

Housing Finance Reform: Mortgage Securitization Utility

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Design Principles

- Goal: maintain flow of mortgage credit during periods of stress, and to reduce cyclicity of credit more generally.
- Design Principles:
 - Alignment of public and private incentives requires:
 - Restructuring of incentives across securitization chain
 - Restrictions on structure and business activities
 - Regulation and governance restrictions
 - Fixed rate mortgages can still be attractive when fairly priced.
 - The benefits of standardized securitization are meaningful.
 - Economies of scale and scope → small number of securitizers.
 - The government owns the tail risk in housing finance.
 - Any housing subsidies should be transparent and on government's balance sheet (rather than via a private entity).

What to Change and What to Keep

What to Change

- Require government tail risk insurance to be explicit and fairly priced.
- More capital, and liquidity standards consistent with risks of the business.
- No retained investment portfolios.
- Align risk-taking incentives across private sector participants (lenders, securitizer, private insurers) and the government.
- Clearly distinguish affordable housing goals from business activity.

What to Keep

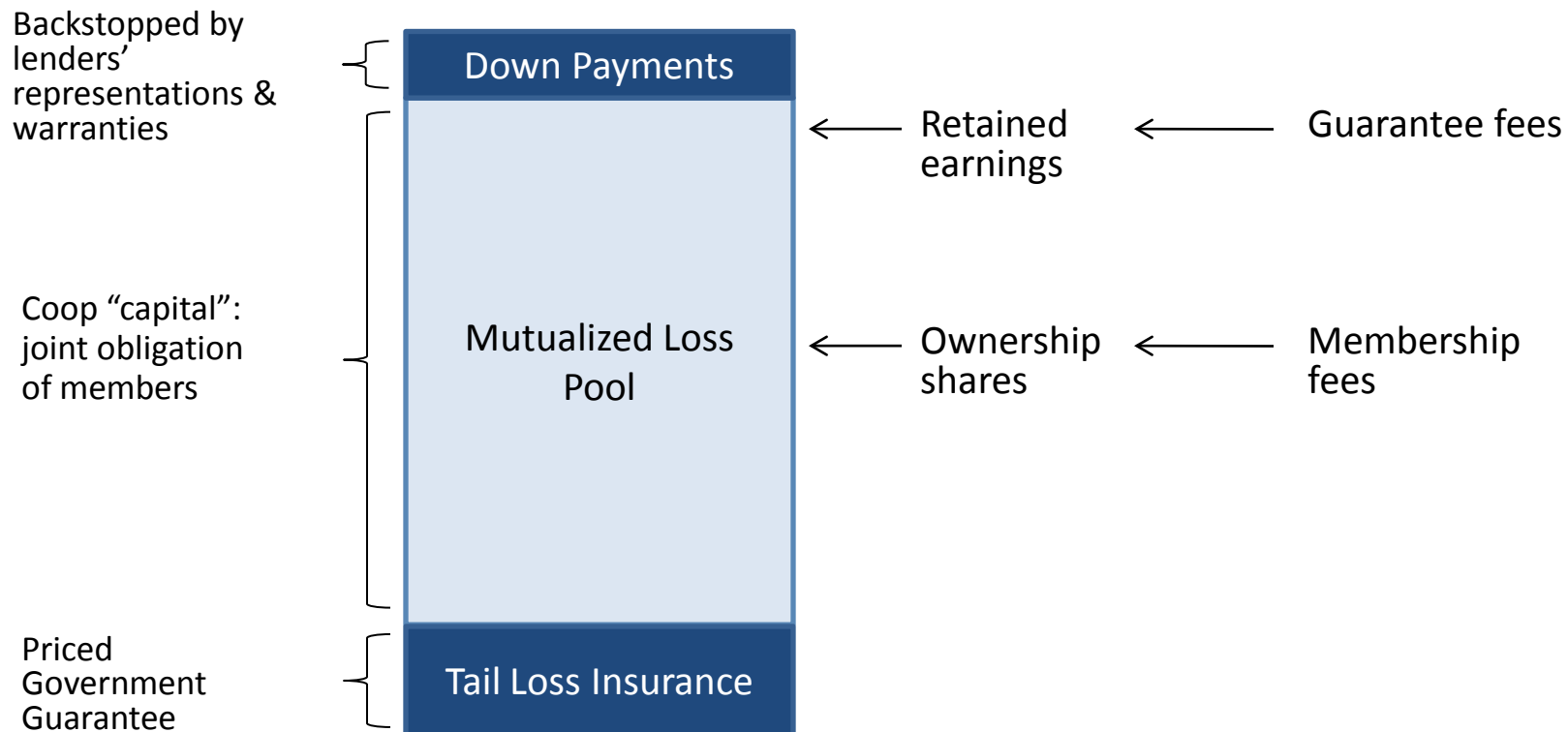
- “Skin in the game” for originators and the securitizer.
- Standardization, economies of scale in current securitization infrastructure.
- The liquidity benefits of the market for issuing and trading agency MBS.

