



BEST PRACTICES IN PUBLIC- PRIVATE PARTNERSHIPS FINANCING IN LATIN AMERICA



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**BEST PRACTICES IN PUBLIC-PRIVATE
PARTNERSHIPS FINANCING
IN LATIN AMERICA**

BEST PRACTICES IN PUBLIC-PRIVATE PARTNERSHIPS FINANCING IN LATIN AMERICA

Washington D. C. May 4 and 5, 2011

Conference Report

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EXECUTIVE SUMMARY

The conference dealt with recent efforts, made by the governments of Latin American and Caribbean (LAC) countries, to support the financing of their Public - Private Partnerships (PPPs) programs, and with the lessons learned from such efforts.

Between 2005 and 2009, the region maintained a growing trend in investments made through PPP schemes. In comparison to other regions, LAC was not affected by the global financial crisis to the same degree. In particular, projects in Brazil (energy sector) and Panama (Panama Canal expansion) mitigated the negative effects of the global financial crisis.

Following that line, the sectors that have concentrated higher levels of investment are energy and transport, while telecommunications, water and sanitation have not witnessed significant levels of investment. It should be noted, however, that more investment in ports, water and sanitation is needed. After the crisis, there has been decreased debt participation, an increase in risk aversion, as well as higher contributions, in the form of subsidies or payments, from governments to PPPs.

Although the recent trend in investments in infrastructure can be considered positive, there are still obstacles that limit further developments and PPP financing. In this sense, the participation of pension funds can be important. Among the factors limiting greater participation of pension funds in infrastructure projects are the delays in PPP process, the lack of technical analysis to define the project costs, the existence of other more attractive assets and more guarantees. The political commitment on regulatory stability and the provision of a clearer commitment for investment, as well as capital market development, play important roles in promoting infrastructure funding.

The participation of pension funds can be facilitated by a regulatory framework incorporating standart evaluation

methods and validated by independent third parties. In the case of difficulty in taking risks by investors and financiers, the participation of governments and multilateral agencies would be important to ensure feasible projects.

Regarding guarantee funds, which are created to cover partial or full government payment obligations, these have not been used enough. This may be due to a lack of incentives to promote their use, since they are available after the PPP award, and do not internalize the potential benefits in the bids nor cover construction risks. On the other hand, the presence of close substitutes may cover the risks.

In contrast, contractual guarantees have been most effective in achieving financial access to PPP projects. For instance, Chile, Colombia and Peru have implemented a variety of contractual guarantee schemes.

Moreover, PPPs subsidies have served to ensure net economic gains and financial viability of projects. In the case of Mexico and India, programs have been created based on grant funding. In Brazil and Colombia, the program works on the basis of budgetary appropriations by project. Funds for the subsidies have worked better than budget appropriations for each project, mainly because they promote transparency and demonstrate to investors the government's commitment in the approval process.

However, subsidies only make sense if policies are designed to maximize the value generated by each dollar of subsidy. To this end, policy design criteria should be considered, such as: sources of funding, eligibility criteria, amount of subsidy, method of payment, and administration of the grant. It is recommended to consider the market mechanisms (actions) to set the amount of subsidy in order to minimize the amount that the government has to pay. Also, evaluations on the use

of direct subsidies with indirect fiscal support ensure the fiscal impact of the project will not exceed economic benefits.

The assessment of fiscal risks in PPP projects is essential to ensure sustainability in the long term. Therefore, both certain and contingent commitments associated with PPP payments, both certain and contingent should be counted carefully. Certain payments must be regarded as public debt, since governments are contractually obligated to make these payments. The accounting for contingent liabilities should encourage an optimal allocation of contractual risk, ensuring effective risk management by the public and preventing an excessive accumulation of systemic risks.

Recognition of the inability to finance a large volume of projects is necessary in order to associate infrastructure constraints to capacity payment of each country. Prioritizing investment programs in public infrastructure involves balancing pro-growth investments (which generate revenue growth and enhance short-term budget) with pro-quality of life (enhancing long-term growth but with no short-term budgetary impact).

Moreover, in order to support the financial close of PPP projects, some governments in Latin America and the Caribbean have developed innovative instruments. Some of these were created before the financial crisis, such as infrastructure bonds (Chile, 1998) and Certificates of Recognition of Work-Annual Payment for CRPAO (Peru, 2006). Other instruments were created during the crisis, as for example, the Structured Equity Securities -CKDs (Mexico, 2009).

During financial close it is essential to have a project that is economically feasible, with adequate returns for investors. It is also essential to have a contract that clearly allocates risks, defines compensation mechanisms in the case of contract

termination, contains mechanisms for restoring financial and economic equilibrium and clauses that define tax stability. Also, inflation-indexed earnings are important in order to consider financial closure.

Finally, rising investment funds for infrastructure financing in Latin America and the Caribbean reflects the lack of investment in infrastructure, which varies by country. Nevertheless, the main challenge that lies ahead is to have proper PPP regulations, stability and long-term political commitment, simplified procedures for obtaining environmental licenses and expropriation procedures, project preparation studies, as well as appropriate allocation of risks.

INTRODUCTION

The need to close the gap in the provision of public services and infrastructure is still a great challenge for the governments of Latin America and the Caribbean (LAC). In this context, financing projects through Public-Private Partnership (PPP)¹ schemes, has been one of the more effective ways to achieve this purpose.

Nevertheless, the global financial crisis showed the weaknesses of institutions related to PPPs. One of these was the negative impact of access to financing for PPP projects in most countries, including LAC countries.

In the same way, during the last years, restrictions for PPP financing increased risk aversion of financial agencies, which translated in a significant increase in the role that LAC governments played in support of PPP programs through several mechanisms. In the case of PPP financing, governments have created or promoted – for example – investment funds (private, hybrid and pension funds), guarantee funds, subsidy funds, as well as innovative financial products. Likewise, some governments introduced changes to legislation, and to PPP contracts, in order to improve the *bankability* of projects.

On the other hand, against expectations of some countries in the region, PPPs have become an effective instrument to mitigate the effects of the financial crisis, through aggressive investment programs.

In this scenario, it is evident that the promotion of PPP mechanisms, its effectiveness and sustainability in the long run, includes not only sharing the knowledge about financial instruments, such as investment or guarantee funds among others, but also the institutional aspects associated with the correct performance of PPPs, the corresponding incorporation

1. In Spanish *Asociaciones Públicas y Privadas (APPs)*.

of regulations in investment contracts, risk allocation, tax impacts, and in general, indispensable aspects for an efficient management of projects throughout their execution.

In order to achieve this goal, it is necessary to carry out policies concerning information knowledge and development of capabilities for the private and public sectors. In this context, on May 4th and 5th, 2011 the conference “Best Practices in Financing Public-Private Partnerships in Latin America” was held in the headquarters of the World Bank in Washington D.C., in order to share best practices of PPP financing among LAC countries, with emphasis on the design, implementation and efficiency in the use of financial mechanisms developed by LAC governments as response to the effects of the global financial crisis.

Likewise, best practices can be applied in other regions in order to strengthen PPP programs.

This event has been an important effort in that direction, and gathered 120 participants in Washington, many of them representatives from 15 LAC countries, including PPP Agency officials, Treasury Ministries, directors of Planning Agencies, representatives of regulation agencies, as well as executives of investment banks, investment funds managers, infrastructure operators, rating agencies for Latin America, and in general, professors, researchers, PPP practitioners and representatives of multilateral agencies.

The audience included the online participation of a significant number of PPP practitioners (between 300 and 400 participants of 50 countries) through the Global PPP Network (<http://pppnetwork.ning.com>) of the World Bank Institute. All participants, in addition to seeing and listening to the presentations in real time, were able to ask questions and share their comments and opinions with speakers and panelists.

It is important to note that this experience has been possible thanks to the collaboration of the Ministry of Economy and Finance of Spain, the Public and Private Infrastructure Advisory Fund (PPIAF), the Banco Bilbao Vizcaya Argentaria (BBVA) of Spain and the World Bank teams of the LAC Sustainable Development Department (LCSSD) and the Public - Private Partnerships Program of the World Bank Institute (WBIPP).

We hope this report contributes to sharing experiences and lessons concerning the design, implementation and efficiency of mechanisms associated with PPP financing in LAC countries and other regions, and to providing an enriching and necessary debate on best practices and policies on PPPs in the international community.

Washington DC, September, 2011

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WELCOME SPEECH

The World Bank Vice-President for the Latin American and Caribbean Region (LAC), Mrs. Pamela Cox, inaugurated the conference. She then explained the meaning of the three "P's" under the Public- Private Partnership (PPP) concept for the World Bank (**WB**), which are key to the provision of infrastructure and basic services, economic growth and technology transfer for LAC.

Cox pointed out that the first "P" refers to the "Public Sector", entrusted with important responsibilities tied to the WB in terms of the supply and strengthening of capabilities; the second "P" refers to "Private Sector" and is associated with activities developed mainly by the International Finance Corporation (IFC), which provides consulting on the structuring of investment transactions. However, Mrs. Cox pointed out that in the WB, this sector also implies concerns with the creation of new jobs, human resources, equity, technology, innovation and investments in infrastructure. Therefore, the WB works for and deploys activities in both fields, public and private.

The last "P" (*Partnership*), refers to the Association between the public and private sectors, and is the most complicated variable in the PPP equation. LAC countries know well how difficult is to find the perfect combination of public – private partnerships. Perhaps that is the reason why LAC is the region where significant developments and innovations concerning PPPs have taken place. It is the first region to have counted on Independent Regulatory Agencies, the first to have massive programs in highway construction, the only region that has countless public participation methods in the same field (water), from privatizations to concessions. It is also the first region that experimented with different bidding variables, liberalization of telecommunication services, the energy spot market, port authorities and ports, and in using pension funds, for example, to extend their capital markets.

In spite of this being a great experience, unfortunately it is still insufficient because the region continues to suffer from low infrastructure investment levels. With respect to this, Cox pointed out that financing needs are so large that private investment is not enough to achieve much desired economic growth.

Lastly, she considered that developing infrastructure through PPPs also requires achieving increases in economic productivity, increases in connectivity, reduction of logistical costs and improvement in the quality of services, among others. Such improvements enable job creation, securing better conditions for the poor, which is related to the core objective of these efforts. A fourth “P” refers to “People”, that is, to the people of LAC who are the beneficiaries of all investments made.

INTRODUCTION TO THE CONFERENCE

José Luis Irigoyen, Director of the Transport, Water, Information and Communication Technologies Department and Head of the Experts Team on PPPs of WB, began his introduction by thanking the support of the Ministry of Economy and Finance of the Spain, the Banco Bilbao Vizcaya Argentaria (BBVA) and the Public & Private Infrastructure Advising Fund (PPIAF).

He mentioned that unlike what is usually expected, the global financial crisis forced many countries to look at infrastructure investments as a way to promote rapid growth, and in doing so, to overcome the crisis, even through fiscal packages. In the international sphere, within the G20 framework, one of the areas where progress should be reviewed, in order to introduce new support steps in the PPP agenda, is infrastructure. Other areas include safety measures in food, which is associated to the climate change agenda. In this context, Irigoyen pointed out that the role played by PPPs will be very important to attract not only additional financial resources, but also to generate management capacity in these sectors.

Concerning this matter and the response of the WB during the crisis, it should be noted that loans for the infrastructure sector reached US \$ 26 billion, which is quite a record for this organization. In projects related to PPPs, loans are near US \$162 million. Thus we cannot keep on considering PPPs as a marginal program, as just one more option, but as a significant way to contract and execute investment programs to provide infrastructure and services.

One of the main lessons learned is that the countries that work more efficiently in PPPs are those that have established objectives in investment programs through PPPs. By doing so, through project programs and not disassociated projects, investors feel more comfortable, as they achieve greater

efficiencies along the whole project cycle and establish a project history that reduces future costs of financing.

In general, three main lessons in PPPs can be drawn: (i) there are some sectors that are easier than others: telecommunications is the sector with more private financing (receiving almost 50% of the investment, even though merely as private financing and not through PPPs) whereas the hardest sector has been water. In between, we find the transport and energy sectors; (ii) investment has been concentrated in a few countries, perhaps associated with the rapid growth experienced in these countries. Conditions need to be fulfilled in order to make these projects more attractive to private investment through PPPs. Perhaps it is associated with the rapid growth experienced in these countries; (iii) the vulnerability revealed by the crisis. Investors now want to invest in safer projects, from a legal and regulatory point of view. In this respect, projects receiving local financing faced the crisis better.

Likewise, the WB is interested in having its loans leveraged with other funds, particularly in a world where capital flow is going to be restricted. He pointed out that the problem is not necessarily associated to the lack of financing, but that a worse deficiency is not to have well structured investment projects.

Lastly he mentioned that the WB has internally organized a team that includes all competencies and skills related to a projects' life cycle: structuring, financing, management and supervision of the project, and for that purpose, there is now more interaction with the IFC. However, the development of competencies and skills is still a very significant aspect in the WB agenda and in the agenda of its technical team.

DAY 1

First Session:

Recent trends in PPP financing in Latin America and the Caribbean

Lecturer

JORDAN SCHWARTZ, Lead Economist, Latin America and Caribbean Region, Sustainable Development Department, World Bank

In this session, the main PPP financing trends in LAC were presented. Schwartz pointed out that between 2005 and 2009, the region kept a growing trend in investments made through PPPs. Compared to other regions, LAC was not affected by the global financial crisis. Mainly, projects in Brazil (energy sector) and Panama (the Panama Canal expansion) mitigated the negative effect of the crisis.

In the 2000-2010 period, trends showed that the sectors concentrating higher investment volumes in PPPs were energy and transport. In contrast, the sectors with less investment flow were telecommunications, water and sanitation. Brazil and Mexico were the countries that received major infrastructure capital flows. Chile, Colombia and Peru were also favored with such investments.

In 2009, investments through PPPs in Brazil represented 2.5% of GDP, while in Chile and Peru investments represented 1.0% and 1.4% of GDP respectively (refer to Table N.1).

