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# ARGENTINA

## CAPITAL MARKET FINANCING FOR INFRASTRUCTURE

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THE WORLD BANK GROUP  
FINANCE AND MARKETS GLOBAL PRACTICE  
LATIN AMERICA AND THE CARIBBEAN REGION

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## LIST OF ACRONYMS

<b>ANSES</b>	National Social Security Administration
<b>AUM</b>	Assets Under Management
<b>AySA</b>	The Argentine Water and Sanitation Company ( <i>Aguas y Saneamientos Argentinos, S.A.</i> )
<b>BADLAR</b>	Buenos Aires Deposits of Large Amount Rate
<b>BCRA</b>	Central Bank of Argentina ( <i>Banco Central de la República Argentina</i> )
<b>BICE</b>	Investment and Foreign Trade Bank ( <i>Banco de Inversión y Comercio Exterior</i> )
<b>BIS</b>	Bank for International Settlements
<b>BNDES</b>	Brazilian Development Bank
<b>CAF</b>	Andean Development Corporation ( <i>Corporación Andina de Fomento</i> )
<b>CAMMESA</b>	Wholesale Energy Market Administrator ( <i>Compañía Administradora del Mercado Mayorista Eléctrico Sociedad Anónima</i> )
<b>CAO</b>	Work Progress Certificates ( <i>Certificados de Avance de Obra</i> )
<b>CNV</b>	National Securities Commission ( <i>Comisión Nacional de Valores</i> )
<b>CPI</b>	Consumer Price Index
<b>DSCR</b>	Debt Service Coverage Ratio
<b>DNV</b>	National Road Directorate ( <i>Dirección Nacional de Vialidad</i> )
<b>EPC</b>	Engineering, Procurement, and Construction
<b>FGS</b>	Sustainable Guarantee Fund ( <i>Fondo de Garantía de Sostenibilidad</i> )
<b>FODER</b>	Fund for the Development of Renewable Energy ( <i>Fondo para el Desarrollo de Energías Renovables</i> )
<b>GoA</b>	Government of Argentina
<b>GCG</b>	Green Climate Fund
<b>GIF</b>	Global Infrastructure Fund
<b>HNW</b>	High Net Worth
<b>IABD</b>	Inter-American Development Bank
<b>IFC</b>	International Finance Corporation
<b>IIC</b>	Inter-American Investment Corporation of the IABD
<b>INDEC</b>	National Statistics and Censuses Institute ( <i>Instituto Nacional de Estadística y Censos</i> , INDEC)
<b>IPO</b>	Initial Public Offering
<b>IPP</b>	Independent Power Purchasers
<b>KPI</b>	Key Performance Indicators
<b>LIBOR</b>	London Interbank Offered Rate
<b>MINEM</b>	Ministry of Energy and Mines ( <i>Ministerio de Energía y Minería</i> )
<b>MW</b>	Megawatt
<b>MWh</b>	Megawatt hour
<b>NPL</b>	Non-Performing Loan
<b>OECD</b>	Organisation of Economic Co-operation and Development
<b>OS</b>	Offering Statement
<b>PPP</b>	Public-Private Partnership
<b>PPA</b>	Power Purchasing Agreement
<b>REIT</b>	Real Estate Investment Trust
<b>RPI</b>	Compensation for Investments ( <i>Repago para inversión</i> )
<b>SISVIAL</b>	Integrated Road System Trust ( <i>Fideicomiso Sistema Vial Integrado</i> )
<b>SMF</b>	Subordinated Multipurpose Facility
<b>SPV</b>	Special Purpose Vehicle
<b>SSN</b>	<i>Superintendencia de Seguros de la Nación</i>
<b>SWF</b>	Sovereign Wealth Fund
<b>YPF</b>	Fiscal Oilfields ( <i>Yacimientos Petrolíferos Fiscales</i> )
<b>YTD</b>	Year-To-Date

## I. Executive Summary

### A. Capital Markets

1. **Argentina's improved sovereign credit rating has helped to spur the recent sub-sovereign and corporate bond issues.** In early April 2016, Standard & Poor's upgraded Argentina's sovereign ratings for local and foreign currency debt to B from B-. This follows the ratings upgrade from Moody's which raised Argentina's sovereign rating for foreign currency denominated debt from C1 to B3 in 2016. This rating was re-affirmed by Moody's in March 2017. Since Argentina's re-entry into the international capital markets in early 2016, there has been USD 8.4 billion and USD 4.4 billion of bonds issued by sub-sovereign and corporate entities which is being used, in part, being used to support infrastructure projects. Although investor appetite has been relatively strong, it is difficult to ascertain the level of liquidity for sub-sovereign debt over the long-term.

2. **The potential level of involvement of foreign and local banks in the financing of infrastructure is still to be determined once Public-Private Partnerships (PPP) projects are tendered.** Going forward, the issues that will impact the participation of lenders are: (i) the timing for completing and implementing the underlying regulatory framework for PPPs; (ii) the development of a project pipeline and subsequent tenders; (ii) macroeconomic conditions. The ability of the renewable energy projects under the RenovAR program to obtain bank financing will serve as useful benchmark for the rest of the PPP program.

3. **Lenders have been relatively inactive in the financing of infrastructure.** Generally, lenders tend to be heavily involved in the financing of infrastructure due to their relative ability to provide long-term debt financing and to develop financial structures that can sculpt the amount of interest paid during project construction. The absence of active PPP projects that have been tendered and reached commercial close has effectively precluded the participation of lenders. Going forward, the issues that will impact the participation of lenders are: (i) the timing of the drafting and implementation of the underlying regulatory and policy framework for PPPs; (ii) the development of a project pipeline and tender schedule; and (iii) macroeconomic conditions. Additionally, the lack of long-term hedging instruments makes it more difficult to attract foreign based banks.

4. **Despite recent reforms, financing of infrastructure from institutional investors faces several challenges.** In contrast with other countries in the region, Argentina lacks an institutional investor base with sufficient Assets Under Management (AUM) to anchor infrastructure financing. Thus, in the short to medium term, any financing via the capital markets would likely require the participation of foreign-based institutional investors. The value of the mutual fund and insurance industries are relatively small in relation to the overall size of its economy and compared to other countries in the LAC region. Additionally, the private pension fund system needs to be restarted due to the nationalization of the pension system by the previous government administration. Another potential source for financing of infrastructure is the Sustainable Guarantee Fund (FGS) which is being managed by the National Social Security Administration (ANSES). For the FGS to be more closely aligned with market demand, the Government of Argentina (GoA) should review the governance structure, mission, and investment strategy of the FGS as a means for crowding in investment in infrastructure.

5. **Despite the recent bond issues by sub-sovereign entities, indebtedness levels currently appear to be manageable.** For example, the Province of Cordoba raised debt levels from 35 percent to 40 percent of revenues. However, Moody's expects that downward pressures on its credit rating would be considered if the Provinces' debt levels were to reach at least 50 percent of revenues. Cordoba's operating margin averaged 11.7 percent from 2011-15 despite high inflation and the devaluation of the ARG peso.<sup>1</sup>

6. **A key element for determining the long-term sustainability of Argentina's re-entry into the international capital markets is not only timely repayment, but also how the bond proceeds are used.** Although sub-sovereign and corporate entities have obtained debt through the international capital markets, the success and sustainability of these initiatives as an aggregate is contingent on the extent that bond proceeds are used to invest in infrastructure. An initial survey seems to show that non-sovereign debt has been used for financial support, such as the refinancing outstanding debt and to close budget gaps, as well as for economic development purposes. For example, there is anecdotal evidence that the Province of Argentina is using its large debt program for both purposes. To encourage project finance transactions, the continued use and expansion of capital market instruments should go in parallel with the development normative framework for Public Private Partnerships (PPPs)

7. **Although the proposed Capital Markets Law is intended to reduce market inefficiencies, additional legislation is needed to deepen local capital markets.** This law, which is under legislative review, may not go far enough to develop the institutional base needed to provide long-term financing for infrastructure. Additional provisions could be added or new legislation could be developed that would: (i) encourage insurance companies to offer new types of products; (ii) rebuild private pension by incentivizing the establishment of asset management companies for managing pension assets; (iii) providing preferential tax treatment for closed end mutual funds (e.g. Colombia) or value capture adjacent to real estate (e.g. Colombia and the United States); (iv) encouraging the establishment of Real Estate Investment Trusts (REITs); (v) encourage the development of long-term hedging instruments to manage currency risk; and (vi) incentivize the issuance of local currency bonds and project bonds.

8. **The cash flow profile for financing infrastructure, typically involves a large capital outflow during construction, followed by initial revenue generation and debt service over time.** This is known anecdotally as the "J-curve." Consequently, infrastructure assets typically require long-term debt financing to generate sufficient cash flows to repay interest and principal and to generate a sufficient return on equity, if applicable. To provide lenders with greater certainty that project cash flows are sufficient over time to cover debt payments, it is necessary that systemic risks can be controlled sufficiently so that the private sector can then price, manage, and mitigate project and non-project specific risks. The latter includes the following: (i) macroeconomic risks (ii) banking sector risks; (iii) public sector risks; corporate sector risks; (iv) market and liquidity risks.

9. **The main risks limiting investment are macroeconomic risks, particularly inflation pressures and the foreign exchange risk, followed by policy uncertainty.** Macroeconomic conditions and developments, especially high inflation and high nominal interest rates, explain the limited ability to form a yield curve, the absence of domestic long-term finance, the

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<sup>1</sup> Global Capital, "Cordoba clinches fourth provincial deal in 2017" February 23, 2017

preferences for issuing securities in dollars or other foreign currency, and difficulties in obtaining long-term maturities in local currency denominated debt. Thus, foreign lenders and investors continue to be missing from the domestic capital markets. This applies to equity, fixed income, and non-listed direct investment. It is expected that inflation will be brought down to levels to more manageable levels in 2017; but reaching single digit inflation is as a medium-term goal. The IMF's most recent forecast published in April 2017 estimated that consumer prices would increase by 25.6 percent and 18.7 percent in 2017 and 2018, respectively. Recent progress has been made with the issuance of Peso-linked notes by Argentine corporate entities.

10. **There are also several procedural and regulatory barriers that will continue to be a deterrent for foreign investors, even as the macroeconomic and policy environment improves.** Such barriers include onerous account opening, know your client, and tax registration procedures and requirements. On the financing side, where infrastructure projects have USD earnings, a dollar market is likely to develop. However, financing for peso earning projects remains an open question. Another important issue is ensuring that the Comisión Nacional de Valores (CNV) becomes a credible and effective supervisor, particularly as the market increases in size and complexity. Steps have already been taken in this direction, with the appointment of a new board, which has embarked on a wholesale review of the organization as well as some of the proposed reforms included in the draft Capital Market Law. The development of a pipeline of bankable PPP projects is also critical.

11. **Although the enactment of the proposed Capital Markets Law is intended to reduce market inefficiencies, additional legislation, regulation and policies are needed to deepen and widen local capital markets.** This law, which is still under legislative review, may not go far enough to develop the institutional investor base needed to provide long-term financing for infrastructure. Provisions could be added or new legislation could be developed which would: (i) encourage insurance companies to offer new types of products; (ii) rebuild private pension systems by incentivizing the establishment of asset management companies; (iii) providing preferential tax treatment for closed end mutual funds or value capture adjacent to real estate; (iv) supporting the establishment of REITs; (v) reviewing the governance structure, mission, and investment strategy of the FGS; (vi) support the development of long-term hedging instruments to manage currency risk through trusts or related mechanisms; and (viii) promote the issuance of peso-linked bonds while developing a peso/dollar hedge market.

## **B. Infrastructure Finance**

12. **Total infrastructure needs are estimated to be approximately USD 155 billion.** This amount includes the ongoing RenovAR program as well as proposed transport and water projects. Given the status of the PPP program and the financial feasibility of the proposed infrastructure projects and the depth of the capital markets, it is realistic that approximately 10 to 20 percent of this amount can be delivered as a PPP.

**Table 1: Summary of Planned Infrastructure Investments by Sector**

Sector	Estimated Capital Costs (USD Billions)
Renewable Electricity Generation	15.0
Highway and Road (non-tolled)	45.6
Toll Roads	2.4
Urban Transport	13.8
Freight Rail	15.0
Maritime Ports	1.5
Airports	1.2
Water Supply and Distribution	18.0
Irrigation	22.0
Education	16.2
Health	3.9
<b>Total</b>	<b>154.6</b>

Sources: Argentina Investment + Trade Promotion Agency and WBG Staff

13. **The FODER model for renewable energy could potentially be replicated.** The GoA has allocated ARS 12 billion (USD 860 million) at current exchange rates) to the Fund for the Development of Renewable Energy (*Fondo para el Desarrollo de Energías Renovables*, FODER). FODER is divided into two accounts—the project finance account and a payment guarantee account. The latter will be used to guarantee payments for electricity under all PPAs tendered through the RenovAR program. This account must always have on deposit at least 12 months of payments due by the offtaker, the wholesale Energy Market Administrator (*Compañía Administradora del Mercado Mayorista Eléctrico Sociedad Anónima*, CAMMESA) If at any point FODER does not have enough funds, the Ministry of Finance is obligated to replenish the account. The RenovAR program has been backstopped by a USD 480 million World Bank guarantee facility to the private investors to honor any PPA offtaker payment commitments or other government payment obligations specified. These arrangements and enhancements have been helpful to attract private investment into the renewable energy sector. RenovAR Round 1 and Round 1.5 were oversubscribed.

### C. Public Private Partnerships

14. **The enactment of the PPP Law in 2016 and the development of initial regulation in support of this law are first positive steps.** However, the new PPP law did not define the institutional framework for development of the underlying regulatory framework as well as the responsibilities and institutional location of the PPP unit. After some uncertainty and reshuffling, the PPP unit, now resides within the Ministry of Finance. Additional legislation and/or regulation is needed to better define: (i) how the project pipeline is managed and developed; (ii) contract renegotiations; (ii) arbitration procedures; (iii) environmental reviews; (iv) feasibility studies (v) Congressional notification; and (vi) how to treat unsolicited proposals.

15. **The PPP project pipeline is still evolving with potential projects in renewable energy, transport, water, and irrigation.** The RenovAR program managed by the Ministry of Energy and Mines has successfully concluded two separate auction rounds resulting in the awarded of 37 projects that will generate an estimated 1,167 MW of wind energy and 918 MW of in solar energy upon completion. The projects have 20-year project purchase agreements (PPAs) with CAMMESA. Additionally, an estimated 10-12 projects are being evaluated in the

transport sector and 4-8 pilot projects. The timing for tendering these projects will depend on the robustness of the feasibility studies, the development and implementation of the normative framework for PPPs, and the establishment of a process for evaluating, selecting, prioritizing projects. Market sounding activities should be conducted once bankable projects have been identified for tender.

**16. The absence of a formal PPP project pipeline in Argentina has been raised by potential market participants as being a potential impediment to investment.** The project pipeline and tender schedule are important market signal for lenders and investors to mobilize scarce financial and human resources.

**17. Market barriers may also play a role in the timing and level of interest of foreign investors in PPP.** The Odebrecht bribery scandal has not only impacted the political situation and PPP program in Brazil, but throughout the region. The reverberations of this scandal include the cancellation of billion dollar projects in Colombia and Peru that had been previously awarded to Odebrecht. Although the Odebrecht situation may discourage some sponsors and lenders from investing in the region, others may see this a potentially propitious opportunity to enter the market.

#### **D. Strategies for Supporting Capital Market Financing of Infrastructure**

**18. Future support for the financing of infrastructure should build on existing initiatives and programs.** Potential support with respect to capital market financing of infrastructure, PPPs, and project finance transactions could involve the following areas: (i) expanding the types and durations of capital markets instruments that can be used to finance infrastructure; (ii) replicating the FODER model to support a general infrastructure fund; and (iii) technical assistance for the PPP program. With respect to expanding and deepening capital markets, the following technical assistance activities should be considered:

- i. encourage insurance companies to offer new types of products;
- ii. rebuild the private systems by incentivizing the establishment of asset management companies for managing pension assets;
- iii. provide preferential tax treatment for closed-end mutual funds (e.g. Colombia) or value capture adjacent to real estate (e.g. Colombia and the United States);
- iv. support the establishment of REITs;
- v. review the governance structure, mission, and investment strategy of the FGS;
- vi. encourage the development of long-term hedging instruments to manage currency risk;
- vii. incentivize the issuance of local currency bonds and project bonds while developing a peso/dollar hedge market.
- viii. Technical advice should be considered to support the development of special purpose trusts, such as FODER, to provide financial support and credit risk enhancements in case PPP projects experience temporary financial pressures.
- ix. examine “value capture” strategies based on increasing tax revenues from land adjacent to infrastructure assets, as complementary financing sources;

- x. analyze how sector-based funds with dedicated tax revenues (e.g.: gas taxes, for road financing) can be used as collateral to secure bond issues.
- xi. enhance the private placement (144(k)) style regime to better incorporate project bonds for sale to qualified investors.

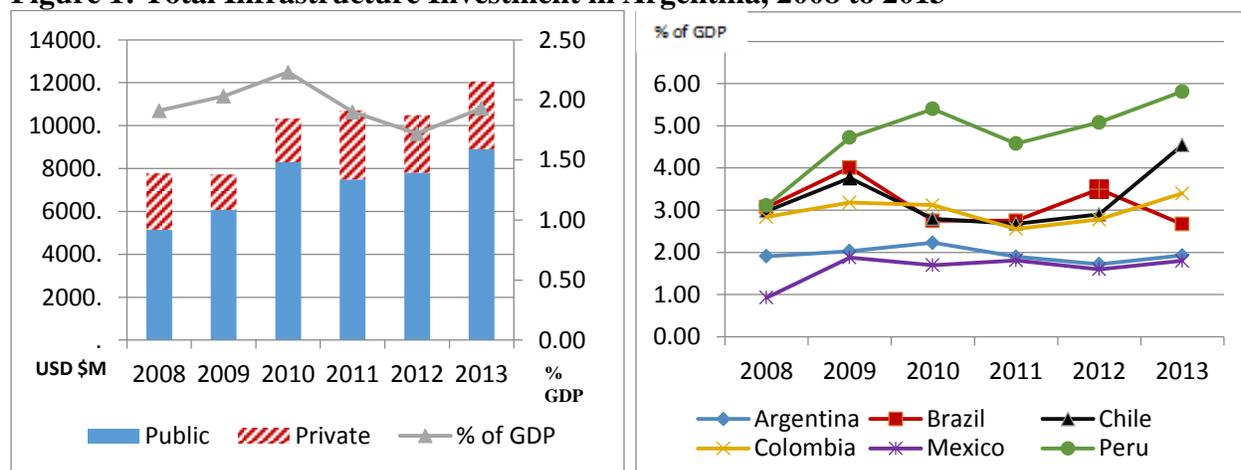
19. **Options should be explored for modifying or expanding partial credit guarantee facilities to include other infrastructure sectors or support sub-sovereign entities in their respective PPP programs.** This can include: (i) contingent credit lines as stand-by liquidity and/or credit enhancement facilities; (ii) first loss partial credit guarantees; (iii) first loss “contract payment” guarantees; (iv) financial intermediaries to insure or guarantee infrastructure bonds; (v) contingent credit lines as a guarantee backstop facility; (vi) stand-alone infrastructure fund; and (vii) the securitization of government availability payments as bond collateral.

20. **Additionally, technical assistance can be provided to support the PPP program.** This can include support to improve the institutional capacity of the PPP unit, recommend changes to the normative framework, support the implementation of the regulatory framework, project selection and prioritization, and market sounding activities.

## II. Background

21. **Despite having the 21st largest economy globally, Argentina lags compared to other large economies in the region and globally.** Argentina was ranked 85th among 138 countries in infrastructure development, per the Global Competitiveness Index 2016-2017 report from the World Economic Forum. This ranking is well behind most of Argentina’s neighboring countries, such as Chile (44th), Uruguay (47th), Mexico (57th), and Brazil (72nd).

