Financial Development in LAC
The Road Ahead

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Latin America and the Caribbean
The World Bank

World Bank LAC
opportunities for all

Why this study?

- Excepting the Caribbean, LAC's financial systems have weathered the global financial crisis remarkably well
  - This in part reflects substantial improvements in both macroeconomic and prudential management, following years (if not decades) of crises and turbulence
- Yet, this study is timely because
  - There are still substantial developmental gaps that need fixing
  - There are unresolved key developmental issues that require attention
  - The region is entering a post-global crisis era increasingly dominated by issues of systemic oversight, to which the region needs to adapt

The structure of the report

- Financial development
  - Frictions and paradigms
  - Bright and dark sides
  - Patterns and paths
- Where does LAC stand?
  - Domestic FD
  - Financial globalization
  - Financial inclusion
- Developmental issues
  - The banking gap
  - The equity gap
  - Going long
  - Risk absorption by the state
- Prudential oversight
  - Where is LAC?
  - The new agenda
    - Macro-prudential policy
    - Micro-systemic regulation
    - Systemic supervision

The outline of this presentation

- Comprehending financial development
  - Conceptual framework
  - Some empirics
- Benchmarking LAC's financial development
  - Where is LAC?
  - The banking gap
  - The equity gap
- Policy issues
  - Going long
  - Risk absorption by the state
  - Dealing with the dark side – the new prudential agenda

Comprehending financial development

Conceptual framework

Simple typology of frictions, market failures, and paradigms

	Perfect information/ full rationality	**Imperfect information/ full or bounded rationality**
Bilateral focus (Agency frictions)	Costly enforcement (CE)	Asymmetric information (AI)
Multilateral focus (Participation frictions)	Collective action (CA)	Collective cognition (CC)

- Helping resolve frictions is the *raison d'être* of the financial services industry
- Financial structure – snapshot of financial markets, intermediaries, facilitators, etc.
- Financial development – the evolution of financial structure over time

The easing of frictions drives financial development… *The bright side*

- The easing of *agency frictions* allows a gradual escape from the tyranny of collateral and connections ("relationship lending")
  - Spurred by improvements in informational/contractual environment
  - Otherwise, significant skin-in-the-game is needed to align principal-agent incentives, making financial contracting costly & limiting inclusiveness
- The easing of *participation frictions* enables cost pooling and risk dispersion and activates positive network & scale effects
  - Spurred by technological innovation, financial literacy, etc.
  - Denser financial markets make participation easier
- The easing one type of friction helps ease the other
  - Higher participation helps ease skin-in-the-game requirements by enabling the spreading, pooling, and diversification of risks
  - Lower agency costs promote participation by raising its payoffs

… but it can also plant seeds of future financial instability *The dark side*

- The easing of *skin-in-the-game* requirements (lower information & enforcement costs, ability to spread risk) reduces returns to private monitoring, promoting *collective monitoring failures*
  - Free riding on public information
  - Increased reliance on third-party monitors with no skin in the game
  - Entry of new agents with no skin in the game
- The easing of participation frictions in the good times promotes free riding on *liquidity*, giving rise to *collective action failures* (runs to safety, fire sales) during the bad times
- The easing of agency and collective frictions begets *collective cognition failures* that can accentuate the *mood swings*
  - E.g., through the introduction of increasingly complex innovations whose systemic implications are poorly understood

- Policy responses link naturally to the paradigms and associated market failures
- Given tensions & tradeoffs across paradigms, good financial policy is about finding the right balance

Paradigm	*Rationality*	*Market failure*	*Policy response*
CE		*Limited commitment*	*Strengthen contractual environment*
CA		*Coordination failures*	*Catalytic interventions/compulsory participation/public guarantees/LLR*
CA		*Externalities/free riding*	*Prudential regulation/Pigouvian taxes*
AI	*Full*	*Insufficient monitoring*	*Strengthen informational environment*
AI	*Bounded*	*Consumer/investor abuse*	*Consumer protection/deposit insurance/delegated supervision*
CC	*Full*	*Inefficient equilibria*	*Information provision*
CC	*Bounded*	*Mood swings*	*Macroprudential guidance*

Comprehending financial development

Some empirics

The predictable dynamics

- The order of appearance of financial activities should reflect the intensity of the frictions to which they are exposed
- The order of appearance should correlate with scale effects and the convexity of the FD paths
- Countries' FD paths should be affected by the quality of country-specific policies and institutions
- However, they should also hover around central paths that reflect general FD patterns and dynamics
- The central FD paths can therefore provide a benchmark to assess the quality of country policies and institutions

The method of empirical analysis

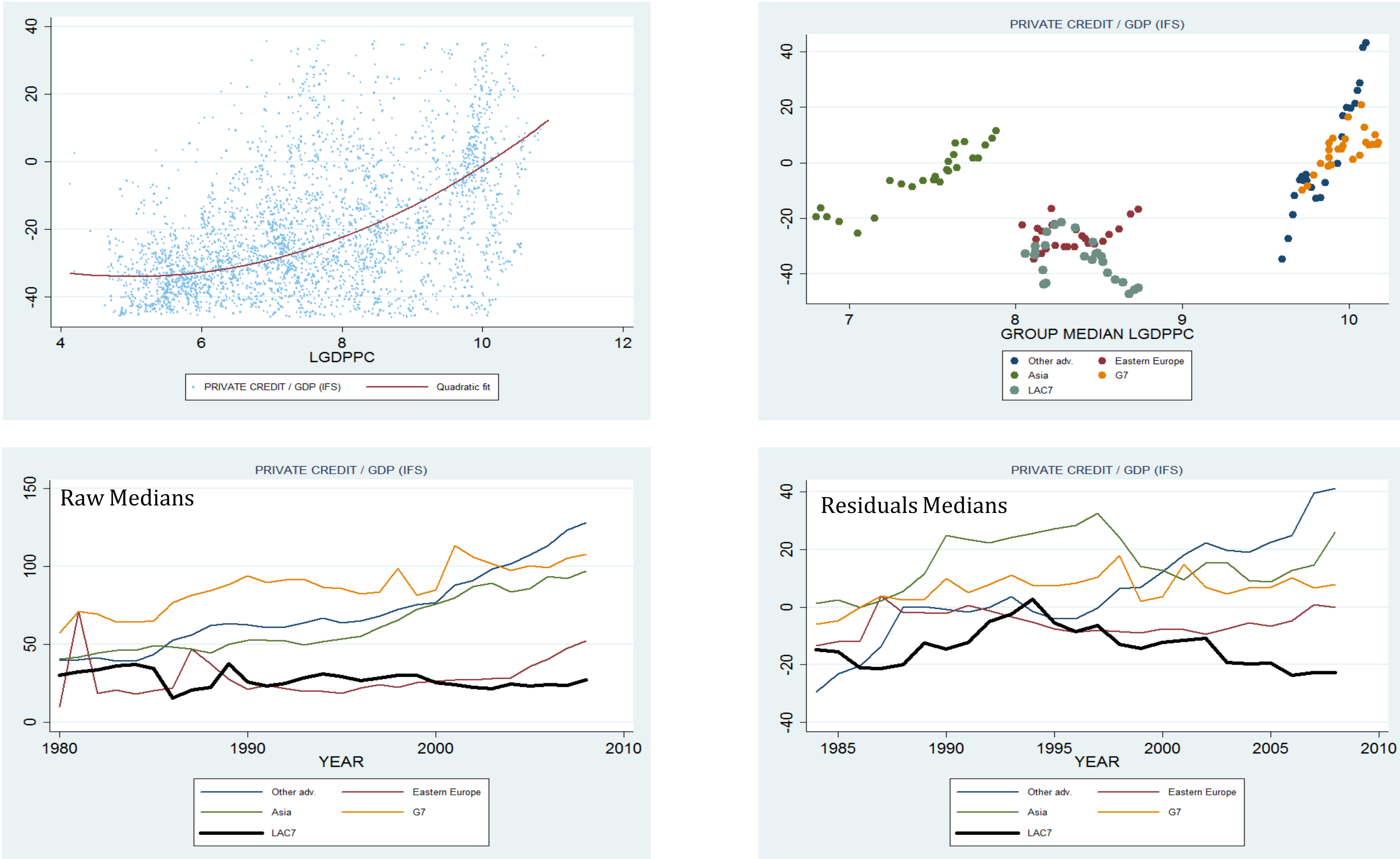
- Worldwide database of 40 FD indicators with yearly observations for 1980-2008 (coverage varies by country and indicator)

- FD indicators are controlled (through quantile regressions) for GDP per capita and structural (non-policy) features
  - Population size & density, age dependency ratio, offshore center, oil exporter, transition country, year fixed effects

