Housing Finance in the Aftermath of the Crisis

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Outline of Presentation

- Causes of the US Mortgage Market Crisis
- Policy Actions Taken in Response to the Crisis
- International Comparisons: What have other countries done?
- What Has Changed Since the Onset of the Crisis?

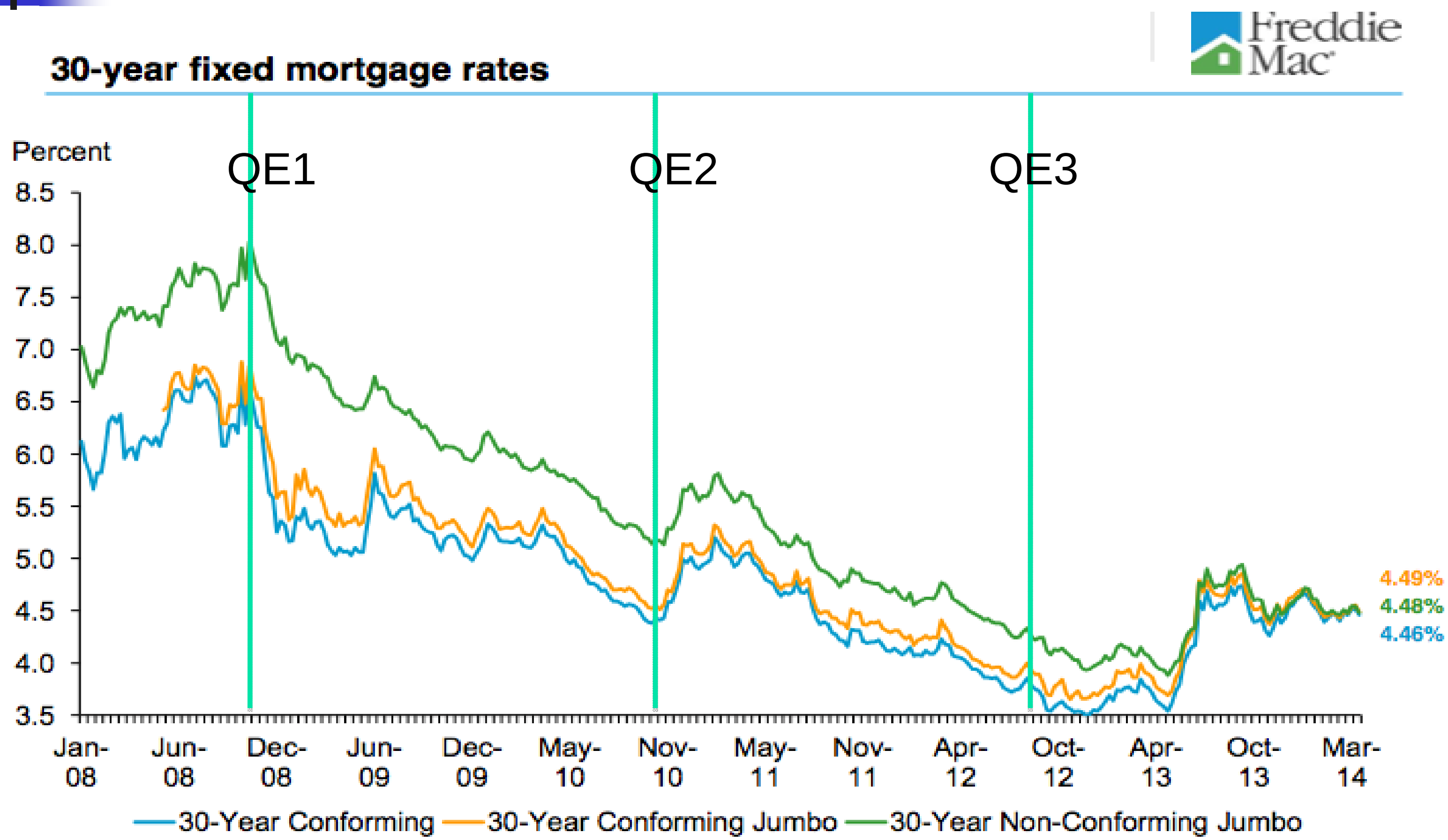
Pre-Crisis Structure of US Housing Finance System

- Low interest rates; accommodative monetary policy
- Dominance by government-backed institutions
- Aggressive lending and product design
  - Volume orientation; incentives and compensation
  - Lax underwriting, sub-prime and Alt-A
  - "Affordability products"
- Homeownership policy; tax system, housing goals, CRA
- Dominance of long-term fixed rate mortgage and dependence on securitization
- Extreme leverage: GSEs, SIVs, non-bank lenders