**Figure 1: Total Infrastructure Investment in Argentina, 2008 to 2013**



Source: INFRALATAM

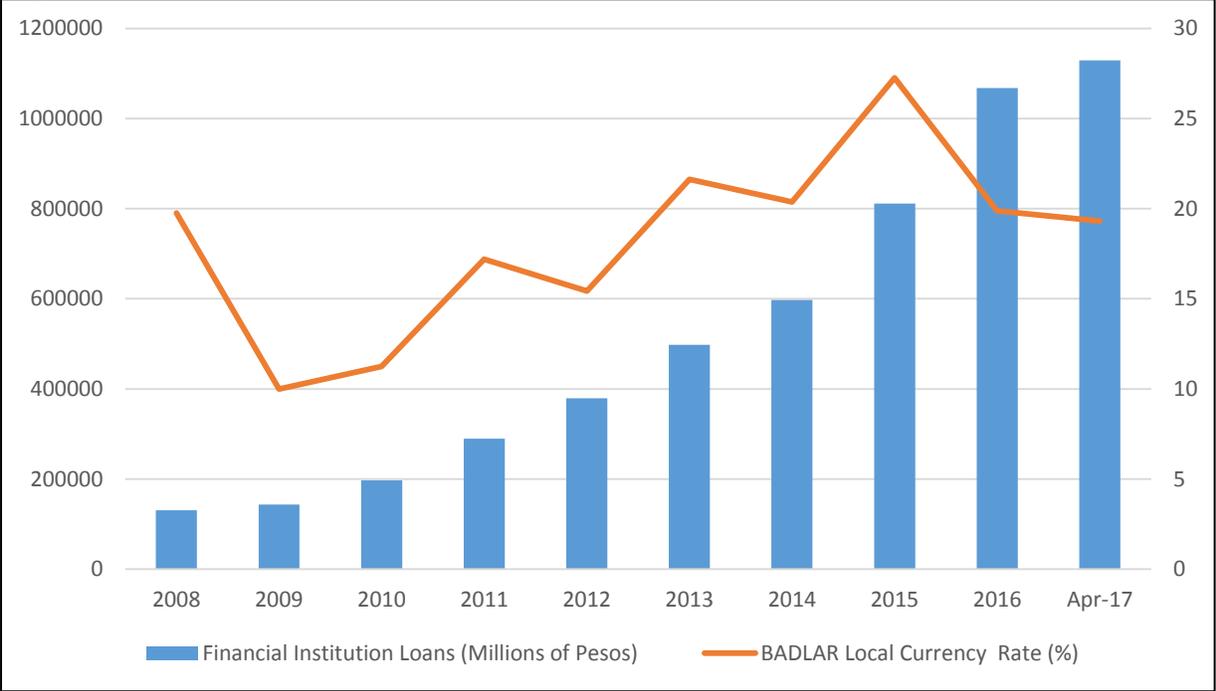
22. **In recent years, Argentina has steadily increased spending on infrastructure from 7.8 billion in 2008 to 12.0 billion in 2013.** Public spending has ranged from 66 percent to 74 percent of total investment in infrastructure, except in 2010 during which public spending on infrastructure reached 80 percent. Total investment in infrastructure has averaged 1.9 percent of GDP. However, compared to other relatively large economies in the region, total investment in infrastructure has averaged 3.2 percent of GDP, with only Mexico (1.6 percent of GDP) having invested less into infrastructure during this period.

23. **To address the infrastructure deficit, the Ministry of Transport announced an ambitious 3-year USD 83 billion investment program which includes an estimated 20 to 25 percent of private capital to be completed by 2019.** The infrastructure plan includes the doubling of size of the national highway network, the upgrades of existing airports and ports, and the construction and expansion of the rail network, including cargo lines. Furthermore, the Ministry of Energy Ministry has launched a USD 36 billion power generation program with the aim of increasing the country’s power generation by about 20 gigawatts (GW) by 2025.

24. **The value of loans to the private sector has been growing steadily since 2008 due to a combination of growth and inflation.** As shown in Figure 2, total lending to the private sector increased from ARG 130 billion in 2008 to 1,128 billion in 2017 year-to-date (YTD), representing an average annual increase of approximately 30 percent. Due the lack of available information as to the percentage change in the Consumer Price Index (CPI), it is difficult to differentiate how much of this growth has been organic growth in the sector and how much is due to inflation. The average annual increase in the Wholesale Price Index (drawn from the

World Development Indicators) is estimated at approximately 15 percent<sup>2</sup>, which indicates that it is likely that the increased value of loans is likely due to both factors.

**Figure 2: Financial Institution Loans to the Private Sector**



Source: BCRA

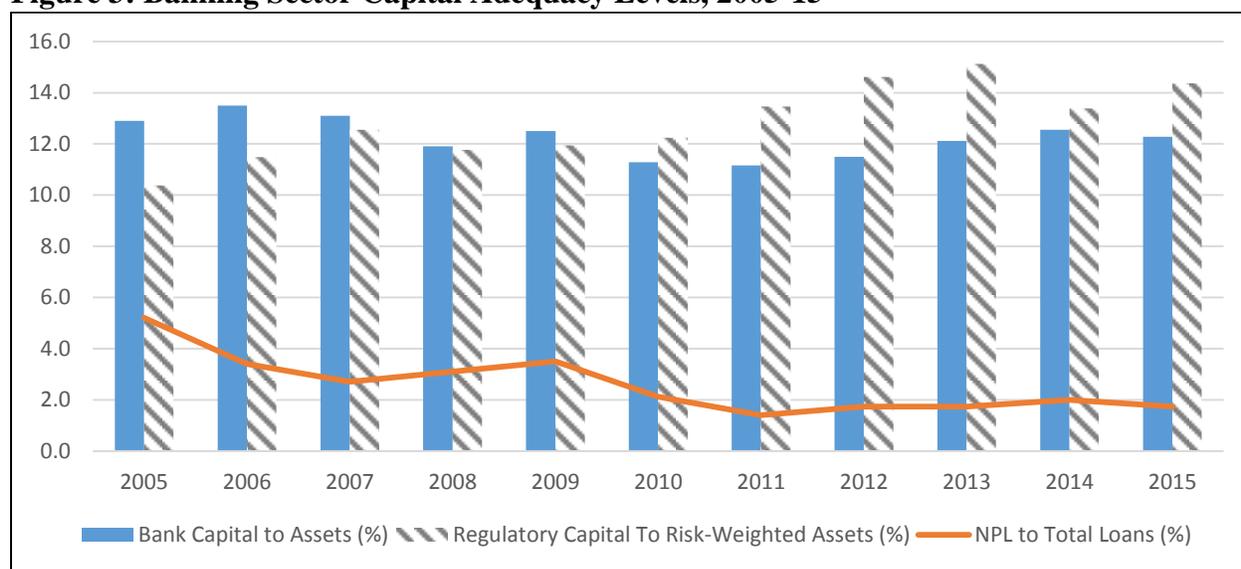
25. **The local reference lending rate in Argentina has increased steadily but appears to have stabilized during 2016.** The Buenos Aires Large Amounts Deposits Reference Rate (BADLAR) for lending was 10.00 percent at the end of 2009 increasing as high as 27.25 percent by the end of 2015 (Figure 2). The BADLAR rate was 19.875 on December 30, 2016 and 19.135 as of April 19<sup>th</sup>, 2017. Stabilization of the reference lending is a positive sign for future lending activities, especially in the infrastructure sector which has long-term investment horizons.

26. **The banking sector remains relatively stable and healthy with available capacity to provide financing for infrastructure.** Regulatory capital to risk weighted assets was 14.4 percent having increased 13.4 percent during 2014. This percentage exceeds the Basel III requirements of 10.5 percent by (required by 2018). Additionally, the number of non-performing loans (NPLs) has decreased gradually from a high of 5.20 percent in 2005 to 1.74 in 2015. 2016 data was not available as of this writing.

27. **Figure 3** summarizes capital adequacy levels and the percentage of NPLs from during the previous ten years.

<sup>2</sup> This data was obtained on April 20, 2017

**Figure 3: Banking Sector Capital Adequacy Levels, 2005-15**



Source: Finstats and World Bank Staff

28. **Syndicated bank loans in Latin America have decreased substantially during the last ten years but may rebound in the future.** Syndicated loans are common for the debt financing of larger projects, particularly infrastructure project finance transactions, as this structure allows for greater risk diversification among a group of banks. Moreover, loan syndicates and club deals concentrates creditors as opposed to diffuse bond holders, so that debt restructuring can be cheaper and quicker compared to bond financing.<sup>3</sup> However, the loan syndication market in Latin America has decreased steadily since 2007 despite a strong pike in 2013. During 2016, total syndicated loan volume decreased 23.16 percent from the previous year to USD 35.4 billion on 115 transactions. Telecommunication, industrials, and energy accounted for 24 percent, 20 percent, and 8 percent of total syndicated loans, respectively.<sup>4</sup> In terms of financing structure, project finance deals have historically accounted for 3 to 4 percent of the total value of syndicated loans in the Americas regions, which includes U.S. and Canada.

<sup>3</sup> OECD, “Mapping of Instruments and Incentives for Infrastructure Financing: A Taxonomy” (September 2015).

<sup>4</sup> Bloomberg, “Global Syndicated Loans, H1 2016”



## A. Capital Market Financing of Infrastructure

29. **A new Capital Markets Law is under consideration by the Congress.** The proposed legislation would change the roles and responsibilities of the Comisión Nacional de Valores (CNV) and seek to eliminate several barriers that limit capital market activities that were imposed during previous administrations. Key changes included in the proposed law, some of which would support infrastructure finance, are summarized below:

- (i) CNV would regulate and require the audit of “investment managers” defined as entities providing regular financial advice. This provision is intended to encourage the return of private banking activity.<sup>5</sup>
- (ii) The new law would limit the ability of CNV to designate “supervisors” with veto power over resolutions adopted by the Boards of Directors of publicly traded companies. However, CNV would be able to initiate administrative proceedings and impose sanctions in the event of violations of the capital market law.
- (iii) Change the sources of funding for CNV from fines, to fees from the public offering of securities, the registration of agents, clearing houses, and firms offering derivatives.
- (iv) Modifies the regulation regarding pre-emptive rights for public equity offerings.
- (v) Allows CNV to issue rules governing private placements, including prospectus publication, the number and type of qualified investors who can purchase shares, and places limits on share distribution.
- (vi) Modifies the regulatory framework for voluntary and involuntary takeover bids. The objectives are to protect potential investors by better defining “fair market value” for hostile takeovers, and outlines the procedures for delisting, if a firm becomes private.
- (vii) Increases the regulatory powers of the CNV with respect to external auditors. This includes the establishment of a registry for external auditors, the development of a system for supervision, information requests, and inspections, and the imposition by CNV of penalties and fines for non-compliance.
- (viii) Amends Law #24083 governing mutual funds. In particular, the proposed legislation would (1) more clearly define open and closed mutual funds, (2) modify the tax treatment with respect to closed mutual funds, so that there are fewer disincentives for investing in these instruments, (3) require prospectuses for closed funds, but not for open mutual funds, (4) increase the regulatory powers and supervisory responsibility of CNV over the management companies of mutual funds, and (5) establish new guidelines for the settlement of open mutual funds and shareholder meetings for closed mutual funds
- (ix) Modernizes the legal and regulatory framework for negotiable obligations, including the change in notification requirements as well as introduces exemptions on stabilization and readjustment clauses for currency convertibility. Payments in local currency under section 765 of the Civil and Commercial code will no longer be applicable. This provision may impact the financing of real estate and infrastructure projects.

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<sup>5</sup> Private banking refers to investment or other financial services provided to high net worth investors.

(x) Although the proposed legislation is relatively silent with respect to syndicated loans, it would allow, if enacted, the establishment of mortgage and pledged collateral through a collateral agent who would work for the benefit of creditors. Secured collateral can be transferred to a third party.

30. **Although many of the proposed reforms in the capital markets law cover CNV's operational and regulatory responsibilities, the law contains provisions which could indirectly impact infrastructure finance.** The final version of the proposed law could include the following provisions: (i) encourage improved transparency and reporting of banks and non-financial institutions; (ii) encourage increased participation from institutional investors, such as mutual funds; and (iii) clarify the framework for long-term hedging instruments. Future legislation could examine potential incentives for the sale and purchase of local currency denominated bonds issued for infrastructure projects, such as preferential tax treatment for institutional investors and fideicomiso trust structures with a facility backstop to better manage currency risk.

31. **Although the banking sector appears to have sufficient capacity to offer loans, there have been almost no loans for infrastructure projects.** This differs markedly from other countries in the region and globally which rely heavily on bank loans to finance infrastructure. Key limiting factors include the challenging macroeconomic conditions, the evolving policy environment, the time lag for banks to set up local operations to conduct due diligence, and the short- to medium-term timeframe until potentially bankable projects are tendered and awarded. This situation is expected to change once new projects, e.g. in the renewable energy sector or in transport, are ready to seek financing to begin construction.

32. **Despite recent issuance bond issuances in the international capital markets, the amount of outstanding debt by Argentine corporate and provincial governments remains relatively small.** The Bank for International Settlements (BIS) estimates that corporate and government entities in Argentina had an estimated USD 206 billion in outstanding debt issues listed internationally and another USD 37 billion listed locally as of the 3<sup>rd</sup> quarter of 2016. Approximately 55 percent of the internationally listed debt was issued by government entities, including state-owned enterprises (SOEs) as well as provincial and municipal governments. The outstanding amount of debt issued is expected to increase due to the recent debt issuances by provincial governments. However, total outstanding debt issuance by private and public entities based in Argentina is relatively small compared to some countries in the LAC region as well as other emerging market economies with active PPP programs. For example, Malaysia has issued an estimated USD 349 billion in debt with approximately 45 percent listed in the domestic capital market (**Table 2**).

**Table 2: Total Outstanding Debt Securities, Third Quarter of 2016 (USD Billions)**

Country	Total Debt USD Billions	Financial Corporations	Non-Financial Corporations	Government
<b>Latin American and the Caribbean Region</b>				
Argentina	206	80	11	115
Chile	215	90	68	57
Colombia	132	9	17	106
Mexico	718	164	180	374
Peru	73	24	14	35
<b>Non-LAC Countries with Large PPP Programs</b>				
Turkey	294	60	11	223
Malaysia	349	74	111	164
Indonesia	247	41	22	184
Philippines	131	8	11	112

Source: BIS

33. **In recent months, there has been relatively strong activity and interest in corporate and sub-sovereign government bonds in Argentina.** The issuance of these bonds is tied closely with the market perception of the sovereign credit rating along with the underlying credit quality of the bond issuer. Bonds issued in the past year are full recourse having been backstopped by the revenues and assets of the issuer. While most of the bonds have been denominated in foreign currency, there have been a few bonds issued by sub-sovereign governments in local currency. As of this writing, there have no project bonds issued that are fully secured using project revenues and assets.

## B. Corporate Bonds

34. **Despite challenging macroeconomic conditions, there have been seven internationally placed corporate bond issues which raised USD 4.4 billion between the second half of 2016 and in early 2017.** The foreign currency denominated corporate bond issues were from companies in the electricity generation, transportation, and water sectors. Interest rates have ranged from 6.95 percent to 8.75 percent and maturities have ranged from three to ten years. The corporate bond issues have involved international placement and denominated in foreign currencies. Three additional corporate bond issues have been planned that would raise a total USD 600 million. Bonds issued by locally based infrastructure and related companies is summarized in **Table 3**.

**Table 3: Argentine Corporate Bonds Issued from May 2016 to May 2017**

<b>Foreign Currency Bonds</b>	<b>USD (\$M)</b>	<b>Coupon</b>	<b>Average Maturity (Years)</b>
Aeropuertos Argentina 2000	400	6.95	10
AES Argentina Generación	300	7.75	7
CAPEX	300	6.875	7
Compañía Latinoamericana de Infraestructura & Servicios (CLISA)	300	9.75	7
Genneia	350	8.75	6
Pampa Energy	750	7.625	10
Petrobras Argentina	500	7.50	7
Stoneway Capital Corporation	500	10.0	10
Yacimientos Petrolíferos Fiscales (YPF)	1,000	8.50	5
<b>Average</b>	<b>488</b>	<b>8.20</b>	<b>7.66</b>

Sources: Infrastructure Journal, Global Capital, El Cronista, and World Bank Staff

### i. Electricity Generation and Distribution

35. **AES Argentina Generación (AES) which operates more than 3.5GW of capacity in Argentina or about 12 percent of installed capacity, placed a USD 300 million 144A/Reg. S bond.** AES generation capacity includes approximately two-thirds thermal and one-third hydroelectric power. The nine generation facilities are in the provinces of Buenos Aires, Neuquén, Salta y San Juan. AES, one of the largest private power generation companies in the country, has placed a USD 300 million Rule 144A/Reg S offering. The bond has a coupon of 7.750 percent and are due in 2024. Credit Suisse Securities, Itau BBA and JP Morgan were joint book-running managers for the transaction.

36. **Pampa Energy issued a USD 750 million bond in January 2017 with a 7.625 percent yield and a 10-year maturity.** Pampa Energy has ownership stakes in Petrobras Argentina and the electricity distribution company Edenor, the electricity transmission company Transener. Through these acquisitions, Pampa Energy has become the largest electricity company in Argentina. Petrobras Argentina had issued a USD 500 million bond issue in July 2016.

37. **In late 2016, Yacimientos Petrolíferos Fiscales (YPF) issued a USD 1 billion bond with an 8.5 percent coupon and a 5-year maturity.** Demand was relatively strong, especially considering that the market only had one day to react to YPF's bond issue.

38. **Genneia which is currently developing renewable energy generation facilities, placed a USD 350 million that was 3 times oversubscribed.** The bond had a coupon of 8.75

percent and a six-year maturity due in 2022. The bond was placed internationally and traded locally. Proceeds from the bond issue will be used to finance wind generation projects.

39. **Stoneway Capital Corporation issued a \$500 million Rule 144A/Regulation S project bond in February 2017.** The transaction provides financing for the development, procurement, construction and operation of four simple-cycle power generating plants totaling 686.5 MW in the Buenos Aires region.

40. **CAPEX, the Argentine electricity company, completed a USD 300 million bond sale in May 2017.** CAPEX operates 672 MW thermos-combined cycle generation facility which is connected to the grid through a 111-km transmission line, operates a liquefied natural gas (LNG) facility in Neuquén, and is involved in the production and sale of oil and natural gas. Approximately USD of these proceeds will be used to pay off existing debt that is due in 2018.

41. **Central Puerto, S.A. (CEPU) is preparing a bond issue of up to USD 500 million.** Central Puerto, S.A (CEPU) is an energy generation company that privatized in 1992 with an estimated total generation capacity of 2,165 MW or approximately 9 percent of total generation capacity in Argentina. CEPU's electricity generation facilities are in Buenos Aires and Neuquén. The planned bond issue that was originally planned for early 2017 has been delayed due to market uncertainty. The bonds would have a maturity ranging from 7 to 10 years. JP Morgan and Deutsche Bank are the underwriters.

42. **Grupo Albanesi, which operates thermal, solar, and natural gas that generates nearly 1,000 MW, is planning to issue a USD 100 million bond.** The planned bond issue would have a coupon of 9.623 percent and 6-year maturity.

## ii. Transport

43. **Aeropuertos Argentina 2000 (AA2000) issued USD 400 million in bonds with a 10-year maturity which were oversubscribed by a factor of 9.** Aeropuertos Argentina 2000 (AA2000) is a consortium consisting of locally based Corporación America (75.65 percent), the SEA Group, which operates the Milan Airport (8.5 percent), RIVA S.A. (0.85 percent), and the Government of Argentina (15 percent). In 1998, AA2000 was awarded a 30-year concession for 33 airports, including Ezeiza and Aeroparque Jorge Newbery in Buenos Aires. The concession contract includes an option to extend the concession for an additional 10-years. Moody's assigned a B2 rating to AA2000's internationally placed bond with a stable outlook. The rating reflected the airport operator's strong traffic and revenue trends. Prior to the issuance, Moody's noted that approximately 20 percent of AA2000's revenues are generated from international travel into Argentina, which helped to partially de-link the bond issue from risks related to local macroeconomic conditions. Moody's also noted that most of AA2000's revenues are denominated or indexed to the US dollar, which helps to reduce exchange rate risks.<sup>6</sup> The bond issues were used to refinance USD 180 million of 2010 notes that were set to expire in 2020. AA2000 hired Morgan Stanley and Oppenheimer to assist in placing the bond.

