor does it qualify as a 100 percent public infrastructure fund (PIF). It could be defined as a needed complement to a PIF, but it does not have all the characteristics of a fund. However, the lessons learned from the Program and the challenges it faces share many of the same features of other PIFs in the sample.

IIPSA is a €100 million infrastructure program jointly developed by the European Union (EU) and the Government of South Africa (GoSA) that blends EU grant financing with loans from participating development finance institutions (DFIs) for priority infrastructure projects in South Africa and the SADC region. The Program was developed in 2012–13 in support of the GoSA's prioritization of infrastructure investment as a means of economic transformation through job creation, poverty elimination, and inequality reduction.

The IIPSA grant is a bilateral support facility between the EU and the GoSA. The Development Bank of Southern Africa (DBSA), a non-bank financial institution fully owned by the GoSA (Treasury Department), is implementing the Program. DBSA plays a substantive role in the Program's implementation as both IIPSA Secretariat and Fund Manager, as well as operating as a participating DFI in the Program. DBSA's selection as IIPSA Secretariat and Fund Manager was based on the bank's expertise and experience in financing infrastructure projects, its geographical coverage of both South Africa and Southern Africa, as well as its established partnerships with European financing institutions already active in South Africa. Most importantly, DBSA's selection was a cornerstone of South African ownership of the Program. DBSA has a large concentration of its lending operations with subnational entities in South Africa.

The Program, originally established as a "blending facility" similar to other EU-funded facilities successful in other parts of the African continent, has become a facility that predominantly supports project preparation. Lack of institutional capacities at the subnational level in South Africa, coupled with the complexities of regional infrastructure projects in SADC, has increased day-to-day pressures on IIPSA's Secretariat to allocate Program funding to prepare better projects. The transition from the original "blending" objective to a "project preparation" facility is understood in part by market realities and the nature of the grant financing conditions. However, it is in the best interest of IIPSA to continue exploring "blending" options that could increase the leverage of funding sources and the impact on South Africa's infrastructure development.

Nearly 34 percent of the EU's original commitment (€100 million) was disbursed by the EU to the DBSA in the 2014–17 period.<sup>167</sup> IIPSA has already committed up to 72 percent of the available grant funding (€93 million), although effective disbursements seem to be lower, at 30 percent of total commitment.<sup>168</sup> To date, 80 percent of the IIPSA commitments have been to projects in South Africa.<sup>169</sup>

In comparison to other PIFs in the case study, IIPSA is a relatively young program. Agreements were signed in late 2013, but the pipeline started developing in the 2015–16 period. Although IIPSA has several projects in execution that are in project projection phase, the Program has only

<sup>167</sup> €9.0 million in 2015, €8.1 million in 2016, and €17.3 million in 2017.

<sup>168</sup> Of the total €100 million, 7 percent was allocated to management fees to DBSA. The total amount available for project allocation is equivalent to €93 million.

<sup>169</sup> Project Steering Committee, Progress Report No. 13, February 20, 2018 (projects in implementation plus projects committed – approved and signed).

two projects in execution in the implementation phase (that is, projects that have reached financial closure and are in the construction stage).<sup>170</sup> For a better measure of IIPSA's performance as a grant facility, the project pipeline will need to be more mature, with a higher number of projects in the execution stage. Despite the young nature of IIPSA's product life cycle, project origination, after the shift toward a project preparation facility, is strong. If it continues at current rates, original funds would be committed by late 2019. IIPSA, as a closed fund, matures in 2020. Under current circumstances, it would seem likely that the disbursement phase would need an extension from the EU until 2021 or 2022.

IIPSA and DBSA have limited engagement with the private sector, particularly the financial sector. The authors understand that due to EU conditions and DBSA's public sector focus, the design of the Fund was not led by a goal to mobilize private capital. Nonetheless, market realities are such that, unless developing countries can mobilize private capital in robust amounts, the infrastructure-financing gap will only keep growing.

South Africa, unlike most other developing countries, has well-developed financial markets (both bank and bond markets). The experience in selected developing countries has shown that PIFs play a catalytic role developing local capital markets by expanding the local investors base and attracting global capital into the domestic financial markets. There is probably no better blending role for a facility like IIPSA than to dedicate funding to this goal. Although this role is currently beyond the scope of IIPSA, it is probably in the best interest of DBSA and the GoSA to explore a new grant facility with the purpose of promoting capital market development in terms of municipal infrastructure finance and general infrastructure finance instruments. In addition, because IIPSA is seeking to influence municipal-level infrastructure, given the great need and high impact, the GoSA could continue to explore the development of a municipal finance market<sup>171</sup> with a solid credit rating system of different municipalities. This market would need strong oversight by the Ministry of Finance of municipalities' debt capacity and debt service monitoring, and it would also need a solid public sector financial institution with the role of promoting municipal finance development through initial phase market mechanisms such as partial risk and partial credit guarantees and other credit derivatives. Development of stable long-term local currency financing will help mitigate cross-border risk in South Africa.

## 1. COUNTRY INFORMATION

### Brief Description of South Africa

The Republic of South Africa (RSA) is an upper-middle-income country of 56 million people located at the southernmost tip of Africa. The country has the second largest economy in Africa, after Nigeria, with one of the highest GDP per capita rates on the continent, at US\$5,292 in 2016. It is the only African member of the G20. However, South Africa struggles with high levels of poverty, inequality, and unemployment, which have loomed over the country since its transition from apartheid to democracy 24 years ago. Due to this struggle, the country exhibits a dual economy that perpetuates inequality and social exclusion.

South Africa initially experienced a significant decrease in poverty following the end of apartheid. Based on a measure of US\$1.90 per day in purchasing power parity (PPP) terms, poverty fell from 33.8 percent in 1996 to 16.9 percent in 2008, due to increased social safety nets, real income growth, decelerating inflationary pressure on households, expansion of credit, and growth in formal housing.<sup>172</sup> However, this

<sup>170</sup> These projects are: Western and Northern Aqueducts of the Thekwini Municipality; and in the Polokwane municipality.

<sup>171</sup> Currently, the Government of South Africa, through the Inter-Governmental Relations Division of the National Treasury, is leading initiatives to develop a municipal finance market by hosting investment seminars with the private sector, development institutions, and municipalities.

<sup>172</sup> South Africa: Overview, World Bank, <http://www.worldbank.org/en/country/southafrica/overview> (accessed January 2018).



### Box 1. The Decline of Dominance of Mining in South Africa's Economy

Mining has played a significant role in the growth of South Africa's economy since early discoveries in the second half of the 1800s. Gold, diamonds, platinum, and coal are the most well-known minerals and metals mined. South Africa's production of each ranks among the top 10 in the world. However, South Africa's mining sector is shrinking. At its peak in 1980, the sector accounted for 21 percent of South Africa's GDP. Today the industry accounts for merely 7 percent of the country's GDP. Cited reasons for the decline include risks associated with the country's regulatory, political, and legal environment; volatility of commodity prices and foreign exchange of the rand; rising costs and falling productivity; as well as labor relations, unreliable electricity supply, and other domestic challenges. Although the dominance of the sector is no longer as strong, mining still remains a key source of direct and indirect employment, export earnings, and tax revenues for the country. The sector accounts for 21 percent of South Africa's exports and 7 percent of GDP and directly employs half a million individuals.

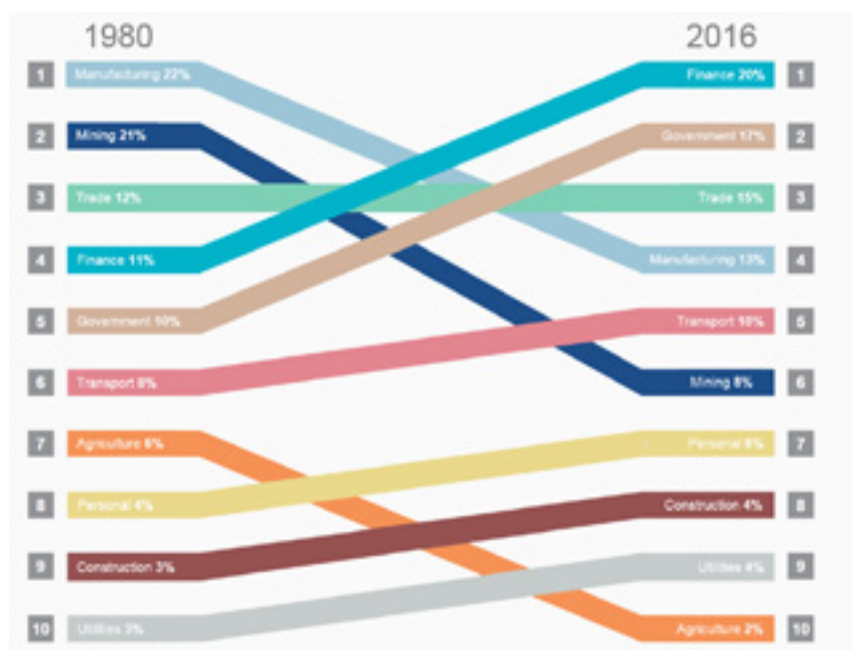
Following price lows in 2015 and 2016, prices recovered strongly in 2017 for most of the main commodities that South Africa mines and exports. However, the industry was hit by regulatory changes in June 2017 through the introduction of a new Mining Charter, which industry players say will result in a decrease in dividends and market capitalization to 2015 levels.

Source: Chamber of Mines of South Africa, Facts and Figures 2016.

trend slowed following the global financial crisis in 2008, with the poverty rate falling to only 16.6 percent in 2011. The World Bank estimates that poverty rates marginally changed in 2016, to 15.9 percent.<sup>173</sup>

South Africa is the most industrialized country in Africa. Its traditional engines of growth include finance, real estate, and business services, representing approximately 20 percent of GDP, followed by general government services (15 percent); trade, catering and accommodation (14 percent); manufacturing (12 percent); transport, storage and communication (9 percent); and mining (7 percent) (Figure 1).<sup>174</sup>

Figure 1. Sectors' Contribution to GDP, 1980 versus 2016



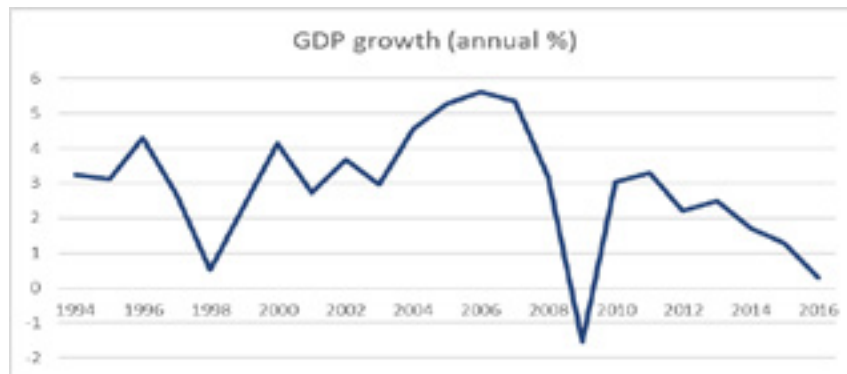
Source: Statistics South Africa.

173 Using a poverty line of US\$3.10 per day, which is a more appropriate measure for middle-income countries, poverty in South Africa was estimated at 34.1 percent in 2016.

174 Statistics South Africa, <http://www.statssa.gov.za/publications/P0441/P04414thQuarter2017.pdf> (accessed March 2018).

GDP growth rates were strong for much of the 2000s, before the global financial crisis. As shown in Figure 2, real GDP growth rates have been steadily decreasing since 2006. Growth rates were 1.3 percent in 2015 and 0.3 percent in 2016. The World Bank expects rates for 2017 to slightly improve to 0.6 percent. Such rates indicate that the country's per capita GDP contracted between 2015 and 2017.

**Figure 2. Annual GDP Growth, South Africa, 1994–2016**



Source: World Bank, 2017.

Investment has been subdued and business and consumer confidence have remained low in an environment of weak growth, as shown in Figure 3. Falling global demand and a regional drought, as well as domestic factors, such as structural constraints and domestic political and policy uncertainty, have suppressed South Africa's growth.<sup>175</sup> Weakening growth has been further exacerbated by the already high unemployment rate; unfortunately, the country's high inequality and slow economic growth are intertwined and reinforce each other. Although South Africa has implemented sound macroeconomic policies since 1994, which allowed for a relatively stable economy with modest growth, the economy's growth over the last decade has been too slow to create enough jobs in the country, predominately for poor South Africans. Consequently, South Africa has consistently ranked among the top countries for income inequality (the country's Gini coefficient of 0.69 in 2014 is the highest in the world).

