ANDREW DAVIDSON & CO

Turning mortgage data

into investment insight

GSE Reform:
Risk Sharing and Cooperatives

Andrew Davidson

ANDREW DAVIDSON & CO

April 2012

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

ANDREW DAVIDSON & CO

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

ANDREW DAVIDSON & CO

What is a Mortgage?

- Documents
- Processes
- Financial Risks

Financial Risks

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

ANDREW DAVIDSON & CO

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)

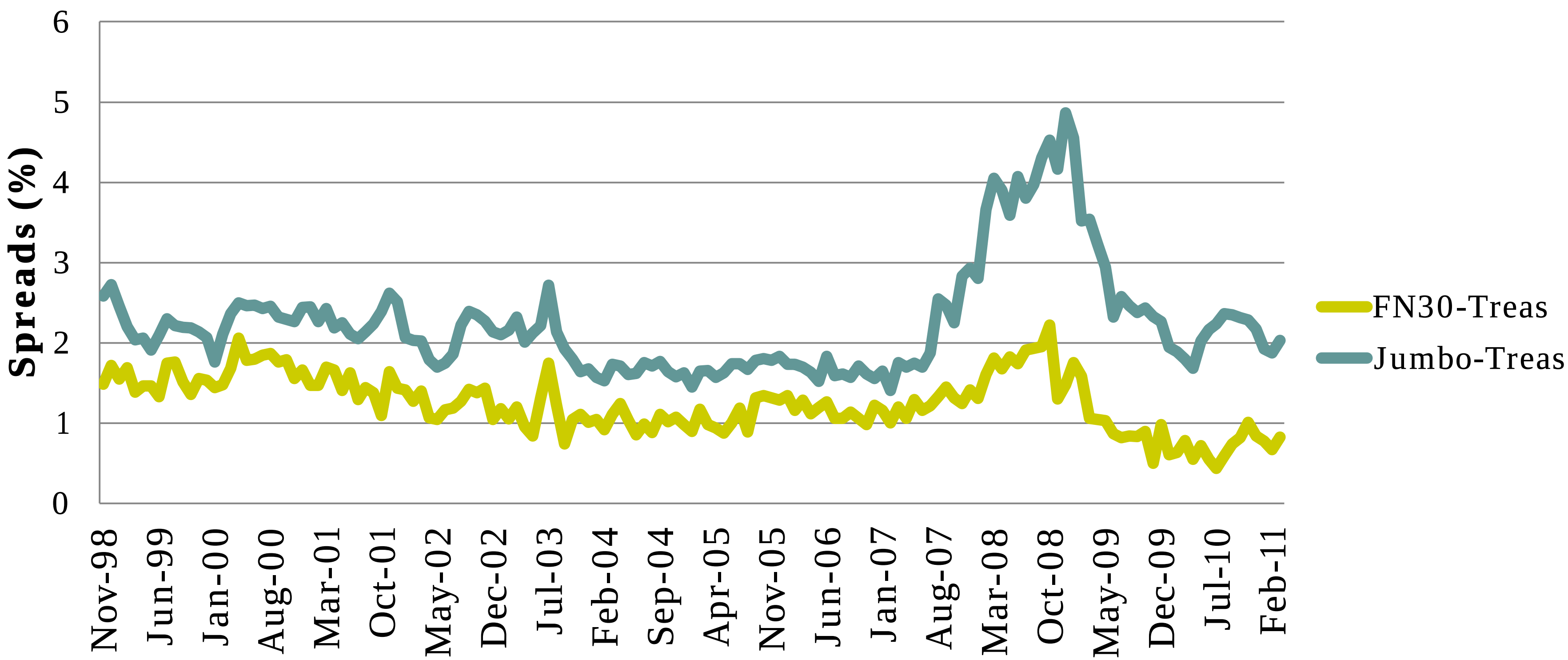
Funding Instruments

- GSE MBS
- Bank Deposits
- Home Loan Bank Advances
- AAA bonds

Funding Instruments

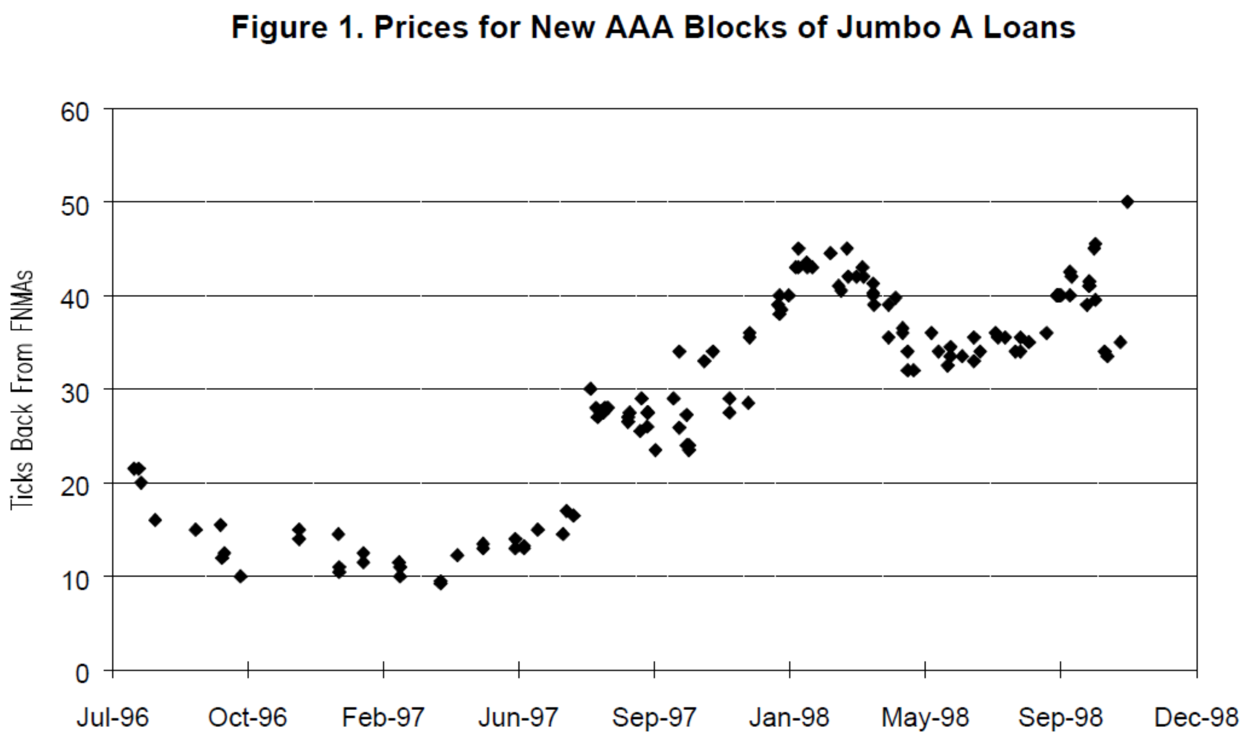
- GSE MBS
- Bank Deposits
- Home Loan Bank Advances
- ~~AAA bonds~~

