

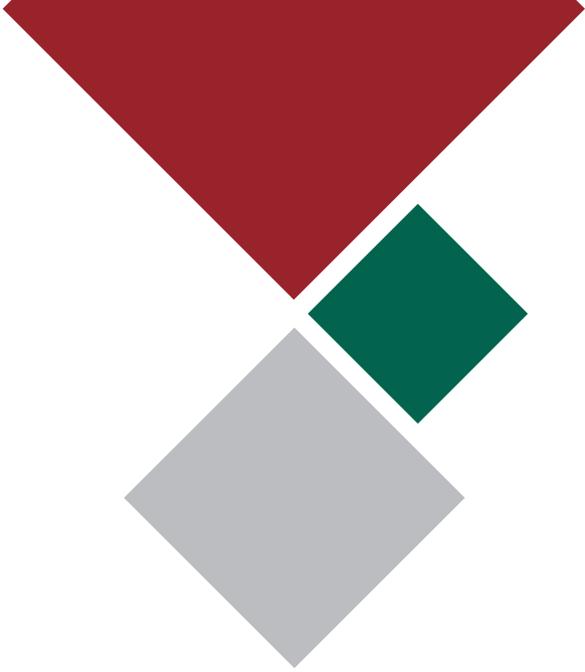
Private Financing of Public Infrastructure through PPPs in Latin America and the Caribbean

Executive Summary

Catiana Garcia-Kilroy
Heinz P. Rudolph



WORLD BANK GROUP



Executive Summary

Financing public infrastructure is an important challenge in the growth agenda of the Latin America and the Caribbean

(LAC) region. Subject to fiscal constraints, many countries in the LAC region have been looking at private sector financing as an alternative for financing public investment. With different degrees of success, countries in the region have been using Public-Private Partnerships (PPPs) since the late 1980s. Although the needs of investments in public infrastructure vary by country and by sector,¹ it is clear that public resources might not be enough. While public infrastructure will continue to be largely financed by the public sector in the LAC region, significant room still exists for private sector financing of public infrastructure. In advanced economies (AEs), such as Australia and the United Kingdom, PPP projects account for 10 to 15 percent of overall infrastructure investments.²

This report analyzes the challenges and policy options to increase private sector financing in public infrastructure in the LAC region through PPPs. Given the diversity of LAC countries, the report takes a conceptual approach and analyzes the different alternatives of private sector financing of public investments that different groups of countries can utilize. This approach also takes stock of the different status and degree of institutional and financial development in LAC countries in light of

ongoing promising legal reforms and financial innovations for infrastructure finance in the LAC region, as well as in AEs and other regions.

Only a few countries in the region have financial sectors and capital markets with the level of maturity to support the financing of PPP programs. Only large- and medium-sized countries with a minimum level of financial development would be able to afford PPP programs broad in scope and in local currency. This situation contrasts with other smaller countries of the LAC region, where the financial sector and capital market might have only the capacity to finance some flagship infrastructure projects, at the most. The problem is not only the size of the local financial markets, but also their level of sophistication and the structure of incentives to invest in long-term assets.

International financing and development finance institutions (DFIs) are important complements to domestic markets. PPP projects benefit not only from the resources that international banks bring, but also from the technological transfer, especially in the area of project finance. The report highlights that domestic banks in most of the countries in the region have deficiencies in this area, and partnerships with international institutions are a good way of improving the standards and bringing efficiency to the cost of funding. In addition, DFIs may play an important role in countries with smaller financial sectors and unsophisticated capital markets. Far

¹See Fay and Andres (2017).

²See McKinsey Global Institute (2016).

from becoming the sole lender of PPP projects, the role of DFIs is to help address market failures and provide a catalytic role that may enhance participation of domestic and international investors in the financing of domestic public infrastructure.

A solid infrastructure finance agenda in LAC is dependent on a decoupling from the political cycle and creating strong PPP institutional and financial governance arrangements. This agenda requires reforms on five critical areas: (1) reinforcing ongoing reforms in PPP legislation and institutions to ensure a pipeline bankable and fiscally sustainable projects; (2) leveraging on a greater role for project finance from domestic and global banks; (3) developing a flexible and suitable menu of capital market vehicles and instruments; (4) addressing incentives leading domestic pension funds to invest with short-term horizons; and (5) introducing a change of mandate for national DFIs so they shift from direct investments to catalytic interventions addressing market failures. Additionally, multilateral DFIs can play an important role in supporting governments in these reforms and with financial products to crowd in the private sector, such as credit enhancements and co-investments.