South Africa's unemployment rate hit 27.7 percent in 2017, which was a 14-year high; this figure is 36.4 percent when including discouraged workers, and closer to 50 percent among youth. Such a large number of unproductive members of society heavily constrains the country's economic growth. As a legacy of apartheid, historically disadvantaged groups remain primarily disadvantaged due to a lack of access to services and opportunities, as well as a migrant employment system. The World Bank notes that South Africa's small and modern developed economy is spatially surrounded by informal settlements, rural villages, and townships where many disadvantaged groups reside and receive substandard services. This inequality reinforces economic marginalization and creates spatial poverty traps.

The Government of South Africa (GoSA) acknowledges the challenges facing the country and the urgency to speed up growth and create an inclusive society. The GoSA's strategic plan is outlined in South Africa's National Development Plan (NDP) 2030, which was launched in 2012, and is centered on two main goals: elimination of poverty and reduction of inequality from a Gini coefficient of .69 to .60 by 2030.

175 World Bank, <http://www.worldbank.org/en/country/southafrica/overview> (accessed January 2018).

Figure 3. Investment and Business Confidence



Source: Statistics South Africa and Bureau for Economic Research

Source: RSA Budget Review 2018.

South Africa's weak economic outlook has accordingly affected its fiscal outlook. The country's debt-to-GDP ratio has steadily increased from 27.8 percent in 2008 to 50.7 percent in 2017 due to low growth and revenue shortfalls.<sup>176</sup> According to the 2018 Budget Review, the GoSA has committed to fiscal consolidation, and several measures are in place to correct revenue collection and control debt levels, including tax increases. The 2018 Budget Review proposes a program of expenditure cuts and a re-prioritizing of spending over the medium term. Tax measures, such as a 1 percentage point increase in the value added tax (VAT) rate, below-inflation adjustments to personal income tax brackets (particularly for higher-income individuals), increased ad valorem excise duties on luxury goods, and higher estate duties for wealthy individuals, as well as increases in the general fuel levy and alcohol and tobacco excise duties, will be implemented.<sup>177</sup> However, government transfers to underperforming state-owned-companies (SOCs), such as Eskom and South African Airways (SAA), continue to be a burden on the state. Poorly governed SOEs run high costs due to operational inefficiency and financial mismanagement, and their large government guarantees pose risks to the national purse. The GoSA has begun to take steps to strengthen the governance and operations of key SOEs, including installing new Boards at Eskom and SAA, as well as restructuring SOE debt and inviting private participation in various projects.

176 Figures represent gross loan debt to GDP.

177 Budget Review 2018, National Treasury, Republic of South Africa, 21 February 2018.

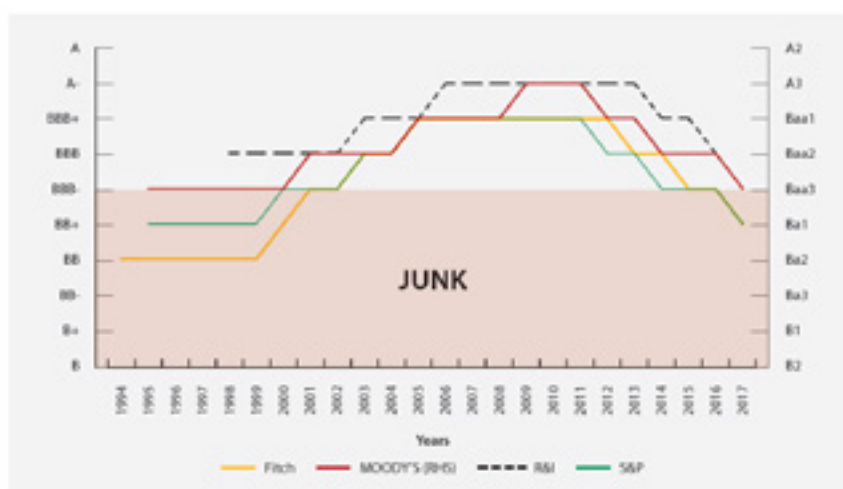
**Table 1. Government Guarantee Exposure, 2014–17**

R billion	2014/15		2015/16		2016/17	
	Guarantee	Exposure	Guarantee	Exposure	Guarantee	Exposure
State-owned companies	469,6	220,9	469,9	255,8	477,7	308,3
of which:						
Eskom	350,0	149,9	350,0	174,6	350,0	218,2
SANRAL	38,9	27,4	38,9	27,2	38,9	30,1
Trans-Caledon Tunnel Authority	25,6	20,8	25,8	21,2	25,7	20,7
South African Airways	14,4	8,4	14,4	14,4	19,1	17,9
Land Bank	6,6	2,1	6,6	5,3	11,1	5,4
Development Bank of Southern Africa	12,9	4,1	13,9	4,3	12,7	4,2
Transnet	3,5	3,8	3,5	3,8	3,5	3,8
Denel	1,9	1,9	1,9	1,9	1,9	1,9
South African Post Office	1,9	0,3	4,4	1,3	4,4	3,9
South African Express	1,1	0,5	1,1	0,5	1,1	1,0
Industrial Development Corporation	1,6	0,3	2,0	0,2	1,9	0,2
Independent power producers	200,2	96,2	200,2	114,0	200,2	125,8
Public-private partnerships	10,1	10,1	10,3	10,3	10,9	10,9
South African Reserve Bank	7,0	0,0	3,0	0,0	3,0	0,0

Source: RSA Debt Management Report 2016–17.

The World Bank estimates a modest rebound of the economy in 2018 and 2019 due to improvements in commodity prices and the strengthening of balance sheets of South African households from easing inflation and looser monetary policy.<sup>178</sup> The World Bank projects real GDP growth in 2018 to be 1.1 percent and 1.7 percent in 2019.<sup>179</sup> The GoSA similarly expects investment growth to recover moderately in 2018 and 2019.

**Figure 4. South Africa’s Historical Credit Ratings**



Source: RSA Budget Review 2017.

178 Macro Poverty Outlook for South Africa, 2017, World Bank Group. <https://hubs.worldbank.org/docs/imagebank/pages/docprofile.aspx?nodeid=27333613>

179 South Africa Economic Update 2017: Innovation for Productivity and Inclusiveness, World Bank.

Note: Budget Review dated October 25, 2017. The figure does not capture S&P's further downgrade in November 2017. Note that Fitch's BB+ rating remained unchanged following the review in November 2017. South Africa's rating also remained unchanged, yet is under review for a downgrade by Moody's Rating Agency. Moody's noted that the review period may not conclude until after the size and the composition of the 2018 budget is evaluated (after February 2018).

## Country's Demand for Infrastructure Investments

South Africa ranks in the top half globally in terms of infrastructure development. The *Africa Competitiveness Report* for 2017 ranks the country's overall infrastructure 64<sup>th</sup> of 138 countries, with a rated value of 4.2 out of 7. As noted in the report, although certain subsets of infrastructure have been well developed, including ports, air transport, and road infrastructure, the country's overall infrastructure development has stalled, particularly in transport and electricity, where frequent power outages in 2015 and 2016 plagued the country.

Table 2. Infrastructure Program under Consideration, 2012–20

R billion	Project stage								Total
	Concept	Pre-feasibility	Feasibility	Financing	Detailed design	Tender	Construction	Ongoing programmes <sup>1</sup>	
Water	20	–	–	32	–	5	18	–	74
Transport	310	–	78	17	12	88	8	71	583
Electricity	720	268	314	–	95	103	345	101	1 945
Liquid fuels	–	–	211	–	2	–	–	–	213
Education	20	–	–	40	–	–	–	125	185
Health	–	–	50	29	–	–	–	31	110
Telecommunication	12	–	–	–	–	–	3	–	15
Human settlement	–	–	–	78	–	–	–	–	78
<b>Total</b>	<b>1 082</b>	<b>268</b>	<b>653</b>	<b>195</b>	<b>109</b>	<b>195</b>	<b>374</b>	<b>328</b>	<b>3 204</b>
% total expenditure	33.8%	8.4%	20.4%	6.1%	3.4%	6.1%	11.7%	10.2%	100.0%

Source: RSA 2012 Budget Review.

The Africa Infrastructure Country Diagnostic (AICD) noted in 2010 that South Africa required annual spending of US\$27 billion to build new infrastructure, refurbish dilapidated assets, and operate and maintain all existing and new installations of infrastructure. Given that the diagnostic estimated that required annual spending for the continent was US\$93 billion, South Africa represented the largest spending needs for an individual country.<sup>180</sup> In the country's 2012 annual budget, GoSA estimated a R3.2 trillion infrastructure program until 2020,<sup>181</sup> of which electricity occupied the largest component, as noted in Table 3.

As emphasized in the country's NDP 2030, South Africa suffers from an inadequate amount of well-located infrastructure. The deficiencies in national and regional infrastructure highlighted in the plan include: an inefficient logistics system, where transportation costs are significantly higher than the global average; inadequate road and rail networks; an unsustainable energy resource path due to overdependence on coal; a costly and inadequately accessible information, communication and technology (ICT) sector; underdeveloped water and waste management and ecosystems; and insufficient access to essential services such as clean running water, sanitation, electricity, and housing.<sup>182</sup> The priority sectors for investment outlined in the NDP include: water, energy, telecommunication, transport, and social infrastructure. The plan also sets a target for infrastructure investment to grow to 30 per cent of GDP by 2030.

180 Africa Infrastructure Country Diagnostic (AICD), *Africa's Infrastructure: A Time for Transformation*, Africa Development Forum, World Bank, 2010.

181 Large-scale projects under consideration or in process. At that time, only 25 percent of projects were being financed and implemented, while the rest were under assessment.

182 EU IIPSA Program Concept Note.

Infrastructure investment is also a key priority under the New Growth Path, the government's policy guideline to achieve 5 million new jobs by 2020. Infrastructure is prominently featured in the policy as the number one jobs-driver due to South Africa's infrastructure fragmentation between the economic centers, such as Johannesburg and Pretoria, and the high-density residential areas on the peripheries where the disadvantaged migrant population reside. The consequences of the country's migrant employment system on disadvantaged persons are long commute times and insufficient wages being spent on daily commuting. The World Bank notes that lack of spatial integration of economic activity and residential areas adversely affects economic growth, productivity, and the government's ability to provide efficient utilities and basic services to citizens. However, spatial imbalance can be overcome through deliberately placed infrastructure investment.

South Africa's infrastructure deficiencies are the result of underinvestment in new and existing infrastructure between the mid-1980s and 2003.<sup>183</sup> During this period, the average expenditure of public and private capital investment was less than 20 percent of GDP, as compared to more than 25 percent between the mid-1970s and mid-1980s.<sup>184</sup> As noted in the National Budget of 2012, South Africa's underinvestment in infrastructure for those two decades has put the country at risk of not being able to meet future demands for energy, transport, water, and ICT if proactive measures are not implemented. Another cause for the country's infrastructure deficiencies stems from challenges in project implementation, specifically at the provincial and local government level. This manifests in underfunded infrastructure preparation and support, and a lack of human resource capacity to carry out infrastructure investments, which result in project delays and cost overruns.

In line with the NDP, the National Infrastructure Plan was launched in 2012 to pave the way for economic transformation that would allow for job creation and a strengthening of basic services delivery. The plan called for investment in upgrading existing infrastructure and investing in new infrastructure,<sup>185</sup> with prioritization of infrastructure spending in medium-term budgets. The GoSA's comprehensive strategy for infrastructure around this period also included the creation of the Presidential Infrastructure Coordinating Commission (PICC),<sup>186</sup> which was given the responsibility to develop the National Infrastructure Plan and steer its implementation, while coordinating major capital projects. The PICC has approved 18 strategic infrastructure projects (SIPs) to support economic development and service delivery in all provinces. The PICC's Secretariat, which is supported by the Department of Economic Development, will spend R32.6 million on facilitation, monitoring, and reporting on ongoing projects, according to the 2018 Budget Review. In addition, the PICC, together with the National Treasury and the Department of Planning, Monitoring and Evaluation, represent a technical committee that oversees the Budget Facility for Infrastructure, a Facility managing the development of a pipeline of investment-ready projects. The Facility was established in 2016 to ensure that fiscal resources are committed transparently. Following a process of rigorous technical analysis, 38 projects within the water, health, telecommunications, transport, and justice and protection services sectors have been recommended to the Medium-Term Expenditure Committee (MTEC) and the Ministers' Committee on the Budget (MinComBud), and will be submitted to Cabinet.

