

## Pensions funds and infrastructures in LATAM

OECD, PARIS 12-11-09

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▪ Since the original Aschauer (1989a, 1989b, 1989c) papers, economic literature has found different correlations between infrastructure and economic growth

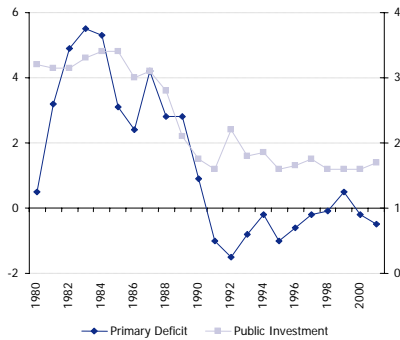
▪ A recent BBVA study (Alonso et al, 2009) using a meta analysis exercise, has shown infrastructure - economic growth elasticity's between -0.62 & 0.53, with 0.10 being the most probable

▪ "Law of diminishing returns" shows an infrastructure optimal accumulation path, which is different for each country (Canning & Pedroni, 1999)

▪ Empirical evidence in LATAM shows that the infrastructure effect on growth is positive.

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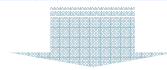
**Primary Deficit in Public Investment in Infrastructures (% of GDP)**



The fiscal consolidation in LATAM has been done by adjusting public investment in infrastructure

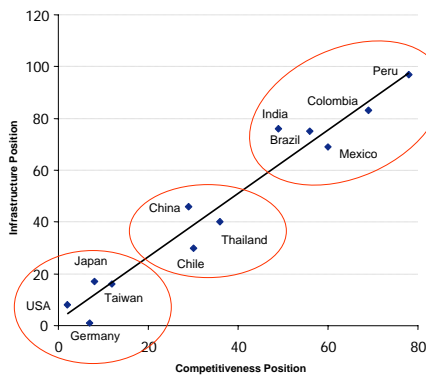
Public Investment's contraction has been partially offset by foreign direct investment

The economic crisis and the ending of privatization programs have reduced foreign capital contributions



**Increasing infrastructure gap with regard to competitors**

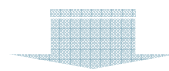
**Relation between competitiveness and Infrastructures**



The lack of infrastructure investment provokes competitiveness problems

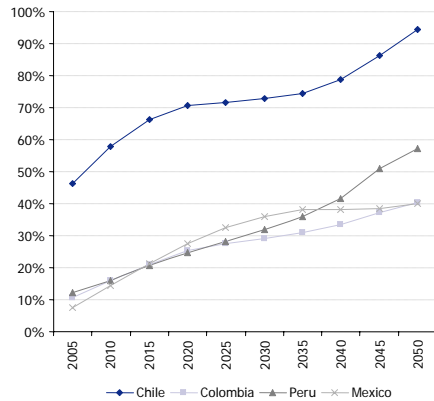
Official estimations calculate investment needs of 4% of annual GDP for the following years

But the international investment inflows have been reduced drastically



**National Savings Needs**

**Accumulated Balance Projection of Private Pension Funds (% of GDP)**



The private pension funds (PPF) can be an appropriate source of savings to partially cover these needs

PPFs will manage a large amount of resources in the next decades

**Positive Factors of the investment in infrastructure assets for the PPF**

- Assets invested in infrastructure allow optimal long-term portfolio planning (Inderst, 2009).
- We expect that Pension Fund participation in infrastructure investment will reduce political and regulatory risks. (Vives, 2000).
- The right design of long-term project finance investment offers a good relationship between return/risk.
- Pension Fund investments in the same country considerably reduce some financial risks, for example with exchange rate fluctuations.
- Public opinion could be more favorable of PPF management if they invest in infrastructure projects which improve the quality of life

### **Positive elements for the country with the pension funds financing infrastructure participation**

▪ Consolidation of fiscal budget, by facilitating resources for other social expenses, or for reducing fiscal pressure.

▪ Improvements of the economic efficiency and efficacy in the budgetary process, by allocating the infrastructure costs to beneficiary/users.

▪ If the public budget is not able to execute the project because of cyclical problems, the private sector participation could compensate.

▪ Higher probability of quality improvements and cost reductions due to more transparency and efficient projects managed by the private sector.

**HOWEVER, THE LAST INVESTMENT DECISION IN INFRASTRUCTURE ASSETS SHOULD BELONG TO THE PPF AS A RESULT OF A COMPREHENSIVE ANALYSIS OF THEIR OPTIMAL PORTFOLIO MANAGEMENT**

### The current investment situation in infrastructures

	Indirect Investment		Direct Investment		Limit investment in direct infrastructure
	USD\$ millions	% portfolio	USD\$ millions	% portfolio	% of portfolio
Chile	9969 (1)	9,17%	1956	1,80%	without specific limit
Colombia	4431 (3)	17,10%	0	0	without specific limit
Mexico	5535	6,90%	0	0	10,7 (2)
Peru	2416	11,50%	700,2	3,3%	without specific limit

Source: SEE BBVA. Datos a septiembre de 2009  
 (1) (electricity, water, telecommunications)  
 (2) weight average by each Sifore investment  
 (3) December 2008

