

Latin American pension fund and infrastructure investing

Panel on long term investing and infrastructure investments

David Tuesta

Making Funded Pensions Work

OECD/IOPS Global Forum on Private Pensions | Santiago de Chile, October 24th, 2012

Contents

Section 1

The rationale of pension fund investment in infrastructure

Section 2

Latin American PF and infrastructure assets

Section 3

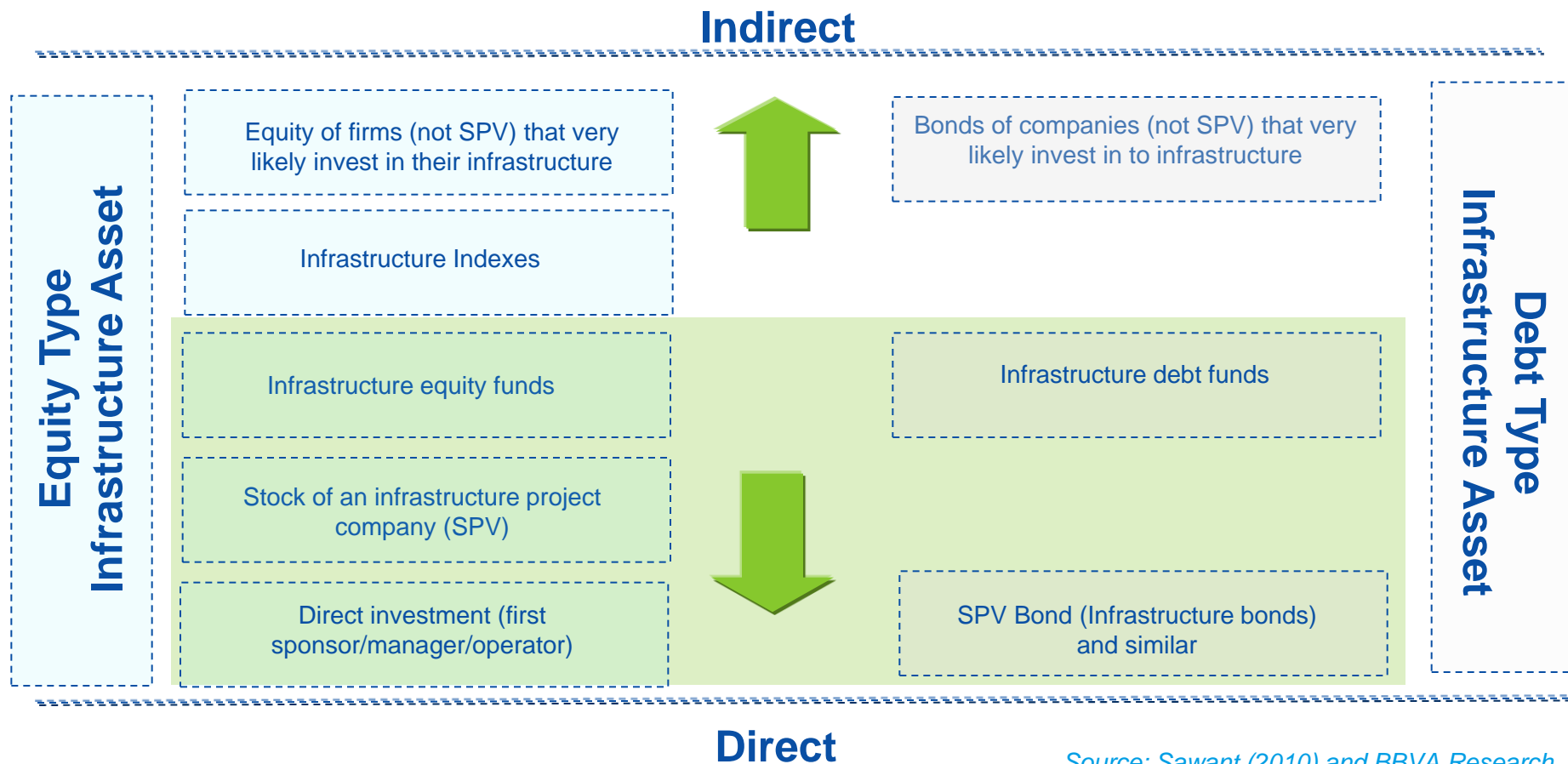
Determinants of future trends in infrastructure investing

Section 4

Conclusions

The rationale of pension fund investment in infrastructure

What has been arguing in favor of investment in infrastructure?: (i) Improving **efficient frontier** of PF's portfolio; (ii) a **closer relationship with society** and improving their **public image** (specially in mandatory schemes); (iii) **government's** high interest to close the **infrastructure gap** (LatAm need US\$ 70 billion annual in infrastructure investment and LatAm PF has almost US\$700 billion AUM !)