Table 3 presents South Africa's estimated public expenditure in 2017/2018 as R260 billion, of which nearly half is at the provincial departments and local government level. The country's Medium-Term Expenditure Framework (MTEF) is estimated at R834.1 billion for the next four years. SOCs, which are financed through their own revenue, borrowings, and private funding, are to be the largest contributors to the MTEF, while PPPs and public entities make up the smallest portion of expenditure. Economic infrastructure, which includes expanding power generation capacity, maintaining and expanding transportation networks, and improving sanitation and water services, will account for 76 percent of public sector infrastructure spending over the MTEF.<sup>187</sup>

183 This includes ineffective operation and maintenance of existing infrastructure.

184 EU IIPSA Program Concept Note.

185 These included health care facilities, schools, water and sanitation, housing, electrification, ports, roads, railway systems, electricity plants, hospitals, schools, and dams.

186 Established in 2011 by Cabinet.

187 Total MTEF expenditure of R834.1 billion breaks down as follows: energy (R218.8 billion); water and sanitation (R118.2 billion); transport and logistics (R288.2 billion); other economic services (R10.8 billion); health (R32.6 billion); education (R46.8 billion); human settlements



**Table 3. Public Sector Infrastructure Expenditure and Estimates**

R billion	Outcomes				Estimates			Total
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Provincial Departments	56.4	60.6	62.6	62.6	53.5	54.9	56.9	165.3
Local Government	53.2	54.7	54.4	63.6	59.7	60.4	63.7	183.8
Public entities	19.2	17.8	17.1	15.6	16.2	17.4	18.1	51.7
Public-private partnerships	4.0	4.3	4.8	5.0	5.9	6.1	6.4	18.5
State-owned companies	115.8	109.3	95.2	97.5	115.4	128.0	124.8	368.2
<b>Total</b>	<b>262.2</b>	<b>261.2</b>	<b>249.9</b>	<b>260.1</b>	<b>266.0</b>	<b>282.3</b>	<b>285.8</b>	<b>834.1</b>

Source: RSA Budget Review 2018.

a. MTEF = Medium-Term Expenditure Framework.

The GoSA's goal to increase infrastructure investment to 30 percent of GDP by 2030 cannot be achieved by the public sector alone. Infrastructure investment was 19.5 percent of GDP as of 2016. As such, IIPSA potentially plays a vital role in crowding in private sector investment in order to meet the government's goals for infrastructure investment.

### Local Financial Markets

South Africa's financial sector is considered among the most mature among the emerging markets. The country's total financial sector assets are three times the size of GDP, which exceeds most other emerging market economies. Commercial banks' assets are 112 percent of GDP and the insurance sector's gross assets<sup>188</sup> are 67 percent of GDP.<sup>189</sup> With sound legal and regulatory frameworks that govern its financial institutions and transactions, South Africa's financial sector stands out as a leader for the rest of the continent in terms of size and activity. For financial market development, the country ranks 44<sup>th</sup> globally and for regulation of securities exchanges it ranks 46<sup>th</sup> in the world (*Global Competitiveness Report*). The Johannesburg Stock Exchange (JSE) is the 17<sup>th</sup> largest exchange in the world and the largest in Africa, with a capitalization of US\$1 trillion and approximately 400 companies listed. A large segment of debt listed on the JSE is by the GoSA, SOCs, corporates, banks, and other African countries. In recent years, the country's capital markets have performed well in contrast to the country's broader macroeconomic environment.

According to the Banking Association of South Africa, the banking sector is made of 19 registered domestic banks, 31 foreign banks with approved local representative offices, 15 local branches of foreign banks, 3 mutual banks, and 3 co-operative banks.<sup>190</sup> Banks in South Africa are well capitalized and very

(R57.1 billion); other social services (R30.6 billion); administration services (R31.0 billion).

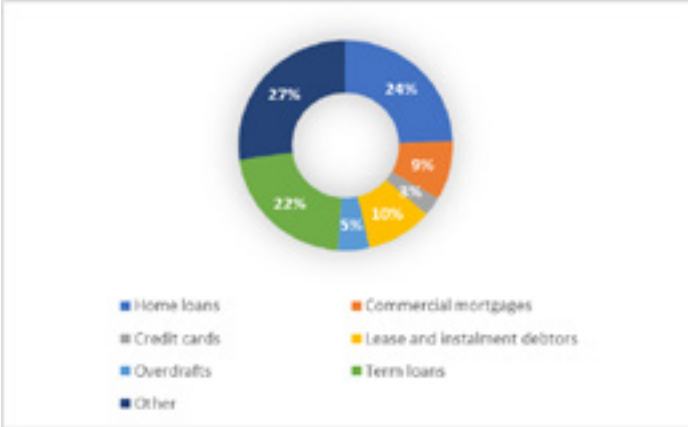
188 Includes underwritten pension funds and insurance policies of domestic pension funds.

189 South Africa Financial Sector Assessment Program, 2015 Stress Testing the Financial System, International Monetary Fund Technical Note, <https://www.imf.org/external/pubs/ft/scr/2015/cr1554.pdf>.

190 Selected South African Banking Sector Trends. January 2018. South African Reserve Bank.

concentrated, with the five largest banks in the country dominating 90.7 percent of South Africa’s total banking sector assets of R4,877 billion.<sup>191</sup> Figure 5 illustrates the composition of South African banking sector loans and advances as of 2016, with home loans representing the largest component. Continued low growth and high unemployment would worsen the financial situation of households and firms, resulting in risks to banks’ loan portfolios.

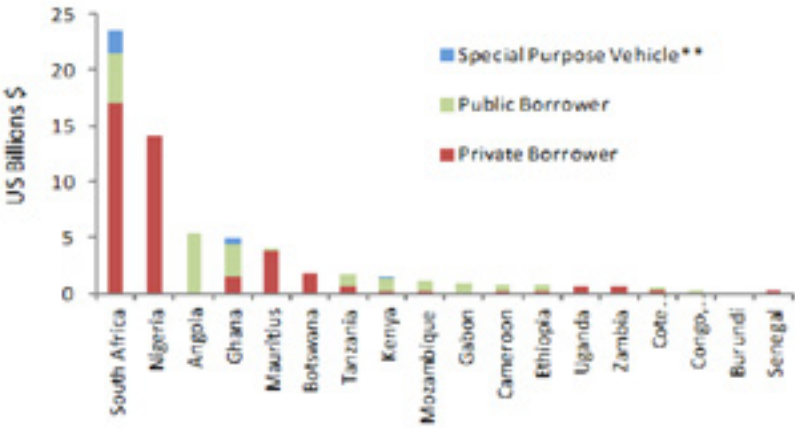
**Figure 5. Composition of Loans and Advances, January 2016**



Source: RSA Reserve Bank, 2016.

According to the European Investment Bank (EIB), recent trends in banking in Sub-Saharan Africa show that South Africa is the largest recipient of bank lending for infrastructure financing from 2006 to 2014 (Figure 6).<sup>192</sup> Major international banks operating in South Africa as well as local banks participate in providing financing for infrastructure borrowers. Banks such as Standard Bank, Rand Merchant Bank, Nedbank Capital, ABSA, and Investec have participated in syndicated deals in foreign and local currency for tenors as long as 20 years.

**Figure 6. Top Recipients of Bank Lending for Infrastructure Financing, Sub-Saharan Africa, 2006–14**



Source: European Investment Bank (EIB). Regarding classification of funding, EIB notes that the role of public sector is likely underestimated, as private borrowers include SOCs, such as Eskom in South Africa. In addition, the ownership of special purpose vehicles is not disclosed.

191 As of December 31, 2016. Supervision Department Annual Report 2016, South African Reserve Bank, <https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/7813/04%20Chapter%201.pdf>,

192 Recent Trends in Banking in Sub-Saharan Africa, European Investment Bank, July 2015, [http://www.eib.org/attachments/efs/economic\\_report\\_banking\\_africa\\_from\\_financing\\_to\\_investment\\_en.pdf](http://www.eib.org/attachments/efs/economic_report_banking_africa_from_financing_to_investment_en.pdf).

Unlike most of the rest of Africa, South Africa’s local capital markets are an important source of infrastructure finance in the country. The history of the domestic bond market in South Africa traces its roots to the 1970s and 1980s, when sanctions imposed on the country barred it from access to international financial markets. These sanctions helped spur the government, which at the time was running high deficits, to fund its budget deficit in the domestic bond market.<sup>193</sup> Most South African bonds are issued by government and SOCs (90 percent of all liquidity reported to the JSE). However, the number of corporate bonds issued is growing, although controlled by a few large firms, primarily banks and financial firms. South Africa’s bond market was monitored and regulated by the Bond Exchange of South Africa Ltd (BESA) until 2009, when it was acquired by the JSE and rebranded as the JSE debt market.

Institutional investors play a critical role in financing infrastructure in South Africa. However, the GoSA has indicated its desire for pension funds and other institutional investors to increase investment in infrastructure development, and to move beyond traditional listed bonds issued largely by SOCs. The World Bank conducted a review of the contribution of institutional investors in private investment in infrastructure from 2011– H1:2017 and found that most institutional investors’ private participation in infrastructure (PPI) in Sub-Saharan Africa is concentrated in South Africa, which accounts for 12 of the 21 projects in Sub-Saharan Africa between 2011 and the first half of 2017.<sup>194</sup> The review found that South Africa’s institutional investors tend to invest in infrastructure in the form of equity only. In terms of the sector breakdown within this period, 35 energy projects were recorded as receiving institutional investor support globally, of which 12 projects were in South Africa (primarily in renewable energy). The GoSA has been a promoter of renewable energy and provided guarantees to almost all institutional investments made in the renewable space in the country. The other sector with South African institutional investor participation includes the road transport sector (one project). There were no South African institutional investments in water or ICT.

**Table 4. Snapshot of South African Institutional Investments, 2011–H1:2017**

	Project name	Institutional Investor	Primary Sector	Project Type	Total Project Cost
2011	Beitbridge Border Post	Beitbridge Border Post	Transport	Brownfield	US\$97M
2012	ACED Cook-house Wind Farm	ACED Cook-house Wind Farm	Energy	Greenfield	US\$300M
2012	Inspired RustMo1 Solar Plant	Inspired RustMo1 Solar Plant	Energy	Greenfield	US\$25M
2012	Jeffrey’s Bay Wind Farm	Jeffrey’s Bay Wind Farm	Energy	Greenfield	US\$296M
2012	Old Mutual–Greefspan Solar PV	Old Mutual–Greefspan Solar PV	Energy	Greenfield	US\$48M

<sup>193</sup> South African Capital Markets: An Overview, by Shakill Hassan, Economic Research South Africa (ERSA) Working Paper 391, November 2013.

<sup>194</sup> Contribution of Institutional Investors. Private Investment in infrastructure 2011-H1 2017, World Bank Group, <https://library.pppknowledgehub.org/documents/5450/download>.

2012	Old Mutual–Herbert Solar PV	Old Mutual–Herbert Solar PV	Energy	Greenfield	US\$98M
2012	Old Mutual Hopefield Wind Farm	Old Mutual Hopefield Wind Farm	Energy	Greenfield	US\$200M
2012	SolarReserve Lesedi Solar Plant	SolarReserve Lesedi Solar Plant	Energy	Greenfield	US\$300M
2012	Standard Bank Kouga Oyster Bay Wind Farm	Standard Bank Kouga Oyster Bay Wind Farm	Energy	Greenfield	US\$258M
2013	Neusberg Hydro Electric Plant	Neusberg Hydro Electric Plant	Energy	Greenfield	US\$56M
2013	Bokpoort CSP Plant	Bokpoort CSP Plant	Energy	Greenfield	US\$498M
2015	Noupoort Mainstream Wind	Noupoort Mainstream Wind	Energy	Greenfield	US\$160M
2016	Kathu CSP Power Plant	Kathu CSP Power Plant	Energy	Greenfield	Not Available

Source: World Bank Group.

The JSE will begin allowing the listing of project bonds in 2018. As noted in the 2018 Budget Review, this form of funding instrument will allow institutional investors to participate in infrastructure projects through listed, tradable securities that offer superior risk-adjusted returns. The project bonds will be underpinned by the cash flows of the ring-fenced projects. However, project bonds are not new to South Africa, as the first listing and investment-grade rated infrastructure project bond occurred in 2013. The bond was held entirely by institutional investors and listed on the JSE. The proceeds of the bond were used to finance the construction of a 44-MWp concentrated photovoltaic plant.