It is possible to affirm that in sectors such as mining or electricity there is no correlation between risk and direct foreign investment, due to the high returns. However, for infrastructure, higher risk levels involve a lesser participation of the private sector. On this subject, it is worth mentioning that there are countries such as Brazil, Chile, Panama, Peru, Mexico or Colombia, that present country-risk levels lower than those of China and Vietnam. In contrast, other groups in the LAC region are quite above. Most evident is the difference between

Table N.1**Private
Participation in
Infrastructure**

PPI Percentage of GDP	2005	2006	2007	2008	2009
Argentina	0,5%	1,5%	0,9%	0,8%	0,5%
Brazil	1,2%	1,1%	1,4%	1,9%	2,5%
Chile	0,8%	0,3%	0,6%	0,4%	1,0%
Colombia	0,6%	1,9%	1,0%	1,2%	0,5%
Mexico	0,6%	0,7%	1,0%	0,5%	0,5%
Peru	1,0%	1,6%	1,9%	1,2%	1,4%
Rest of LAC	0,7%	0,9%	0,9%	0,6%	0,4%

PPI: Private Participation in Infrastructure

Prepared by: Schwartz - Source: PPI Database, The World Bank (2011).

high- and low-risk countries in LAC, which is now increasing. This risk level directly affects infrastructure investment decisions.

During the 90s, the participation of the private sector in public services was mainly achieved through privatizations. This situation changed in the 2000-2009 period, when 80% of private sector investments in the LAC region were made through Concessions and "Greenfield" projects. For the year 2009, new investments were around US\$ 30 billion, and were concentrated by more than 70% in "Greenfield" projects.

Concerning the debt-equity ratio, Schwartz mentioned that there is a significant change in this structure. Up to 2005, investments were mainly financed through bonds and loans; however, after the crisis of 2008, projects began to be financed with more equity contributions. The total equity-investment ratio between pre-crisis, crisis and post-crisis (2008-2010), increased from 18% to 28% the total investment level. Financing through loans and bonds decreased from 79% to 64%. In this way, investment with high leverage levels was reduced after the crisis.

However, before the crisis, investments through PPP programs

represented only 15% of total investments. During and after the crisis, such participation increased to 30%. Thus we saw an increase in PPPs, yet as a counterpart, we saw the reduction of private equity, by less than 20%.

Energy generation and highways have been the areas that attracted most investment in recent years. But there are still pending investments in other types of infrastructure, such as ports, and in sanitation. For example, in order to serve new vessels, it is necessary to modernize the existing port infrastructure, which is a requirement made more urgent with the expansion of the Panama Canal. In water and sanitation, the increase of private sector participation is still pending.

Currently, infrastructure shows deficits in coverage that prevents serving more users, particularly lower-income ones.

**Second Session:
Pension funds in infrastructure financing**

DAY 1

Lecturers

RAFFAELE DELLA CROCE, Economist/Policy Analyst,
Financial Affairs Division, OECD

DAVID TUESTA, Chief Economist, Pensions-Emerging
Markets, BBVA Research

Pension Funds and the Infrastructure Sector

In this session, Raffaele Della Croce presented the evolution of pension fund investments in infrastructure, its problems, and future changes necessary to improve and increase pension fund investments in infrastructure. The financial crisis enlarged the infrastructure gap, because public investment had reduced its scope and at the same time, the traditional financing sources of private capital had been affected.

In this context, institutional investors such as pension funds can play a more active role. The suggested reason is that long-term financing needs of infrastructure projects match the objectives of pension funds for investing in assets with long maturity terms.

Della Croce pointed out that over the past 10 years, interest in the infrastructure sector has increased, which is reflected in favorable trends in the infrastructure market and pension funds. The increasing number of experts in infrastructure that have been contracted by the pension funds is another indicator of these trends. In the last decade, the OECD member countries presented an increase of private sector participation in infrastructure investments, while the participation of the government decreased. In the year 2009, institutional investors² had US\$ 65 trillion of AUM³, and

2. Investment Funds and Insurance Companies.

3. Assets Under Management.

pension funds had US\$ 17 trillion. This greater participation of pension Funds materializes with changes in the regulatory framework, allowing for a certain flexibility and adjustment in investment strategies.

Situation of Infrastructure Investment

Traditionally, exposure of institutional investors in the infrastructure sector has been of an indirect nature. That is to say, investments were made through the acquisition of shares (for example utilities), debt (bonds), or through real estate portfolios. The first funds to finance infrastructure were established in Australia, in the mid 90's. In the 2000's, low cost debt availability encouraged the taking of funds assigned to infrastructure.

Institutional investment in the infrastructure sector is not significant. Pension funds in Australia and Canada are the ones that have made more investments in infrastructure, but in Europe, infrastructure market and investment in such assets has been limited. In the United States, there is little investment in infrastructure, while, in recent years, public pension funds in Korea have aggressively invested in other countries.

The LAC Region case

David Tuesta noted that while the LAC region has been experiencing significant growth in recent years, this has not been accompanied by a significant expansion of infrastructure investment. In comparative terms, the figures are substantially lower than those of emerging Asian countries. In fact, in the last ten years, while the average growth rate of GDP per capita was 3.5%, investment in infrastructure accounted for 1% of GDP. Countries like

China and Vietnam grew about 7% of GDP per capita, and investment in infrastructure represented 10% of GDP.

The previous comparative perspective reveals two extremely important aspects for consideration in the future. First, the strong relationship between economic growth and infrastructure development can be highlighted as a determinant factor to obtain higher rates. Second, bottlenecks can limit sustainable growth if appropriate financing arrangements are not developed.

In terms of searching for “natural funding” to promote greater investment in infrastructure projects, pension funds can play a relevant role. By analyzing the size of projected pension funds in countries where the private pension component is more developed, as in Chile, Colombia, Peru and Mexico, it can be noted that the pension funds continue to accumulate more weight over the years. To date, this represents on average about 30% of GDP for these four countries, and by 2050 the average can reach 50% (in the case of Chile it may exceed 90%). In this regard, pension funds need to diversify their investment alternatives, and financial instruments associated with infrastructure projects may become more important for this purpose.

With the goal of establishing the relevance of private pension funds in financing infrastructure, Tuesta highlighted common ground between governments and pension funds. On the government side, in recent decades, Latin America has been more inclined to give priority to fiscal sustainability. This may limit public investment in infrastructure, but could be covered by private placement financing of pension funds. This complementarity would free up state resources to address, for example, emergency social spending and alleviate cyclical fluctuations in the economy.



Meanwhile, investment in infrastructure through appropriate financial instruments would allow pension funds to direct optimal planning of long-term portfolio (Inderst, 2009) and reduce political and regulatory risks (Vives, 2000). The correct design of a financial plan for long-term investment provides a good return/risk ratio. Also, investment within the country reduces some financial risks such as exchange rate risk, and eventually, the public opinion may view favorably those pension funds that invest in infrastructure, since this in turn increases the quality of life.

Three key elements for pension funds to consider investment in infrastructure are: (i) contribution of the infrastructure asset performance risk on the total pension fund portfolio, (ii) fiduciary duties and reasonable analysis under the regime of planned investment, and (iii) feasibility of the cash flows of infrastructure assets. Not all infrastructure projects are necessarily successful for several reasons, including technical, operational, economic, political, etc. Given this scenario, the final decision for pension funds to invest in infrastructure should be left to the latter. Final decisions must result from a rigorous analysis of optimal portfolio management, and must consider the crucial importance of their fiduciary role.

Currently, pension funds in LAC have been investing in infrastructure projects both directly and indirectly. In terms of indirect investments, Tuesta estimates that as a percentage of the portfolio, they account for 18.7% in Colombia, 11.1% in Peru, 10.3% in Chile and 7.6% in Mexico. Note that these figures consider investment in energy infrastructure, which is important in magnitude in this region. In GDP terms, the investments referred to fluctuate between 3.5% and 0.8% for those countries mentioned. It should be noted that direct investment has been gaining importance, particularly in the cases of Peru, Colombia and Chile, which represent 27%, 24% and 14% of the portfolio of pension funds, respectively. The

strategies are different, highlighting schemes in infrastructure investment funds, trust funds, structured instruments (CKDs in Mexico), private equity, among others.

Problems in infrastructure investment

Among the main limitations faced by pension funds to invest in infrastructure are: (i) availability of investment opportunities for private capital and pension funds; (ii) maturity and size of the pension fund market. In other words, the amount of available capital for investment; (iii) regulation for pension funds investment and; (iv) complexity of infrastructure investment.

Specifically, the infrastructure sector features the lack of long-term political commitment, which can be translated into regulatory instability. Likewise, there is fragmentation in the different government levels, with no entity that concentrates infrastructure matters. Far more worrying is the fact that there are few investment opportunities in the sector, and there are excessive risks. In addition, pension funds have little experience in infrastructure financing and investors have a “short-term” perception, which means they want profits in the short-term.

It is also seen that conditions for investment in the infrastructure sector are not clear and transparent. Thus information about infrastructure projects and bidding processes is often diverted through several bureaucratic and legal hurdles, which are difficult to predict at the outset of project planning.

Tuesta recognized the participation of pension funds in infrastructure investments, yet he also identified certain problems that restrict further investments. These restrictions are: the absence of a clear integral process for the



Project	Infrastructure	Type	Months
Olmos	Water diversion	Co-financed	89
Red Vial 5	Road	Self-financed	59
Red Vial 6	Road	Self-financed	90
Lima Airport	Airport	Self-financed	29
IIRSA Norte	Road	Co-financed	58
Emfapa Tumbes	Sanitation	Co-financed	59

Table N.2

**Processing time
in six concession
processes**

Source: Payet. Prepared by: Author.

development of PPPs and the participation of different players; entities fragmented into different sectors and government levels (duplicity); administrative and judicial restrictions that limit decision-making process of key players in concessions (those who make decisions must review several times the documents signed in order to avoid taking judicial risks); limitations in the authority responsible for process decisions and risks that are not duly allocated and evaluated; and the desire to accelerate infrastructure development based on Pension Funds can generate inappropriate incentives.

For example, in the case of Peru, Tuesta mentioned that the infrastructure investment system features some weaknesses. The main weakness is the bureaucratic process that halts PPPs. Faults in social risk contracts and unfavorable framework for supervision are also present. Moreover, delays in PPP process affect the duration of projects and add uncertainty to the process. In a six-project sample, the average time is of almost six years.

Proposals to improve Pension Funds participation in Infrastructure

In order to increase pension fund participation in the infrastructure sector, Della Croce recommended that governments support long-term investments. In this sense, he

proposed working on the approval of a stable and accessible infrastructure projects program and PPPs (i.e., a national infrastructure plan with stability within the regulatory framework). He also suggested understanding the needs of institutional investors. He expressed the need for project structuring, directed to make investments attractive to pension funds, as well as the creation of necessary conditions for the development of institutional investors.

Della Croce proposed adapting the current regulatory framework to long-term investor needs, which is necessary to improve pension funds management, encourage collaboration strategies and the creation of common funds. In other words, such a framework would improve the investment environment (for example, information based on independent entities), as well as bring together the interests of both the pension funds and the infrastructure industry.

On the other hand, Tuesta pointed out that in order to generate investment in infrastructure with the participation of Pension Funds, an integral proximity and improvement of all process stages is required, and for that end, it is necessary to:

- Identify bottlenecks, contrasting the opinions of the different players;
- Institutionalize cost-benefit analysis projection models;
- Establish regulation, PPP laws and control measures ensuring effectiveness and guaranteeing efficiency;
- Ensure financial assets for investments have duly allocated risks, capable of achieving adaptation with the existing regulations (or facilitating changes that imply improvements). Institutional investors need to voice their opinions concerning the design framework;
- Develop clear instruments to mitigate risks. A risk map that generates a favorable environment so the issued



instruments receive good risk rates, encouraging the participation of relevant players, is necessary;

- In the case of pensions, assess the behavior of the risk/return ratio of instruments that are considered appropriate within the multi-fund plan of the industry;
- Consolidate the Project Finance model.

The Experience in Latin America and the Caribbean

Chile

Pension funds keep significant volumes of resources invested in infrastructure (9,467.8 million USD – 4.29% of GDP). The main investment method is indirect through shares and bonds of companies associated with infrastructure (7,508.1 million USD – 3.4% of GDP).

Direct investment includes infrastructure bonds and investment funds in infrastructure projects (1,959.7 million USD), for example, “Prime Infrastructure I and II” investment funds, Talcachuano –Penco Inter-port route. Pension funds investment in infrastructure bonds was quite intense in the beginning when significant transport works were under concession (large highways, urban roads and the airport of the capital city). However, such trend halted (the last issuance took place in 2006). One of the main reasons for not using infrastructure funds as financing means for new projects is the bankruptcy of monoliner issued by insurance companies.

In Chile, there is now more room for prisons and hospitals construction, though there is no preference for a certain sector. Given the needs in sanitation, we can see major participation in this sector, but ultimately, investments will depend on the availability of risks mitigation instruments.

The legal framework allows pension funds to invest only in instruments expressly authorized by law or by the investment regulation. Investment regulation establishes that such funds can only be invested in financial assets of public offer due to liquidity issues and the relative ease of the assessment. Investment in structured debt can reach 95% of the portfolio (depending on the type of fund).

Colombia

Investment in infrastructure has developed mainly indirectly through corporate bonds and shares (9,591 million USD – 3, 5% of GDP). The electricity sector takes the larger participation of the infrastructure investment (84% of the total infrastructure investment). Investment in private equity funds (PEF) has significantly increased since 2007, when the Investment Regime was established according to Decree 2175. Presently, investment takes place in 35 PEFs, of which the main funds are mainly associated with the energy sector, for example, PEF Interbolsa energético, FCP CPVAL and FCP Tribeca Fund I.

