Bank Aggregator Exit, Nonbank Entry, and Credit Supply in the Mortgage Industry*

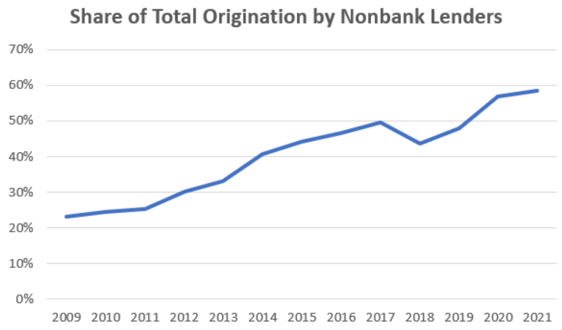
David Benson   You Suk Kim   Karen Pence

Federal Reserve Board

FDIC Conference: September 28, 2023

*The analysis and conclusions set forth are those of the authors and do not indicate concurrence by the Board of Governors or other members of the staff.

Nonbank share of mortgage originations has soared



- Literature has focused on the shift to nonbank originators: Buchak et al. (2018 & 2020); Fuster et al. (2018); Gete and Leher (2018)
- But originators are only part of the intermediation chain

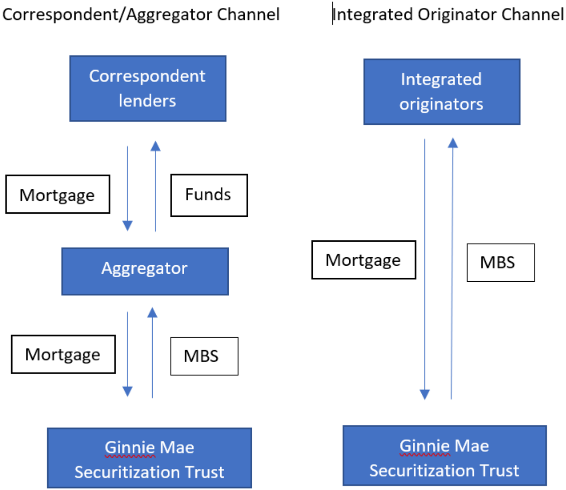
Goal of This Paper

- Originators often sell loans to *aggregators*, who then securitize the loans
- Many originations (e.g., half of FHA originations) are sold to aggregators

This paper:

- documents dramatic shift to nonbanks in the aggregator space in Federal Housing Administration (FHA) mortgage lending
- estimates its effect on market structure and credit supply in the FHA market

FHA Mortgage Origination Channels

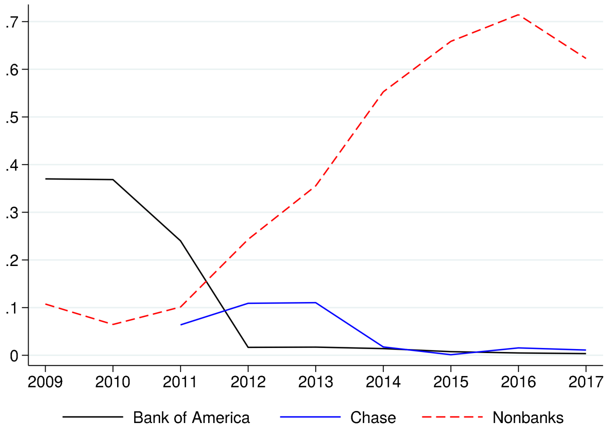


Aggregators

- Purchase loans from "correspondent" lenders, pool and issue MBS
- Account for more than half of GNMA MBS issuance
- Only "Ginnie Mae issuers" can issue GNMA MBS
- Becoming a Ginnie issuer is cost-effective for larger lenders

Exit of Bank Aggregators and Rise of Nonbank MBS Issuers

Share of GNMA MBS issuance



<u>BOA and Chase</u>

- Over 70% of FHA loans they securitized were originated by third-party

<u>What led to the exit?</u>

- False Claims Act lawsuits targeted big banks
- Post-crisis bank regs (stress testing, Basel III)

Research Design

Effects of the exits on market structure and credit supply in FHA lending?

Difference-in-differences design

- Cross-county variation in market shares of BOA and Chase prior to exits

Home purchase loan data

- HMDA
- FHA administrative microdata

Summary of DID Results

FHA Market Structure

- Nonbanks replaced 50-60% of BOA and Chase's share as MBS issuers
- Shift to integrated channel: more originations by vertically integrated nonbank originators-issuers, who also securitize own originations

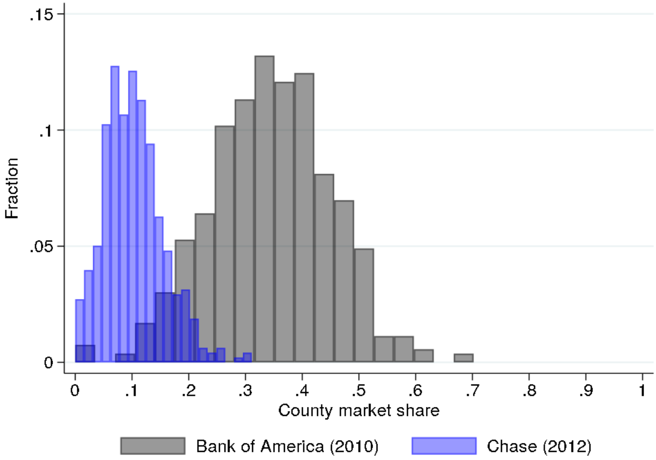
Credit Supply

- More lending to low-score borrowers
- If exiting banks had pre-exit market share of 100% $\Rightarrow$ 10pp increase in share of originations to below-median credit scores

