

# Rebuilding the Mortgage Financing Pipeline: A Way Forward

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Federal Reserve Board

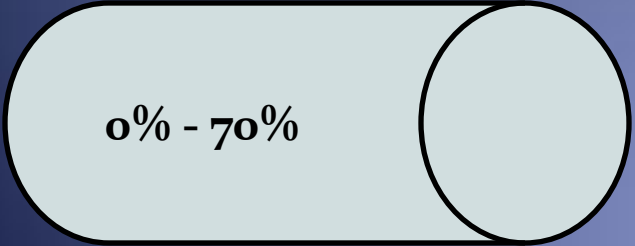
<sup>Ψ</sup> The results in this presentation are preliminary materials circulated to stimulate discussion and critical comment. The analysis and conclusions set forth are those of the authors and do not indicate concurrence by other members of the research staff or the Board of Governors.

# A Framework for Describing the Conventional Mortgage Pipeline

- The financing of home purchases is segmented into four parts.
- Each part is based on a loan-to-value (LTV) range.
- Who finances each portion of the mortgage?
- Who bears the credit risk associated with each portion of the mortgage?

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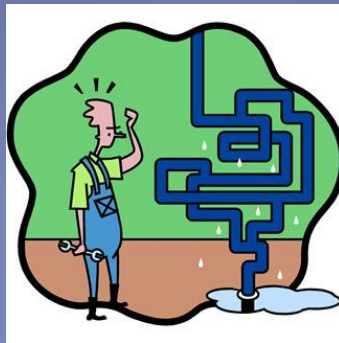
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# Pre-Crisis Conventional Mortgage Financing Using Mortgage Securitization



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- Guaranteed by Fannie Mae or Freddie Mac.
- Used to create GSE MBS.



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- Extension of first mortgage possible if private mortgage insurance (PMI) available.
- Sometimes financed by a “piggy-back” loan.
- Sometimes financed with homeowner down-payment.

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- Included as part of the first mortgage.
- Used to create GSE MBS.

- Extension of first mortgage possible if PMI available.
- Sometimes financed by a “piggy-back” loan.
- Sometimes financed with homeowner downpayment.

- A downpayment from homeowner.
- Sometimes partially covered by other sources of finance.

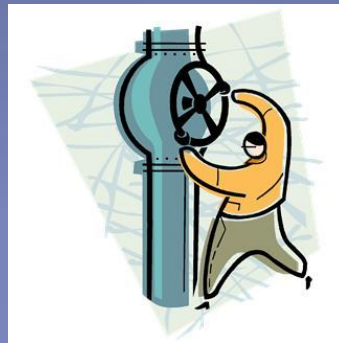
# Problems with Pre-Crisis Conventional Mortgage Financing

- Too much risk for taxpayers—Fannie Mae and Freddie Mac provided too much credit for too little return during the housing boom.
- Not enough private capital in the mortgage system—Mortgage brokers failed and many banks suffered major losses.
- Junior liens complicated foreclosure and resolutions.
- No market-based indices of risk were widely available.

# Post-Crisis Conventional Mortgage Finance using Mortgage Securitization

- All securitization is government backed.
- Liquidity is created by bringing guarantee-sensitive investors into the market for securities using extensive government guarantees.
- These investors do not engage in due diligence with regard to the value of the collateral underlying mortgage-backed securities. They rely on selling assets quickly to protect the value of their investments.
- Such “liquidity” can suddenly dry up should the government guarantee come into doubt.
- Little private capital in the post-crisis system. The government does it all and takes all the risks.

# A Way Forward: Providing Government Guaranteed Catastrophic Mortgage Insurance



# A Way Forward:

## Providing Government Guaranteed Catastrophic Mortgage Insurance

- Government bears the “tail risk” associated with a systemic shock.
  - Historically, private market securitization has failed repeatedly as investors became too sanguine about risks and then fled when higher risks were revealed.
  - Government should assume it bears this risk of extreme events.
  - Would mitigate disruptions during a financial crisis if managed *ex ante*.
- Government agency that could be structured like FDIC.
  - For two mortgage-backed instruments: MBS and covered bonds.
  - Explicit risk-based insurance premiums charged to mortgage originators.
  - Insurance reserve fund maintained.
  - Insures only against very extreme financial disruptions (e.g. catastrophic risks).
- Provides possible role for Fannie Mae or Freddie Mac.
- Brings private capital into the “first loss” position (as well as second and third loss positions) for mortgage finance.

# A Way Forward:

## Providing Government Guaranteed Catastrophic Mortgage Insurance

- We provide detailed and substantial analysis elsewhere:
- Hancock, Diana, and Wayne Passmore (2011). "Catastrophic Mortgage Insurance and the Reform of Fannie Mae and Freddie Mac," in Baily, Martin N. ed., *The Future of Housing Finance: Restructuring the U.S. Residential Mortgage Market*. Washington, DC: Brookings Institution Press.
- Hancock, Diana, and S. Wayne Passmore (2009). "Three Initiatives Enhancing the Mortgage Market and Promoting Financial Stability," *The B.E. Journal of Economic Analysis & Policy*, Vol. 9, no. 3.