Macroeconomic and Financial Context of PPPs

Greater efficiency in resource allocation is at the core of the use of PPPs. Although the possibility of doing off-balance-sheet accounting of public investments is perceived by policy makers as an attractive incentive for financing infrastructure via PPPs, their main benefit is in their capacity to diversify risks among stakeholders and take advantage of greater efficiencies and innovations in the private sector. While in traditional public provision of infrastructure, most risks are taken by the taxpayers, in the PPP framework these risks are diversified among different agents under the criterion of allocating them to the party with the greater capacity to manage it. Compared to public provision where governments in the region have seldom conducted

risk assessments, the main risks in well-designed PPP frameworks should be properly identified and priced.

The higher cost of financing PPP projects compared to public provision reflects a mechanism of financing based upon the strength of the project cash flows and a more complex financing structure, where risks are priced and diversified. Conceptually, the all-in economic cost, given a certain quality of service and risk allocation, should be lower as a result of efficiency gains in the construction and operation of the service. While in public provision, infrastructure is funded at the cost of funding by the government, in a PPP scheme, the cost of funding reflects the private sector's assessment of risks of the project, the sponsor's credit rating, and the cost of credit enhancement if required. Although the latter might be more expensive than the first, taxpayers do not typically bear commercial risks, such as construction and maintenance of the project. Performance standards, including quality of service, are defined so the private sector sponsor is responsible for managing those risks. Risk diversification, efficiency gains, and lower fiscal costs, in exchange for a higher cost of financing may provide significant added value compared to traditional public provision of infrastructure.

However, not all infrastructure projects are eligible for PPPs. The transport sector is one of the preferred sectors for PPP due to (1) the presence of economies of scale, (2) the possibility of charging fees, and (3) the possibility of enforcing quality of service. PPPs compete with other forms of private sector participation, including privatizations. PPP frameworks offer significant flexibility in terms of planning and changes in future demand, compared to privatizations. In addition, since each concession has a term and new auctions will need to be conducted in the future for each project, the nature of the sector needs to ensure symmetric information for potential participants in order to make the competitive process efficient. To the extent that the incumbent can retain relevant information—due to the complexity of the task—and consequently may win future auctions, it may be better to move

to privatization or other forms of private sector participation.

The financial sector in the PPP structure may add value in screening viable projects when a “user fee” model is selected. Although selecting PPP projects based on their social and economic benefits is the role of the government, the financial sector could also play a role in assessing the financial viability of projects and deciding what projects receive financing and move forward and what projects not to develop. For this framework to work, it is essential to present projects with a high level of preparation so financiers can assess and price the main risks of the project, including construction and revenues. The financial sector can conduct this financial assessment using market criteria to the extent that projects are not fully supported with government guarantees and government payments to the concessionary company. Depending on the context, in some countries this could be a way of preventing the development of politically motivated projects with low social returns. In other countries with strong institutions and governance frameworks, availability payments could be a relevant model to support projects with high economic and social returns or to lower the cost of financing.

PPP Institutional and Regulatory Framework

Governments in the LAC region have been using PPPs as a procurement method since the late 1980s, but the evolution and level of sophistication of the various PPP markets have not been uniform. Chile and Mexico are considered the most successful programs in the region, especially in the transport sector. Brazil, Colombia, and Peru also have an extensive track record on PPP projects. However, all of these markets have issues to be solved to create a competitive bidding environment and finance projects using project finance. Argentina has seen renewed interest in PPPs albeit with no successful projects having been awarded yet. The Dominican Republic and Jamaica

are the leading markets in the Caribbean and are now revising their PPP frameworks. Other countries such as Bolivia, Ecuador, Nicaragua, and Venezuela, have not developed viable PPP initiatives.

Over the past two decades, most countries in the LAC region have improved their legal and policy PPP frameworks. Nineteen countries have enacted PPP legislation, and their PPP frameworks have consistently been revised and improved. For example, over the years, Brazil, Chile, Colombia, Mexico, and Peru have revised their strategies regarding financial guarantees, unsolicited proposals, risk allocation, governance and project selection, accounting and management of contingent liabilities, conflict resolution, and contract renegotiation. Although 17 countries have in place some form of PPP unit, significant challenges remain to address the high potential demand for PPP projects.

In addition, governments in many LAC countries have put in place comprehensive financial management schemes for assessing contingent liabilities and fiscal commitments. Chile, Colombia, and Peru, for example, have mechanisms in place to evaluate and account for the fiscal commitments related to PPP projects. For example, Peru has expanded business case requirements to include ceilings on government financial commitments, either funding or contingent liabilities. Since 2000, Chile’s government has put in place a sophisticated model for valuing contingent liabilities of PPP projects. At the subnational level, the state of São Paulo in Brazil has created the São Paulo Partnerships Corporation to provide and account for fiduciary guarantees to PPP projects. Moreover, new accounting standards for PPPs and concession arrangements (IPSAS 32) are starting to be adopted within the region.

