SHADOW BANKING AND HOUSEHOLD FINANCE

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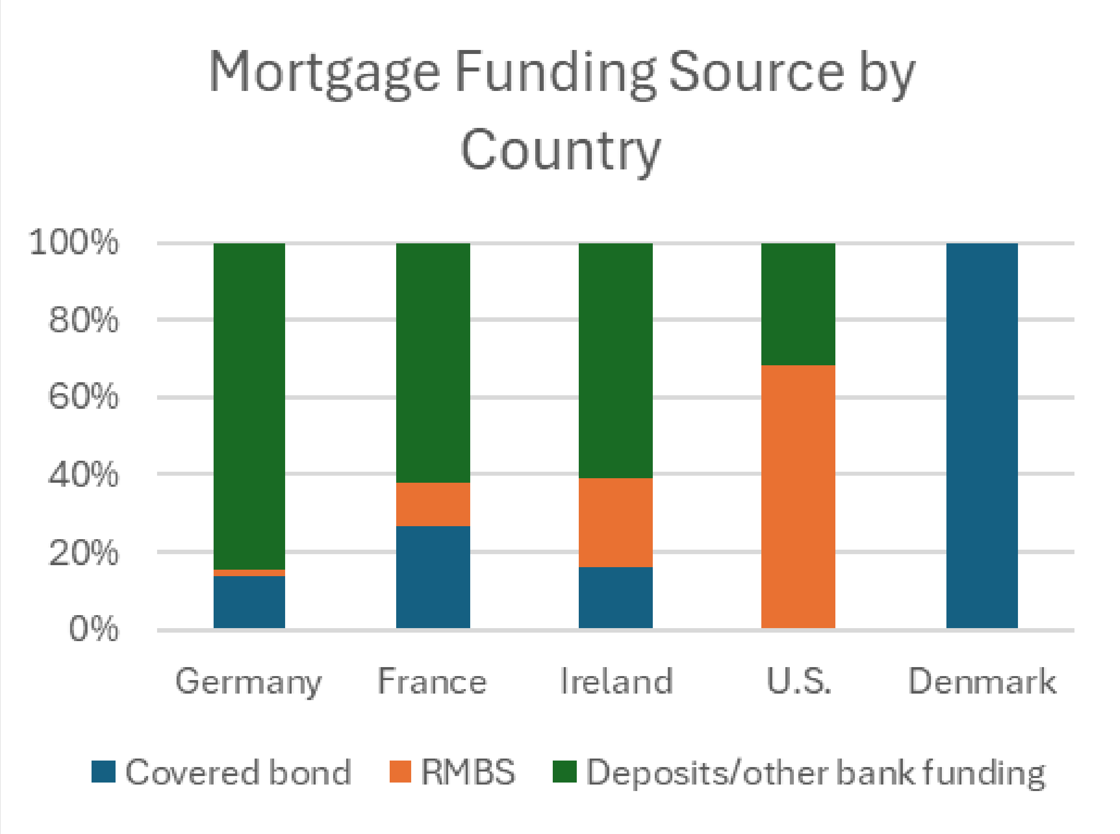
Note. The views in this presentation are not necessarily those of the Federal Reserve Board or its staff.

BANKS, NONBANKS, AND FINANCIAL INTERMEDIATION

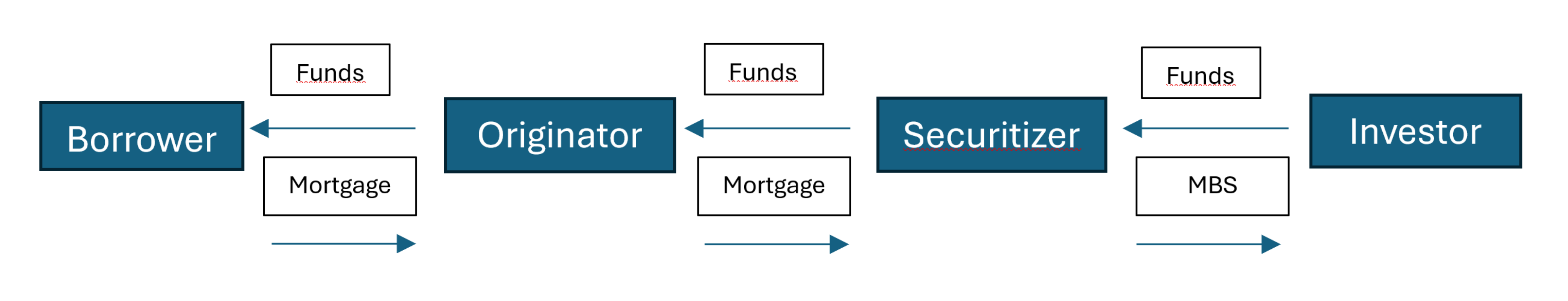
- Loans are produced by a financial intermediation chain
- The types of firms in the chain vary across countries and time
- Does it matter for
  - Access to credit
  - The stability of the intermediation chain during a crisis
- If the firms in this chain are banks or nonbanks?
- Focus of this talk: mortgages

