Turning mortgage data into investment insight
Goals of Housing Policy

- Support sustainable home ownership
- Create a stable system for financing home ownership
- Protect homeowners from unfair practices
- Encourage or provide financing/credit to underserved communities
- Ensure that subsidies are provided effectively so as to minimize their cost and
- Reduce risk to tax payers of bailouts during market disruptions
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What is a Mortgage?

- Documents
- Processes
- Financial Risks
Financial Risks

- Funding
- Interest Rates
- Prepayments
- Credit
  - Origination
  - Systematic
Financial Risks

- **Funding** (the $10 trillion dollar question)
- **Interest Rates** (thrift crisis)
- **Prepayments** (86, 94)
- **Credit** (98, 07)
  - Origination (reps/warrants needs repair)
  - Systematic (the $400 billion question)
Funding Instruments

- GSE MBS
- Bank Deposits
- Home Loan Bank Advances
- AAA bonds
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Flight to Quality and MBS

- September 2011: Jumbos widen 50-70 bp relative to FN30
- Feb 07-Dec 08: FN30s widen 50bps while Jumbos widen 350 bps
Flight to Quality and MBS

Fig 1. Prices for New AAA Blocks of Jumbo A Loans

- Jul 98- Dec 98: During Russian Debt crisis Jumbos widened 25-35 bp (1 1/4 in price) relative to FN30 with sporadic trading at times
- Source: Paine Webber Mortgage Strategist
Guarantees promote stability

- Government Guaranteed MBS help prevent a financial crisis from becoming a housing finance crisis

- Government Guaranteed MBS limit the spread of housing crisis to the financial system
  - 2007 financial meltdown was primarily due to CDOs and private label MBS
  - In 2008, GSE MBS did not widen significantly despite home price declines and weakness of GSEs
Estimated credit risk of new originations

Base case loss of 25bp

Less than 1% probability of exceeding 4% to 5% of credit enhancement

Pool Loss Profile

- Average Scenario Probability (%)
- Average Cumulative Probability (%, RHS)
- WAVG Loss (%)
- WAVG Default (%)

Improving
Base
Moderate Stress
Stress
Extreme Stress

0.01 0.02 0.04 0.06 0.09 0.12 0.17 0.24 0.32 0.43 0.58 0.77 1.02 1.34 1.89 2.59 3.47 4.55 5.85 7.40

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Economics of Tail Risk

- Expected loss of tail can be very small, with appropriate underwriting and credit enhancement
  - 3% shortfall, 1% probability, 3bp expected loss

- Additional 3% of private credit enhancement will have lower price than gov’t guaranteed tail by about 2.5 pts (7.5bp)
  - Economically viable to have larger private credit enhancement
  - However, added “AAA” credit enhancement provides little or no incremental protection in “flight to quality”

- Government wrap will improve pricing of full MBS vs. private “AAA” by about ½ to 1 point
  - Government could charge 5 -10bp/year for wrap
  - Government wrap adds to economic efficiency and stability even if wrap fee exceeds expected loss (negative subsidy)
Credit Risk

- **Corporate Guarantee**
  - Fannie/Freddie
  - Bank holding of MBS
  - Mortgage Insurance
  - Credit Default Swap

- **Funded**
  - Home Loan Bank Advances
  - Senior/Subordinated Structures
  - Credit Linked Notes
Future of the GSEs

- **Privatize**
  - No government backstop for funding investors
  - Private Capital for Credit Risk

- **Hybrid**
  - Government backstop for funding investors
  - Private Capital for Credit Risk
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Fannie and Freddie should be selling off credit risk to private capital
Goals of Test Transactions

- Issue subordinate bonds or credit linked notes
  - Reduce risk to tax payer by bringing in private capital
  - Determine market based guarantee fees
  - Assess extent of market for agency quality credit risk

- Explore impact on TBA market

- Address structuring issues
  - QRM, Risk retention
  - Servicing, Reps Warrants
  - Systems, Reporting
  - Role of ratings agencies and risk measures
  - Legal/Tax/Regulatory issues
Underlying Assumptions

- Public policy favors preserving the 30-yr fixed-rate mortgage
- The TBA market has valuable functions and should be preserved
- Government is the best and only guarantor of last resort for providing liquidity
- The Government is not well suited to pricing and managing credit risk (unlike liquidity risk)
- Capital is required to bear credit risk. With adequate capital requirements, private markets can price credit risk
Public and private goals are not easily combined in one entity

Securitization and portfolio activities are not easily combined in one entity

Implied guarantees will be likely be abused and used to cross-subsidize businesses

Cooperatives take less risk than shareholder companies

Cooperatives redistribute monopoly profits into their customers or owners where they are subject to competition.
Establish Securitization Utility

- Focused on securitization
- Limited ability to issue non-MBS debt
- Guarantee fee structure preserves current system and credit cost transparency
- Subject to Federal regulation
- Cooperatively owned by originators
- Limited number of charters (2-5)
- Can be viewed as an “exchange” for credit risk
MBS Credit Enhancement

- Coop enforces reps/warrants for improperly originated loans
- Coop bears first loss using equity from members
- Federal guarantee wraps MBS.
- Risk sharing for pro rata portion of cooperative loss
  - Provides market pricing of credit risk
  - Provides additional source of credit risk capital
Advantages of Cooperatives

- Provides issuer/originator skin-in-the game
- Keeps excess profits in origination channel. Competition will deliver those to borrowers and investors
- Cooperatives provide for mutual enforcement of reps/warrants and underwriting standards, thereby limiting “race to the bottom”
Issues with recommendations

- Determining appropriate level of subordination for government guarantee
- Determining appropriate underwriting guidelines for eligible MBS
- Determining equity requirement for cooperative
- Balancing interests of cooperative members
- Spreading prepayment risk in the economy
- Determining division between government, chartered utility and private markets
Housing Finance System Overview

- FHA/GNMA deliver subsidized mortgages
- Home Loan Banks provide advances, but eliminate mortgage portfolios
- Encourage private mortgage market by limiting government guaranteed sector
- Regulation of origination process to provide consumer protection
- Consider replacing mortgage deduction with homeownership/long term rental tax credit
Mortgage Market Components

![Graph showing mortgage market components for 2006, 2011, and 2016?](image)

- Loans
- Private
- GSE
- GNMA
Proposal Meets Goals

- System supports sustainable home ownership by rationalizing credit pricing and limiting government support to appropriate mortgage products
- Utilities plus explicit guarantees provide a stable system for financing home ownership
- Regulating origination practices protects homeowners from unfair practices
- FHA/GNMA provides financing/credit to underserved communities
- Subsidies are provided explicitly through FHA and guarantees are paid for by investors rather than through implied guarantees and vague definitions of mission
- Explicit guaranty and higher capital requirement via subordination reduces risk to tax payers of bailouts during market disruptions