



# Global Trends in Housing Finance

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for  
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World Congress  
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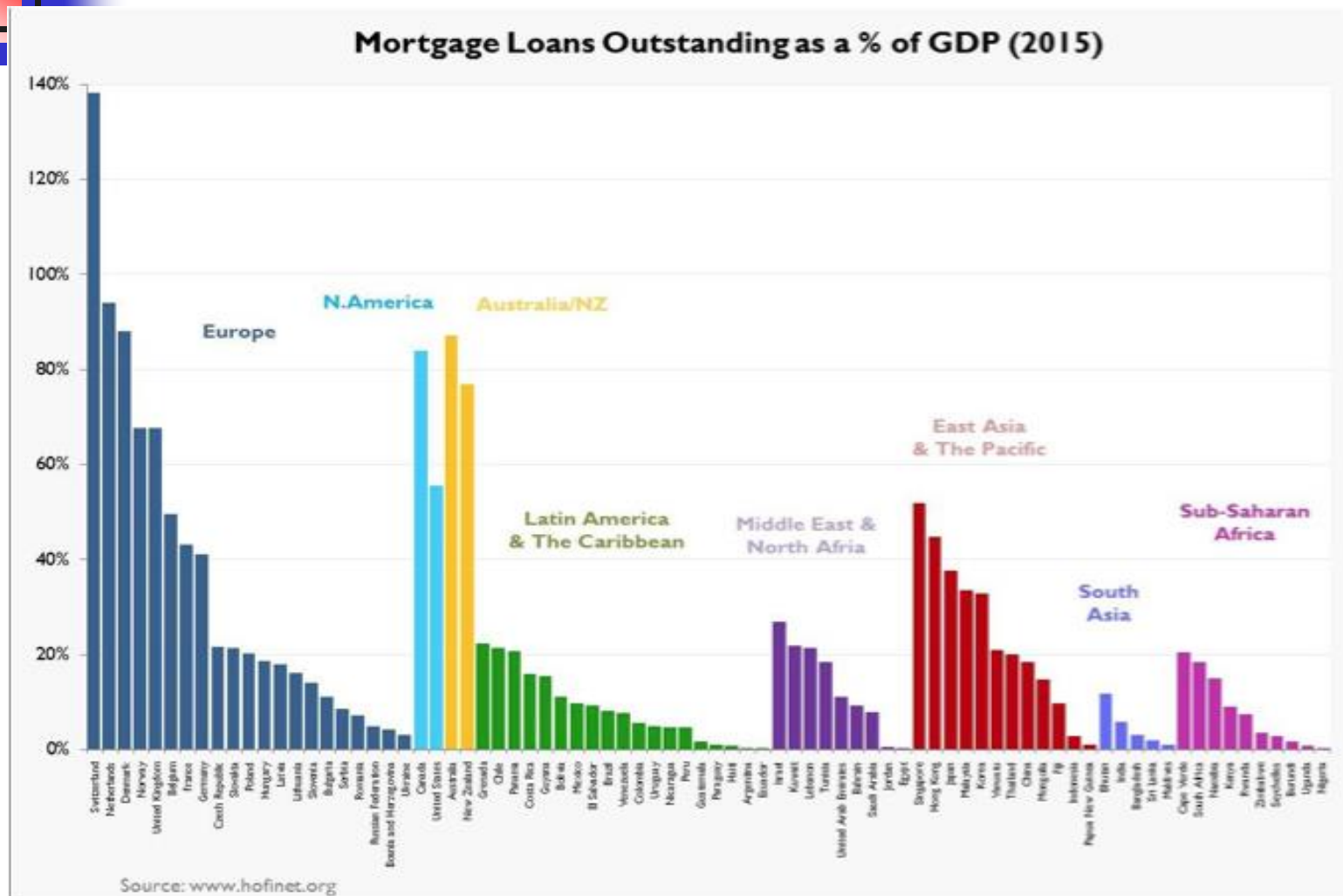


# Outline

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- Major Trends in Housing Finance
  - Developed economies
  - Emerging markets
- Why Are Emerging Market Housing Finance Systems So Small?
  - Obstacles to expansion of housing finance
  - Approaches to increasing housing lending