Beyond the energy sector and PEF, other areas have witnessed much less participation of pension fund's portfolio (1, 7%). In this context, it is equivalent to 14.5% of the debt bonds placement of local companies in the year 2010 or equivalent to 30% of private investment in transport and communications.

Concerning the present legal framework, Act 1328 of 2010, as well as regulatory decrees, allow for greater diversification, and depending on the opportunities of the projects that have been presented and the existing investment plan, it would be possible to add room for indirect investments in infrastructure projects (for example, from a 30% limit of the bonds portfolio, today the limit extends to 60%).

Type of infrastructure investment	
Direct investment	0%
Indirect investment	100%
Direct investment as a percentage of the total portfolio	
Energy - Electricity	15,7%
Private Capital Funds	1,2%
Roads	0,8%
Communications	0,2%
Water	0,3%
Aeronautical bonds	0,2%
Securitization by mortgage	0,0%
Others	0,2%
Sub-total, energy and private capital funds excluded	1,7%
Total	18,6%

Table N.3

Infraestructure Investment

Source: Asofondos and BBVA's estimations.

Mexico

As a percentage of GDP, pension funds in Mexico have increased from 1.4% at the end of 1998, to 10.2% at the end of 2010 (USD 114.24 million). The main investment method is indirect through shares and bonds of companies associated with infrastructure (includes hotels, iron and steel industry, transport, infrastructure, telecommunications and housing). Investment was at USD 663.9 million or 0.64% of the GDP at the end of 2010. Direct investment occurs through structured instruments, including structured equity securities (CKD's), representing 0.26% of GDP at the end of 2010 (USD 266.2 mmd). According to CONSAR figures at December 9th, 2010, 2.34 mmd had been placed in CKD's, and the participation of SIEFORES (Sociedades de Inversión Especializada en Fondo para el Retiro) in CKD's supported productive projects for an amount equal to \$2.11 million. Almost 20 new projects were in the placement and analysis process.

Macquarie and Red de Carreteras de Occidente (RCO – Spanish acronym for Western Highway Network) are among the main CKDs associated with infrastructure and Macquarie is the first infrastructure investment fund launched in Latin America by the Australian Bank Macquarie. RCO was the first project that issued CKD's (October 2009) and is mainly in charge of the Maravatío-Zaplotanejo Highway, Guadalajara-Zaplotanejo Highway, among others.

It was after March 2008, with the reform of the investment regime, that direct investment in infrastructure was allowed through trusts, as well as financial instruments associated with CKD's infrastructure projects, Infrastructure and Real Estate Trusts; investments of up to 40% of the *securitized* instruments portfolio and up to 15% in structured instruments (depending on the type of pension fund) were accomplished.

Peru

Resources invested in infrastructure by pension funds are USD 3,416 million or 2.3% of the GDP. The main investment method is indirect through shares and bonds of companies associated with infrastructure and investment funds of this sector (USD 2,483 million – 1.7% of GDP).

Direct investment is carried out through bonds and shares of infrastructure projects and the infrastructure trust, such as the financing of the IIRSA Sur highway (Interoceánica Sur), through CRPAO (Certificates issued by the Government for Annual Payment derived from Works), for example.

The infrastructure investment funds market in Peru is relatively new. Presently, it includes: (i) Investment fund in infrastructure, public services and natural resources of *AC Capitales*, (ii) *Larraín Vial Energía Latinoamericano* Investment Fund, and (iii) *Brookfield & AC Capitales* Infrastructure Investment Fund.

The latter was created by the Ministry of Economy as a way to finance large investment projects during the financial crisis of 2009. Currently, it has secured almost USD 500 million.

For a Pension Fund Manager (PFM) to invest in any instrument, it must be "*PFM-able*". In other words, the Insurance and Bank Superintendence and PFA (SBS) authorizes PFM investment in such instrument. In some cases, this process can be long and complex, limiting the investment instrument's offer. Pension funds can invest up to 100% of its portfolio in structured instruments (depending on the type of fund).

DAY 1

Third Session:

Regulation of pension funds and financing of infrastructure.

Headed by

RUI MONTEIRO, Senior Public-Private Partnerships Specialist, World Bank Institute

Panel Members

JAIME MARIZ, Chief of Cabinet, Previdência Complementar, Brazil

LUIS FIGUEROA DE LA BARRA, Director of Regulation, Pension Fund Regulatory Agency, Chile

JUAN PABLO ARANGO, Director, Finance Agency, Colombia

LORENA MASÍAS, Director, Agency of Banking, Insurance and Pension Funds, Peru

PEDRO ORDORICA, President, National Commission for the Pension System (CONSAR), México

During the course of this session, different regulation regimes of Pension Funds in Brazil, Chile, Peru and Mexico were presented. The operation and impact of these regimes on investment decisions of Pension Funds, particularly in the infrastructure sector, was duly explained.

Brazil

The representative of Brazil, Jaime Mariz, pointed out that the country is experiencing significant transformations and challenges associated with commitments made to reduce poverty. In this sense, the Government of Brazil is aware that infrastructure improvements will positively impact competitiveness and job creation. Thus there is significant participation of Pension Funds in the Infrastructure sector.

In Brazil pension funds invest 17% of Brazil's GDP. Mariz pointed out that these entities are the major investors in the infrastructure sector; these are institutional investors, willing to

Between million	Quantity	%
Over R\$ (reais) 50.000	1	0,003
R\$ 20.000 to R\$ 50.000	2	0,005
R\$ 10.000 to R\$ 20.000	4	0,011
R\$ 1.000 to R\$ 10.000	56	0,152
R\$ 500 to R\$ 1.000	46	0,125
R\$ 200 to R\$ 500	57	0,154
Under R\$ 200	203	0,550

Table N.4**Distribution of Pension Fund Assets in Brazil**

Prepared by: The author.

take economic, financial, regulatory, political and fiscal risks, among others.

Presently in Brazil there are 39 Pension Funds. The net worth of these institutions is approximately R\$531 billion, and infrastructure investments amount to nearly R\$1,8 billion.

One of the features of pension funds in Brazil is that there are different fund scales. Most of these funds are small, and only big pension funds can participate in infrastructure projects, while medium and small funds should associate with one another in order to achieve scale.

Mariz mentioned that PFs should observe prudential limits and diversification rules in order to maintain the principles of liquidity, solvency, safety and transparency. In accordance with provisions under the National Monetary Council of Brazil, pension funds must analyze and monitor investment risks, and also participate in the identification of investment opportunities. The Council establishes that it is necessary to follow-up six types of assets: fixed-interest assets, floating rate, structured investment, investments abroad, real estate, and the maximum limits on investments in equity.

Among the different factors restricting major participation of Brazilian pension funds in infrastructure projects are:

procedures to obtain environmental permits, undefined and increasing costs of infrastructure projects, precariousness of projects, with frequent changes during the project's cycle, as well as the guaranteed and attractive compensation that PFs get in public credit markets, without excessive bureaucratic procedures.

To invest in infrastructure projects, PFs need to conciliate the long-term profile and liquidity of these projects with profit expectations. They also require conciliation in the scale and volume of resources that infrastructure projects usually demand. Finally, it is necessary to reduce uncertainties and project risks.

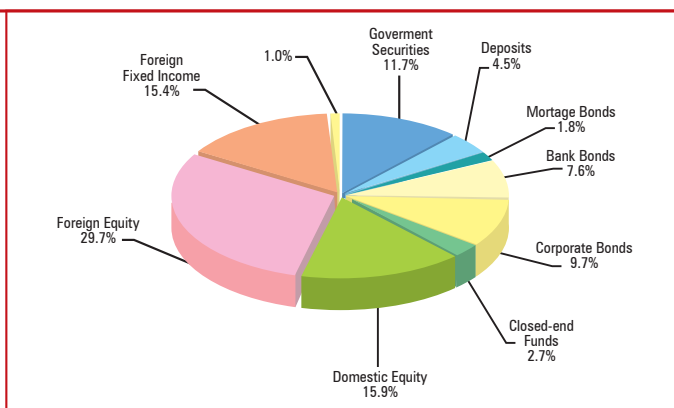
Chile

Luis Figueroa De la Barra pointed out that pension funds in the Chilean system were created in 1981. The assets of Pension Funds reach US\$ 148 billion. They represent approximately 70% of GDP, in total 9 million affiliated persons.

About 50% of pension funds portfolio in Chile is invested in variable rate assets, and the remainder is fixed-interest. 45% of these assets are invested abroad⁴. Investments in financial instruments issued by banks represent about 15% of assets. An important part of this investment is justified by mortgage credits by banks that are indirectly financed by pension funds, through the acquisition of bonds (bank or mortgage bonds). Finally, one-third of the portfolio finances private companies (*equity and bonds*).

Pension funds have almost 40% of the mortgage bonds stock. These bonds were issued with long-term maturity periods (10,

4. In the year 1993, foreign investment was authorized and the maximum limit is 80% of the portfolio.

**Chart N.1**

Pension Fund Assets
(Percentage of total assets,
December 2010)

Best Practices in PPP financing in Latin America-World Bank, May 4-5, 2011, Washington DC.

15, 20, 25 or 30 years) and were indexed to inflation. In the past, mortgage bonds were the main instruments to finance housing using its own resources (for example, issuance of banking bonds).

Figuerola de la Barra mentioned that Corporate Bonds and the issuance of shares⁵ were the vehicles to finance infrastructure. Corporate bonds account for 10% of total assets (US\$ 14 billion) managed by pension funds. It is estimated that pension funds have approximately 40% of corporate bonds issued in Chile. These are long-term and inflation-indexed assets that are attractive. Parts of these bonds are financing eleven highways and one airport.

In 2002 the multi-fund was included, with each person being able to choose the fund. The A fund, which had the biggest amount of floating-rate instruments during the crisis (2008), featured certain profitability of -42%. That is to say, the crisis had a significant impact. However, the composition of pension funds remains stable and performance was in accordance with

5. A third of investments in shares are invested in electricity and telecommunications.

long-term conditions, with no hasty share or bond sales. This proves that there is trust in PPPs and infrastructure financing.

Projects were structured to attract the demand of insurance companies and of pension funds. In particular, a strong guarantee system was created through the Government, international insurance companies and the Interamerican Development Bank (IADB), where all bonds were investment grade issued, with long-term maturity and inflation index. Likewise, concessionaires are registered with the Securities Regulator, which has several requirements, making the issuer more transparent.

Even when, after 2008, the insurance companies decreased in the rankings of international risk agencies, the grounds for projects and the warranties continued to support investment. This is the reason why the local risk agencies kept the infrastructure bonds under "investment rate".

According to Figueroa de la Barra, the main lessons learned from the Chilean model are:

- The Chilean pension funds still have opportunities for continued investment in infrastructure and PPPs.
- The experience with securities related to infrastructure and PPPs (mainly highways) have been successful in Chile.
- The public infrastructure financing process has been well structured, with securities including guarantees by the government and the private sector.
- Pension funds have contributed to the financing of infrastructure projects in privatization, contributing with equity, and also, in the case of concessions, by acquiring the bonds to finance. Approximately 20% of the pension fund's portfolio is invested in infrastructure.
- The pension fund portfolio is well diversified and does not include complex financial instruments. This characteristic has allowed for the reduction of losses.



- The development of a capital market in Chile has played an important role when encouraging financing in public infrastructure.
- Evaluation is an important factor to be considered in infrastructure financing. Evaluation of securities⁶ must be accurate and transparent to encourage pension funds to invest in proper financial instruments.

Colombia

Nowadays Colombia has 9.5 million affiliated persons to Private Pension Funds, and pension savings are near 19% of GDP. The main contributors are young people, between 15 and 35 years old. Yet Juan Pablo Arango pointed out that the system is unable to grow due to informality in the economy. Nearly 65% of the working population of Colombia is employed in the informal sector.

Pension funds initially invested in public debt, which nowadays is only 35%. Currently, the portfolio has diversified in bonds of financial agencies and demand deposits; however, the greatest growth is in participative securities (domestic shares) and in foreign investment. The profitability rate of funds is 11%.

The main change in the pension funds system is the inclusion of multifunds, including three funds for accumulation stage and one special fund for scheduled retirement. However, the Law did not allow for the allocation of the higher risk fund to those who did not express their choice, representing a limitation for the development of this plan. Affiliated members during this accumulation stage that fail to express their choice are designated to a moderate risk portfolio, except for those individuals who are about to reach the minimum pension guarantee age who will gradually be assigned to the

6. The Pensions Superintendence of Chile carries out valuation of Bonds.

conservative fund. The feasibility to combine different funds will be studied in the future.

Pension funds in Colombia have invested mainly in the energy sector and less so in housing or transport infrastructure. The meager demand for infrastructure investment by Pension Fund Managers (PFMs) is due to significant issuance within the institutional, legal and regulatory frameworks of the transport sector in Colombia. The diagnosis falls along four main axes:

A) Balance in the Road Sector Concessions

- Institutional weakness of the transport sector restricts its participation in the definition of road networks.
- Symbiosis between public expenditure and concessionaires interested in additional works.
- The legal framework consolidates the symbiosis and therefore fails to defend the public interest.
- Low quality of designs and performance of roads.

B) Network planning and projects' assessment

- Lack of sector framework to assess the projects' opportunity
- Road network defined without standardization
- Impossibility to halt the construction of "white elephants".
- Unmanageable risks by certain serious concessionaires.
- Heterogeneous size projects.

C) Projects' Awards

- Erratic project award processes won by expert re-negotiation companies (profit hunters).
- Free access to concessions without suitable qualification.
- Project awarded to small consortiums.
- Bids or plunderer bids are not excluded.
- Endemic renegotiations.



D) Financial Structuring and Security Arrangements

- No equity contribution.
- Bank debt against balance.
- Work financing based on tolls and sluggish construction.
- The government finances profitable concessions and displaces the capital market.
- An automatic contract extension without bidding produces significant profits.

