

Housing Finance in Latin America

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Based on the IADB research program

“Housing Finance in Latin America and the Caribbean:
What is holding it back?”

and

“Too Small to Thrive: The Housing Finance Market”
by Arturo Galindo, Alessandro Rebucci, Frank
Warnock, and Veronica Warnock



Three facts the region must confront

- Housing outcomes in the region must improve.
- Mortgage markets are tiny.
- With many competing demands on budgets, governments cannot do everything on their own.



While there are high homeownership rates in many LAC countries ...

Table 1. Rental vs Ownership, Selected Countries (2009)

	Own	Rent
Hungary	92%	8%
Spain	87%	13%
Venezuela	81%	19%
Mexico	80%	20%
Panama	78%	22%
Nicaragua	78%	22%
Norway	78%	23%
Italy	76%	24%
Poland	76%	25%
Costa Rica	75%	25%
Brazil	74%	26%
Chile	72%	28%
United Kingdom	70%	30%
El Salvador	70%	30%

	Own	Rent
Peru	69%	31%
USA	69%	31%
Ecuador	68%	32%
Uruguay	68%	32%
Sweden	67%	33%
Guatemala	62%	38%
Finland	61%	39%
Czech Republic	61%	39%
France	57%	43%
Colombia	53%	48%
Denmark	51%	49%
Germany	45%	55%
Switzerland	35%	65%

Source: INFONAVIT, with information from McKinsey and Co.

Source: Lopez-Silva, et al (2011). Housing finance in Mexico: Current state and future sustainability. Mimeo.

...housing outcomes need to improve.



Housing Outcomes Need to Improve (1): Huge slum population in LAC

POPULATION (2005)	In slums (percent)	In slums (millions)	Total (millions)
Argentina	26.2	10.2	38.7
Brazil	29.0	54.0	186.1
Chile	9.0	1.5	16.3
Colombia	17.9	7.7	43.0
Costa Rica	10.9	0.5	4.3
El Salvador	28.9	1.8	6.1
Guatemala	42.9	5.5	12.7
Mexico	14.4	15.1	105.0
Panama	23.0	0.7	3.2
Peru	36.1	10.0	27.8
Trinidad and Tobago	24.7	0.3	1.3

Source: UN-Habitat Global Urban Indicators Database



Housing Outcomes Need to Improve (2): Substantial housing deficits

HOUSING DEFICIT	Count	Total Housing	Year	Source
Argentina	3,500,000		2008	Titularizadora Colombiana (2010)
Brazil	5,572,313		2008	Martins et al (2010)
Chile	639,000		2008	Titularizadora Colombiana (2010)
Colombia	3,828,055	10,578,899	2005	DANE Censo General (2005)
Costa Rica	182,265	1,257,000	2009	Sancho et al (2010)
El Salvador	540,499	1,406,485	2008	Sancho et al (2010)
Guatemala	1,500,000		2010	Cuevas et all (2010)
Mexico*	6,000,000		2009	Titularizadora Colombiana (2010)
Panama	125,014	862,586	2009	Sancho et al (2010)
Peru	1,500,000		2009	Titularizadora Colombiana (2010)
Trinidad and Tobago**	40,000		2006	UN-Habitat (2006)

* The government estimate for the 2008-2013 period was 7 million units (Lopez-Silva et al (2011)) .

**40,000 for the 2001-2006 period



Mortgage markets in the region are very small.

(If housing outcomes were adequate, this wouldn't be a problem.)

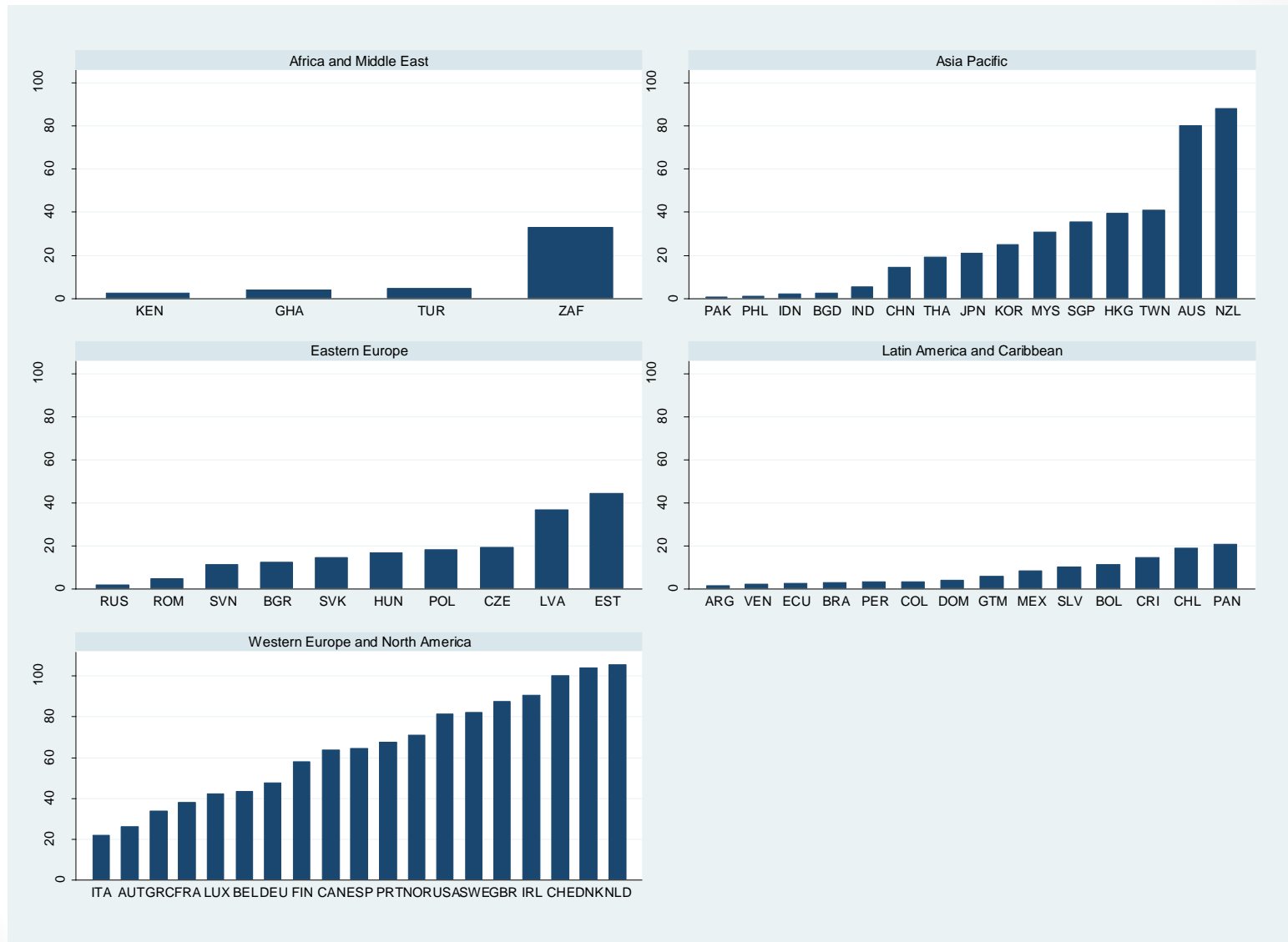


TABLE 15.4 | CHARACTERISTICS OF SUBSIDY PROGRAMS

Country	Program	Demand subsidy?	One-time subsidy?	Portable?	Does it finance only dwellings built under the program?	Does it finance progressive/self-built housing?	Is it constrained to the savings capacity?	Is the credit provided by a public agency?	Does it include credit programs with private financial intermediaries?	Is the interest rate lower than the one in the market?	Does it subsidize fixed costs or risks by financial intermediaries?
Argentina	Fonavi	No	n.a.	No	Yes	No	No	Yes	No	Yes	n.a.
Chile	Serviu and others	Yes	Yes	Yes/no ^a	Yes/No	Yes/no ^a	Yes	No ^b	Yes ^b	No	Yes ^b
Colombia	Subsidios a la vivienda de interés social	Yes	Yes	Yes	No	Yes	Yes	No	Yes ^c	Yes ^c	No
Costa Rica	Bono familiar de vivienda	Yes	Yes	No	No	Yes ^d	No	No	No	n.a.	n.a.
Ecuador	Sistema de incentivos para vivienda	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	n.a.
El Salvador	Programa de contribuciones para la vivienda	Yes	Yes	No	No	Yes	No	No	Yes	No	No
Guatemala	Foguavi	Yes	Yes	No	No	Yes	Yes	No	No	n.a.	n.a.
Mexico	Fovi/SHF Programa financiero de vivienda	No	No	Yes	No	No	No	No	Yes	No	No
Mexico	Prosavi Programa especial de crédito y subsidios a la vivienda	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
Peru	Mivivienda	No	Yes	Yes	No	No	Yes	No	Yes	Yes	No
Peru	Techo Propio	Yes	Yes	Yes	No	No	Yes	No	Yes	No	No
Uruguay	Sistema integrado de acceso a la vivienda	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	n.a.

n.a. Not applicable.