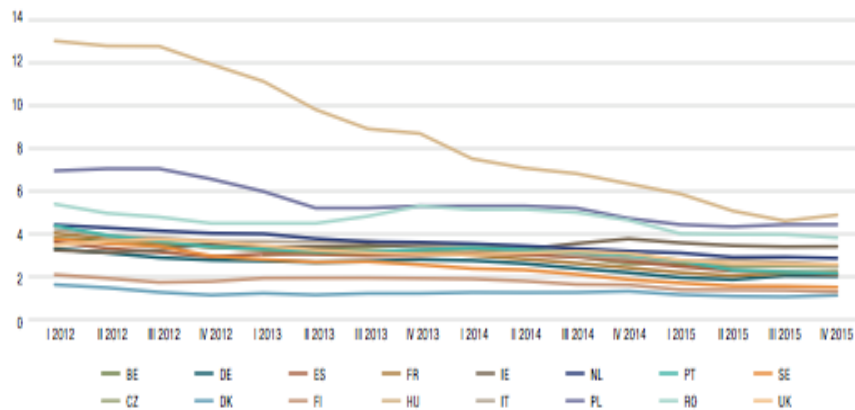
# Global Mortgage Debt



Source: HoFiNet

# Developed Country Trends: Monetary Policy and House Prices

CHART 21 ► Mortgage rates in the EU



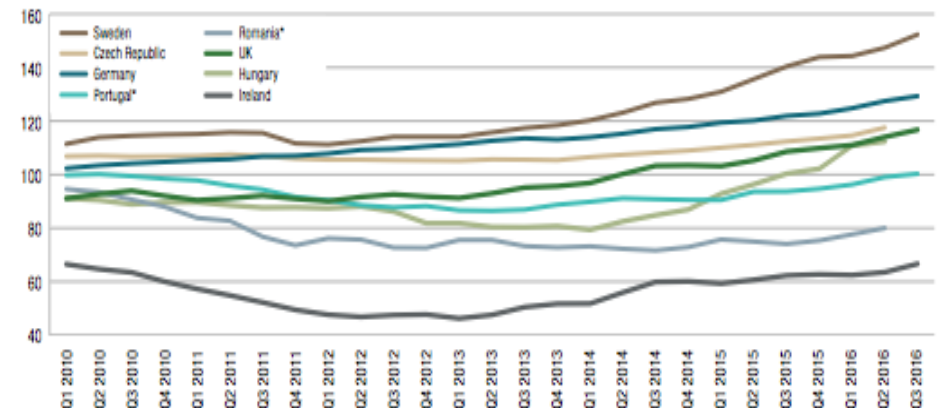
Source: European Mortgage Federation

FRED — 30-Year Fixed Rate Mortgage Average in the United States®



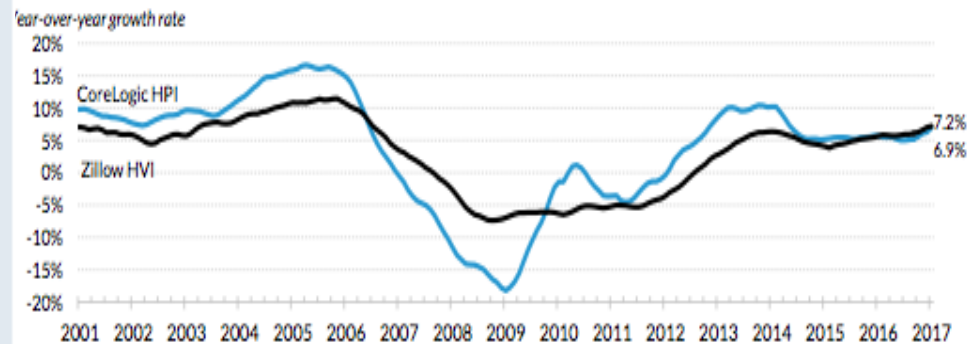
Source: Federal Reserve Bank of St. Louis

Chart 2c ► Countries where house prices have risen by at least 5% y-o-y (base year 2007)



## National Year-Over-Year HPI Growth

While the strong year-over-year house price growth from 2012 to 2013 has slowed somewhat, home price appreciation remains robust as measured by the repeat sales index from CoreLogic and hedonic index from Zillow. We will continue to closely monitor how rising mortgage rates impact this strong growth.



Sources: CoreLogic, Zillow, and Urban Institute.

January 5, 2017

# Developed Country Trends: Monetary Policy and House Prices

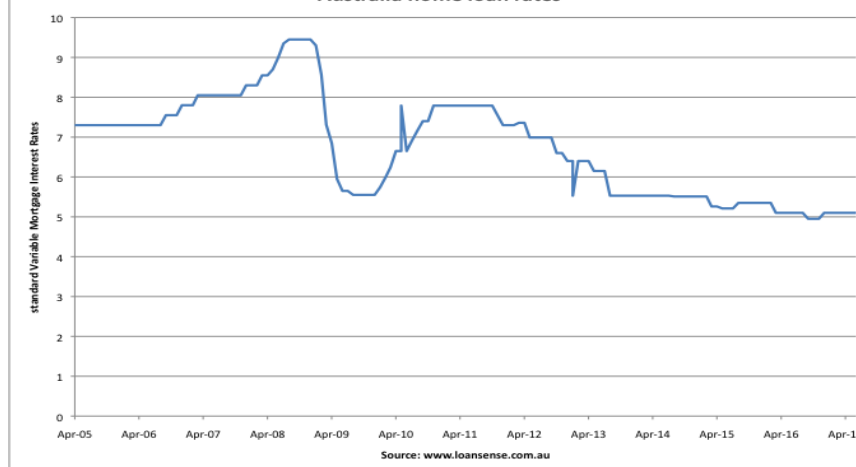
Historical Discounted 5-year Mortgage Rates

From 2006 - Today

Source: Ratehub.ca



Australia home loan rates



House Price Change, Annual (%)



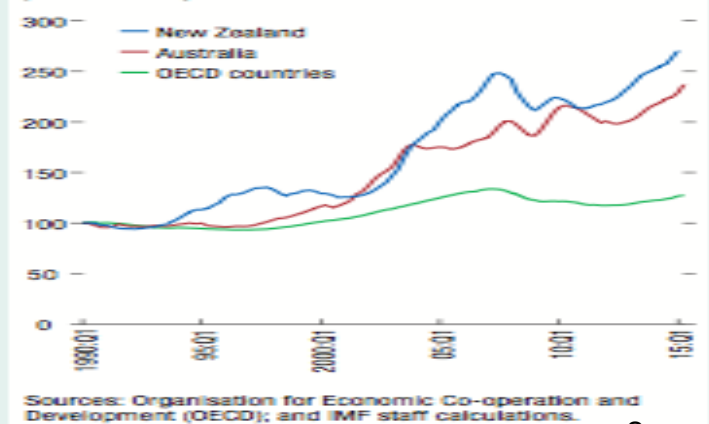
■ Nominal

■ Real

Source: Global Property Guide

Source: Statistics Canada

Figure 1.1.1. Real House Prices (1990 = 100)



Sources: Organisation for Economic Co-operation and Development (OECD); and IMF staff calculations.