Latin American PF and infrastructure assets

LatAm: Pension Fund Investment in Infrastructure Allocation - 2011

Source: Dos Santos, Torres, Tuesta (2011)

	TOTAL AUM		Broad Concept PF Infrastructure Investing			Direct PF Infrastructure Investing		
	US\$ Billion	% GDP	US\$ Billion	% GDP	% Portfolio	US\$ Billion	% GDP	% Portfolio
Brazil	310	14,7%	62,6	3,0%	21,0%	3,1	0,1%	1,0%
Colombia	51	17,0%	9,5	3,5%	18,7%	0,4	0,2%	0,7%
Chile	158	57,9%	14,4	5,4%	10,3%	1,9	0,7%	1,2%
Mexico	121	11,7%	10,8	1,1%	9,2%	3,5	0,4%	2,9%
Peru	24	16,7%	3,4	2,3%	11,1%	0,9	0,6%	3,7%
LatAm	664	17,5%	100,7	2,7%	15,2%	9,8	0,3%	1,4%

- Is this the **adequate** asset allocation for direct infrastructure investing in LatAm?
- What is happening in **other more experienced PF** around the world with this asset class?

Latin American PF and infrastructure assets

What is the adequate asset allocation for LatAm PF direct infrastructure investing?

Developed countries sample

Source: Weber and Alfen (2010), Torrance (2008), OECD (2012), Future Fund Board (2011), Infrastructure Partnerships Australia (2010)

	2010	Target		2010	Target		2010	Target
MTAA-AUS	31,1%	25%	SunSuper-AUS	4,5%	7,5%	AP Fonden-SWE	0,8%	-
West Scheme-AUS	17,9%	-	QIC-AUS	4,0%	-	PGGM-NED	0,8%	-
OMERS-CAN	16,1%	20,0%	Unisuper-AUS	4,4%	6,5%	PFA- DEN	0,7%	-
BUSS(Q)-AUS	14,1%	-	CPP-CAN	3,4%	-	Gov. Employees RSA	0,3%	-
Cbus-AUS	14,0%	-	Telstra-AUS	3,0%	-	AlaskaPFC-USA	-	18,0%
Australian Super-AUS	11,3%	11,3%	USS-UK	2,9%	-	Ausfund-AUS	-	10,0%
OTPP-CAN	9,3%	-	PFZW-NED	2,0%	-	Firstsuper-AUS	-	7,5%
Military SupAnn-AUS	9,0%	-	State Super-AUS	1,9%	-	Catholic Super-AUS	-	5,0%
Care Super-AUS	6,0%	-	ABP-NED	1,8%	3,0%	Calpers-USA	-	3,0%
VICSuper-AUS	5,5%	-	Caisse de Depot-CAN	1,4%	8,8%	Calstrs-USA	-	2,5%
Future Fund- AUS	5,2%	-	Hesta-AUS	0,8%	10,0%	MERS-USA	-	5,0%

Latin American PF and infrastructure assets

LatAm Direct Infrastructure Investing (Direct Debt/SPV-Equity/SPV Inf. Funds) Returns