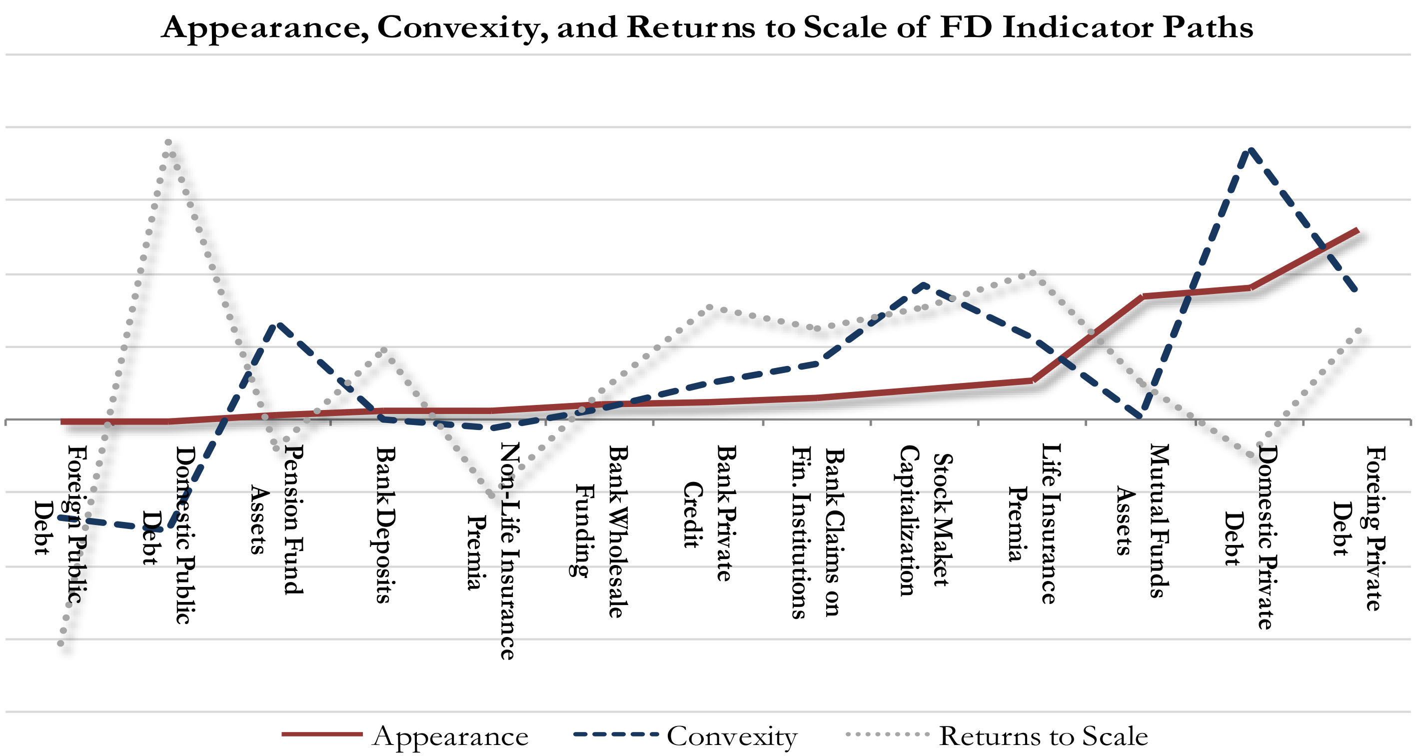
- The central path is obtained from cross-country regressions where each country is collapsed to a single average historic observation

- FD paths for country groups (by regions or initial income levels) chart the yearly medians of the groups against the central path

Unpacking the results of the workhorse model



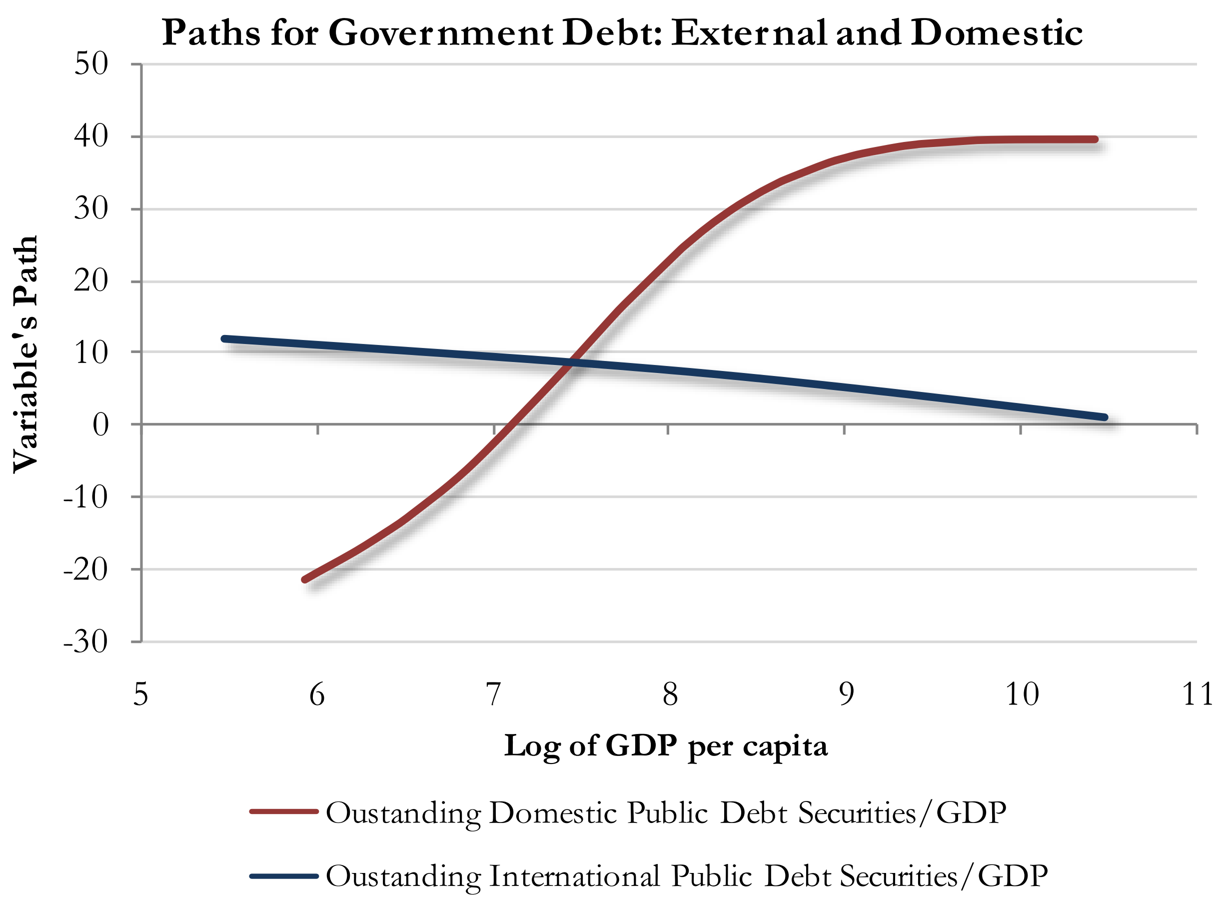
Order of appearance is positively correlated with scale effects and convexity, with explainable exceptions



Domestic sovereign bonds – appear earlier than consistent with large returns to scale, reflecting policy premium to finance budget or due to its public good nature
Domestic private bonds – appear late despite limited returns to scale, reflecting the binding nature of critical mass effects and agency (rather than collective) frictions

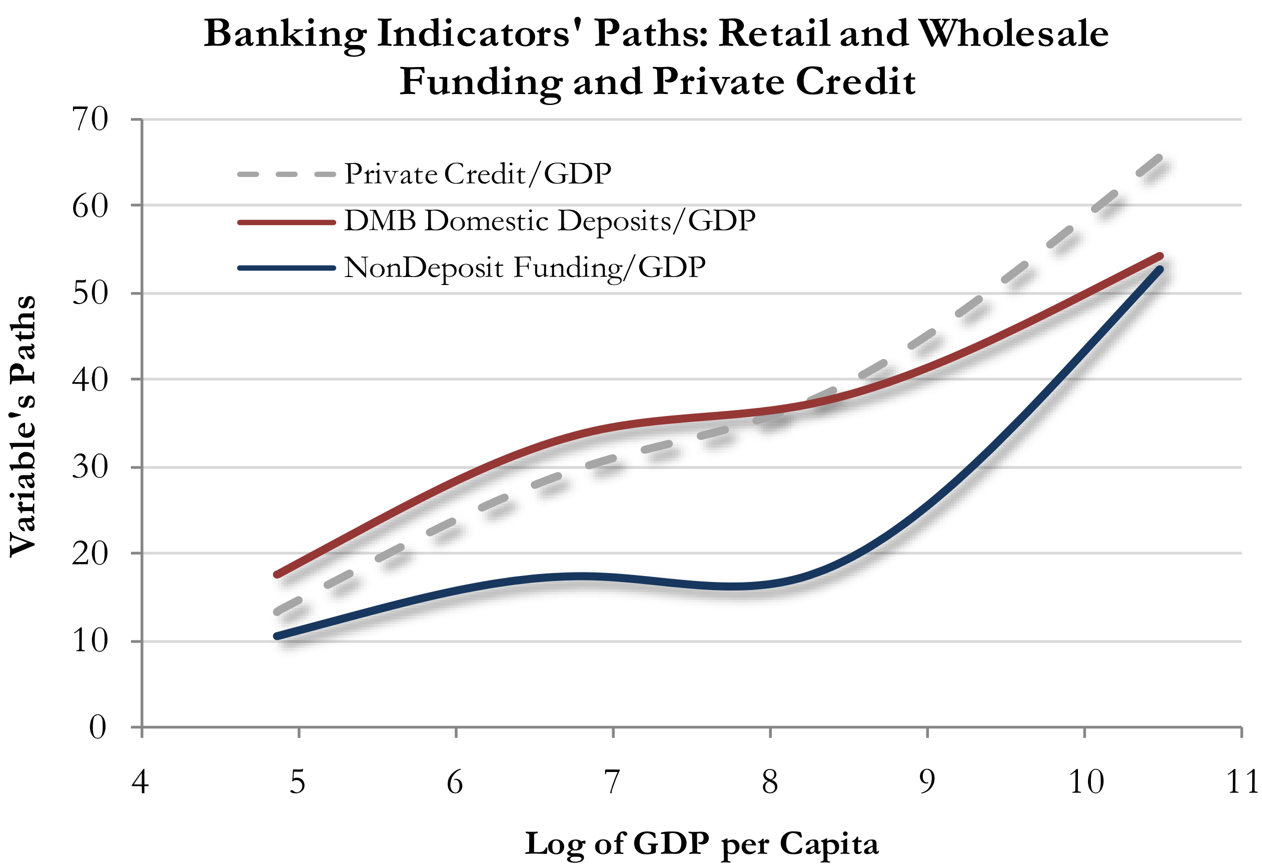
Source: de la Torre, Feyen, and Ize (2011).