Source: IMF



# Developed Country Regulatory Trends

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## ■ Canada

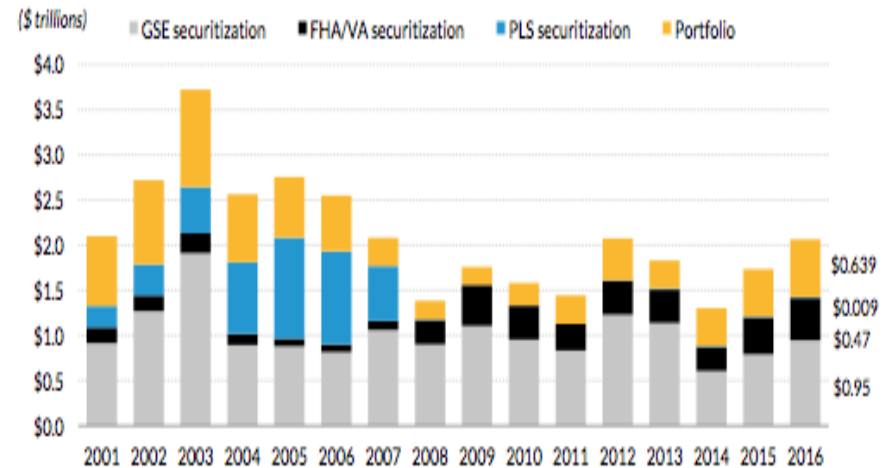
- Max term reduced from 40 to 25 years
- Minimum 5 percent downpayment for purchase
- Minimum 20 percent downpayment for refinance
- Max mortgage debt service ratio 39%; total debt 44%
- Govt. insurance limits: by house price and total CMHC in force

## ■ Europe Mortgage Credit Directive

- Enhanced disclosure (standardized information sheet)
- Ability to pay assessment
- Right of early repayment
- Right to convert foreign currency mortgage
- Most European countries have max 80% LTV but few have DTI limits (Lunde and Whitehead 2016)

# US Regulatory Trends

- Government Still Dominates Mortgage Funding (70%+)
  - No progress on restructuring GSEs after govt. takeover in 2008
- Partial Regulatory Tightening
  - Qualified mortgage max 43% DTI
  - Limits on product features
  - But no limits on LTV
    - 97% LTV loans still common



Sources: Inside Mortgage Finance and Urban Institute. Last updated February 2017.

## Qualified Mortgage (QM) at a Glance

### Limits on loan features

- No negative amortization or interest-only periods
- No balloon payments (except for certain portfolio loans made by smaller lenders in rural or underserved areas)
- The loan's term may not exceed 30 years

### Points and fees cap

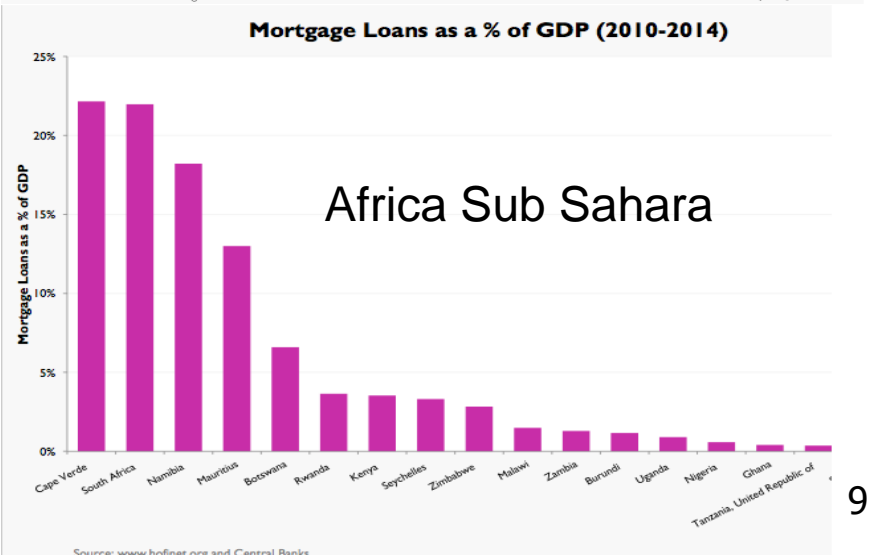
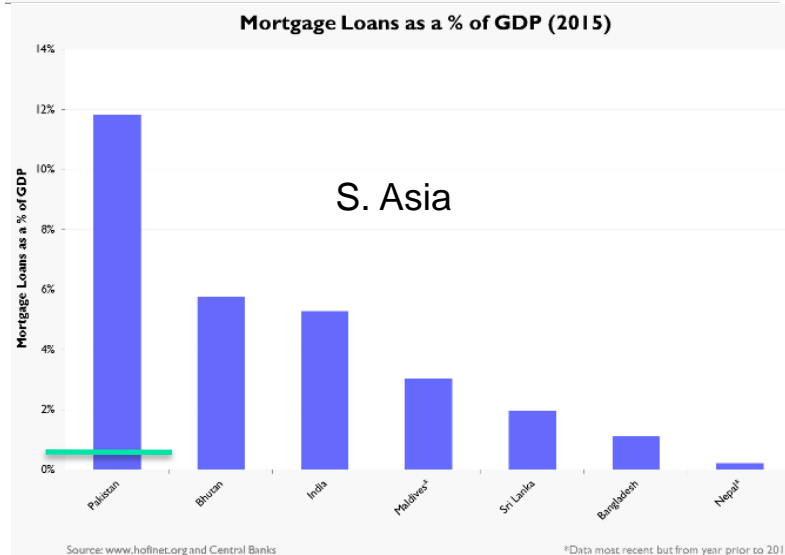
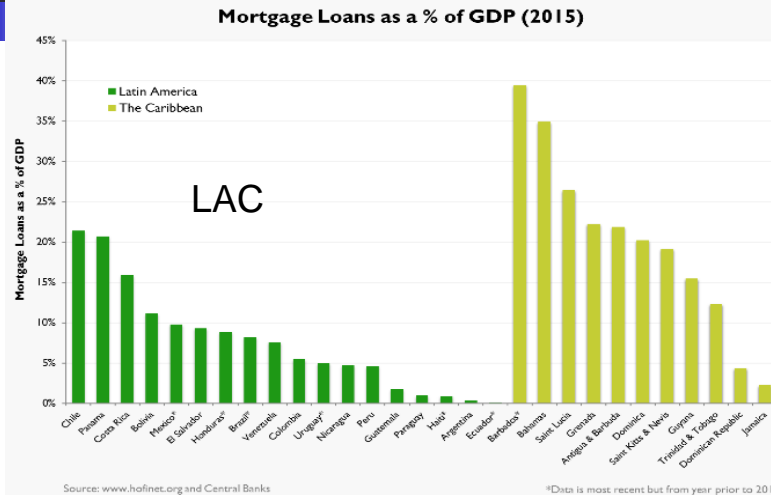
- Generally 3% of the total loan amount
- Up to two additional bona-fide discount points allowed, depending on the rate
- Higher caps allowed for loans less than \$100,000