^a According to the program.

^b Since 2002.

^c The methodology of financing is not included in the program, but banks must use 25 percent of the increase in credit to finance housing through controlled interest rates.

^d Only for groups already organized.

Source: For Mexico, BBVA Bancomer (2002); for Peru, Eyzaguirre and Calderón (2003); for other countries, Rubinstein and Carrillo (2001).

Traditionally, governments in LAC are deeply involved in the provision of housing / housing finance.

But the markets remain small, and government cannot do everything.

Source: IDB (2004). Unlocking Credit: The Quest for Deep and Stable Bank Lending.



Given the three facts the region must confront:

- Housing outcomes in the region must improve.
- Mortgage markets are tiny.
- With many competing demands on budgets, governments cannot do everything on their own.

The Key Question Is:

How can governments in the region enable the private sector to play a more important role?



Outline

- Global Perspective (to provide a benchmark)
 - Factors that explain cross-country variation in the depth of housing finance systems around the world
- Zero in on LAC
 - Use the global perspective to focus on a short list of fundamental areas, and apply to some LAC case studies.



Global Perspective

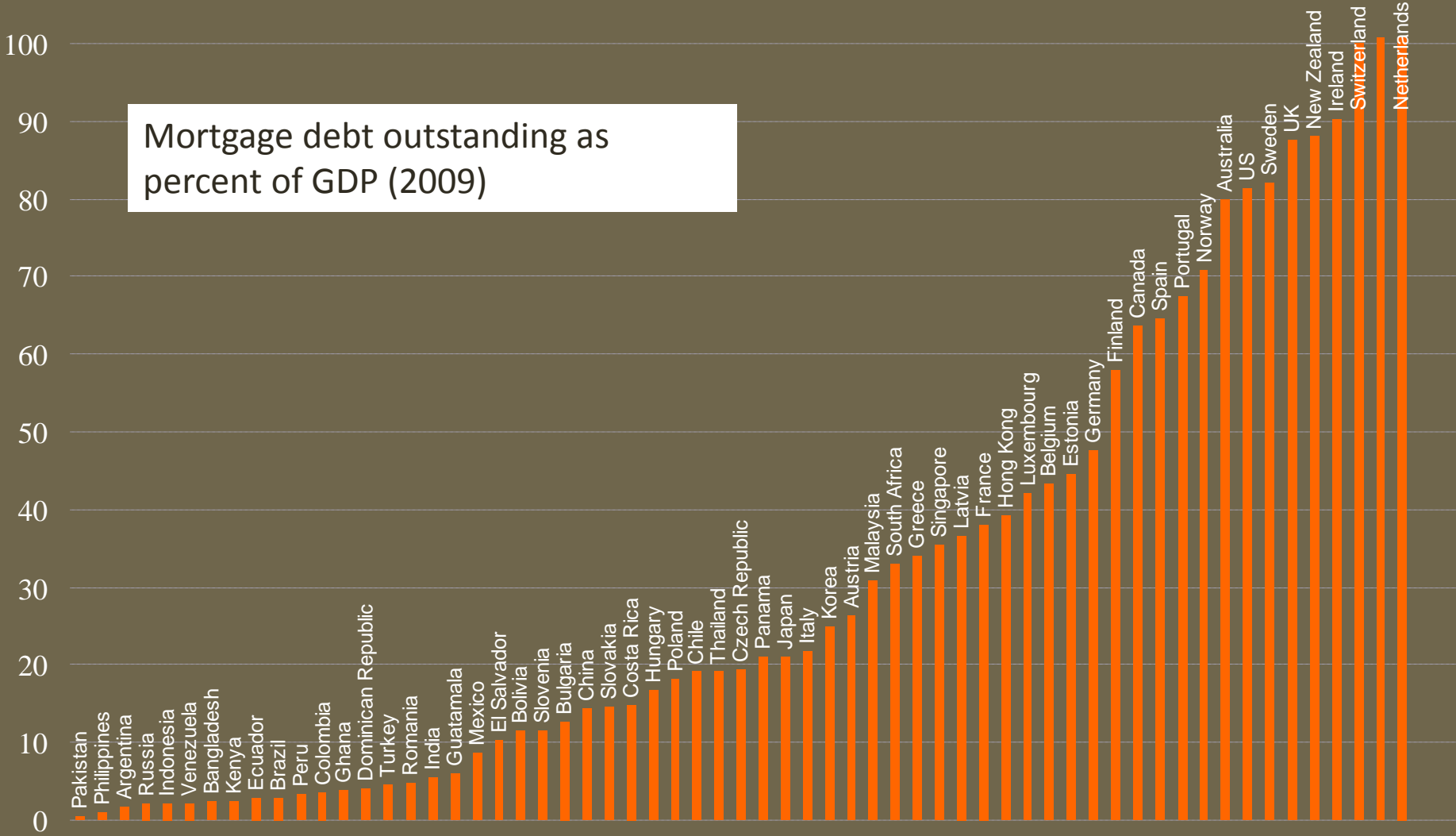
What are the determinants of well-functioning housing finance system?

- There are many ways one might want to gauge this: measure of access, range of products, stability, ...
- We use size of mortgage market (mortgage debt outstanding scaled by GDP), which is available for many countries.
 - Not a perfect measure
 - Influenced by price dynamics and tax considerations
 - Mortgage markets that are too large or growing too quickly might contribute to macroeconomic instability.
 - Bigger is not necessarily better.
 - But, in the face of huge housing deficits and substandard housing outcomes, it is important to understand what is holding back LAC mortgage markets.