EUROPEAN MORTGAGES ARE MORE LIKELY TO BE FUNDED ON BANK PORTFOLIOS



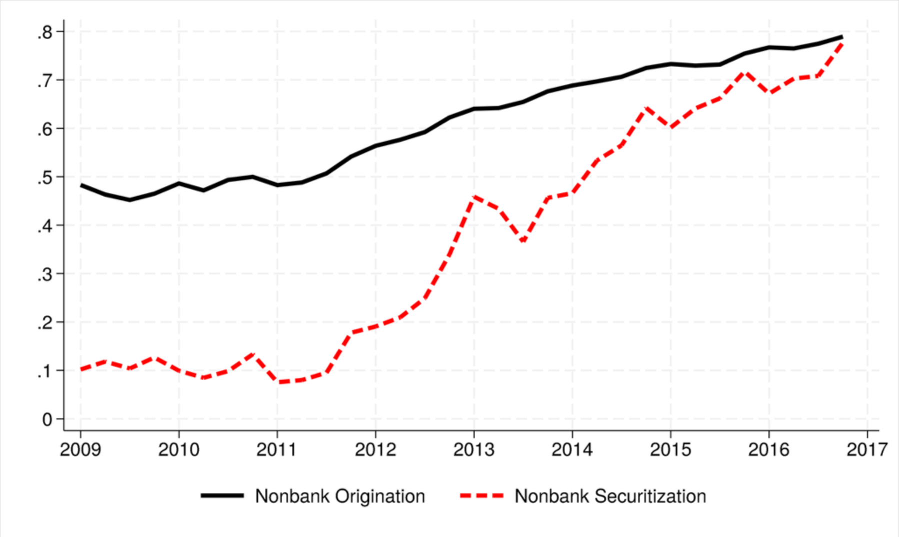
Source. Hypostat (Europe). Financial Accounts of the United States (U.S.).

EVEN IN THE SECURITIZATION CHAIN, BANKS AND NONBANKS CAN PLAY VARIOUS ROLES



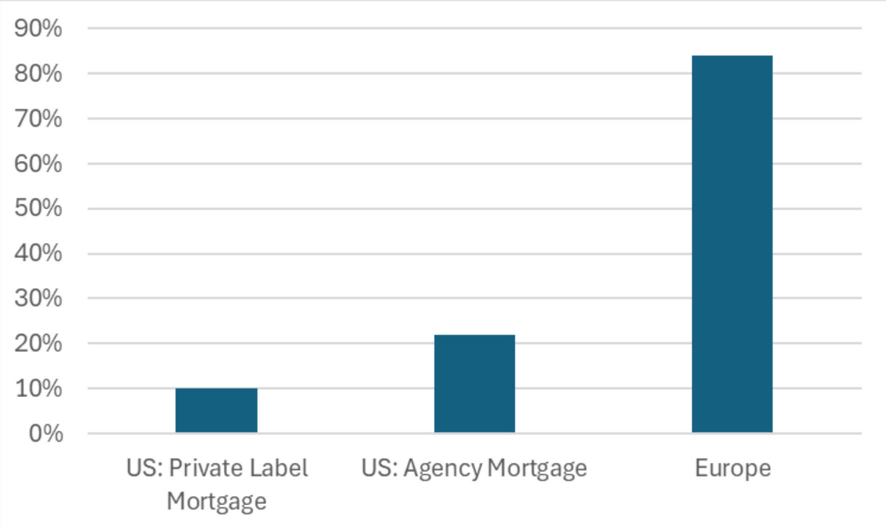
NONBANK SHARE VARIES ACROSS TIME AND COUNTRIES

NONBANK SHARE OF FHA MORTGAGE ORIGINATION AND SECURITIZATION



Source. Benson, Kim, and Pence (2025).

