The Subprime Crisis from a National Policy Perspective

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Main Points
From the National (and Federal) Perspective

• What happened and why
• Goals and fixes in the short run (stabilize housing, financial system, economy; deter financial crisis; global interactions)
• Goals and fixes in the long run (maintain homeownership, avoid recurrence)
• Unanswered questions
What Happened and Why

• Housing Bubble—Demand, Supply, Prices
  – Underlying support for home ownership; policy to expand base
  – Supply of capital—global capital seeking higher returns
  – Reduced lending standards
  – Increased demand for and supply of units

• Financial Bubble—Underpriced Risk
  – New, underregulated mortgage issuers
  – New financial instruments
  – Rating issues—AAA granted for higher risk levels
  – High leverage, low reserves
Home Ownership Rates
Owner Occupied Household Change Due to Change in Ownership Rate, 2000-2007


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US Annual Sales, Existing Homes

Source: California Association of Realtors; National Association of Realtors, US Bureau of the Census

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Trend in Mortgage Servicing Outstanding 1-4 Family

Foreign Holdings of US Agency Bonds and MBS by Region, as Shares of Total Agency Securities Outstanding

Source: US Treasury TIC Data
Subprime and Alt A Mortgage Originations—Value and Share of Total Originations

Percent of Loan Value Low-Doc or No-Doc
(All Except Agency Prime Loans, 2000 Q1 to 2007 Q2)

Source: Bardhan, Edelstein and Kroll using First American CoreLogic Marketing Reports, Loan Performance data, May 2008.
Regional Differences in Housing Price Growth
1975-2008

US Indices

Far West Region

Source: Indices created by authors using Office of Federal Housing Enterprise Oversight index (adjusted to 1975 base); US Bureau of Economic Analysis data.
Understanding Variation in Exposure and Experience Can Help Shape Policy

- Wide variation within the US in housing markets (median 2007 home value ranges from $88,000 in Mississippi to $536,000 in California)
- Wide variation in exposure to subprime loans (low of 6% in South Dakota, high of 20% in Nevada)
- Share of subprimes in foreclosure range from 3% in Utah to 18% in Michigan
- Factors, such as age, household size, ownership rates, and government regulation, can influence the level and outcome of exposure.
Cross-State Regression Results: Determinants of Subprime Share in Total Mortgages

• More subprime loans where populations were younger (median age)
• More subprime loans where home price and price growth rate higher, and higher share minority
• Lower per capita income drew higher shares of subprime
• State with stronger regulatory base (financial administrative expenditures; state employment, etc.) showed lower shares of subprime
Cross-State Regression Results: Determinants of Foreclosure Share in Total Mortgages

- Higher subprime share $\Rightarrow$ higher foreclosure rate
- Foreclosures negatively related to regulatory stance, even when subprime share taken into account
- Higher minority share $\Rightarrow$ higher foreclosure rate
- Complex relationship between subprime share and foreclosure share on one hand, and home price change and age on the other
Share of Subprime in Total Mortgages Outstanding: Top Ten States
Share of all Mortgages in Foreclosure 4Q 2007: Top Ten States
States with Largest Loss in Home Value from Peak to Q2 2008

Source: Bardhan, Edelstein and Kroll from OFHEO data.
Issues in Resolving the Problem

• No good measures on the size of the problem
• Will stabilizing housing market resolve the financial crisis?
• Will stabilizing the financial market resolve the housing problems?
• Implications of short term fixes for long term consequences
Subprime in Perspective

- 128 million housing units in the US (2007)
- 59 million loans outstanding (1/2008)
- 6.9 million subprime (1/2008)
- 2.9 million delinquent loans (1.2 prime/1.7 subprime; 1/2008)
- 1.1 million in foreclosure (0.39 prime/0.76 subprime; 1/2008)

Source: US Census, American Factfinder; First American CoreLogic, LoanPerformance data.
Uncertainties in Estimating Subprime Vulnerability—Some Back of the Envelope Attempts