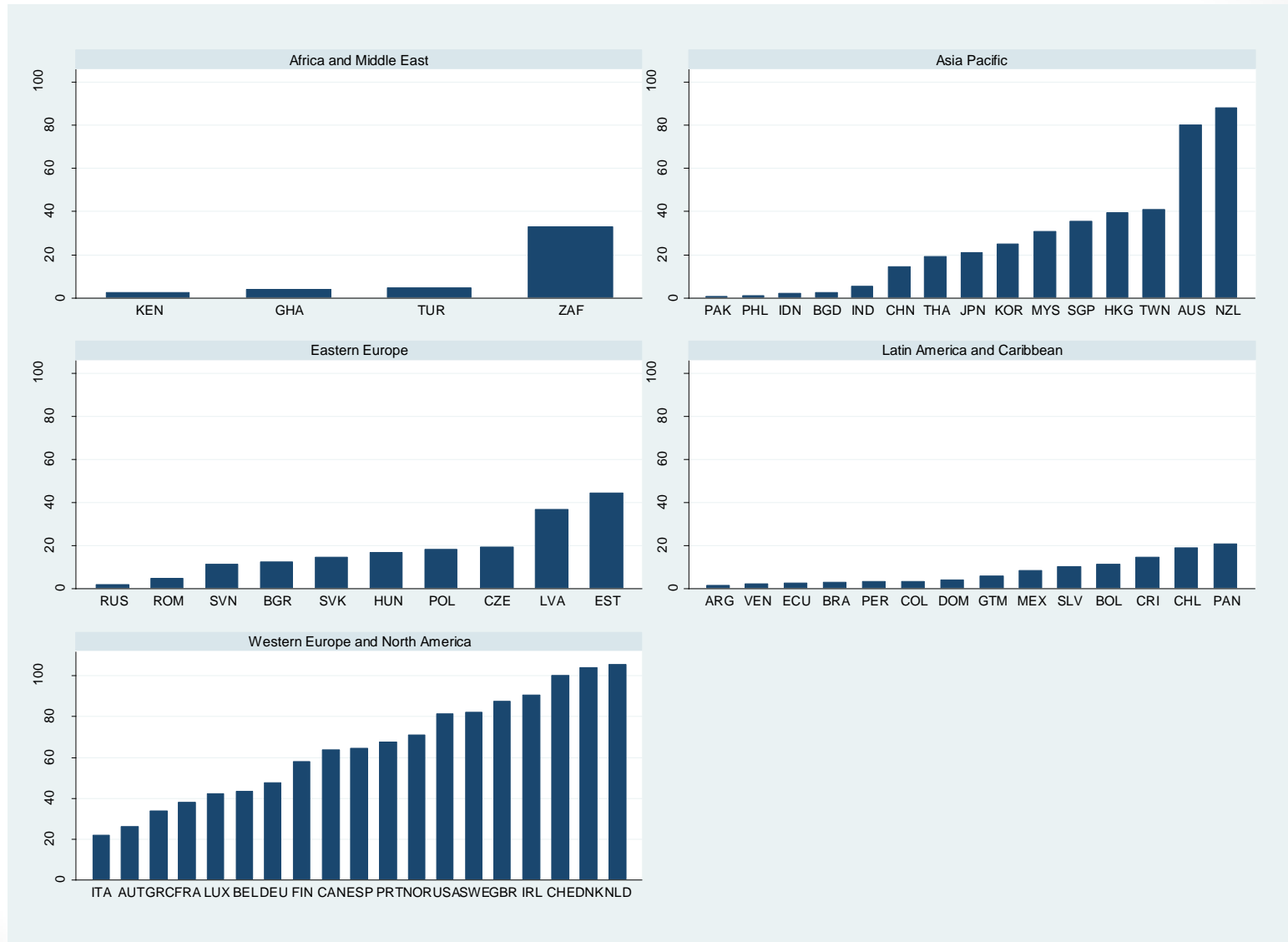


Great variation in size of housing finance systems...

Mortgage debt outstanding as percent of GDP (2009)



...and mortgage markets in LAC are quite small.



Empirical analysis suggests that mortgage markets are larger in countries with (i) stronger legal rights for borrowers and lenders, (ii) deeper credit information systems, (iii) greater ease in registering property and (iv) less macroeconomic instability. LAC could improve scores on many of these.

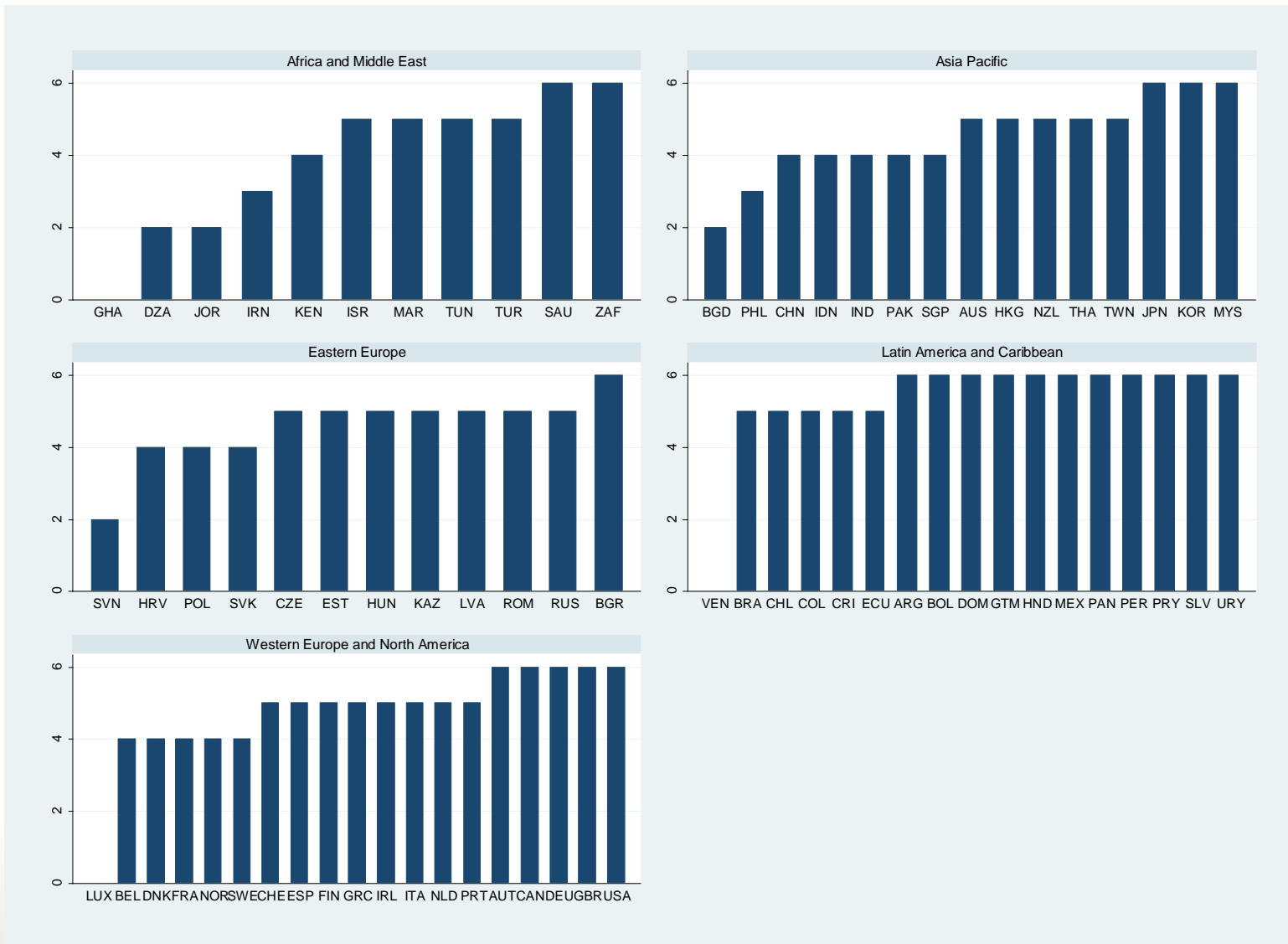
	Mortgage Debt / GDP			Mortgage Debt / Private Credit		
	(1) All Countries	(2) EMEs	(3) AEs	(4) All Countries	(5) EMEs	(6) AEs
Legal Rights	3.56** (1.37)	1.52** (0.70)	1.65 (2.41)	1.57** (0.74)	0.77 (0.78)	1.10 (1.10)
Credit Info	3.76** (1.80)	1.98** (0.78)	-9.02 (11.38)	3.40*** (1.24)	3.03*** (0.98)	-4.72 (6.53)
Registering Property	3.64*** (1.29)	1.19* (0.60)	5.63** (2.17)	1.71* (0.89)	0.85 (0.68)	2.49* (1.32)
Inflation Volatility	-1.54** (0.59)	-0.47*** (0.16)	-0.78 (13.24)	-1.03*** (0.33)	-0.47** (0.18)	-5.16 (3.72)
Country Size	2.14 (1.90)	-1.59 (1.10)	0.06 (5.73)	-0.50 (1.08)	-2.51* (1.25)	-2.14 (3.00)
Observations	60	36	24	57	34	23
R-squared	0.381	0.446	0.281	0.402	0.457	0.352

MDO scaled by GDP
or Private Credit

Warnock and Warnock (2012) "Developing Housing Finance Systems"