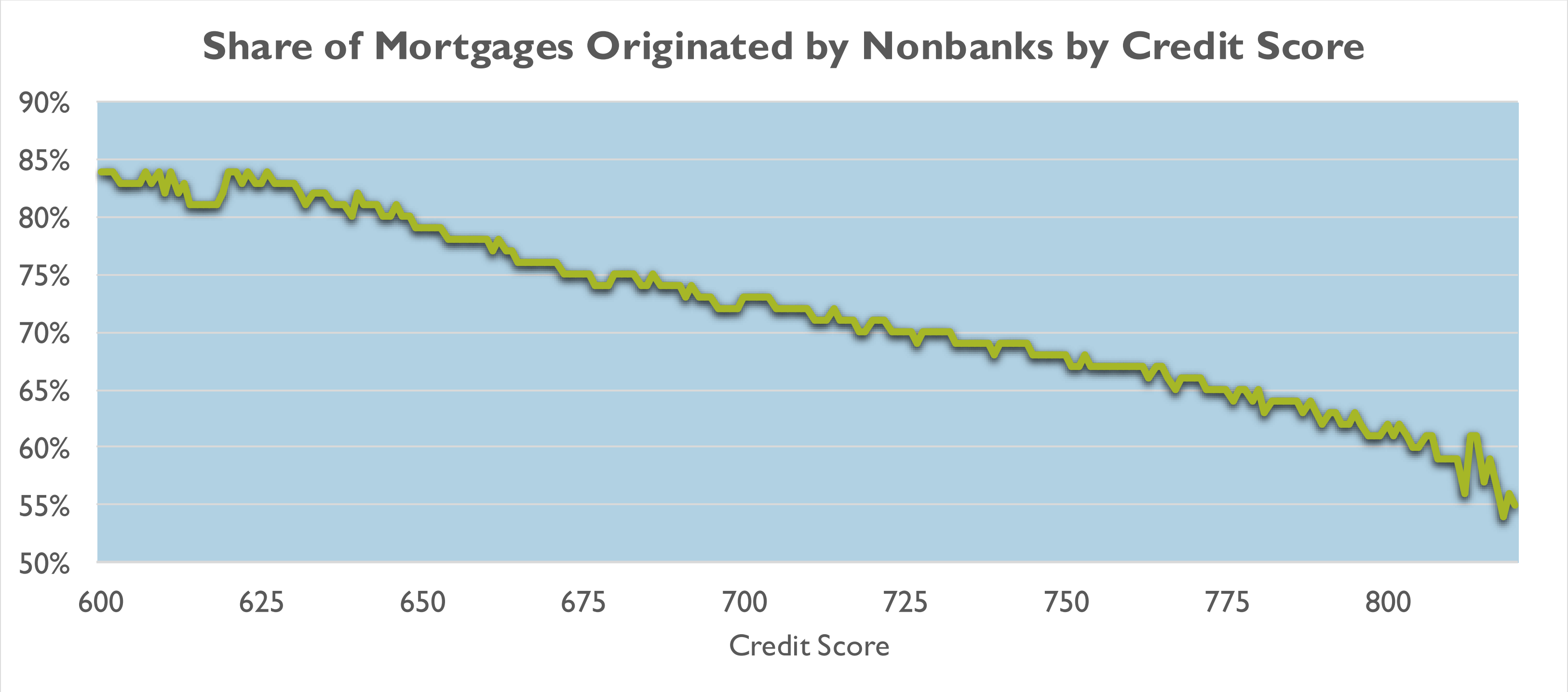
APPROXIMATE BANK SHARE OF SECURITIZATION INVESTORS



Note. Europe includes all types of securitizations. US includes RMBS and CMBS. Source. Financial Accounts of the United States and Financial Stability Board.

ACCESS TO CREDIT

U.S. MORTGAGE BORROWERS WITH LOW CREDIT SCORES GENERALLY USE NONBANKS



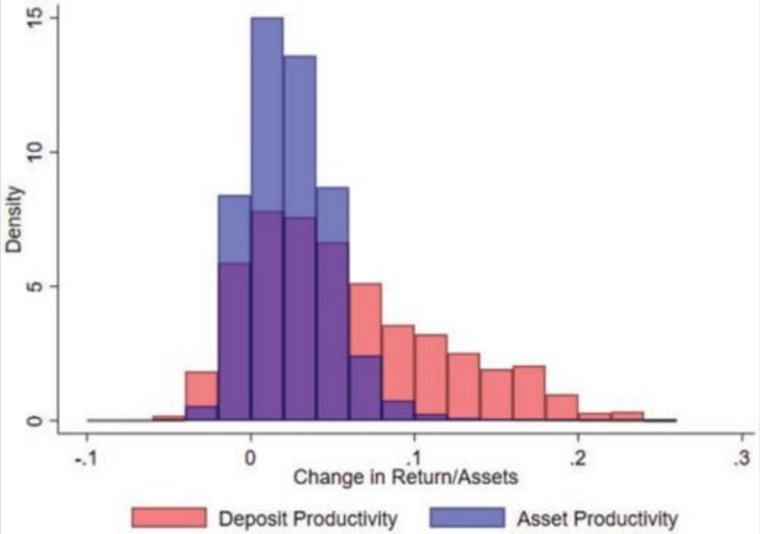
Source. Home Mortgage Disclosure Act, 2021.

WHY MIGHT NONBANKS HAVE A GREATER TASTE FOR CREDIT RISK?