Despite initiatives to improve PPP frameworks, challenges remain particularly in the areas of infrastructure planning and project preparation. Only a few countries in the region have developed project pipelines based on socioeconomic cost-benefit assessments—reflecting political priorities before a decision is made on whether to procure

through public works or through PPPs. Additionally, in many countries, projects tend to be launched into procurement without adequate project preparation because of (1) the desire to accelerate project delivery and (2) the lack of internal capacity and budget. The lack of information, particularly detailed engineering studies defining scope and performance specifications, as well as short timeframes for participants to prepare for the bidding processes have resulted in low competitive processes, with participants bidding with wide margins to hedge for unmeasured risks, and incentives to renegotiate contracts. These efficiency losses have also resulted in costly delays in reaching financial closing, and ultimately project delivery.

Improving project preparation and allocating risks properly are essential steps to bring efficiency to the PPP process. In the presence of low-level project preparation, public authorities in many countries in the region struggle to structure and present to the market bankable PPP projects that can attract sufficient interest among sponsors. A common response for governments in LAC countries to offset the lack of bankable projects, characterized by low-level proper project preparation, is to accept more risk than standard and less favorable contractual terms in the PPP contracts. Although these risk allocations have enabled many PPP projects to move forward, such measures ultimately undermine the potential “value for money” for these projects, reduce efficiency, shift back risks to taxpayers, and lead to increased project costs.

In the LAC region, many sponsors originate from the national construction industry, with limited expertise in the long-term financial business of PPPs. In many countries, markets are characterized by a shallow pool of local sponsor competitors, who are relatively inexperienced with PPP delivery. A weak capital base of these companies, together with limited or no experience in the concession business, has contributed to the high rate of contract renegotiation and delay in reaching financial closing. The evidence suggests that the presence of international concessionary companies with experience in the PPP business has a positive

effect on the programs’ credibility and brings in financiers with expertise in project finance.

Banks and Infrastructure Finance

While banks are the main private sector financiers of public infrastructure in AEs, domestic banks in the LAC region have little exposure to infrastructure finance. Banks provide debt financing for projects under several ownership models: purely private sector ownership, PPPs, and projects developed by state-owned enterprises. In the past few years, most infrastructure projects developed in LAC countries have been financed by international banks. Brazilian banks play the largest role of any LAC banks in infrastructure finance, both in Brazil and throughout the region. Brazil is the only LAC country that has a bank ranked among the 100 initial mandated lead arrangers in 2015.

The project finance market in the LAC region has had the strongest recovery among Emerging Market Economies (EMEs) after the global financial crisis. After a 42 percent annual drop in 2009, the region’s volumes have had a fast recovery, doubling the precrisis market share in project finance in the period to 28 percent at 2015 levels. Also as in other regions, banks have been the main suppliers of financing in infrastructure projects in LAC countries in the last five years.

Strengthening the capacity of domestic banks to become more active in project finance is essential to increase private financing for infrastructure in the LAC region. With the exception of Chile and Mexico, project finance has been relatively scarce in the region. Several preconditions need to be in place for project finance to become relevant, beyond sporadic projects: (1) PPP frameworks and well-structured projects with a risk allocation matrix that the private sector is able to manage; (2) quality project sponsors with financial solvency and credibility; and (3) regulations and supervisors sensitive to project finance-specific features in relation to corporate lending. In addition, the presence of

international banks with expertise in the area of project finance can help in enhancing competition and transferring these skills to domestic banks. Development finance institutions (DFIs) can also play an active role in supporting these policies.

Even in the best scenarios, domestic banks will not be able to finance the public infrastructure needs of the region by themselves. Because the capital base of domestic banks is significantly smaller than the one in AEs, their capacity to finance public infrastructure is limited. Project finance in international banks is rarely above three percent of their assets. With a three percent ratio applied to domestic banks, the needs of LAC public infrastructure is unlikely to be fulfilled. However, the role of banks would still be central in project structuring and financing certain segments of projects (e.g., tranches of the construction phase) that would be necessary to attract financing from domestic and international institutional investors.

International banks have an important role to play both as providers of financing and in transferring project finance skills to domestic banks. Since the evidence suggests that international banks get involved in project finance mostly following their clients' demands, it is important to attract quality international sponsors. The fact that international banks lend in hard currency, typically limits their eligibility of projects to those in the tradable sector, in particular, projects that generate hard currency revenues, including ports and airports. In the absence of long-term markets, governments may consider the possibility of currency swaps to projects that generate revenues only in local currency. Alternatively, governments may create the conditions for facilitating local currency funding to international banks by allowing them to issue long-term debt domestically or through lending from domestic DFIs.