Sovereign debt issues emerge early in the game, moving from foreign to domestic markets



Source: de la Torre, Feyen, and Ize (2011).

Retail bank funding appears ahead of (convex) bank credit, which precedes the more convex wholesale funding



Source: de la Torre, Feyen, and Ize (2011).

Selected issues

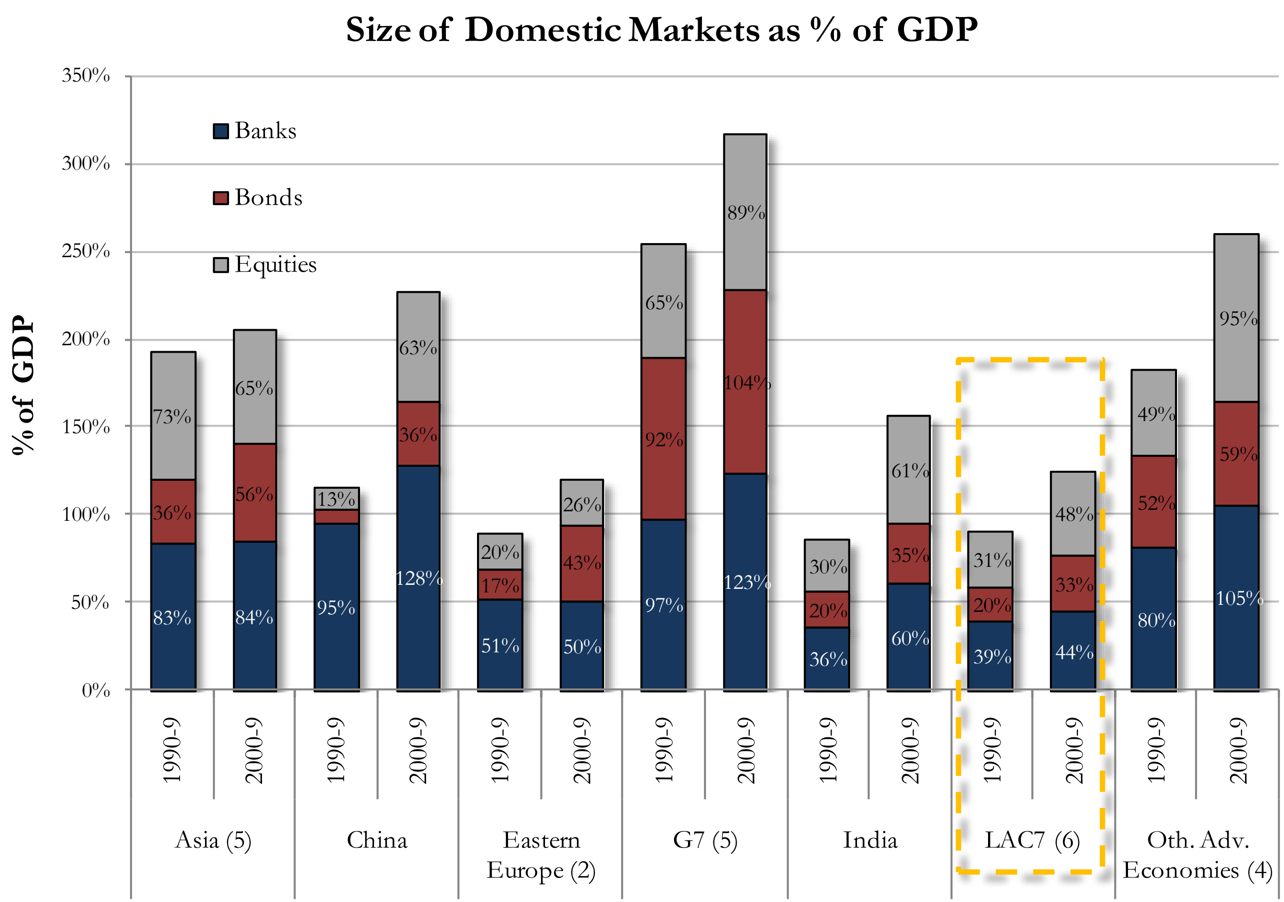
- Drivers of country-specific deviations from central paths
  - *Country-specific policies* – including overall quality of enabling environment as well as special policies (e.g., 2nd pillar pensions in Chile)
  - *Path dependence* – given that output growth is a function of financial development and that institutional arrangements are self-reinforcing
  - *Leapfrogging* – for financial services that rely heavily on innovations that are transferable across borders (e.g., credit card services)

- Can there be too much finance?
  - Convexity of paths implies decreasing returns of impact of FD on growth
    - Assuming non-satiation – more finance should be better
  - Where forces of dark side gather strength, marginal benefit of FD may fall below marginal cost of maintaining stability

Benchmarking LAC's financial development

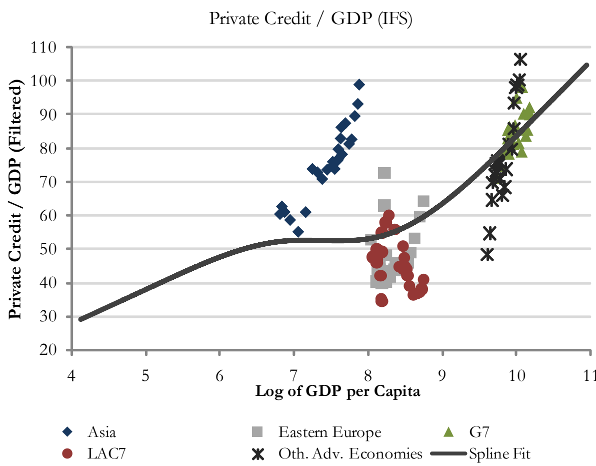
Where is LAC?

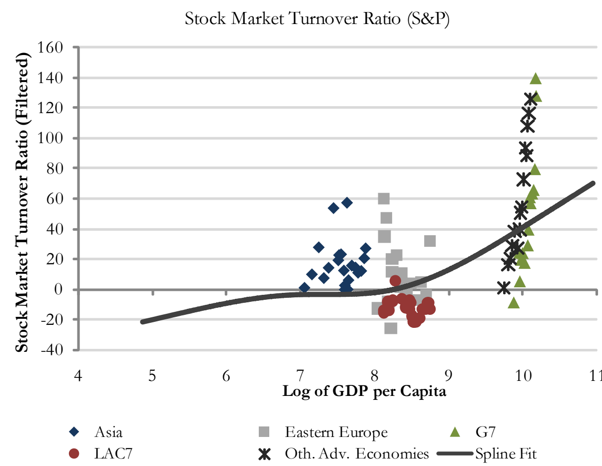
Domestic financial systems in international comparison – LAC does not look too bad compared to Eastern Europe

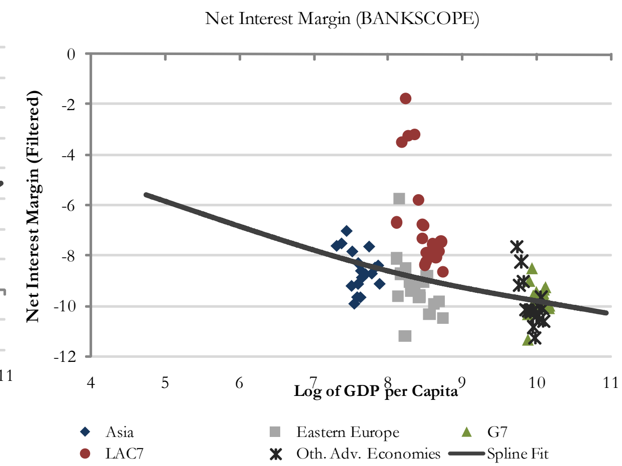


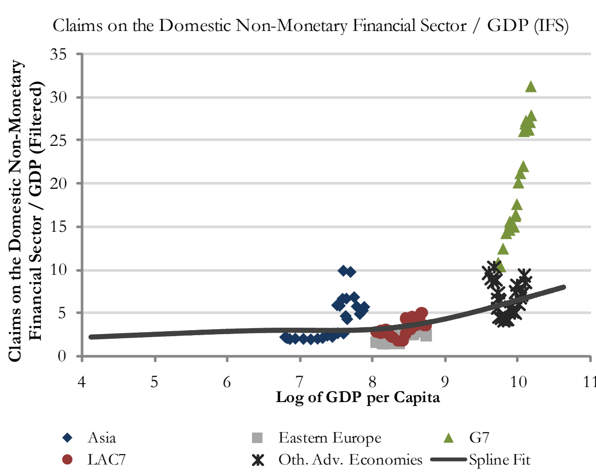
Source: Didier and Schmukler (2011)