Given this scenario, Arango proposes the following:

- PPP Law that will allow for the strengthening of government functions regarding planning, contract procedures and supervision. Likewise, such law can allow for differentiation of concessions from activities usually associated with the acquisitions of assets and services.
- Institutional strengthening that allows for the reinforcement of Sectorial Supervision and Economic Regulation activities.
- Creation of the National Infrastructure Agency to be in charge of structuring, promoting and defining the finance mechanisms. In the same way, it will manage the Concession Contracts.

Peru

Lorena Masias pointed out that the international financial conditions of 2008 caused volatility in pension funds. However, in the long run, a positive evolution in the funds was observed, as they increased in 2010 by about 25%. In March 2011, the managed portfolio achieved US \$ 30 billion.

Pension systems require investing in long-term investment instruments. Concerning this subject, the Bank and Insurance Companies Superintendence (SBS) has issued certain standards

to promote the diversification of PPP investments, allowing for options in investment of bonds and shares issued by companies that are executing infrastructure works.

The small local stock market and the lack of fixed-interest instruments with long-term maturity drives pension fund investments in alternatives, such as Concessions and Infrastructure Projects. The possibility to invest in these types of projects has been present since the year 2001. But as of 2004 the standards allowing Pension Fund Managers (PFMs) to acquire a wider selection of instruments as the projects' finance source were issued.

The investments made by PFM can occur through several instruments: preferred stocks, common shares and bonds. However, the major part of financing occurs through bonds because investment in shares is made in Stock Exchange listed instruments since the issuer is required to submit an additional guarantee in the case of share issuance. Resources invested in instruments can be destined to the financing of new projects, infrastructure projects, concessions, housing, exploitation of natural resources and forests, or other sectors that require medium and long-term financing.

Nonetheless, issuers must comply with certain requirements. First, PPPs or temporary concessions should derive from bidding processes or tenders supervised by an agency representing the Government. Secondly, the total amount of investments made or committed for the financing of projects should not be lower than US\$10 million or its equivalent in national currency. In addition, issuers or majority shareholders of issuers must substantiate their credit solvency by attaching reports on risk rates for investment instruments issued in the local or foreign market or letters of credit by local or foreign financial institutions. The project operators should also prove acknowledged experience in the economic sector that corresponds to the project.



Given the nature of infrastructure investment projects, these are basically financed by institutional investors. Public–Private Partnerships (PPPs) and projects given in concession to the private sector allowed for the intervention of the Government as an active agent in the financing plans through the grant of financial and non-financial guarantees. The use of the instrument known as Annual Payment Certificate (CRPAO), and the participation in trust plans, among others, have made possible some projects, as well as the reduction of associated risk.

Evolution of Investment in Infrastructure

In December 2010, investments by pension funds in infrastructure projects amounted to US\$ 3,437 million (11.05% of the total pension funds). The sector receiving the majority of investments was energy, with 60.3% of the total investments, followed by the transport sector, representing 20.6% of projects' total investment.

The main securities issuers are:

- In telecommunications, *Telefónica Móviles, América Móviles* and *Telefónica del Perú*.
- In energy there are investments in electric power distribution, electric power generation, electric power transmission, hydro-energy projects and hydrocarbon projects, with issuers such as Cahua, Duke Egenor, Edegel, Enersur, Electroandes, Inkia Energy, the American Energy Investment Fund of Larraín Vial, Kallpa, Southern Cone and the Infrastructure Investment Fund of AC Capitales.
- In transport infrastructure, PFAs have allocated resources to invest in road network projects, such as IIRSA Sur (segments 2, 3 and 4), IIRSA Norte and Interoceánica segmento 5.
- Investments have been made in the Infrastructure Investment Fund of AC Capitales, in aero-commercial

projects, among others, and in the Lima International Airport.

- In sanitation, investments have been made in the Consorcio Agua Azul, Huascacocha and Taboada projects through the Infrastructure Trust.

Masías mentioned that the main lessons from the Peruvian model are:

- The project operators must prove their knowledge and have an established reputation in the economic sector in which the project is developed. Likewise, issuers or majority shareholders should prove credit solvency; in Peru, the PFM invest in projects managed by international first-level operators, for example, Suez, Duke, ODEBRECHT.
- The investment risk is reduced for the projects developed in very dynamic and productive sectors. In the case of concessions that include the participation of the Government as an active part of the concession plan, the risk associated to the project is diminished through several guarantees. In Peru, the CRPAO certificate has been a key element to facilitate financing in the capital market.
- The participation of pension funds in infrastructure projects allows for the implementation of actions that encourage good corporate governance practices through the appointment of directors and members of the Audit Committee independently from the economic group that manages the concession company.
- The improvement of corporate governance is also encouraged through information transparency demands and compliance with certain rules under concession plans (solvency, experience of the project's operators, among other requirements). In Peru, investment of pension funds in ENERSUR shares included agreements associated with sound corporate governance.
- Investment in infrastructure projects allows for greater

diversification of the pension fund portfolio, considering that these projects are implemented in several sectors of the economy, such as: electric power generation, transport infrastructure, telecommunications and sanitation. Additionally, the price of infrastructure projects' instruments has a low correlation with the price of traditional instruments.

- In Peru, the participation of pension funds in infrastructure projects has promoted the growth of the capital market thanks to new securities listed in the Stock Exchange (ENERSUR) and to the issuance of bonds through public offer (ENERSUR, Agua Azul Consortium) and through private offers (Olmos Project).
- Through investments in infrastructure, the pension fund portfolio can include long-term investment instruments that allow for matching the investment horizon of affiliated members with that of the acquired instruments, diminishing the re-investment risk.

Mexico

The assets of pension funds reached US\$ 117 billion in March 2011. These assets provide financing to private and public entities. During the last five years, the Mexican Pension Fund Manager (AFORES) grew 14.7%. The resources of pension funds represent an increase of local capital for investments in infrastructure and productive projects.

According to Ordorica, the reasons why the Pension Funds should invest in infrastructure are:

- Financing needs fit the amount accumulated in the fund.
- Infrastructure projects entail fewer risks.
- Infrastructure projects feature constant cash flow.
- They have natural hedge – protection against sudden inflation moves.



- They are in accordance with the economy's expansion phase.
- Projects provide visibility.
- Increase in national productivity, implying major future contributions.

Financial Instruments

The instruments that have been used in infrastructure financing are: (i) bonds intended to meet the financial needs of large and medium companies. In these assets AFORES have invested US\$ 10, 3 billion; (ii) in terms of shares, investments of US\$ 632 million have been made in the infrastructure sector; (iii) FIBRAS (Spanish acronym of Real Estate Investment Funds) have invested through instruments specialized in financing housing, which include special payment characteristics in dividend payment and tax treatment. Investments amount to US\$ 152 million; (iv) CKD (structured equity securities) enable the financing of small companies in any economic sector or infrastructure area located in Mexico. Through CKDs, pension funds have financed the infrastructure sector and other projects for an amount equal to US\$ 3.2 billion. Approximately 50% of this amount is destined to infrastructure and housing.

CKDs are not only used to finance investment projects, but these certificates can be used for financing solvent companies that are not listed in the Stock Exchange (companies may belong to any economic sector). These trustee certificates are not associated with fixed rates, but are remunerated with cash flows produced from the project; there is no establishment of pre-fixed debt payment because it is equity. These instruments have been complemented with subordinated debts, convertible debts, guarantees, buyouts, distress debts, restructuring, among others.

Finally, an issue to be considered is that of *institutionality*, which is essential for the structuring and design of long-term

financing. For example, Mexico has presently structured more or less US\$ 14,3 billion, with CKDs and FIBRAS. The investments made by Pension Funds in these areas arise from changes in the regulatory framework that allowed AFORES to invest in these instruments.

DAY 1

Fourth Session:

The role of guarantee funds and subsidy funds in PPP financing

Headed by

AURELIO MENENDEZ, Sector Manager, Latin America and Caribbean Region, Sustainable Development Department, World Bank

Lecturers

SERGIO HINOJOSA, Consultant, World Bank Institute
ALFONSO GUZMÁN, Managing Director, Castalia

Panel Members

ISAAC AVERBUCH, Head of PPP Unit, Ministry of Planning, Brazil
RICARDO DE VECCHI, Senior Advisor for FONADIN, Inter-American Development Bank, Mexico
CLAUDIA STEVENSON, Financial Specialist, Inter-American Development Bank
LINCOLN FLOR, Senior Public-Private Partnerships Specialist, World Bank Institute

The main objective of guarantees in PPPs is to enable project bankability, which allows for long-term financing. Hinojosa pointed out that guarantees can be financial (Mexico and Brazil) or non-financial (Chile, Colombia and Peru). Both types aim to mitigate risks derived from non-compliance with Government payments or claims.

Financial Guarantees

Sergio Hinojosa defined financial guarantees as insurance that secures the timely payment of interests and repayment of principal to debt holders. Guarantees give investors confidence and reduce financial costs. There are two types of guarantees: *Full Wrap* and Partial Guarantees. The former covers 100% of the debt obligation while the latter covers a specific

Table N° 5**Full Wrap vs Partial Credit Guarantees Comparison**

Characteristic	Full Wrap Guarantee	Partial Credit Guarantee
Guarantee of Principal and Interest in a timely manner	Yes.	Yes.
Irrevocable	Yes.	Yes.
Unconditional	Yes.	Yes, subject to the maximum limit amount of the guarantee.
Limit to the coverage of the Guarantee	No limit. Covers 100% of every coupon of principal and interest.	Limit determined according to the number of notches of credit enhancement required.
Credit Enhancement	Increases the rating of the guaranteed obligation to the rating level of the guarantor.	Increases the rating of the guaranteed obligation to a specific number of notches according to the size of the limit amount of the guarantee.
Complexity	Simple and standardized. Investors need to understand the underlying risk but derive comfort from the 100% guarantee.	More complex. Investors need to understand the characteristics of each PCG, the underlying risk, the credit enhancement provided and its sufficiency.
Versatility of Application	Limited. Applicable only to projects that can achieve an investment grade underlying rating in the global scale.	Can be applicable to non-investment grade projects.
Maximum Credit Enhancement	To the rating of the guarantor. If the guarantor is rated "AAA", and the underlying rating is "BBB-" (minimum investment grade), and the credit enhancement achieved is equivalent to 10 notches.	Normally not more than 5 notches.
Cost	Normally less than 1%, applicable to the full amount of the guaranteed obligation.	Normally above 2% applicable to the guaranteed amount.
Scope of Work of the Rating Agencies	Underlying rating (without considering the guarantee) and public rating (with the guarantee). All work is done by the Infrastructure / Project Finance Group.	Underlying rating done by the Infrastructure / Project Finance Group; sizing of the PCG and public rating done by the Structured Finance Group.
Guarantors	Monoline insurance companies and banks in the form of Stand By Letters of Credit.	Multilateral agencies.

Source: Author, own Information.

percentage of the obligation. Usually, Full Wrap Guarantees are granted by monoliner insurance companies and recently by commercial banks in the form of Standby Letters of Credit. Partial Guarantees, on the other hand are offered by multilateral agencies and in some cases, can be created by governments. Another difference is that Full Wrap is applicable only to projects that can be executed under an “investment grade”. The following chart presents a summary of different types of financial guarantees.

Mexico’s National Development Bank (BANOBRAS)

BANOBRAS offers two types of financial guarantees:

- *Timely Payment Guarantees (GPO – in Spanish) or Partial Credit Guarantees*: the type of guarantee is unconditional and irrevocable in nature, and guarantees the payment of principal and of interests. The maximum amount of the guarantee is 50% of the credit amount. The main condition for the guarantee is that the PPP project achieve the qualification of investment grade, in the local scale.
- *Guarantees for Service Rendering Projects (PPS – in Spanish)*: under this type of financial guarantee, BANOBRAS fully guarantees the payments made by the Government to private “sponsors” of PPP projects. This guarantee is applicable to service rendering projects; the product is destined to States and Municipalities that want to attract private investments. This guarantee differs from the previous one in the sense that these are guarantees granted to State entities and not to projects.

The expansion of these BANOBRAS’ products has been limited due to two factors: the financial crisis of 2008 and the market’s lack of knowledge concerning the availability of these guarantees.



The Infrastructure National Fund (FONADIN)

The Federal Government created the National Plan for Infrastructure 2007-2012 in order to encourage the development of infrastructure projects in Mexico. This program anticipates the investment of more than 2.500 billion pesos (around US\$200 billion); 18% of these resources will be destined to infrastructure projects such as highways, ports, railways and airports.

The Mexican Government created the Infrastructure National Fund (FONADIN) to support the participation of the private sector in projects included in the National Plan for Infrastructure (See Chart)

FONADIN was created in 2008, and is characterized as a coordination tool of the Mexican Government for the development of infrastructure. The sectors it supports are: communications, transport, water, environment and tourism. It also participated in the planning, financing, design, construction and transfer of infrastructure projects in which the private sector participates, and that have a social impact or are economically profitable.

FONADIN has two instruments to support PPPs: (1) Non recoverable instruments, where contributions are targeted (to carry out studies), and subsidies, intended for investment projects and (2) Recoverable instruments, where the risk capital contributions, subordinated debt and guarantees are located and destined to investment projects.

Ricardo De Vecchi believes that the financial crisis generated more risk aversion, resulting in higher interest rates and lower leverage levels, less capital availability, no syndications (only *Club Deals*), *Market Flex*, more problems for *take outs* and absence of monolines. This condition is reflected in the fewer

Chart N.2

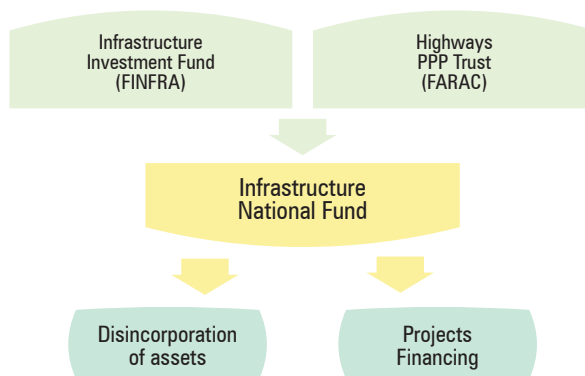
number of investors participating in bids and greater offer of projects.