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



- 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

ANDREW DAVIDSON & CO

Guarantees promote stability

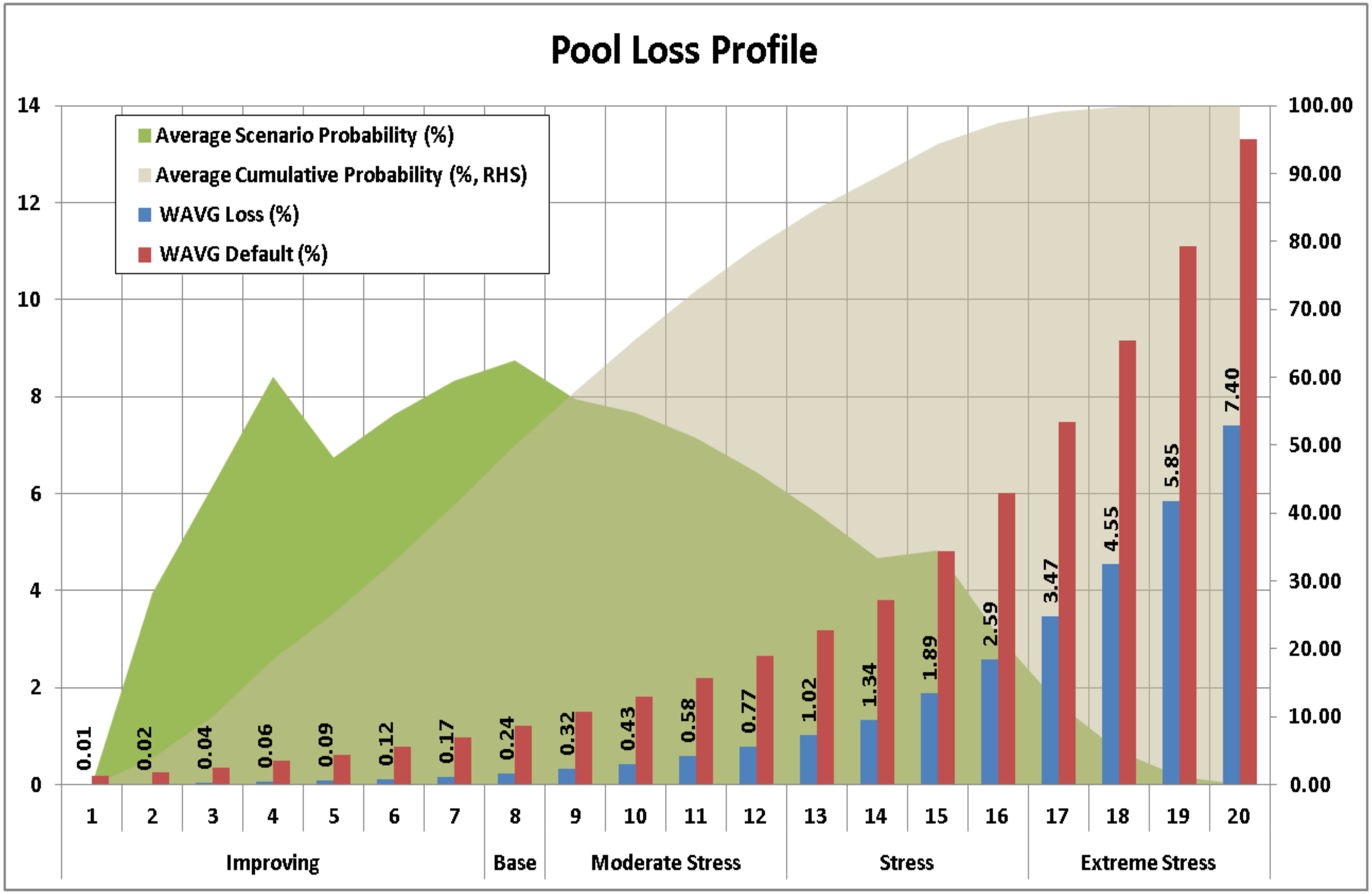
- Government Guaranteed MBS help prevent a financial crisis from becoming a housing finance crisis
- Government Guaranteed MBS limit the spread of housing crisis to the financial system
  - 2007 financial meltdown was primarily due to CDOs and private label MBS
  - In 2008, GSE MBS did not widen significantly despite home price declines and weakness of GSEs

ANDREW DAVIDSON & CO

Estimated credit risk of new originations

Base case loss of 25bp

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



ANDREW DAVIDSON & CO

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)

ANDREW DAVIDSON & CO

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

ANDREW DAVIDSON & CO

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

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

ANDREW DAVIDSON & CO

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

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

ANDREW DAVIDSON & CO

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

ANDREW DAVIDSON & CO

Underlying Assumptions - 2

- 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.