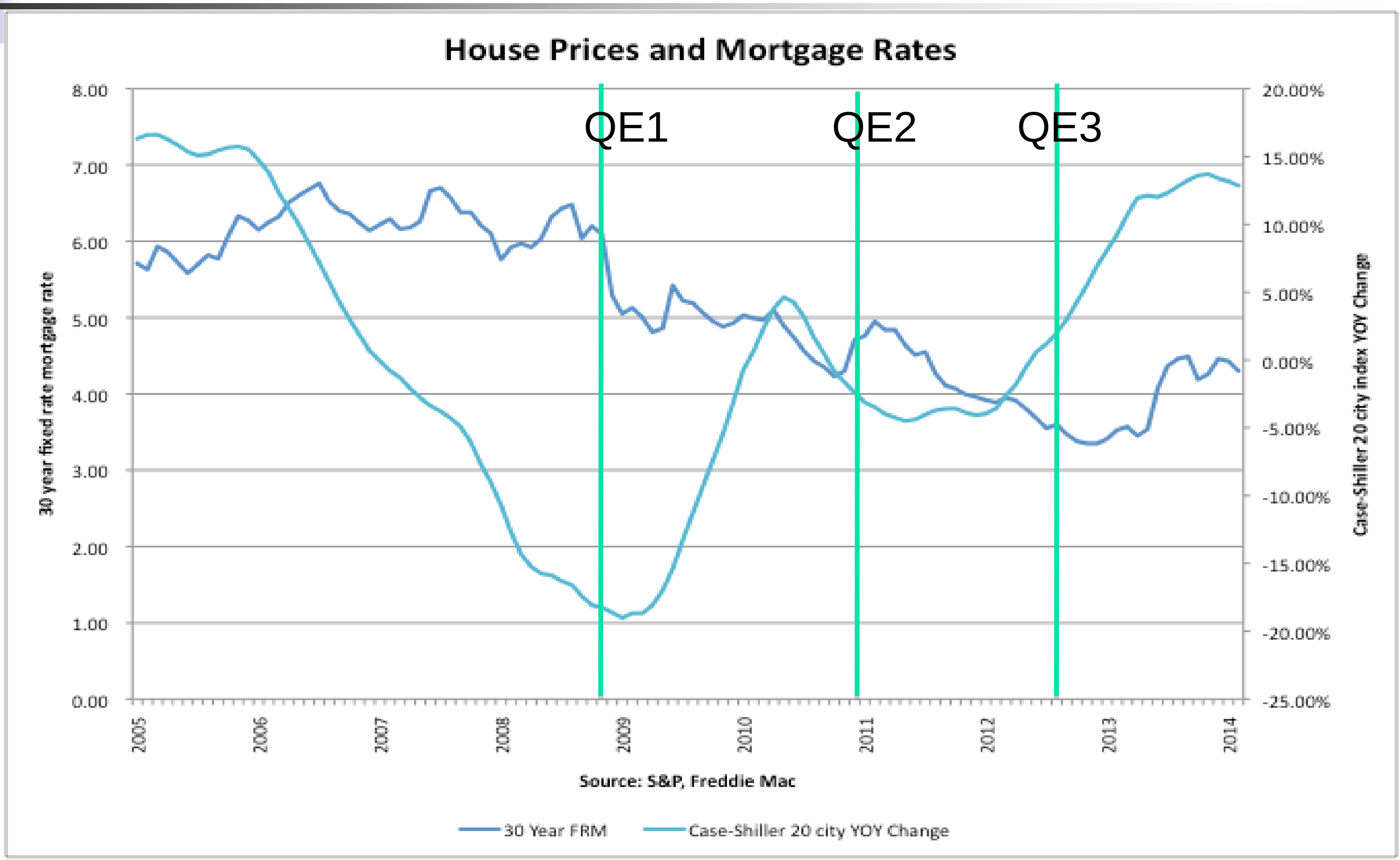
Causes of the Crisis: FCIC

- Majority Report: <u>Regulatory and supervision</u> failure allowing deteriorating underwriting and risky products;
- Dissent #1: <u>Structural</u> -- Global credit and housing bubble; misaligned incentives, non-traditional mortgages, excessive leverage and liquidity risk, flawed credit ratings, concentration of correlated house price risk; spread by securitization
- Dissent #2: <u>Government</u> <u>homeownership policy</u>: GSE goals, CRA

Monetary Policy Response



House Price Recovery



Monetary Policy Effectiveness

- Evidence that first round of QE effective in lowering long term rates
  - Encourage refinance; boost to house prices; wealth effect (though much less than pre-crisis)
- Far less if any impact in later rounds
  - Rate rise in May 2013 reduces refinance
  - House prices rising in 2012
- Risks of policy
  - Lock-in effect of low rate; less trade-up, inventory for sale?
  - Extension risk for MBS holders (what is the new duration)?

Legislation and Regulation Response (Dodd-Frank)

- “Qualified Mortgage”
  - Minimum underwriting standards (ability to pay and documentation)
  - protects lenders from lawsuits/regulatory action
- Credit risk retention: 5% for securitizers with exemption for low risk “Qualified Residential Mortgage”
- Constraints on originator compensation (can’t be based on terms of loan other than amount)
- Appraiser independence (separation from loan production)
- Limits on prepayment penalties
- Establishes Consumer Financial Protection Bureau
  - Responsibility for conduct of business; regulation of non-bank lenders
- Office of Credit Rating regulation (SEC)

Underwriting and Loan Features

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%

www.qualifiedmortgage.org

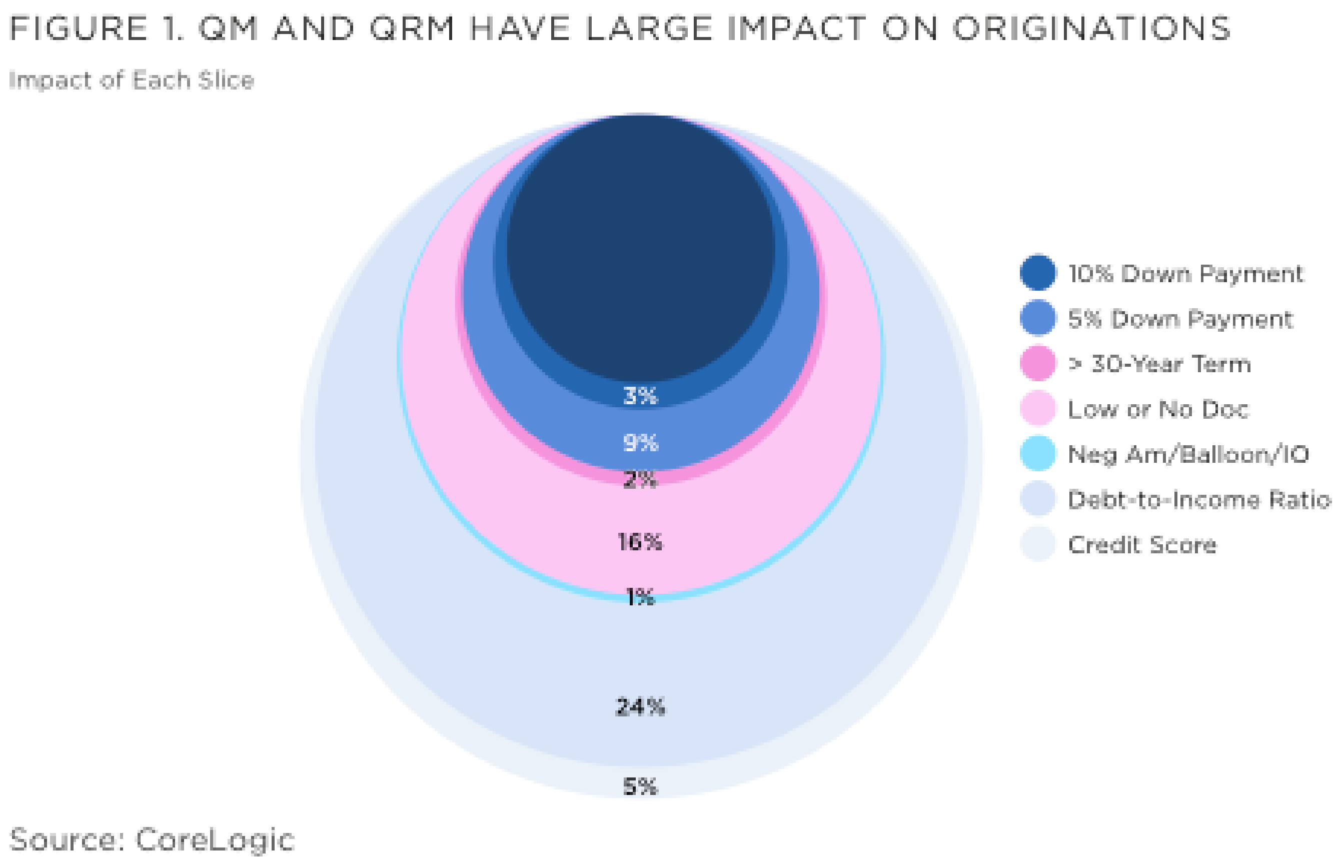
- Protections: Safe Harbor and Rebuttable Presumption

QRM: “Skin in the Game”

Dodd-Frank requires mortgage sellers to retain 5% of the risk (up to regulators to define)