## iii. Multi-Sector

44. **Compañía Latinoamericana de Infraestructura & Servicios S.A (CLISA), a subsidiary of the Roggio Group, issued USD 300 million in bonds on the Irish Stock Exchange.** CLISA is mainly engaged in construction, waste management, water distribution, and

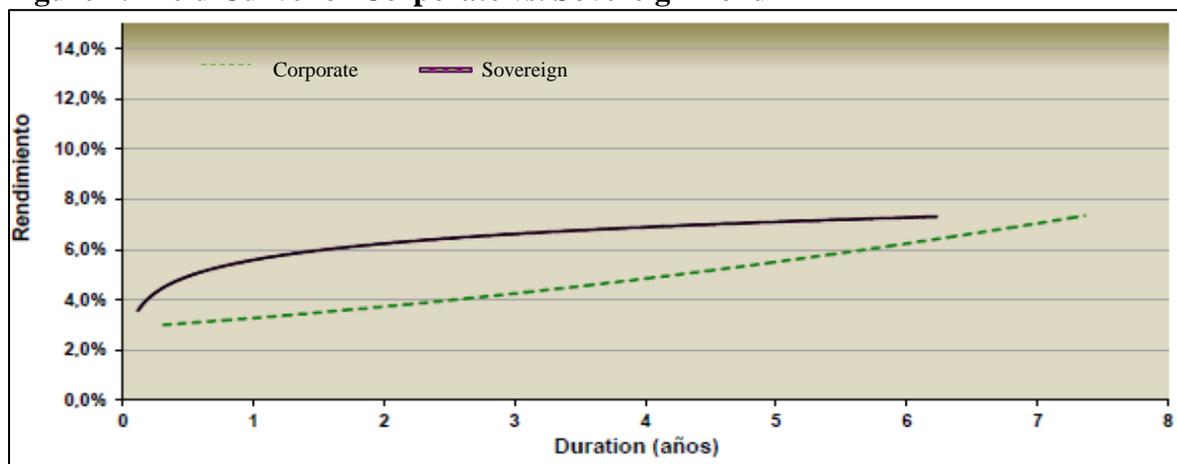
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<sup>6</sup> Moody's, "Moody's upgrades Aeropuertos Argentina 2000 S.A. ratings to B2, stable outlook," December 16, 2016.

transportation. The mid-2016 issuance involved USD 200 million and USD 100 million tranches, which both having 9.50 percent coupons and 7-year maturities.

45. **There is increasing acceptance by investors for Argentine corporate bonds.** As shown in **Figure 4** there is recent evidence indicating that spreads between corporate and sovereign bond issues have been narrowing in recent months with average maturities going out to seven years. This figure includes recent corporate bond issues for a variety of industries, including infrastructure energy, and construction sectors.

**Figure 4: Yield Curve for Corporate vs. Sovereign Bond**



Source: [www.fondospremier.com.ar](http://www.fondospremier.com.ar), Planilla de Bonos Corporativos for April 26<sup>th</sup> 2017.

46. **Peso-linked bonds are a relatively new instrument that is also starting to obtain market acceptance.** Three companies—Supervielle, Tarjeta Naranja, and YPF—have recently issued “peso linked bonds” in which the bonds are priced, denominated, and repaid in USD. However, the performance of peso-linked bonds is linked to changes in the weight of the respective local rates, in this way foreign investors can take advantage of potential upside relating to high local currency yields. This instrument can serve as a temporary measure until long-term hedging instruments are developed in the local capital markets.

### C. Sub-Sovereign Bonds

47. **The GoA and the provincial governments are currently re-evaluating and negotiating the structure of the Federal Co-Participation scheme.** This system is used by the GoA to divide and allocate revenues generated from income taxes, fuel taxes, national service transfers and other miscellaneous tax transfers. The distribution formula is two tiered. The first distribution is between the Federal and the provincial governments followed by a second distribution, which is among the provincial governments. Funds from the co-participation scheme can be used as collateral to secure and issue bonds. Only four sub-sovereign entities—the Municipality of Buenos Aires and the Provinces of Neuquén, Chubut, and Santa Cruz—receive at least 50 percent of revenues from locally imposed taxes and fees. The remaining provinces are heavily reliant on the Federal Co-Participation scheme. For example, the provinces of Jujuy, La Rioja, and Santiago del Estero, receive over 90 percent from the Federal government.

48. **There has also been flurry of bonds issued by sub-sovereign governments totaling approximately USD 8.4 billion in debt.** The Government of Argentina’s issuance of sovereign bonds in April 2016 has helped to pave the way for municipal and provincial governments to return to the international capital markets. As of this writing, an estimated 12 of 23 provinces and two municipalities have issued local and/or dollar denominated bonds with an additional 2 provinces, Tierra del Fuego and Santa Cruz provinces, planning to issue bonds in the near term. Neuquén and Mendoza placed bonds shortly thereafter in May 2016, which has subsequently been followed by several other local governments. Moody’s has recently upgraded the credit ratings of most provincial governments from Caa1 to B3 rating with either a positive or stable outlooks. Moody’s reaffirmed the ratings for the municipalities of Buenos Aires and Cordoba along with four provinces in early March 2017.<sup>7</sup>

49. **Most of the municipal bonds have been listed internationally and traded locally.** The bonds are governed by the laws of the State of New York, listed on the Luxembourg Stock Exchange, and traded on the Buenos Aires Stock Exchange. Interest rates have ranged from 6.50 percent to 9.95 percent or approximately 100 to 300 basis points above the sovereign bonds. Bond maturities have ranged from six to eleven years. Most of the municipal bond issues have involved international placement and denominated in hard currencies. In a few cases, these recent bond issues have represented refinancing of previously issued bonds.

50. **Notably, the USD 200 million bond issued by La Rioja Province is the first “Green Bond” in Argentina.** Although technically La Rioja’s bond issue has not been formally classified as a Green Bond, it fulfills most of the internationally recognized requirements, including the financing of sustainable projects and annual reporting. The bond is financing a 100 MW wind farm (USD 170 million) and a transmission line (USD 30 million). Based on the framework developed by the Organisation of Economic Co-operation and Development (OECD) for Green Bonds, La Rioja’s bond issue would be considered as a “Use of Proceeds” Green Bond (Table 4).

**Table 4: Types of Green Bonds, Internationally**

Type	Proceeds	Debt Recourse	Example
Use of Proceeds Bond	Earmarked for green projects	Standard/full re-course to the issuer with same credit rating as issuer	EIB “Climate Awareness Bond (backed by EIB)
Use of Proceeds Revenue Bond	Earmarked for green projects	Issuer’s revenue stream is from fees and taxes which are used to secure debt	Hawaii State (backed by a fee on electricity bills collected by state utilities)
Project Bond	Ring-fenced for specific green projects	Recourse is only to the project assets	Alta Wind Holdings LLC (backed by wind project) in California
Green Securitized Bond	Can be (i) earmarked for green projects or (ii) directly finance green projects	Recourse is to a group of projects that have been grouped	(i) Northland Power (backed by solar farms) or (ii) Solar City (backed by residential solar leases)

Source: OECD

7 Moody’s, “Moody’s revises outlook to positive from stable of four Argentinean provinces and two municipalities following sovereign outlook change to positive,” March 7, 2017

51. **Bond proceeds have tended to be used for a combination of refinancing and infrastructure projects.** A review of a small sample of Offering Statement (OS) reports indicated that bonds proceeds are used to only partially finance infrastructure improvements. For example, the Province of Chubut’s bond issue specified that 50 percent of the bond proceeds will be used to refinance previously issued debt with the remaining 50 percent would be to finance: (i) infrastructure works in the municipalities of the Province; (ii) infrastructure works in rural areas; and (iii) other works in the Province.

**Table 5: Argentine Sub-Sovereign Foreign Currency, Bonds Issued from 2016 to the Present**

Local Government	Moody’s Rating	USD (\$M)	Coupon	Maturity
Buenos Aires, Municipality	B3 Stable	890	7.60%	11.0
Cordoba, Municipality	B3 Positive	150	N/A	8.0
Buenos Aires Province	B3 Stable	500	5.87%	3.0
		500	7.87%	9.25
		250	4.50%	3.0
		500	7.375%	10.0
		750	6.60%	5.0
		750	8.10%	10.0
Chaco Province	Caa1	250	9.37%	8.0
Chubut Province	Caa1	650	7.75%	10.0
Cordoba Province	B3 Stable	725	7.15%	5.0
Entre Rios Province	B3	350	8.75%	8.0
La Rioja Province	B3 Positive	200	9.75%	6.5
Mendoza Province	B3 Stable	500	8.37%	8.0
Neuquén Province <sup>1</sup>	CCC+	235	8.625%	12.0
Salta Province <sup>1</sup>	CCC+	300	9.10%	7.0
Santa Fe Province	B3 Positive	250	6.90%	10.0
Santa Cruz	N/A	350 (pending)	TBD	TBD
Tierra del Fuego <sup>8</sup>	N/A	150 (pending)	TBD	TBD

Sources: Moody’s, Infrastructure Journal, Global Capital, and World Bank staff

1. Standard & Poor’s ratings as Moody’s rating not available

52. **Collateral, reserve accounts, and trigger events helped to provide investor comfort.** Collateral includes royalties from hydrocarbons concessions and first priority security interest from the reserve accounts—a Collateral Account, Argentine Dollar Debt Service Reserve Account, Argentine Peso Debt Service Reserve Account, and an Argentine Trigger Event Prepayment Account. Since the Province of Chubut also draws revenues from taxes and royalties from hydrocarbons, there is also an Argentine Extraordinary Royalties Prepayment Account. The event trigger is if the debt service coverage ratio (DSCR) falls below 1.35 times.

53. **Terms have tended to be better for larger issues.** Market participants reported that the Province of Santa Fe had to pay a “liquidity premium” of approximately 40 basis points, since its bond issue was below USD 300 million. In contrast, the Province of Buenos Aires’ issue had a yield of 6.5 percent of an issuance of 750 million.

<sup>8</sup> Tierra del Fuego was initially looking to issue a bond in October 2016 but delayed the issue due to uncertainties relating to the U.S. Election. The Province’s other international bond issuance was in 1997, which was repaid in 2003. These notes were rated C by Fitch upon the receipt of the final maturity payment.

54. **Most sub-sovereign entities are relatively new to the international capital markets.** Debt management policies tend to vary considerably among local governments depending on experience. While the Province of Buenos Aires and Municipality of Buenos Aires have historical experience with issuing debt, the provinces of Tierra del Fuego, Entre Rios and Santa Cruz have limited experience. Standard and Poor’s noted that the Province of Entre Rios sold its foreign currency denominated debt despite lacking a formal debt policy or debt office. These bonds were 250 basis points higher than the sovereign reference curve.

55. **Better terms were offered for foreign currency bonds for the Provinces that are less reliant on Federal revenues.** The Province of Buenos Aires, which obtains 12 percent of its financial resources from locally generated revenues obtained a 7.87 percent coupon for the bond issued in June 2016 with roughly similar maturities. On the other end, the bond issued by the Province of Chaco, which derives over 80 percent of its revenues from the Federal government and has among the lowest per capita income, had a coupon of 9.375 percent. These bonds were rated Caal by Moody’s.

56. **Although currency risk remains an issue, this risk appears to be relatively manageable given that over 93 percent of the issued debt has been denominated in foreign currency.** This risk also varies at the local level as some sub-sovereign governments, e.g. Neuquén, Salta, Santa Cruz, Mendoza, and Chubut generate revenues in foreign currency, which reduces the potential risk of currency mismatches. However, this risk is greater in other provinces, such as Santa Fe and Cordoba, which do not generate income directly in dollars.

57. **Despite the activity and interest in foreign currency denominated bonds, local currency bonds represent the next growth area for capital markets development.** A positive starting point are the local currency bonds issued by the Municipality of Buenos Aires and the Province of Misiones. The Municipality of Buenos Aires issued ARS 5,085 million (USD 331 million) and ARS 3,708 million (USD 235 million) bond in March 2017). However, these bonds were characterized by relatively high interest rates and short maturities. The interest rate on the bonds were BADLAR + 3.25 percent (approximately 23 percent in nominal terms) and BADLAR + 5.0 percent (approximately 24.75 percent), respectively. The higher interest rate on the latter bond reflected the longer maturity of 5.0 years compared to 1.5 years for the lower priced bond. The Municipality, which has a Moody’s credit rating of Baa for local currency debt and a per capita GDP of USD 23,600, was one of the few public entities along with the Province of Tierra del Fuego that did not default on its debt after 2001. The Municipality of Buenos Aires is attempting to reduce its reliance on foreign currency debt from 95 percent of total debt to roughly 50 percent of total debt over the next few years. The bonds issued by Misiones represented a debt restructuring, was facilitated by ANSES, the public pension and social security scheme. The medium to long-term goal is for the market to provide more attract terms and longer maturities for these instruments.

**Table 6: Argentine Sub-Sovereign Local Currency Bonds Issued from May 2016 to May 2017**

Local Government	Moody’s Rating	ARS Million	Coupon	Maturity
Buenos Aires, Municipality	Baa3	5,085	BADLAR +3.25%	1.5
		3,708	BADLAR +5.0%	5.0
Misiones Province	Baa3	1,015	N/A	N/A

Sources: Moody’s, Infrastructure Journal, Global Capital, and World Bank staff

58. **Finally, there not have been any recent issuances of infrastructure project bonds.** This market remains underdeveloped for foreign and local currency bonds. Macroeconomic risks and structural issues, such as the absence of a PPP project pipeline, are some of the barriers that have precluded the issuance of project bonds.

## D. Institutional Investors

### i. Insurance Companies

59. **Despite recent reforms, the financing of infrastructure from institutional investors faces several challenges.** In contrast with other countries in the region, Argentina lacks the institutional investor base with sufficient assets under management (AUM) to anchor infrastructure financing. Thus, in the short to medium term, any financing via the capital markets would likely require the participation of foreign-based institutional investors.

60. **The private insurance market is underdeveloped and with an outmoded legal and regulatory framework.** The insurance sector comprises approximately 2 to 3 percent of GDP. The law that governs insurance activities was enacted in the 1950s, amended during 1970s, and needs to be updated to meet current conditions in the international market as well as to diversify the types of products that can be offered. Insurance companies have historically been prohibited from the following: (i) investing outside of Argentina; and (ii) the type of investment products, e.g. closed funds. These restrictions have resulted in the overall poor quality of investments made by insurance companies as well as restricted the ability to diversify risk. Additional issues include the accounting rules for sector investments and investment strategies. As of this writing, there has been almost no investment by insurance companies in infrastructure.

61. **The private insurance market is highly fragmented with a strong concentration on a few insurance products.** The primary focus has been the provision of insurance for automobiles and workers' compensation which comprises an estimated 60 to 80 percent of the market in terms of market value. Of the estimated 180 insurance companies operating in Argentina, 30 provide only workers' compensation, 30 provide reinsurance products, and 120 companies are general insurers offering a limited range of products. However, approximately 75 percent of the general insurance companies tend to be small, niche firms. The national insurance superintendency, *Superintendencia de Seguros de la Nación* or *SSN*, is also conducting a market analysis of the sector with the objective of attracting larger market players that can offer a wider range of products at competitive market rates.

**Table 7: Insurance Company Assets as Percent of GDP, 2000-15**

Year	Argentina	Brazil	Chile	Colombia	Mexico	Peru
2005	2.77	6.23	19.61	4.08	3.62	3.56
2006	2.54	7.00	16.45	3.78	3.60	3.41
2007	2.36	7.70	17.84	3.78	3.93	3.43
2008	2.15	7.60	15.38	6.01	4.36	3.58
2009	2.35	9.00	20.92	6.43	4.91	3.87
2010	2.17	9.17	19.62	5.56	4.94	4.14
2011	2.07	9.04	16.82	5.42	5.23	4.21
2012	2.26	10.43	18.76	5.72	5.35	4.38
2013	2.41	10.54	17.86	6.03	5.75	5.15
2014	2.45	10.88	18.59	6.28	6.02	5.79
2015	2.63	11.81	19.29	6.34	6.42	6.44

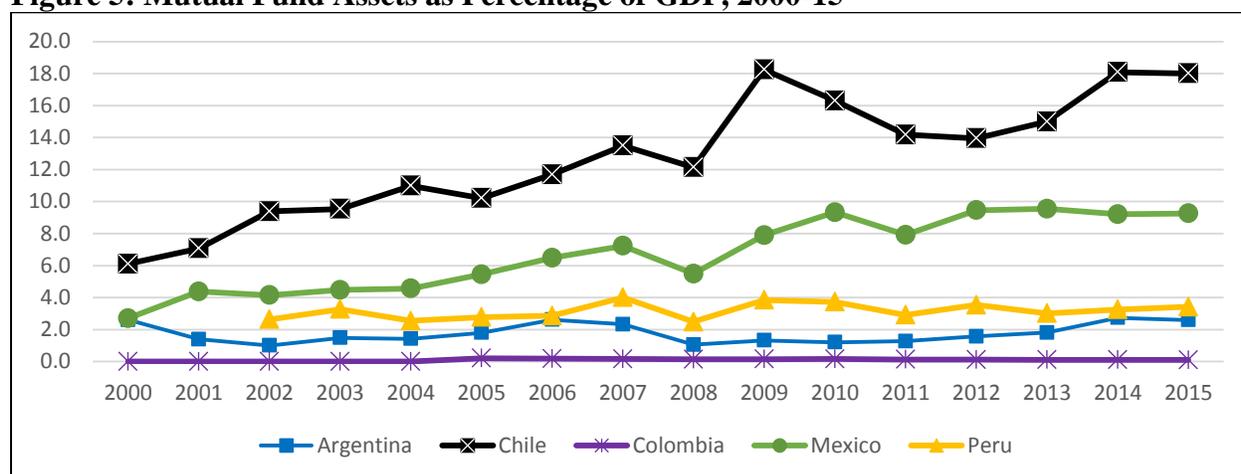
Source: Finstats and World Bank Staff

62. **However, the overall size of the insurance sector remains relatively small and decreased slightly from 2005 to 2015.** In 2005, insurance industry company assets accounted

for 2.8 percent of GDP, which was below Brazil (6.2%), Chile (19.6), Colombia (4.1%), Mexico (3.6%), and Peru (3.6%). The size of the insurance sector in relation to GDP has decreased slightly and then rebounded and was 2.6 percent at the end of 2015. In the intervening years, the gap with other countries in the region has grown significantly in relation to other large economies region. The insurance sector accounts for over 6 percent of GDP in Colombia, Mexico, and Peru and nearly 12 percent in Brazil.

## ii. Mutual Funds

**Figure 5: Mutual Fund Assets as Percentage of GDP, 2000-15**



Source: Finstats and World Bank Staff

63. **The size of mutual fund assets has grown slightly but similarly remains small.** The size of the mutual fund industry is estimated to be USD 17 billion in 2015 and USD 20 billion in 2016.<sup>9</sup> Mutual funds in Argentina accounted for approximately 1.8 percent of GDP in 2005, increasing to 2.6 percent in 2015. This percentage remains below Chile (18.0%), Mexico (9.3%) and Peru (3.4%). However, the mutual fund in Colombia is extremely small, accounting for only 0.1 percent of GDP in 2015.

64. **The tax amnesty program has generated renewed interest to re-establish closed end mutual funds, which have been non-existent.** Offshore assets held by Argentine nationals is estimated to be USD 400 to 500 billion.<sup>10</sup> The tax amnesty program announced in May 2016 (“*El Blanqueo*”) could provide additional funding for infrastructure. The tax amnesty program offers the following options: (i) declare previously undeclared assets but pay a penalty up to 15 percent; (ii) purchase zero interest government bonds with severe trading restrictions; or (iii) invest in closed-end funds for a minimum of five years. In the first six months, the tax amnesty program brought in an estimated USD 4.6 billion. Private estimates are that the tax amnesty program could bring in a total of USD 16 billion.<sup>11</sup> Several firms have hired specialists to evaluate and structure potential investments managed by closed end funds.<sup>12</sup>

<sup>9</sup> The *Cámara Argentina de Fondos Comunes de Inversión* estimates that the value of the mutual fund industry was 298 billion pesos.

<sup>10</sup> This range is based on separate estimates calculated by the Economic and Financial Center for the Development of Argentina and Tax Justice Network for Latin America and the Caribbean, respectively

<sup>11</sup> Bloomberg, “UBS Said to be Among Banks Weighing Argentina Wealth Management” November 3, 2016.

<sup>12</sup> Bloomberg, “Tax Cheats’ \$500 Billion Targeted for Argentina Fund Revival” November 1, 2016.