### Relevant underwriting requirements

- Use maximum rate in first five years after first payment, with full amortization
- Consider and verify income or assets
- Consider and verify current debt obligations, including alimony and child support if applicable
- Monthly debt-to-income (DTI) ratio cannot exceed 43%

# Emerging Mortgage Markets

Source: HoFiNert







# Why Are Emerging Country Mortgage Markets So Small?

## Does Your Market Have . . .

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- Macroeconomic Stability
  - Relatively low and stable inflation and interest rates
- Legal and Regulatory Support for Mortgage Lending
  - Land and lien registration; ability to foreclose
- Affordability, Formal Income And Credit Assessment
  - House price to income <5; high percentage in formal employment; credit bureaus and ability to document income
- Ability to Assess Collateral Value
  - Professional appraisers; Transactions data; secondary housing market
- Long term funding – government bond yield curve
- Competitive financial markets
  - Do non-government lenders have a significant market share?

# Macroeconomics: Nominal Interest Rates

Philippines

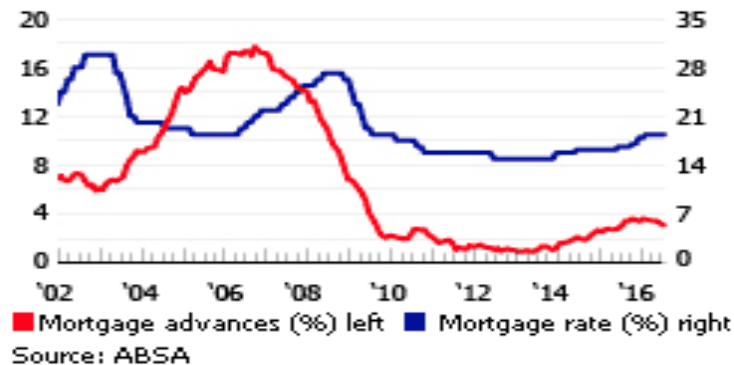
## HOUSING LOAN

Tenor	Interest Rates
Yearly	5.50%
2-3 years	6.00%
4-5 years	6.88%
6-10 years	8.00%
11-15 years	9.50%
16-20 years	11.50%

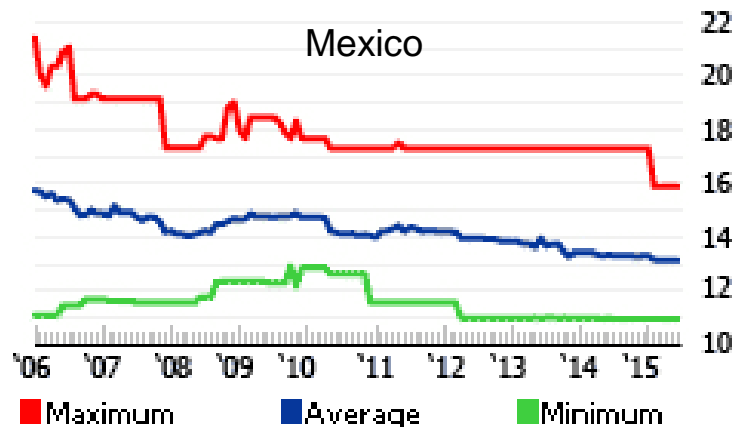
## PROPERTY EQUITY LOAN

Tenor	Interest Rates
Yearly	6.50%
2-3 years	7.00%
4-5 years	7.88%
6-10 years	9.00%
11-15 years	10.50%
16-20 years	12.50%

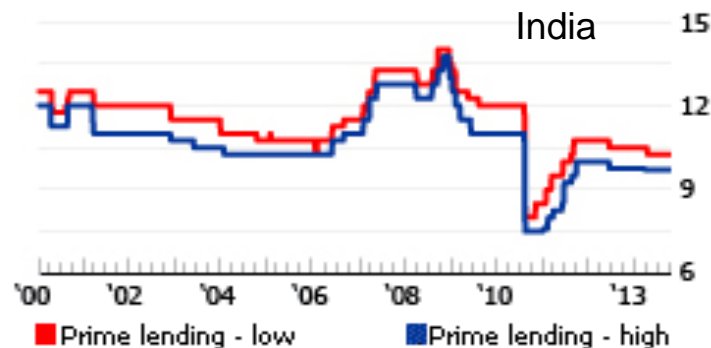
## Mortgage Advances Growth & Interests Rates



## Banks & Sofoles Mortgage Rate (%)



## Prime Lending Rate (%)





# Necessary Legal Infrastructure

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- Mortgage finance depends on enforceable liens on property pledged as collateral
  - Differentiates mortgage from unsecured credit
- Is real property registered?
  - Who owns the property?
  - How long does it take and at what cost?
- Are liens registered?
  - Are there existing liens on the property?
  - How long to register and at what cost?
- Can mortgage liens be enforced?
  - How long does it take and at what cost?

# Property Registration

## World Bank doing Business 2015 Registering Property

This topic examines the steps, time and cost involved in registering property, assuming a standardized case of an entrepreneur who wants to purchase land and a building that is already registered and free of title dispute.