- Nonbanks face a less comprehensive regulatory regime
- Nonbanks are monolines while banks have multiple business lines
  - Banks want to cross-sell products and protect their franchise value
  - Banks experience financial and reputational hits from mortgage credit losses that could impair their ability to sell other products
  - Low credit score borrowers may be less profitable customers in areas where banks have a comparative advantage: deposits, credit cards, wealth management

BANK PROFITABILITY BY PRODUCT LINE

Bank profitability from deposits relative to loans



Source. Egan, Lewellan, and Sunderam (2022)

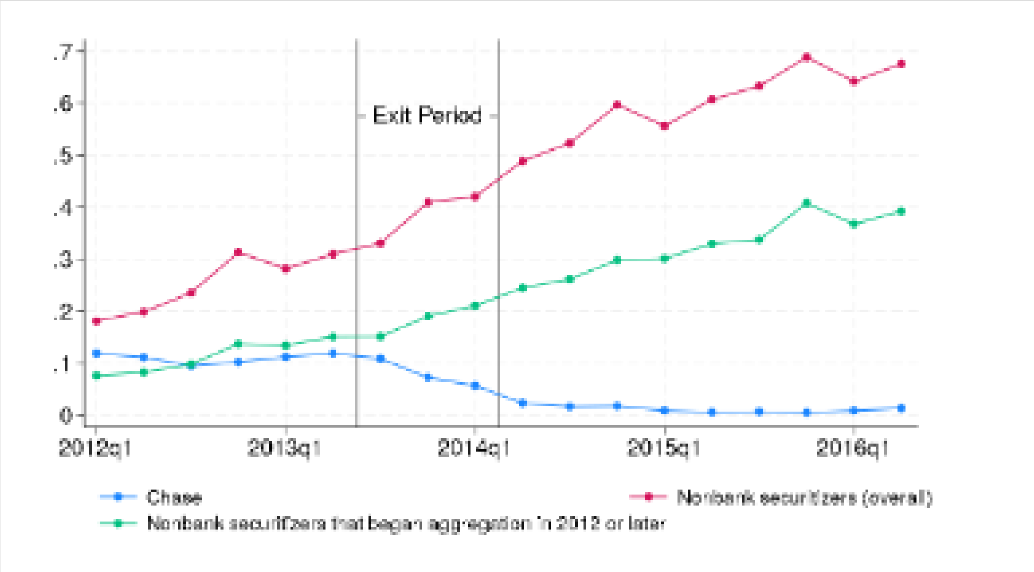
"Why are we in the mortgage business? As a bank that wants to build lifelong relationships with its customers, we want to be there for them at life's most critical junctures" (CEO Dimon's shareholder letter, 2015)

EXPERIMENT: BIG BANK WITHDRAWAL FROM FHA SECURITIZATION

CHANGES IN MARKET STRUCTURE FOR SECURITIZATION OF FHA MORTGAGES

- Borrowers with low credit scores in the United States generally get mortgages insured by the Federal Housing Administration (FHA)
- In the early 2010s, large banks pulled back from FHA origination and securitization because of foreclosure costs
- Nonbanks entered the market
- We look at how borrower outcomes changed as nonbanks replaced JPMorgan Chase in the FHA securitization market

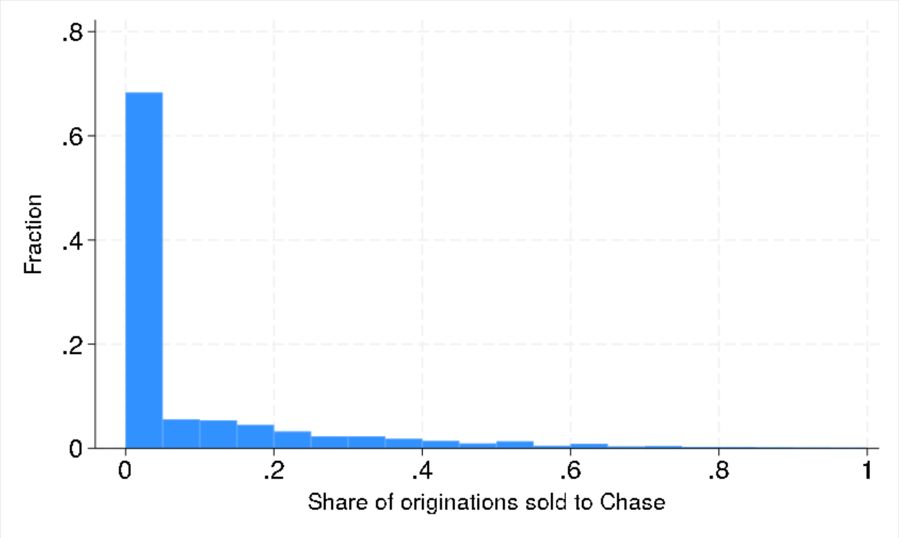
FHA Securitization Market Share



Source. Benson, Kim, and Pence (2025)

VARIATION ACROSS ORIGINATORS IN EXPOSURE TO CHASE'S PULLBACK

ORIGINATOR VARIATION



Source. Benson, Kim, and Pence (2025)