65. **A U.S. based hedge fund, PointState Argentum owns the largest equity stake (44 percent) in Genneia, which has been awarded multiple RenovAR projects.** PointState Argentum and Point State Blockhouse (collectively PointState) are private hedge funds managed by PointState Capital LP. Genneia’s equity holding are also held by Fintech Energy (25 percent), private individuals (25 percent) and LAIG (6 percent). In addition to the RenovAR projects (Table 9 and Table 10, pp. 37-38), Genneia also owns and operates the 77.4 MW Rawson Wind Park in Chubut Province and nine geothermal energy generation facilities which have a combined generation capacity of 280 MW.

**iii. Pensions**

66. **Argentina has had no private pension funds since the 2008 nationalization.** The assets of these funds are now held by the Sustainable Guaranty Fund (*Fondo de Garantía de Sustentabilidad*, FGS), a part of the national social security administration (Administración Nacional de la Seguridad Social, ANSES) resulting in the creation of a state fund with AUM of approximately USD 50 billion. The investment regime allows ANSES to invest up to 100 percent of the FGS portfolio in assets with real guarantees, up to 50 percent in government securities, and up to 20 percent in infrastructure. As of 2016, FGS’s portfolio is currently invested as follows: 12 percent equity, 68 percent public sector bonds, 10 percent infrastructure projects, and a small portion in local mutual funds. ANSES currently faces restrictions with respect to market activity, the most significant of which is a prohibition on share and corporate bond trading.

**Table 8: Pension Assets as Percent of GDP, 2000-15**

Assets as % of GDP	Argentina	Brazil	Chile	Colombia	Mexico	Peru
2000	7.17	10.95	48.90	4.63	2.53	5.24
2001	7.74	11.71	51.27	5.86	3.66	6.56
2002	12.37	11.33	52.81	7.43	4.50	7.92
2003	12.47	12.70	56.05	8.62	5.22	10.33
2004	11.17	13.22	55.97	9.80	5.50	11.27
2005	11.61	13.81	55.62	12.48	6.22	13.04
2006	12.47	15.76	57.53	12.89	6.88	15.83
2007	10.45	17.00	61.01	13.50	7.29	18.89
2008	N/A	14.50	49.82	13.73	7.65	13.88
2009	N/A	15.74	61.99	17.71	9.52	18.79
2010	N/A	14.89	62.63	20.22	10.43	20.58
2011	N/A	14.40	58.01	17.65	10.76	17.43
2012	N/A	15.26	60.10	18.96	12.18	19.06
2013	N/A	13.96	62.21	18.64	12.73	18.66
2014	N/A	12.66	68.09	20.40	13.76	19.91
2015	N/A	N/A	69.64	20.83	N/A	20.68

Source: Finstats and World Bank Staff

67. **ANSES has been evaluating strategies for divesting its investments in several infrastructure companies.** Through FGS, ANSES currently holds minority equity positions in

approximately 44 companies, including infrastructure service providers and banks. To increase the amount of available capital to meet future pension liabilities. Within infrastructure, this includes including energy generation companies (e.g. Pampa Energy and Central Puerto, S.A.), electricity transmission (e.g. Transener), electricity distribution (e.g. Edenor), and transportation (e.g. Metrovías). Nearly half of the firms held by FGS provide a dividend to ANSES. ANSES has been evaluating strategies to divest its equity participation in these companies. The first equity transactions involved the sale of Petrobras Argentina to Pampa Energy. The second transaction occurred in March 2017 in which ANSES sold its participation in Solvay Indupa, a chemical company, to the Brazilian firm, Unipar Carbocloro. The list of companies in which ANSES held an equity stake at the end of 2015 is listed in Annex 1.

**68. The recent Supreme Court decision may have a significant impact on the financial position of the ANSES.** Since 1992, the GoA began taking 15 percent from each province's contribution to the Federal Co-Participation to fund the National Social Security Administration (ANSES). In late 2015, the Supreme Court ruled that this contribution was unconstitutional and required the GoA to return funds plus accumulated interest to the provinces that had been withheld starting from 2006. The negotiated amount due to the provinces is ARG 86 billion which is expected to be repaid in installments by 2020.

#### **iv. Other Equity**

**69. There were two Initial Public Offerings (IPOs) involving Argentine corporate entities during 2016, representing the first since 2010.** The first involved Havanna (HAVH.BA), which makes alfajores and manages over 300 coffee shops in Latin America was the first to go public selling approximately 10 percent of its shares. Most of the orders for equity shares came from external markets. Subsequently, Grupo Superville SA (SUPV.BA), a banking company, listed its shares in Buenos Aires and New York exchanges, raising USD 281 million. With respect to infrastructure companies, Corporación América, which is a holding company for its partial ownership stakes in Aeropuertos Argentina 2000 and Compañía General de Combustibles along with microchips and agriculture businesses, was planning an IPO, but was delayed due to an unresolved dispute with U.S. based creditors involving unpaid debt. This IPO requires approval from the GoA due to its 15 percent ownership in the airports company.

**70. Financing construction using value capture strategies is an emerging area.** In Argentina, sub-sovereign governments can finance certain public works through the assessment of betterment taxes (contribuciones de mejoras) when it can be demonstrated that the infrastructure project will result in increased land values. As a rule, sub-sovereign governments “identify certain categories of beneficiaries and share part of the cost of construction among them in proportion to the estimated benefit.”<sup>13</sup> This seems to imply that the value capture strategies have historically been used more for cost-recovery rather than revenue generation.

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<sup>13</sup> Rezk (2004)

## E. Capital Market Issues

71. **The cash flow profile for financing infrastructure, typically involves large capital outflows during construction, followed by initial revenue generation and then more robust growth over time.** This is known anecdotally as the “J-curve.” Consequently, infrastructure assets typically require long-term financing that can match project cash flows during operations to repay interest and principal and to generate an adequate return on equity, if applicable. To provide lenders with greater certainty that project cash flows are sufficient over time to cover debt payments, it is necessary that systemic risks can be controlled sufficiently so that the private sector can price, manage, and mitigate project and non-project specific risks. The latter includes the following:

- *Macroeconomic risks*, which includes GDP growth which impacts project revenue generation as well as inflation and foreign exchange to avoid potential mismatches between revenue and debt obligations.
- *Banking sector risks*. This refers to the ability and interest of banks to lend and to provide long-term maturities.
- *Public sector risks*, which can include the following (i) legal and regulatory changes; (ii) political, including changes in government administrations; (iii) policy uncertainty; (iv) borrower creditworthiness; and (v) expropriation.
- *Corporate sector risks*, including the ability of corporate entities: (i) to obtain debt financing at acceptable terms; (ii) to manage existing and future leverage levels; (iii) to rollover short-term debt; (iv) to maintain sufficient profitability; and (v) to adequately manage the corporate entity or SPV.
- *Market and liquidity risks* impact the price and availability of debt financing.

This assessment is limited to risks that impact the financing of tendered and awarded infrastructure projects. Project specific risks, such as construction, environmental, land acquisition, permitting, and geotechnical risks, are outside of the scope of this analysis. These risks require feasibility and pre-feasibility, risk workshops, and risk mitigation strategies that are unique for each project.

72. **The key risks are macroeconomic risks, particularly inflation and foreign exchange risk, followed by policy uncertainty.** Foreign lenders and investors continue to be missing from the domestic capital markets. This applies to equity, fixed income, and non-listed direct investments. Macroeconomic conditions, especially high inflation and high nominal interest rates, explain the following:

- the limited ability of the government to issue domestic currency treasury securities that could help form a yield curve;
- the general absence of domestic long term finance for corporates, local governments, SMEs, housing, and infrastructure;
- the preference for issuance of securities in dollars, and the appetite of investors for dollars as the only viable instrument for long term saving; and
- the difficulties in establishing long-term hedging instruments for managing foreign exchange risk.

73. **It is expected that inflation will be brought down to more manageable levels during 2017; but reaching single digit inflation is a medium-term goal.** The IMF's most recent forecast published in April 2017 estimated that consumer prices would increase by 25.6 percent and 18.7 percent in 2017 and 2018, respectively. In the medium term, alternative solutions might be needed to foster the development of a long-term finance market, such as the use of inflation-linked instruments. Progress has been made with the recent issuance of Peso-linked notes by Argentine corporate entities. However, the development of these type of instruments is not without challenges. These issues will be further explored in the section on infrastructure financing.

74. **During the previous government administration, there was limited credibility associated with the inflation index.** The lack of a credible inflation index made it extremely difficult for underwriters to accurately price and investors to purchase domestic currency bonds. While the credibility is slowly being restored, it is important that the GoA maintains the independence of the National Statistics and Censuses Institute (*Instituto Nacional de Estadística y Censos*, INDEC).

75. **There are also several procedural and regulatory barriers that will continue to be a deterrent for foreign investors, even were the macroeconomic and policy environment to improve.** These barriers include onerous account opening, know your client, and tax registration procedures and requirements. However, it is understood that KYC requirements are currently being reviewed with the objective of rationalizing them, including relying on the due diligence performed by foreign regulated entities. In addition, it is understood that some capital controls remain, including a minimum investment period of 120 days for foreign investment. Foreign investors are also waiting for the GoA to complete and implement the ongoing reforms in the financial sector, capital markets, and PPPs.

76. **Structural issues would also need to be addressed for the capital markets to play a role in infrastructure financing.** On the financing side, where infrastructure projects have USD earnings, onshore and offshore dollar markets are likely to develop. However, financing for peso earning projects remains an open question. Solutions to address currency risk do not seem available in the short term due to the high inflation and interest rates. In the medium term, the development of inflation linked instruments might be an option; however, this is not without risks and needs a calibrated application once interest rates are brought down.

77. **There are other structural issues that could affect the long-term development of the capital markets: ensuring that the Comisión Nacional de Valores (CNV) becomes a credible and effective supervisor should be a key objective, particularly as the market grows in size and complexity.** The proposed capital markets law attempts to address some of these issues. Additional steps have already been taken in this direction, with the appointment of a new board, which has embarked on a wholesale review of the organization. There is a need to continue working on (i) improving supervision, through the implementation of risk-based supervision at the micro-level and the development of a process for identifying risks at the market level, and (ii) developing and implementing a credible and effective enforcement strategy. In the meantime, the framework for ensuring independence and accountability will need to be strengthened.

78. **Although the enactment of the proposed Capital Markets Law is intended to reduce market inefficiencies, additional legislation is needed to deepen and widen local capital markets.** This law, which is still under legislative review, may not go far enough to develop the institutional investor base needed to provide long-term financing for infrastructure. Additionally, provisions could be added or new legislation could be developed that would: (i) encourage insurance companies to offer new types of products; (ii) rebuild private pension systems by incentivizing the establishment of asset management companies; (iii) providing preferential tax treatment for closed end mutual funds (e.g. Colombia) or value capture adjacent to real estate (e.g. Colombia and the United States); (iv) supporting the establishment of REITs; (v) reviewing the governance structure, mission, and investment strategy of the FGS; (vi) encourage the development of long-term hedging instruments to manage currency risk; and (viii) incentivize the issuance of local currency bonds and project bonds while developing a peso/dollar hedge market.

79. **The improved sovereign credit rating has been a key driver of the recent sub-sovereign and corporate bond issues.** In early April 2016, Standard & Poor's upgraded Argentina's sovereign ratings for local and foreign currency debt to B from B-. This follows the ratings upgrade from Moody's which raised Argentina's sovereign rating for foreign currency denominated debt from C1 to B3 in 2016. This rating was re-affirmed by Moody's in early 2017. The perception in the market is that the Moody's may raise this rating based on its forecast growth in GDP of 3 percent for 2017-8 and the expected reduction in the fiscal deficit from 4.6 percent in 2016 to 3.9 percent for 2017. Moody's has forecasted an additional 1 percent decrease in the fiscal deficit.

80. **Lenders have been relatively inactive in the financing of infrastructure.** As a rule, lenders tend to be heavily involved in the financing of infrastructure due to their relative ability to provide long-term debt financing and to develop financial structures that can sculpt the amount of interest paid during project construction. The absence of active PPP projects that have been tendered and reached commercial close has effectively precluded the participation of lenders. Going forward, the issues that will impact the participation of lenders are: (i) the timing of the drafting and implementation of the underlying regulatory framework for PPPs; (ii) the development of a project pipeline and tender schedule; and (iii) macroeconomic conditions. Additionally, the lack of long-term hedging instruments makes it more difficult to attract foreign based banks. The ability of the renewable energy projects to obtain bank financing will serve as an important benchmark for the rest of the PPP program. Although the relatively strong interest in the RenovAR program, which has been supported by a guarantee facility, provides positive feedback regarding investor interest, the real test is the ability and time that it takes for these projects to reach close of finance and begin construction.

81. **The FODER model could potentially be replicated.** The GoA has allocated ARS 12 billion (USD 860 million at current exchange rates) to FODER, which is divided into two separate accounts. The project finance account, which is funded by a mix of treasury funds, public offerings, ANSES and funds from multilateral institutions, will be used to offer long-term project loans, provide interest rate subsidies and equity contributions to renewable energy generation project companies and special purpose vehicles (SPV). A separate payment guarantee account will be used for all PPAs tendered through the RenovAR program. This account must

always have on deposit at least 12 months of payments due by the offtaker. Although this account is primarily funded by a specific charge to consumers, if at any point FODER does not have enough funds, then the Government of Argentina is obligated to replenish the account or the partial guarantee kicks in, if the contractual triggers apply. This mitigates the risk that CAMMESA will lack sufficient funds to purchase the power contracted under the PPAs. Winning bidders take advantage of FODER's protections by signing an accession agreement with the FODER trustee at the time the PPA is signed. The partial credit guarantee facility was available to investors after the conclusion of RenovAR Round 1 and Round 1.5.

**82. Market perception of bonds issued by sub-sovereign entities are strongly linked to the sovereign debt market.** Moody's raised the foreign currency ratings of four provinces (Buenos Aires, Cordoba, Mendoza, and Chubut) and three municipalities (Buenos Aires, Cordoba, Río Cuarto) from Caa1 to B3 shortly after the national government re-entered the international capital markets. Moody's similarly raised the local currency ratings for these sub-sovereign entities. Additionally, Moody's raised the foreign and local currency ratings for the provinces of Chubut and Formosa from Caa2 to Caa1 with only the former having issued debt, as of this writing. Some investors have raised concerns that sub-sovereign bonds maybe the first to be sold off, if there is a softening in the overall bond market in Argentina or a negative change in macroeconomic conditions

**83. The level of liquidity for sub-sovereign debt has not yet been determined.** Although investor appetite has been relatively strong, it is difficult to ascertain the level of liquidity for sub-sovereign debt. In some cases, bond yields have tightened. For example, the yield for bonds issued by the Province of Salta and Cordoba decreased by nearly 100 bp and 30 bp, respectively, after secondary trading.

**84. Despite the recent bond issues by sub-sovereign entities, indebtedness levels currently appear to be manageable.** For example, the Province of Cordoba raised debt levels from 35 percent to 40 percent of revenues. However, Moody's expects that downward pressures on its credit rating would have to reach at least 50 percent of revenues before a ratings action would be initiated. Cordoba's operating margin averaged 11.7 percent from 2011-15 despite high inflation and the devaluation of the ARG peso.<sup>14</sup>

**85. The Offering Statements prepared for the foreign placed bonds issued by the sub-sovereign governments serve as useful models for the disclosure of information.** Although the quality and accessibility may vary by issuer, a limited review of offering statements (OS) indicated that these documents were relatively easier to find and download and are consistent with international best practices. More importantly, the OS documents included summaries designed to assist qualified investors in making informed decision. This include summaries of the following: (i) macroeconomic data; (ii) recent financial performance, including sources of revenues from local and federal sources; (iii) current and capital expenditures; (iv) collateral; (v) debt reserve accounts; (vi) risk factors regarding repayment of interest and principal; (vii) use of proceeds; (viii) outstanding local and foreign currency denominated debt by maturity, type, and creditor; and (ix) ongoing litigation.

**86. A key element for determining the long-term sustainability is not only timely repayment, but also how the bond proceeds are used.** Although sub-sovereign and corporate

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<sup>14</sup> Global Capital, "Cordoba clinches fourth provincial deal in 2017" February 23, 2017

entities have obtained debt capital through the international capital markets, the success and sustainability of these initiatives as an aggregate is contingent on the extent that bond proceeds are used to invest in infrastructure. This involves the financing of infrastructure projects that encourage economic development, reducing the infrastructure deficit, and extending basic services. An initial survey seems to show that non-sovereign debt has been used for financial support, such as the refinancing outstanding debt and to close budget gaps as well as for economic development purposes. For example, there is anecdotal evidence that the Province of Argentina is using its large debt program for both purposes. Additional analysis and monitoring is needed to determine how bond proceeds are being used and development incentives, such as preferential tax treatment to encourage the financing of infrastructure.

87. **Retail investors have not invested in the stock or non-government bond markets, either as long-term investors in securities, or as active traders.** Although there has been some retail participation in mutual funds, this is not significant. Retail investors prefer USD denominated investments due to inflation and confidence concerns. There seem to be sizeable holdings of retail assets in two categories, neither of which are in the formal domestic financial sector, and do not benefit the development of local capital markets. These include: (i) an estimated USD 1 to 3 billion in safety deposit boxes with domestic banks, and (ii) between USD 3 to 5 billion in holdings and investments abroad. There is potential for the growth of the domestic retail investor base through repatriation of foreign assets. There is also a significant level of retail participation in Peso denominated LEBACs, (CB issued short term paper) as these instruments provide returns close to that of inflation. Investors participate in LEBACs through online banking platforms. However, this is currently crowding out investments in other instruments.

## II. Financing of Infrastructure through the Capital Markets

### A. The Normative Framework for PPPs

88. **There are several existing PPP contracts, especially in the transport sectors.** These include: (i) a concession contract for the National Airport System in 2000; (ii) independent power producer (IPP) generation projects tendered prior to 2000; and (iii) road concession projects that were delivered through CREMA<sup>15</sup> contracts, most of which are set to expire in 2017. The CREMA contracts can be extended for an additional period.

89. **A new PPP law was enacted in November 2016.** The new PPP law (88-S-16 OD 815) was based on international best practices and clarified some elements that had been missing from previous legislation. However, controversial elements were also included in the final version of the law. Key features of the legislation are summarized as follows:

- i. **Local Content Requirement.** The new PPP law requires that 33 percent of the contract value be awarded to local firms, including SMEs. The Ministry of Production can provide exceptions or limit this requirement. Although the local content requirement may not be an issue in the roads sector as sufficient technical capacity currently exists in Argentina, this requirement may potentially disincentivize investment in the energy, water & sanitation, and irrigation sectors.
- ii. **Contract Duration.** The new PPP Law permits concession and PPP contracts of 35 years including extensions.
- iii. **Contract Renegotiations.** Article 9 (i) prevents contract negotiations of more than 20 percent of the total contract value. However, the Law is silent regarding the total number of renegotiations that can take place during the contract period.
- iv. **Ministerial Approvals.** Article 6 states that the Ministry of Environment and Sustainable Development is required to review compliance with national environmental laws and regulations prior to contractual approval (Article 5).
- v. **Congressional Notifications.** Article 9 (x) requires Congressional notification if a contract dispute requires arbitration. In addition, the Bicameral Commission for monitoring PPPs can request information regarding the fulfillment of local content, technology transfer and human resource requirements (Article 12).
- vi. **Fiscal Impact Requirements.** These include the following:
  - Article 6 requires that the Ministry of Hacienda must provide a specific budget line item in the monthly “Ahorro-Inversión Financiamiento”
  - Article 16 and Article 32 establishes that direct and indirect obligations stemming from PPP contracts cannot exceed more than 7 percent of GDP in any given year except for 2017 and 5 percent for 2017, respectively. After 2017, this limit can be reevaluated annually based on budget appropriations.

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<sup>15</sup> Contrato de Recuperación y Mantenimiento.