Among the non-OECD countries, South Africa has one of the largest pension fund industries in both absolute terms and in relation to its economy, with total assets over US\$300 billion. The country has by far the largest pool of pension assets in Africa. Within South Africa, the Public Investment Corp. (PIC) dominates domestic activity. PIC manages the country's largest pension fund, the Government Employees Pension Fund (GEPPF), and it also runs the funds of 22 other public sector bodies, including South Africa's unemployment insurance fund. Total assets under PIC's management are over R1.9 trillion (US\$160 billion). PIC has made key investments in solar power and telecommunications domestically, while investing in the banking sector internationally.

### Country Credit Rating and a Brief History of Access to Global Financial Markets

Given the GoSA's consistently sound budgetary policies, the country has been able to access the

international bond markets with reasonable sovereign risk spreads.<sup>195</sup> However, South Africa's sovereign ratings have been downgraded by rating agencies because of poor growth prospects and rising government debt, in addition to high deficits on the current account.<sup>196</sup> In April 2017, Standard and Poor's (S&P) downgraded South African long-term, foreign-currency-denominated debt to sub-investment grade ("junk"). This was followed by Fitch's downgrade of foreign and local currency to "junk" a few days later. The World Bank estimated that this downgrade may cost South Africa 1 percent of GDP. Additional downgrades took place in November 2017. South Africa's current sovereign ratings are reflected in Table 5.

**Table 5. South Africa's Current Credit Ratings**

Rating agency	Long-term foreign-currency rating	Long-term local-currency rating	Outlook
Fitch	BB+ (Sub-investment grade)	BB+ (Sub-investment grade)	Stable
Moody's	Baa3 (Investment grade)	Baa3 (Investment grade)	Negative
R&I	BBB (Investment grade)	BBB+ (Investment grade)	Negative
S&P	BB (Sub-investment grade)	BB+ (Sub-investment grade)	Stable

Source: RSA Budget Review 2018.

In September 2017, the GoSA began fully financing its foreign currency commitments through borrowing in global capital markets. This marked a shift in government practice, where previously government borrowed domestically to buy foreign currency and borrowed in global capital markets. Given exchange rate risks, the GoSA limits foreign currency debt to 15 percent of its total portfolio.<sup>197</sup> The shift in practice is expected to reduce funding pressures in the domestic market.

### Country Strategy with Respect to Climate Change

South Africa is facing significant climate change challenges, as the largest energy consumer and greenhouse emitter in Africa. It is among the world's top 20 greenhouse gas polluters, and as a country reliant on coal, South Africa emits almost at the level of per capita CO<sup>2</sup> as the European Union. Given that South Africa is a leader in Africa, it is a key representative on the continent with respect to climate change. As expressed in the country's Climate Change 2016 Annual Report, South Africa is committed to the reduction of carbon emissions and the creation of an enabling environment that reduces and adapts to climate change impact and facilitates the transition to a climate-resilient and low-carbon economy. South Africa is a non-Annex I party to the United Nations Framework Convention on Climate Change (UNFCCC),<sup>198</sup> and a signatory to the Kyoto Protocol, which it ratified in July 2002. South Africa's National Adaptation Strategy is the bedrock for climate change adaptation in the country, and presents the country's comprehensive approach to climate change adaptation.

<sup>195</sup> World Bank, <http://www.worldbank.org/en/country/southafrica/overview> (accessed January 2018).

<sup>196</sup> World Bank, <http://www.worldbank.org/en/country/southafrica/overview> (accessed January 2018).

<sup>197</sup> As of now, it accounts for 8.8 percent.

<sup>198</sup> Signed in April 2016.

## 2. DESCRIPTION OF IIPSA

### Selection of this Case Study

The Infrastructure Investment Program for South Africa (IIPSA), executed by the Development Bank of Southern Africa (DBSA), is a very different case from the rest of the cases in the Global Review sample. IIPSA is an EU-funded program to provide grant financing to leverage additional long-term financing from international financial institutions for infrastructure development in South Africa. As such, IIPSA is not a financial institution nor does it qualify as a 100 percent public infrastructure fund (PIF). It could be defined as a needed complement to PIFs, but it does not have all the characteristics of a fund. However, the lessons learned and challenges facing IIPSA share many of the same features of other PIFs in the sample. This one has the particular characteristic that it has been solely funded by the EU.<sup>199</sup>

### Development Bank of South Africa (DBSA)

DBSA is a non-bank (non-deposit taking) financial institution fully owned by the GoSA (Treasury Department). It is a decentralized institution with its own funding strategy (the last capitalization by the GoSA took place in 2012). DBSA lends to public sector infrastructure projects, including subnational projects in municipalities. It lends to selected public-private-partnership (PPP) infrastructure projects. DBSA is also a regional development bank, given its mandate to lend to countries included in the Southern African Development Community (SADC) region and throughout Africa.<sup>200</sup>

The lion's share of DBSA risk exposure (approximately 95 percent) is to South Africa's public sector. A large portion of this exposure within the public sector is to subnational entities. In its annual report, DBSA states its three main business lines as project preparation; infrastructure financing; and infrastructure implementation, where it concentrates the efforts to mobilize funding from donors and development financial institutions (DFIs). DBSA considers project preparation (pre-investment funding) to prepare financeable projects, a critical challenge to infrastructure development in developing countries. Table 6 presents financial highlights of DBSA.

Table 6. DBSA, Financial Highlights, 2015–17 (R million)

	2017	2016	2015
Investments in development (loans, bonds, and equity participation)	78,768	77,064	63,123
Cash, short-term, and other assets	4,885	6,282	7,821
<b>Total assets</b>	<b>83,653</b>	<b>83,346</b>	<b>70,944</b>
Total liabilities	51,622	53,081	47,261
Total equity	32,031	29,265	23,683
<b>Profit (loss)</b>	<b>2,821</b>	<b>2,577</b>	<b>1,214</b>
Debt-to-equity ratio	1.58	1.78	1.95

199 The Government of South Africa has cofinanced the Program in the amount of R13 million; however, this has yet to be utilized.

200 Member countries include: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe.



ROE (return on equity)	9.20	9.70	5.70
ROA (return on assets)	3.40	3.40	1.80
Exchange rate, rand per US\$ (March 30 each year)	13.30	14.80	12.13

Source: DBSA Annual Report, March 31, 2017.

Note: The exchange rate is the spot inter-bank market rate.

DBSA's total assets as of March 31, 2017, were R83,653 million (equivalent to US\$6.3 billion).<sup>201</sup> Its financial performance, as measured by the three indicators in Table 6, is slightly above average for the sample of infrastructure funds in the Global Review. DBSA, as part of its mandate, has consistently promoted the access to donor financing for special programs to leverage its own resources.

DBSA is the executing agency for different funds and programs, including the IIPSA Program. DBSA has set up a full division, the Project Preparation Division, to manage all its project preparation programs with donors. The Division has four operational units: Program Development Unit, Project Preparation Unit, Climate Finance, and Strategic Planning. The management of the IIPSA fund is the responsibility of the Program Development Unit.

## DBSA Programs

- **The DBSA Project Preparation Fund** provides funding for infrastructure projects in the transport, energy, ICT, and water and sanitation sectors in South Africa, the SADC region, and selected African countries. The Fund provides funding for pre-feasibility studies and bankable feasibility studies, as well as assistance with costs to reach financial close. The Fund supports only up to 50 percent of the project preparation costs of a project. However, funds are not provided on a grant basis, as DBSA recovers the money at financial close.
- **The SADC Project Preparation and Development Facility (PPDF)** supports projects that enable regional integration. It is financed by the EU's regional program and the German Investment Bank (KfW). The Facility finances the preparation of infrastructure projects and provides technical assistance for infrastructure project identification, preparation, and feasibility studies, with a view to making the projects bankable and attractive to investors. The PPDF provides a grant facility to fund recipients for 95 percent of the required amount. A 5 percent monetary value of the grant is required from the recipient. The funds are limited to projects within the SADC region that span two or more SADC countries or, if located in one country, facilitate and promote regional integration. The eligible sectors include transport infrastructure, energy generation and transmission, ICT, water and sanitation, and tourism-related infrastructure.
- **The Green Fund** is a unique, national fund that supports green initiatives. The Fund's objective is to assist the country's transition to a low-carbon, resource-efficient, and climate-resilient development path to deliver high-impact economic, environmental, and social benefits. Assistance is provided to projects through grants (recoverable and nonrecoverable), loans (with concessional rates and terms) and equity. The funding windows include Green Cities and Towns, Low-carbon Economy, and Environmental & Natural Resource Management.
- **The SADC Regional Fund for Water Infrastructure and Basic Sanitation (Water Fund)** is part of the SADC Regional (infrastructure) Development Fund (RDF), which is the main instrument of SADC for the social and economic development and integration of the SADC region. The SADC Water Fund is the key financing facility for the development and integration of the water sector in the region.

<sup>201</sup> From an asset management viewpoint, IIPSA represents less than 2 percent of the overall DBSA assets.

- The Fund’s objectives are to contribute to the improvement of the social-economic livelihoods of the population living in the SADC region by strengthening the coordinating function of SADC in water sector funding; creating an instrument to channel the contributions of International Cooperating Partners (ICPs) to the SADC Water Fund sectors; and improving the regional water and sanitation infrastructure. DBSA has been appointed as the project executing agency.
- **Infrastructure Investment Program for South Africa (IIPSA).** This Program is the subject of this case study.

## Reasons for and Genesis of IIPSA’s Development

IIPSA is a €100M (R1.5 billion) infrastructure program jointly developed by the GoSA and the EU, approved in 2012. It is a closed grant facility for priority infrastructure projects in South Africa and the SADC region. The facility includes the conditionality of a loan from the participating DFIs (loan conditions are set by the DFIs). The Program also helps prepare projects for bankability for funding. Participating DFIs include DBSA, KfW, the European Investment Bank (EIB), and Agence Française de Développement (AFD). Regional finance institutions active in South Africa may also be associated with the Program as co-financiers with one or more of the participating DFIs. These include banks such as the African Development Bank (AfDB) and other South African banks, such as the Industrial Development Corporation (IDC).

IIPSA’s purpose is to support the government’s National Infrastructure Plan by addressing constraints and accelerating infrastructure development in South Africa and the SADC region. The Program is aligned with the EU-SA Country Strategy for 2007–13 and the EU’s Multiannual Indicative Program, which focuses on employment creation and regional and African development. IIPSA also complements the G20 Hamburg Principles/Addis Action Plan, which advocates for country ownership, aid effectiveness, and alignment of multilateral development bank (MDB) actions with country development plans. The creation of IIPSA promotes aid effectiveness through increased EU harmonization and joint action on national and regional development plans, and through increased cohesion between the work of the EU and EU member states, as well as between development partners and DFIs.

IIPSA originated in EU’s push toward regional blending facilities in Asia and South America, as well as Africa. The Africa Infrastructure Trust Fund (ITF) was the first blending facility established by the EU. IIPSA was envisioned to pilot an innovative financing solution referred to as blending, which merges grant funding with loans from participating DFIs for essential infrastructure projects in various sectors.<sup>202</sup> At the core of blending is the principle of additionality, or the net benefit derived from the EU grant beyond what could have been achieved without the grant. The additionality principle extends past private capital mobilization, and is also realized through an increase in project sustainability, standards, governance, transparency, technological improvements, and an increase in development impact.

The value of blending includes the attainment of improved outcomes, such as policy reforms that improve the enabling environment, and the increase in quality and bankability of projects. Rather than replacing available resources to projects, the blending method aims to crowd in private capital that otherwise would not be available. As outlined in the Program’s Financing Agreement (FA), IIPSA is intended to have a leveraging effect of at least 5 to 10 times the amount that the financial nonrefundable contributions could achieve on their own.<sup>203</sup> The Program’s Financing Agreement also highlights that successful project proposals financed by participating DFIs blending their loan resources with IIPSA grant resources will allow an increase in the risk and credit ceilings of projects and will encourage the financing of categories of investments that cannot be financed by the market or DFIs separately.<sup>204</sup> For the EU, the blending method increases its visibility within donor countries, and also allows the European Commission to support coordination between EU donors and lenders. The EU has engaged in previous

<sup>202</sup> The 2015 EU Blending Guidelines notes that, “Blending is the strategic use of a limited amount of grants to mobilize financing from partner financial institution and the private sector to enhance the development impact of investment projects.”

<sup>203</sup> Financing Agreement between the EU and the RSA, Annex II, Section 1.3.

<sup>204</sup> Financing Agreement between the EU and the RSA, Annex II, Section 1.3.

regional grant/loan blending facilities, which have produced significant results. In line with the principles of the World Bank Group's Maximizing Finance for Development (MFD) approach, these facilities have leveraged EU funding for a significant amount of additional finance in Africa.