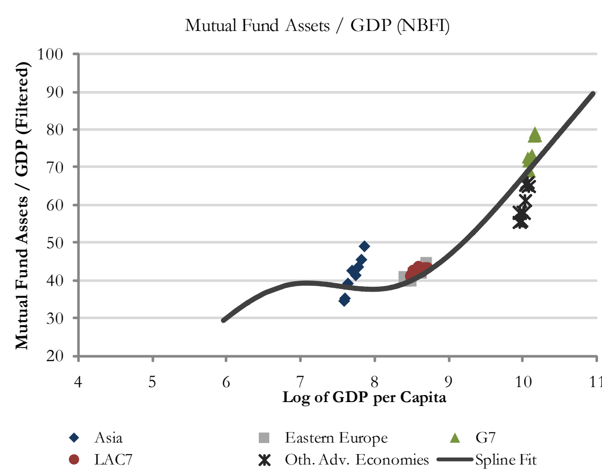
More careful benchmarking of country-grouping paths for different FD indicators is needed to identify true gaps

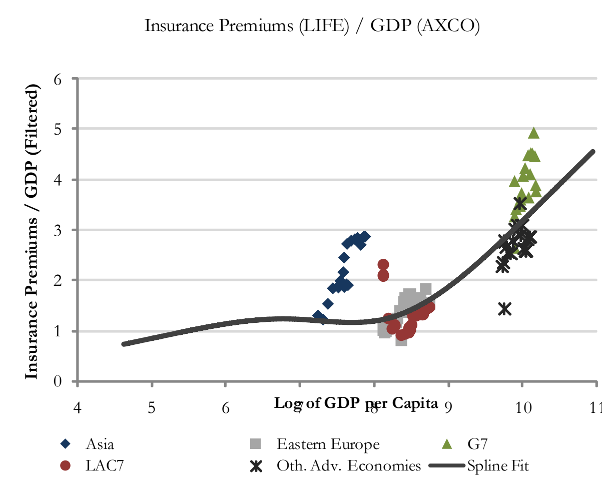






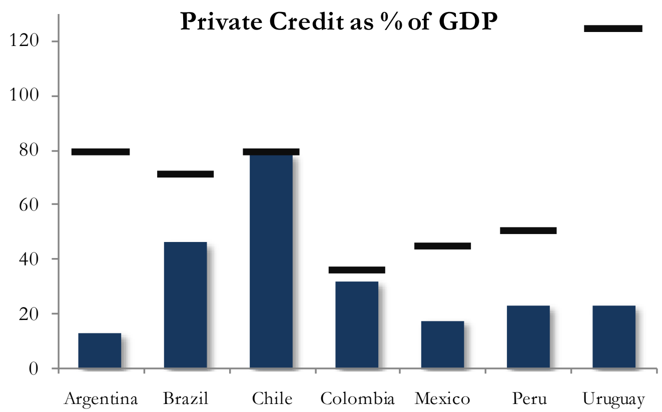


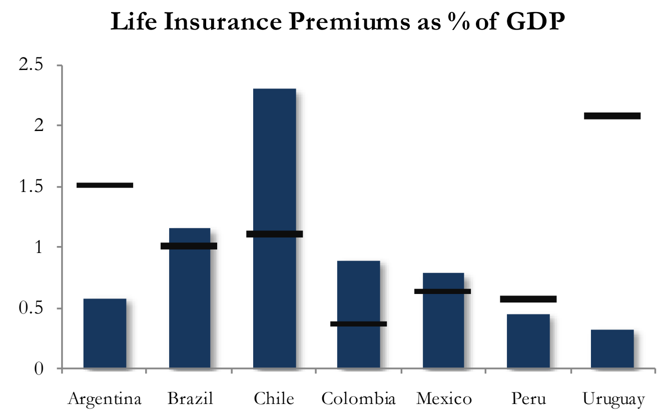


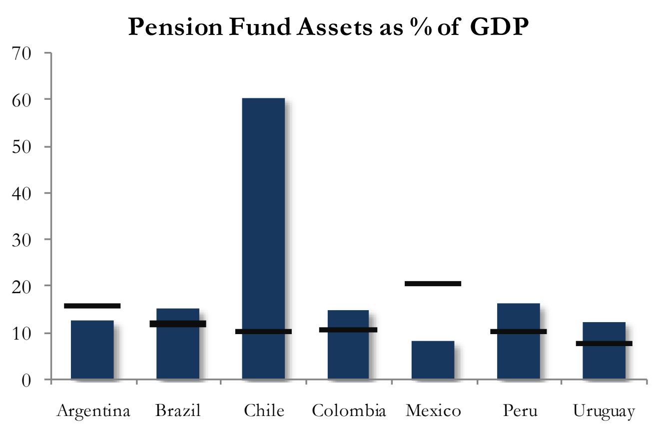


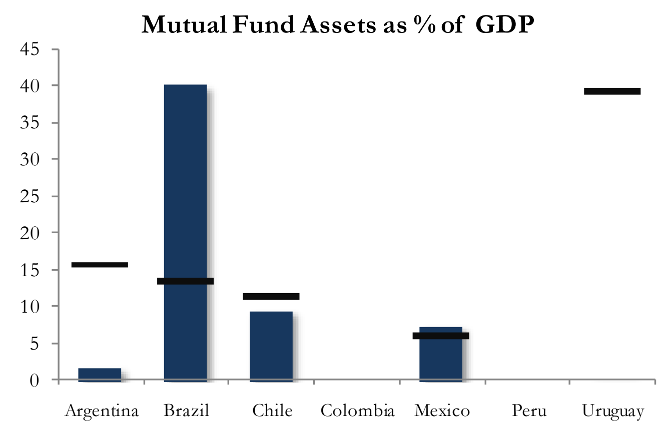
Source: de la Torre, Feyen, and Ize (2011).

Within-LAC heterogeneity



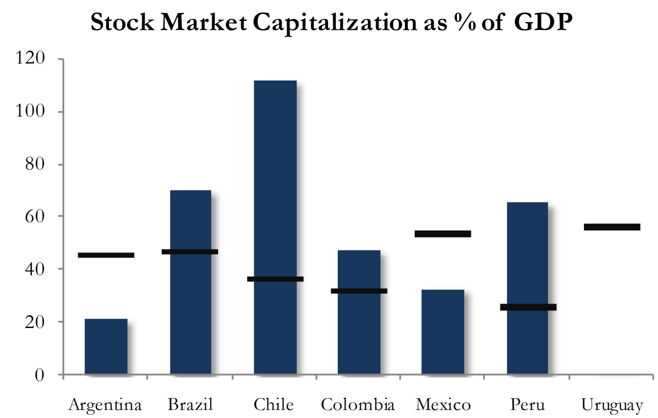


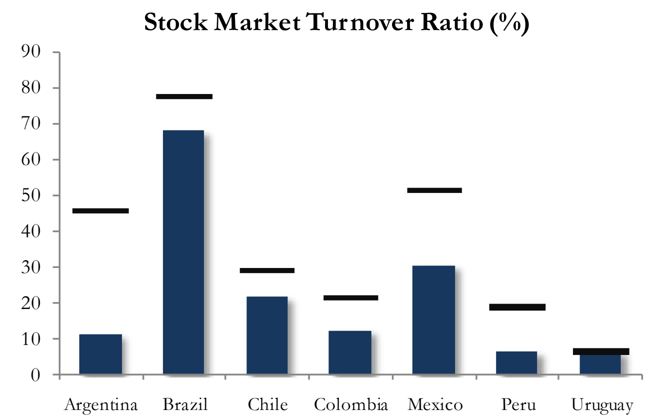


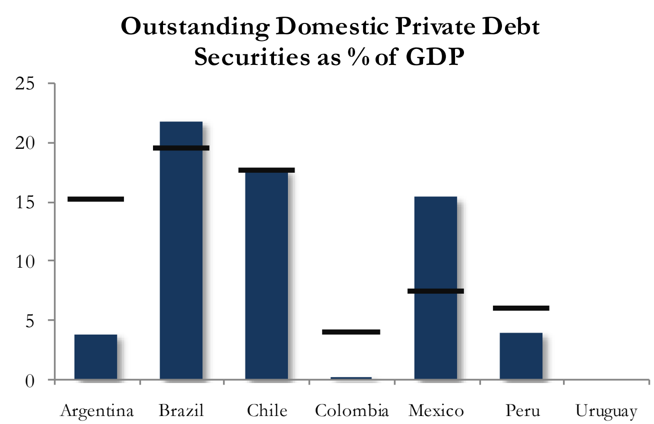


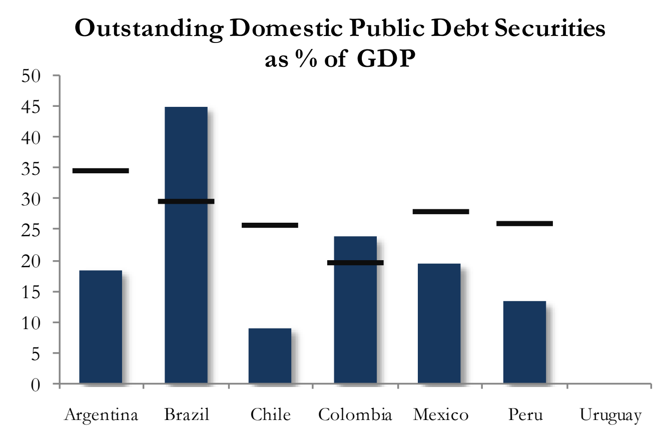
Source: de la Torre, Feyen, and Ize (2011).