- Article 20 requires the creation of reserve funds to meet outstanding fiscal obligations.
  - Guarantees having a fiscal impact would require Congressional approval as well as the appropriation of sufficient budgetary resources, if the project guarantee is invoked.
- vii. **Trusts**. The PPP law reaffirms the use of trusts and sociedad anonimas as per Law 26,831.
- viii. **Step-In Rights**. Allows for step-in rights for lenders allowing the restructuring of debt for projects that are unable to repay debt service
- ix. **Feasibility Studies**. Article 13 requires the following feasibility studies and reports:
- Business case for the PPP delivery method selected
  - Additional fiscal and budget impact of the project
  - Fiscal impact of the project during the contract term
  - Availability of public resources to meet public obligations
  - Project externalities
  - Employment impact, nationally and on small and medium enterprises
  - Socio-economic impact
  - Cost-benefit analysis, including risks, regarding the PPP delivery option selected
  - Risk allocation and sharing
- x. **Early Termination**. Article 9 (p) and Article 10 more clearly define termination clauses due to mutual agreement, cause, and without cause as well as authorized compensation for early termination.
- xi. **Arbitration**. Article 9 (x) sets forth that the parties involved can go to arbitration in the event of a contractual dispute.
- xii. **PPP Unit**. The New Law mandates the creation of a PPP Unit. The PPP unit is intended to be a consultative, rather than an approving entity.
- xiii. **Sub-sovereign entities**. Article 33 implies that the new PPP law is not binding for sub-sovereign entities, particularly the Province of Buenos Aires.
- xiv. **Article 9 of the new PPP law expressly states that the revised regulatory framework must address the following topics (by section number):**
- a) Contract duration
  - b) Risk allocation
  - c) Roles and responsibilities of contractual parties
  - d) Oversight mechanisms
  - e) Minimum technical requirements
  - f) Payment mechanism
  - g) Direct financial resources from the public sector
  - h) Mechanisms for handling technological changes
  - i) Contract renegotiations
  - j) Changes to the project financial equilibrium

- k) Minimum revenue guarantees
- l) Other contractual guarantees
- m) The authority to confer guarantees
- n) The role of the procuring authority in helping to secure financing
- o) Revenue generation and the securitization of revenues post-contract award
- p) Early contract termination
- q) Credit guarantees
- r) Equity transfers and sales
- s) Temporary contract suspension in the event of non-compliance
- t) The partial or complete transfer of the contract to a 3<sup>rd</sup> party (provided that 20% of the investment has been completed and with the consent of the lenders).
- u) Subcontracting
- v) Asset handback
- w) Dispute resolution
- x) Arbitration

90. **However, the new PPP law does not define the institutional framework for the development and implementation of the underlying legal and regulatory frameworks.** This has led to great deal of uncertainty and institutional competition which had delayed the establishment of the PPP unit specified under the legislation. In turn, institutional uncertainty has delayed the development of a pipeline of potentially bankable PPP projects as well as limited coordination among the line ministries to determine the timing of project tenders. The PPP unit that is now housed under the Ministry of Finance is short-staffed with a 2-3 part-time individuals dedicated to the PPP program.

91. **The new PPP law permits sub-sovereign entities to develop and deliver infrastructure projects through a PPP structure.** The Municipality of Buenos Aires as well as the Province of Province of Buenos Aires and Province of Cordoba have expressed an interest in developing projects through PPPs. The enactment and implementation of the regulatory framework for PPPs at the national level is necessary first step for sub-sovereign entities to develop a PPP framework that is consistent with the national framework. The recent enactment of regulatory reforms underlying the PPP law may spur the development of PPP frameworks at the sub-sovereign level.

## **B. Potential Refinements to the Normative Framework**

92. **To help attract private sector capital and address the issues cited above, the following issues should be clarified or expanded in subsequent versions of the PPP regulations.**

- i. Renegotiations. There is a need to define: (1) the total number of renegotiations that can take place during the contract term, and (2) whether the 20 percent limit applies for each separate renegotiation or all renegotiations agreed during the contract term.
- ii. Early Termination. Expand the guidelines related to early termination due to a Force Majeure event.

- iii. Arbitration. The regulation should be clear as to (1) under what conditions arbitration would take place; (2) the process for going to arbitration; and; (3) the arbitration location. The PPP law requires that the GoA must approve as well as inform Congress that a contractual dispute requires arbitration. However, this requirement could create a barrier to investment as sponsors may be concerned that the GoA will grant arbitration only if it is a plaintiff. Moreover, the law seems to imply that arbitration can take place solely in Argentina. This would need to be clarified as international investors prefer having the option that arbitration takes place outside of the project country to ensure the independence and transparency of the arbitration panel.
- iv. Ministry of Environment Reviews. Article 5 should be clarified so that is clear what is meant by having the Ministry of Environment “tomar intervención” in the review of a contract with the private sector. Potential delays in contract approval could create uncertainties that might limit private investment.
- v. Feasibility Studies. Provide guidance with respect to independent feasibility studies, specifically: (1) how the feasibility and risk analyses will be applied; (2) who should perform the risk analyses, e.g. universities, private companies, etc., and (3) whether the results of the risk analysis could result in project cancellation or restructuring. Additionally, the regulatory guidelines could establish ranges for the value of the identified project risks and/or require the preparation of risk mitigation plans.
- vi. Congressional notification and the submission of contractual documents in the event of arbitration. The supporting regulation should strike the right balance between requiring public disclosure while maintaining sufficient confidentiality of business information so as not to disincentivize potential investors and lenders.

93. **Another critical issue is the absence of a formal PPP project pipeline in Argentina.** This issue has been raised by market participants as being a potential impediment to the PPP program. The development of a project pipeline is an important market signal that helps lenders and investors mobilize scarce financial and human resources in relation to the timing and scale of the projects being tendered. To develop a pipeline of potentially bankable PPP projects, it is necessary to first develop a framework for evaluating, selecting, and prioritizing PPP projects under consideration by the line ministries. A potential framework that has been adopted in other countries is a multi-criteria analysis that assigns different weights to different categories, such as development impact, timing, technical complexity, bankability, etc., among other factors.

94. **Market barriers may also play a role in the timing and level of interest of foreign investors in PPP.** The Odebrecht bribery scandal has not only impacted the political situation and PPP program in Brazil, but throughout the region. The reverberations of this scandal include the cancellation or re-tendering of large PPP projects in Colombia (Río Magdalena) and Peru (Gasoducto Sur) that had been previously awarded to Odebrecht. Although this scandal may eventually encourage the implementation of reforms in the PPP program, particularly in Peru, it has slowed PPP project development in multiple jurisdictions. Moreover, the scandal has highlighted the need for improved transparency and disclosure requirements. While the Odebrecht scandal may discourage some sponsors and lenders from investing in the region,

others may see this as a potential opportunity to enter the market and invest in infrastructure. The timing and magnitude of the projects to be tendered will help to drive investment decisions.

### III. Project Pipeline

95. **With the re-entry of Argentina into the international capital markets in early 2016, there has been significant interest from the private sector to invest in infrastructure, particularly in renewable energy projects.** The estimated capital costs for the renewable energy program is approximately USD 15 billion. The RenovAR program managed by the Ministry of Energy and Mines (MINEM) successfully concluded two separate auction rounds resulting in the awarded of 37 projects that will generate 1,167 MW of wind energy and 918 MW of in solar energy upon completion. The projects have 20-year power purchase agreements (PPAs) with CAMMESA. This program is being supported by a USD 480 million partial credit guarantee facility. An estimated 10-12 projects are being evaluated in the transport sector and 4-8 pilot projects are being proposed for the water and irrigation sectors. Financing for renewable energy project awarded under RenovAR Round 1, includes corporate bonds from the project sponsors and sub-sovereign entities. Additionally, a corporate bond has also been issued to support capital projects for airports managed by Aeropuertos 2000. The financing models, contract types, and timing of the tenders for possible PPP transport and water sector projects are still being determined.

#### A. Renewable Energy Generation

96. **Rather than waiting for a PPP law to be enacted, the RenovAR program was based on the Energy Generation Law (#27191) enacted in 2015.** A total of 7 renewable energy projects were awarded under Round 1 and another 30 projects under Round 1.5. The megawatt per hour (MWh) spot market price ranged from USD 49 to USD 57. A new Energy Distribution Law is currently under consideration.

97. **The GoA has set the goal of increasing the amount of electricity generation from renewables to 25 percent by 2025.** The amount of electricity generated from renewables as a percent of total energy generation was 2 percent in 2016. Law #27191 established an intermediate target of 8 percent by the end of 2017. Industry estimates that a total of 2,000 MW can be generated using renewable energy sources.

98. **Two auctions have been conducted the RenovAR program in 2016 which have been viewed by the Government and market participants as being successful.** Bidders were awarded 415 MW wind projects along with 400 MW solar and 1 MW biomass during Round 1.<sup>16</sup> The level of interest from the private sector, which submitted 123 bids for more than 6,300 MW, led to additional awards.

99. **Financing for the RenovAR round 1 projects is expected to comprise of a mix of corporate bonds and equity as well as MDB financing.** The Villalonga Wind and Chubut Norte projects are expected to be financed through a corporate bond issued by Genneia. In contrast, the La Castellana Wind Project is expected to obtain a USD 50 million from the Investment Corporation (IIC) of the IADB which is using funds provided by the Green Climate Fund (GCF).<sup>17</sup> In all, the GCF has approved USD 133 million for RenovAR projects. The

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<sup>16</sup> Bidders had offered 600 megawatts of wind, 300 megawatts of solar, 65 megawatts of biomass, 15 megawatts of biogas and 20 megawatts of small hydropower capacity

<sup>17</sup> The GCF was established by 194 governments to limit or cut greenhouse gas emissions in developing countries, and to help vulnerable areas adapt to the impacts of climate change. The GCF is administered by the United Nations.

financing structures for the remaining projects have yet to be announced, as of this writing. The average megawatt/hour for the wind and solar energy generation projects was USD 59.4 and USD 59.7, respectively. The average MW/h for the 1.2 MW biomass project was USD 118.

**Table 9: RenovAR Round 1**

Province	Project	MW	Company	Financing Structure
Buenos Aires	Villalonga Wind	50	Genneia	Corporate bond
Buenos Aires	La Castellana Wind	99	Central Puerto	IIC, USD 50 million loan
Chubut	Chubut Norte Wind	28	Genneia	Corporate bond
Chubut	Garayalde Wind	24	PAE	TBD
Chubut	Manantiales Behr Wind Farm	100	YPF	IIC USD 100 million loan, 9-years; USD 100 million 6-year syndicated loan from BBVA (33.3%), Santander (33.3%), and Citibank (33.3%)
Cordoba	Río Cuarto 2 Biomass	1	Biomass Crop	TBD
Corrientes	Santa Rosa Biomass	13	Papelera Mediterranea y Lucena	TBD
Jujuy*	Cauchari Photovoltaic	400	ENEL	TBD
La Rioja	Arauco II (phases 1-2)	100	Parque Arauco SAPEM	Partial financing from bond issued by La Rioja Province
<b>Total</b>		<b>815</b>	N/A	N/A

Sources: IJ Global, MINEM

100. **The wholesale energy market administrator, CAMMESA, is the offtaker.** This is a significant change since CAMMESA’s corporate role, had historically been limited to market regulation and dispatch activities. Contract terms require that CAMMESA maintain at least 6 months of reserve funds to meet its ongoing commitments. Historically, budget transfers comprise 100 percent of CAMESA’s revenues, so that the reserve fund must be replenished every six months by the GOA. Additional financial support is provided through the Fund for the Development of Renewable Energy (*Fondo para el Desarrollo de Energías Renovables*, FODER operates as a trust to backstop ongoing financial obligations by CAMMESA or MINEM.

101. **The power purchase agreements (PPAs) contain a put mechanism which is intended to provide greater comfort to investors and financial institutions.** The FODER structure also provides the project developers with a put option to sell the power project back to the government that can be exercised in any of the following situations. These include: (i) if the offtaker fails to make payments over a certain period; (ii) a breach of an Argentine court judgment or the dispute resolution clause in the PPA; (iii) the Argentine currency becomes inconvertible or non-transferable; (iv) there is a change in certain Argentine laws; (v) the project is expropriated, or (vi) an early termination of the PPA, the guarantee facility or the FODER accession agreement. Any of these events will, after the conclusion of a specified cure period, allows the winning bidder to sell the project to FODER based on the book value of the project.<sup>18</sup>

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Additional funding proposals totaling USD 315.24 million approved during 2016. Were for projects in Mongolia, Mauritius, the Pacific Islands and other countries

<sup>18</sup> The amount is the book value, excluding depreciation, of the project assets based on the most recent audited financial statements of the SPV or the project sponsors.

The guarantee facility backstops Argentina’s obligation to fund FODER when it is required to buy out a project due to of the exercise of the put option. The guarantee facility will be in place until the earlier of 20 years, or Argentina obtaining an investment grade rating.<sup>19</sup>

**Table 10: RenovAR Round 1.5**

Province	Project	MW	\$/MWh	Company	Financing
Buenos Aires	Pampa Wind	100	46.0	Sinohydro	TBD
Buenos Aires	Necochea Wind 1	38	55.5	Genneia	TBD
Buenos Aires	Miramar Wind	98	56.4	Isolux	TBD
La Pampa	La Banderita Wind	37	50.0	Facundo Fravega	TBD
Rio Negro	Pomona I Wind	100	54.9	Genneia	TBD
Santa Cruz	Del Bicentario Wind	100	49.5	Petroquimica Comodoro Rivadavia	TBD
Chubut	Lomo Blanca VI	100	53.3	Isolux	TBD
Mendoza	El Sosneado	50	55.0	Empresa Mendocina de Energia	TBD
La Rioja	Arauco Wind (phases 3 and 4)	95	56.7	Parque Arauco SAPEM	TBD
Cordoba	Achiras Wind	48	59.4	CP Renovables	TBD
<b>Total Wind*</b>		<b>766</b>	<b>53.12</b>		
Catamarca	Saujil Solar	23	51.9	Energias Sostenables	TBD
Catamarca	Tinogasta Solar	15	53.4	Genneia	TBD
Catamarca	Fiambalá Solar	11	53.7	Energias Sostenables	TBD
Salta	Cafayete Solar	80	56.3	Isolux	TBD
La Rioja	Nonogasta Solar	35	56.4	Fides Group	TBD
Mendoza	Anchoris Solar	21	48.0	Empresa Mendocina de Energia	TBD
Mendoza	General Alvear Solar	18	55.0	Empresa Mendocina de Energia	TBD
Mendoza	La Paz Solar	14	55.0	Empresa Mendocina de Energia	TBD
Mendoza	Lavalle Solar	18	55.0	Empresa Mendocina de Energia	TBD
Mendoza	Lujan de Cuyo	22	55.0	Empresa Mendocina de Energia	TBD
Mendoza	PASIP Solar	1	52.0	Empresa Mendocina de Energia	TBD
San Juan	Sarmiento Solar	35	53.0	SoEnergy International	TBD
San Juan	Ullum N1 Solar	25	53.7	Fides Group	TBD
San Juan	Ullum N2 Solar	25	55.2	Genneia	TBD
San Juan	Ullum 3 Solar	32	57.6	Genneia	TBD
San Juan	Ullum 4 Solar	14	56.5	Colway 08 Industrial	TBD
San Juan	Iglesia – Guañizuli	80	54.1	Jinkosolar	TBD
San Juan	Las Lomitas	2	59.2	LatinoAmerica Energia	TBD
San Juan	La Cumbre	22	56.7	Diaser	TBD
San Juan	Caldenas del Oeste	25	58.9	Quattro Participações	TBD
<b>Total Solar</b>		<b>518</b>	<b>54.94</b>		

\*Weighted Average

Sources: IJ Global, MINEM, and World Bank staff

<sup>19</sup> The IBRD guarantee is for up to 20 years, although sub-projects may request the guarantee for a shorter period.

102. **Round 1.5 resulted in the award of 10 wind and 20 solar projects that is expected to add another 1,282 MW solar and wind projects to the energy grid.** The average MW/h of the wind and the solar projects was USD 53.12 and USD 54.94, respectively. The MW/h costs for the wind energy and solar energy projects, decreased by nearly 10 percent and 8 percent, respectively, between the two RenovAR rounds. The developers for the awarded projects are in the process of seeking financing for projects awarded during Round 1.5. Additional auction rounds could take place during late 2017 or in 2018.

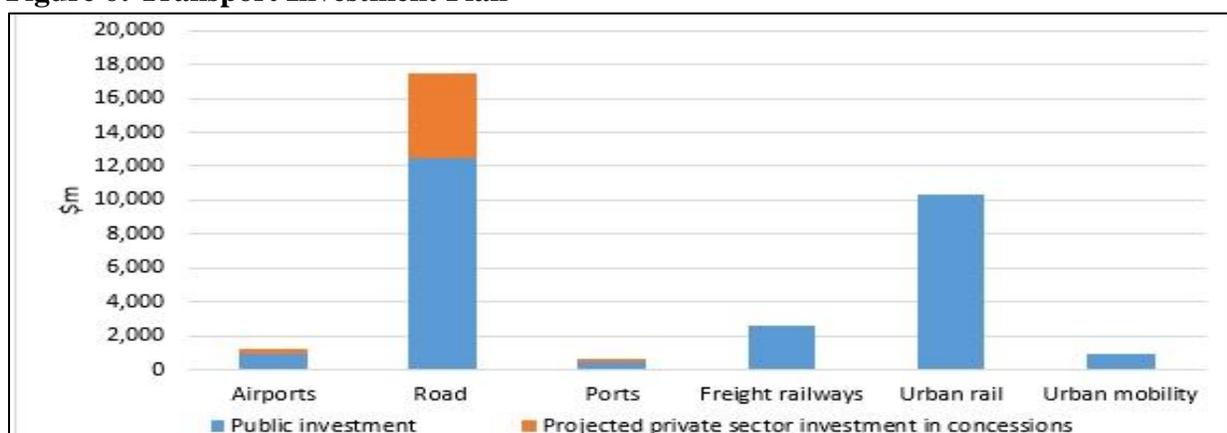
103. **The technical and financial feasibility of waste-to energy generation facilities in the Buenos Aires area is currently being examined.** The Argentine Water and Sanitation Company, (*Aguas y Saneamiento Argentinos, S.A., AySA*) is evaluating potential sites in the Buenos Aires area in which it already owns the land to develop 1 to 3 waste-to-energy facilities through a PPP. One of the proposed projects was tendered but has not reached close of finance while the other two projects have not yet been tendered and are seeking potential investors. One potential location includes a transmission line to deliver the generated energy and a rail connection to transport solid waste to the generation plant. However, this site is somewhat removed from the solid waste needed to generate energy, resulting in higher transport and operating costs.

104. **Another proposed site is closer to the solid waste facility and has access to a transmission line, but lacks a suitable rail connection.** Consequently, this proposed site could have higher capital costs to develop a rail connection or to purchase new trucks. Proposed capital costs depend on planned generation capacity, which range from 5 MW to 60 MW at full build-out. Veolia, a France based company that operates energy, water, and transport projects globally, has expressed interest in this project. Initial market sounding discussions have also been held with Acciona (Spain) and General Electric (United States). Potential financing structures includes revenues generated from existing facilities, funding from nearby municipalities, and private equity. The PPA structure has yet to be determined.

## **B. Transport**

105. **The Ministry of Transport has announced an ambitious USD 33 billion investment plan for the transport sector.** Approximately half of this amount, nearly USD 17.5 billion, would be used to improve the surface road network. The investment plan involves a combination of brownfield and greenfield projects which would be partially financed by private sector. Urban rail and bus transit along with freight rail projects would comprise another 40 percent of the proposed investment plan. Airports and ports account for the remainder of the proposed investment plan with private capital being a component of the financing plan. Although this investment plan has a three-year timeframe, this may be difficult to achieve given the amount of the investment required, the timing of tender schedule, and the ongoing development and implementation of the underlying regulating framework for PPPs. The subsequent figure summarizes the transport investment plan by sector.

**Figure 6: Transport Investment Plan**



Sources: Ministry of Transport and IJGlobal

106. **The 12 corridors would be tendered through 25-year management contracts.** The National Road Directorate (Dirección Nacional de Vialidad, DNV) is currently examining the feasibility for tendering up to 12 brownfield road corridors. This review includes the preparation and review of the financial models, initial evaluation of toll rates and policy, the review of the legal and regulatory structure for PPPs, and the assessment of capital and operating expenses. DNV is also examining the project specific risks, e.g. environmental, construction, etc., for each corridor. The development of a project preparation facility, market sounding activities, and tender schedule are currently under review.