While banks have been the main providers of lending to PPP projects, the implementation of Basel III imposes some questions for the future. Although Basel III represents a challenge for the banking industry and capital and liquidity

requirements will be tightening, there is not enough information or evidence for assessing the impact of Basel III on the participation of local banks in project finance. However, four risk measures of the agreement have a potential impact infrastructure financing as already experienced in some AEs. The first one is the liquidity coverage ratio (LCR), which will be more stringent with contractual "committed facilities" granted to project finance than for other types of financing. The second one is the net stable funding ratio (NSFR), which restricts the maturity mismatch for lending in tenors above one year. Under this provision, banks with limited access to medium- or long-term funding would face strong restrictions to participate in project finance requiring long tenors. The third risk indicator relates to tighter limits for large exposures, which may limit the participation of relatively small banks in project finance, as projects are generally large. The fourth risk indicator is in the possible elimination of internal risk-based (IRB) models for project finance. Since external ratings may not be allowed or not be available, a more conservative capital provisioning may be applied.

Capital Markets and Infrastructure Finance

Since the 2008 financial crisis, governments increasingly have been looking to institutional investors to assist in financing public infrastructure. While banks are expected to continue as the largest private sector financiers of PPP projects, Basel III might restrict their capacity to lend in long tenors. Therefore, attention has turned to institutional investors to complement volumes, provide competition, and particularly help fill the gap in the longer tenors. Such investing is expected to grow substantially in the future as institutional investor assets are rapidly increasing in LAC countries. Globally, new instruments are being developed that will make these investments more attractive to institutional investors, and governments are modifying regulatory guidelines for institutional investors to make it easier for them to invest in infrastructure.

Long-term investors should be seen as complements, not substitutes, to traditional sources of financing from banks and sponsors. Although long-term investors can contribute to infrastructure financing with substantial volumes and debt holdings with long tenors, financing becomes more sustainable when they partner with qualified banks and professional sponsors. Banks and other partners may provide: (1) highly specialized knowledge in project finance and infrastructure; (2) higher risk appetite and capacity to manage certain risks that long-term investors might not be comfortable with (i.e., construction risk); and (3) more flexibility in reacting to project contingencies that may lead into debt restructuring (e.g., delays, cost overruns).

Features of infrastructure assets delivered through PPPs are generally misaligned with investment rules in the LAC region requiring in most countries listed capital market instruments. The most important misalignments are: (1) low liquidity; (2) low degree of standardization; (3) lack of performance and valuation benchmarks; (4) the need for partial drawdowns of funds during the construction phase of projects; and (5) a high probability of project contingencies that lead to renegotiating project covenants. All these features are obstacles to institutional investors, particularly pension funds that, in most countries, are required by law to invest in listed instruments subject to mark-to-market valuation and that lack the skills and institutional structure to negotiate with project sponsors.

Capital markets' financing solutions need to be flexible and open to a range of instruments matching project needs and the different risk-return profiles of investors. A global trend is blurring the dividing line between banking and pure capital market instruments to finance infrastructure. Hybrid financing structures mixing bank and capital market financing, particularly in greenfield projects, are able to address some of the challenges faced by pure capital market solutions. Through these structures, banks can provide financing in the shorter tenors and assume the function of controlling creditor, while institutional investors can take

the longer tenors and rely, in part, on banks' greater expertise in infrastructure finance. Projects in the less risky operation and maintenance phase with stable cash flows can be more easily financed with capital market instruments only.

The challenge in the LAC region is to explore in a more systematic way new unlisted capital market instruments as an alternative to traditional listed instruments. These instruments would be more suitable for financing infrastructure projects and be able to attract foreign institutional investors and banks. There is already a growing off-shore private placement market for international investors' financing infrastructure projects in the region. Instruments with the most promising results include project bonds, equity, and debt funds, although in some special cases direct investments may be the best option. Project bonds are gradually developing in the LAC region, although they are still facing the challenge of evolving into standardized structures and credit risk levels acceptable to a broader investor base. The availability of credit enhancement instruments provided by development banks or multilaterals is important in the initial stages of project bond innovations. Infrastructure debt funds are showing promising prospects in the LAC region to attract domestic investors and to provide long-term financing along with banks from the construction phase. Infrastructure equity funds are already present in the region but could be further developed to provide capital to domestic sponsors.