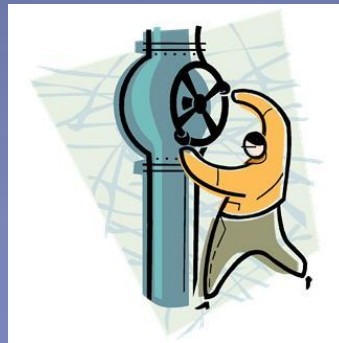
# A Way Forward:

## Providing Government Guaranteed Catastrophic Mortgage Insurance

### The Important Role of a National Mortgage Registry in Protecting the Taxpayers

- Any government insurance program that backstops credit losses associated with mortgage default needs to be able to measure and understand its risks.
- As demonstrated by the recent crisis, junior liens create significant problems for mortgage resolution and foreclosure.
- Moreover, the private sector will need clearer signals of risks if significant private market capital is desired.

# Conventional Mortgage Financing using MBS with Government Catastrophic Insurance



# Conventional Mortgage Financing using MBS with Government Catastrophic Insurance

How mortgages are financed for each range of loan-to-value (LTV) ratios  
(All liens and guarantees are registered in National Mortgage Database)

0% - 70%

## First mortgage financed by Government –Guaranteed MBS

- Gov. holds credit risk using first mortgages as collateral.
- Use GSE securitization method to securitize first mortgages.
- Gov. sets underwriting standard and sets g-fee.
- Permits capital bank banking to be relatively small because 70% of value of home is financed with a mortgage with a zero percent risk-weight (i.e., a mortgage that is government-backed).

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## Second mortgage is held by bank and is financed by bank's liabilities

- Gov. sets minimum underwriting standards to qualify use of the first mortgage for a Gov. guarantee.
- PMI guarantee is at bank's discretion.
- **No Gov. guarantee.**

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## Second mortgage is held by bank and financed by Gov. - regulated subordinated debt issue / No Gov. guarantee

- Subordinated note is sold to private investors and is backed by second mortgages. PMI guarantee is optional .
- Gov. sets standard note characteristics; standardization facilitates market liquidity .

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## Third mortgage is held by bank and is financed by the bank's liabilities

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## Third mortgage is held by bank and financed by Gov.-approved subordinated debt issue

- Subordinated note sold to private investors with third mortgages as collateral.
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## Downpayment



# Adding U.S. Style Covered Bonds to the Mix

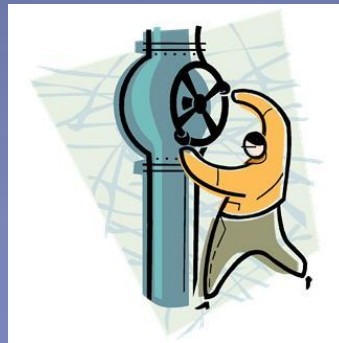
- **European Style:**

- Covered bonds rely on overcollateralization.
- Bank replenishes cover pool—when a mortgage defaults, it is replaced with another mortgage.

- **U.S. style:**

- Covered bonds for only first mortgages.
- Replenish cover pool based on first mortgages, but no overcollateralization.
- Bank bears loss if first mortgage defaults, but investors are protected by replenishment.
- Second and third mortgage defaults create losses for investors or for banks.
- Government catastrophic insurance covers only bank default.

# Conventional Mortgage Financing using Covered Bonds with Government Catastrophic Insurance



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## **Government-Guaranteed Covered Bonds with Bank Holding Credit Risk**

- Gov. has full recourse to bank for mortgage defaults.
- Gov. covers risk if bank itself defaults.
- Covered bonds are consolidated on bank's balance sheet.
- Covered pool is replenished with a new first mortgage when a first mortgage defaults.

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## Second Mortgage Financed in the Same Manner as MBS

- Bank holds second mortgage or uses subordinated MBS.

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# Conclusions

- **Catastrophic Insurance** brings in guarantee-sensitive investors, creates liquidity in secondary market for mortgages, and allows for hedging of interest rate risks.
- **National Mortgage Database** allows mortgage market participants—bankers, investors in subordinated mortgage-backed securities, investors in covered bonds, private mortgage insurance providers, and the government insurer—to measure and assess their risks.
- **Subordination Structure of Liens/ PMI Requirement** ensures homeowner, PMI providers (if applicable), and private-sector securitizers / covered bond issuers bear losses before the government, which only bears “tail-risk.” Hence, these providers of mortgage financing have an incentive to price their risks.
- **Government Underwriting Standards / Standardization** facilitate liquidity in secondary market for subordinated MBS.
- **A Limited Role for Government**—provision of tail-risk insurance ensures mortgage credit availability throughout the housing cycle.
- **Subordination Structure of Liens** brings private capital/homeowner equity into the “first loss” position (as well as “second loss” and “third loss” positions) .