Several complementary programs and donor activities are in line with IIPSA (Table 7). At the national level, DFIs such as DBSA, the Industrial Development Corporation (IDC), the European Investment Bank (EIB), AFD, and KfW have programs and activities centered on financing of infrastructure, climate change mitigation and adaptation, and support to local government in South Africa and within the SADC region. EIB, KfW, and AFD also have programs being jointly implemented with DBSA, in which they co-finance projects and finance project preparation. The DBSA separately operates its own project preparation facility as well.

**Table 7. Complementary National and Regional Programs**

Regional Programs		Continental Programs	
Funders	Program	Funders	Program
KfW and EU-funded	SADC Project Preparation and Development Facility (SADC PPDF) <sup>a</sup>	European Union (EU)	EU-Africa Infrastructure Trust Fund (ITF)
			Africa Investment Facility (AfIF)
UK Department for International Development (DFID)	Climate Resilient Infrastructure Development Facility (CRIDF) <sup>b</sup>	New Partnership for Africa's Development (NEPAD)	Short Term Action Plan (STAP)
		African Union (AU), NEPAD, and AfDB	Program for Infrastructure Development in Africa (PIDA)

a. Established in 2012 to support project preparation of regional infrastructure projects. Whereas the PPDF focuses solely on project preparation, IIPSA provides direct grants for blending with DFI loans.

b. Established in 2013 to support long-term solutions to water issues affecting the poor in Southern Africa. The Facility works to bring together financial resources for projects, and advises on selection, management and implementation of those projects.

## History

IIPSA was approved as part of the EU's Programmatic Action Plan for 2012 and is aligned with the EU's larger country strategy for South Africa through the 2007–13 period. The strategy supports the government's prioritization of infrastructure development to address South Africa's three greatest development challenges: high unemployment, poverty, and inequality. The strategy also aligns specifically with the government's National Infrastructure Plan to oversee the long-term development of national and regional infrastructure. Moreover, IIPSA is also in line with the EU's Agenda for Change (2011), which emphasizes infrastructure development as a priority area of development assistance for the European Commission and resolves that a larger percentage of EU aid should come through innovative financing instruments such as facilities for blending grants and loans. IIPSA officially launched on October 16, 2013, following the signing of the Financing Agreement by the GoSA. The Program's operating period

is a total of nine years (seven years for implementation with a two-year closure period). Its closing date is set for October 15, 2022.

An initial amendment was made to the Program's Financing Agreement in June 2016, which allowed for an extension of the Program's contracting deadline from December 19, 2016, to October 15, 2020. Although the contracting deadline was limited to three years post-signing of the Delegation Agreement (DA) between the EU and DBSA, this extension was granted due to the infusion by the GoSA of R13 million in co-financing, which reclassified the Program as a multi-donor action. In July 2017, a second amendment to the Financing Agreement was approved to allow other private entities, not only those with a public service mission, to be Project Owners and therefore applicants to IIPSA funds. This was done to increase the flexibility of IIPSA's support. Another modification made to the Financing Agreement during the second amendment was a reallocation from a 50/50 budget split between national and regional projects to a split of between 70/30 and 85/15 percent.

DBSA's management fees are 6.5 percent of the IIPSA grant, which is consistent with other EU blending facilities. The payment of fees, as stipulated in the Financing Agreement, is disbursed upon disbursement of project grants and not on commitment.<sup>205</sup>

Through the signed Delegation Agreement (DA) between the EU and DBSA, IIPSA is managed through direct centralized management and through indirect centralized management (Table 8).<sup>206</sup> As it pertains to the Program's indirect centralized management, contracts that are implemented under IIPSA are awarded and implemented in accordance with DBSA procedures and standard documents. Although in some cases IIPSA funds are jointly financing a contract implementing the Program, the procurement procedures of DBSA may be altered in line with international standards as required by the participating Finance Institutions.

Under direct centralized management (for activities such as audit, evaluations, and visibility), all implementing contracts must be awarded and implemented in accordance with the EU's procedures and standard documents. Per the Financing Agreement, the EU may replenish funds under its multiannual financial framework if the Program is deemed successful. However, the EU does not plan to continue the Program past its closing date and is looking at other schemes that South Africa may be eligible to receive.

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205 Per Article 7.1 of the FA, the Commission shall transfer funds no later than 45 calendar days after the date on which it registers an admissible payment request from the Beneficiary.

206 The indirect centralized management system stipulated that Program funds must be committed within approximately three years from signature of the Financing Agreement and Disbursement Agreement (D+3 years rule). This arrangement was extended with the second amendment of the Financing Agreement.

**Table 8. IIPSA Indicative Budget Allocations**

Budget Heading for EU Contribution	Amount (€)	Management mode
1. Delegated Agreement with DBSA:	99,600,000	Indirect centralized management
a) Support to eligible projects:		
- National projects	46,500,000	
- Regional projects	46,500,000	
b) DBSA management fees	6,500,000	
c) Communication/Visibility	100,000	
2. Communication/Visibility	50,000	Direct centralized management
3. Monitoring, external evaluation, and audit	350,000	Direct centralized management
<b>Total</b>	<b>100,000,000</b>	

Note: Figures are as of the time of the Program concept stage, per EU's IIPSA Program Concept Note.

### The Transition from a “Blending” Facility to a “Project Preparation” Facility

As has been the norm (very consistently) in the rest of the cases in the Global Review, project preparation to generate a pipeline of financeable “feasible” projects is one of the major constraints to effective performance of public infrastructure funds in developing countries. DBSA is a strong believer in the need to mitigate this constraint and constantly promotes the development of different options to provide project preparation funds under soft financing conditions. IIPSA management within DBSA was placed under the responsibility of the Project Preparation Unit initially. However, it now resides under the Program Development Unit within the Project Preparation Division.<sup>207</sup>

According to IIPSA, EU's procurement guidelines, as well as some of the DFIs' procurement guidelines, also play a role in the transition of the original blending concept to the project preparation concept.<sup>208</sup> Some of the donor conditions, such as the need to procure every subcontract via international public bidding, or the minimum size of contracts, also had an impact in restricting the option of direct capital grants (DCGs) as part of the financing structure of a given project.

The authors believe that the day-to-day business challenges of DBSA (in terms of project preparation needs) logically had an impact on the way IIPSA funds were being allocated. This fact, together with some of the donor restrictions, explains the high concentration of project preparation (PP) allocations in the current IIPSA portfolio (66 percent; see Table 9).

<sup>207</sup> Part of the rationale was the need to maintain a “Chinese wall” governance protection between the investment part of DBSA and the use of grant financing.

<sup>208</sup> The EU notes that EU procurement guidelines do not affect the choice of instrument (project preparation, direct grant, and so on).

**Table 9. Allocation of IIPSA Funds (R million)**

	Direct Capital Grant (DCG)	Project Preparation (PP)	Interest Rate Subsidy (IRS)
<b>Regional projects</b>	<b>0.0</b>	<b>160.5</b>	<b>0.0</b>
Number of projects	0.0	4	0.0
<b>South Africa</b>	<b>135.0</b>	<b>490.0</b>	<b>193.7</b>
Number of projects	2	13	3.0
<b>Average allocation per project</b>	<b>67.5</b>	<b>43.4</b>	<b>64.5</b>
<b>% allocation total</b>	<b>13.80</b>	<b>66.40</b>	<b>19.80</b>

Source: IIPSA Project Steering Committee, Progress Report, February 20, 2018. Includes only projects under implementation, committed and approved. It does not include appraisals in process and projects on hold. Total of R991 million for 22 projects (representing 25 project grants). Total commitments approximately equal to €67.32 million (at an exchange rate of R14.72 per €1 as of March 16, 2018).

IIPSA has already committed nearly €67.32 million of the facility (72.4 percent of the total availability of €93 million). IIPSA had received €34 million from the EU as of March 2018. There are currently 7 regional projects on hold, for the equivalent of R303 million (all project preparation projects),<sup>209</sup> and 6 South African projects in the appraisal process and on hold, for a total of R165 million (all project preparation projects). If all the 13 project preparation projects in process were to materialize, it would be the equivalent of €31.8 million. Under this scenario, the entire IIPSA facility will be committed and the allocation to project preparation projects will increase to 80 percent. New funding sources will be required if the pipeline materializes.

## Leveraging

Since most of IIPSA's commitments until February 20, 2018, are in the project preparation area (80 percent of the funds),<sup>210</sup> the concept of financial leverage of the Program does not apply.<sup>211</sup> On the individual project level, when a direct capital grant (DCG) is included, the financial leverage of the IIPSA fund can be established. As of February 20, 2018, only one project where a DCG was present had reached financial close. The project is the Western and Northern Aqueducts in the Municipality of eThekweni, for a total of R700 million. Financing is done by IIPSA, AFD, and DBSA. In this case, the authors estimate a financial leverage of 6 to 1 for the IIPSA resources.

## Blending Operations

There are two operations under development by IIPSA that will be qualified as a direct capital grant and if implemented would have a big impact on South African infrastructure development. These are two good examples of the leveraging originally envisioned for IIPSA.

209 The exchange rate used was US\$1 to R11.738 as of March 25, 2018.

210 Including the 13 project preparation projects in process.

211 For purposes of the case studies, financial leverage is defined as the amount of additional long-term financing resources mobilized for a given infrastructure project. Certainly, one can make the case that pre-investment (project preparation) funding has a leveraging impact, once financial completion is reached, and other entities provide the long-term financing. However, there is a degree of uncertainty between the time the project preparation funds are disbursed and the time of financial completion. The authors have opted for limiting the concept of financial leverage.

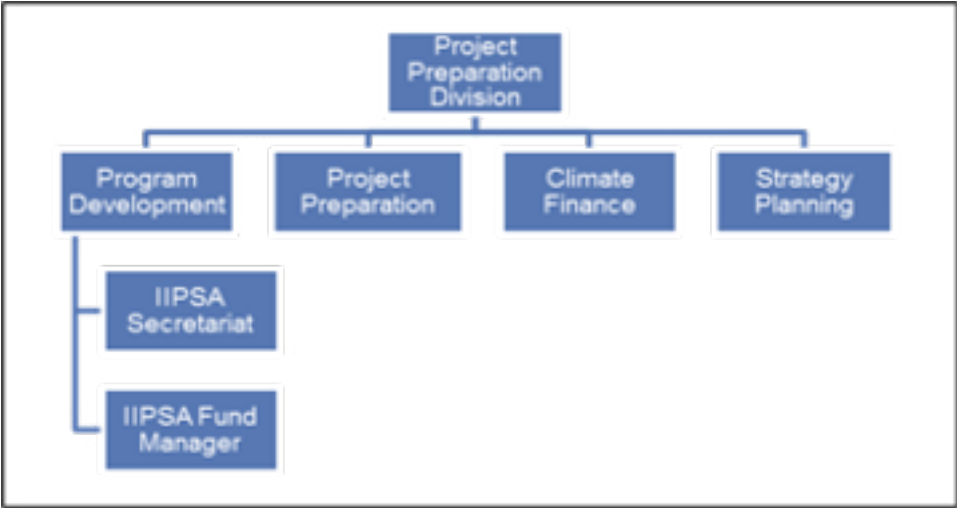


- **Low-income municipalities.** IIPSA is working with the Department of National Treasury to develop a financing facility in which IIPSA funding will be blended with DFIs’ credit lines to DBSA to be on-lent to low-income municipalities. The focus of the program will be on municipal (economic and social) infrastructure development. IIPSA funding will be earmarked for capital grants and interest rate subsidies. This operation would be attractive to DFIs that currently cannot lend directly to subnational entities without a sovereign guarantee.
- **Student Accommodation, Higher Education (social infrastructure).** IIPSA is working with the Ministry of Education to develop a financing facility to fund social infrastructure to accommodate 300,000 student beds. It is a ten-year program to be offered to 26 universities in South Africa. The facility will be funded by IIPSA, the Ministry of Education (through an annual earmarked budget allocation), and DFIs. The total financing is estimated to be approximately R3 billion. This project might yield some important economies of scale that could induce significant construction cost savings for the Ministry of Education.

### 3. INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE

The IIPSA’s Secretariat and Fund Manager teams sit within the Project Preparation Division of the DBSA. As displayed in Figure 7, the Secretariat and the Fund Manager teams sit within the Program Development Unit under the Division. These units within the Project Preparation Division do not exclusively work on IIPSA, but also on other project preparation programs funded by DBSA and third parties.