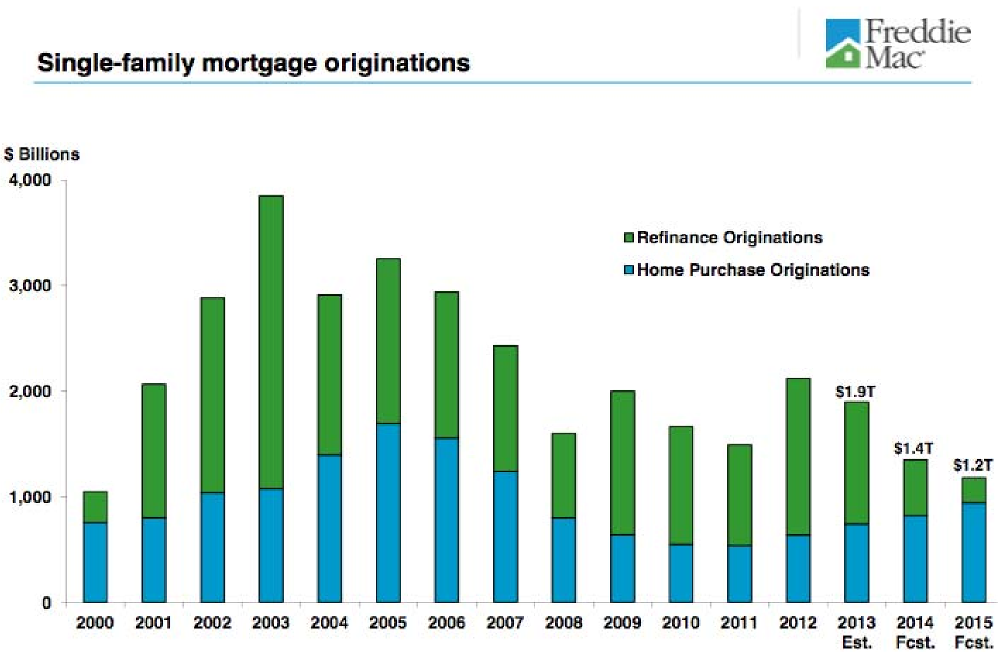
- 3 years later and regulators haven’t defined
  - (e.g., a vertical or horizontal slice)
- Recent proposals would exempt vast share of market (i.e., QM qualified loans; loans purchased by GSEs)
  - Although regulators have floated an alternative definition that would require 10 percent downpayment most commentators believe it will not be enacted
  - Which means the incentive alignment required by Dodd-Frank will not take effect
  - And the exemption further cements the dominant role of the GSEs

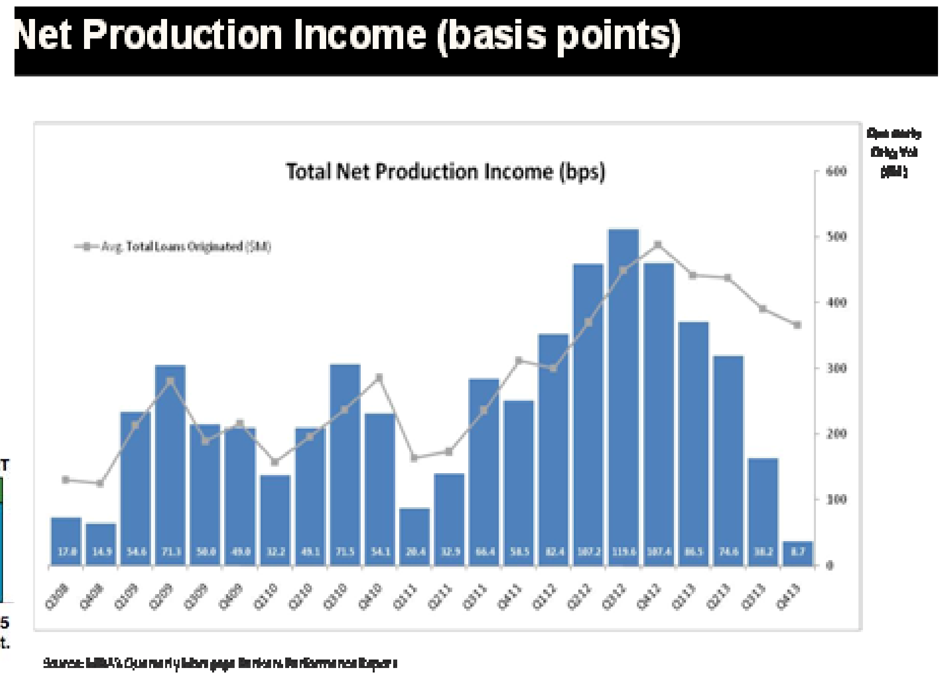
Impact of QM



QM has also had a major impact on lender costs and profitability

Impact of QM





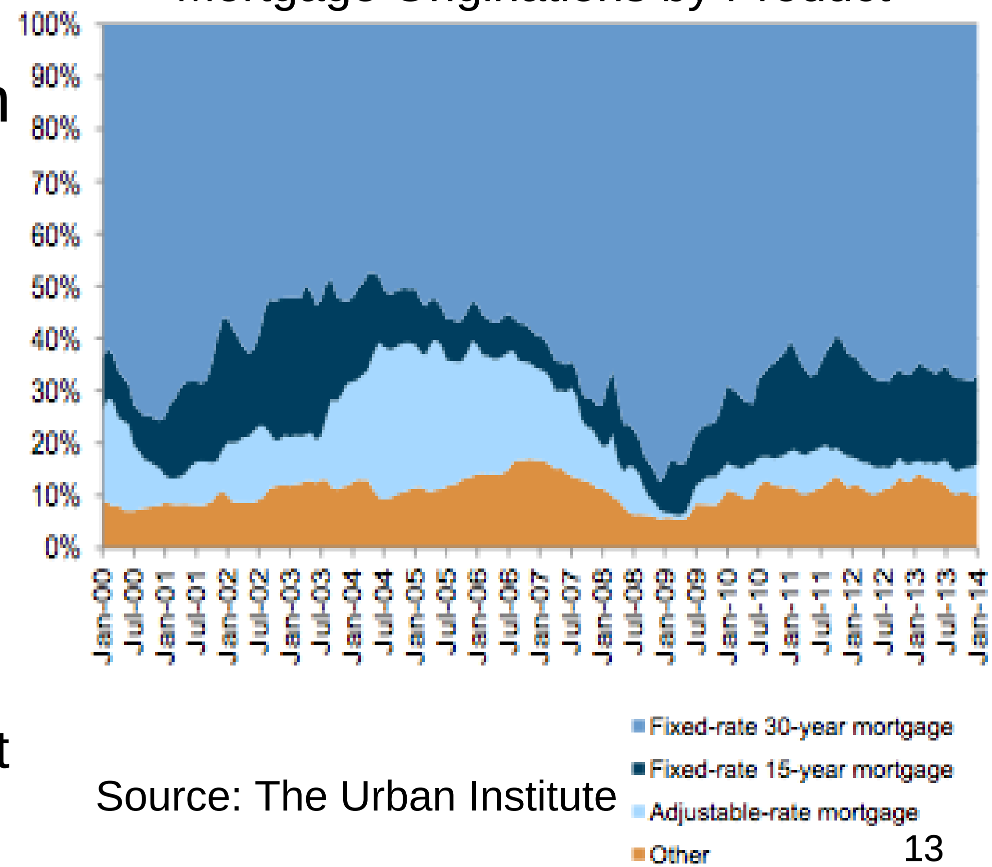
Source: Freddie Mac

Source: MBA

Changing the Product Menu

- The long term (15-30 year) fixed rate prepayable mortgage (FRM) has been the dominant instrument since the Depression
- Govt. policy has long favored the FRM
  - Required until 1981
  - Favored by GSEs
- QM will entrench the FRM
  - ARM qualification at highest rate in first 5 years

Mortgage Originations by Product



Source: The Urban Institute

What's So Special About the FRM?