Within-LAC heterogeneity







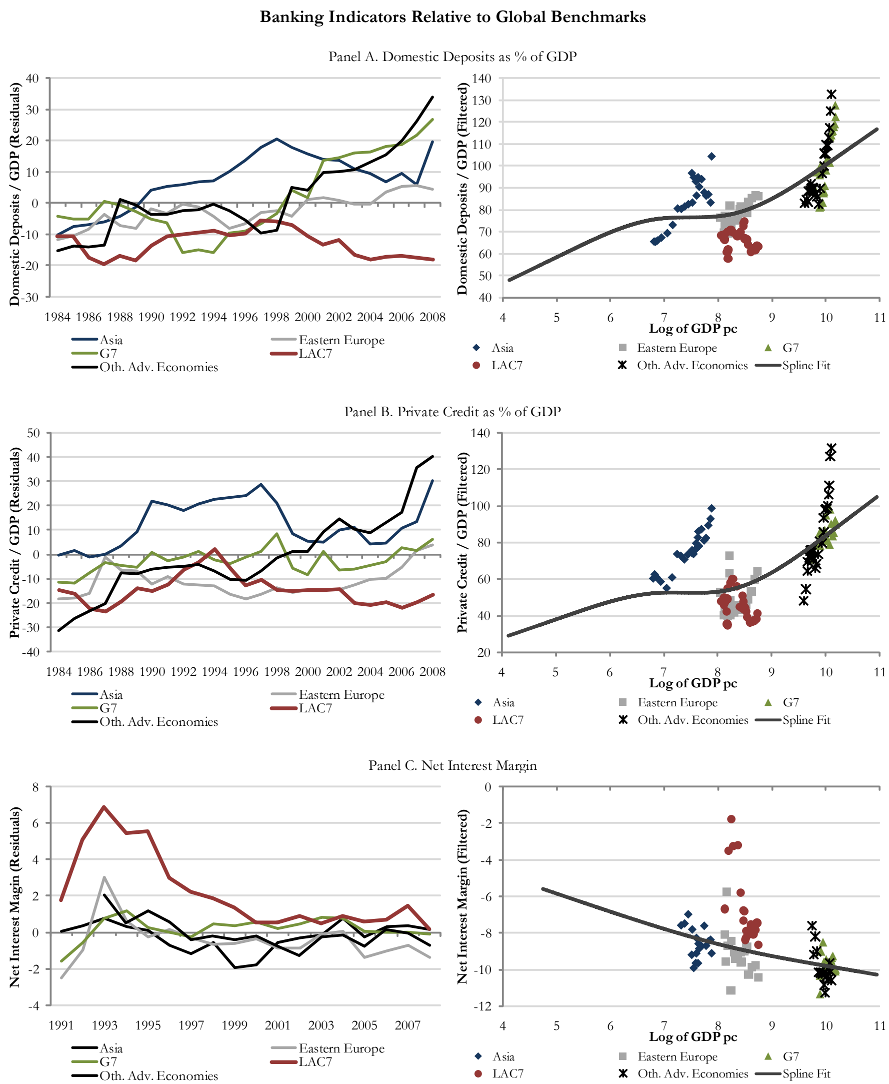


Source: de la Torre, Feyen, and Ize (2011).

Benchmarking LAC's financial development

The banking gap

Diverging banking depth, converging efficiency



Source: de la Torre, Feyen, and Ize (2011).

The gap by type of credit

LAC7 Credit Gap by Type of Credit

	Expected	Actual	Gap	Gap/Expected
Year: 1996				
Credit to the Private Sector as % of GDP				
Commercial	24.7	19.4	5.2	21.1
Mortgage	8.4	5.4	3.0	35.7
Consumer	8.8	3.4	5.4	61.4
Total	41.8	28.2	13.6	32.5
Year: 2007				
Credit to the Private Sector as % of GDP				
Commercial	22.9	14.5	8.4	36.7
Mortgage	12.6	3.1	9.5	75.4
Consumer	11.2	6.5	4.7	42.0
Total	46.7	24.2	22.5	48.2

Source: de la Torre, Feyen, and Ize (2011).

What explains the credit gap?

Explained Credit Gap based on LAC7 Median Values:

Contract Enforcement Index	1.98
Legal Rights Index	0.65
Credit Information Index	
Property Rights Index	0.34
Annualized Avg. Sample GDP Growth	2.80
Credit Crash Dummy (% of Time)	6.27
Total Explained Gap	12.04
Gap	15.7
Percent of Total Gap Explained	77%

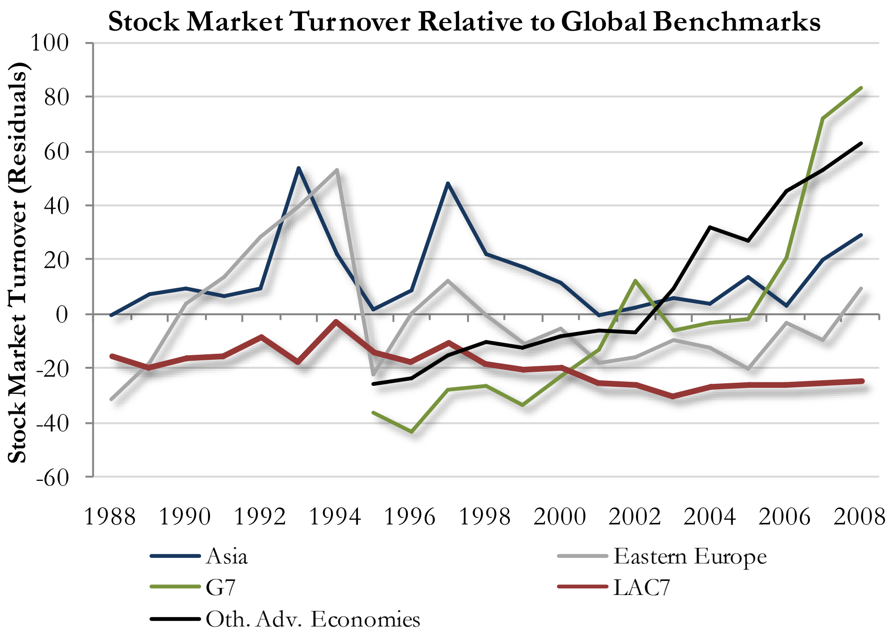
What can be done?

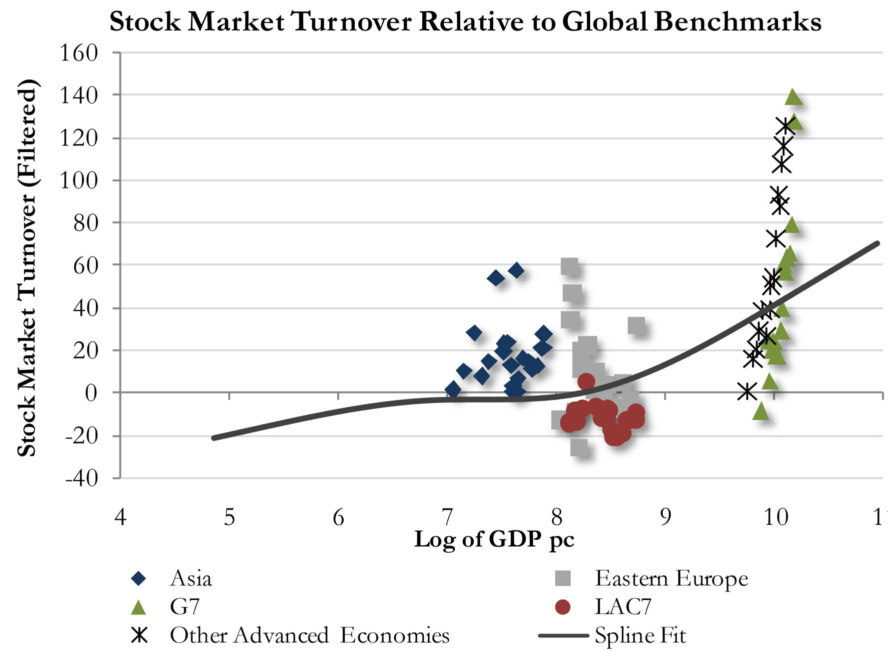
- Ensuring good systemic oversight will be crucial to avoid a costly repeat of the crises of the past
- Part of the problem is the shortage of bankable projects, which puts a premium on growth-promoting policies
- Correcting contract rights and enforcement systems should receive priority, while gains in information infrastructure need consolidation
- More research needed to ascertain the impact of the credit gap on SMEs and whether lack of competition is a significant issue in LAC