Source: BBVA Research (2012), national government sources

2011		2011		2011	
Bond- Infra.-Avg-CHL(02-11)	10,5%	CKD- LATIN (IRR)	20-30%	CKD-Vertex-MEX (IRR)	14-18%
Inf. Fund Prime-CHL	9,0%	CKD INFR-Macquaire (IRR)-MEX	8%	CKD-Wamex-MEX (IRR)	12,5%
CKD-AGC-MEX (IRR)	8,0%	CKD INFR- MARHNOS (IRR)-MEX	11-14%	CKD-AMB - MEX (IRR)	13-16%
CKD- Artha- MEX /IRR)	12%	CKD INFR-Navix-MEX (IRR)	16-18%	CKD INFR-GBM-MEX (IRR)	16-19%
CKD- Atlas.MEX (Exp. IRR)	8%	CKD-Nexxus-MEX (IRR)	20%	Inf. Fund AC- PE (Ytd)	37,9%
CKD-Capital Inmobiliario-MEX (IRR)	11,5%	CKD- Pinebridge-MEX (IRR)	20-25%	Inf. Fund Larrain PE (IRR)	22,2%
CKD- EMX Capital-MEX (IRR)	25-30%	CKD-PLA (PRUMEX)-MEX (IRR)	16-22%	Bond-SPV Pq Rimac-PE (Coupon)	6,5%
CKD-MEXGIS 3-MEX (IRR)	18-22%	CKD-Planigrupo-MEX (IRR)	16-20%	Bond-SPV IIRSA N-PE (Coupon)	8,75%
CKD-MRP-MEX (IRR)	16-20%	CKD-Promecap-MEX (IRR)	10-25%	Bond-SPV Taboada-PE (Coupon)	5,97%
CKD INFR- Institucional MEX (IRR)	16-20%	CKD- Carreteras Occ-MEX (IRR)	11-15%	Bond –SPV Huascacocha PE (Coupon)	5,2%

Latin American PF and infrastructure assets

Some financial instrument used by PFs to invest directly in infrastructure

Source: Dos Santos, Torres y Tuesta (2011)

Infrastructure Bonds-CHL

- 1998. Investment grade bonds
- Up to 24 y, minimum gvt revenue guarantee
- Political and regulatory risk insured by monoliners and the IADB

CRPAO Bond-PER

- 2006. IIRSA Highways.
- Debt instrument (15y) issued by gvt,
- High gvt guarantee but strict mechanisms of supervisions according to Work Progress Certificate.

CRPI Bond-PER

- 2009. IIRSA Highways.
- Debt instrument (15y) issued by investors.
- High gvt guarantee but strict mechanisms of supervisions according to Work Progress Certificate.

Infrastructure Bond-COL (New!)

- 2012. O&M.Minimum 10y.
- Minimum gvt guarantee
- Disposable Payment Certificates.
- 2 kind of bonds (assets and securitization)

CKDs-MEX

- 2008. Trust structured instrument to finance one or more projects.
- Technical committees to control de project.
- Participation of experienced operator (Real Estate, PE, Infrastructure (24%))

Funds

- Infrastructure Funds
- Private Equity Funds

Adequate financial vehicles + market size + good economic condition + good institutional framework

Determinants of future trends in infrastructure investing

Elements affecting future trends of PF's direct infrastructure investing

Source: BBVA Research

- LatAm is in the beginning of its **learning curve**. There are more things to come in the future.
- **An scenario of diminishing interest rates** as a consequence of global monetary policies, financial conditions, new regulatory developments (Basel III, Solvency II, others). This makes necessary for PF to look for alternatives that improve portfolio returns.
- **Longevity risk will affect future pensions**. Likely need to count on more infrastructure investing.
- How **governments will facilitate** the overall **regulatory and procedural** framework to have **good projects**
- LatAm has an **important infrastructure gap** that governments cannot finance alone. **US\$ 700 billion dollars in AUM** (and more in the future) could be **very tempting for politicians** (something for being alert).

Section 4

Conclusions

- Direct PF infrastructure in LatAm is going through the first stages of its learning curve. The process is recently getting into more dynamism.
- The current allocation of LatAm PF in infrastructure investing seems “reasonable” comparing to other experienced PFs around the world. Notwithstanding, there is not enough information to perform a complete financial analysis (recent experiences, no official reports in some cases) although some numbers seems to match theoretical and empirical perspectives.
- LatAm PFs are using interesting financial instruments to invest directly in infrastructure projects. The quality and quantity of this instruments depends fundamentally on the availability of well designed projects and timely processes, where government facilitator role is key. Different studies show that a well developed institutional framework is key.
- In general terms, project infrastructure investing are a good alternative for increasing pension fund's financial exposure; however, this needs to go hand in hand with its trustee role, the commitment to provide adequate pensions, and a well designed long term financial strategy.