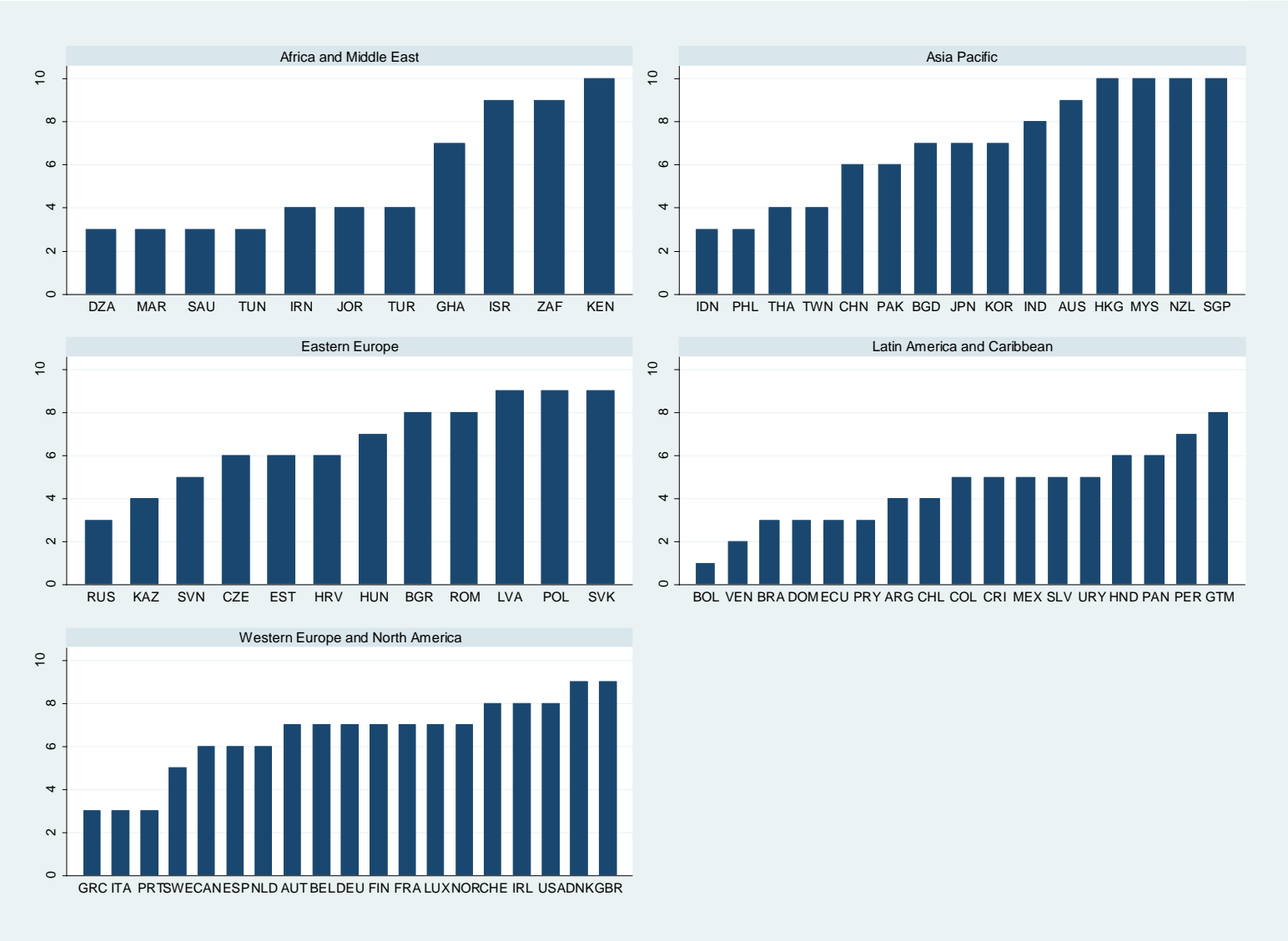
One factor LAC scores well on is depth of credit information systems (although there is a caveat).



Source: Doing Business Reports 2011.



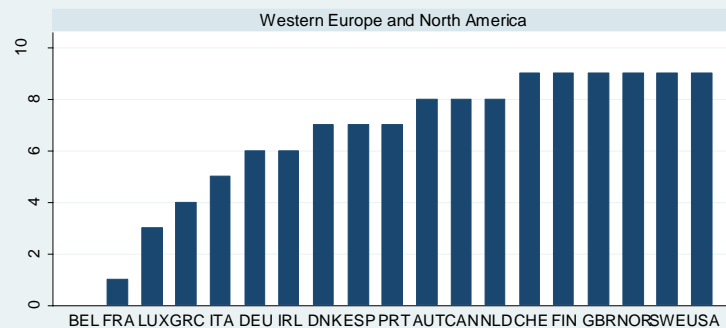
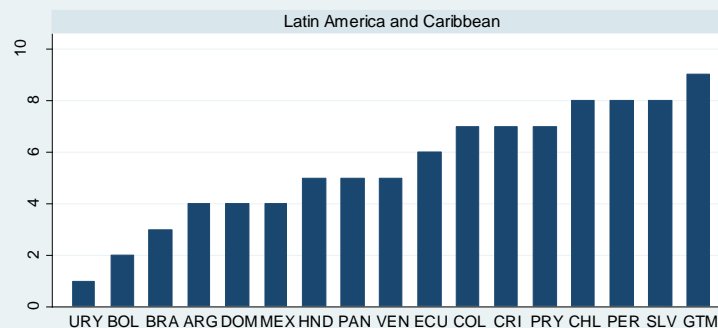
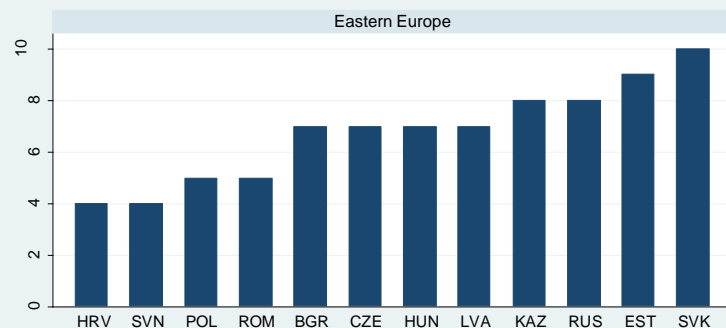
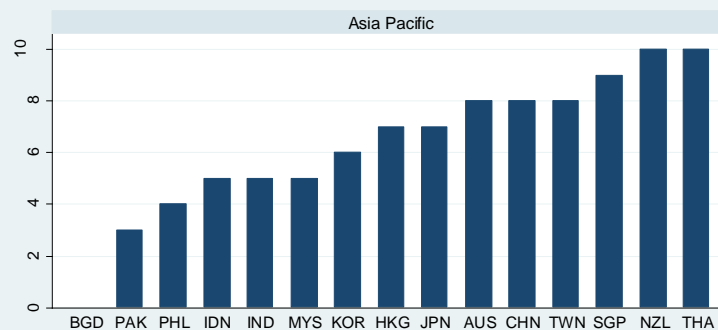
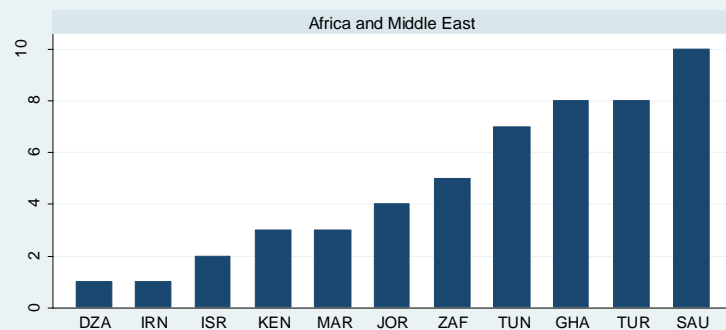
But it scores poorly on legal rights for borrowers and lenders



Source: Doing Business Reports 2011.