Benchmarking LAC's financial development

The domestic equity market turnover gap

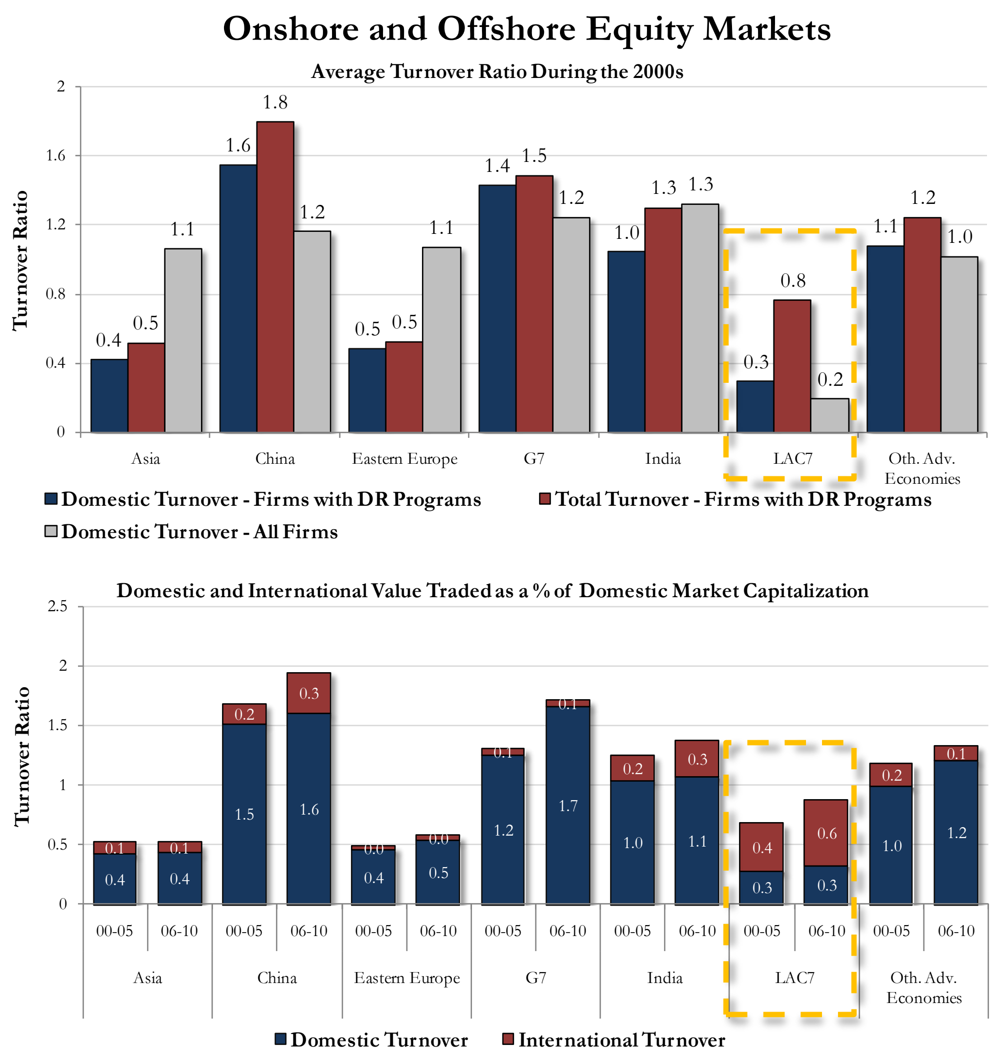
The shrinking domestic equity market turnover





Source: de la Torre, Feyen, and Ize (2011).

As the bigger stocks left, the smaller stocks were left in shallower waters



Source: de la Torre, Feyen, and Ize (2011).

What explains the turnover gap?

Domestic Equity Turnover and Enabling Environment Indicators

	Dependent Variable: Stock Market Turnover	
	(1)	(2)
LAC7 Dummy	-27.02**	
	(-2.505)	
Credit Crash Dummy (% of period)	-109.2	-125.7***
	(-1.524)	(-3.049)
Annualized Avg. Sample GDP Growth	3.164	
	(1.385)	
Contract Enforcement Index		-4.298*
		(-1.970)
Credit Information Index		4.452***
		-2.738
Property Rights Index		0.592***
		(3.211)
Constant	296.0***	445.7***
	-2.73	-4.343
Workhorse Controls	Yes	Yes
Observations	86	103
Pseudo R2	0.54	0.47

Source: de la Torre, Feyen, and Ize (2011).

What can be done: more questions than answers?

- Additional improvements in the general enabling environment and market infrastructure will no doubt help but only at the margin

- The bigger issues concern size and governance
  - Liquidity is a function of size; price revelation is a function of liquidity

- As regard size, regional integration might help but can it do much more than global integration?

- As regard governance, should the smaller countries follow the Brazilian example (tighter standards) or go lighter instead?

Policy issues

Going long

Long-term financial contracts are perhaps the most socially useful yet the most challenging aspects of FD

- The two sides of the market for going long typically have a hard time meeting
- In the U.S. the solution has revolved around securitization and asset management, boosted by government guarantees…
  - But the emphasis on short-term returns in asset management has led to excess risk-taking and trading
- …and investors have relied heavily on financial intermediaries and secondary market liquidity to exit early in case of trouble
  - But this raises obvious collective action problems that were brought to light in the global crisis
- Can LAC avoid falling into the same traps?...

LAC's agency challenges

- Where is LAC now?
  - Pension & mutual funds are expensive, spend too much in marketing and not enough in asset management (safest/most liquid securities)
  - This reflects an undemanding clientele; and the limited availability of meaningful long-term performance benchmarks
  - Personal brokers have grown to fill part of the gap but face transparency and investor protection issues
- Possible policy responses
  - Stepping up public monitoring and tightening regulation of asset managers, without undermining boosting moral hazard
  - Promoting standardization and performance benchmarking without exacerbating short-termism (life-cycle funds as part of the solution)

LAC’s collective action challenges

- Possible alternatives to the developed country model
  - Long-term asset-liability managers – Chile’s of life insurance companies provides one particularly valuable alternative
    - This requires some sort of compulsory pension fund participation and the removal of obstacles to the concomitant development of the annuities
  - Participation costs may be further reduced through common collection infrastructures (pension funds) and “unbundling”
  - More research on the pros and cons of “covered bonds” for housing finance versus “mortgage-backed securities”
  - Suitable and well-priced re-insurance by the state

Policy issues

Risk absorption by the state

A charged LAC history, in four acts…

- **Act I:** The state can do it better
- **Act II:** On second thoughts, markets can perhaps do it better
- **Act III:** Markets and states should cooperate
- **Act IV:** When the going gets tough…

Shortcomings in popular justifications for state risk taking

- Justification by objectives, but why should public guarantees be the proper instrument?

- Justification through market failures, but how can public guarantees help?
  - Externalities
  - Agency problems

- Justification based on limited welfare criteria, but who pays for the guarantees?

Without risk aversion, agency frictions or externalities alone won’t do

- Without risk aversion, unsubsidized public guarantees won’t make a difference

- Agency frictions alone do not justify subsidized public guarantees, except if the state has a (hard to argue) information or enforcement advantage over the private sector

- Adding social externalities may justify public subsidies but not (subsidized) public guarantees

With risk aversion, agency frictions alone may justify private (but not public) guarantees

- Monitoring requires *sufficient* skin in the game

- But risk aversion introduces a deadweight cost that limits monitoring below its socially optimal level

- A guarantee that spreads risk is optimal if it does not unduly debilitate monitoring – if the costs of monitoring the monitor are sufficiently low

- In the absence of collective action frictions (that raise participation costs), private guarantees are preferable to public guarantees
  - Because the private sector has a comparative advantage in resolving agency frictions

The case for public guarantees

- *Normal idiosyncratic risk:* temporary public guarantees may help complete underdeveloped systems
  - By promoting participation and spreading risk more broadly than markets
- *Fat-tailed idiosyncratic risk:* permanent public guarantees may be justified, even in well-developed financial systems
- *Systematic risk:* permanent guarantees may help prevent coordination failures and limit risk premia
- *In all cases*, the comparative advantage of states (markets) is in resolving collective action (agency) frictions – a natural complementarity between states and markets that should be fully exploited

What do we see in practice?