Figure 7. DBSA’s Project Preparation Division Organizational Structure



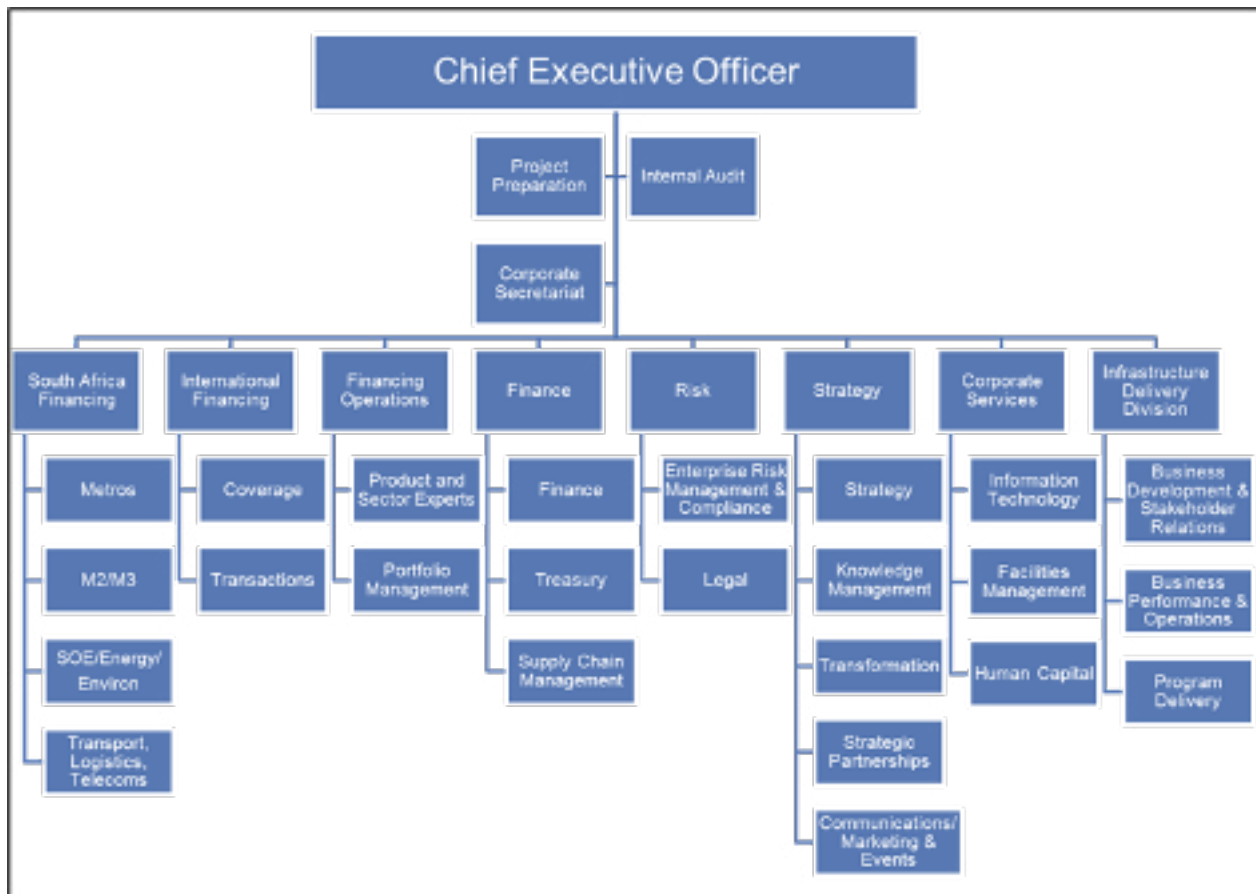
Source: IIPSA Secretariat

DBSA’s selection as the IIPSA Secretariat and Fund Manager was based on several factors, including the bank’s expertise and experience in financing infrastructure projects, its geographical coverage of both South Africa and the SADC region, and its established partnerships with three European financing institutions already active in South Africa (EIB, AFD, and KfW). Although the IIPSA grant is a bilateral support facility between the EU and the GoSA, the Department of Treasury notes that DBSA was jointly selected to implement IIPSA due to the government’s lack of capacity to undertake implementation of the Program. As a wholly owned government entity, DBSA was also selected as a form of government ownership of the Program. Although some lessons learned from other EU-supported programs were applied in the development of IIPSA, emphasis was placed on South African ownership and manage-

ment of the Program, and this weighed heavily in the Program’s institutional set up.

The IIPSA Secretariat has a direct staff of 3 Program officers. However, the Fund Manager team relies significantly on DBSA staff for sector expertise as well as legal and financial support for project development. DBSA estimates that IIPSA makes use of 9 project preparation staff, as well as 15 sector, environmental, social, financial, and legal specialists, which are split into project teams. In terms of governance, the Secretariat reports to both the EU and the National Treasury. The Secretariat oversees administrative procedures with regard to the submission of proposals, as well as the overall operations of the Program, while due diligence on projects is conducted by project teams that are comprised of staff from the larger DBSA community (Figure 8).

**Figure 8. DBSA Organization Structure**



Source: DBSA 2017 Integrated Annual Report

Project proposals are approved by the IIPSA Project Steering Committee (PSC), which meets on a quarterly basis and whose members include representatives from the Department of National Treasury (Chair), the Department of International Relations and Cooperation (DIRCO), the Department of Public Enterprises, and the Department of Economic Development. The EU, along with members of the SADC Secretariat, participate as observers at PSC meetings, while Project Owners may be invited when required. Formerly, participating DFIs did not participate in PSC meetings, but only in quarterly DFI coordinating meetings, which involve an in-depth technical and financial review of potential projects and give an opportunity for DFIs to express interest in a project before its presentation before the PSC. However, following the recommendations of the Program’s Mid-Term Evaluation (MTE) to increase DFI involvement in the Program’s governance structure, participating DFIs now partake in PSC meetings.<sup>212</sup>

<sup>212</sup> Although DFIs participate in PSC meetings, they do not participate while grant decisions are made.

Once project proposals are approved by the PSC, final no objections to grant awards are provided by the EU.

The National Treasury supervises the overall implementation of IIPSA for the GoSA, while the DIRCO monitors the implementation of the regional component of the Program. Project Owners include both public and private entities initiating infrastructure projects, while the participating DFIs include EIB, KfW, AFD, and DBSA.

As Fund Manager, Program Secretariat, and a participating finance institution, DBSA plays a central role in IIPSA. Program documents note that necessary precautions are taken to avoid potential conflicts of interest through the maintenance of separate operating and administrative arrangements at DBSA. This includes information barriers, maintenance of impartiality during the project appraisal process, and the implementation of other internal procedures to mitigate any conflict of interest issues and ensure confidentiality. However, institutional challenges are still noted by the EU and the Program's MTE Team, particularly because they are believed to be the result of a suboptimal institutional arrangement and performance, which significantly differs from other EU blending facilities.

Among the key institutional challenges, the EU and the MTE team cited the following factors as main constraints to the successful execution of the blending program as initially envisioned.

- **Role of DFIs in the formal governance structure of the IIPSA.** As emphasized by the EU, the relationship between the EU grant and DFI lending is a core principle of the blending concept. According to the EU and the MTE team, the exclusion of DFIs in identifying and submitting projects for consideration diminishes their influence in the selection of projects and their opportunity to provide technical assistance during project preparation. IIPSA's current setup limits active participation by DFIs to a consultative role during quarterly coordinating meetings and now participation during PSC meetings. In other EU blending facilities, DFIs tend to play a more active role.
- **DBSA's triple role as Fund Manager, Secretariat, and participating DFI.** The role of DBSA as Fund Manager, IIPSA Secretariat, and participating DFI could, in certain instances, constrain the evolution of the Program. DBSA has leadership over the strategy and operations for the Program, developing the pipeline, preparing projects, overseeing the administrative process of the Program, arranging facility agreements, and procuring services for project preparation, among other activities. In addition, DBSA has a default status as a DFI in the Program. Although some steps have been taken to mitigate conflicts of interest, it might in the Program's best interest to consider a more arm's length relationship on these two important roles.

For the monitoring and evaluation of IIPSA, the IIPSA Secretariat completes quarterly progress reports for the PSC and annual implementation progress reports for the EU. The National Treasury summarizes the PSC reports in memo form for the Minister of Finance on a quarterly basis. In terms of IIPSA's risk management, this function is overseen by the risk management function of DBSA to ensure that the Program adheres to best practice and good governance. IIPSA's risk management measures are further detailed in Section 5 of the case study. IIPSA was reviewed officially in October 2015 as part of the EU Result Oriented Monitoring (ROM) and completed its EU MTE in December 2017. A final evaluation will be conducted at the beginning of the closing phase of the Program and possibly, during an ex post evaluation, per the Financing Agreement.

#### 4. FISCAL MANAGEMENT

IIPSA, as a grant finance facility, does not generate any type of fiscal commitment that would require financial consolidation in the debt quantification and monitoring of the GoSA. It does require monitoring and supervision like any other funding resource allocated by donors to infrastructure projects in South Africa. DBSA, as a non-bank financial institution fully owned by the GoSA, consolidates with the

government and is subject to the fiscal management policies of the Treasury Department.

## 5. OFFERING OF FINANCIAL PRODUCTS

The provision of IIPSA grant funding under the Program aims to support project preparation activities of infrastructure projects and/or directly support the financing of infrastructure projects. Funding can be applied at the following stages of a project: (1) enabling environment and project definition; (2) pre-feasibility; (3) feasibility studies to bring a project to bankability; (4) advisory services to structure a project (such as PPPs, legal considerations); and (5) implementation (construction phase).

Grant funding is made available specifically to:

- **Technical assistance and studies (project preparation).** Financing technical assistance for preparation, management, and implementation of qualifying projects. This can include environmental impact assessments, project supervision, and capacity building.
- **Direct capital grants (DCG).** Direct grants co-financing capital expenditure of an infrastructure project jointly with a loan from one or more participating DFIs in the Program.
- **Interest rate subsidies (IRS).** Provision of a lump-sum amount, which will be used to reduce the interest rate of a long-term loan provided by one or more of the participating DFIs. These grants will only be approved in cases where it is ensured that the subsidy will not create any market distortions.
- **Loan guarantee cost financing and insurance premium.** These grants will only be provided in cases where initial-stage funding of insurance will ensure the launch of a project. So far, the Program has yet to provide this type of grant funding.

Neither the Financing Agreement nor the 2012 Feasibility study conducted to assist in the design of IIPSA stipulates a specific blend of the four available instruments. However, technical assistance and studies (project preparation) dominates IIPSA's current portfolio. Although an explicit portfolio breakdown was not required of the Program, the consequences of a portfolio dominated by project preparation is that much of the support provided by IIPSA is offered without reciprocal gain to participating DFIs. Most projects prepared under IIPSA will not be completed within the implementation period. This fact will limit DFIs' participation in the project financing as was originally envisioned in the Program.

As of February 2018, IIPSA had 22 projects approved under the portfolio. These projects represent 25 approved grants, as 3 projects have been approved for two categories of grant funding. The Program has a total approved grant allocation value of R991 million. Regional projects make up 4 of the approved projects, while national projects make up 18 projects (representing 22 project grants). Two projects are in implementation, and both are at the municipal level. All regional projects are project preparation projects. Table 10 provides further details of the portfolio of projects. Although impact indicators such as the number of jobs to be created by IIPSA's investments are yet to be determined due to many projects still being in preparation phase, it is estimated that the Western and Northern Aqueducts Project in the eThekweni municipality, which is currently in implementation, will provide water to over 1 million citizens, or approximately 200,000 households, when completed, per the MTE report.

**Table 10. Portfolio of Projects (R million)**

	South African projects			
	DCG	PP	IRS	Total
<b>Projects in implementation</b>	90	25	15	130
Number of projects	1	1	1	2*
<b>Committed projects</b>	0	327	0	327
Number of projects	-	12	-	12
<b>Approved Projects</b>	0	128	253	381
Number of projects	-	2	5	5*
<b>Total</b>	90	480	268	838
Number of projects	1	15	6	22 19*
	<b>Regional projects</b>			
	DCG	PP	IRS	Total
<b>Projects in implementation</b>	0	0	0	0
Number of projects	-	-	-	-
<b>Committed projects</b>	0	31	0	31
Number of projects	-	1	-	1
<b>Approved projects</b>	0	122	0	122
Number of projects	-	2	-	2
<b>Total</b>	0	153	0	153
Number of projects	-	3	-	3

Note: \* These numbers represent the absolute number of projects, which for South Africa projects differs from the number of project grants approved under the Program. For example, there are two projects in implementation at the national level; however, one project has been provided with both a direct capital grant and an interest rate subsidy grant. As such, there are 19 national projects, which represent a total of 22 project grants. DCG = direct capital grant; IRS = interest rate subsidy; PP = project preparation;

## Project Selection and Pipeline Challenges

At the onset of IIPSA's implementation, the PSC approved the launch of a Request for Proposals (RFP) process to generate a pipeline of projects. However, the process was not successful in producing a robust pipeline of investment-ready projects. Out of the 250 applications submitted, only 27 projects were eligible for support under the Program, and only 5 remain on IIPSA's current project list. The unsuccessful RFP process subsequently led to an open invitation for project proposals in 2015, and this

continues to be the process for soliciting projects today. The Program operates an online application system on IIPSA’s website. In addition to the website, IIPSA proactively solicits projects from the GoSA (including the PPP Unit at the National Treasury and the PICC), the SADC Secretariat, and the SADC Project Preparation Development Facility (PPDF).<sup>213</sup> Although there has been an increase in proposal submissions through open invitation and active marketing, the unsuccessful RFP process did lead to more than a year of implementation delays for the Program.