Thank you

David.tuesta@bbva.com

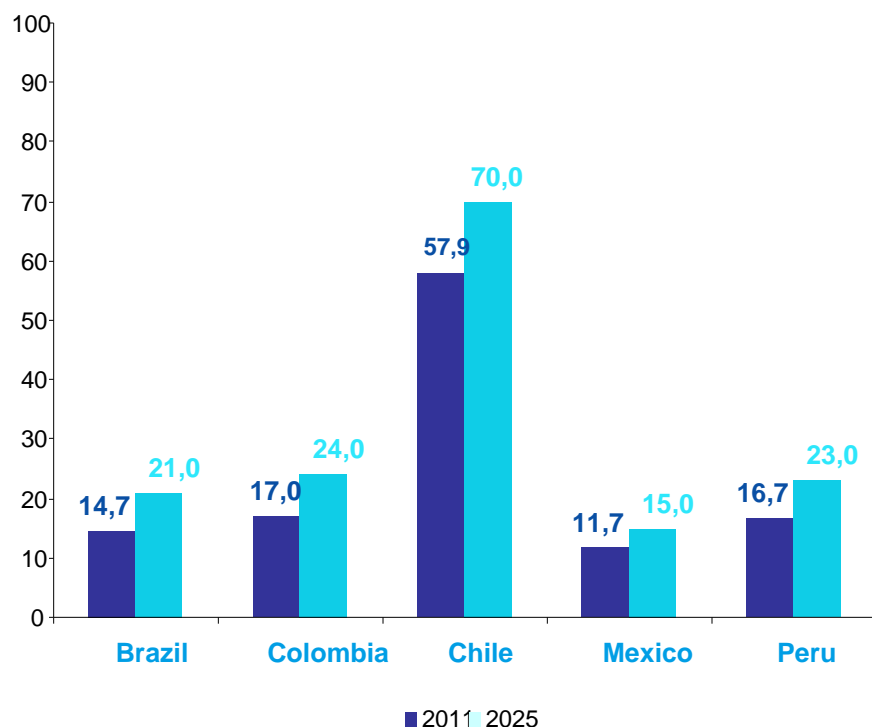
www.bbvaresearch.com

Latin American PF and infrastructure assets

LatAm AUM - 2011 and 2025

As a % of GDP

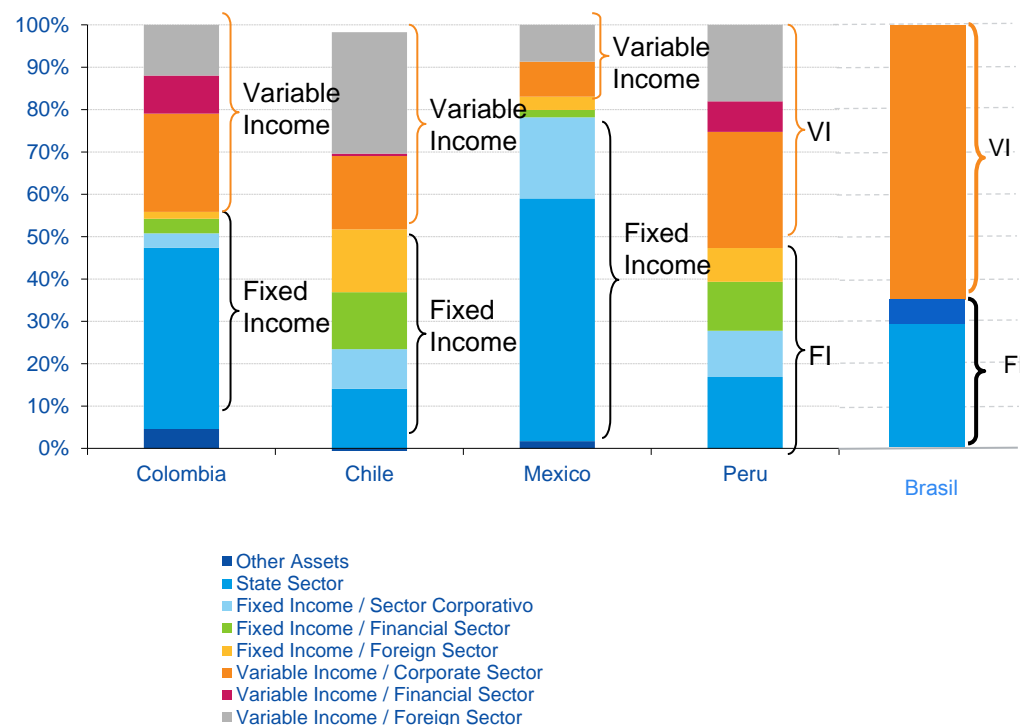
Source: BBVA Research (2011)



LatAm - Asset allocation

Percentage

Source: BBVA Research



- Important amount of resources now ...and more in the future.
- Different asset allocation strategies. Infrastructure investing is not considered an specific asset class in LatAm financial regimes

Latin American PF and infrastructure assets

What about LatAm PF Infrastructure investing allocations?