Robust PPP and project finance frameworks are a critical precondition for the success of capital markets' financing solutions. With some exceptions, both frameworks have been missing across the LAC region. In their absence, financing infrastructure through capital market instruments has been either sporadic or concentrated in off-shore instruments or in structured government bonds that are fiscally unsustainable.

Only a few countries in the region can be expected to mobilize financing for infrastructure through capital markets in a systematic way. Prerequisites include the existence of

long-term domestic institutional investors and a minimum depth of their government debt market providing price benchmarks. Additional enabling conditions include quality credit rating agencies, a supportive framework for institutional investors on both the issuance side and the investment regulations, and availability of credit enhancement options to support the initial stages of capital market innovations.

Institutional Investors and Infrastructure Finance

The significant infrastructure gap in the region contrasts with the portfolio structures of their pension funds, which remain highly invested in government securities and bank deposits.

Although the lack of diversification is partially a problem of lack of financial instruments, the regulatory issues tend to bias pension fund investments toward shorter term securities.

Defined contribution (DC) open pension funds are the predominant pension fund model in the LAC region.

These systems exist in Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Mexico, Panama, Peru, and Uruguay. Pension funds are managed by pension fund management companies (PFMCs), whose only objective is to manage pension funds. Contributions are mandatory for all dependent employees, and they may shift PFMCs more or less at any time. In addition, legislation in most of the countries allow PFMCs to offer different pension portfolios (*multifunds*), whose investment regulation is well defined and structured by type of instruments and exposure. In the DC pension system, pensions are calculated as a function of the value of the assets accumulated up to retirement. With the exception of Chile, which has a developed annuity market, retirement options in the rest of the countries are subject to transition rules or changes, including the case of Peru, which recently allowed contributors to withdraw a large majority of their savings at retirement age.

Contrary to common knowledge, DC pension funds are not necessarily long-term investors, and consequently they are not natural buyers of infrastructure bonds.

Since the regulatory incentives promote competition on short-term returns, DC pension funds do not necessarily have the incentives for investing in long-term instruments, such as infrastructure bonds, which offer more volatility compared to short-term fixed income instruments. In this regard, the presence of other institutional investors, such as annuity companies, with strong bias toward long-term maturities may help to pull pension funds into a long-term equilibrium. In the case of Chile, the depth of the long-term sovereign bond market and the strong long-term demand from annuity companies helped pension funds to invest in infrastructure bonds. The more cautious approach of DC pension funds in the rest of the LAC region toward infrastructure bonds can be explained not only by the low presence of annuity companies, but also from the mixed quality of the PPP programs during the different stages of implementation.

Regulatory amendments may help to align the investments of DC pension funds with the long-term objectives of contributors.

In the absence of long-term liability for pension funds, countries may consider modifications in the investment regulation of the mandatory pension funds, by introducing a minimum duration in the fixed income portfolio for them. This regulation would need to be aligned with the available supply of instruments in a way that would avoid distortions in the yield curve structure. Alternatively, the regulatory framework may consider the use of long-term portfolio benchmarks for pension funds that take into consideration the contributors' long-term objectives.

While DB pension funds are also supporters of infrastructure bonds, most of the existing plans in the region are gradually reducing the term of their liabilities.

Brazil has the largest DB pension funds in the region, with approximately 80 percent of the assets of the closed pension funds being DB (approximately US\$160 billion). Since most of these plans have been closed for new entrants for more

than a decade and their liabilities are shortening over time, their appetite for investing in long-term bonds is gradually decreasing. Despite this consideration, Brazilian DB pension funds are potentially strong supporters of investments in public infrastructure and have the necessary volume to kick-start a more active role of institutional investors in the financing of infrastructure. The main regulatory challenge is to design investment vehicles that may address their risk appetite, in particular regarding their aversion to construction risk and difficulty in dealing with the J curve.

For institutional investors to participate in the financing of infrastructure, it is essential that financial vehicles reflect acceptable risk-sharing arrangements. The contractual arrangement should specify the type of risks that bondholders are willing to take. For example, pension funds typically are not comfortable with engaging in the construction phase, but they are comfortable in taking operational risks. Liquidity risk is, in most of the cases, a significant risk for DC pension funds.

Standardization of the financial vehicle can facilitate the investment of DC pension funds in infrastructure. Because regulation requires them to take only minority participation in the issuance of shares and bonds, pension funds have a strong preference for instruments that can reach a minimum level of liquidity. To the extent that infrastructure bonds resemble, in structure, other bonds in pension portfolios, including sovereign and corporate, and risks are properly priced, pension funds can add significant demand for these assets. Although the standardization of the instrument may help in increasing volume, it does not imply greater monitoring capacity.