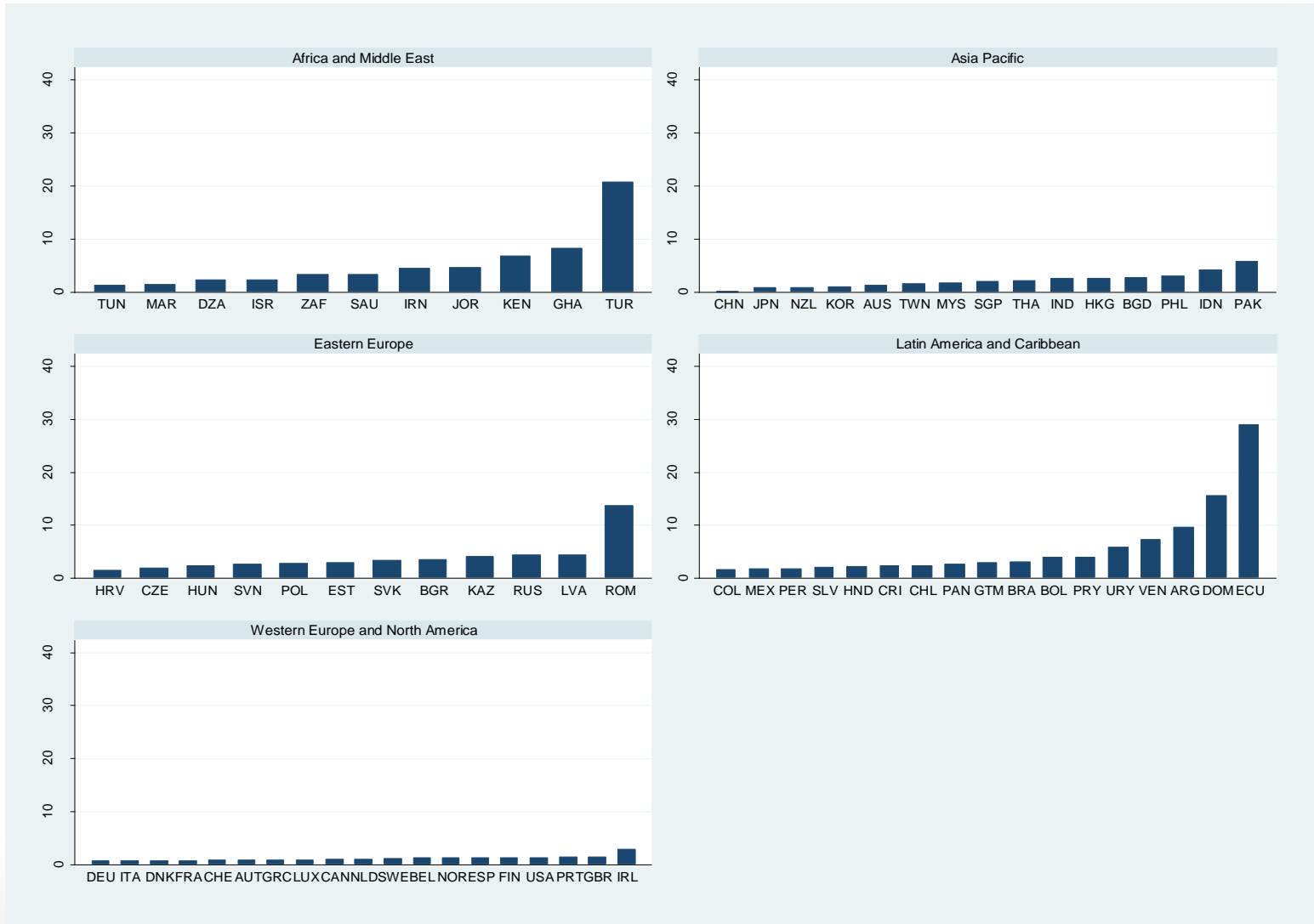
...and poorly on registering property.



Source: Doing Business Reports 2011.



LAC's performance on macroeconomic stability has improved greatly over the past decade, enabling some growth of mortgage markets.



Source: IFS

*standard deviation of 2000q1-2009q4 annual inflation rates



Global Perspective

Depth of housing finance

- Mortgage markets are larger in countries with stronger legal rights for borrowers and lenders, deeper credit information systems, greater ease in registering property and less macroeconomic instability.
- LAC scores poorly on legal rights and registering property.

Source: Warnock and Warnock (2008, 2012)

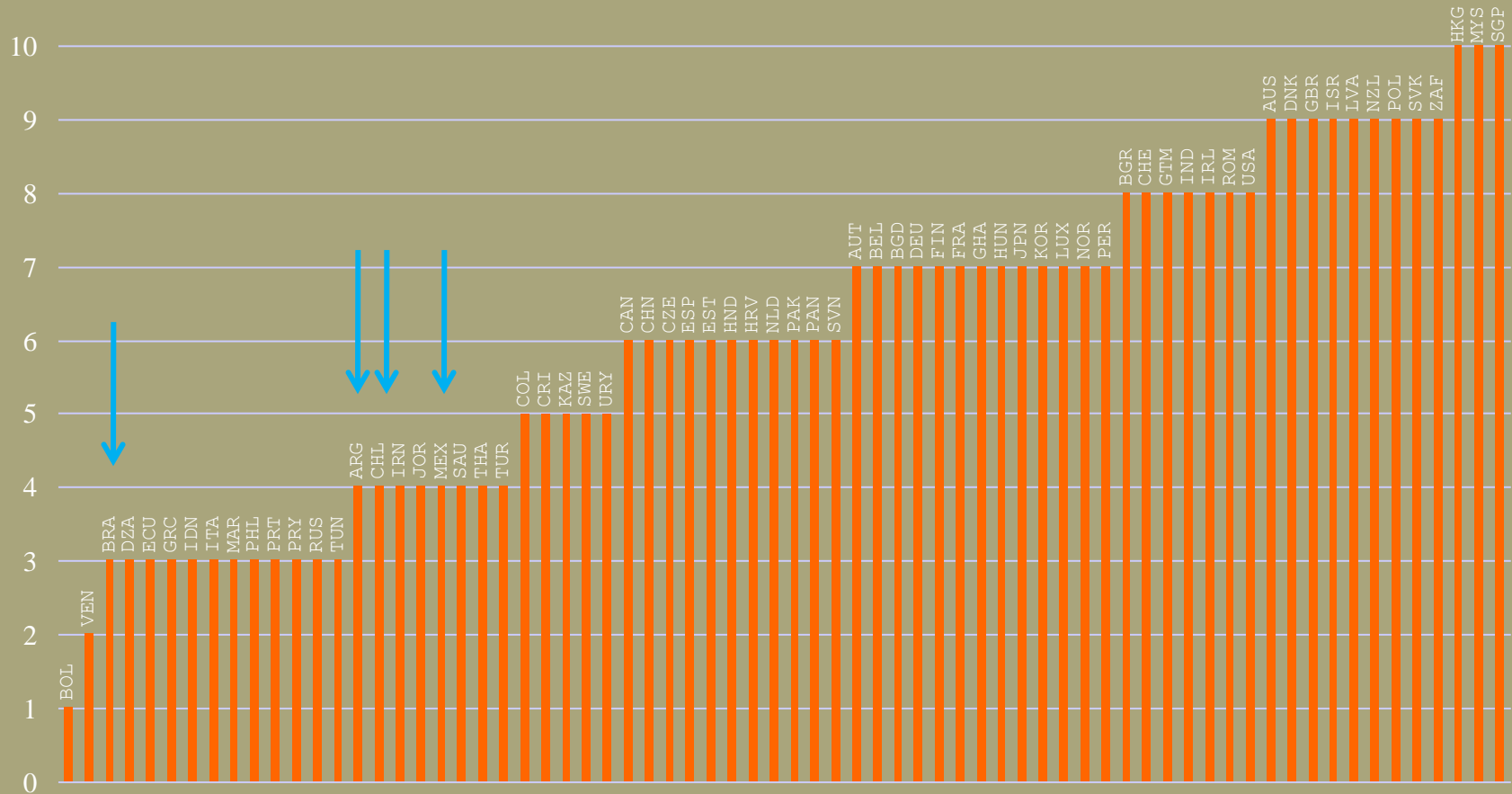


Strength of Legal Rights for Borrowers and Lenders

	ARG	BRA	CHL	MEX
Can any business use movable assets as collateral while keeping possession of the assets; and any financial institution accept such assets as collateral?	1	1	1	1
Does the law allow businesses to grant a non possessory security right in a single category of movable assets, without requiring a specific description of collateral?	0	0	0	0
Does the law allow businesses to grant a non possessory security right in substantially all of its assets, without requiring a specific description of collateral?	0	0	0	1
May a security right extend to future or after-acquired assets, and may it extend automatically to the products, proceeds or replacements of the original assets?	0	0	1	0
Is a general description of debts and obligations permitted in collateral agreements, so that all types of obligations and debts can be secured by stating a maximum rather than specific amount between the parties?	1	1	1	1
Is a collateral registry in operation, that is unified geographically and by asset type, as well as indexed by the grantor's name of a security right?	0	0	0	0
Do secured creditors have absolute priority to their collateral outside bankruptcy procedures?	1	0	0	0
Do secured creditors have absolute priority to their collateral in bankruptcy procedures?	0	0	0	0
During reorganization, are secured creditors' claims exempt from an automatic stay on enforcement?	1	0	1	1
Does the law authorize parties to agree on out of court enforcement?	0	1	0	1

Source: IFC/World Bank, Doing Business Report 2011

Strength of Legal Rights for Borrowers and Lenders



Source: World Bank Doing Business Report 2011



Housing Finance Infrastructure Data

Registering Property is an index measuring the ease of registering property. It focuses on the time, cost, and number of procedures required to go from a seller with property registered and no title disputes to the buyer being able to use the property, resell it, or use it as collateral. (Rescaled to range from 0 to 10, with higher values indicating greater ease of registering property). Three components:

- Days required to complete each procedure
- Cost, not including bribes, required to complete each procedure (as % of property value)
- Number of procedures to legally transfer title on immovable property. These include preregistration (checking for liens, notarizing sales agreement, paying property taxes), registration (in country's largest city), and post-registration (transactions with authorities).