**Table 11: Road Concession Program**

Corridor #	Project	Distance (km)	Capital Cost (US\$M)
1	De la Llanura	1,503	\$230
2	Pampeano	1,605	\$0
3	Central	1,366	\$215
4	Río Paraná	1,635	\$0
5	Centronorte/Belgrano	1,643	\$1,680
5	NEA	1,299	\$0
8	Patagónico	1,535	\$0
9	NOA	1,783	\$230
10*	Regional Tucumán	675	N/A
11*	Regional Cuyo	643	N/A
12*	Regional Comahue	247	N/A
<b>Total</b>		13,934	\$2,355

\* To be tendered in the medium- to long-term. Sources: DNV and World Bank Staff

107. **Determination of tolling policy is critical for tendering and the financial structure of road concession projects.** Tolling options under consideration include: (i) maintaining the existing tolling structure but increasing and indexing toll levels to reflect (a) inflation and (b) the devaluation of peso to the US dollar; (ii) eliminating all tolls except for access roads into and exiting Buenos Aires; (iii) adopting a shadow tolling structure (e.g. United Kingdom); and (iv) incorporating a hybrid system with tolling and shadow tolls. Currency risk and indexation of tolls are critical concerns both for international and local investors, particularly if project debt is denominated in foreign currency. Minimum revenue guarantees backstopped by the Ministry of

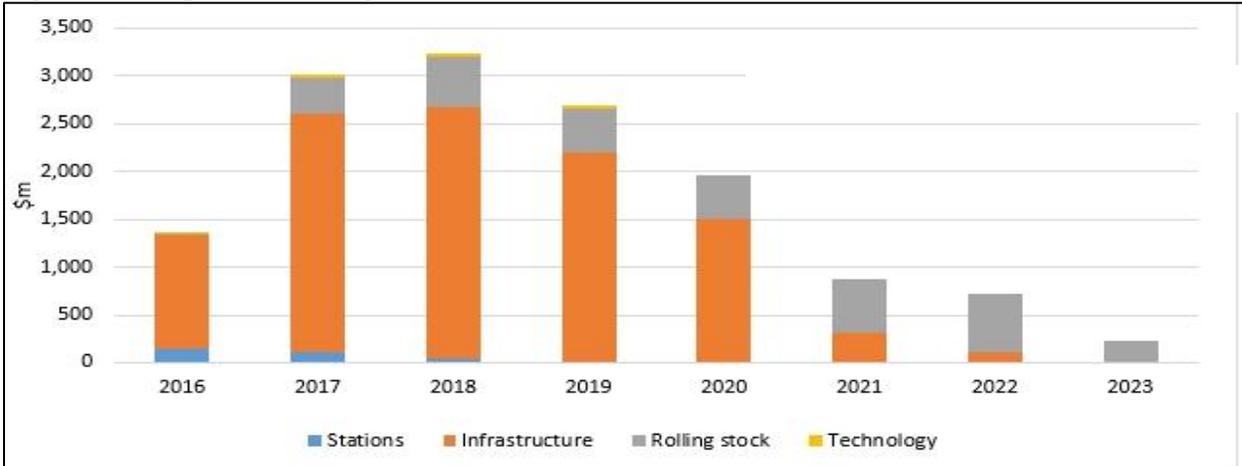
Finance are under consideration. Although initial financial projections show positive net income for most of these roads, these estimates do not include long-term lifecycle costs and the replacement of toll equipment. **Table 11** summarizes the proposed concession projects under consideration.

108. **The Municipality of Buenos Aires is also financing the construction of a 6.7 km dedicated 4-lane underground expressway for trucks and buses through a bond issue.** The USD 650 million Paseo del Bajo would relieve congestion from truck entering the Port of Buenos Aires. The project would connect the Illia, the Buenos Aires-La Plata Highway and the 25 de Mayo Highway. The project would run parallel to the Puerto Madero area. The project is being financed through a combination of a bond issue and a USD 400 million loan from the Andean Development Corporation (CAF).

109. **The urban mobility program improvement program outlined by the Ministry of Transport is extremely ambitious.** A key component of this program involves the USD 8.5 billion construction of three passenger rail lines that would connect the three major train stations in Buenos Aires (Retiro, Once and Constitución) creating a 790 km, 241 station rail network. Stage 1 involves the construction of underground stations, access points, tunnel viaducts, and electrification for the Roca-San Martin-Mitre rail line (USD 2.3 billion). Stage 2 of the urban rail program would involve construction works along the Sarmiento-Mitre line (USD 5.4 billion) including tunnels, stations, and the “undergrounding” of the Sarmiento line. Stage 3 would involve the construction of Belgano North-South line (USD 800 million) which includes the construction of viaducts and tunnels as well as and line electrification improvements. Additional urban mobility projects under consideration include: (i) the expansion of rolling stock (USD 3.2 billion) and (ii) modernization Buenos Aires A, C and D subway lines (USD 500 million); and (iii) the construction of a new Buenos Aires subway line (USD 900 million). These works, which are summarized in

110. **Figure 7**, are scheduled to be tendered from the present through 2023. Additional road surface mobility projects included in the long-term investment plan would be developed in Santa Fé, Córdoba, Neuquén, and Corrientes.

**Figure 7: Proposed Passenger Rail Investment, 2016-23**



Sources: IJGlobal, Ministry of Transport, and the Argentina Investment + Trade Promotion Agency

111. **The Ministry of Transport is planning to improve freight rail utilization and efficiency through a nearly USD 15 billion improvement plan.** At present, only 5 percent of freight is transported through by rail, representing approximately 18 million tons per year. Moreover, the freight rail system operates at low efficiency with average speeds of 12 to 15 km/hour. The long-term investment plan involves the following components: (i) 2016-19 – Belgrano rail line (USD 2.5 billion), (ii) 2020-20 – San Martín, Urquiza, and Bahía Blanco-Añelo rail lines (USD 3.2 billion); (iii) 2024-27 – San Martín and Roca Line freight rail line extensions (USD 3.2 billion); (iv) 2028-31 – San Martín and Mitre line extensions (USD 3.2 billion) and (v) 2032-35 – Belgrano line extensions (USD 2.8 billion). However, these projects do not appear to generate sufficient revenues in relation to capital and operating costs to be financially sustainable with private financing and will likely be developed using public funds.

112. **The modernization of the Port of Buenos Aires may be delivered through a PPP structure.** This project is expected to have total capital costs of USD 1.5 billion with construction taking place over an eight-year period. Proposed improvements by stage include: (i) Stage 1 – construction of a new bridge, paving, refilling, dredging, and closure of Terminal 6; (ii) Stage 2 – paving, refilling, new passenger bridge, increased capacity and dredging; (iii) Stage 3 – construction of a new dock, elimination of a grain storage area, and a breakwater extension; and (iv) Stage 4 – construction of new cruise terminal and dock. The call for tenders is expected to take place in 2017 or 2018. Private financing could be obtained through a 25-year concession contract with a 10-year option. The potential 35-year concession represents the longer term allowable as per the new law.

### **C. Water Supply, Irrigation and Sanitation**

113. **The infrastructure gap in irrigation and water treatment is relatively large.** The penetration rate for wastewater treatment is approximately 15 to 20 percent in Argentina compared to 70 percent in Brazil and 96 percent in Chile. Similarly, only an estimated 33 percent of irrigable land has been irrigated. To address this infrastructure deficit, the Ministry of Interior, Public Works and Housing has proposed an USD 18 billion investment plan to expand plan water supply through the development of 85,000 km of new water pipelines as well as improvements to water treatment and distribution facilities. The proposed USD 22 billion investment for irrigation would involve 45 projects in 15 provinces, which would nearly triple the amount of irrigated land from 2.1 to 6.2 million hectares.

114. **Bids have been received for the Las Catonas-Moreno Wastewater Treatment project.** The brownfield project located in the municipality of Moreno is being tendered by Enhosa, a water and sewerage utility. The facility is currently not operational and the contract would involve refurbishment works, which have an estimated capital cost of ARS 247 million (USD 16 million). Two bids were received. Project financial structure has yet to be determined.

115. **Table 12 lists the projects that could be developed and delivered through a PPP.** The financial structure under consideration potentially includes the establishment of special trust funds or *fedeicomisos* for administering project revenues and expenses. The pilot PPP project in Río Negro Province listed in **Table 12** could form part of a larger USD 730 million irrigation project from Valle Azul to Viedma Idevi which includes the construction of a diversion dam, a 14 km canal and secondary & tertiary canals. AySA is also examining potential PPP structures for electricity and water distribution, but these initiatives remain relatively conceptual.

**Table 12: Proposed Water and Wastewater PPP Projects**

Procuring Authority	Project	Status	Cost (USD M)
Enhosa	Las Catonas-Moreno Wastewater Treatment Refurbishment	Tendered	16
Río Negro Province	Negro Muerto Irrigation Project	Pipeline	120
Chubut Province	Meseta Intermediaria Irrigation Project	Pipeline	350
Entre Rios Province	Mandisovi Irrigation Project	Pipeline	160
Neuquén Province	Mani Menuco Irrigation Project	Pipeline	120
Neuquén Province	Catamarca Aqueduct and Treatment Plant	Pipeline	35
Salta Province	Salta Wastewater Treatment Plant and Energy Generation	Pipeline	30
Formosa City	Macro/micro metering	Pipeline	8
La Pampa Province	Santa Rosa – General Pico Aqueduct	Pipeline	142
Mendoza City	Sewage System Improvements	Pipeline	56
<b>Total</b>			<b>1,036</b>

Source: World Bank staff and Argentina Investment + Trade Promotion Agency

116. **A pilot program for tendering irrigation projects through a PPP is currently being developed.** Four irrigation projects that would supply a total of 122,000 hectares of water have been identified as potential pilots. The technical evaluation of these 4 pilot projects along with the pre-feasibility, social and environmental, and institutional framework analyses have been completed. Current technical assistance support is being provided to: (i) develop the sector specific legal and regulatory framework for the tendering these pilot through a PPP; (ii) develop the ownership and governance structure; (iii) developing the potential financial structure; and (iv) preparing the financial models for these projects. The proposed PPP model will include a trust (*fideicomiso*) that will administer the land included under the projects, sell land to farmers, manage the financial structure, and repay debt.

117. **Water supply and wastewater projects that could be delivered through a PPP are also under consideration.** The intent is to tender 3-4 pilots in Catamarca, Salta, and Formosa. Consultants have been contracted to develop concepts for these pilots. Once these studies have been completed, feasibility studies will be conducted with respect to determine capital costs, operating costs, and tariffs.

#### **D. Health and Education**

118. **The GoA's investment plan also attempts to improve health and education facilities.** The proposed investment plan includes USD 16.2 billion to build 460 primary, secondary, and tertiary education facilities as well as USD 3.9 billion for the construction of new hospitals and the modernization of existing health centers. The three education projects (with estimated capital costs of USD 10 million or less) that are considered ready for development include: (i) the rehabilitation of school buildings in Santiago del Estero; (ii) the construction of a new school in Ciudad de Plottier; and (iii) the construction of a new school in Rincón de los Sauces. Health sector projects that could be developed relatively soon are the completion of a hospital in Santa Fé City (Santa Fé Province), the construction of a 70-bed hospital and treatment centers in San Martín de los Andes (Neuquén Province), and the remodeling of a public hospital in Morón

(Greater Buenos Aires). Health sector projects have a total estimated construction cost of USD 63 million.

#### IV. International Experiences

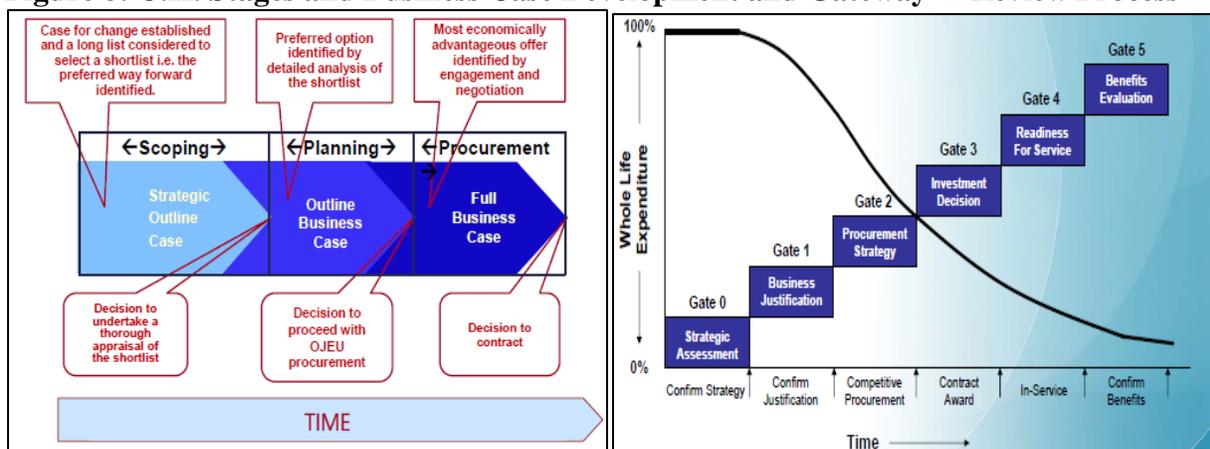
119. There are number of different approaches that have been used to encourage the development and financing of PPP projects. These include expanding the types of public funding and private financing sources as well as developing blended financing structures to attempt to crowd-in and expand the participation of the private sector. This section describes quality of entry strategies, financing models, and approaches for managing risk and fiscal impact that have been adopted and sometimes discarded both in the region and globally.

##### A. Prior to Project Tender and Award

120. The United Kingdom Business Case Model focuses on project selection and quality at entry. The U.K. experience with PPPs has led to the development of the five case study model for the selection of potential PPPs and provide strategic and economic rationales for developing infrastructure projects through PPPs. This model encompasses the following:

- Strategic Case, which highlights the strategic and synergic elements of the proposed project and the proposed outcomes;
- Economic Case (or public value), which includes the evaluation of potential project delivery options and cost-benefit analysis;
- Commercial Case, which focuses on the successful elements for a PPP transaction, including risk transfer, pricing mechanisms, key contract terms, and accounting treatments;
- Financial Case that outlines the funding and financing packages, balance sheet impacts, and fiscal impacts; and
- Management Case which demonstrates the project will be implemented in accordance with international best practices and includes plans for managing risks, the contracting of advisors, implementation monitoring, and contingency arrangements.

Figure 8: U.K. Stages and Business Case Development and Gateway™ Review Process



Source: Partnerships UK

The underlying principle with this approach is that additional resources are expended at project development to: (i) avoid inordinate risk assumption, direct guarantees, and contingent liabilities by the public sector; (ii) encourage contract standardization; and (iii) avoid project re-tendering and contract renegotiations after award. This methodology is an iterative process which focuses

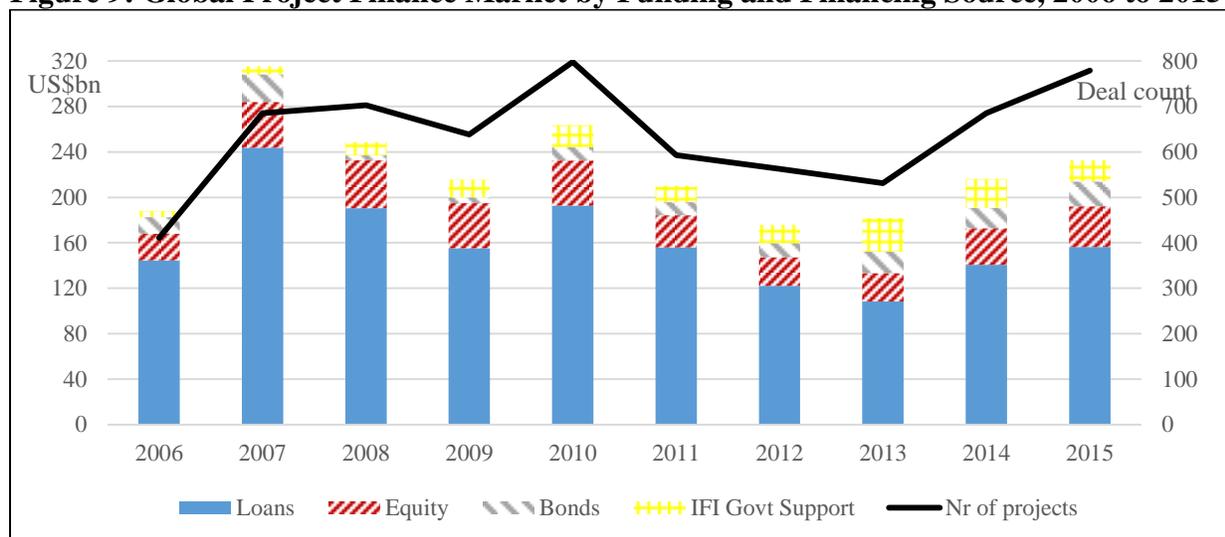
on providing more detailed analysis of the main elements of the business case, e.g. project design, commercial interest, risk allocation, contract terms, and affordability, at each successive stage with “gateway” reviews at each stage (Figure 8). Additionally, this process allows for the review and refinement of underlying assumptions, the assessment and management of potential dependencies, and a framework for project monitoring oversight over time. Partnerships UK anticipates this approaches places greater emphasis on the estimation of lifecycle costs during the project term, the potential value to the public sector, improved due diligence and the quality of procurements, increased competition, and more efficient financing approaches.

## B. Prior to Close of Finance

### i. Bank Loans

121. **Although bank loans comprised about 70 percent of total financing for PPP and project finance transactions in 2015, financing from project bonds has rebounded since the 2008-09 global recession.** Using data provided by *Infrastructure Journal*, bond financing as a percentage of total non-public financing for infrastructure averaged approximately 6 percent from 2006 to 2015. Prior to the 2008-09 recession, bond financing accounted for roughly 8 percent of the total financing for infrastructure, decreasing significantly to 2 percent during the recession. During this period, there were relatively few bond issues for infrastructure, which was due in part to the collapse of the monoline insurers who had previously provided credit guarantees on such bonds, but who had large exposures in the housing and real estate markets.

**Figure 9: Global Project Finance Market by Funding and Financing Source, 2006 to 2015**



Source: IJGlobal.

### ii. Public Financing

122. **Financing through bonds accounted for approximately 9 percent of total infrastructure financing in 2015.** Lending from International Financial Institutions (IFIs) was relatively small at approximately 2 percent of total financing for infrastructure in 2006, increasing significantly to 7 percent during the recession, peaking to 16 percent in 2013, and then decreasing to 8 percent in 2015. Financing from bank loans for project finance transactions has decreased steadily from 77 percent of in 2006 to approximately 67 percent in 2015. Finally,

equity investment has accounted for 13 to 15 percent of total infrastructure financing except during the recession years, during which time lenders required additional equity commitments to achieve close of finance.

**123. In the United States, the Transportation Infrastructure Finance and Innovation Act (TIFIA) loans are direct government lending programs that provide cheaper financing for project finance transactions.** The TIFIA program's fundamental goal is to leverage Federal funds by attracting substantial private and other non-Federal co-investment for critical improvements to the national surface transportation system. Because TIFIA credit assistance is often available on more advantageous terms than in the financial markets, this program has become an important component for financing PPPs in the U.S. As of April 2017, interest rates on TIFIA loans were 3 percent. The TIFIA credit program offers three distinct types of financial assistance designed to address the varying requirements of projects throughout their life cycles:

- Secured (direct) loans which offers flexible repayment terms, a 5-year grace period during construction, and up to 35 year maturities. The grace period is intended to allow for sufficient time to complete completion and a partial revenue service ramp-up period.
- Loan guarantees through the full-faith-and-credit of the U.S. Government, which guarantees borrower repayments to non-Federal lenders.
- Standby lines of credit which represents a secondary source of funding in the form of a contingent Federal loan to supplement project revenues, if needed, during the first 10 years of project operations, available up to 10 years after substantial completion of project.

Funding amounts are capped based on Congressional appropriations. TIFIA credit assistance is limited to a maximum of 33 percent of the total eligible project costs and the senior debt must be rated investment grade. Projects receiving TIFIA loans must be supported in whole or in part from user charges or other non-Federal dedicated funding sources. As a result, the private sector typically takes on revenue risk in these transactions. The TIFIA loan program is extremely competitive and there is a formal pre-application project review to screen out non-bankable project and a formal application. The overall program currently consists of 56 active loans and 10 retired loans. Due to lower than forecasted revenues, four projects have required a restructuring of the non-TIFIA loans and another project was effectively in default on the TIFIA loans.