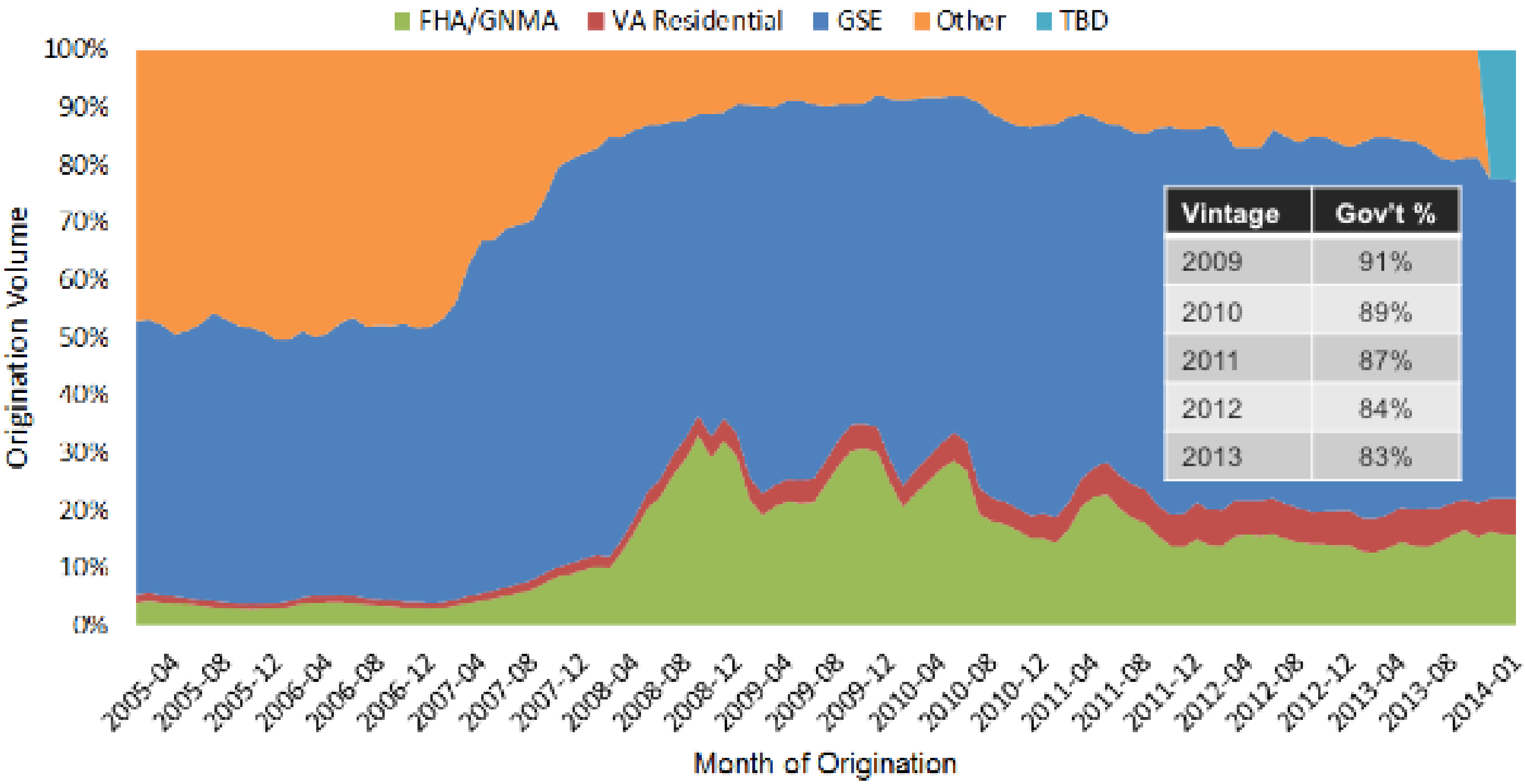
- Benefits to the consumer
  - Payment stability – avoidance of interest rate risk
  - Penalty free refinance
  - Simplicity
- Costs to the investor/lender
  - Interest rate risk – difficult to hedge or match fund
  - Difficult price and manage prepayment risk
  - Generates refinance waves that destabilize market
  - Higher rates for consumer (relative to short term fixed)
  - Lock-in effect with declining rates and house prices
  - Taxpayer risk

Incentive Alignment

- US mortgage lending industry is volume driven
  - Mortgage brokers and loan officers 100% commission
    - Fees a function of loan amount; Regulation only addressed yield spread premium (broker mark up over lender required yield)
  - Lenders sell most mortgages; retain little risk
    - Sellers can no longer book future profits – must amortize
  - Appraisers rely on lenders for repeat business – pressure to “hit the number”
    - Separation from production; No mortgage value
  - Investment banks earn fees on securities sold
  - Rating agencies paid by issuers
    - Greater SEC oversight; new competitors but no change in model

Government Share of the Mortgage Market

Origination by funding source



Source: Black Knight

GSE Conservatorship

- F/F have been funding about 70% of the market
  - Why? Low rates encourage FRM lending; banks rebuilding capital; private label securitization hasn’t recovered
  - No change in regulatory preferences for GSE securities
- The regulator (FHFA) has imposed change
  - Higher guarantee fees (doubled since crisis)
  - Large put backs and lawsuits against sellers
  - Project to consolidate GSE securitization platforms
  - Pilot risk sharing transactions
  - Shrinking retained portfolio
- Results
  - Return to profitability Is this surprising?
  - Fear of put backs creates greater lender caution

GSE Reform

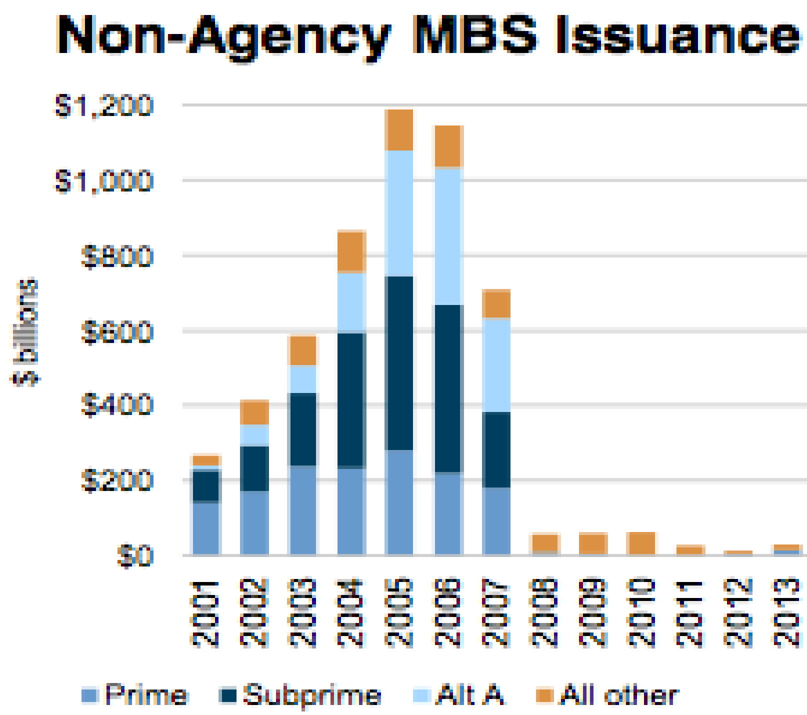
- Johnson-Crapo bill in Senate
  - F/F wind down; Creates new govt. run guarantor/SMM regulator providing catastrophic guarantee; privately funded govt. approved entities guarantee and issue MBS; affordable housing fee
- PATH Act in House
  - Eliminates F/F; No govt. guarantor; creates non-profit market utility for standardized MBS issue
    - FHA/GNMA authorized to expand guarantees if private market seizes up
- Consensus is that GSE reform is dead for 2014

Government Homeownership Policy

- The Mortgage Interest Deduction
  - Deduct interest on loans up to $1 million (and second homes)
- GSE Housing Goals
  - Scaled back but in place
- FHA/VA Mortgage Insurance
  - Insures loans up to 96.5%/100% respectively
  - 20 percent market share
  - FHA de-capitalized and required Treasury capital infusion
- CRA: Remains in place