The initial process of soliciting projects for IIPSA was done to ensure South African ownership and prioritization of existing projects, as well as long-term sustainability. National projects were to have the support of the highest decision-making authority appropriate to the project through inclusion in the country’s NDP, while regional projects were to have been included in the Regional Infrastructure Development Master Plan (RIDMP). However, the process now generates most of its pipeline through approval of unsolicited proposals.

Sourcing investment-ready projects has been a challenge for the Program. A feasibility study funded by the EU in 2012 to assist in the design of IIPSA concluded that there was a lack of prioritized national and regional infrastructure projects that could be brought to bankability quickly. The envisioned pipeline of projects was to be sourced from a list of priority projects identified by the PICC and the RIDMP. However, following the launch of the Program, it was confirmed that most project proposals were high-level project ideas rather than investment-ready projects. The lack of investment-ready projects also reflects the capacity of the Project Owners to borrow, as many of the projects originate from municipalities that lack experience borrowing.

**6. SECTOR FOCUS**

The eligible sectors for grant support under IIPSA include: (1) energy (generation, transmission, safety and security of energy, energy efficiency); (2) transport and logistics; (3) water and sanitation; (4) climate change (low-carbon and cleaner industrial production, environmentally friendly technologies, climate change adaptation technologies, integrated waste management systems); (5) ICT (information and communication technology); and (6) social infrastructure (health and education).

Table 11 reports IIPSA’s expected project results for the respective eligible sectors.

**Table 11. Expected Project Results by Sector**

Sector	Expected Project Results
Energy infrastructure	<p>Increased production of renewable energy.</p> <p>Improved electricity transmission network and interconnections.</p> <p>Improved safety and security of energy infrastructure.</p> <p>Improved energy efficiency and energy savings.</p>

<sup>213</sup> Other interactions have included: the World Bank; the New Partnership for Africa’s Development (NEPAD); South African Power Pool (SAPP); African Development Bank (AfDB); the New Development Bank (NDB); Department of Water and Sanitation (DWS); the Economic Development Department (EDD), responsible for coordinating the country’s New Growth Path; Department of Energy (DOE); Department of Public Enterprises (DPE); and South Africa’s Cities Project Preparation Facility (PPF) to identify more projects



Transport infrastructure	<p>Improved rail infrastructure.</p> <p>Improved ports infrastructure.</p> <p>Better (cleaner, faster, cheaper, and safer) transport infrastructure, providing better modal balance and promoting social cohesion and sustainable growth.</p>
Water and environment	<p>Improved water resources management, including necessary related infrastructure.</p> <p>Enhanced water management capacity.</p> <p>Improved maintenance of water and wastewater infrastructure particularly at municipal level.</p> <p>Promotion of low-carbon and cleaner industrial production, including promotion of innovative and environmentally friendly technologies.</p> <p>Promotion of climate change adaptation technologies, including necessary related infrastructure.</p> <p>Promotion of integrated waste management (household, municipal, industrial and mining wastes), including necessary related infrastructure.</p>
ICT infrastructure	<p>Enhanced network coverage.</p> <p>Faster internet connectivity.</p>
Social infrastructure	<p>Better access to health care and improved health services in urban and rural areas.</p> <p>Better education facilities, increased access to education in urban and rural areas.</p> <p>Improved vocational training facilities.</p> <p>Improved housing.</p> <p>Public buildings and spaces.</p>

## 7. CLIMATE CHANGE CONSIDERATIONS

Within IIPSA's approved pipeline, six projects fall under the climate change mitigation and adaption performance indicator within the Financing Agreement.<sup>214</sup> These six are primarily projects within the water sector. They involve saving water through reuse and better metering and use of industrial water, among other outcomes. The Program does not have clear guidelines on a minimum percentage of climate change investments nor does it differentiate between climate change mitigation investments and adaptation investments. There is one other climate change-related performance indicator in the Financing Agreement that the MTE report does not report data for projects: the expected reduced level of carbon emissions (when relevant).

As noted in the Program's description in Section 2 of the case study, DBSA also manages the Green Fund on behalf of the Department of Environmental Affairs (DEA). The Green Fund is a national fund aimed at supporting the country's transition to a green economy by removing barriers and bridging

<sup>214</sup> The MTE team notes that this number relates to projects demonstrating additionality (by their review). The total number of approved projects that address climate change mitigation and adaptation where additionality was not demonstrated is 12.

gaps along the innovation value chain. The Fund considers opportunities within three funding windows: (1) Green Cities and Towns (which includes areas such as greening core municipal infrastructure, environmental and integrated planning for sustainably built, climate-resilient cities); (2) Low-Carbon Economy, which includes cleaner production, energy efficiency, renewable energy, and alternative fuels; and (3) Environmental & Natural Resource Management, which focuses on investment in ecosystem services, sustainable agriculture, and rural adaptation models.<sup>215</sup> Within these three funding windows, the Green Fund offers support for project development, capital investment in green projects and programs, capacity building, and research and development initiatives; financial support can take the form of grants (recoverable and non-recoverable), loans (concessional rates and terms), and equity.

As of the August 2015, the Fund had registered 20 project grants for a total approved amount of R740 million (US\$62.8 million).<sup>216</sup> This includes a combination of 2 concessional loans amounting to R19 million, 10 non-recoverable grants amounting to R284 million, and 8 recoverable grants amounting to R437 million.<sup>217</sup> Recipients of grant awards range from nongovernmental organizations (NGOs) to research organizations, private companies, and municipalities. The projects vary in stages of implementation: 4 projects were in the project development phase, which includes feasibility studies; 1 project was in feasibility piloting; 7 projects were in the pilot phase; 7 projects were in the implementation phase; and 1 project was in the expansion phase.

## 8. FUND PERFORMANCE

IIPSA does not fulfill the typical function of a public infrastructure fund, where it provides loans and guarantees to clients. Its performance can be measured by its financial ratios, including financial leverage. Moreover, IIPSA is a relatively young program. Agreements were signed in late 2013, but the pipeline started developing in the 2015–2016 period. IIPSA currently has only two projects in execution in the implementation phase (projects that have reach financial closure and are in the construction stage).<sup>218</sup> For a better measure of IIPSA's performance as a grant facility, the project pipeline will need to be more mature, with a higher number of projects in the execution stage.

Despite the young nature of IIPSA's product life cycle, project origination, after the shift toward a project preparation facility, is strong. If it continues at current rates, original funds would be committed by late 2019. Migrating from commitments to disbursements is a complex process, particularly when the end-client is a subnational entity. It is true that migrating from commitments to disbursements is easier if the "product" is project preparation as opposed to a direct capital grant. In the latter case, financial closure takes longer and involves other stakeholders (DFIs) not under IIPSA's control. IIPSA as a closed fund has a maturity date of 2020. Under current circumstances, it would seem likely that the disbursement phase would need an extension from the EU until 2021 or 2022.

In late 2017, the EU conducted an MTE of IIPSA by contracting an external consultant. The evaluation reported some positive aspects of IIPSA's development (administration of the Program, focus on high impact projects, etc.), and some negative aspects (more effort required to promote the original "blending" concept, better coordination with DFIs, and better management of their procurement requirements, etc.).

As a blending facility originally envisioned by the EU and GoSA, IIPSA has experienced challenges stemming from several key issues, including difficulties in generating a pipeline of investment-ready projects; lack of participation of DFIs in the Program's governance process; lack of participation by a regional body; conflicts of interest issues stemming from IIPSA's triple role as Secretariat, Fund Manag-

<sup>215</sup> SA Green Fund.

<sup>216</sup> Exchange rate of US\$1 to R11.78 as of March 29, 2018.

<sup>217</sup> SA Green Fund, Project Portfolio, <http://www.sagreenfund.org.za/wordpress/wp-content/uploads/2015/09/Green-Fund-Investment-Project-Portfolio-end-Aug-2015.pdf>.

<sup>218</sup> These projects are: Western and Northern Aqueducts of the Thekwini Municipality; and Water and Sewage Pipes Replacement in the Polokwane Municipality.

er, and DFI; and the concentration on project preparation, among others. The participation of DFIs in the governance of the facility is the key element to attaining the leveraging effect envisioned by the EU from the blending facility.

Although the Program's direct investment in infrastructure is low (1 of 25 project grants), IIPSA has successfully contributed to needed project preparation in South Africa and SADC, and the Program has significantly contributed to a national dialogue on infrastructure financing. IIPSA was launched at a critical time for South Africa's prioritization of infrastructure investment. While other GoSA initiatives have failed to realize results, IIPSA is an active program that is supporting projects, albeit the majority are project preparation. The lessons learned from IIPSA have also helped influence the establishment of the Treasury's Budget Facility for Infrastructure.

Financial highlights are summarized in Table 12.

**Table 12. Financial Highlights of IIPSA, 2016–17**

	March 31, 2017	March 31, 2016
	(thousand rand)	(thousand rand)
Trade and other receivables	1.4	6.8
Cash (funding accounts)	124,518.0	146,302.3
<b>Total assets</b>	<b>124,519.4</b>	<b>146,308.6</b>
Liabilities (accruals and paid leave)	197.1	160.9
<b>Equity</b>	<b>124,322.3</b>	<b>146,147.7</b>
Funding received EU	125,305.2	13,000.0
Interest received	2,988.7	65.4
FX differential (gains)	0.0	30,877.4
<b>Total revenues</b>	<b>128,293.9</b>	<b>43,942.8</b>
DBSA contribution (auditing, IT, advertising) <sup>1</sup>	611.6	1,302.9
Staff costs	3,902.5	4,493.3
Technical assistance (project preparation)	124,703.2	998.7
Interest paid to EU	2,122.6	312.9
FX differential (loss) <sup>2</sup>	18,859.3	0.0
<b>Total operating expenses</b>	<b>150,199.2</b>	<b>7,107.8</b>
<b>(Deficit)/Surplus for the period</b>	<b>(21,825.3)</b>	<b>36,835.0</b>
Exchange rate used for conversion (rand per euro)	13.93	17.82
Average exchange rate	15.47	15.02

Source: IIPSA, Audited Financial Statements, 2016 and 2017.

1. Office expenses are part of the justification for the €7 million of management fees to DBSA.

2. IIPSA is exposed to currency risk to the extent that there is a mismatch between the currencies in which the bank account is denominated, and the respective functional currency of the Program, in this case the South African rand (Note 9 to Financial Statements).

## 9. RISK MANAGEMENT

IIPSA's risk management profile, as presented in the Program's Annual Financial Statements for the year ended March 31, 2017, is discussed next.

- **Liquidity risk.** Liquidity risk is the risk that the Program will be unable to meet its payment obligations when they fall due. Liquidity risk more generally is the risk that the Program will be unable to continue operating as a going concern due to lack of funding. The Program's liquidity risk stems from possible shortfalls in the availability of funds to cover future commitments.
- The Program is exposed to liquidity risk because of uncertain cash flows related to investment income receivables. In terms of its long-term liquidity risk, the Program seeks to maintain a reasonable balance between the period during which assets generate funds and the period during which respective assets are funded. The Program manages liquidity risk through an ongoing review of future commitments.
- **Interest rate risk.** Interest rate risk is the risk that the Program's financial position may be adversely affected by changes in interest rate levels. The Program is exposed to interest rate risk because changes in interest rate levels will affect the investment income-related cash flows and the debt service costs on loans advanced.
- Because most of the Program's liabilities have a very short duration, they are largely unaffected by movements in interest rates. The Program manages and mitigates its exposure to interest rates through active portfolio management. Failures will harm the image of both the Program and the DBSA. As a countermeasure, the risk management function of DBSA also oversees the Program's operations to ensure that the Program adheres to best practice and the principles of good governance in all respects.
- **Credit risk.** Credit risk is the risk of financial loss of the Program if a counterparty to a financial instrument fails to meet its contractual obligations. Credit risk consists mainly of cash deposits, cash equivalents, and trade debt. The Program deposits cash only with major banks with high-quality credit standing and limits exposure to any one counterparty.
- **Foreign exchange risk.** The Program is exposed to currency risk to the extent that there is a mismatch between the currencies in which the bank account is denominated and the respective functional currencies of the Program. The functional currency of the Program is the South African rand.