In addition, investments through intermediaries, such as investment funds, may increase the capacity of the institutional investors to monitor the projects. As pure portfolio managers, DC pension funds in general have limited capacity to monitor each project. Thus, the presence of infrastructure funds with strong managers may help to mitigate project selection and ensure that selected

projects follow good practices. However, it is essential to have in place complete collective undertaking agreements, such that the responsibilities of the general partners are properly defined.

The Role of DFIs in Infrastructure Finance

DFIs can play a supplementary role in infrastructure financing.³ DFIs should be able to provide additionality in cases where market failures inhibit financial sector participation, but as enabling conditions improve, they should be prepared to backtrack and let the financial market stand on its own. As a consequence of different circumstances (e.g., degree of development of that particular market or lack of skills), private financiers in some markets might not be prepared to assess or manage the risks involved in a PPP framework. In these circumstances, DFIs may play a catalytic role in bringing private sector financing into infrastructure. In addition, DFIs may support PPP authorities by helping to improve the quality of project preparation. To fulfill these tasks, it is essential for DFIs in the region to align their mandates and governance structures with these objectives to ensure the additionality of their interventions.

The credibility of DFIs needs to be supported on a solid capital structure and adequate governance. The catalytic role of DFIs will be effective only to the extent that it is perceived by the market as an independent institution from the government. Based on arm's length principle, and good governance, DFIs can be instrumental in leveraging private sector participation in cases of market failures. Market failures that justify the presence of DFIs in infrastructure financing are limited to a handful of reasons:

³With the exception of Chile, most of the other PPP programs in the region have been supported by DFIs. A credible Chilean PPP program with a relatively strong institutional capacity and support from domestic and international financiers helped the country to rely on private sector financing for infrastructure projects.

- a. **Lack of expertise by the domestic financial sector in project financing structures based on no recourse to the sponsor's balance sheet.** This is an area common in many countries in the region, and DFIs can play a role in providing technical capacity to banks and other private financial institutions.
 - b. **Lack of size, depth, and sophistication of the domestic financial sector.** Because insufficient financial sector development affects the capacity to provide financing to projects with long tenors in the LAC region, DFIs can support the provision of long-term funding to projects through different means: second-tier long-term lending to banks; long-term loans complementing banks shorter term loans; or partial guarantees crowding in institutional investors, rather than providing direct financing to projects.
 - c. **Asymmetric information in early or revised phases of the PPP framework implementation.** Support from DFIs may help to reinforce credibility in new concessions, considering the less successful experiences of private sector financing in previous PPP programs or projects. DFIs can help to mitigate those risks by providing independent assessments of the new risk framework and by co-investing in public infrastructure with other private sector partners.
 - d. **Counterparty risk from central or subnational governments with low credit ratings.** Although larger countries in the LAC region with an investment-grade credit rating have counterparty risks that are typically manageable for investors, some of the smaller economies with credit ratings below investment-grade and shallow financial markets may find it difficult to attract international investors in the financing of their PPP program or projects. DFIs can be instrumental in supporting early stages of PPP framework implementation through the use of partial guarantees in all phases of the project cycle while the PPP framework is tested and consolidated.
 - e. **Lack of preparedness of the local concessionary companies.** A common feature in the LAC region is the limited capacity of the concessionary companies to deal with sizable PPP programs. Through the provision of technical expertise with the support of strategic partners, and by fostering private capital into these companies, DFIs can play a significant role in preparing local concessionary companies for competitive biddings. Strengthening the technical and financial capacity of local concessionary companies is especially important in cases of limited participation by foreign sponsors.
 - f. **Lack of a long-term currency hedge market.** Currency risk is one of the most challenging areas in project financing in the region. While participation of foreign financial institutions might be needed, they might be reluctant to finance projects that generate revenue in local currency. Larger markets, such as Brazil and Mexico, might be an exception, but smaller markets are in a difficult position. With the technical support from DFIs, governments' Treasuries might be required to provide hedge products able to address foreign exchange risks, including long-term currency swaps, while markets mature. These products would need to be priced in a way that reflect best estimates of long-term prices.
- In addition, DFIs can contribute to support governments in improving project bankability when, for technical reasons, project preparation and information are below marketable standards.** Problems in the quality of project preparation are widespread in the LAC region to different degrees depending on the country. Projects are often tendered without a sufficient degree of preparation, even in countries with solid PPP frameworks. Multilateral and domestic DFIs can provide valuable assistance with both funding and expertise. They can also help transfer knowledge about experiences with project preparation among countries, recommend best practices, and help to standardize procedures for appraising and structuring PPPs and concessions in LAC countries.