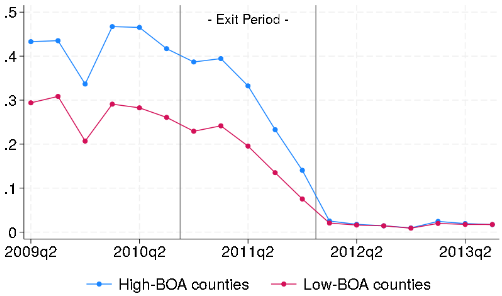
Contribution

- Roles of banks and nonbanks in mortgage industry: Buchak et al. (2018); Gete and Reher (2018); Buchak et al. (2020); Begley and Srinivasan (2023); Buchak et al. (2023); Degerli and Wang (2023); Jiang (2023);
- Empirical evidence on function of aggregators: Stanton et al. (2014); Stanton et al. (2018)

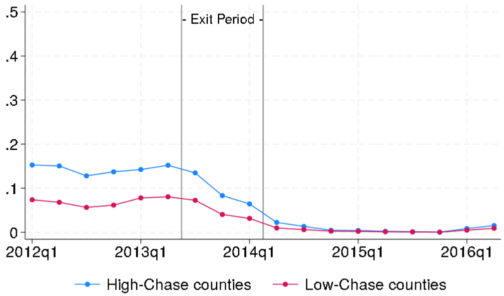
Identification strategy: county-level variation in pre-exit share of loans securitized by exiting bank



County-level share of loans securitized by exiting bank



BOA Exit

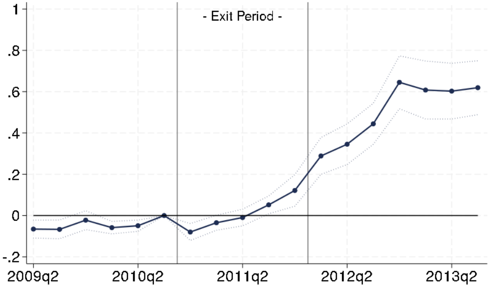


Chase Exit

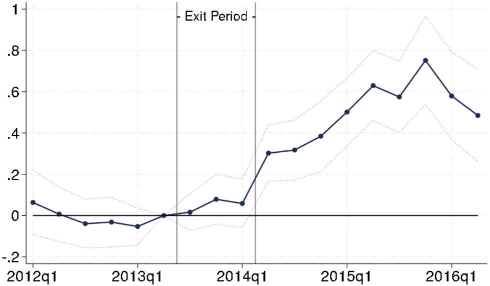
- Exit process took several quarters
- Effects of the exits would be more gradual during the exit period

Nonbanks replaced exiting banks as Ginnie Mae MBS issuers

County-level share of loans that nonbanks securitize into Ginnie MBS



BOA Exit



Chase Exit

- Nonbanks replaced 50-60% of BOA and Chase's share as Ginnie MBS issuers

Responses by originators: whether and to whom to sell loans?

- Originators that sold originations on BOA or Chase have three options:
  1. selling to another bank aggregator
  2. selling to a nonbank aggregator
  3. securitizing own originations as vertically integrated originator-issuer
- Option 3 requires changes in the business model of correspondent lenders

Nonbank Issuer Share by Business Model

	BOA's exit			Chase's exit		
	(1) Purchased or originated by nonbank issuers	(2) Purchased by nonbank issuers	(3) Originated by nonbank issuers	(4) Purchased or originated by nonbank issuers	(5) Purchased by nonbank issuers	(6) Originated by nonbank issuers
Exit Period × Pre-exit County-level Share (S_{ct})	0.056***	-0.028**	0.083***	0.053	0.047	0.006
	(0.019)	(0.013)	(0.016)	(0.052)	(0.039)	(0.043)
Post Exit × Pre-exit County-level Share (S_{ct})	0.543***	0.222***	0.321***	0.520***	0.323***	0.196***
	(0.055)	(0.025)	(0.039)	(0.075)	(0.067)	(0.054)
County FE	Y	Y	Y	Y	Y	Y
Quarter FE	Y	Y	Y	Y	Y	Y
N. Obs.	3,043,713	3,043,713	3,043,713	2,645,691	2,645,691	2,645,691
Adj. R^2	0.80	0.63	0.76	0.91	0.83	0.82

- Exits led to changes in business model of nonbank correspondent lenders
- Additional result: large originators that relied more on exiting banks became Ginnie Mae MBS issuers

Exits led to more lending to low-score borrowers

Share of originations to credit score < 680 ($\approx$ median)

BOA Exit

Chase Exit

Possible mechanisms for increased credit box

1. Nonbanks may be more willing than banks to take risks in origination
   - Nonbanks can expand their operations only by reaching to riskier borrowers, whereas banks have multiple product lines (Gissler et al, 2020)
   - Banks have more franchise value at stake and may be more cautious
2. Vertically integrated nonbank originator-issuer can monitor quality of underwriting of potentially risky loans

- Additional results suggest that both mechanisms are important

Conclusion

- Crucial change in mortgage market is the rise of nonbanks as aggregators or vertically-integrated lenders
- These changes resulted in increased credit box
- Welfare implications are not very clear (Kim et al, 2016)
- Some evidence of inefficiency from nonbank servicers in the context of pandemic-era mortgage forbearance (Jiang et al, 2020; Kim et al, 2023)