Before 2009, projects entailed more access to financing and therefore, there were fewer capital requirements. These conditions reverted after the crisis, and it is now

necessary to combine the instruments of the Bank and those of the Fund in order to improve the projects' financing profile. This translates into FONADIN sharing risks with the bank. However, it also shares the project's profits when the project exceeds its financial condition. With respect to this subject, FONADIN established mechanisms by which the company received subsidies and has the obligation to repay them once a certain TIR (internal rate of return) level is exceeded. Nevertheless, the implementation of this methodology was complicated and thus it was decided to take the project's gross income.

Nowadays, FONADIN has a *pipeline* of 91 projects. The total value of included projects is US\$18 billion. The total support that these projects would require from FONADIN is estimated at around US\$7 billion. This entity is analyzing 9 investment funds specialized in infrastructure with an accumulated objective value of US\$3.5 billion. The estimate is that FONADIN participation in these investment funds may reach 650 million dollars.

FONADIN is financed by the Government with the collection of tolls from different roads managed by the Federal Government. Therefore, it is a fund with significant liquidity levels. This Fund



Source: BANOBRAS.

brings capital and subordinated debt to finance PPP projects. The guarantees offered by this fund include:

- i. First Loss: FONADIN will assume the first loss and carry out the first expenditure from this guarantee to cover the debt service payment, before spending any other guarantee.
- ii. *Pari Passu* (at the same time and in the same degree):. FONADIN would use the guarantee proportionally to the insufficiency of funds, as agreed with other lenders or guarantors.
- iii. Final Payment: FONADIN will be the last party to disburse from this guarantee, upon insufficiency of project funds, after honoring other guarantees.
- iv. Mixture: a combination of first loss and “*Pari Passu*”.

FONADIN offers guarantees that cover management and political risks. The guarantee covering the management risk guarantees part of the project's construction risk, up to 15% of the budget. Likewise, some guarantees also cover the initial project operation stages, until inflow reaches 40% of projected incomes.

The main difference between guarantees offered by BANOBRAS and the FONADIN, is that BANOBRAS guarantees investments that achieve “investment grade”, while FONADIN focuses on projects that do not attain this grade. In this manner, BANOBRAS guarantees that payments are carried out on time and that FONADIN executes the payments when a company is not able to comply with its creditors.

Possible reasons for which FONADIN does not have many placed guarantees are:

- Lack of knowledge of the product and organizational procedures for its management. FONADIN does not have

a team specialized in offering financial guarantees. It is organized by sector specialists (roads, water and wastes), and granting financial guarantees is among its activities.

- Projects where FONADIN offers its guarantees are very risky. Consequently, there is high probability in making effective the guarantee option.
- The type of guarantee offered by FONADIN would not be well accepted in some banks. The type of guarantee that is more commonly accepted is the one offered by BANOBRAS, i.e., those covering the timely payment of obligations.

In recent years, some States and Municipalities of Mexico have structured their finances based on future tax collection. Traditionally, this financial structuring consists in the Banks granting loans, which are guaranteed with funds of the States and Municipalities.

Brazil

One of the most distinctive aspects of the PPP scheme in Brazil was the creation in 2005 of the “*Fundo Garantidor de Parcerias Público – Privadas*” (FGP) at the federal level. The initial amount was \$3 billion and nowadays it has increased to US\$ 180 million. The fund’s objective is to ensure that private sector payments and government subsidies involved in PPP projects will be performed on time and as agreed. The trustee of the fund is the Banco do Brasil, and to date the FGP has provided a single guarantee for \$ 120 million for Pontal Project (irrigation project of 7.7 ha., 25, sponsored award).

The possible reasons for which the FGP has not had much demand are:

- Complicated administrative and bureaucratic procedures causing delays in the approval of payments.



- Many of the projects intended to be under this scheme are “stigmatized” as “bad for the country” when considering the PPPs as a privatization of public services.
- Alternative guarantees are offered by the Brazilian States, which limits the market penetration of the guarantee fund. The States have promulgated legal standards in PPP in order to attract private investments.

Issac Averbuch pointed out that in the last few years, there have not been difficulties in the availability of resources for PPP financing at the Federal and State level in Brazil. Public Banks such as BNDES (Brazilian National Development Bank) had enough resources. Likewise, there was a certain fiscal affluence, and the 2008 crisis did not alter this panorama.

The Government, however, established a fiscal austerity program. At the federal level, fiscal restrictions of 1% of net revenue (RCL) have not yet been effective because the execution of investment projects will take a long time. Nevertheless, some States have started to feel the pressure of exhausting the payment limit, as established under the Law (3% RCL).

According to Averbuch, this austerity program may cause Public Bank loans to become insufficient for not having enough resources. The Treasury capitalizes Public Banks, and their interest is quite attractive for the reference market in order to model and finance the projects. Private Banks cannot compete with public banks, which limits their participation, mainly when interest rates increase.

Most of the banks, especially private ones, are opposed to risk and therefore, do not have many incentives to invest in new projects such as PPPs. For this reason, they demand very stable and liquid guarantees. Nevertheless, large banks are still interested in investing in PPP projects.

The problem of the federal government is that it does not have very stable guarantees to offer, because of changes in the legislation and increasing uncertainty. Currently, banks do not have the support of the country to offer complete guarantees for the FPG model (without leverage). States, especially the poorest ones, face the largest difficulty in providing guarantees that are reliable for the market. It is necessary to suggest alternatives, allowing for the improvement of the situation, which will require legislative modifications.

Regarding Peru, the Inter-American Development Bank (IADB) granted a partial revolving guarantee for a value of US\$ 60 million. Such guarantee allowed for the construction of the Peruvian IIRSA Norte road, for a value of US\$ 228 million. According to Claudia Stevenson, the guarantee of the IADB allowed for increasing the number of bidders, and improved the project “*rating*”. This guarantee was activated in the event that the Government failed to meet the payment of the CRPAO (Certificates Acknowledging the Annual Payment for Work). These documents were issued by the Ministry of Transportation as the work progressed; they are irrevocable for the Government.

Non Financial Guarantees

Sergio Hinojosa pointed out that these kinds of guarantees are aimed to mitigate risks associated with the incomes derived from the project. The most commonly used guarantees are: the guaranteed minimum income (IMG) and the guaranteed minimum annual traffic (demand). Both types of guarantees are predefined under the Concession Agreement. When the guarantee is activated, the Government pays the difference between actual income and predefined income (or the difference between forecasted traffic and the traffic carried out during the project). This modality has been used in Brazil, Colombia, Peru and Chile.



Lincoln Flor pointed out that the financial crisis had a negative impact in terms of costs and availability of financing, and the implication was a higher cost of capital and greater profitability demanded by shareholders. Consequently a reduction in the number of profitable projects was witnessed. The crisis also had a negative impact on economic activity, generating a lower demand for public services (energy, water, transportation, etc.).

Another risk is the competition (fair or unfair) that can generate a new, available infrastructure. In order to mitigate these risks, some countries in Latin America and the Caribbean have implemented “explicit guarantees, contractual or non-financial guarantees”, which generated strong incentives for PPP financing or project bankability. Additionally, during the crisis, non-financial guarantees (guaranteed minimum income) were the first line of defense for infrastructure bonds, as well as for the pension system in Chile.

Flor mentioned that this type of guarantee creates contingent liabilities as counterparts and should be appropriately regulated and managed (through rules and transparency) in order to avoid fiscal problems. In this regard, some countries have regulated a fiscal cap (regarding GDP) associated with these liabilities. In Flor’s opinion, non-financial guarantees are more demanded than financial ones.

Another type of non-financial guarantee is the *Present Value of Incomes*. The main characteristic of this mechanism is that the Concession term is variable. If effective demand is larger than expected demand, then the concession will be terminated before the term established under the Agreement. If the expected demand is less, the opposite happens, in that the term of the Concession is automatically extended.

Finally, an alternative mechanism for risk mitigation is the clause of economic and financial equilibrium. This mechanism

usually refers to changes in regulation or Government decisions with negative direct impact on operator revenues or costs. Other reasons are the delays in licenses or authorizations, and changes that affect the economic life of the project in the long term. This type of clause has been applied in PPP contracts in Brazil, Colombia and Peru.

Lessons Learned

Hinojosa pointed out that non-financial guarantees (explicit financial guarantees) - those that are designed and offered directly by governments in PPP contracts - have been most effective in achieving project bankability. In this sense, Chile has a complete and varied non-financial guarantee scheme, with a menu and design that can be extended, and replicated to other countries in Latin America and the Caribbean.

Financial guarantees have allowed for the opening of capital markets to institutional investors interested in long-term financial instruments at a fixed rate, a type of financing that can be rarely brought by the banks. Total or partial guarantees, however, are not an effective answer when banks search for liquidity more than for protection in relation to project risks.

Guarantee funds and guarantees offered by the multilateral organizations have not been used as expected. One of the reasons for this is the lack of an active, permanent and effective promotion plan from the institutions that are offering the guarantees. Moreover, they usually do not cover risks that are considered essential by the investor, such as the construction risk.

In the case of Brazil, guarantees have not been greatly required because, among other reasons, there is the idea that guarantees will not be delivered in time due to administrative



delays in their processing. This situation increases project transaction costs, which, in the end, increases project financial cost. Additionally, this warranty is given once the bid has been awarded, and consequently the financial benefits of the guarantee are not incorporated in the bid.

The economic and financial clause is a guarantee for equity and is perceived as highly effective for equity purposes, reassuring both investors and lenders. Nevertheless, there is a certain risk if the clause is not used appropriately, especially in renegotiation processes.

Moreover, financial guarantees (full or partial) are not an effective response when the banks look for liquidity and do not necessarily seek protection against certain specific project risks. Banks can charge spreads for liquidity risk and project risk. Therefore, financial guarantees are not crucial.

Given the high coverage required by the banks to mitigate interest rate risks and the potential fluctuation of taxes, some entities from Mexico and Brazil commit a large portion of their federal revenues as collaterals for loans and financial losses, which encourages a view of their potential incomes from taxes as a new source of financing. Taxes that will be received in the future, associated with payrolls, vehicle ownership, and licenses, are used as guarantees.

Subsidies in PPP Financing

Alfonzo Guzmán mentioned that the Government may want to grant subsidies to ensure that PPPs attract private investors. In this context, a subsidy entails direct fiscal contribution or a subvention paid for a portion of costs that is not repaid for the project incomes.

Subsidies for PPPs may be structured in different ways. One option for governments to provide subsidies is to execute cash payments (*upfront*) in order to cover the project capital expenditures. When the project is implemented, the government may carry out regular payments to private companies, based on the availability and quality of services under the Agreement. A third option is for the government to pay a *fee* per user.

In theory, subsidies to PPPs help ensure that projects produce a net economic profit or a social profit, and are financially feasible. In this regard, many infrastructure projects can create public benefits that are not reflected in the prices that users are willing to pay.

Guzmán pointed out that subsidies make sense if there are policies or programs designed to maximize the value generated by each dollar of the subsidy. For this reason, some policy design criteria should be taken into account, such as: source of resources, eligibility criteria, subsidy amount, expenditure mode, and subsidy management.

Subsidies may be financed with the creation of special funds or with budget appropriations. In the case of Mexico⁷ and India⁸, a Program has been created based on Subsidy Funds. In Brazil⁹ and Colombia¹⁰, the Program functions on the basis of budget appropriations (See Table N.6)

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7. Initial capitalization. With assets of infrastructure funds existing but obsolete (FARAC and FINFRA).
 8. Initial capitalization of the funds with resources of the national government. (US\$ 335 million).
 9. Annual Budget. Payments are classified as payments of interests and, therefore, are not subject to annual legislative approval. Legislative approval is required to cancel payments.
 10. Annual budget. Long-term payments to which Colombia commits are approved by CONFIS and CONPES—entity determining the strategic importance of every project.

	Years From Creation	Source of subsidies	Average subsidy per project	Total Investment in Subsidy projects (US\$ Billion)
Brazil	7	Budget	25%	12.4
Colombia	17	Budget	54%	16.8
Mexico	3	Fund	39%	3.4
India	6	Fund	20%	3.5

Table N.6

The selected cases present a range of options and experiences

Source: Castalia Strategic Advisors.

Guzmán specified that creating a subsidy fund has worked better than budget appropriations for every project. The reasons are that: (i) it generates pressure for more transparency and clear rules, (ii) allows private sector agents to see the government's commitment, (iii) creates incentives for PPP, and (iv) simplifies the approval process.

He noted that a greater advantage may come from the subsidy if payments are made once results are tangible. For instance, in Brazil payment occurs during the operation, according to performance levels. In the case of Colombia, payments are made during the construction of the infrastructure, and are pursuant to the attainment of performance. In India, payments are made during the construction of the asset, and are pursuant to attainment performance indicators. Additionally, there are payments during the first years of operation. Finally, in Mexico payments are made on specific dates established by the contract, when the Monitoring Unit approves the payment (Refer to Table N.7).

Likewise, it is important for the Government to take into account the fiscal impact and economic justification of all financial support mechanisms. For example, in the event of subsidies, it should assess the value of the subsidy; regarding guarantees, it should analyze the liabilities' contingent value

Table N.7

Subsidy Experiences

	Brasil	Colombia	México	India
<i>When is the subsidy paid?</i>	Operation	Construction and operation	Before the construction (sometimes during operation)	Construction
<i>Under what conditions?</i>	Performance targets	Construction Milestones Performance targets	Compliance with obligations	With payment of senior debt and after the equity
<i>Who checks?</i>	Independent Agent	independent Agent	FONADIN Monitoring Units	Bank

Source: Castalia Strategic Advisors.

and the opportunity cost of the funds. Lastly, in the event of a subsidized debt, it should consider the cost of implicit subsidies.