A Lender-Owned Cooperative Utility for Securitization

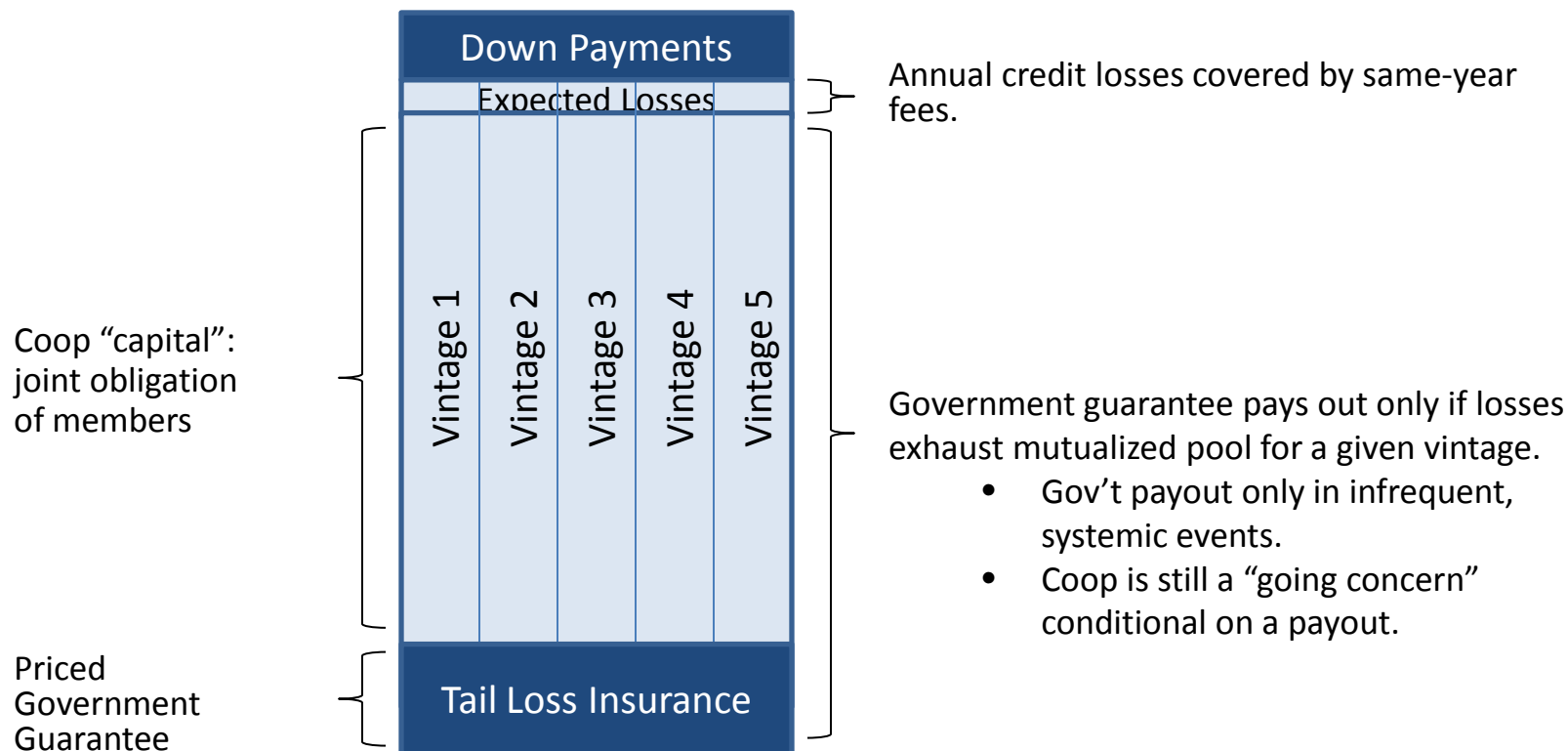
*A highly regulated, mutually-owned utility
Capitalized by fees from mortgage originators
Required to purchase mortgage tail risk reinsurance from the government*