Economy ▲	Registering Property rank	Registering Property DTF	Procedures (number)X	Time (days)	Cost (% of property value)	Quality of the land administration index (0-30)
East Asia & Pacific		56.61	5.3	74.2	4.4	13
Europe & Central Asia		75.32	5.4	22	2.6	19.4
Latin America & Caribbean		54.86	7	63	6.1	11.5
Middle East & North Africa		61.43	5.7	29.6	5.6	12.5
OECD high income		76.73	4.7	21.8	4.2	22.7
South Asia		47.83	6.4	97.6	7.2	7.6
Sub-Saharan Africa		50.98	6.2	57.5	8.3	8.4
<b>Select Countries</b>						
Brazil	130	52.48	13.6	31.7	3.1	13.6
Colombia	54	72.85	6	16	2	16
Mexico	106	58.74	6.8	63.7	5.1	14.3
Canada	42	75.09	6	16.5	3.3	21.5
China	43	75.02	4	19.5	3.4	17
Denmark	9	89.88	3	4	0.6	24.5
India	138	50.22	7	47	7.5	7
Indonesia	131	52.45	5	27.4	10.8	8.3
Nigeria	185	25.18	12	69.6	18.6	6.3
New Zealand	1	94.46	2	1	0.1	26
Philippines	110	57.52	9	35	4.3	12.5
South Africa	101	60.79	7	23	6.4	14
Thailand	57	71.33	3	3	6.3	13.5
United States	34	76.85	4.4	15.2	2.4	17.6

Result: 70% of land in emerging markets unregistered

Source: World Bank Doing Business 2015 13

# Enforcing Contracts

## World Bank Doing Business Enforcing Contracts

The enforcing contracts indicator measures the time and cost for resolving a commercial dispute through a local first-instance court.

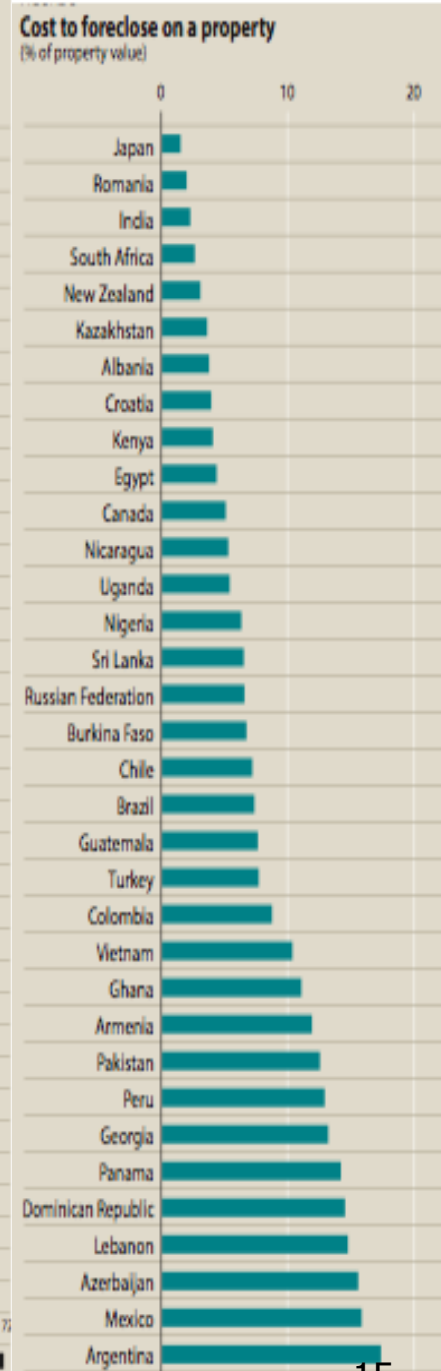
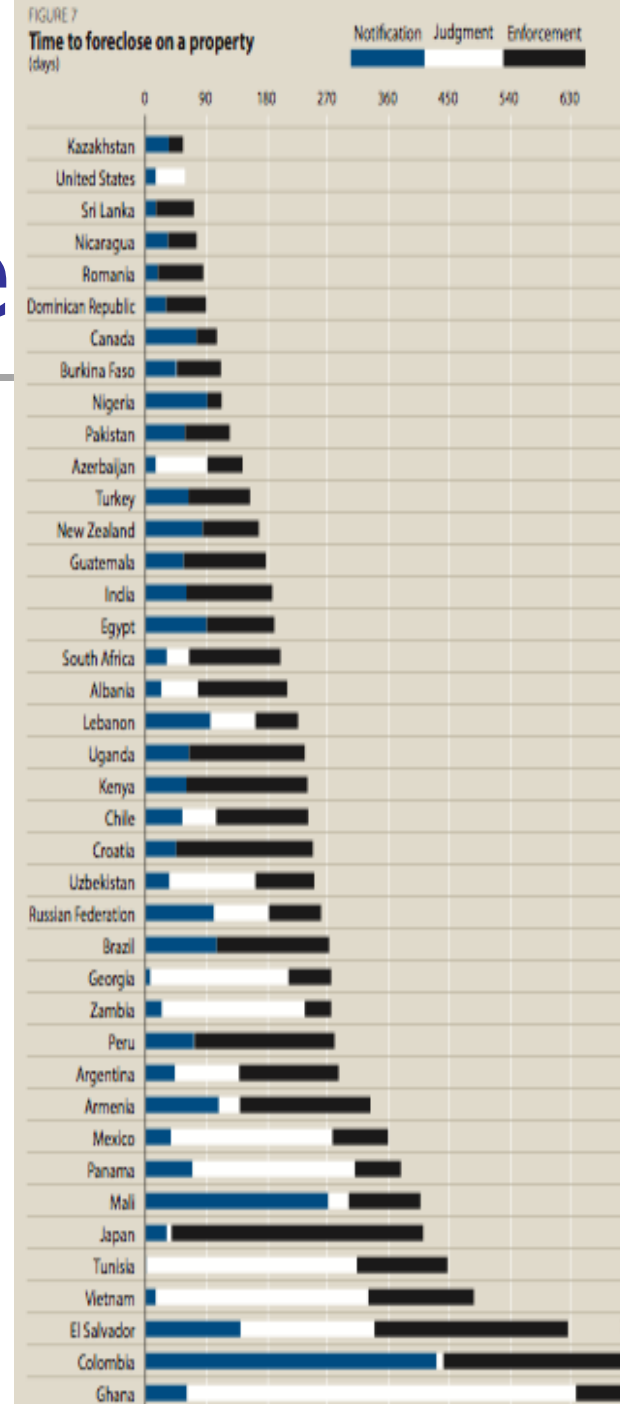
Country/Region	Enforcing Contracts rank	Enforcing Contracts DTF	Time (days)X	Cost (% of claim)	Quality of judicial processes index (0-18)
East Asia & Pacific ..		52.72	553.8	48.8	7.6
Europe & Central Asia ..		66.43	480.7	26.2	10.5
Latin America & Caribbean ..		54.18	736.9	30.8	8.4
Middle East & North Africa ..		54.88	653.3	24.7	6.5
OECD high income ..		67.86	538.3	21.1	11
South Asia ..		42.83	1,076.90	30.5	6.5
Sub-Saharan Africa ..		47.67	653.1	44.9	6.4
Select Countries					
Brazil	45	66.48	731	20.7	13.1
Colombia	180	29.66	1,288	45.8	6.5
Mexico	41	67.39	389	30.9	10.6
Canada	49	65.49	570	22.3	10.5
China	7	77.56	452.8	16.2	14.1
Denmark	37	68.56	410	23.3	10
India	178	32.41	1,420	39.6	7.5
Indonesia	170	35.37	471	115.7	6.3
Nigeria	143	48.59	509.8	57.7	7.7
New Zealand	15	74.25	216	27.2	11
Philippines	139	49.24	842	31	7.5
South Africa	119	53.18	600	33.2	6.5
Thailand	57	62.69	440	19.5	6.5
United States	21	72.61	420	30.5	13.8