SPECIFICATION

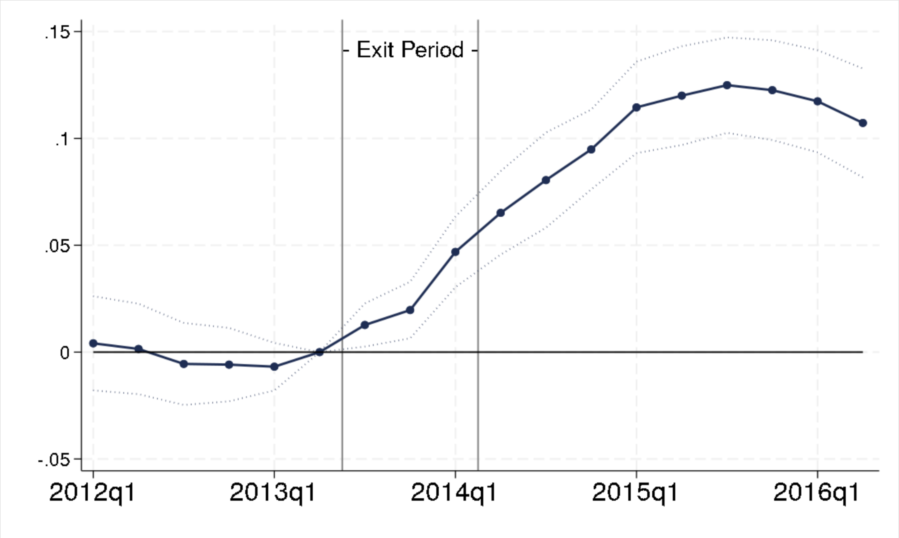
$$y_{jct} = \sum_{\tau=t^*-6}^{t^*+11} \beta_\tau H_j 1[\tau = t] + \delta_{jc} + \delta_{ct} + \epsilon_{ijt}$$

- β_τ traces out how the outcome variable y_{jct} evolves relative to the pullback quarter t^* by the share of loans that the originator sold to Chase pre-exit (H_j)

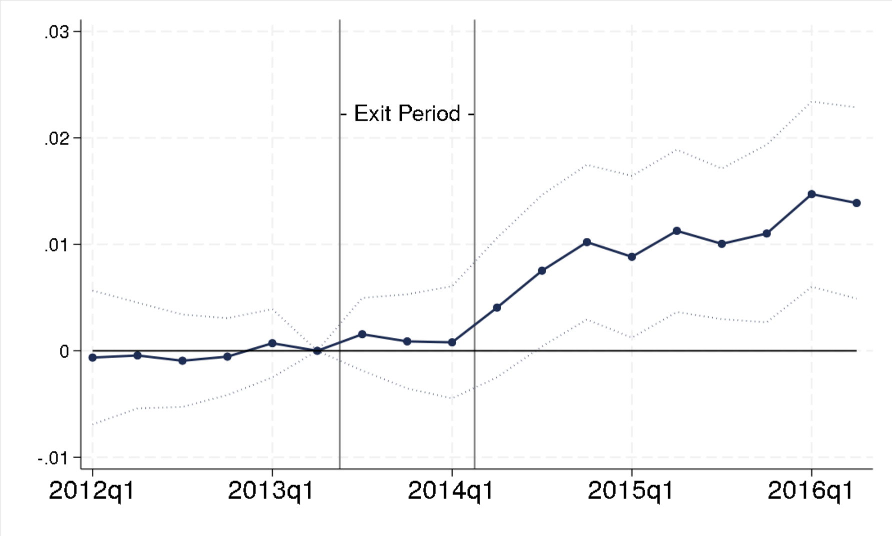
- Controls for confounding factors with originator *j* X county *c* and quarter *t* X county *c* fixed effects (spirit of Khwaja and Mian (2008))