Projects should continue if the total project and government costs are less than the economic benefits. In addition, it should take into consideration the fiscal impact of a project, and whether or not the government can assume the responsibility.

Lessons learned

Guzman noted that simplifying the approval processes can increase attention, as well as increase the benefits of the subsidy program, the number of projects executed through PPPs, thereby improving decision-making criteria to select projects.

If the Government Agency is responsible for managing the subsidy program, then they can advise other agencies in the project structuring process. In this manner, knowledge can be shared and projects can be adequately structured.

De Vecchi pointed out that having financial resources is not enough. There should be consistency among specific infrastructure-related variables: the structural variable

(coordination between the federal, state and municipal governments is essential); the legal variable (there should be a federal legal framework allowing for speeding up PPP structuring; and qualified human resources variable ("PPP Units"¹¹ should have adequate staff to execute their operations).

Recoverable subventions are essential to support PPP development. It is recommended that they not be allocated in order to finance public work projects. Even if promoting public work through *PPP Units* may be important in the development of infrastructure, PPP financing may be jeopardized. If PPP Units finance public work, it should be on a temporary basis, measuring available financial resources. *PPP Units* should be flexible in their operation and adaptable to the changes that may occur in their environment.

Adopting clear criteria for the selection of projects that will receive subsidies may facilitate obtaining well-structured projects, which are economically feasible. There should be a "common thread" among the projects included in the infrastructure plans, i.e., they should have feasibility studies that are either completed or in an acceptable progress status.

Setting the subsidy amount through market mechanisms (auctions) may minimize the amount government pays. Allowing the auction bidders to offer "premium" (negative subsidies) creates an additional source of resources and ensures the maximum value for the government. Likewise, using "*triggers*" for paying subsidies encourages private parties to meet contract obligations.

Evaluating direct subsidies together with indirect fiscal support, such as guarantees or "soft" loans, ensures that the

11. Organic units inside the government, responsible for the PPP frame.

fiscal effect of the project will not exceed these economic benefits. Furthermore, having separate agencies to manage the guarantees or concessional loans, or executing non-discretionary policies, may reduce conflict of interest.

Creating a website in order to make available policy recommendations and the information on projects that receive subsidies may improve transparency and public supervision. In this manner, private investors' interest and trust may grow.

DAY 1

**Fifth Session:
Fiscal Risks and PPPs**

Headed by
CLIVE HARRIS, Practice Manager, Public-Private
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Lecturer
RUI MONTEIRO, Senior PPP Specialist, World Bank
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Panel members
DAVID DUARTE, Chief of Contingent Liabilities and PPPs,
Ministry of Finance, Chile
LUIS EDUARDO ARANGO, Deputy Director, Ministry of
Finance, Colombia

Rui Monteiro pointed out that PPPs can create fiscal space provided that selected projects be efficient. The degree of efficiency of a project will be determined by: project selection (cost-benefit analysis, *affordability* analysis and PPP model definition), contracting (initial studies, bid preparation and bid management), and management of contracts.

It is important to consider that with PPPs the private sector remains contractually bound in order to ensure the contract's efficiency, but the public sector is also committed in the long term. Consequently, the public administration should be concerned with identifying fiscal risks in PPP project preparation, the sustainability of the PPP program in the long term, and public-private interface management (considering that this relation can be, for example, for 25 years).

The evaluation of fiscal impact of PPP projects is essential in order to ensure their sustainability. For example, in the case of Portugal, millions of Euros were committed in PPPs, assuming they would enlarge the fiscal budget. However, this did not happen, and the financial crisis caused a scarcity of fiscal resources, which made PPP projects unsustainable.

England went through a similar experience: some hospitals that were built under the PPP plan had to stop rendering certain services. Health authorities had to reduce their budget and this limited the service. Yet, this problem would have occurred with or without PPPs. Ultimately, someone has to cover the building cost, but in the case of PPP operation (and maintenance), costs have to be met, and can be less if the infrastructure is used in its full capacity.

Even though public infrastructure is essential for economic growth and quality of life, these investments may be distorted by the existence of over-costs, delays in the works, inappropriate maintenance, poor quality design, corruption and inadequate project selection. Therefore, it is necessary to evaluate costs and risks at the moment of making a decision on PPPs.

There may be significant fiscal risks arising from poor contract management. In addition to ensuring contract enforcement and cooperation between the public and private sectors, as well as development of projects, contract management should include an ongoing strategic management of the contractual relationship. It should also include monitoring of changes in technology, business, demography, legal framework or political decisions that may affect the contract, as well as prevent strategic behavior by the private operator.

Sources of Fiscal Implications

The same PPP features that are the source of contractual efficiency (long-term private capital) can create fiscal risks. As a recoverable investment in the long-run, a public infrastructure project will seek private capital to maximize profitability in this period. An important success factor of a PPP is the alignment of public interest with private interest, obtained by meeting minimum requirements for service and a payment mechanism associated with the infrastructure performance and service.

It is clear that in the long term, the PPP contract is subject to changes (technological, commercial, demographic, legal or political). It is also true that the contract will be completed (in order to incorporate changes and uncertainty) and private investors may be interested in managing the changes to their benefit. In the context of PPPs involving the provision of public services, there is informational asymmetry: the private investor has more information about the operation of the service and will always be protected, while the public partner has incomplete information and can be politically induced to meet the public interest at all times (which may involve higher costs in terms of the contract, including renegotiation expenses).

These risks cannot be avoided, as they are typical in public service-related activities, but can be mitigated during the selection process, contract definition, and can subsequently be managed by the public sector and the Ministry of Finance.

Some public infrastructure projects under PPP when executed will have high associated fiscal risks that can eliminate potential efficiency gains and create fiscal sustainability (this is the case of projects involving technological change or projects facing changes in public policy). An adequate selection of PPP projects using filters and prioritization criteria is therefore essential for the management of fiscal risks.

In addition, during the design of PPPs, there is the need to carefully allocate risks associated with the project, either in the public or private sectors. The public sector can retain too much risk, above the optimum, or otherwise transfer too much risk to the private sector, in which case, the private cost will be higher and will present a potential risk transfer to the public sector.

Another feature of PPPs is that they could potentially create negative effects during design and construction. Some



governments tend to consider PPP projects as “projects with zero cost”, which will be paid for by future administrations. This erroneous perception has two effects: it encourages an exaggerated volume of PPP projects and distorts the selection of public projects. Tailoring PPPs to the budget process (distribution of costs over the life of the project) is crucial in order to encourage good project selection and careful design of contracts.

Long-term payment capacity

Rui Monteiro argues that there is a lack of infrastructure. Governments do not have financial capacity to fund the large volume of projects, even in developed countries such as the UK or the U.S. Governments should associate the lack of infrastructure to the country’s payment capacity, and prioritize investment programs in public infrastructure, balancing pro-growth investments (which generate growth and boost budget revenues in the short term) and pro-quality life (which may enhance long-term growth but have no short-term budgetary impact).

An exaggerated amount of future public costs will translate, sooner or later, into a fiscal crisis. Governments should be carefully accounting all the commitments associated with PPPs: certain costs (set in the contract) and contingent costs (dependent on uncertain events).

The certain commitments should be considered as public debt, since governments are contractually obligated to make these payments. Out-of-balance costs (dependent on asset performance) can create fiscal irresponsibility. The experience in Europe shows that Eurostat rules are being revised, after what happened in some countries (Portugal, United Kingdom, among others), some governments (Germany and the UK) have included commitments in the public accounts as a measure of

transparency, and as a tool to introduce disincentives for more obligations to be paid.

The accounting of contingent liabilities (eg. guarantees related to demand levels, exchange rate risks, force majeure and early termination of the contract) should encourage an optimal allocation of contractual risk, ensuring effective risk management and preventing an exaggerated accumulation of systemic risks.

Efficiency in the public option

When a public decision-maker selects PPP projects, selection should be based on economic return. If there is a cost-benefit ranking, high return projects may be executed before those with a low return. The projects with a negative cost-benefit analysis should never be carried out. However, without the cost-benefit evaluation, the probability of executing them remains high.

If PPPs do not involve immediate public costs (in the first years), they do not fit the usual budget systems. PPPs require a long-term, pluri-annual budget plan and a specific plan for accounting PPPs. Then, public organizations shall be created (technically and legally) to evaluate these projects in terms of the cost-benefit analysis, and budget rules for PPP accounting should be set up. The Treasury Departments are responsible for ensuring the quality of accounting.

PPP contract design

In order for projects to be successful, ensuring good PPP contracts is not enough; an adequate institutional framework is also necessary. This includes: project evaluation and selection institutions (PPP Unit, *gateway system*, *steering committees*);

bidding management institutions (*Steering committees* and contracting panels) and contract management and regulation institutions (contract managers, regulators, auditors and PPP Unit).

In addition to a sound legal environment, PPPs require public entities devoted to: (i) definition of effective and efficient PPP models; (ii) evaluation of fiscal risks and costs; (iii) contract of PPP projects; (iv) contract management; (v) regulation of the sector and (vi) management of PPP fiscal risks.

To a great extent, the success of PPPs depends on the contract management capacity. In this regard, adequate staff recruiting and training process are required. It is also necessary to have an adequate motivation and retention policy. Additionally, the establishment of information disclosure and transparency policies allowing for external tax control and supervision is necessary. The main sources of contract inefficiency are bad contract renegotiation, fast technological evolution and obsolescence, as well as political changes.

In order to manage fiscal risks, the role of the PPP Unit of the Treasury Departments is crucial. These entities should: support the political definition of the PPP; guarantee an adequate legal environment for the PPP; verify the quality of the cost-benefit analysis; evaluate the efficiency of the PPP models being used; evaluate the long-term sustainability (*affordability*); evaluate *ex-ante* fiscal risks; check the bidders' proposals; evaluate *ex-post* fiscal risks; guarantee the efficacy of contract management and renegotiate contracts. Likewise, the *Gateway* System should be taken into consideration, whereby the line ministries propose projects but the veto power remains under the Treasury Department.

In general, there is no standard environment for PPPs; it all depends on the local conditions. It depends on the characteristics of the public institution for the selection of



projects, on the public administration and its relation with the politicians, as well as on budget planning and control.

Rui Montero recommended that governments retain a long-term vision. The efficiencies to be considered are: productive efficiency (*cost efficiency*), public decision-making efficiency (project selection) and economic efficiency. There are often conflicts among these public challenges, and, in the end, it is a political decision, but one that should be based on a solid technical, economic, and legal assessment.

He finished by saying that PPPs are tools to attain promptness, efficacy and efficiency, but that their application implies a careful institutional development, involving: transparency and rendering of accounts, efficient project selection, efficient PPP preparation and contracting, and an efficient contract management and management of fiscal risks.

Chilean experience

David Duarte mentioned that in 2001, the central government of Chile implemented a long-term income projection to structure the annual budget. It constituted an adjusted balance because of the effect of the economic activity cycle and the copper price. Such a plan was formalized in the 2006 Fiscal Liability Law. In order to perform a due evaluation of the fiscal position, future commitments should be taken into account, which not only includes annual flows, but also stocks. The unused resources in a year are kept in a sovereign fund.

Duarte explained that in Chile, different types of contractual guarantees are granted to PPPs, such as: minimum income guarantee (income co-participation), exchange rate coverage mechanisms, variable term mechanisms, environmental risks coverage, coverage for some construction costs and other

specific guarantees under some contracts (for example, El Melón Tunnel and Chiloé Bridge).

Each guarantee has a specific objective, and they cannot be used to artificially improve the profitability of a project. During the bid, pressure is exerted to improve its value (all the parties interested in bidding the project). It is evident that there is some level of information asymmetry, since the design of the project is carried out assuming a financing structure that is “known” only by the investor.

If the Minimum Incomes Guarantee is activated, the concessionary can pay the financing (objective function of the design). Then the project is not profitable for the private sector. A premium is charged for accessing this mechanism.

From a fiscal point of view, guarantees emphasize the economic cycle (they are pro-cyclical) and therefore should be kept under control. Being contingent, they are difficult to estimate. If randomly activated, they cannot be included in the fiscal budget.

Some models, however, allow for estimating a distribution of payment probabilities, which allows the Treasury Department to calculate the present value. Such estimation is recorded in the Contingent Liabilities Report of the Budget Direction. The financial management of the system is sustainable in the long-term, compatible with the fiscal planning, and monitored by international organizations. In order to guarantee the adequate operation of this system, certain measures have been implemented such as information disclosure (Contingent Liabilities Reports published by the Budget Direction), the rule of maximum fiscal commitment, the management of contingent liabilities, and the management of project portfolio. Additionally, the Treasury Department is permanently involved in projects and programs.



Among the recommendations offered by Duarte are the monitoring of macroeconomic risks and economic efficiency criteria in public decisions. Likewise, he advised considering the estimated, and not the expected flow of projects, and developing PPP projects that are socially beneficial.

He also recommended disclosing all information (contracts, agreements, commitments, etc.) and contrasting concession costs with public financing. Finally, risk distribution should be evaluated, good base line studies should be executed, and an effective plan of institutional *checks & balance* should be established.

Colombian experience

Luis Eduardo Arango pointed out that due to budgetary restrictions, over the last decade, PPPs have been promoted in Colombia (the most commonly used modality is concession), as a mode of financing needed infrastructure in the country. The problem was that Colombia had security concerns, and therefore, in order to make projects feasible, guarantees were granted. The State assumed risks in order to mitigate uncertainty in the private sector and encourage its participation. The guarantees were not recorded in the framework of fiscal accounting because there was no instrument available to do so. Consequently, the real fiscal situation was not reflected.

In the risk matrixes of the first PPP generation, the State was the party that assumed the highest risks; it was assuming the construction risks, traffic risks, fee risks, land risks and force majeure risks (See Table N. 8)

Works were executed, yet the contingent liabilities incidence was high, which led to very strong fiscal pressures. In a crisis

Table N.8**Risk
Distribution**

Risk	First Generation	
	Private	Public
Construction	x	Partial
Traffic		x
Tolls		x
Land		x
Environmental License		x
Tax	x	
Exchange	x	x
Force Majeure (insurable)	x	
Force Majeure (uninsured)		x
Financing	x	

Source: Ministry of Transport and Department of National Planning.

situation, macroeconomic management became difficult, forcing the issuance of debt instruments.