Property Registration

	ARG	BRA	CHL	MEX
Days required to complete each procedure	52	42	31	74
Cost, not including bribes, required to complete each procedure (as % of property value)	7.0	2.7	1.3	5.2
Number of procedures to legally transfer title on immovable property. These include preregistration (checking for liens, notarizing sales agreement, paying property taxes), registration (in country's largest city), and post-registration (transactions with authorities).	6	14	6	5



Ease of Registering Property: All Countries



Source: World Bank Doing Business Report 2011



From the Global to the Local: Focus on Housing Finance in LAC

- In *Unlocking Credit: the quest of deep and stable bank lending* (2004), the IDB identified possible explanations why there is so little housing finance in LAC:
 - Interest rate risk
 - Maturity mismatches
 - Issues with collateral
 - Inability to pay

The first and second have been alleviated to some extent with stable macro environments and developing bond markets.

The third and fourth have also improved, but persist.

Note that regulatory issues are not listed as a problem. “Banks in LAC are relatively solid, and regulation/supervision is relatively tight in most countries.”



Inability to pay is certainly an issue: Low per capita GDP...

	GDP per capita (at constant 2000 US\$) 2009
Argentina	9,880
Brazil	4,419
Chile	6,083
Colombia	3,102
Costa Rica	5,043
El Salvador	2,566
Guatemala	1,858
Mexico	6,099
Panama	5,732
Peru	2,913
Trinidad and Tobago	10,541
USA	37,016

Source: World Bank. World *data*Bank



...high rates of poverty...

POVERTY RATE	Poverty headcount ratio at national poverty line (% of population)	Year
Argentina		
Brazil	21.5	2003
Chile	17.0	1998
Colombia	45.1	2006
Costa Rica	23.9	2004
El Salvador	30.7	2006
Guatemala	51.0	2006
Mexico	47.0	2004
Panama	36.8	2003
Peru	51.6	2004
Trinidad and Tobago	21.0	1992

Source: World Bank. World *data*Bank



... and a dual economic structure with a quite large informal economy...

INFORMAL ECONOMY	% of GDP
Argentina	32.9
Brazil	28.4
Chile	32.1
Colombia	43.5
Costa Rica	41.8
El Salvador	36.8
Guatemala	42.3
Mexico	28.2
Panama	44.4
Peru	38.1
Trinidad and Tobago	24.4

Source: Guillermo Vuletin (2008). Measuring the Informal Economy in Latin America and the Caribbean, IMF Working Paper.



...and a large number not employed in the formal sector.

INFORMAL EMPLOYMENT	As percent of total nonagricultural employment
Argentina	
Brazil	60
Chile	36
Colombia	38
Costa Rica	44
El Salvador	57
Guatemala	
Mexico	55
Panama	
Peru	
Trinidad and Tobago	

Source: ILO (2002). Women and Men in the Informal Sector:
A Statistical Picture.



Zeroing in on LAC

- Inability to pay is an issue that will continue to give lenders reason to pause.
- That said, are there ways government can enable more private sector participation in housing solutions?
 - From the global regressions, the private sector might play a larger role if legal rights for lenders were strengthened, credit information was improved, and the process to register property was less onerous.
 - This assumes macro stability will persist...if it doesn't, the other factors won't matter.
 - What can we learn from the country case studies for the “[Housing Finance in Latin America and the Caribbean: What is Holding it Back?](#)” IADB research project?
 - In the rest of the presentation I will go through examples from five countries (Argentina Brazil Chile Colombia and Mexico).



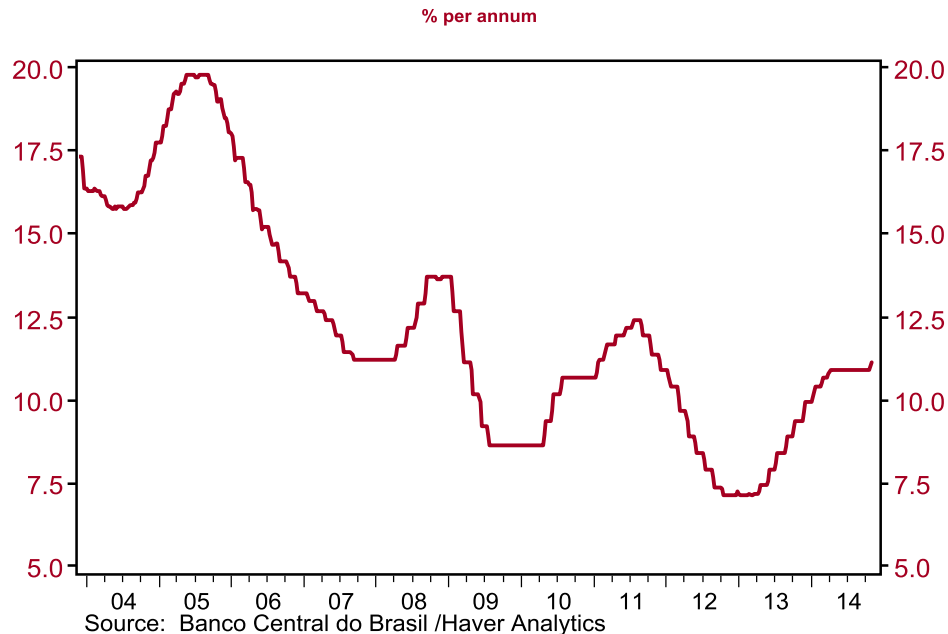
Brazil

- Growing but tiny mortgage market at 2.9 % in 2009 from 1.2 % in 2004
- (Housing deficit of 5,572,313 units)
- Positives: Some increase in macro stability and some improvement in legal aspects that reduce risks to lenders
- But the housing finance system is dominated by government, either directly through public lenders (40% of market) *or* through “earmarking” rule for housing funds.
 - “Rule”: Brazilian banks, for every Real (R\$) receive for deposit in savings accounts, must direct 65 centavos to housing finance.



Brazil

Brazil: Monetary Policy Rate (The Overnight Selic Rate)



Brazilian banks, for every R\$1 received for deposit in savings accounts, must direct R\$0.65 to housing finance.

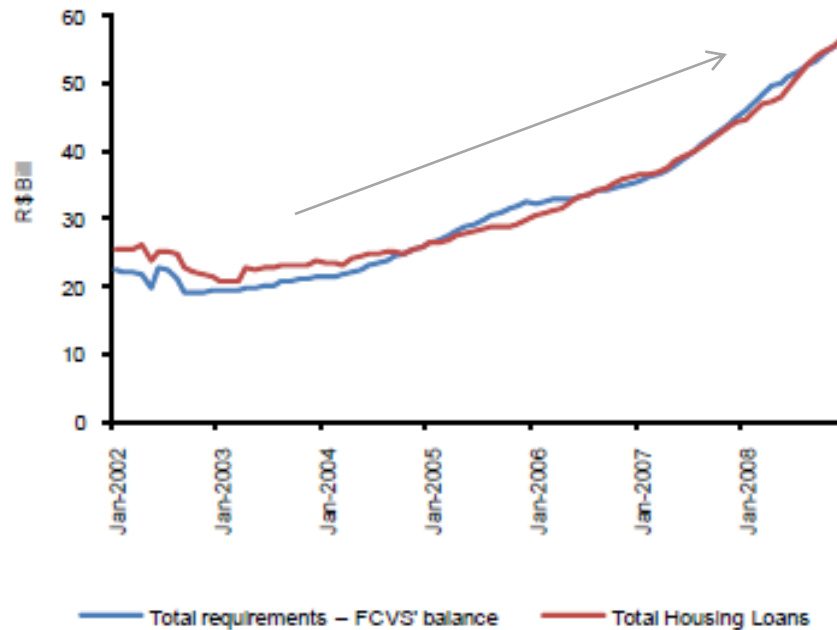
Savings (which receive a quasi-fixed rate) tend to increase when the SELIC rate (overnight policy rate) decreases.