- One business: securitizing residential mortgages
- Utility insures credit risks in MBS it issues
- Mutually owned by lenders: credit losses are shared in proportion to securitization activity
- Vintage-based triggers for payout of government catastrophic reinsurance
- Restrictive charter, regulation, and governance structure

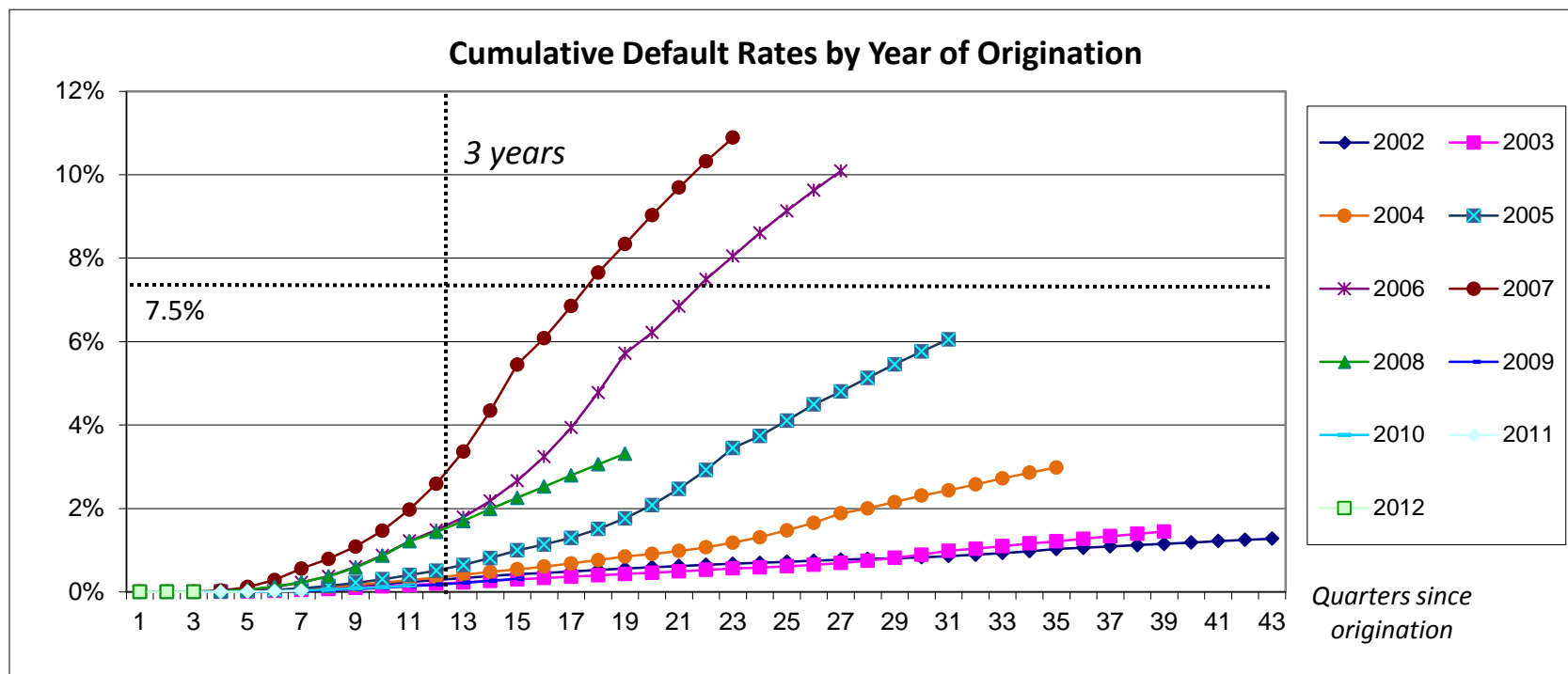
Cooperative Capital Waterfall



Cooperative Capital Waterfall with Vintages



How Much Capital for Vintages and for How Long?



- Loan performance displays stratification within 8-12 quarters of origination:
 - Supports the vintage concept.
- Assumptions:
 - Capital against original balances (versus remaining) held for 3 years.
 - 40% LGD and 3% “capital” → tail loss triggered at 7.5% cum default rate.

Stylized Example: Utility G-Fees under Different Assumptions

<i>Assumptions</i>	<i>Base</i>	<i>w/o Tail Loss Insur</i>	<i>Higher ROE</i>	<i>Incr Tail Risk</i>
Min K Ratio (50% risk wt)	6%	12%	6%	6%
Assumed Return on Equity	10%	10%	15%	10%
Expected Losses	5 bps	5 bps	5 bps	5 bps
Tail Loss Fee	10 bps	0 bps	10 bps	17 bps
Tail Loss Rate	6%	6%	6%	8%
Frequency of Tail Event	30 years	30 years	30 years	30 years
Implied Guarantee Fee	62 bps	90 bps	86 bps	69 bps

- Assumed tail loss (private plus government) of 6% every 30 years. Tail loss fee is calculated assuming full government payout of remainder of tail loss insurance beyond Utility's vintage specific capital.
- G-fee is highly sensitive to assumed ROE, minimum capital requirement, and sensitive to government tail loss trigger point.
- "going concern" examples of g-fees; upfront capitalization of g-fees also possible.

Why a Cooperative?

- Academic literature indicates mutualization is appropriate for:
 - Homogenous and sophisticated owners, engaged directly and frequently with the business;
 - The party with less market power in the pertinent transaction (here, the lenders, not their securitizer).
- Advantages
 - Narrow mission, less risk taking
 - Weaker profit motive; lower required/expected returns
 - Facilitates monitoring & risk management
 - Aligns incentives of lenders and securitization entity (contrast to private securitization)
- Disadvantages
 - Less innovation
 - More limited access to capital markets
 - Governance is complicated; need to manage via charter and regulation

Governance: The Regulator

- Manages government reinsurance program
 - Sets tail risk insurance fee & oversees the reinsurance fund
 - Approves risk-based pricing and sizing/structure of risk transfer bonds (if any)
 - Approves credit/underwriting standards and new products
- Sets capital standards and governance framework
 - Minimum regulatory capital standards
 - Prompt corrective action for threats to safety and soundness
 - Oversees governance structure and sets standards for risk management
 - Supervision via examinations, stress tests, etc.
- Sets guidelines for the liquidity portfolio of the utility
 - Pipeline / warehousing
 - Modifications, foreclosures, REO, and loss mitigation
 - Not investment or relative value

Appendix: Formulas in Guarantee Fee Model

$$\begin{aligned} \text{G-Fee} &= \text{Tail Loss Fee} + \text{Expected Losses} + \text{Admin. Costs} \\ &+ \left[\frac{(\text{ROE} - \text{return on cash}) \times \text{RWA} \times (\text{Required Capital Ratio})}{(1 - \text{Tax Rate})} \right] \end{aligned}$$

$$\text{Tail Loss Fee} = \frac{\text{Tail Loss} - \text{Expected Loss} - (\text{RWA} \times \text{Required Capital Ratio})}{(\text{Horizon for Tail Loss})}$$