PPP contracts showed deficiencies in the risk allocation matrix. These Contracts did not specify to what extent risk was assumed by the public sector, which is equivalent to saying that the State was assuming an infinite risk. Given this situation, in 1998, Law 448 was sanctioned, and the Contingencies Fund was created. It is an extra-budget fund where the contingent liabilities of the Colombian Government are entered in the accounts. The law established that the Treasury Department had to assess such contingencies. This law helped monitor public finance management and allowed for processing the contingent obligations of Government Entities. In this manner, contributing entities were committed to include in their debt service budgets the necessary appropriations (funds) to cover possible losses derived from the contingent obligations under their responsibility; Contributions are understood as budgetary executions.

Decree 423 was issued in 2008 regulating Law 448, with the aim of improving risk allocation in Concessions, i.e., trying

to generate a balance between the risks assumed by the public and private sectors, while reducing budgetary volatility. The main benefit brought by this rule is that in the past, contingencies were very large, even larger than the cost of work. Nowadays, the Contractor can ask for the contingency funds and assume the risks. In this manner, Law 448 and Decree 423 empowered the Treasury Department to approve the assessment of the contingent obligations and determine the contribution plans, in order to cover possible obligations, and to determine and update the assessment methodologies for contingent obligations.

DAY 1

Sixth Session:

Innovation of financial instruments for PPP financing

Headed by

LINCOLN FLOR, Senior Public-Private Partnerships Specialist, World Bank Institute

Lecturers

**SERGIO BRAVO, Consultant, World Bank Institute
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Looking to support the financial close of PPP projects, some governments in Latin America have developed innovative instruments, some of them created before the financial crisis, such as the infrastructure bonds of Chile (1998) and the Recognition Certificates of the Annual Payment for Work (CRPAO) of Peru (2006). Other instruments were created during the crisis, such as, for example, the Development Capital Certificates (CKDs) of Mexico (2009).

Financial close depends, among other factors, on the design of the PPP contract, its structure, and more specifically, risk allocation and expected incomes. A financial close may be considered successful when low financial costs are incurred and it occurs within reasonable time. This means having stable and predictable cash flows that can be “securitized”. Contract design plays a key role in the financial close, particularly in the distribution of demand-associated risks (assumed by the government or operator).

Chilean infrastructure bonds (1998)

Mauricio Gatica pointed out that in Chile, the PPP system has a deep long-term position in the capital market in terms of pension fund stability. According to the Association of Concessionaries for Public Infrastructural Works (Asociación de Concesionarios de Obras de Infraestructura Pública A.G. – COPSA), 56% of debt

corresponds to long-term bonds (86% are administered by pension funds and insurance companies). In this context, 20% is related to infrastructure bonds financed by PPPs since 1998.

The Concession of Costanera Norte Highway was financed with the issuance of infrastructure bonds. Financial close occurred in December 2003, and was associated with a value of US \$ 294 million, with periods of 13 and 21 years for each series.

Net resources associated with the bonds were deposited into trust accounts and addressed to construction. The transaction has an unconditional and irrevocable guarantee granted by the Inter-American Development Bank (IADB) and the Insurance Company *Ambac Assurance Corporation*, with a participation of 15% and 85%, respectively. Both entities were classified by Moody's at AAA rating. These guarantees are regulated by the Laws of the State of New York.

On the other hand, financial structuring established that the concession holder would be authorized to use the benefits or reduce the capital, if a minimum liquidity was guaranteed for the next payment of the coupon.

In a basic plan of infrastructure financing with bonds, the operator had to contribute between 15% and 20% of the required investment. During the construction stage, a loan bridge was arranged. The bond was placed in the market of Pension Funds and Insurance Companies, with a long-term time modality. Then, to issue the bond, the following requirements were established: project having an "investment grade" and financial guarantee issued by a multilateral organization or insurance companies (*monoliner*). According to Gatica, most infrastructure bonds were issued with *monoliner* guarantees, the sole exceptions being the Inter-port and Melipina Highways (See Table N.9).

Table N.9**Infrastructure Bonds**

Operator	Date	Payment (UF)	Term	Duration	Rating	Interest Rate	Margin
Los Libertadores Highway	17-ene-07	1.119.000	18,5	10,8	AAA	3,26%	0,45%
Del Maipo Highway	20-dic-06	6.000.000	24,0	21,3	AAA	3,51%	0,66
Del Bosque Highway	16-nov-06	1.500.000	17,1	16,3	AAA	3,36%	0,54%
Del Sol Highway	28-jun-06	970.000	12,0	6,1	AAA	4,15%	0,77%
Interportuaria Highway	26-ene-06	990.000	24,5	7,7	A+	4,60%	1,76%
Vespucio Sur Highway	11-nov-04	10.5000.00	24,0	12,1	AAA	4,59%	0,44%
Del Maipo Highway	13-oct-04	5.800.000	21,0	12,7	AAA	4,69%	0,30%
Central Highway	19-dic-03	13.000.500	23,0	11,5	AAA	5,69%	0,67%
Costanera Norte Highway	11-dic-03	7.600.000	21,1	11,9	AAA	5,58%	0,56%
Costanera Norte Highway	11-dic-03	1.900.000	12,6	7,9	AAA	4,95%	0,80%
Melipilla Highway	17-jul-03	720.000	21,5	4,9	AA-	6,49%	2,60%
Los Libertadores Highway	9-abr-03	1.591.000	8,0	4,0	AAA	4,00%	1,36%
Los Libertadores Highway	9-abr-03	2.085.000	23,0	10,1	AAA	5,78%	1,96%
Del Sol Highway	9-may-02	5.565.000	16,0	8,2	AAA	6,35%	1,35%
Rutas del Pacífico	9-abr-02	10.999.000	23,0	11,5	AAA	6,02%	1,10%
Del Bosque Highway	21-mar-01	7.801.000	20,5	9,9	AAA	6,38%	1,08%

Preparation and Source: Gatica.

As a result of the Financial Crisis, *monoliners* disappeared, but the risk of bonds survived. Gatica mentioned, however, that the Government guarantees were not activated. This situation was mainly due to the good design of the concessions, which allowed for an adequate evaluation of the risks and in this manner, project costs were perfectly aligned to the projections of incomes and project terms.

Structured Equity Securities (CKDs)

In 2009, Mexico issued the CKDs in order to introduce long-term financial instruments into the market, not only for PPPs. CKDs are fiduciary instruments aimed at financing one or more

projects. In order to implement them, two changes were implemented in the regulation framework: (i) Modification of the regulation framework of pension funds and (ii) obligation of being listed in the Stock Exchange of Mexico.

CKDs are structured through Mexican trusts whose aim is to issue Fiduciary Stock Exchange Certificates that will be placed and offered to the public at the Mexico Stock Exchange. The CKD, due to its design, is not considered a debt instrument. The operation that is carried out is similar to that of any other common action. CKDs can only finance Mexican companies or projects located in Mexico. There are basically two types of CKDs:

- Those financing individuals or company projects.
- Those financing private capital funds in order to invest in multiple companies or assets according to a Business Plan and some pre-determined eligibility criteria.

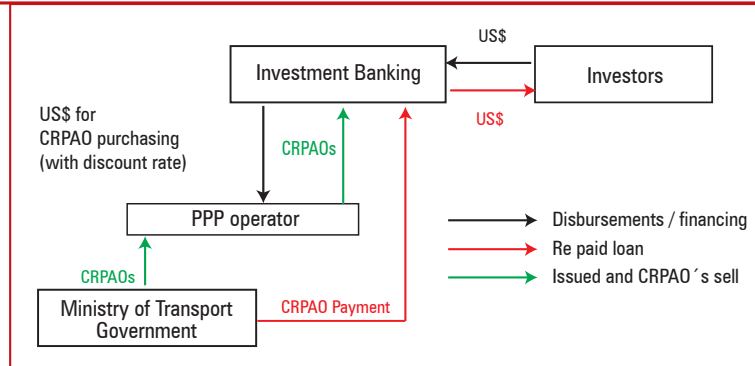
Siefores (sociedades de inversión especializadas de fondos para el retiro) are the most important institutional investors in Mexico; they manage funds above the value of US \$ 90 trillion. Siefores are authorized to invest in public offers of "*securities*" and are not allowed to execute any kind of commitment for capital contributions.

Recognition Certificates of the Annual Payment for Works (CRPAO)

Sergio Bravo pointed out that in Peru, the CRPAO was introduced in 2006, between the contract and financial close, after a renegotiation process in four IIRSA Road Concessions (IIRSA Norte, Tramos 2, 3 and 4) to facilitate financing. The underlying asset of CRPAO is the Work Progress Certificate (WPC or CAO). The Government has the obligation to

Chart N.3

CRPAO Operation



Source: Sergio Bravo.

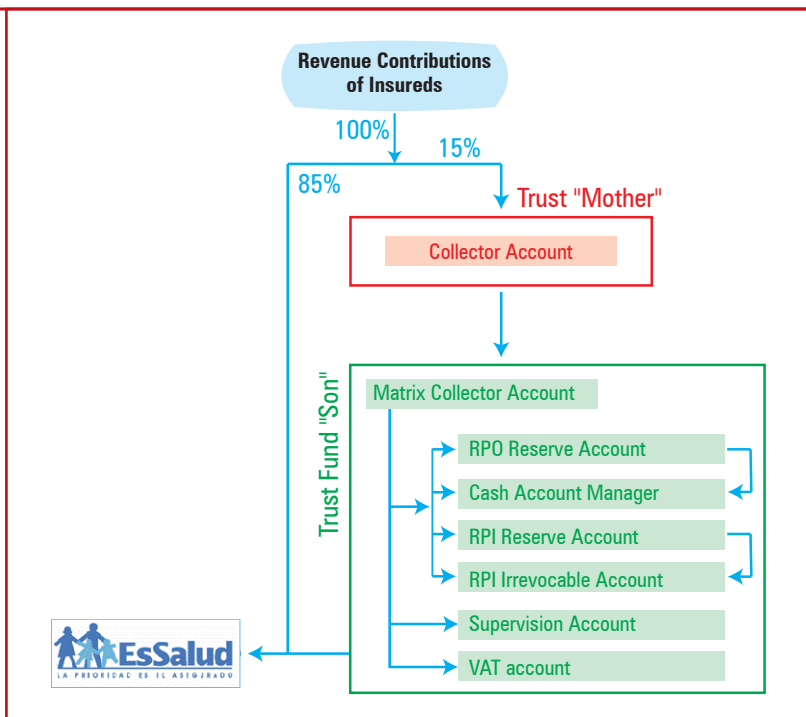
recognize the payments for construction work that is in progress. The Supervising Agency of Investment in Public Transport Infrastructure Facilities (OSITRAN) issues the WPC or CAO, which represents the physical construction in terms of quantity or as a percentage of the total project. After the issuance of the WPC, the Ministry of Transport issues the CRPAO. The CRPAO is a financial instrument with irrevocable and unconditional characteristics, payable in 15 years, on a six-month basis (See Chart N.3).

Recognition Certificates of Investment Payments (CRPI)

The main difference between CRPI and CRPAO is that the investor issues the CRPI. The CRPIs are issued depending on the WPCs, or underlying asset. The risk of the financial instrument will depend on the quality of the payment source (liquidity). In the case of Peru, the social security (ESSALUD) funds have to be separated in a former account, allowing for isolation of the economic and financial risks of the institution (See Chart N.4).

CRPAO and CRRPI reduced the effect of construction risk on financiers, because payments are recognized as the

Chart N.4



Source: Presentation by S. Bravo.

work progresses. Therefore, the government assumes the construction risk every time it issues the Work Progress Certificates (WPC), from which the CRPAO are derived.

In the case of infrastructure bonds or CKDs, when a contract expires or terminates, there are established settlement mechanisms for each contract. In this manner, the project financier assumes the risk of lack of compliance with the total payment that was initially agreed upon. Regarding CRPAO, this situation does not occur because of their irrevocable nature with respect to the Government, which ensures payment of 100% of the obligations, in the case of the Concession Agreement being terminated.

CRPAO and CRRPI allow for quality verification in the work as it progresses. The Work Progress Certificate (WPC) guarantees that construction is executed according to the standards established under the Concession Contract. In the case of Infrastructure Bonds and CKDs, this situation does not occur.

Lessons learned

Bravo recommends that, in the case where the Government assumes demand risk, a cost model should be used, which should include investment through the instruments described above. By contrast, if the operator assumes demand risk, then a demand model should be used, in which case the cash flow can recover the concessionaire's investment, and the risks and benefits must correspond to the operator. Under a demand risk model, if guarantees are issued, it should create conditions for the Government to share risks and benefits.

For the cost risk model, payments made by the Government must compensate the investment and maintenance separately. The separation between payments for investment and operations is crucial and will allow for the separation of different risks, as well as being useful in the process of contract expiration. The use of separate payments is more transparent and also reduces the risk of disputes between parties.

Institutional investors must have the opportunity to transfer their "securitized" debt at any time, which is a strong signal of the success of economic and financial structuring in PPPs.

DAY 2**PANEL I:****Financial Close: lessons from different perspectives****Headed by****TOMAS S. SEREBRISKY**, Senior Infrastructure Economist
Latin America and Caribbean Region, Sustainable
Development Department, World Bank**Panel Members****JUAN CARLOS CABREJOS**, Director, ODEBRECHT
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JESÚS GONZALEZ, Head of Structured Finance Americas,
BBVA

Cabrejos presented the financial close plan that was implemented for IIRSA (Initiative for the Integration of the Regional Infrastructure of South America) North and South Roads, joining the Peruvian coast with the Brazilian border. The concession of the projects occurred through the PPP modality, co-financed by the Government. The collection of a toll was not sufficient to cover the investments, as well as operation and maintenance. The Contract type is BOT, that is "Built, Operate and Transfer".