ORIGINATORS SWITCHED TO NONBANK SECURITIZERS AND EASED CREDIT STANDARDS

NONBANK SECURITIZER SHARE



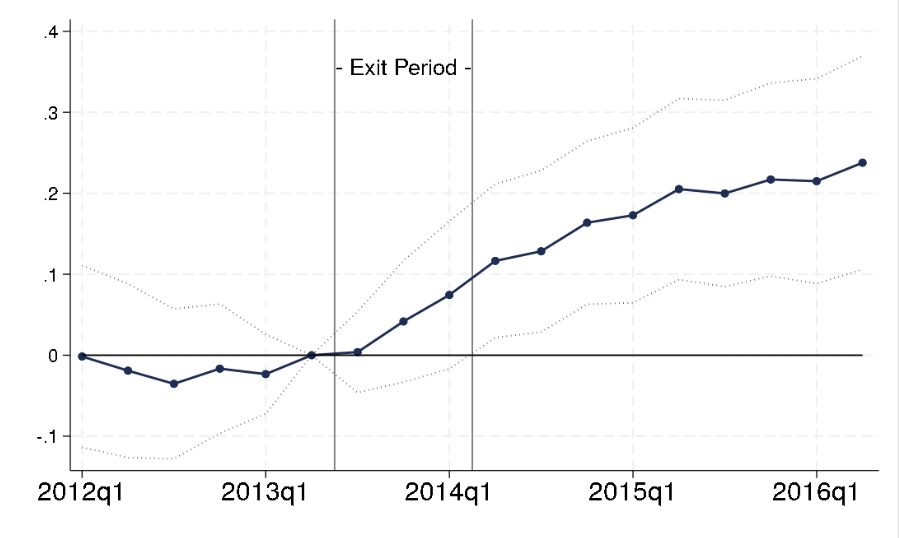
SHARE OF LOANS WITH CREDIT SCORES LESS THAN 640



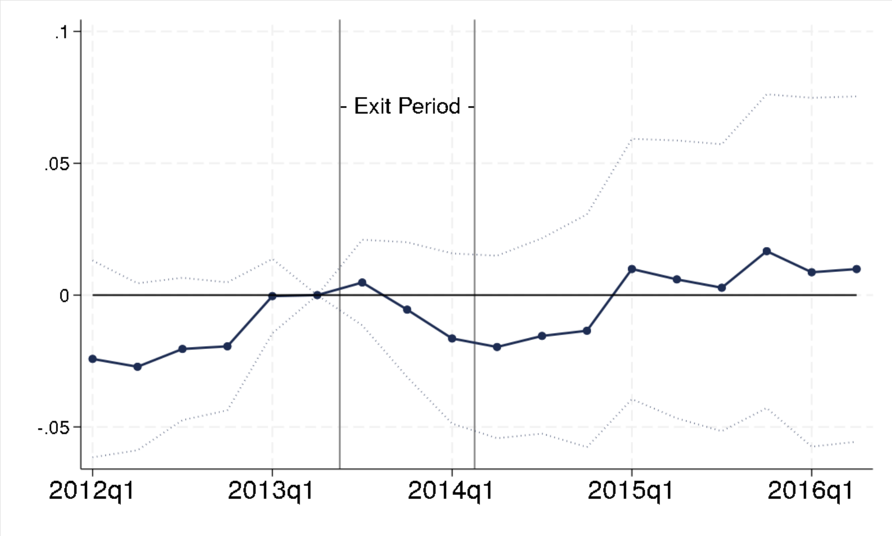
Note. Coefficients are average treatment effect on treated. Source. Benson, Kim, and Pence (2025).

ORIGINATIONS ROSE TO LOW-SCORE BORROWERS

NUMBER OF ORIGINATIONS WITH CREDIT SCORES < 640



NUMBER OF ORIGINATIONS WITH CREDIT SCORES >640



Note. Poisson regressions. Source. Benson, Kim, and Pence (2025).

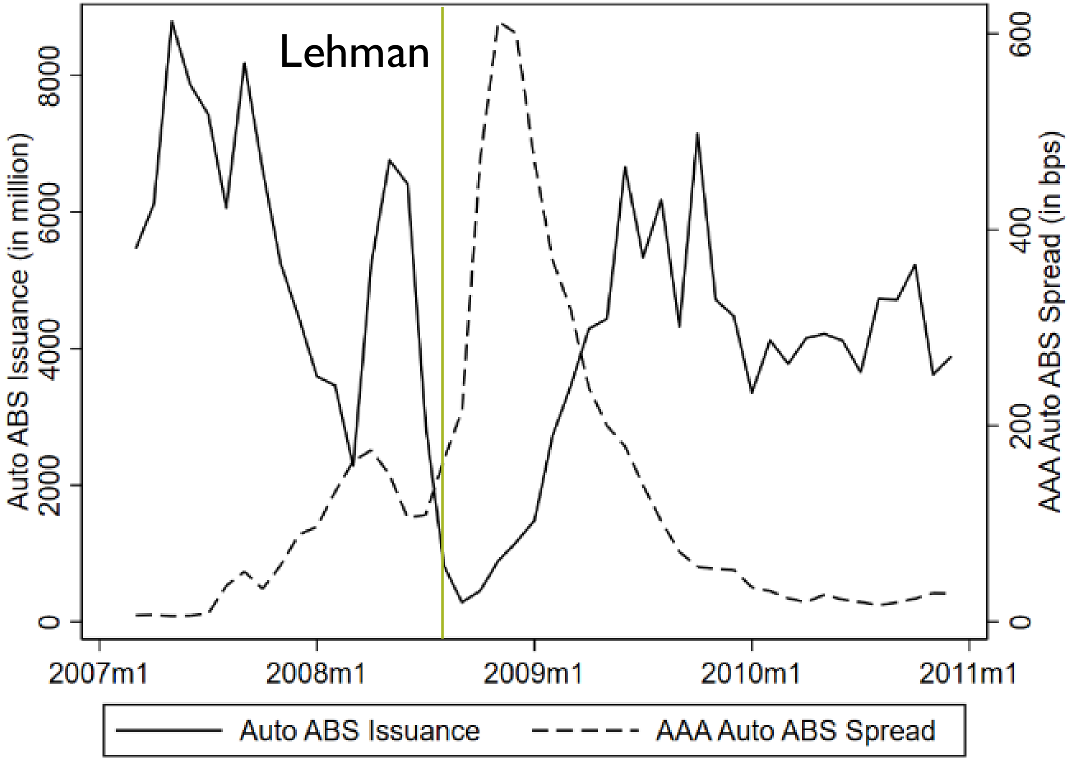
ARE HOUSEHOLDS BETTER OFF?