ANDREW DAVIDSON & CO

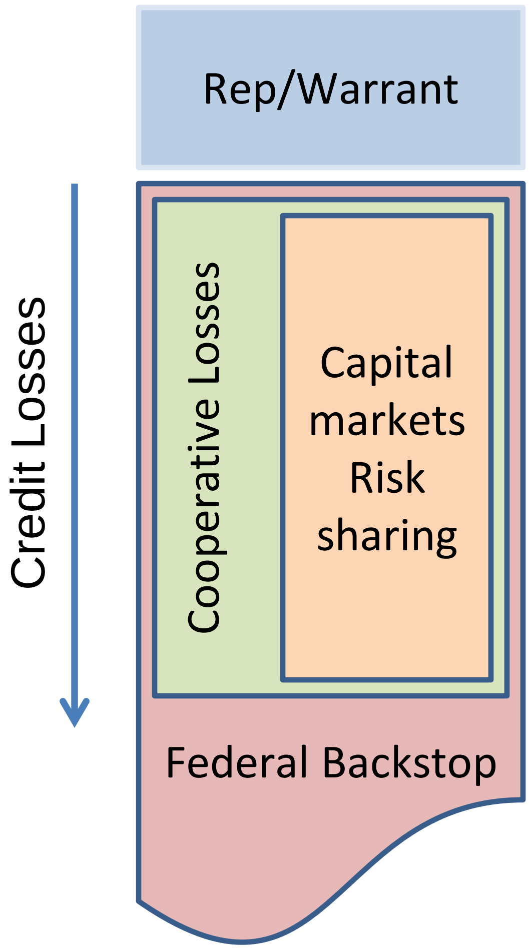
Establish Securitization Utility

- 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

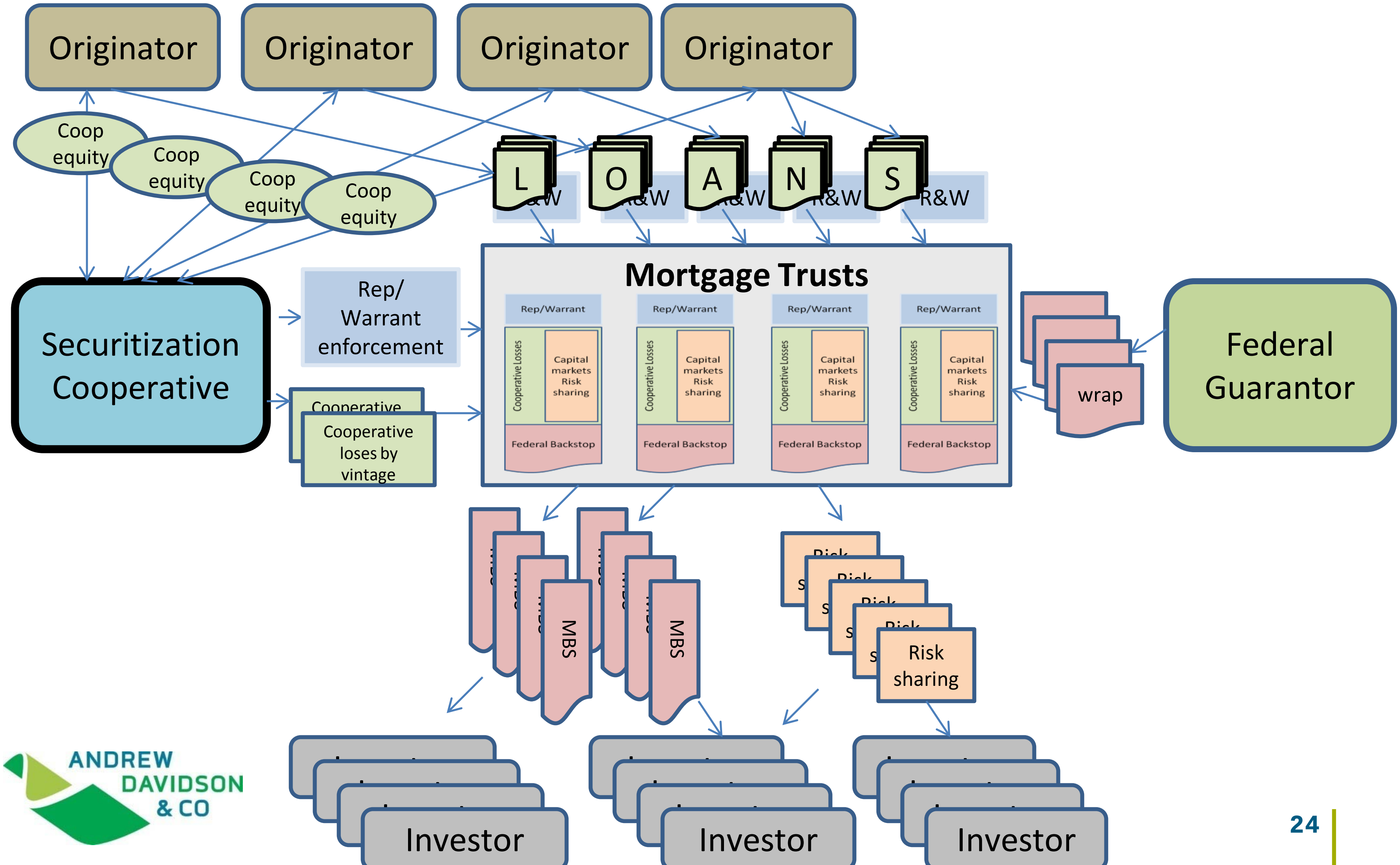
ANDREW DAVIDSON & CO

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



Cooperative Structure



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”