The Peruvian Government grants two types of payments to the operator: (i) Annual Payment for Works (APW), a direct obligation of the Ministry of Transport, characterized as "unconditional and irrevocable". It may be used as a collateral, directly sold or securitized, and payment is granted for 15 years; and (ii) Annual Payment for Maintenance and Operation (APMO), during the exploitation period. Toll incomes are for the Government and are used to minimize co-financing

contribution; there is no commercial risk for the concession holder.

The financing idea started from offering to the international bank the APW, with no resource for the investor. The bank would then issue the bonds with guarantee of the APW as an underlying asset. The “*quasi* sovereign” nature of the obligation made it possible to draw the interest of high level investors and incur reasonable financing costs.



In order to structure the IIRSA projects, a bridge loan was granted by the CAF. For IIRSA Norte, the amount was US\$ 60 million and for IIRSA Sur, US\$ 150.5 million. The credit term was 3 years, at a LIBOR rate plus 1.5%. Pre-payment was not penalized. Resources obtained from the financial close were used to pay the LCE early.

In the case of IIRSA Norte, a CRPAOs sale agreement was signed by the operator and the CRPAO Purchaser. The funds for the purchase of CRPAOs came from an emission of notes in the international market through 144-A / Reg S. The rate of notes was 8.75%. The amount available to buy CRPAOs was US\$ 224 million, with availability of funds as per a pre-established chronogram. CRPAO payments were partially guaranteed by the IADB for an amount up to US\$60 million.

In IIRSA Sur, a take-or-pay contract for the future purchase of the totality of CRPAO's was signed, for an amount equal to US\$ 600 million. Unlike IIRSA Norte, it did not require Partial Guarantees. Availability of funds was as per a predefined chronogram, in the works execution term.

Alfonso Navarro, in turn, pointed out, regarding projects under public-private partnerships (or APPs as they are known in Mexico) for the development of social infrastructures, that four projects at the federal level and five at the state level

have been developed in Mexico since 2005. The experience of Acciona with the approach to these projects is that financial entities are more interested in federal projects, because they have the guarantee of the federal government.

Navarro noted that for state projects, additional guarantees are required as an alternate payment source, either through federal participation or state tax allocation. The states are sometimes reluctant to structure these guarantees, even though their legal framework is well structured. Creating a federal guarantee fund to support these PPS projects would be useful, as well as creating an adequate legal framework.

He concluded by noting that projects with high technological risk are more difficult to finance. In these cases, it is helpful to set up limits for penalties and to state specifications that correctly transfer risks to the investor.

Carmen Pérez de Muniain took up again the subject of pension fund financing. She pointed out that infrastructure investment returns are generally correlated with a country's nominal GDP growth, aligned to the objective of the funds for attaining sufficient pension/salary replacement rates at the moment of retirement. The returns on investments in infrastructure diversify the returns on other assets, improving the profitability/risk relation of the portfolio.

She presented the instruments through which investments of Pension Funds could be materialized, highlighting, among others:

- The most senior bonds issued by the party investing in infrastructure, qualified by a rating agency, are an ideal option for direct investment of Pension Funds.
- The most junior bonds issued by the operator, qualified by a rating agency, are an ideal option for direct investment

of Pension Funds, provided that the payment of capital and interests is sufficiently guaranteed, and keeping the risk of term extension.

- Investment in the most subordinated bonds, mezzanine debt and capital make recommendable channeling the investment through a fund for infrastructure, where a specialized manager carries out a more profound analysis of investment feasibility. In this case, payment of the management commissions is justified.

According to Pérez de Muniain, the regulation framework for pension funds in LAC countries has opened slowly to investments in infrastructure, directly and/or through specialized funds. There are 20 Private Capital Funds devoted to investment in local infrastructure in Mexico, Chile, Colombia and Peru, managing a total amount of resources equal to US\$ 4,035 million. More than half of the resources of these Funds correspond to investments of Local Pension Funds. The 20 Funds prioritize investment in Capital for Infrastructure in every local market and almost all of them are governed by Local Managers. Governments and Multilateral Organizations take part as investors in some of the funds.

Because of the regulation and competitiveness framework in which the Mandatory Pension Funds operate in LAC, profitability is measured in short observation periods. It is fundamental not to have assessment-related distortions in such products, and therefore clear standards are required for the assessment. The complexity in analysis of these products requires plenty of means that are hardly attainable in a PFA. For the benefit of the affiliated themselves, it makes sense to find synergies at a systems level.

In this regard, Pérez de Muniain suggested that Governments set up a regulatory framework integrating homogeneous assessment plans for all the investors, validated by an



independent third party. Likewise, she proposed to establish corporate governance regulations for the Pension Funds, in order to avoid conflict of interests.

On the other hand, she suggested participation of governments and multilateral organizations in the financing of infrastructure projects, assuming the most difficult risks for investors. Additionally, she affirmed that the Government should be sure that there are sufficient projects for channeling authorized Funds.

Regarding infrastructure funds supported by the government or by multilateral organizations, she mentioned that investment policies guaranteeing the exposure to risk profile required by the Pension Funds should be clearer and more committed. She also recommended participation, as specialized investors, in the most complex parts of project financing.

Carlos Suñer highlighted the importance of having experienced and well-trained regulatory organizations, which is fundamental for financial close. Examples include OSITRAN and PROINVERSION in Peru, which were fundamental in the financial closing. In general, there are always conflicts between what Structuring Banks want and the aims of the Government. Suñer pointed out that in their position as multilateral parties, regulatory organizations lie somewhere in the middle; they are interested in regulatory issues, but also in private sector issues.

Political commitment is essential in projects; an example of this commitment is having regulatory bodies with professional and experienced people. The regulatory body should have experience and knowledge about what the banks are ready to assume, which comes from knowing how to allocate risks. The risk should be assumed by the party who can manage it best.

In shallow capital markets, financial close could take a very long time, despite the government desiring closure as soon as

possible. Multilateral parties then came in with bridge loans or partial guarantees, which increased the project's rating.

Nowadays, local banks are increasing the terms at which they offer their loans. In this manner, a local bank is now working in more aggressive ways, i.e., more competitors, with lower costs.

Among the fundamental risks of the financial close we can find the level of returns for investors. This is the eternal conflict between what governments offer, and what investors want. Often, investors are in construction, and look for a profit from construction, but not from long-term flows. Consequently, there are potential problems, such as quality service reduction. There is even an interest in selling projects, which may lead investors to ask for renegotiation of the contract.

The Contract should allocate risks clearly. A critical issue is compensation mechanisms. Guarantees are important in the financial close, in the event of Contract termination. Another fundamental clause is the economic-financial balance, as well as tax stability clauses. Likewise, inflation-indexed incomes are another important element to be considered upon the financial closing.

Juan Carlos Javier presented the PPP project called "San José-Caldera Road Public Service Work Concession", which was financed by the Central American Bank of Economic Integration (CABEI). This project is important because it was the first PPP road in Costa Rica. The highway has a total investment of US\$ 330 million, a length of 76.8 kilometers and will join the cities of San José and Caldera. This Concession consists in the design, planning, financing, construction, rehabilitation, improvement, operation and maintenance of the highway. To finance this work, a syndicated loan was used, for an amount equal to US\$ 246,186,294, lent by CABEI. This loan required normal guarantees plus a mechanism of

minimum incomes approved by the Government and a joint guarantee of *sponsors*.

Some lessons learned are: minimize project politics; create a joint controversy solution commission; close coordination with the media; reduce the execution risk, clearly defining a plan covering both parties' obligations (work chronogram, technical surveys, etc.); and anticipate and adequately define social risks.

Finally, Jesus Gonzalez Torrijos pointed out that despite the current volatility, Latin America and the Caribbean has a stable macroeconomic situation, reflected in a dramatic decrease in the CDS spreads since March 2009, which, in some cases, is below that of European countries. GDP growth forecast in Latin America and the Caribbean shows a great potential for creating new opportunities for continuous growth. Lending activity is re-emerging after the crisis, and Mexico and Brazil have the most active markets.

Regarding market infrastructure in the LAC region, Gonzalez mentioned that investments are very focused on transport infrastructure (roads and airports) and in social infrastructure. The transfer risk matrix is very balanced toward the private sector. He noted that the number of demand risk operations is higher than availability risk operations.

He mentioned that there is a lack of liquidity in the secondary infrastructure market, and institutional investors are coming to the market, ie private initiatives are not playing a major role. Long-term financing remains relevant.

All these elements are typical of emerging markets. The trends will gradually change to greater activity in the secondary markets, with greater participation of institutional investors and increased importance of social infrastructure vs. transport infrastructure.



He clarified that commercial and financial close does not necessarily have to occur simultaneously, but that the rules must be clear. Moreover, PPP processes are long and need the Public Administration's commitment, not only a financial one but also investment in human resources, in order to ensure success. Gonzalez mentioned that there is liquidity to fund projects, although this is perhaps lacking in some markets. Finally, he noted that it is necessary to give more transparency to the bidding process, which involves a stable legal framework.

DAY 2

PANEL II:

Infrastructure Funds: Panorama and perspectives

Headed by

ADRIANA DE AGUINAGA, Program Manager, Public-Private Infrastructure Advisory Facility (PPIAF)

Panel members

CARLOS SUÑER, Senior Specialist, Corporación Andina de Fomento (CAF)

NICK O'NEILL, Chief Operating Officer, Macquarie Capital Advisers, Mexico.

GONZALO DE LAS CASAS, Fund Manager, Sigma Plus Fund, Peru

RICARDO DE VECCHI, Senior Advisor for FONADIN, IADB, Mexico

Reasons to invest in Infrastructure Funds

Ricardo De Vecchi pointed out that FONADIN was created in Mexico to support the execution of projects included in the National Infrastructure Plan. Likewise, the support of FONADIN has facilitated private investment in infrastructure, because it provides more certitude, a perception that was lost with the failed road concessions that occurred in the past in Mexico.

Gonzalo De las Casas noted that the infrastructure deficit in Peru has to be financed not only by the public sector but also by the private sector. Infrastructure development is necessary to support economic growth. For the pension funds, investment in infrastructure is ideal because of the terms and the fact that risks are covered. For example, under Concession Contracts, fees are readjusted based on inflation.

Nick O'Neill mentioned that Macquarie infrastructure funds started in Mexico as part of its expansion strategy in Latin America. Creating the fund in Mexico is the first step. The reason to invest is that pension funds have long-term liabilities

and require long-term assets; infrastructure investment is a long-term operation and offers high yields.

Carlos Suñer affirmed that equity is limited, because investment volumes demanded by infrastructure projects are high. For this reason, it is more convenient to gain access through an Investment Fund and, in this manner, participation in projects is possible proportionally to the availability of resources. Additionally, Suñer mentioned that working with Investment Funds is an advantage because they have qualified staff that knows the infrastructure business.

Sectors with Investment Opportunities and project challenges

Suñer noted that there is a very large infrastructure deficit in all the countries of the region. One of the sectors with more opportunities is the energy sector. All countries have to define the changes in their energy matrix in order to face the challenges accompanying economic growth. Investment opportunities lie in alternative and renewable energies. In the generation and transmission sector, however, there is still some room for investment. In water and sanitation, there are also investment possibilities. The main challenges are related to regulation, environment, social issues, expropriation and political will.

O'Neill mentioned that in Mexico, opportunities are concentrated in roads, renewable energy, water, but there are also significant opportunities in other sectors as well. Project challenges are associated with road rights, environmental authorizations and regulatory issues. What matters most for investors in infrastructure is certainty in the process, which in some places in Mexico does not exist, particularly in the FARAC processes. Finally, a key point is the risk allocation between the Government and the operator under Concession Contracts.



De Las Casas mentioned that opportunities arise from the need in the country to be internally and externally interconnected, since it is an open economy. Within this context, investment is required in energy, roads, ports and logistics services. It would also be convenient to focus on water, sewage and basic services. In terms of challenges, the main one is the issue of having clear rules. It is not acceptable that Concession Contracts be modified upon request by users or because of political pressures.

De Vecchi pointed out that there are opportunities in urban transportation, for example, in cities such as León, Guadalajara, Tijuana, among others. Regarding the challenges, having financial resources is not enough, as there has to be coordination among several sectors, including the Government, States and Municipalities. Another problem is that Mexico does not have a PPP law. Finally, he believes that FONADIN is a *PPP Unit* that can fund public works, but does not have enough staff to operate the fund. Finally, De Vecchi noted that when a country prepares an infrastructure plan, there should be a common thread among projects. In addition, project preparation (i.e., feasibility studies) is very important.

FINAL WORDS

Clive Harris, PPP Practice Manager of the World Bank Institute, closed the conference by saying that, just as pointed out by the Vice-President of the World Bank for the Latin America and the Caribbean Region, PPPs will continue playing a role in the provision of essential infrastructure and in meeting the social needs of the region.

During the conference we discussed recent approaches and lessons learned on mechanisms implemented by governments to facilitate PPP financing, innovations in financing infrastructure projects, and fiscal risk control. This will be very useful material to continue to deepen these issues and share knowledge with other regions.

In a similar manner, Harris mentioned that a second dissemination event on best practices in PPP financing will be scheduled in Central America over the following weeks.

On the other hand, he mentioned the significant on-line participation through the Global PPP Network, with approximately 400 participants from about 50 countries. He also pointed out the intention to provide an important database related to PPP projects and contracts.

Finally, he expressed his gratitude for the significant support granted by the Ministry of Economy and Finance of the Government of Spain, PPIAF and BBVA, as well as to the speakers, panelists, moderators and interpreters; he thanked especially the organizing team of the event from the Latin America and the Caribbean Region and the World Bank Institute. Finally, Mr. Harris thanked all the participants who contributed toward the success of the event.



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