- Most PCGs cover normal risks (e.g., SME lending) on a permanent basis and without apparent fiscal costs: *a political bonanza…*

- Why can't markets do it?
  - Public guarantees crowd out private guarantees: *time to exit or expand the public risk frontier*
  - Financial systems are not mature enough: *what is the exit strategy?*
  - Risk is in fact fat-tailed: *this should be reflected in the pricing of the guarantees and their profitability during the good times*

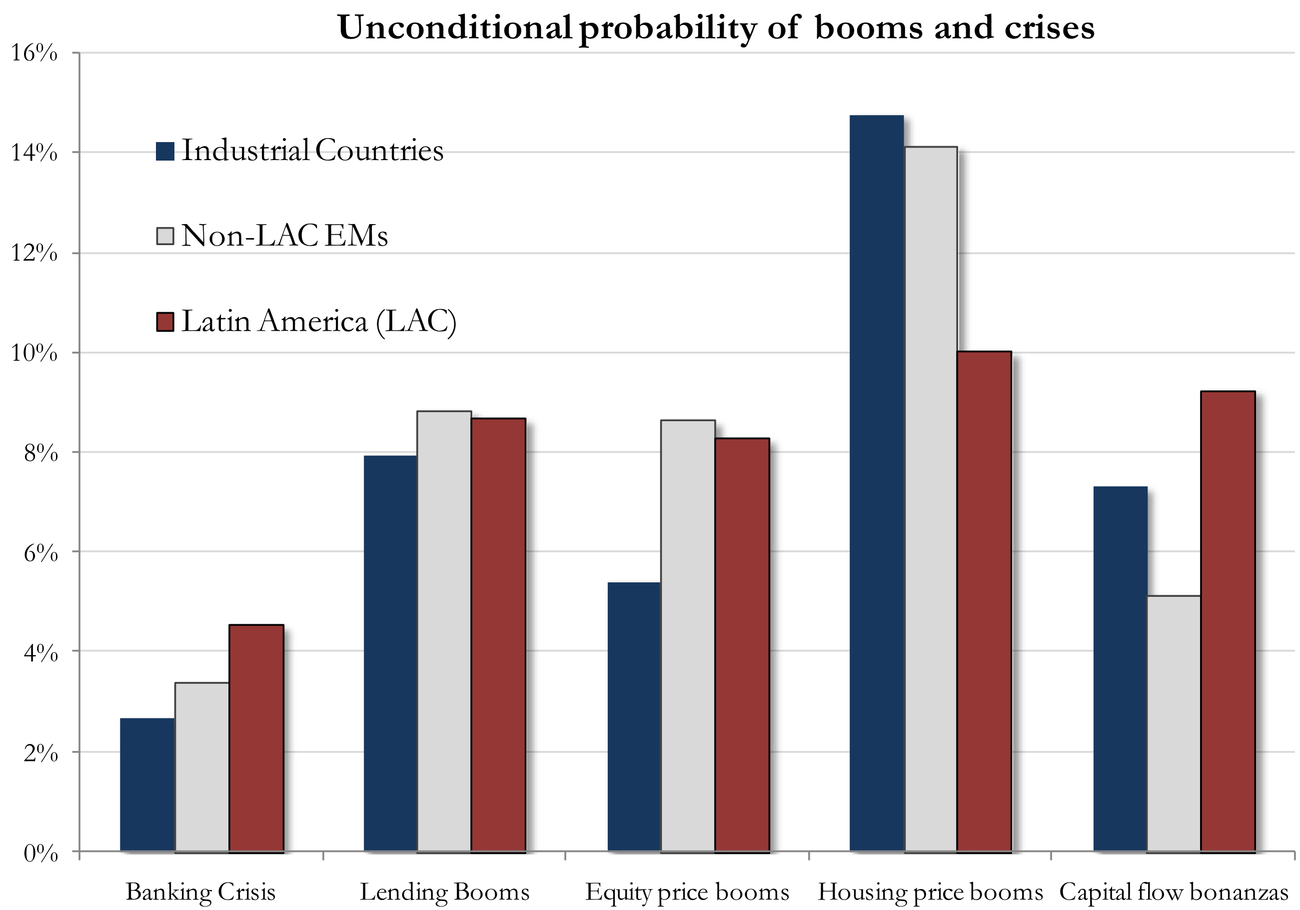
Some policy implications for LAC

- Before states engage in risk taking, should exploit to the maximum the state's role in promoting participation (basic infrastructure, catalytic interventions, mutualized private risk sharing, compulsory participation, etc.)
- The risk bearing role of public banks should be reformulated based on risk aversion and participation frictions, rather than externalities/agency frictions
- Public guarantees should as best priced as possible
- To avoid competition and enhance complementarity, the public risk frontier should move beyond that of markets (riskier debtors, venture capital, large projects, longer horizons, etc.)
- Avoiding competing with the private sector may in fact allow public banks to play a more effective countercyclical role
- Public-private risk sharing and risk discovery arrangements (auctions of guarantees) should help align incentives and promote complementarity

Policy issues

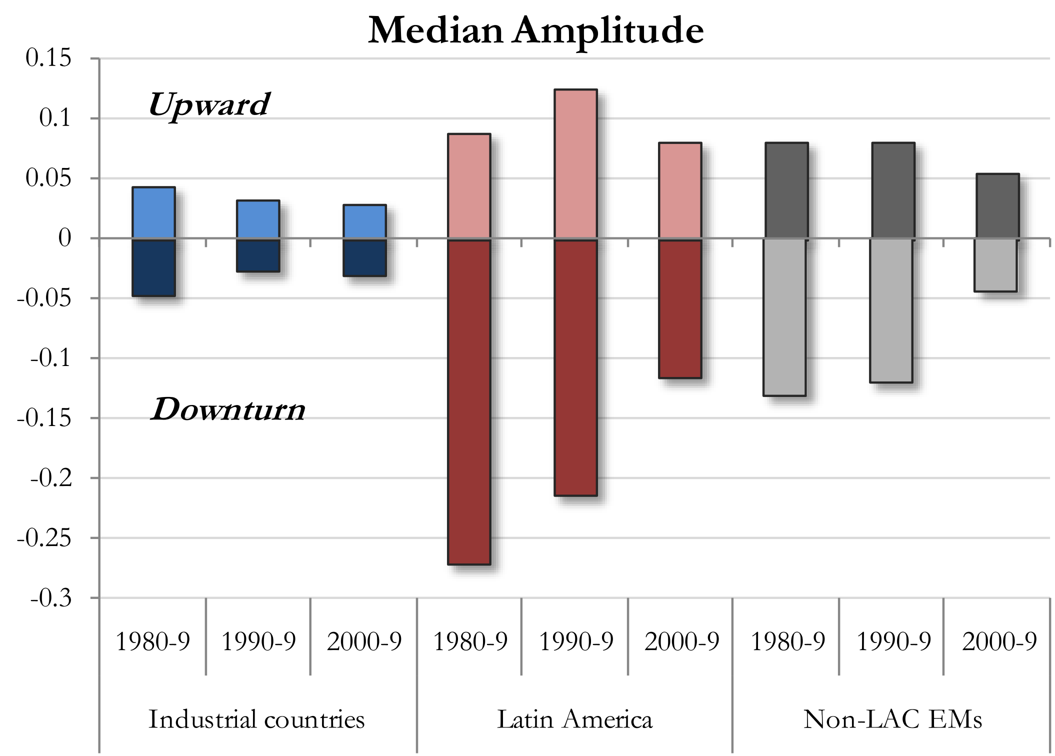
The prudential agenda

LAC has a turbulent past…



Source: Calderon and Serven (2011)

…associated with bigger cycles…



Source: Calderon and Serven (2011)