Private Label Securitization

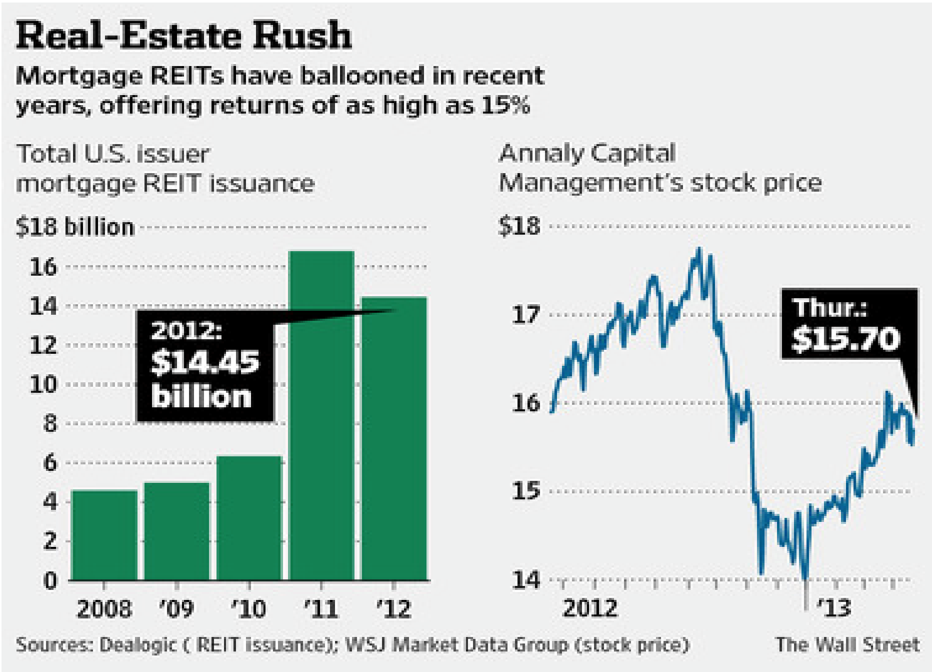
- Little PLS activity
- Uncertainty about risk retention and regulatory treatment
- Lack of standardization
- GSE competition
- Outlook brighter
  - Better quality loans
  - Better information



Source: Urban Institute

Leverage

- Bank capital improved
  - Leverage focus aot RBC
- GSE's have yet to be recapitalized
  - Profits flow to Treasury
  - Should GSEs hold bank level capital? Effects?
- Mortgage REIT concern
  - Buy mortgage securities funded with short term wholesale debt