ANDREW DAVIDSON & CO

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

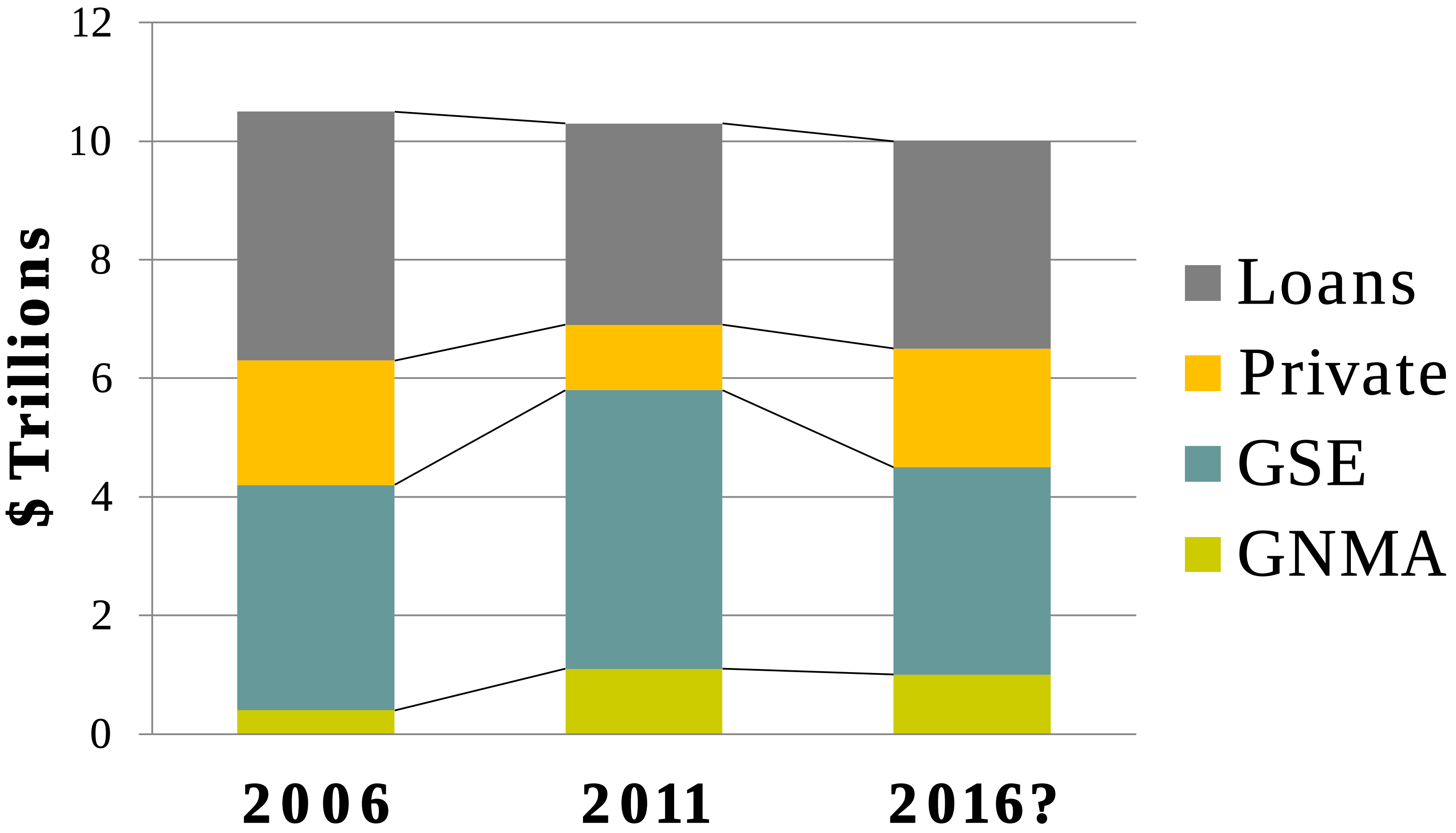
ANDREW DAVIDSON & CO

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

ANDREW DAVIDSON & CO

Mortgage Market Components



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

ANDREW DAVIDSON & CO