#### Investments in Infrastructure Projects with Bonds in Chile

MERCADO NACIONAL O LOCAL						
NOMBRE BONO	SERIE	MONTO UF	TASA ANUAL	FECHA EMISION	DURACION BONO	PERIODICIDAD PAGO
SOC CONCESIONARIA RUTAS DEL PACIFICO	A	1.000.000	5,50%	09/04/02	11 años	Semanal
	B	10.421.000	5,80%	09/04/02	22 años	Semanal
	C	1.000	5,80%	09/04/02	22 años	Semanal
SOC CONCESIONARIA AUTOPISTA DEL SOL	A	4.379.000	5,80%	09/05/02	16 años	Semanal
	B	1.215.000	5,50%	09/05/02	16 años	Semanal
	C	970.000	4,00%	28/06/00	12 años	Semanal
SOC. CONCES. AUTOPISTA LOS LIBERTADORES	A	1.580.000	5,00%	09/04/00	18 años	Semanal
	B	2.521.000	5,50%	09/04/02	23 años	Semanal
	C	1.109.200	3,40%	18/01/07	18 años	Semanal
SOC CONCES. AUTOPISTA INTERPORTUARIA	Unica	990.000	4,25%	26/01/00	24,5 años	Semanal
	Unica	600.000	6,50%	17/07/00	21 años	Semanal
AUTOPISTA DEL MAPU SOC. CONCESIONARIA	A	5.000.500	4,85%	13/10/04	21 años	Semanal
	B	6.000.500	3,50%	20/12/00	24 años	Semanal
	C	1.124.500	3,50%	28/10/00	15 años	Semanal
RUTA DEL BOSQUE SOCIEDAD CONCESIONARIA	A	7.801.000	6,50%	21/03/00	20 años	Semanal
	B	1.500.000	3,50%	01/11/00	20 años	Semanal
	Unica	7.221.000	7,50%	03/08/00	20 años	Semanal
SCL TERMINAL AEREO SANTIAGO S.A. SOC. CONCES.	Unica UF	2.961.000	4,00%	17/11/04	15 años	Semanal
	Unica UF	13.000.500	5,50%	28/09/03	22 años	Semanal
SOC CONCESIONARIA AUTOPISTA CENTRAL	Unica	16.000.500	5,50%	24/06/00	24 años	Semanal
	A	1.000.000	5,00%	11/12/03	13 años	Semanal
SOC CONCESIONARIA VESPUCO MONTE EXPRESS S.A.	B	7.000.000	5,50%	11/12/03	13 años	Semanal
	A	5.000.500	4,95%	11/11/04	24 años	Semanal

NOTA: UF es una unidad de cuenta indexada a la inflación. Al 30 de Mayo de 2008 una UF equivalía a US\$42.

#### Direct Investment in Perú by the PFAs

Empresa	Sector	Descripción de Operaciones	Monto Inversión Junio (USD MIL)	% Total Inversión en Infraestructura
<b>Sociedades Concesionarias</b>				
Concesio Agua Anil	Agua y Saneamiento	Operación de las Agencias Operadoras y Subestaciones de la Cuenca del Río Chillon, su tratamiento y la entrega a SEDAPAL para su posterior distribución a aproximadamente 800.000 habitantes en los Distritos del Norte de Lima.	10500	0,33%
Concesio Transmuntaro	Energía e Hidrocarburos	Transmisión de Energía. Inversión de USD 19 millones en la ampliación de la capacidad de transmisión de la Línea Montano-Sayhuma	787	0,03%
Red de Energía del Perú	Energía e Hidrocarburos	Miembro del Grupo ISA. La más importante empresa de transmisión eléctrica del Perú.	57570	1,86%
Concesio Transase Olmos	Agua y Saneamiento	Construcción de Transase para el transporte de los aguas del río huancabamba de la vertiente del Atlántico a la vertiente del Pacífico	63143	2,04%
<b>Sociedades Tituladoras</b>				
Peru Enhanced Pass-Through	Infraestructura	Financiamiento de los Camioneros Viajes BSA Sur (Barrancabermeja) y Norte	341851	11,02%
<b>Sociedades Tituladoras</b>				
Plaspetrol Camasca	Energía e Hidrocarburos	Explotación y Explotación del Lote 88 de Camasca.	90740	2,93%
Transportadora de Gas del Perú	Energía e Hidrocarburos	Transporte por ductos de gas natural (LGN) y de líquidos de gas natural (LGNL). Desde los yacimientos de Camasca hasta Pisco (LGN) y Lima (LGNL).	135660	4,38%

Fuente: Superintendencia de Banca y Seguros, junio 2009

**Strengths and Weaknesses of the current systems (0=worst, 8=best)**

	Chile	Colombia	Mexico	Peru
Macro Environment	5,6	4,7	4,7	4,7
Legal Structure	<b>4,5</b>	<b>3,8</b>	<b>3,3</b>	<b>3,3</b>
Political Risk	6,8	4,8	5,5	4,8
Information Access	5,6	4,8	4,7	<b>4,0</b>
Financial Markets Factors	4,9	<b>3,5</b>	<b>3,6</b>	<b>3,6</b>
Private Investment	5,4	<b>3,2</b>	<b>2,5</b>	4,8
Government and Society	5,3	4,7	<b>3,9</b>	<b>3,0</b>
Ability by the private government investment	5,5	5,6	<b>4,1</b>	5,8

Source: Mía et al (2007) and SEE BBVA

**Despite the increasing PPF interest in investing in infrastructure, the actual competitive framework is not optimal.**

**Opportunity cost of not investing in infrastructure by PPF**

	2020	2030	2040	2050	2005-2050
difference in % with present trend (GDP per capita)					Discount Present Value/GDP (2005)
dif en % Mexico	0,8%	1,0%	1,1%	1,1%	24,1%
dif en % Chile	1,8%	2,7%	3,2%	3,6%	89,3%
dif en % Colombia	0,9%	1,4%	1,8%	2,2%	49,1%
dif en % Peru	1,6%	2,3%	3,0%	3,6%	103,3%

Fuente: SEE BBVA

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