- The current asset allocation in direct infrastructure investing seems reasonable and similar to many experienced PF in developed countries.
- What about increasing the actual allocation to 10%? There are many aspects to think about before deciding the right target:
 - How does this asset improve the efficient frontier?
 - How does it correlate with other assets in the portfolio?
 - How much risk do PF tolerate?
 - What is the LatAm PF knowledge to manage more direct investment? (a very demanding task; need of human capital in quantity and quality)

Latin American PF and infrastructure assets

What about LatAm PF infrastructure investing returns?

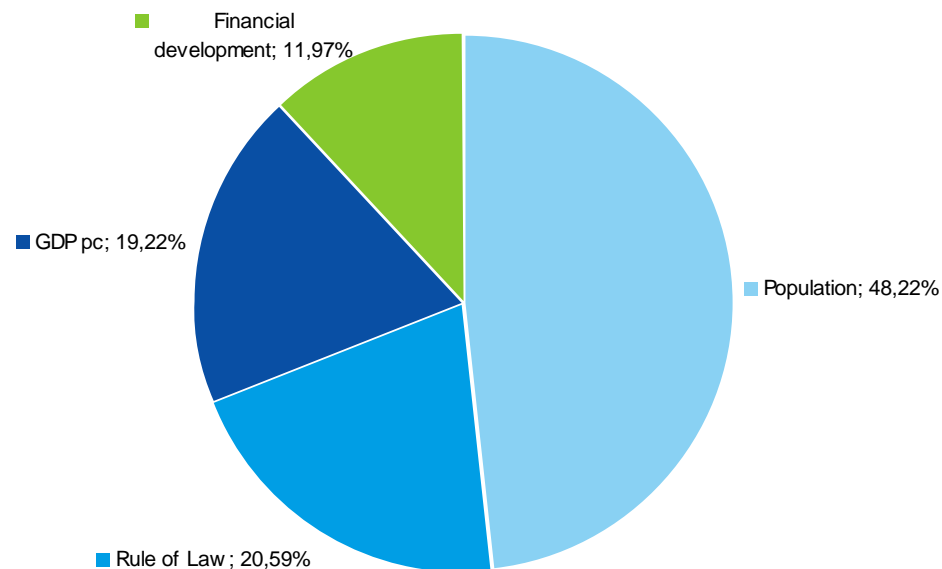
- In general, this heterogeneous data show that **returns are higher with stock** with respect to debt-infrastructure but, the risks are higher too (there is not magic).
- Ten year data of the **Chilean infrastructure bonds** (2001-2011) has shown an **average annual return of 10,5%** compared to 13,8% increase in stock index and 9,3% in Index Bonds. As expected, they have also been less volatile than infrastructure stocks.
- **Stock-infrastructure or debt-infrastructure?** Some studies (Weber and Alfen, 2010) show that **not listed-stock-infrastructures are less correlated** with other assets and improve the efficient frontier. In contrast, **others recommend to invest on debt-infrastructure** (Sawant, 2010) because is less volatile.

Macroeconomic aspects to foster infrastructure investments

Determinants of infrastructure investment (PPP)-Panel Data/Tobin effects

As a % of GDP

Source: BBVA Research (2012) with IMF and World Bank data



Model-Output

Source: BBVA Research (2012) with IMF and World Bank data

TotalInvestmentCommitments	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
z2StocksTradedTotalValueof	440,3382	134,3063	3,28	0,001	177,1027	703,5736
MoneyandQuasiMoneyM2as	5,718168	6,957225	0,82	0,411	-7,917743	19,35408
OfficialDevelopmentAssistance	0,2432372	0,1269655	1,92	0,055	-0,0056106	0,492085
ReservesImportsOfGoodsandSe	5,291242	47,08033	0,11	0,911	-86,9845	97,56698
TotaldebtServiceofexports	2,419444	10,24259	0,24	0,813	-17,65566	22,49454
Generalgovernmentnetlendingb	-24,1156	22,78077	-1,06	0,29	-68,7651	20,5339
z2logPopulation	1773,164	258,1173	6,87	0	1267,263	2279,064
z2GDPperCapita2000US	706,7458	200,3026	3,53	0	314,16	1099,332
RL_EST	757,1392	354,4137	2,14	0,033	62,5011	1451,777
_cons	65,52024	496,6049	0,13	0,895	-907,8074	1038,848