Source: World Bank Doing Business 2015

# Mortgage Foreclosure

- Many emerging markets have high cost and time to foreclose

Source: World Bank: Financing Homes: Comparing Regulation in 42 Countries 2008



# Obtaining Credit

## World Bank Getting Credit

the strength of credit reporting systems and the effectiveness of collateral and bankruptcy laws in facilitating lending

country/Region	Getting Credit rank	Getting Credit DTF	Strength of legal rights index (0-12)	Depth of credit information index (0-8)	Credit registry coverage (% of adults)	Credit bureau coverage (% of adults)
East Asia & Pacific	..	50.6	6.2	3.9	14	21.9
Europe & Central Asia	..	62.2	6.2	6.3	23.8	37.4
Latin America & Caribbean	..	50	5.3	4.7	12.3	40.5
Middle East & North Africa	..	26.75	1.3	4.1	10.8	12
OECD high income	..	62.19	6	6.5	11.9	66.7
South Asia	..	41.25	4.9	3.4	3	12.7
Sub-Saharan Africa	..	35.85	4.9	2.3	5.8	7.1
Select Countries						
Brazil	97	45	2	7	55.1	79
Colombia	2	95	12	7	0	88.7
Mexico	5	90	10	8	0	100
Canada	7	85	9	8	0	100
China	79	50	4	6	89.5	0
Denmark	28	70	8	6	0	7.7
India	36	65	6	..	7	0
Indonesia	71	50	4	..	6	46.4
Nigeria	52	60	6	..	6	0.1
New Zealand	1	100	12	8	0	100
Philippines	105	40	3	..	5	0
South Africa	59	60	5	7	0	62
Thailand	90	45	3	6	0	52.7
United States	2	95	11	8	0	100

Source: World Bank Doing Business 2015



# Long Term Funding and Lender Risk

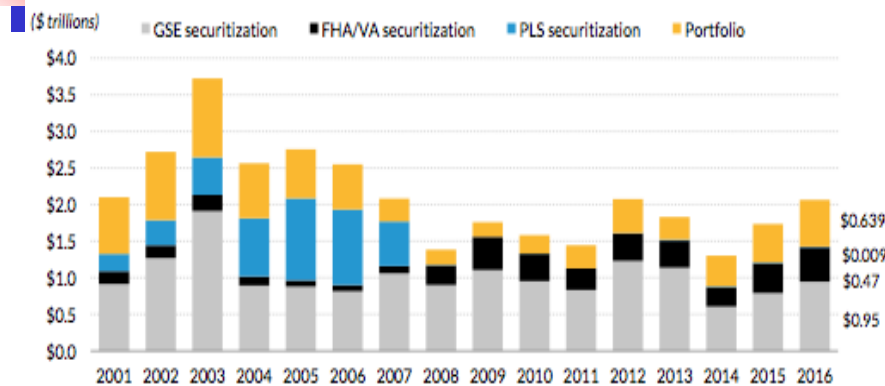
## Retail Deposits (short term) Still Fund the Vast Majority of Mortgages

- Only Denmark and the US primarily fund through the capital markets (covered bonds; securitization)
  - Residential securitization mainly in countries with guarantees
- Covered bonds fund 27% of European mortgages (>€2 trillion in 26 out of 28 countries)
  - Simpler instrument than mortgage-backed securities but needs strong legal/regulatory system
  - Legislation in numerous emerging markets but little issuance
    - Chile, Korea, Turkey exceptions
    - More expensive funding; lack of liquidity
  - Issue with regulators: deposit fund subordination leads to limits on bank covered bond issuance (e.g., 4% in Canada)<sup>17</sup>



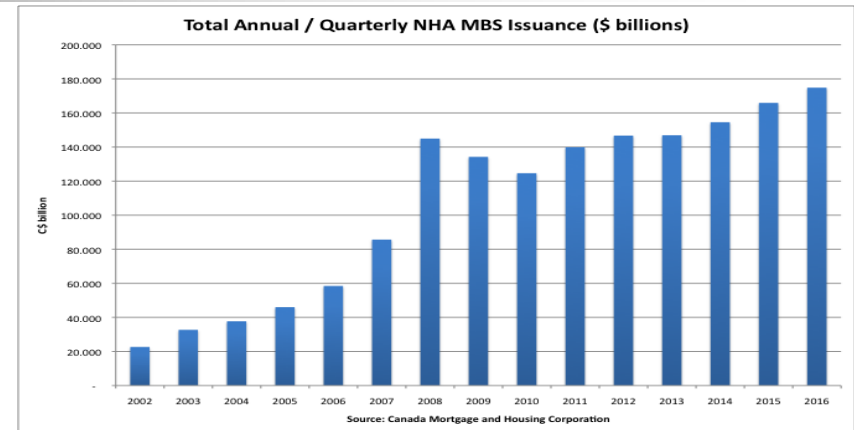
# International Securitization/Covered Bonds Issuance