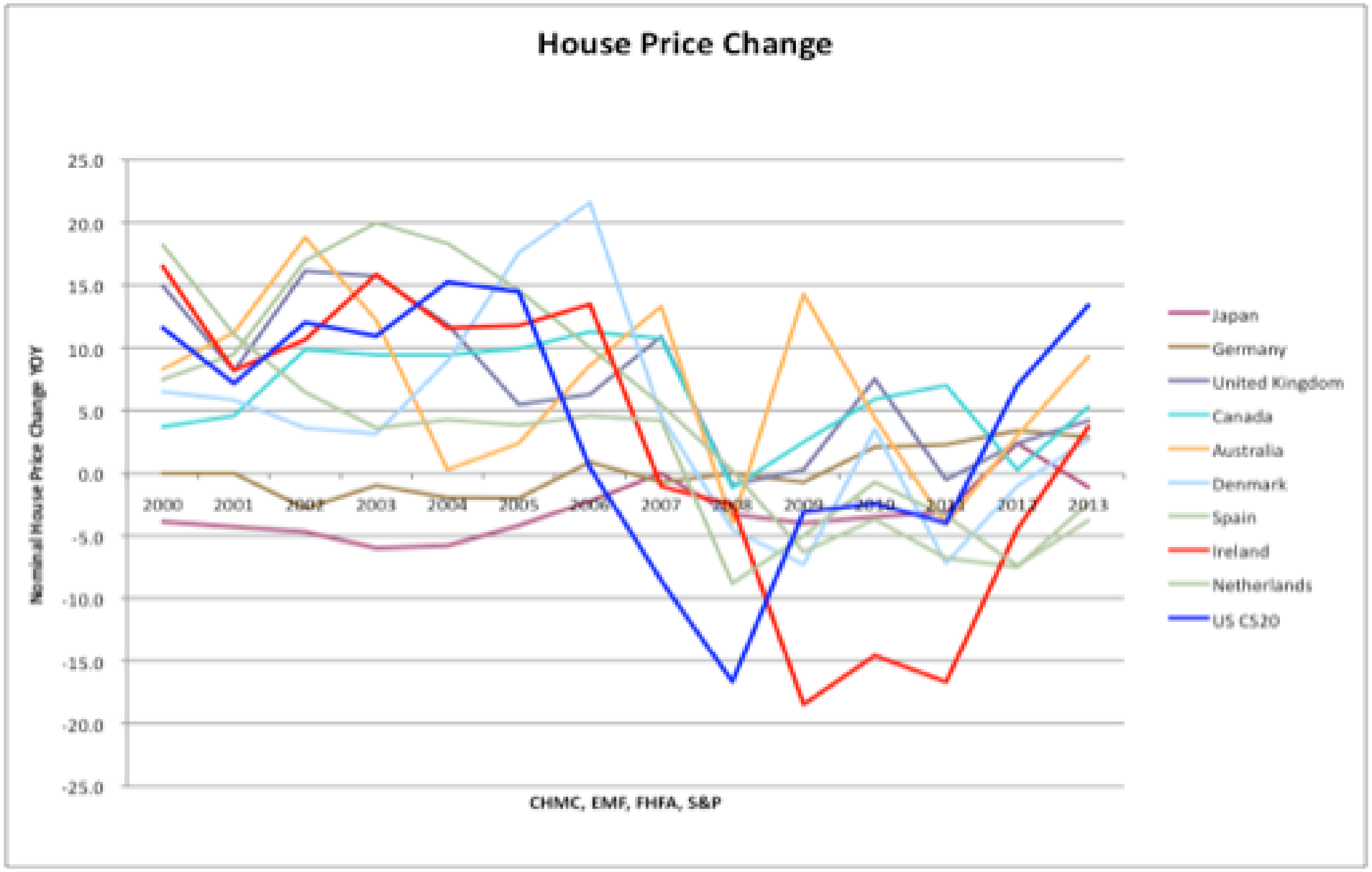


Source: Wall Street Journal

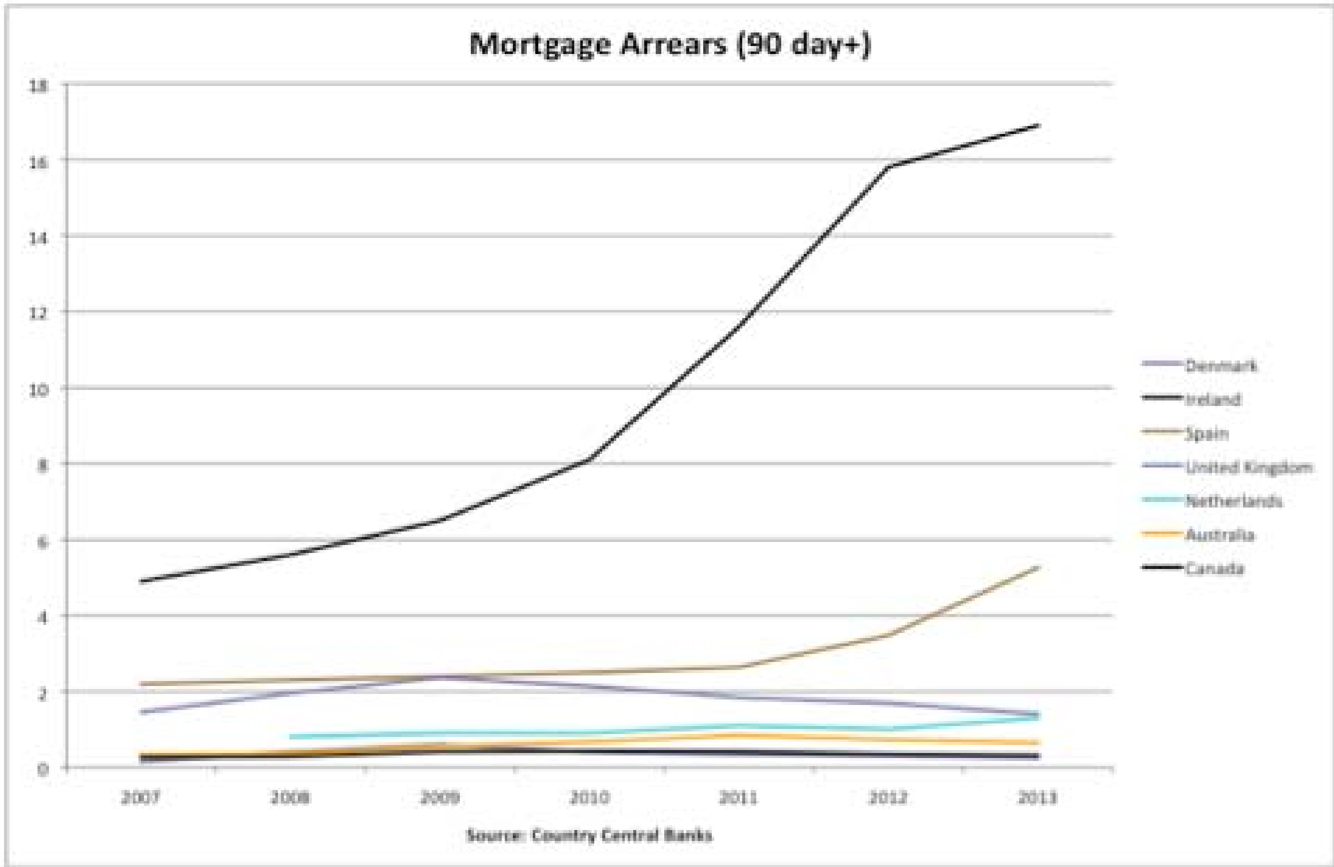
Post-Crisis Structure of US Housing Finance System

- Aggressive monetary policy: QE with MBS
- Tight underwriting and limited product diversity
  - Restricted volume, higher cost
  - But volume emphasis remains; incentive to relax
- Increased dominance by GSEs/FHA
- Homeownership policy: tax, housing goals (reduced), CRA remain
- Increased dominance by long-term FRM and (govt.-backed) securitization
- High leverage: GSEs, mortgage REITs

International House Prices



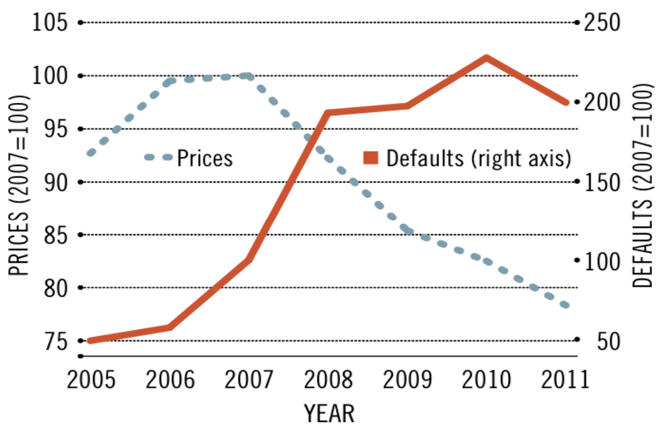
International Default Rates



House Price and Default: Europe and the US

FIGURE 1

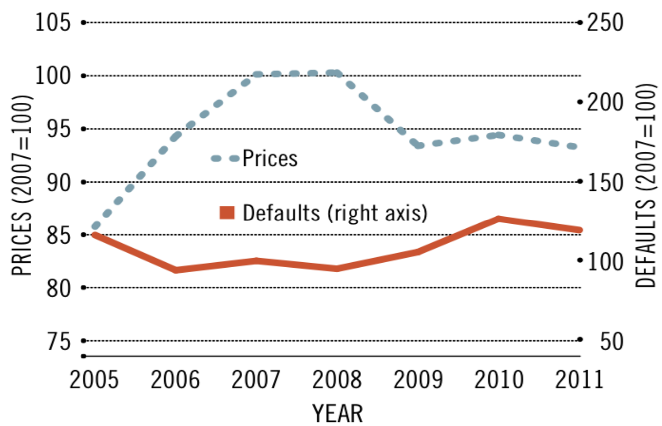
Prices vs. Defaults U.S.



SOURCE: Zillow Real Estate Research.