## 10. LESSONS LEARNED

### 1. Incentive Mechanism for the "Blending" Objective

Undoubtedly, lack of "good" project preparation to develop financeable projects is a key constraint to infrastructure development in South Africa. Unfortunately, it is not the only one. Leveraging and mobilizing additional capital is also required, given the large "gap" between needs and available funding resources. IIPSA's transition from the original "blending" objective to a "project preparation" facility is understandable given market realities and the nature of the grant financing conditions. However, it is in the best interest of South Africa for IIPSA to continue exploring "blending" options that could increase the leverage of funding sources and later the impact on South Africa's infrastructure development.

Projects with potential for high impact, such as the low-income municipalities financing facility or the student accommodation facility (higher education), currently in progress, should be pursued

more actively. An option to consider is the introduction of institutional incentives, by which the IIPSA Fund Manager could delegate the origination of DCG transactions to the investment side of DBSA. The incentive mechanism will need to be carefully designed to respect internal governance issues between DBSA's dual roles as Fund Manager and lender.

## 2. **Effective Coordination with DFIs**

The authors' due diligence with the different stakeholders, as well as in the conclusions of the MTE by the EU, point to a clear need to improve coordination and working arrangements with DFIs operating in the region. IIPSA and other programs could benefit from streamlining DFIs' different "styles" of procurement processes. In addition, more proactive management of DFIs' conditions might result in more expedited processing. One suggestion to consider would be to "upgrade" the current practice of periodic meetings between IIPSA/DBSA and DFIs to a more substantive Advisory Board (or similar arrangement) to the PSC. The Advisory Board would consist of all the DFIs involved in the region, and would have advisory capacities to the PSC regarding the relationship between IIPSA stakeholders, improvements in the procurement process, and IIPSA's strategic vision.

## 3. **Regional Project Implementation (SADC)**

As in many other regions, coordination and implementation of financing for infrastructure projects involving more than one country is complex. Currently, IIPSA has only committed R153 million to three regional projects in SADC. An option to consider, if expediting regional infrastructure development is a priority, would be to pre-allocate a portion of the resources to SADC, and have a separate unit (within the same DBSA Division) exclusively manage the SADC portfolio. If pre-allocated resources are not utilized (committed and approved) by a certain time, they would become available for use in South Africa. For this option to work, SADC must have the institutional capacities to manage these pre-allocated resources.

## 4. **Capital Use (Return on Capital Not Disbursed)**

Most of the successful cases of public infrastructure funds have a similar characteristic in that all have enjoyed a strong initial capitalization with resources outside the government's annual budget. Most of the time these resources have been proceeds from government asset sales (privatization), considered an extraordinary revenue item in the budget process.

In these cases, financial returns (interest on capital not disbursed) have constituted the largest revenue item in the funds while the pipeline is developing, financial closing materializes, and projects initiate their construction phase. The sample of the Global Review suggests a four- to seven-year period between time the Fund is created until disbursement picks up. During this time, interest income increases the resources available for infrastructure development.

The original Financing Agreement between the GoSA and the EU states that interest earned by IIPSA in capital not disbursed must be returned to the EU (after a threshold equivalent to €250,000). In the authors' due diligence with the EU, they could not find a rational explanation for this type of financial arrangement. Perhaps in the event of replenishment of IIPSA funds or in the creation of a new EU-related fund, this arrangement could be revisited.

## 5. Budget Infrastructure Fund, 2018–19

The Budget Facility for Infrastructure was launched in 2016, and in July 2017 conducted a call for proposals for national departments to submit proposals for large infrastructure projects dealing with national priorities, as identified by the PICC. A total of 64 project proposals worth R139 billion were submitted; however, only 38 projects met the initial criteria for submission. Following technical assessments of the projects, a joint Technical Committee of representatives from the National Treasury, the PICC, and the Department of Planning, Monitoring and Evaluation have recommended these projects for consideration by the Medium-Term Expenditure Committee and the Ministers' Committee on the Budget. The way in which the recommended projects will be implemented is currently under consideration, although options to engage DFIs and the private sector will be explored, according to the Budget Review. This action illustrates an important lesson and is a byproduct of the development efforts of IIPSA and its relationship with the Treasury and DBSA.

## 6. Project Preparation Facility as a Revolving Fund

Some other countries encountering the same constraints as South Africa to access “soft” project preparation funding have been experimenting with the “revolving” concept in the project preparation facility. The structure utilized more frequently is to fund the necessary project preparation expenses for the development of a PPP project, and later include such expenses as part of the financial variable in the bidding process, to recuperate 100 percent (or a portion) of the prefunded preparatory costs. Another option is for the winning bidder to include the preparatory costs as part of the total project costs, and at financial closing, reimburse them to the project preparation fund.

In the case of IIPSA, where there is practically no presence of public-private partnerships, the revolving concept could be similar but could be applied at financial closing of the public investment (project preparation costs would be added to the total project cost). The “revolving” mechanism could be considered for both the Budget Infrastructure Fund and IIPSA.

## 7. Mobilizing Private Capital

Throughout the course of the case study due diligence and meeting with IIPSA's stakeholders, the authors were surprised by the limited engagement of both IIPSA and DBSA with the private sector, particularly the financial sector. The authors understand that due to EU conditions and DBSA's public sector focus that the design of the Fund was not led by a goal to mobilize private capital. Nonetheless, market realities are such that, unless developing countries (as well as less developed countries) can mobilize private capital in robust amounts, the infrastructure financing gap will only keep growing.

South Africa, unlike most other developing countries, has well-developed financial markets (both bank and bond markets). Foreign exchange risk continues to be the “capital sin” of infrastructure finance. With a few exceptions (ports, airports, cargo railway, and so on), most of the infrastructure sectors generate local currency. Financing domestic infrastructure via hard currency financing creates a risk (mismatch of assets and liabilities) that ultimately cannot be borne by end-users, public service providers, or financiers. This foreign exchange risk naturally ends up being borne by the sovereign, generating a challenging macro dynamic that could affect the country's systemic risk. It seems a wise strategy to promote the deepening and sophistication of local currency financing markets to mitigate the country's systemic risk and promote infrastructure development.

## 11. KEY CHALLENGES AHEAD



## 1. Urbanization and the Demand for Municipal Infrastructure

Poverty reduction and the growth of the middle class is driving urbanization trends in the region. The urbanization rate has gone from 14 percent in the 1950s to 40 percent today. If this trend continues, the region will start reaching urbanization rates of 60 percent in the 2030–2040s. This will have great implications for infrastructure demands in towns, intermediate cities, and metropolitan areas.

South Africa is at the forefront of the urbanization phenomenon. Demand for municipal infrastructure will grow almost exponentially in the years to come. Accommodating geographical spaces (new towns and neighborhoods) that offer better living standards with job creation (production and services facilities demanding jobs) is a complex public policy exercise. In Latin America, which has the world's highest urbanization rate, at 82 percent, there are very few successful cases of blending urbanization policies for new towns and neighborhoods with industrial development policies that generate jobs. South Africa is going through the same process of accommodating urban expansion with job creation. The solutions, complex to implement, will generate a huge demand for urban infrastructure (in terms of mobility, water and sanitation, energy, resilience to climate change, energy access, and social infrastructure, among others). Meeting this added demand for infrastructure finance will not be possible without the active participation of private domestic financial markets.

## 2. Crowding Out the Private Sector

Although the case study due diligence did not go deeply into the impact GoSA's financial institutions are having on the local financial market supporting infrastructure development, the "crowding out effect" could be present in South Africa and could be hindering the active participation of private sector financiers. This comment does not relate to the IIPSA funds as much as it relates to the later infrastructure project financed by DBSA and its partners. It would be in the GoSA's best interest, and that of the Department of National Treasury, to dedicate some resources to analyze this situation. As mentioned, for a country of 56 million people, mobilizing private capital for infrastructure development is at the core of any growth strategy. The public policy strategy should be one of "crowding in" as opposed to "crowding out."

## 3. The "Blending" Role and the Development of Local Capital Markets

Based on the experience of other developing countries, where PIFs play a catalytic role developing local capital markets by expanding the local investors base and creating the framework to attract global capital into their domestic financial markets, there is probably no better "blending" role for a facility such as IIPSA than to dedicate funding to this goal.

The case study due diligence did not analyze in depth the current constraints faced by the local capital markets to expand their product offerings and risk appetite to fund infrastructure development in South Africa. Taking one practical example raised by senior management at IIPSA Secretariat (DBSA):

Currently, local currency financing tenors for a project finance type of transaction could go as long as nine years maturity. Most infrastructure projects that have long gestation periods and a cost-recovery tariff product cycle cannot be financed with nine-year tenors. Refinancing risk becomes an issue for some private investors, and sources of long-term funding becomes very expensive. The use of grant financing from a "blending" facility to provide credit enhancement (such as take-out financing, refinancing risk guarantee, conversion to long-term bonds) for the market to be able to provide financing in excess of nine years has a very strong leveraging capacity.

The same argument could be made to use proceeds of a “blending” facility to develop credit derivatives products that would stimulate private sector financing to PPP and public investment projects. The Government of Indonesia, where state-owned enterprises and municipalities are the main contracting agencies for PPPs, created the Indonesia Infrastructure Guarantee Fund (IIGF) in 2009. This institution, capitalized by the Government of Indonesia, specializes in the provision of partial risk guarantees to exclusively cover the payment risks of contracting agencies in an off-take contract.<sup>219</sup> In its seven years of operation, IIGF has been able to mobilize four U.S. dollars of private capital for each U.S. dollar of guarantee.

This “catalytic” role is probably beyond the scope of IIPSA currently, as there are no funds available in the Program to develop this function. However, it is probably in the best interest of DBSA and the National Treasury Department to allocate some resources to explore a new grant facility with the purpose of promoting capital market development in South Africa.

#### 4. Municipal Finance

Based on the three previous points, it is in the best interest of the GoSA to develop a well-functioning municipal finance market. Municipal finance is present in South Africa financial markets, but still very concentrated in the country’s large and most financially strong metropolitan areas. To develop a municipal finance market, financially stronger municipalities are needed that have the institutional capacities to interact with private stakeholders and a good credit rating.

The World Bank local office has been working with donor assistance from the Swiss Economic Cooperation Office (SECO) in a technical assistance program to strengthen financial sustainability of municipalities in South Africa. The Program initially targeted large metro areas, but the authors believe it is now being developed for intermediate cities as well.

A well-functioning municipal finance market will need strong oversight by the Ministry of Finance of municipalities’ debt capacity and debt service monitoring, and a solid public sector financial institution with the role of promoting municipal finance development via market mechanisms in the initial phase (partial risk and partial credit guarantees and other credit derivatives).

Mexico provides a country example where municipal finance markets are well developed and where there could be some interesting lessons for South Africa. Table 13 presents a comparison of the two countries’ municipal markets.

**Table 13. Municipal Markets, Comparative Key Figures, Mexico and South Africa**

	Population (millions)	Number of Municipalities <sup>a</sup>	GDP (US\$ billion, 2016)	GDP per Capita (US\$, 2016)
Mexico	127.7	2,448	1,046.9	8,201
South Africa	56.0	277	294.8	5,480

Source: World Bank data base.

a. South Africa municipalities include: 8 metro areas, 44 district municipalities and 225 local municipalities.

<sup>219</sup> In a power purchase agreement between an independent power producer (IPP) and the national utility as the buyer, IIGF will cover the payment risk of the municipality and the municipal water utility. In the early 2000s, Mexico developed a credit rating system for subnational governments with Moody's

and S&P's credit rating methodologies adapted to Mexico's subnational fiscal system (federal transfers, or *co-participaciones*). Mexico has a Sub-Secretary of public debt (Ministry of Finance), with a well-staffed unit to oversee and monitor municipalities and municipal utilities. It also has a well-developed institutional investor base. Mexico has developed an extensive set of legislation that has been updated and modernized recently, which regulates the municipal finance markets. South Africa might want to consider arrangements along these lines, tailored to its own situation and priorities.