US

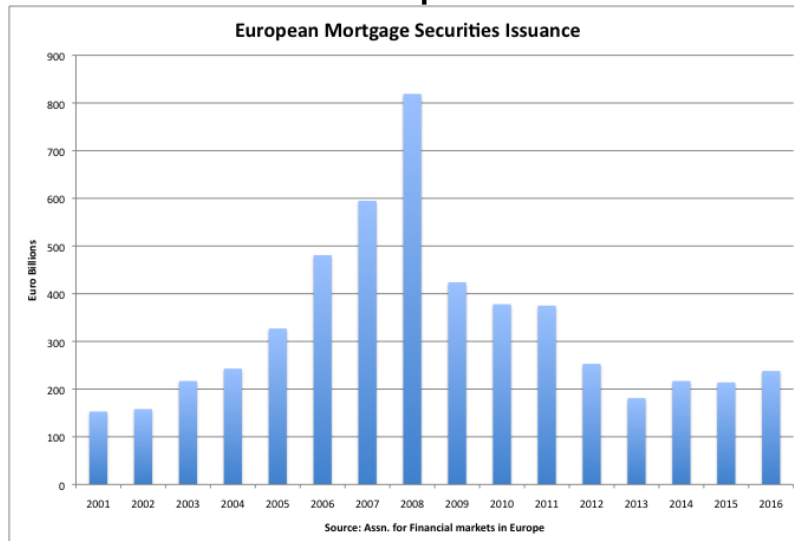


Sources: Inside Mortgage Finance and Urban Institute. Last updated February 2017.