FIGURE 2

Prices vs. Defaults Europe

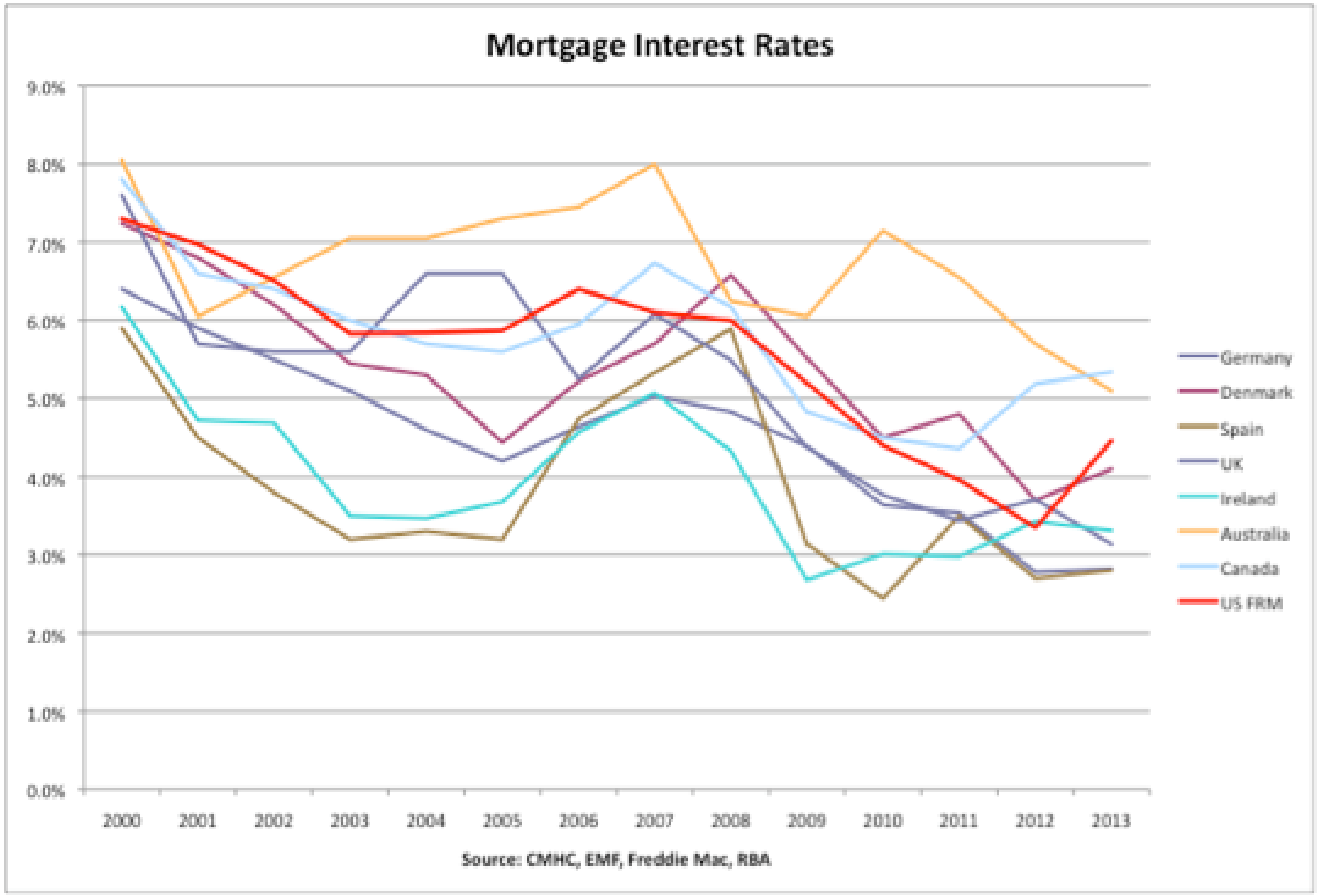


SOURCES: Prices from International House Price Database provided by the Federal Reserve Bank of Dallas. Defaults from Eurostat.

Hatchondo et. al 2013 St. Louis Fed

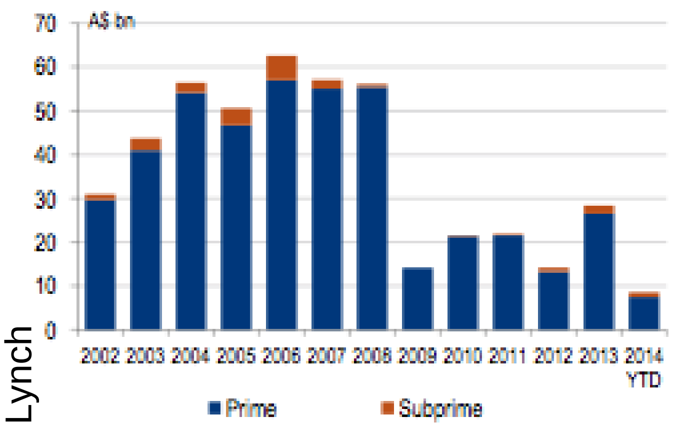
Two Reasons: Europe loans are recourse and (on average) lower initial LTV

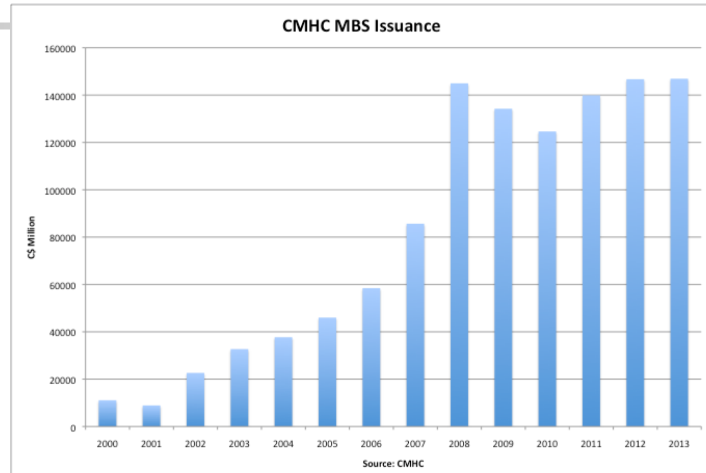
International Mortgage Rates



International Securitization

Chart 42: Australian RMBS issuance composition by prime/subprime



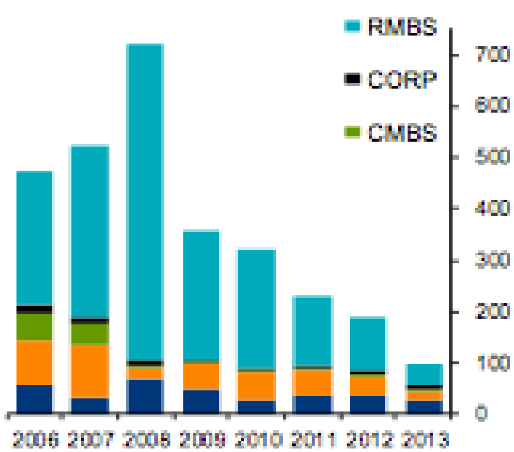


Source: CMHC

Source: Merrill Lynch

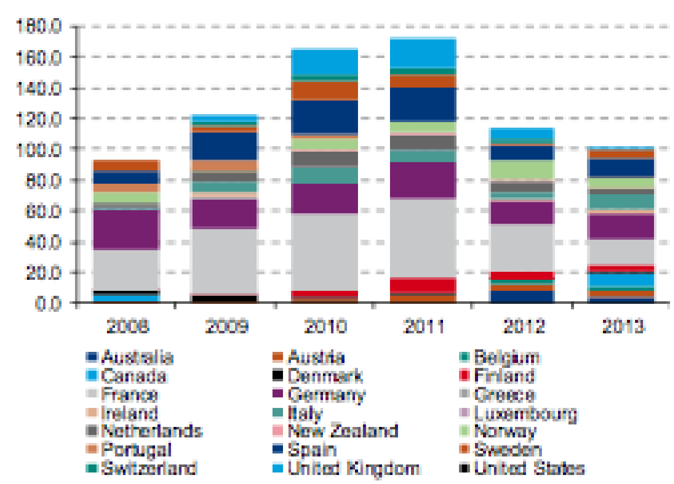
Europe (UK, NL)

Chart 3: Issuance by asset class (€bn)



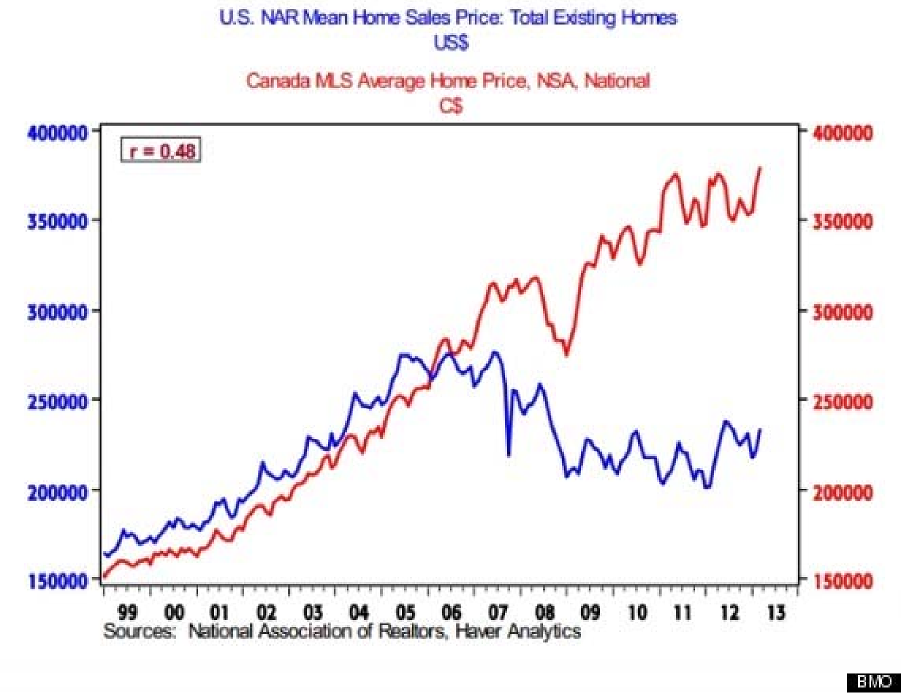
Covered Bonds

Chart 261: €-denominated benchmark issuance by country YTD (€bn)[1]