Table ES.1: Infrastructure Finance in the LAC Region in a Snapshot

Number of LAC countries with a PPP legislation	19
Number of LAC countries with a PPP unit	17
Average period between commercial and financial close (months)	9–12
Awarded contracts that get renegotiated	50–80%
Project finance targeting infrastructure finance (2015)	28%
Commercial bank finance of PPPs	39%
Project finance loans in banks' balance sheet (2015)	0.74%
International project finance bank flows received by top three countries (1997–2015)	73%
Number of countries with no project financing from international banks	12
Project bonds in total project finance debt in LAC countries (2013–2016)	19%
Infrastructure finance provided by DFIs (2011–2015)	30%

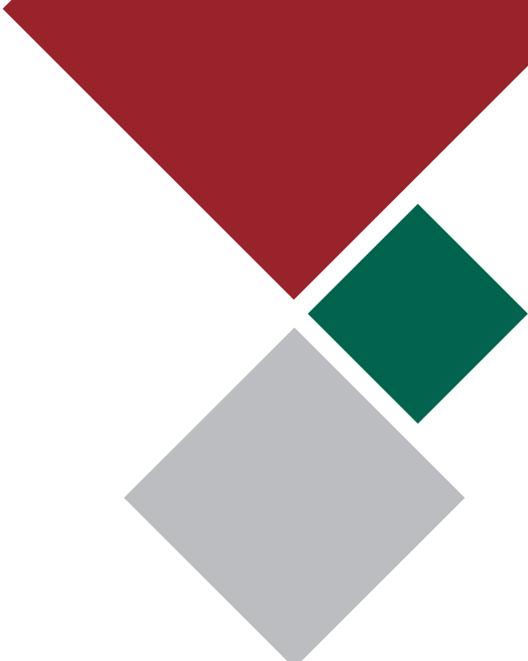
Note: Data for 2016 unless otherwise noted. Percentages relate to totals under each item.

This report is divided into six chapters. The first chapter provides a macroeconomic and financial context for the PPP schemes. Contrary to common belief that PPP schemes are simply a mechanism for government to off-balance the investments in infrastructure, this chapter argues that efficiency is the most valuable outcome of PPP, given an adequate risk allocation. Chapter 2 provides an institutional and regulatory framework of the PPP in the region and benchmarks the region against AEs. Chapter 3 provides an analysis of the strengths and weaknesses of the banking sector in the region and its ability to provide funding to PPP projects. Chapter 4 analyzes the domestic capital markets and the instruments and financial vehicles that can facilitate nonbank financing. Chapter 5 analyzes the role of domestic institutional investors, their constraints, and incentives for investing in public infrastructure.

The last chapter analyzes the role of development finance institutions, their role in addressing market failures, and their upstream contribution in project preparation, when needed. Table ES.1 provides a snapshot of some basic indicators of infrastructure finance in the region. These indicators are further elaborated in Appendix 1.

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Key Conclusions

While PPPs are typically perceived as an off-balance-sheet mechanism for public investments, their main advantage is to attain higher efficiency and quality through risk allocation to public and private stakeholders.

While financing costs might look higher compared with pure public financing of infrastructure, the PPP premium reflects the risk transfer away from taxpayers, including construction, performance, and revenue risk, among others. In exchange, PPPs are expected to offer better quality of service and overall lower all-in cost compared to public provision.

PPPs are not for all countries and all sectors. Only large- and medium-sized countries with a minimum development of financial development would be able to afford PPP programs broad in scope and in local currency. Other countries in the LAC region may use PPP for financing flagship projects.

Improving project preparation and allocating risks properly are essential steps to bring efficiency to the PPP process in the LAC region. It is essential to avoid practices that offset a low level of project preparation with riskier and less favorable contractual PPP terms for the public sector.

The risk allocation of PPP projects should create the incentives for the financial sector to assess the financial viability of projects in both user-fee and availability payment models. Depending on the country and project context each model would have

different trade-offs. User-fee models, when appropriate, can prevent the implementation of politically driven projects with low social returns.

Large foreign concessionary companies might be instrumental in bringing financing from international banks. These institutions might play an important role in transferring project finance technologies to local financial institutions.

Currency risk is a major constraint for international banks to participate in financing of public infrastructure projects. Under certain circumstances, the provision of long-term currency hedges by the government might be justified. Alternatively, countries may aim for the provision of local currency funding to international banks via the capital market or by domestic DFIs.

While banks have been the main private sector financier of infrastructure, the introduction of the Basel III agreement opens questions about the capacity of banks to continue providing long-term financing.

Capital markets, through a range of instruments, can play a significant role in complementing the financing from banks by channeling investments into longer tenors. Hybrid financing structures are being instrumental in attracting financing from some domestic and international institutional investors into greenfield projects.