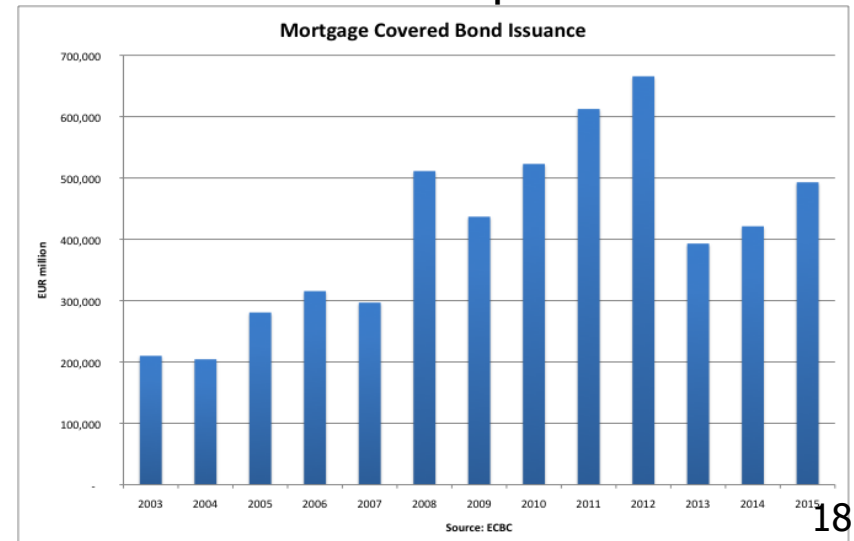
Canada



Europe

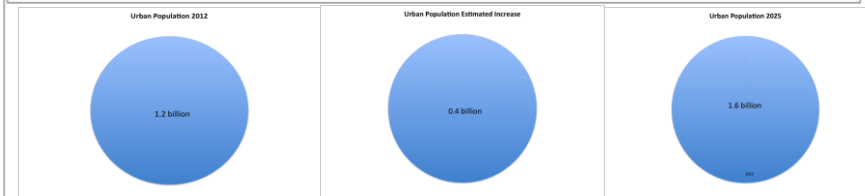
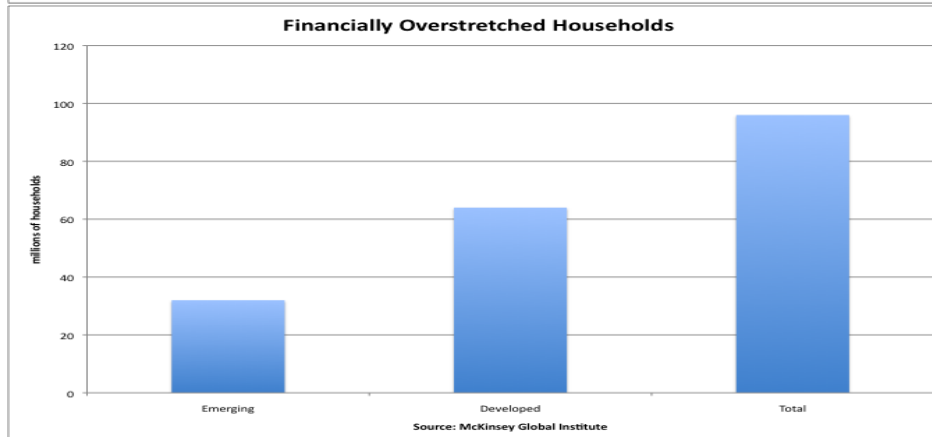
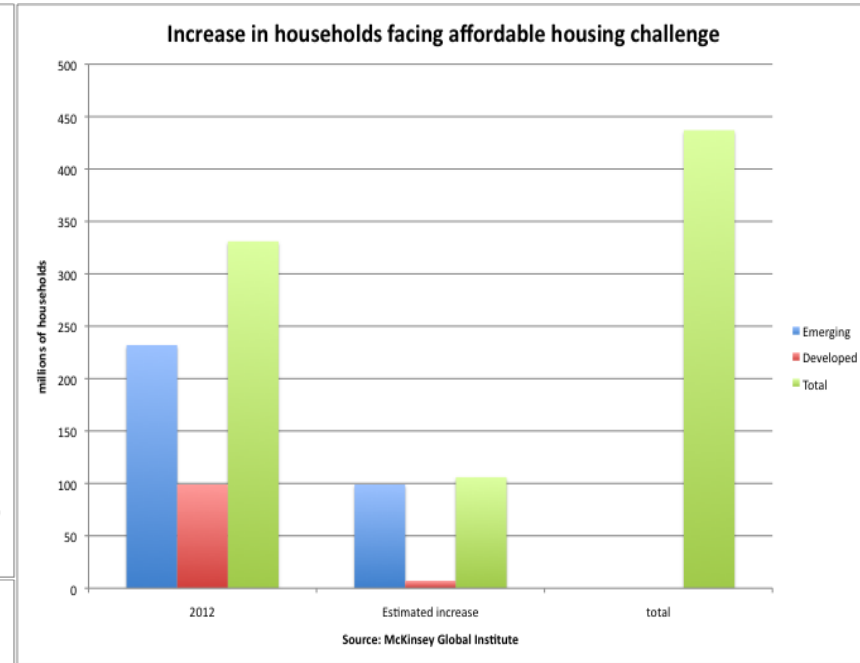
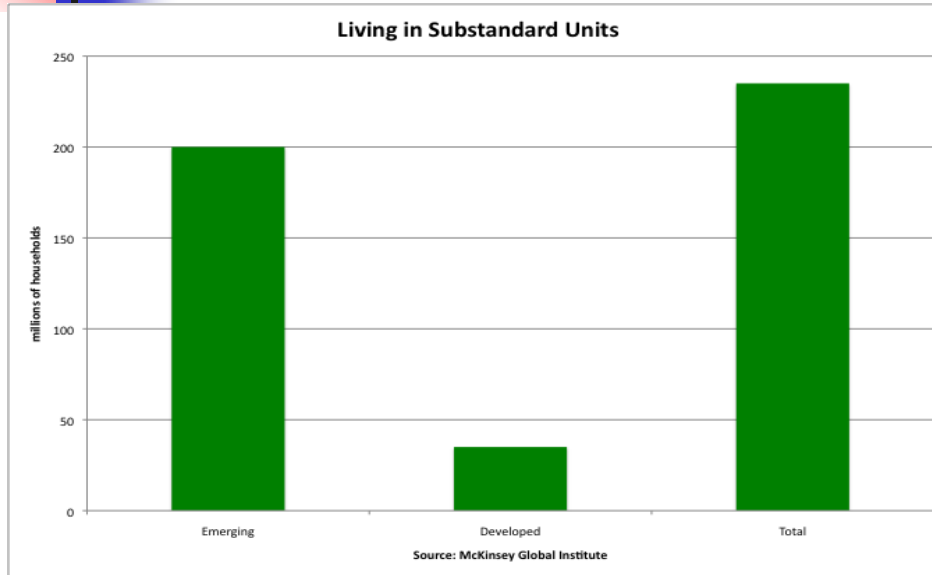


Europe



# Affordable Housing Gap

By 2025 the affordable housing gap could affect 440 million households or 1/3 of the global urban population



# Affordability Drivers

- Affordability pressures will increase as poverty rates continue to fall and urban house prices rise
- Self-employment and informal work present challenges in providing housing finance

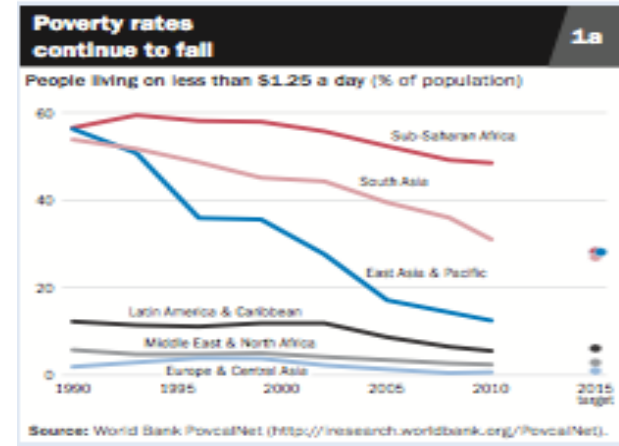
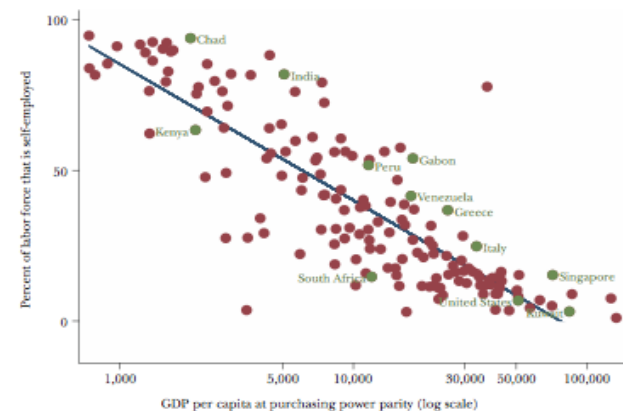


Figure 4  
Self-Employment and GDP per Capita in 2013



Source: World Development Indicators. See online Appendix for countries.



# Approaches to Affordability

## ■ How Can Lenders Reach “Down Market”?

- Alternative mortgage instruments to improve timing of payments, deal with informal incomes
  - Flexible mortgages; partial graduated payment
  - Negative experience with FX mortgages in Central Europe
- Savings for housing schemes for upfront payments
- Alternative collateral (S. Africa)
- Credit risk insurance (India)
- Rental housing finance (legal, tax cultural obstacles)
- Microfinance for housing (home improvement)
- Alternative credit scoring systems (e.g., social media and mobile phone usage data) see <http://tala.co>

# Data From a Smartphone