- Nonbank securitization leads to an expansion of mortgage credit to borrowers with lower credit scores
  - Borrowers presumably better off as long as they keep their homes
- However, delinquencies also increase--both unadjusted and conditional on credit score and other credit characteristics
- Securitizers generally are also the mortgage servicers and carry out crucial functions on behalf of MBS investors and guarantors
- Nonbank securitizers' lower franchise value may lead them to execute these functions with less care
  - Can lead to worse outcomes for borrowers (Cherry et al., 2021, 2022; Kim et al., 2024)

STABILITY OF INTERMEDIATION CHAIN

ABS MARKETS DURING THE FINANCIAL CRISIS

- Securitization markets collapsed in late 2008 in the aftermath of the Lehman bankruptcy
- ABS spreads widened so dramatically, in part, because of a liquidity premium after some ABS investors imploded during the financial crisis



Source. Meisenzahl and Pence (2025)

TERM ASSET-BACKED SECURITIES LOAN FACILITY (TALF)

- Securitization funds a large share of borrowing in the United States
- The ABS market collapse threatened to exacerbate the credit crunch and harm the macroeconomy
- The Federal Reserve (in conjunction with the US Treasury) created a liquidity facility that extended loans to investors to purchase high-quality ABS
- TALF ran from March 2009 to June 2010
- TALF was successful in restoring liquidity to the ABS market and thereby bringing down the cost of credit (Campbell, Covitz, Nelson, and Pence, 2011)

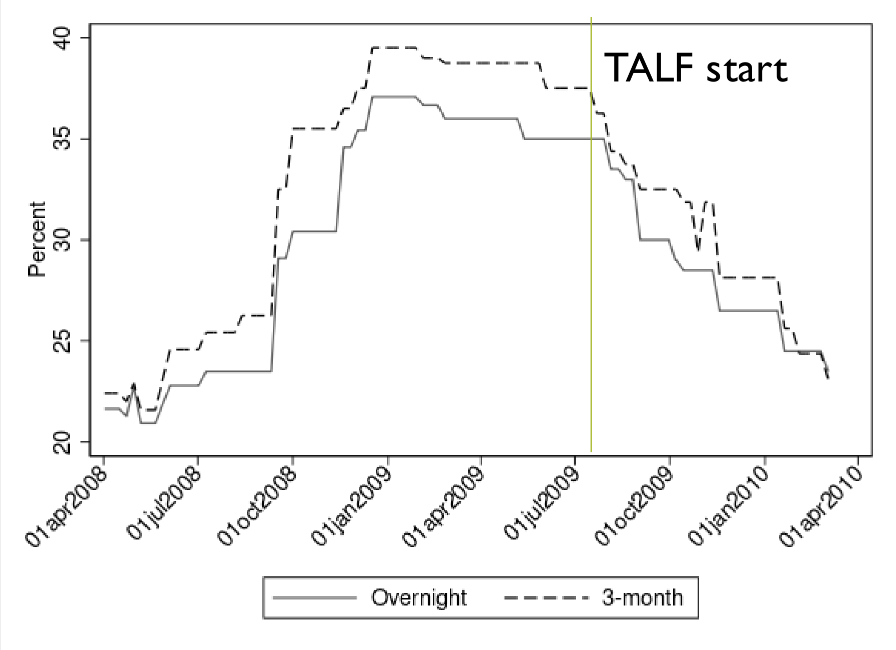
TALF LEGACY CMBS PROGRAM

- The “legacy CMBS” TALF program accepted secondary-market CMBS as loan collateral
- Many of these CMBS were underwritten during periods of lax underwriting
- The Federal Reserve wanted investors to have “skin in the game”
  - To ensure that sales transactions were arms’ length and provided the market with accurate information about pricing
  - To guard against adverse selection
- The Federal Reserve assessed the credit quality of CMBS submitted as collateral and rejected some submissions
- Rejections were costly: investors had to line up more-costly bridge financing or sell the security (often at a loss)

TALF BORROWERS' FUNDING CONSTRAINTS

- Some TALF borrowers (mutual funds, private funds with committed capital) had stable funding sources throughout the TALF program
- Other TALF borrowers (hedge funds, mortgage REITs) were dependent on short-term repo funding that was expensive and hard to get