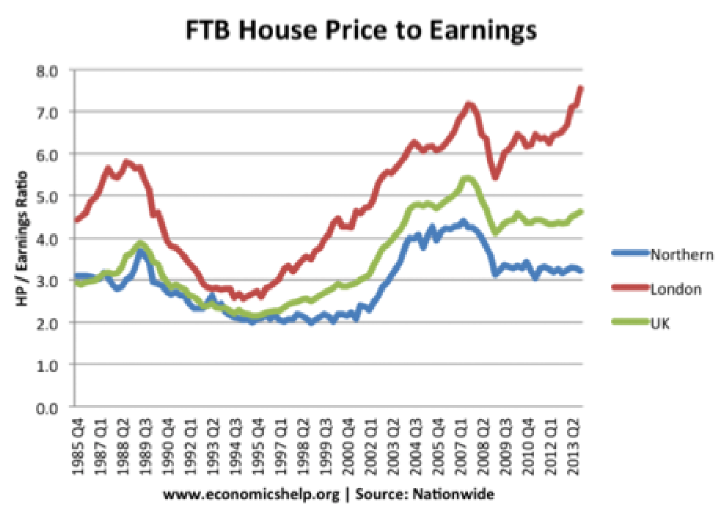
Canada: House Price Bubble?

- 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 available for homes only up to C$ 1 million
- Limits on CMHC insurance and security guarantees
  - Plus risk fee on MBS issuance



United Kingdom: Affordability?

- Underwriting reform
  - Affordability assessment
  - Interest rate stress test
    - UK dominated by short term ARMs
  - Interest only rules
    - Need to verify repayment vehicle



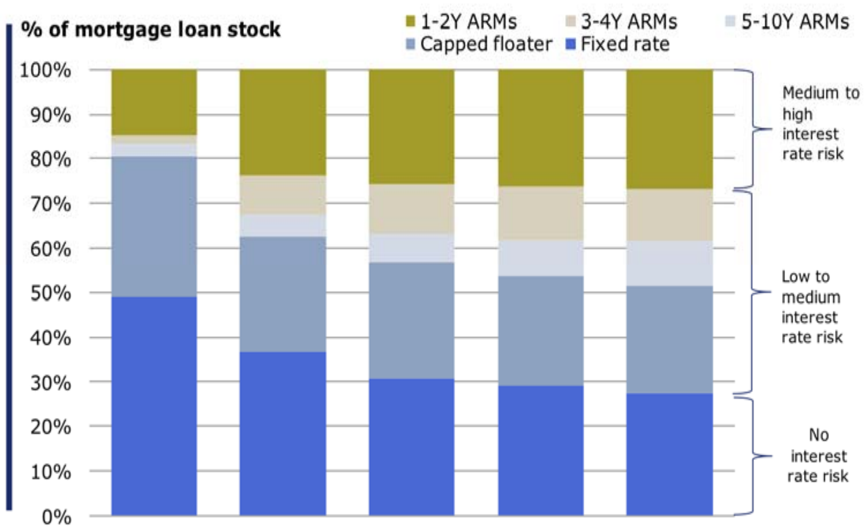
- Help to Buy Scheme
  - Motivated by inability of first time buyers to afford high house prices
  - Govt. loan up to 20 percent of purchase price new built
  - Govt. guarantee of high LTV mortgages

United Kingdom: Default Mitigation

- Mortgage Relief: Support for temporarily unemployed borrowers
- Mortgage Rescue Scheme: Support for borrowers faced with eviction
- Mortgage-to-Rent: Sell the house to a housing assn. and rent it back
- Homeowner Mortgage Support Scheme: guarantees for lenders that temporarily reduce mortgage payments (up to 2 years)

Denmark: Interest Rate Shock?

- Danish concern with high proportion of adjustable rate and interest only loans
  - IO loans 56% outstanding
  - Issues: Potential pay shock and exceeding 80% cap on LTV (with declining house prices)
  - ARMs >50% of market; refinancing risk as 30 yr. loans financed with 1-2 yrs. Debt (CB with maturity matched to rate fix)



Source: Nykredit

Danish Policy Initiatives

- Forced extension of bonds if interest rate increases by more than 5 percentage points at an auction or if the auction fails
  - Cap too far “out of the money’?
- Return of the long term fixed rate mortgage
  - Principal of balance system; ability to de-lever
- Tighter qualification on IO loans
  - Qualify at amortizing equivalent
  - Limit of 80 % of balance that can be financed with IO loan

Netherlands: Debt and Rates Too High?

- Netherlands has one of the highest rates of indebtedness in the world (106% of GDP)
  - Unlimited interest deduction; high MTR
  - High LTV and non-amortizing loans
    - With falling house prices 20% of borrowers underwater
- Minor efforts to constrain borrowing
  - Tax benefits only for amortizing loans
  - LTV limit (104%!)
  - Max 50% of loan can be IO
- Proposal to create national mortgage bank
  - Sell govt. guaranteed debt
  - Increase pension funding and reduce mortgage rates

Ireland and Spain: Foreclosure Prevention?

- Spain
  - High default and repossession due to unemployment, excess bldg.
  - The toughest deficiency and bankruptcy laws in Europe
  - Widespread bank loan restructuring to avoid write-downs
  - Modest 2009 mortgage debt relief program (2 years, strict qualification)
  - Decree 2012 allows courts to delay evictions for up to 2 years for “vulnerable” borrowers
- Ireland
  - High rates of default but low rate of repossession
  - Mandatory one year delay in repossession; code of conduct requires banks to offer restructuring (but no write-downs)
  - Temporary fix; analysts expect repossessions to rise in 2014

Conclusions: What Has Changed?

- US: Fundamentally Not Much
  - Tightened underwriting driven by fear of buybacks and regulation (FCIC Majority report major focus)
  - Government funding share has increased to 80+%
    - Regulatory uncertainty regarding QM and risk retention and what constitutes safe loan stifles PLS
    - Likely to remain high with interest groups supporting status quo “keep my guarantee” and Congress polarized
  - Policies supporting homeownership remain in place
    - GSE housing goals; FHA high LTV mortgage insurance; CRA
    - No serious discussion of reducing the MID
  - QM and GSE funding ensconce the FRM

Conclusions: What Has Changed?

- US: Little has been done to change the incentives that led to the crisis
  - Industry compensated on volume, size of loan
  - Lack of incentives for equity, savings
  - Capitulation on risk retention
  - No meaningful rating agency reform
  - Govt. policies continue to push homeownership

Other Countries: What Has Changed?

- Universal tightening of underwriting; emphasis on affordability
  - Only Canada has lowered max LTV
  - European Mortgage Directive: focus on advice/disclosure
- Canada capping mortgage guarantees but UK, NL introducing them
  - NL beginning to chip away away at tax support
- Denmark: Slow recognition of problems of IO loans
- Ireland, Spain: Extend and pretend?