…often ending up in tears

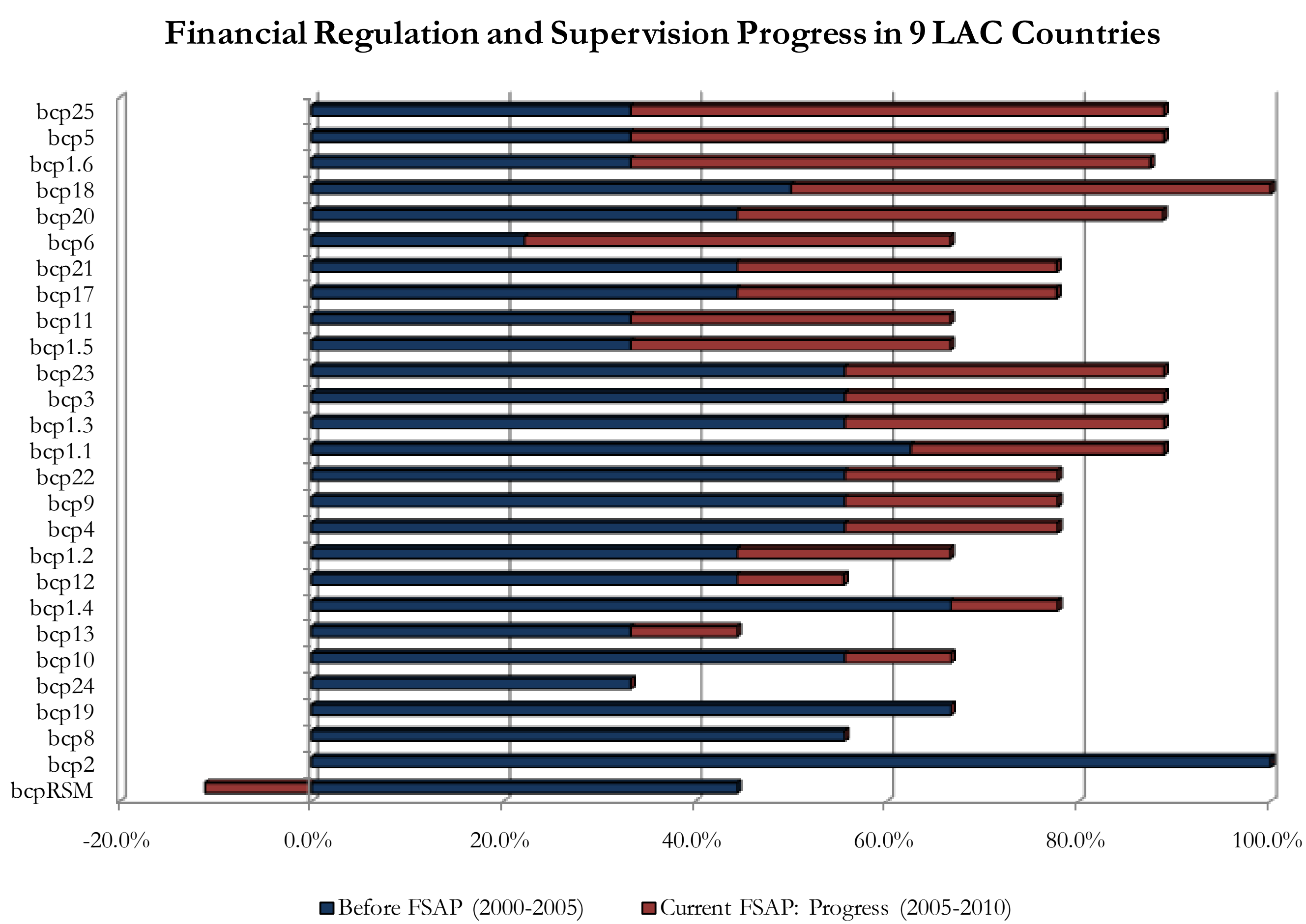
Size of Financial Booms and the Probability of Crisis: Probit Analysis

Sample: 79 countries, 1970q1-2010q4

	[1]	[2]	[3]	[4]
Credit				
Real credit	1.1555 **	1.3246	2.5876 *	2.6228 *
(amplitude of preceding upturn)	(0.518)	(1.027)	(1.364)	(1.405)
Capital flows				
Ratio of non-FDI inflows to GDP	..	-0.1269	-1.2177	-1.3084
(amplitude of preceding upturn)		(1.844)	(2.306)	(2.308)
Asset prices				
Real Exchange Rate	..	..	2.1246	2.2336
(amplitude of preceding upturn)			(2.208)	(2.291)
Stock prices (*real*)	..	..	0.1658	0.0984
(amplitude of preceding upturn)			(0.523)	(0.560)
Leverage of the banking system				
Credit-Deposit ratio	..	..	..	-0.3075
(T-P amplitude)				(0.528)
Constant	-1.4536 **	-1.3826 **	-1.8141 **	-1.7686 **
	(0.163)	(0.256)	(0.345)	(0.366)
No. of Obs.	298	144	116	110
Log likelihood	-108.4	-58.0	-38.3	-36.8
Pseudo R-squared	0.0623	0.0581	0.2084	0.193

Source: Calderon and Serven (2011)

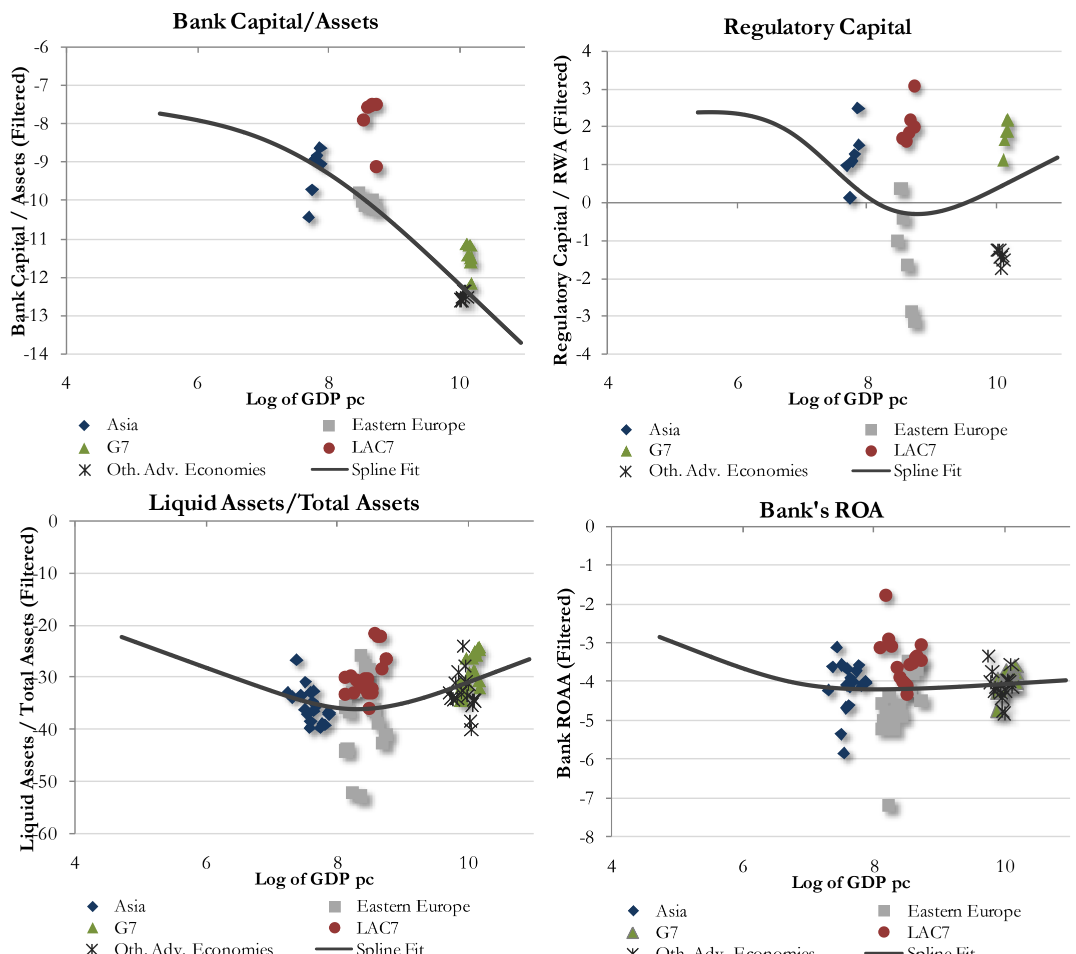
There has been substantial progress in Basel-style prudential oversight…



Source: Heysen and Auqui (2011).

…and LAC banks now have the biggest buffers of all

Dynamic and Cross-Section Development Paths



Source: de la Torre, Feyen, and Ize (2011).

However, there are important remaining issues of traditional oversight…

- Supervisors' limited *independence and legal protection*, together with the civil code, continue to limit supervisory power
- Issues of *consolidated oversight* (particularly consolidated regulation) of financial groups remain dominant throughout the region…
- …and are exacerbated by the predominance of *silo-based regulation* (that has given rise to very large and complex financial groups) and the largely unresolved *challenges of cross-border oversight*
- Weaknesses are larger in the case of the smaller LAC countries

…as well as an ampler and more complex macro-policy mix that will require skillful management

- Monetary policy needs a break!
  - There is still a credibility gap (high policy rates)
  - And monetary policy also needs to worry about the exchange rate
- Fiscal policy must help
  - This will require building up both fiscal buffers and fiscal dampeners (self-stabilizers)
- But macro-prudential policy will also need to pitch in
  - Bigger (and more lethal) credit cycles
  - Large exposure to capital flows and international mood swings
- A supportive, well-calibrated exchange rate policy will also be needed
  - Too much volatility is not good
  - Too little volatility is not good either: volatility contains dollarization and enhances both monetary **and** macro-prudential policy independence

What should LAC shoot for in macro-prudential policy?

- Level 1: correct the pro-cyclicality of existing prudential norms
- Level 2: buffer the financial system to make it less vulnerable to cycles
- Level 3: dampen the cycle itself
- Level 4: kill in the bud the gestation of cyclical dynamics
  - 4 is clearly beyond LAC's reach at present
  - 1 and 2 look like the safest proximate choices for LAC; moreover, they should help with 3
  - However, a particularly good case also exists in LAC for 3
  - But 3 is likely to require considerable discretion: can LAC manage it?
  - How to tell an unsustainable credit cycle from catch up in credit?
  - Are reserve requirements part of the answer?
  - Which other tools (LTVs, DTIs, etc.) should LAC look at and how broad or narrow should they be?

Managing discretion

- Given the shocks and the uncertainty, there is a premium to using discretion in LAC
- However, given the weaker institutions, the use of discretion in LAC is particularly problematic
- Some policy responses
  - Confine discretion to where it is really needed: 1 and 2 can probably do without much discretion
  - Build up the institutional framework: inflation targeting provides an excellent model to follow but a substantial strengthening of accountability and coordination will likely be needed
  - Strengthen (systemic) supervision, the prime area for the use of discretion!

Thank you