- # of Subprime Loans, 12/07—6.95 Million
- Average Loan Value—
  - $100,000? = $695 Billion
  - $200,000? = $1.4 Trillion (may be more)
- Failure Rate ?= f(income, home value, ...); currently:
  - 10% (foreclosure)
  - 24% (delinquent 60+)
- Share that must be covered (lost value)?
  - 10%--$7-$34B
  - 20%--$14-$78B
  - 30%--$21-$100B
  - 50%--$85-$170B
- WHO EXPERIENCES THE LOSS? $70-$140 Billion $170-$340 Billion
Subprime Vulnerability—CBO Estimate

# of Subprime + Alt A Loans = 11 million loans/$2 trillion value

Share Owner Occupied = 9 million borrowers

Failure Rate = $f(\text{income, home value} \ldots)$
CBO assumes 25%, or 2.2 million

\[ \text{minus (complications due to 2nd liens)} = 1.5 \text{ million} \]
\[ \text{minus (ineligible borrowers)} = 1.1 \text{ million} \]
\[ \text{minus (lenders choosing alternative route)} = 400,000 \]

\[ \times $170,000/loan = $68 \text{ billion in loan commitment authority through 2011} \]

Source: CBO cost estimates April, June and July 2008.
Financial System Bailouts

• Term Securities Lending Facility (TSLF)--Up to $200 billion available in short term loans to largest financial firms

• Bear Stearns/ JP Morgan deal $29 billion loan guarantee

• Fannie/Freddie “conservatorship” (nationalization?) Up to $200B preferred stock purchase agreement; other indefinite guarantees

• AIG $85 billion “loan”
Credit Market Recovery Strategies

Goals
- Stabilize Housing Market
- Stabilize Financial Markets

Borrowers
- Debt Forgiveness Act

Congress
- IRS

Potential Home Buyers
- Tax Credit

Lenders/Servicers
- Slow distressed supply
- Rate, term adj

Securitizers
- Reestab market
- Support workouts, purchase new loans

GSEs
- Emergency support

FDIC
- Lend cash

Fed Res
- Lend cash

FHFA
- HOPE NOW

FHLB oversight
- Oversee GSEs

Treasury Dept
- Emergency support

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Stabilizing the Housing Market—Goals

• Retain high home ownership rates
• Arrest drastic value slide
• Maintain ownership incentives for households with negative equity
• Normalize new and existing market activity
Stabilizing the Housing Market
Strategies and Tools

• Stem Foreclosures
  – Interest rate adjustments on ARMS
  – Renegotiate terms
  – Equity sharing
  – Related tax policies

• Stimulate Homebuying
  – Downpayment tax credits
  – Federal support of GSEs
  – Federal intervention in financial market

• “Bank” Foreclosed Properties
  – Housing trust

• State and Local Government Support
Stabilizing the Housing Market

Issues

• Should the homeownership goal be revisited? Balance between homeowner and renter assistance
• Which borrowers should get assistance?
• What about the implications of price support?
• What about those who chose not to get into the market?
• Renters?
• Segmentation of securitized mortgages
Stabilizing Financial Markets

• Goals
  – Maintain liquidity in mortgage market
    • Minimize destabilization from institutional failures
    • Efficient securitization
    • Restore viability of Fannie and Freddie
  – Reestablish confidence in broader financial markets
  – Avoid international financial crisis

• Tools
  – Infusions of capital
  – Guarantees
  – Takeovers

• Issues
  – Moral hazard
  – Equity
  – Effectiveness (short term vs long term)
Long Term Policy Perspective

• No Single Policy is the Silver Bullet
• Complex Benefits-Costs Require Multi-faceted Solutions
• Regional-State Differences Require Regionally Differentiated Approaches—Role for state policy in mortgage regulation and housing support
• Reinvigorate Securitization Process with a difference (financial regulation)