The amount of savings drives the amount of “earmarked” funds.



Private lenders do not seem willing to fund more home loans than required by law.

Fig. 26 – Net Requirements and Total Housing Loans - Private Lenders



Requirements from Earmarking = Total Private Home Loans



Brazil

- Growing but tiny mortgage market at 2.9 % in 2009 from 1.2 % in 2004
- (Housing deficit of 5,572,313 units)
- Increase in macro stability and some improvement in legal aspects that reduce risks to lenders
- Growth is attributed to government involvement directly through public lenders (40% of market) or through “earmarking” rule for housing funds.
 - Rule is basically: Brazilian banks, for every Real (R\$) receive for deposit in savings accounts, must direct 65 centavos to housing finance.
- Private sector lenders do not appear to be participating any more than required. What can be done to incentivize them?
 - One thing needed: Better credit information systems



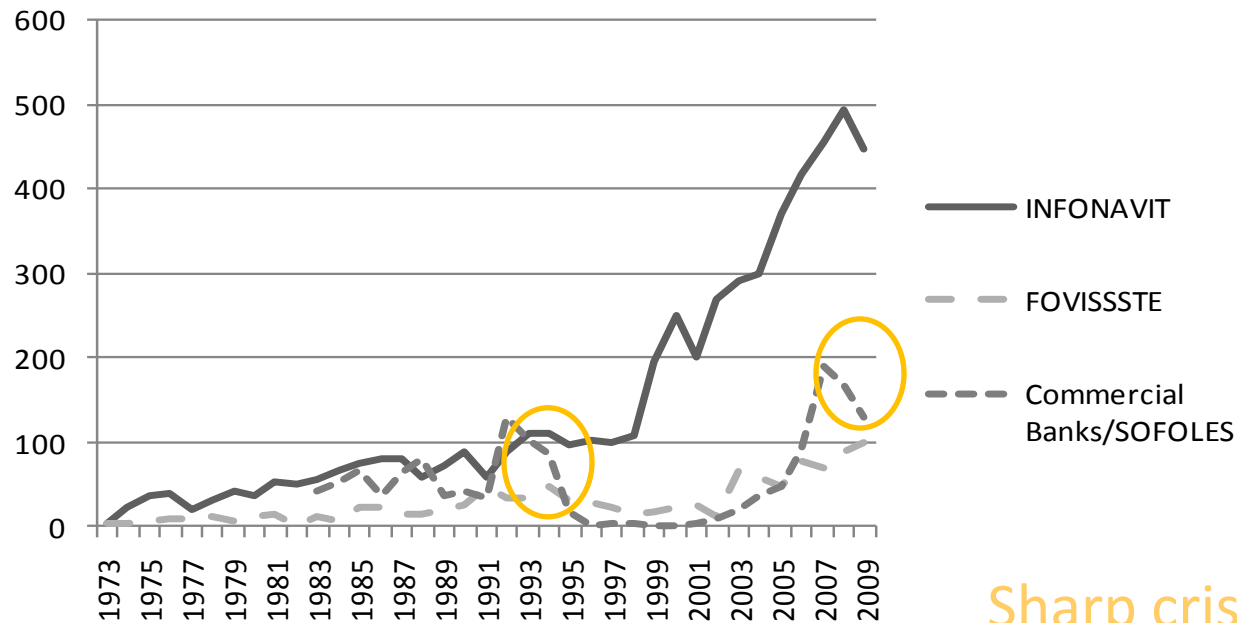
Mexico

- Mortgage size is 8.5 percent of GDP
- (Government estimate for 2008-2013 period is a housing deficit of 7 million units)
- Predominant lenders are mandatory housing provident funds: INFONAVIT (for private employees) and FOVISSSTE (for public employees)
 - In 2009, together they issued 82 percent by number of loans (70 percent of mortgage in total peso volume).
- The rest of the market is made up of lending by commercial banks at 15% and SOFOLES (non-bank financial institution) at 3%.



More analysis is needed in examining the mortgage market cycle in Mexico

Evolution of Loan Origination by Main Participants (number of loans)



Research team's chart which used information from López and Campos (2007) and BBVA Bancomer, Situación Inmobiliaria México (Jan 2010)

Sharp crisis-related downturns in private lending



Mexico

- Mortgage size is 8.5 percent of GDP
- (Government estimate for 2008-2013 period is a housing deficit of 7 million units)
- Lenders: mandatory housing provident funds (82%), commercial banks (15%) and non-bank financial institutions (3%).
- With data on INFONAVIT borrowers accounts, they investigated whether the subsidy helps or harms repayment behavior.
 - The authors argue that the large subsidy programs currently under operation do not seem to do harm.
 - They quibble about the design of the subsidy and cut-offs; but they note that the subsidy appears to enable the purchase of a higher quality home.
- They also note the lack of data on housing construction and related, title issuances, and other housing indicators. *THIS PROBLEM EXISTS IN MANY COUNTRIES making analysis of important aspects of housing and housing finance activity rather difficult, inadequate or even impossible.*



Argentina

- Mortgage market is tiny at 1.7 percent of GDP.
- Housing deficit of 3.5 million units (2008)



Argentina

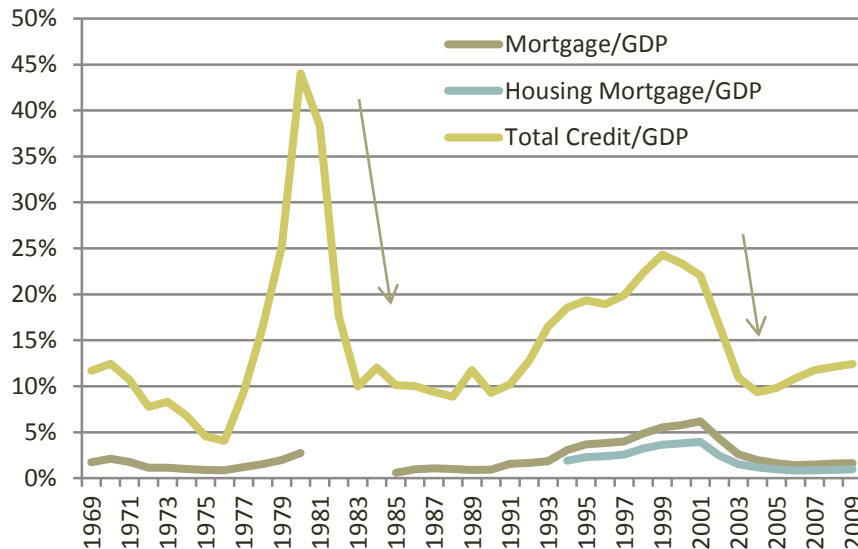
Authors think that the 2001/02 Argentine crisis led to a sharp decline in *demand* for mortgages.

From a survey designed for the study, they find that 80 percent of homeowners did not use any type of loan at all to finance the home purchase.

In the aftermath of Argentina's 2001/02 crisis, real estate—the one asset that did not suffer from expropriation of some sort—has become the country's safe asset, its store of value.

Subsidy/income creep?