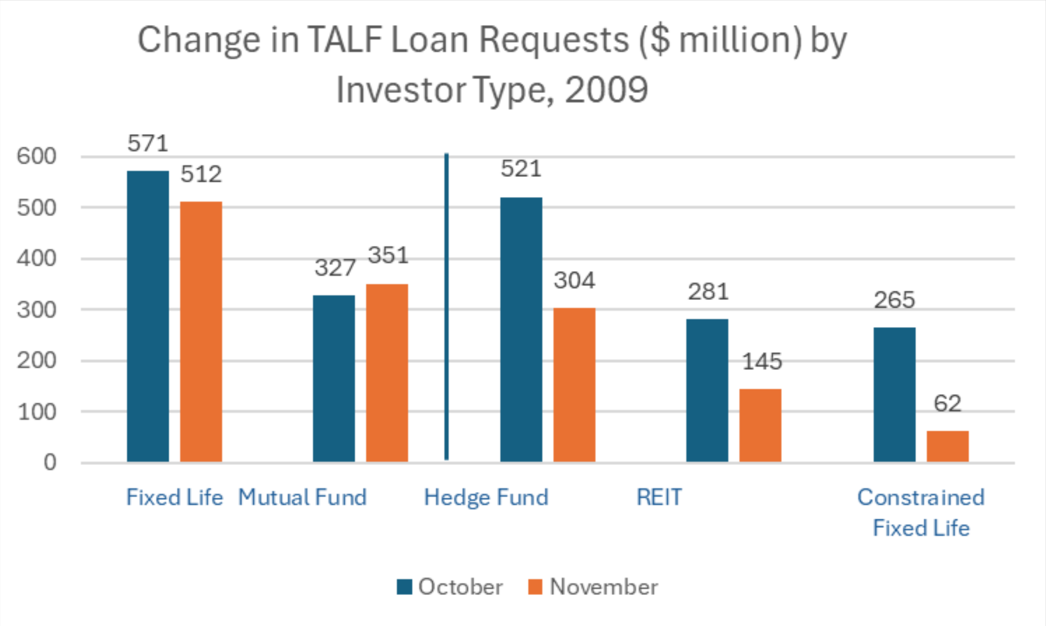
Median Haircuts on Repo Loans Collateralized by CMBS



Source. Meisenzahl and Pence (2025)

INVESTOR BEHAVIOR IN RESPONSE TO REJECTION RISK

- After the September 2009 TALF subscription, investors thought that they had figured out the Fed's credit review algorithm
- The October subscription had a surge in loan requests
- Investors were wrong: the October rejections "roiled the market" and "several investors have started to compare the TALF rejection process to a 'random number generator'"



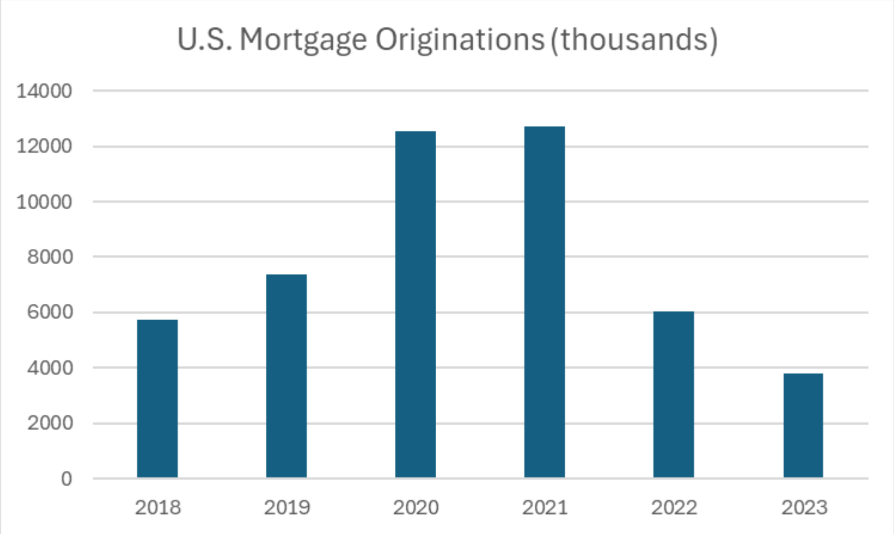
Source. Meisenzahl and Pence (2025)

IMPLICATIONS

- CMBS spreads widened after the unexpected October rejections
  - The funding structure of investors in the financial intermediation chain can affect the ability of borrowers to get credit
- This issue is not unique to nonbanks
  - Banks can also experience funding or capital strains that cause them to pull back from credit intermediation
- However, in times of crisis, central banks have a wider toolkit to intervene with a bank than a nonbank

CONCLUDING THOUGHTS

- Mortgage intermediation chain centered on nonbanks may be more nimble and less stable
- Nimble
  - The 30-year fixed-rate mortgage in the US can cause big swings in loan demand
  - More credit to marginal borrowers
  - Nonbank investors may enter and stabilize dislocated markets
- Stability
  - Mortgage servicing benefits from a long-term counterparty
  - More loan delinquencies
  - Nonbanks can also withdraw from investing



Source. Home Mortgage Disclosure Act. First-lien mortgages for a principal residence.

THANK YOU!