**124. In Europe, the European Investment Bank and the European Commission set up the Loan Guarantee for Trans-European Transport (LGTT) program to attract a larger private sector participation in the financing of transport projects.** The LGTT guarantee enables the transfer of demand risk in a concession-based PPP project during the early years of operation thereby significantly improving the financial viability of the project and making the capital structure more robust. By providing the guarantee, the EIB is effectively assuming revenue risk by becoming a mezzanine lender to the project. The flexibility of the LGTT structure permits a tailoring of the product to fit the needs of the project. The product fits optimally with state-guaranteed senior debt and is an excellent element in mini-perm<sup>20</sup> structures. The EIB and the EC have each committed capital of EUR 500 million to enable LGTT of around EUR 5 billion to be issued from 2008 to 2013. The instrument was launched in 2008 and during

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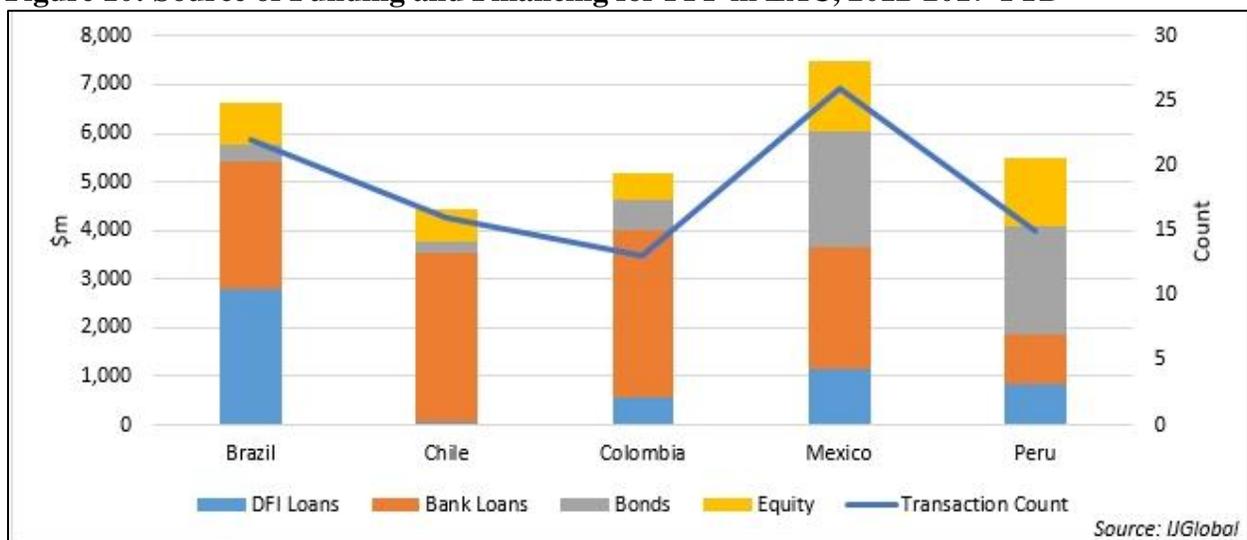
<sup>20</sup> Bridge financing between the end of construction phase and project revenue earning phase.

its first full year of operation in 2009 it was used for three PPP road projects that reached financial close with a total guarantee amount of EUR 70 million.

### iii. Project Bonds

125. **The Latin America and the Caribbean (LAC) region illustrates the varying degree that project bonds can be used to finance infrastructure.** Brazil has financed nearly all of its infrastructure projects during the last five years through loans from the Brazilian Development Bank (BNDES) and other DFIs. At the other end of the spectrum Chile, in general, does not use DFI financing for its infrastructure program. Moreover, the extent that bank loans are used to finance bank loans is relatively high in Chile and Colombia while somewhat low in Peru. Mexico, Chile, and Peru have used capital market instruments to finance infrastructure at higher rates than the global average. However, the models used to support bond financing in Colombia and Peru are relatively different with differing implications on long-term sustainability, risk allocation, and fiscal impact.

**Figure 10: Source of Funding and Financing for PPP in LAC, 2012-2017 YTD**



Source: IJ Global

126. **In Colombia, Pacifico Tres and Costanera Norte were the first two Fourth Generation (4G) highway projects that obtained financing through project bonds in both local and hard currencies.** These 144A dollar-denominated bonds were listed on the Luxembourg Stock Exchange during 2016. These projects present several innovative features:

- They are greenfield projects with majority debt financing raised from pension funds, through either project bonds or debt funds. The Pacifico Tres project attracted 73 percent of total debt from the capital markets. This amount was 62 percent for the Costanera Norte project.
- They are examples of a hybrid project financing model that is gaining increasing popularity, mixing bank loans at shorter maturities (12 years) and debt fund loans and project bonds with longer maturities (19 years).
- A partial financial guarantee covering all debt was necessary to match the market risk appetite.

- International investors participated in both the U.S. dollar-denominated bond as well as the local currency bond.
- Voting on control issues by bond holders follow a “deemed approval process.” which is increasingly used in the LAC region.

127. **The project loans and bonds in U.S. dollars and Colombian pesos (COP) obtained the same investment grade in the global rating scale (BBB- on the global scale from Fitch Ratings) and national scale ratings (AA+).** Such high ratings were made possible by several features: fixed-price; date-certain engineering/procurement/construction (EPC) contracts; low exposure to revenue risks due to government availability payments; and a Colombian-peso denominated revolving Subordinated Multipurpose Facility (SMF) equal to 15 percent of outstanding senior debt. The SMF mitigates liquidity/budgetary risks, construction delays, and temporary liquidity due to low traffic performance. The bonds also featured strong structural features including multiple reserve accounts and a cash sweep mechanism. All debts are fully amortizing and senior secured. The SMF is provided by Financiera de Desarrollo Nacional (FDN), a quasi-public infrastructure finance bank.

128. **Given the unfamiliarity of Colombian institutional investors with infrastructure project finance and the lack of experience with the new 4G concession model, the SMF played a critical role in helping investors become comfortable with these projects.** Tolls on the completed roads are annually adjusted at the beginning of the year by the change in the inflation rate. Should the net present value of toll collections received by the 8th, 13th, 18th, and the last year of the concession fall below guaranteed values, the national infrastructure agency, ANI, has the obligation to cover any shortfalls, after deductions for failure to meet availability, service level, or quality standards specified in the concession agreement. Deductions are capped at 10 percent. The U.S. dollar-denominated bonds have matched U.S. dollar-linked currency revenues (provided by the government of Colombia) settled in COP and issued at a fixed rate. In this manner, bond holders are not exposed to exchange rate risks. The COP-denominated bond payments are indexed to inflation using as a reference rate.

**Table 13: Summary of the Colombia Project Bonds**

Debt Distribution	Pacifico Tres	Costanera Norte
Local Banks	27%	38%
Bonds	58%	53%
Debt Funds	15%	9%
% Hard Currency/Local Currency	55%/45%	55%/45%
Enhancements	SMF	SMF

Sources: Infrastructure Journal and World Bank staff

129. **The financing scheme for PPP projects in Peru has been based on the use of unconditional and irrevocable payment obligations on the part of the government to remunerate the investment of the concessionaires.** The concessionaire has used these availability payment obligations, known as Compensation for Investments (RPIs<sup>21</sup>), to finance

<sup>21</sup> Retribución por Inversiones.

infrastructure projects in the capital markets. The RPIs are linked to the Certificados de Advance de Obra ("CAOs") that originate according to the milestones in the construction of infrastructure. The CAO/RPI promises of consistent government funding can be securitized which allows the concessionaire to issue bonds ex ante, backed by the government commitment. However, CAOs are not associated with the achievement of outcome based milestones or Key Performance Indicators (KPI) that guarantee the entry into service operations of the infrastructure assets.

**130. Because payment is delinked from concessionaire performance, the RPI based system does not fully transfer project risk to the private sector, since the underlying credit risk is close to the sovereign risk of the Peruvian State.** The project is, in practice, financed at a higher cost of capital through a PPP structure but retains the risk profile of a project procured through traditional public procurement methods. RPI payments are rated as sovereign debt and thus have an impact on government borrowing limits. The situation has been compounded by the frequent renegotiation of PPP contracts, particularly those tendered through unsolicited proposals and/or were underbid by the winning contractor.

**131. PPP projects in Peru for electricity generation provide an illustrative example.** Electricity projects were initially mostly self-sustaining, but have been turned into projects requiring availability payments that are often paid from the start of construction. In addition to the co-financing commitments, the Government of Peru offered explicit guarantees and assumed contingent liabilities implicit in the various PPP contracts. In addition, the Government of Peru is taking risks (such as geotechnical and environmental) that are sometimes partially taken by the private sector.

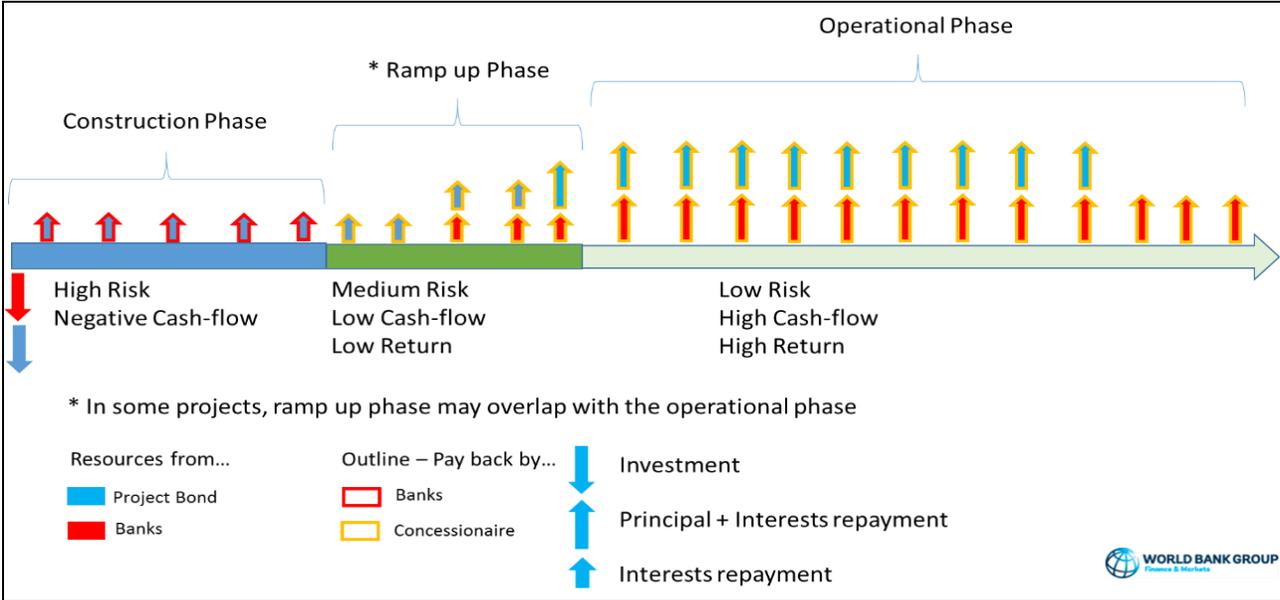
**132. Over the last two years, Peru has been undertaking reforms to the PPP framework that are intend to improve the level of risks transferred to the private sector.** This includes the enactment of a PPP Law and the development of a regulatory framework based on the UK Green Book. This includes changes in how project are developed, increased due diligence, financial structuring, and the development of a model PPP contract. The Government of Peru is still in the process of implementing the revised PPP framework. The response of the new framework has been mixed. While potential lenders and institutional investors appreciate the increased level of due diligence and improved risk allocation, contractors operating in the Peruvian market have been reluctant to embrace changes to the PPP framework.

**133. Brazil is exploring the development a Standardized Infrastructure Bonds (SDIB) model to help mobilize private sector financing of infrastructure projects on a larger scale.** The concept developed jointly between the Government of Brazil and the World Bank has received encouraging feedback from private and public sector stakeholders and is ready to be tested in future PPP infrastructure concessions. The SDIB is a fixed income security issued by a concessionary company. It brings the following innovations:

- The payment of interest during the construction period. SDIB investors will start receiving interest payments from the first semester of the bond. The interest is payable during the life of the bond as any other corporate or sovereign instrument. An underlying guarantee mechanism is in place and kicks in if the interest payments require a third-party source to be honored.

- There is a guarantee on the bond principal at the end of the construction period and/or at bond maturity. Using a Brady bond structure<sup>22</sup>, private guarantors of SDIB, will raise capital to set aside collateral to cover the contingent guarantee, by investing in Brazilian Treasury bonds that will have a value equivalent up to 100 percent of principal at the end of construction period. The development bank, BNDES would contribute a share of such collateral/capital sourced from a proposed World Bank loan, with a long-term repayment period. Thus, the cost of the guarantee facility with BNDES' contribution to the seed capital, should attract private financial investors to structure such funds.

**Figure 11: SDIB Bond Cycle Cashflow and Risk Profile**



Source: World Bank

134. **Interest payments during construction alleviate concerns regarding construction risk.**<sup>23</sup> The SDIB provides high quality guarantees (treasury bonds) that can be easily valued and understood by any investor. The risk sharing structure effectively passes risks to private sector institutions. Institutional investors have partial or total guarantees on the principal at the end of the construction period, and interest is protected during the construction phase; however, they assume all risks in the next phase. The financing of interest during the construction period and the provision of partial or total guarantees on the principal can potentially help to promote the catalytic role of the BNDES and facilitate the participation of other banks in the structuring

<sup>22</sup> Brady bonds were created in March 1989 to convert bank loans to mostly Latin American countries into a “menu” of new bonds after many of those countries defaulted on their debt during the 1980s. At the time, the market for emerging markets' sovereign debt was small and illiquid. This key innovation was to provide a “menu of options” that accompanied these new bonds, which allowed commercial banks to exchange their existing claims on developing countries into tradable bonds which had U.S. treasury securities as underlying collateral.

<sup>23</sup> The J curve refers to investments, typically in infrastructure, where the first phase (e.g., construction) is loss making, i.e., investment value is negative first, before picking up in latter phases and achieving positive returns. In the presence of high interest rates, such as in Brazil, the presence of a “J curve” is a significant inhibiting factor for the participation of institutional investors.

business, thereby creating the sufficient conditions for market surveillance and risk pricing. The guarantee backed by allocated government bond securities has the potential to expand the pool of private sector capital that could offer credit enhancement to infrastructure bonds. The guarantee is based on a AAA rated asset on the local scale that is ring-fenced and easily exercisable, so that the rating of the project bond is separate from the credit rating of the guarantor. In practice, any entity or investor willing to deposit government bonds in a guarantee fund could participate in the structure as a fee earning guarantor.

#### **iv. Pension Funds**

**135. Australia and Canada are two leaders in pension fund investment in infrastructure.** Australian and Canadian pension funds have invested in infrastructure since the early 1990s and early 2000s, respectively. Asset allocation by pension funds dedicated to infrastructure is approximately 5 percent in these two countries, which is the highest in the world. In comparison, the global average is roughly 1 percent.

**136. Canada's infrastructure plan is similarly ambitious. Despite closing a few projects in the early 1990s, Canada has generally lagged behind the United Kingdom and Australia in the development of PPPs.** This situation changed starting in 2006 with the launch of a C\$33 billion infrastructure plan, Building Canada, and was further catalyzed with the launch of the C\$53 billion New Building Canada Plan in 2013. Despite being active in PPP programs, Canadian banks have tended to be more conservative with respect to infrastructure lending with fewer loans and shorter maturities e.g. 5 to 7 years. The banking sector is complemented by one of the more developed project bond markets globally along with the strong participation of institutional investors, including pension funds and insurance companies.

**137. Canadian pension funds are major players globally and locally in investing in infrastructure. Eight Canadian pension funds are among the 100th largest in the world and account for 15 percent of all assets in the Canadian financial system.** A key factor in the growth of pension funds has been the strong interest in non-liquid assets, such as real estate and infrastructure both domestically and internationally. Canadian pension funds have annual contributions of USD 4 to USD 5 billion per year. An important characteristic regarding Canadian pension funds is that the funds are mostly unregulated with the only regulation involving payments to beneficiaries. Additionally, Canadian pension funds have been using cheap debt capital to fund investments.

**138. Canadian pension funds also have relatively low overhead costs along with high internal capacity.** Notable infrastructure investments within Canada include the Toronto 407 Express Toll Route (CPPIB pension investment board), inTransitBC (bcIMC, CDPQ), and the Bruce Nuclear Power Plant (OMERS). Globally, Canadian pension funds have invested in Grupo SAESA which is Chile's second largest electricity and distribution company (PSP Investments, bcIMC, and CPPIB), Eurostar (CDPQ pension fund), toll road projects in India (CPPIB) and Porterbrook Rail in the U.K. (AIMCo).<sup>24</sup> The estimated USD 159.2 billion in infrastructure and real estate investments represent 14.5 percent of total Assets Under Management (AUM).

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<sup>24</sup> The Boston Consulting Group, "Measuring Impact of Canadian Pension Funds" October 2015

**Table 14: Infrastructure Allocation by the 8 Largest Canadian Pension Funds, 2014**

Pension Fund	Global Rank	Total AUM US\$ B	Real Estate AUM US\$ B	Infrastructure AUM (US\$ B)
Canadian Pension Plan Investment Board (CPPIB)	8	265	22.4	11.1
Ontario Teachers' Pension Plan	20	154	17.0	9.7
Ontario Municipal Employees Retirement System (OMERS)	56	73	17.1	8.2
Caisse de dépôt et placement du Quebec (CDPQ)	14	226	25.3	7.8
PSP Investments	28	112	N/A	5.5
Hermes GPE	N/A	N/A	N/A	5.0
Hanwha	N/A	N/A	N/A	4.7
British Columbia Investment Management Corporation (bcIMC)	35	124	14.6	4.5
Manulife	N/A	N/A	N/A	3.2
Alberta Investment Management Corporation (AIMco)	84	84	N/A	3.1
Healthcare of Ontario Pension Plan (HOOPP)	69	61	N/A	N/A
<b>Total</b>	<b>N/A</b>	<b>1,088</b>	<b>96.4</b>	<b>62.8</b>

Sources: FP Post<sup>25</sup> and Boston Consulting Group, Inc.

139. **Australia's Future Fund is an example of a non-commodity based sovereign wealth fund (SWF). The Future Fund is an independently managed investment fund into which the Government of Australia deposits its budget surplus.** The purpose of the fund is to cover the future payments due to public employees during retirement. The Future Fund operates as an umbrella entity responsible for five other funds: (i) the Building Australia Fund that finances major infrastructure projects (e.g. road, rail, ports, and broadband), valued at AUS 3.7 billion;<sup>26</sup> (ii) Health and Hospitals Fund, valued at AUS 459 million; (iii) Education Investment Fund, valued at AUS 3.7 billion; (iv) Disability Care Australia Fund, valued at A\$6.1 billion; and (v) Medical Research Fund, valued at AUS 3.2 billion. The fund is managed and overseen by a 7-member independent board of guardians with 5-year, overlapping terms. The fund was initially seeded through the privatization of the nationalized telecommunications company, Telstra. Since its establishment, the fund's AUM has increased from AUS 59.62 in 2008 to AUD 139.5 in 2016.

140. **In Colombia, closed-end mutual funds have grown from a \$900 million industry in 2010 to \$13 billion at the end of 2016.** Although a few closed-end mutual funds were operational in Colombia prior to 2010, availability and investor appetite for these instruments

<sup>25</sup> National Post, "Inside the Risky Strategy that made Canada's biggest pension plans the new "Masters of the Universe, FP Street, October 27, 2014

<sup>26</sup> As of May 10, 2017, the exchange rate was AUD 1.35 per US Dollar.

increased significantly due to legislation enacted in 2010 and 2013. The recent expansion of the mutual fund industry has been aided by the enactment of legislative decrees #1242 and #1243 in 2013 which allowed mutual fund managers to delegate investment decisions and risk management to external managers. This change in regulation has helped to encourage new market entrants, particularly outside of Colombia, to establish open and closed-end funds. Unlike open ended funds which are priced once per day, closed-end funds are traded and priced throughout the day like a corporate stock. Thus, closed-end funds tend to be relatively more liquid. However, closed-end funds limit the investment period and have a more limited duration period. **Table 15** lists selected examples of closed-end funds in Colombia that have traded, are trading or in the process of raising funds to invest in infrastructure. Some of these funds operate in multiple countries in the region.