Institutional investors in the LAC region are mostly defined contribution pension funds. Because they compete on short-term returns, they may not necessarily behave like long-term investors.

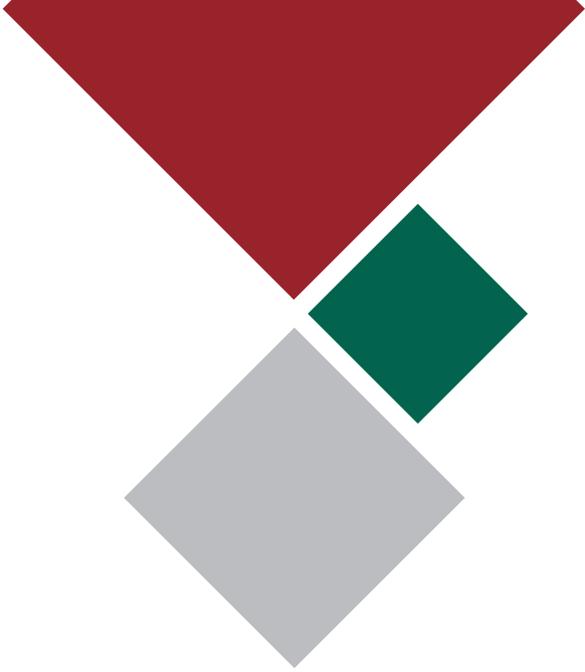
Natural long-term investors, such as defined benefit pension funds, such as the one present in Brazil, and annuity companies, such as the one present in Chile, can be catalytic in bringing other institutional investors into long-term financing.

Standardized investment vehicles that can benchmark against long-term Treasury bonds could make infrastructure bonds a core asset of the defined contribution pension industry.

By addressing market failures, development finance institutions can be instrumental in bringing private sector financiers into infrastructure

Development finance institutions may also play an important role, as an independent advisor, in supporting the government in project preparation, when needed.

The credibility of development finance institutions needs to be supported on strong governance standards and clear objectives.



Key Recommendations

PPP Institutional and Regulatory Frameworks

- ❖ Comprehensive programs of well-prepared public infrastructure projects, accompanied with solid PPP frameworks offering an efficient risk allocation among stakeholders, are key for attracting the attention of financiers.
- ❖ Strengthen project preparation with adequate and symmetric level of information to stakeholders, complete PPP contracts, and set in place transparent procurement processes that allow sufficient time for preparing quality bids and competition from international sponsors.
- ❖ Standardize PPP contracts to facilitate private sector participation and lower transaction costs.
- ❖ Ensure that the provision of availability payments and public guarantees are not substitutes to deficiencies in project preparation.
- ❖ Assess in each country and project context which risk allocation matrix, including the revenue model “user-fee” or “availability payments” would create the best incentives for the private sector to deliver the best quality service, assess the financial viability of the project, and proceed at the lowest possible financing cost.

Banks and Infrastructure Finance

- ❖ Create the conditions to attract competition from foreign concessionaries and foreign banks in PPP programs.
- ❖ Equalize the regulatory framework for banks on project finance vis-à-vis traditional mechanisms of financing (corporate financing).
- ❖ Monitor the potential impact of the implementation of Basel III on project financing.

Capital Markets and Infrastructure Finance

- ❖ Capital market solutions (such as hybrid financing structures) need to be flexible and open to a broad range of instruments matching project needs and the risk-return profile of investors.
- ❖ Explore in a more systematic way new vehicles and instruments as alternatives to traditional listed capital market instruments: project bonds, equity, and debt funds.
- ❖ A parallel agenda on the capital markets—enabling environment is required, including a reliable government bond long-term yield curve

to be used as benchmark, domestic institutional investors, and issuance and investment regulations supportive of infrastructure finance.

Institutional Investors and Infrastructure Finance

- ❖ Amend regulation aimed at incentivizing long-term investments, including minimum duration of fixed income portfolios in DC pension schemes, to help channel long-term investments of pension funds toward infrastructure.
- ❖ Overcome regulatory barriers to develop the annuity market.
- ❖ Develop standardized financial vehicles that reflect acceptable risk-sharing arrangements to attract pension fund investments.

Market Failures and the Role of DFIs in Infrastructure Finance

- ❖ Align mandates and governance structures with market failure justifications to ensure the additionality of DFI interventions.
- ❖ Ensure DFIs have the capacity to provide a menu of financial products (e.g., partial guarantees, co-investment, standardized investment vehicles) to crowd in private financiers and ideally offer at market rates.
- ❖ DFIs can play an important role in supporting PPP authorities to improve the quality of project preparation.



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