Private Credit and Mortgage Credit in Argentina
1969-2009



Source: Figure 2 of Auguste, Bebczuk, and Moya (2011)



Chile

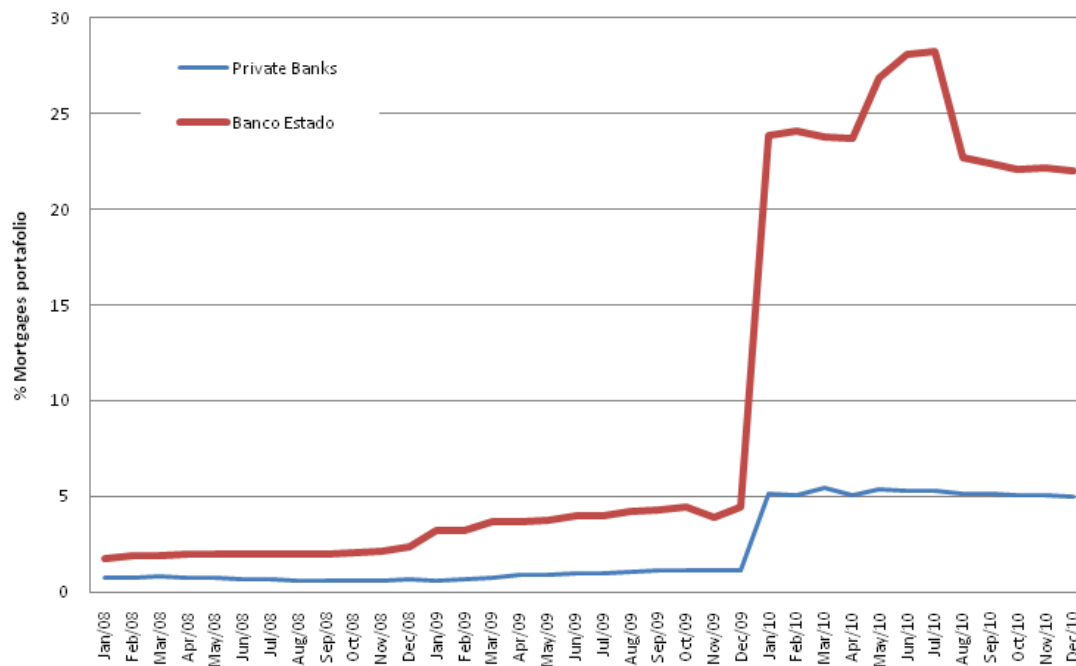
- Largest mortgage market in the region at 20% of GDP
- Housing deficit 639,000 in 2008, but housing outcomes have improved dramatically in the past few decades, in part through government programs
- Troublesome issues:
 - Concentration in the mortgage sector
 - Banco Estado, a state-owned bank that focuses on lower income segments, is responsible for 25 percent of the market.
 - 25% of its loans are nonperforming

SOMETHING TO INVESTIGATE



25% of home loans at the largest mortgage provider are “non-performing”

Evolution of non-performing loan as percentage of portfolio (2008 – 2010)



Note: definitional change since January 2010

Source: Micco and Parrado (2011), using data from SBIF.



Chile

- Largest mortgage market in the region at 20% of GDP
- Housing deficit 639,000 in 2008, but housing outcomes have improved dramatically in the past few decades, in part through government programs
- Troublesome issues:
 - Concentration in the mortgage sector
 - Banco Estado, a state-owned bank that focuses on lower income segments, is responsible for 25 percent of the market.
 - 25% of its loans are nonperforming *SOMETHING TO INVESTIGATE*
 - Explosion of debt-financed mortgage lending by banks
 - “Non-EMC” loans (i.e., regular collateralized home loans) increased from 12% of the market in 2000 to 69% in 2008.
 - Propelled by banks’ issuance of long-term bonds & drop in interest rates.
 - These loans, targeted to high income borrowers, are based on liberal lending practices (e.g. can have 100% LTV, higher debt-to-income ratio).



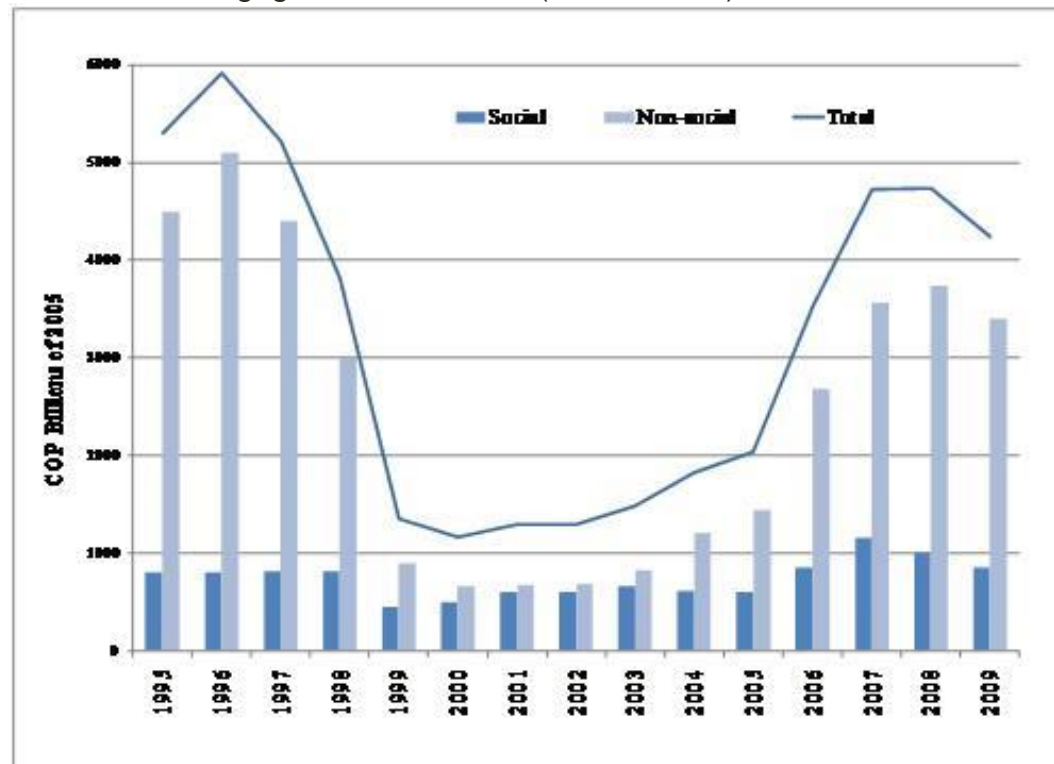
Colombia

- Substantial housing deficit (36.4%)
- Long history of substantial government involvement in housing and housing finance
 - 1970s CAVs (housing savings corporations)
 - Assets -- mortgage loans; Liabilities -- UPAC (inflation-adjusted unit)
 - FAVI, a fund at central bank, transformed CAV deposits into longer-term UPAC loans, alleviating CAVs' maturity mismatch
 - CAVs had a special advantage, but were highly pro-cyclical and eventually ran into liquidity problems. Modifications made to keep CAVs afloat (e.g., adding interest component to UPAC), but in early 90s FAVI (and with it CAVs' advantage) eliminated.
 - 1997/98
 - CAVs still major players, but without advantage.
 - When interest rates spiked during crisis, to ease homeowners' burden the govt removed the interest rate component of UPAC.
 - Lowered mortgage payments, but the rewriting of contract led to major losses at banks, who then cut credit.
 - Crisis ensued, and govt finally moved liabilities onto its books.



Sharp contraction in Colombian mortgage market following 1997/98 crisis

Colombian Mortgage Disbursements (1995 – 2009)



Source: Figure 2 in Arbelaez, Camacho, and Fajardo (2010), using data from Financial Superintendence and Cuellar (2006).



Colombia

- Hofstetter, Tovar, and Urrutia (2010) and Arbelaez, Camacho, and Fajardo (2010) investigate the government's latest attempts to spur housing activity.
 - HTU focuses on the 2009 mortgage interest rate subsidy for new homes.
 - Original goal seemed to be countercyclical economic policy, but subsidy has since been renewed.
 - Find that the subsidy boosted mortgage loans (by around 38%) but that real interest rates went up 1.09%.
 - Banks captured some (about a third) of the subsidy, consumers benefited a bit, and overall housing demand and house prices increased.
 - Using Quality of Life surveys, ACF find while that subsidies and guaranteed loans play only a modest role in increase the use of mortgages, subsidies appear to improve the quality of dwelling and quality of life.
- Both sets of authors think the programs were helpful, but...
 - HTU question whether a government that persistently runs a budget deficit should be footing the bill for such stimulus.
 - ACF find that the social housing subsidy fails to facilitate access to credit and has insufficient coverage among the poorest segments of the population (in part because they lack complementary funding, which owes in turn to insufficient collateral and income).



Summary

- From the global perspective, housing finance systems are small in LAC. Areas that could be improved: legal rights for borrowers and lenders, credit information systems, and the costs and difficulty of registering property.
- In the LAC region, no recent bust, but many housing outcomes are substandard.
 - Some of this owes to poverty and informality. But the global analysis suggests areas for improvement.
- An important question for future work: How are public sector banks controlling credit risks?
 - “Public sector banks in the region are large and dominant players in mortgage markets, and supervisors might have a hard time imposing regulations on such institutions.”
- Question: Can the governments in LAC do a better job *enabling* housing and housing finance markets rather than *directly providing* housing and housing finance?



Thank you.

Housing Finance in LAC