**Table 15: Selected Infrastructure Closed End Funds in Colombia**

Closed End Fund	Investors	Investments	AUM USD (\$M)	Investment Dates & Duration
Infraestructura Brookfield Colombia	Brookfield	Colombia only. Roads, energy, ports, airports, gas pipelines.	228	September 2009-13; 12 years
Fondo de Capital Privado Nexus Infraestructura I-FCP	Nexus Capital Partners	Multi-Country; Greenfield and brownfield roads, airports, and energy	72	October 2009-13; 10 years
FINTRA	Darby Private Equity, Franklin Templeton, and Colpatria	Multi-country. Roads, energy, ports, airports, urban transport.	83	August 2010-14; 20 years
CFC-SK El Dorado LATAM Fund	Corficolombia and SK Group	Multi-country; Energy and infrastructure	500	February 2015-20; 10-years
FCP 4G   Credicorp Capital – Sura Asset Management, Private Debt Fund	Creditcorp Capital and Sura Asset Management	Colombia only. Debt fund for 4G roads	320	November 2015-18; 23 years
Nova Renewable Energy Latin America LP	Novare	Colombia, Peru, and Chile. Renewable energy generation	350	March 2016-21; 10-years
Ashmore CAF Management Company SAS	Ashmore Group plc., and CAF	Colombia only. Infrastructure, 4G roads	450	Pending
<b>Total</b>			<b>2,003</b>	<b>N/A</b>

Source: Bancoldex, Catalago Fondos de Capital Privados y Emprenador en Colombia, 2015-16

#### v. Value Capture Initiatives

141. **Colombia is also cited as a success story with respect to value capture strategies.** Betterment taxes (known in Colombia as *contribución de valorización*) have been in place since 1921 and have been assessed in Bogota, Cali, and Medellin. These special tax assessments are levied when a project is initiated within in a city area to increase property values and grow the

property tax base. These special assessments, which can account for up to 25 percent of local government revenues, can be used to directly finance ongoing or future infrastructure costs, and/or can be secured as collateral for the issuance of bonds. These fees have mostly been used to cover capital and operational costs.

142. **The FIBRA model in Mexico, which are like Real Estate Investment Trusts (REIT), is designed to encourage investment in real estate assets.** The FIBRA model was launched in 2011. In accordance with Mexican law, a FIBRA must be established as a trust pursuant to a Mexican law-governed trust agreement. The main purpose of the FIBRA trust is to acquire or construct real estate properties that are destined for lease or to purchase the right to obtain income from the lease of such real estate properties. Shares of FIBRAs are publicly traded on the Mexican stock exchange. FIBRAs pay dividends on the collected rents.

143. **Specific financial and contractual conditions relating to FIBRAs include the following:** (i) at least 70 percent of the trust estate of the FIBRA must be invested in real estate properties in Mexico and the remainder must be invested in either securities issued by the Mexican Federal government or in shares issued by mutual funds; (ii) properties developed by the FIBRA must be leased and may not be sold within four years of completing construction; (iii) the FIBRA must distribute to its real estate trust certificates (CBFI) holders at least once a year, and no later than March 15 of each year, at least 95 percent of the net of tax result accrued during the immediately preceding year; (iv) the trustee of a FIBRA must issue certificates to represent the trust estate and these certificates must be publicly offered. FIBRAs offer significant tax advantages, including the deferral of income tax of up to 5 percent of the taxable profits on the activity, and the elimination of dividend tax on distributions.

144. **Although the FIBRA model has been used to invest in hotels, industrial zones, and office buildings, FIBRAs can also be used to finance the infrastructure adjacent to these facilities.** In 2015, the Government of Mexico established the regulations for the FIBRA-E structures, which will be dedicated toward the development of one or more of the following activities: (i) electricity generation, transmission, and distribution facilities; (ii) roads, highways, railways, and bridges; (iii) port and port facilities; (iv) civilian airfields; (v) public drinking water, drainage, sewerage, and wastewater treatment facilities; (vi) telecommunications.<sup>27</sup> Supplemental regulations were enacted in April 2016. FIBRA-E structures provide similar tax benefits. However, no FIBRA-E structures have been listed on the Mexican stock exchange, as of this writing.

145. **In five years, FIBRAs have grown from one firm with a market value of USD 300 million to ten companies with a total estimated market value of USD 18 billion.** However, the value of FIBRAs are indirectly tied to macroeconomic conditions in the Mexican and the market for U.S. REITs. Due to prevailing conditions, FIBRAs have lost approximately 20 percent of value from 2014 to 2015. Incentive misalignments and liquidity have been the biggest concerns for institutional investors.

### **C. After Close of Finance – Contingent Liabilities**

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<sup>27</sup> FIBRA-E structures are related to Development Trusts (“CKDs” in Spanish), which can be used for broader activities including infrastructure, real estate, mining, technology, and general business activities.

146. **A few countries have developed comprehensive frameworks for managing contingent liabilities in PPPs.** This can take the form of specific national PPP legislation, regulation, or the adoption of international legislation in the case of the European Union countries. In Australia, guidelines set conditions under which the government can provide guarantees or incur contingent liabilities, including the requirement that risks are explicitly identified, and expected benefits outweigh the level and cost of risks. Guidelines requiring similar justifications for guarantees and contingent liabilities are followed in Canada.

147. **In Colombia, the framework for managing contingent liabilities has been codified in a series of laws and decrees, which includes the creation of Contingent Liability Fund.** Beginning with Law #448 in 1998 which addressed the issue of provisioning for the contingent liabilities and the creation of a Contingent Liability Fund a year after the law was passed. The National Planning Department estimated that total contingent liabilities of the government—not limited to PPPs but including legal risks, natural disasters, pension liabilities, and others—had reached 154.11 percent of the gross domestic product (GDP).<sup>28</sup> Subsequent legislation in 2003, 2007, 2012, defined conditions for budgetary responsibility and transparency, the definitions of contingent liabilities, disclosure requirements, and extensions of contracts.

148. **Minimum revenue guarantees in Chile have helped attract private capital and are capped so that the Government does not have unlimited demand exposures.** Most of the road and airport concessions in Chile contain revenue guarantees. Minimum revenue guarantees are capped at 70 percent of private investment, plus operations and maintenance costs. However, if actual revenues are higher than forecast, then the public sector can share in the profits from the facility. Thus, the traffic risk is shared, the government guarantee is not unlimited, and excessive losses to the private sector are avoided. Although the revenue guarantees are not legally tied to the concessionaire's borrowing, they do facilitate access to private capital.

149. **The Ministry of Finance in Chile has taken on more of an active involvement during the procurement process and has a strong reporting framework.** Although the Ministry of Public Works (MOP) takes the lead in designing, awarding, and monitoring concessions, the Ministry of Finance is involved in the design of the concession contract, contract award, and any renegotiations of the contract. The Ministry of Finance is represented on the selection committee that evaluates the tender and must also approve the contract with the private sector. The Ministry of Finance's role continues after the concession has been awarded as the Minister of Finance must sign any supreme decree that formalizes a change in the concession contract.

150. **The Ministry of Finance must also approve any agreement between the concessionaire and the MOP in the event of a contract dispute.** In addition to using IMF reporting guidelines for direct and indirect guarantees, the Government of Chile also prepares annual reports on: (i) the public finance impact of PPPs which estimates the net present value of committed guarantees, subsidies, and availability payments against the government's available fiscal space; and (ii) a contingent liabilities report, which uses quantitative methods to estimate

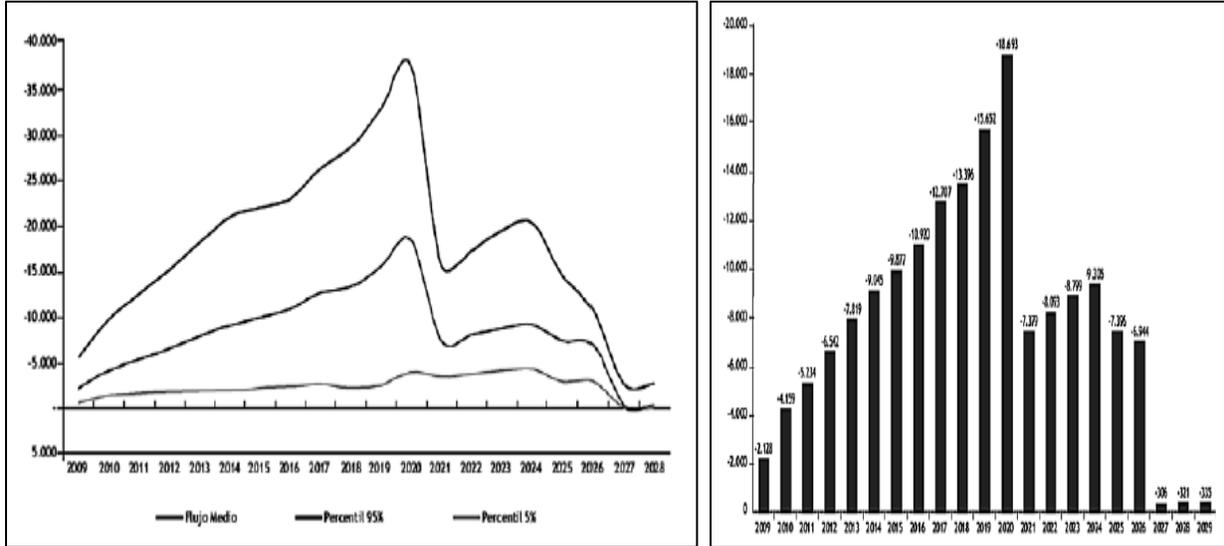
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<sup>28</sup> The Republic of Colombia. Ministry of Hacienda and Public Credit, "Contingent Obligations: The Colombia Experience, p. 10, 2011.

the expected cash flows and the potential variability of aggregate project cash flows from year to year.<sup>29</sup>

151. Figure 12 summarizes forecasted payments and the probability distributions of these payments at the 5th, 50th, and 95th percentiles from 2009 to 2025 (in millions of pesos).

**Figure 12: Chile, Forecast Payment and Probability Distributions**



Sources: Government of Chile (2008) and the World Bank

<sup>29</sup> Irwin, Timothy and Mokdad, Tanya, The World Bank, “Managing Contingent Liabilities in Public-Private Partnerships (PPPs), Practice in Australia, Chile, South Africa, pp. 17-26” 2010

## V. Strategies for Supporting Capital Market Financing of Infrastructure

152. **The financing of infrastructure should build on existing initiatives and programs.** Potential support with respect to capital market financing of infrastructure, PPPs, and project finance transactions could involve the following areas: (i) expanding the types and durations of capital markets instruments that can be used to finance infrastructure; (ii) replicating the FODER model to support a general infrastructure fund; and (iii) technical assistance for the PPP program.

### A. Expanding Capital Market Instruments

153. **Technical assistance should be considered for the expansion and deepening capital market activities.** The diagnostic of capital market activities along with the overview of international best practices outlined a several areas that can potentially expand the types of capital market instruments used to finance infrastructure. These reforms can potentially be achieved through a review of market barriers as well as the development of possible modifications to the legal and regulatory framework to address these issues. Potential activities include the following:

- i. Encourage insurance companies to offer new types of products;
- ii. Rebuild the private systems by incentivizing the establishment of asset management companies for managing pension assets;
- iii. Provide preferential tax treatment for closed-end mutual funds or value capture adjacent to real estate;
- iv. Support the establishment of REITs;
- v. Review the governance structure, mission, and investment strategy of the FGS;
- vi. Promote the issuance of peso-linked bonds while developing a peso/dollar hedge market.
- vii. Expand the use of special purpose trusts, such as FODER, to provide financial support and credit risk enhancements in case PPP projects experience temporary financial pressures.
- viii. Examine “value capture” strategies based on increasing tax revenues from land adjacent to infrastructure assets, as complementary financing sources;
- ix. Analyze how sector-based funds with dedicated tax revenues (e.g.: gas taxes, for road financing) can be used as collateral to secure bond issues.
- x. Enhance the private placement (144(k)) style regime to better incorporate project bonds for sale to qualified investors.

### B. Guarantee Facilities

154. **The FODER model provides guarantee support to renewable energy generation, which can only be called in limited circumstances as a last resort.** FODER guarantees will cover three types of payment obligations: (i) ongoing payment obligations of CAMMESA for purchasing energy under the PPAs, (ii) government payment obligations emerging from the option to purchase eligible sub-projects, and (iii) government payment obligations emerging

from the right of IPPs to sell their sub-projects to FODER (i.e. to exercise a Put Option) if specific macroeconomic or sector risks materialize. To mitigate risks expressed by private investors, GoA also requested that the guarantee facility backstop certain Put Option payments that can be triggered by the following events of default: (a) extended non-payment by the off-taker under the PPA, (b) inconvertibility, (c) intransferability, (d) material adverse changes to FODER's operations without the subproject's prior consent, and (e) non-compliance with an arbitral award or judgment.

**155. Options should be explored for modifying or expanding partial credit guarantee facilities (as used for RenovAR) to include other infrastructure sectors or support sub-sovereign entities in their respective PPP programs.** Article 9 (q) of the new PPP Law permits the Government of Argentina to provide credit guarantees and to use revenues generated from a PPP projects as security. A similar structure as the RenovAR credit enhancement can be developed for other infrastructure sectors, such as road surface transport, irrigation, or water supply, extended to sub-sovereign entities, or involve additional guarantee components not included in the RenovAR program. Partial credit guarantees can be sector specific or multi-sector depending on project readiness and demand factors.

**156. Given the GoA's sectoral priorities as documented in this report and its limited fiscal space, the implementation of financial mechanisms supported by the PPP law will be key to the success of the PPP program.** At the same time, the Government's keenness on deepening the capital markets means that instruments to attract bond investors to infrastructure projects (both brownfield and greenfield) need special efforts to optimize their design and offer coverage for critical investor risks. While bond investors typically complement rather than substitute for bank and sponsor financing of infrastructure, new products are being considered to bring bond investors more upstream in the process. Specialized credit enhancement instruments should thus be in place as pipeline projects materialize and following the awarding of tenders, financial closing can be expedited.

**157. In the above context, innovative infrastructure financing and guarantee mechanisms that can be developed considering useful credit enhancement design options to attract both capital market and other investors<sup>30</sup>, may include the following:**

- Use of contingent credit lines as stand-by liquidity and/or credit enhancement facilities.
- First loss partial credit guarantees (e.g., up to 20 percent) backed by multilateral institutions, the GoA, BICE, state-owned banks, and/or private banks. Some of the large state owned commercial banks are interested in participating in partial credit guarantee facilities and their large capital and liquidity base may also help leverage other investors.
- First loss "contract payment" guarantees, for example, from the GoA to the sponsor, or from the sponsor to the contractor for specified risks affecting project cash flows.

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<sup>30</sup> Bond investors and credit rating agencies typically prefer outright credit risk guarantees which are easier to price. Other financiers or sponsors, may consider taking contractual risks, e.g. timely land purchase, right-of-way acquisition, revenue risk, or geological risks if these risks can be properly priced and managed. Project enhancements and guarantee mechanisms are often incorporated into the PPP contract as a means of sharing these risks with the public sector. However, capital market participants are unwilling to directly assumes these risks.

- Use of a financial intermediary to insure or guarantee infrastructure bonds, especially to cover interest payments during construction or bond principal default. This would address the “J curve” pattern of infrastructure project cash flows. Such structures including private capital could count on multilateral guarantees channeled via a domestic development bank or a special trust therein, or use long term contingent multilateral credit to help capitalize an Argentine guarantee fund (with private or mixed participation).
- Use of contingent credit lines as a guarantee backstop facility for a domestic development bank to provide limited first loss coverage (e.g., up to 20% per project) to project financiers (banks or bondholders).
- Set up a stand-alone infrastructure fund to issue debt backstopped by a 20-30 percent credit guarantee limit for first losses.
- Raise funding from diversified investors to create an investment fund to provide early financing for a set of infrastructure projects, and whose capital can be increased by subscription of additional equity shares.
- Securitize promised government availability payments to raise bond funding at the outset, and include a third party guarantee to cover payments to bondholders if availability payments are not disbursed due to the concessionaire/sponsor not meeting project milestone outputs.

158. In the context of the above instruments, MoF should also put in place monitoring systems and methodologies to track its contingent liabilities (for those instruments that imply government exposure) to assess its contingent indebtedness.

### **C. Legal, Regulatory and Institutional Reforms**

159. **The following technical advisory areas should be considered to provide a more supportive and conducive business environment for expanding and deepening capital market activities, especially for infrastructure finance:**

- i. Capital Markets Law. Provisions could be added or new legislation, regulation or policies could be developed that would: (i) encourage insurance companies to offer new types of products; (ii) rebuild private pension systems by incentivizing the establishment of asset management companies; (iii) providing preferential tax treatment for closed end mutual funds; (iv) supporting the establishment of REITs; (v) reviewing the governance structure, mission, and investment strategy of the FGS; (vi) encourage the development of long-term hedging instruments to manage currency risk; and (viii) incentivize the issuance of local currency bonds and project bonds while developing a peso/dollar hedge market.
- ii. Refine the Regulatory Framework of PPPs. An initial set of regulations were drafted and issued in March 2017 in support of the new PPP law. Additional international expertise should be deployed in the drafting of the subsequent iterations of the regulatory framework. It is recommended that specific regulatory guidelines also be developed with respect to the following topics: (1) unsolicited proposals; (2) information disclosure, and (3) sub-sovereign entities.

- iii. Support the implementation of the normative framework for PPP. This can include developing the guidelines and operational procedures.
- iv. Institutional Structure. The GoA needs to define the institutional structure of the new PPP unit as well as the governance structure, roles and responsibilities, operational procedures for the PPP unit.
- v. PPP Project Pipeline. Support should be considered for the development and implementation of an analytical framework for evaluating, selecting and prioritizing potentially bankable PPPs across multiple sectors.
- vi. Market Sounding. The GoA should conduct market sounding activities to gauge the interest of contractors, infrastructure operators, and financial institutions to invest and lend to PPP programs and projects.

160. **Clarifying the regulatory framework regarding PPP to encourage similar programs at the sub-sovereign level.** There has been interest by the Province of Buenos Aires, the Province of Cordoba, and the Municipality of Buenos Aires to develop PPP program for local infrastructure projects.

## ANNEX 1: ANSES' Equity Ownership

1. As a hold-over from the nationalization of private pensions, ANSES through FGS has retained minority equity positions in over 40 locally based companies, including several firms that are responsible for energy generation or providing infrastructure services. **Table 16** summarizes equity ownership and dividend policy of the companies in which ANSES held an equity position as of December 2016.

**Table 16: Summary of ANSES Equity Position**

Company	% Ownership	Dividend
Banco Macro S.A.	31.50%	
San Miguel S.A.	26.96%	Y
Gas Natural BAN	26.63%	
Consultatio S.A.	24.88%	Y
Edenor S.A.	26.81%	
Distribuidora de Gas Cuyana	26.12%	Y
Siderar S.A.	26.03%	Y
Telecom Argentina S.A.	24.99%	Y
Transportadora de Gas del Sur S.A.	23.11%	
Pampa Energía S.A.	23.23%	
Grupo Concesionario del Oeste	21.56%	Y
Mirgor S.A.	21.54%	Y
Emdersa S.A.	20.96%	
Edesal Holding S.A.	20.96%	
Eggsa Holding S.A.	20.96%	
Edesa Holding S.A.	20.96%	
Grupo Financiero Galicia S.A.	20.32%	Y
Imp. y Exp. de La Patagonia S.A.	20.24%	
Molinos Río de La Plata S.A.	20.04%	Y
Transener S.A.	19.57%	
Solvay Indupa S.A.*	16.71%	
Banco Patagonia S.A.	15.29%	
Endesa Costanera S.A.	15.39%	
Camuzzi Gas Pampeana S.A.	12.65%	
Petrobrás Argentina S.A.*	11.85%	
Petrobrás Energía S.A.	11.85%	Y
HOLCIM - Juan Minetti S.A.	11.31%	Y
Capex S.A.	10.73%	
Aluar Aluminio Argentino S.A.I.C.	9.35%	Y
Grupo Clarin S.A.	9.00%	Y
Metrovías S.A.	8.55%	
Metrogás S.A.	8.13%	
BBVA Banco Francés S.A.	7.90%	

<b>Company</b>	<b>% Ownership</b>	<b>Dividend</b>
Euromayor S.A.	6.25%	
Socotherm Americas S.A.	6.11%	Y
Quickfood S.A.	5.27%	
Banco Hipotecario S.A.	4.94%	Y
IRSA S.A.	4.48%	
Cresud S.A.	3.56%	
Inversora Eléctrica de Bs.As. S.A.	2.09%	
Central Puerto S.A.	1.75%	
Alto Palermo S.A.	1.38%	Y
Transportadora de Gas del Norte S.A.	0.73%	
Ledesma S.A.	0.38%	Y
Alpargatas S.A.I.C.	0.01%	
Y.P.F. S.A.	>0.01%	Y

Source: ANSES

\* ANSES has recently its sold equity ownership in these companies