Nonbank Issuers and Mortgage Credit Supply

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Motivation

- This paper documents the rise in Non-Bank (NB) Issuers
- Background: issuer is who aggregates a package of loans, then sells them to a securitizer. The securitizer gives the issuer back an MBS.

- Important to understand the rise of NB issuers and what it means for access to credit, because we already have an understanding of:
  - originators (Buchak et. al. (2018, 2024); Fuster et al. (2019); Gete & Reher (2021); Jiang (2023); Sarto & Wang (2023)
  - servicers (Jiang, Hamdi, Lewis, Padi, Pal (2023); Padi (2023); Buchak et. al (2023); Cherry et. al. (2022); Cherry et. al (2021); Aiello (2022); Kim et. al (2022a); Degerli and Wang (2022))
- Little work on Non-Bank Issuers

What They Do?

- Study FHA loans because there is a shock in the FHA market
- Shock: Chase Bank leaves the FHA market beginning 2013Q3
  - Shock allows them to identify the effect of issuer because Chase was mainly an issuer in this market, not an originator
- Research Design: shock only the issuer, not the originator → originators' prior downstream market relatively unaffected
  - Measure is changes that occur in response to the issuer changing:
    - Either a change in issuers who then pass through requirement changes to originators
    - Or changes in issuer spurs vertical integration of issuer-originator model and they price differently because they have more information about borrowers - indirectly related to changes of issuers (equilibrium effect)

Econometric Strategy: DID Continuous Treatment

$$y_{ict} = \sum_{\tau=t^*-6}^{t^*+11} \alpha_\tau S_c \times 1_{\tau=T} + X_{ict}\gamma + \delta_c + \delta_t + \epsilon_{ict}$$

- y_{ict} = indicator for non-bank issuer, min-credit score, average credit score, LTV, DTI, 60+ DPD
- S_c = pre-period market share of Chase in a county
- $1_{t=T}$ = indicator for month
- X_{ict} = controls
- δ_c & δ_t = county and month FE
- $\epsilon_{z,t}$ = error term

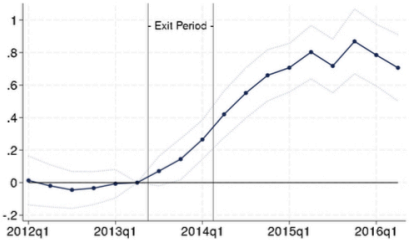
Findings

1. Non-Bank issuers increase market share
2. Majority of increase driven by Non-Bank aggregator issuers entering
3. Some of increase driven by rise of issuer-originator model
4. Credit scores decline, borrower delinquencies increase

Effects on Lending – Borrower Creditworthiness

- Non-bank issuers increased post Chase exit
- Minimum credit score (& average credit score) decreased

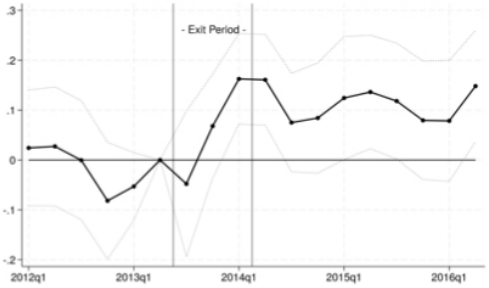
Figure 6: Effects of Chase's Exit on Market Share of Nonbank Issuers



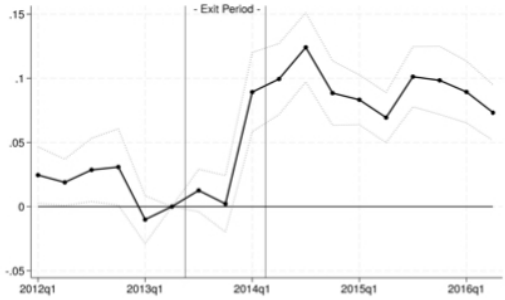
(a) Minimum Credit Score (by lender and market)

Effects on Lending – Effect on Interest Rate

- Interest rates increased in exposed counties
- Funding costs increased in exposed counties



(a) Mortgage Interest Rate



(b) Funding Cost per Loan (APR)

Main Comment 1- Quantifying Issuer Direct Effect

- Quantify only issuer effect versus issuer-originator equilibrium effect
- Find the same originator who is selling to more than one aggregator/issuer and compare loans with the aggregator/issuer (who changed) with a loan from the same originator that did not change aggregator/issuer

- Possible Soln: Use Originator FE and vary issuer exposure to Chase – Hold fixed the originator and change the issuer pre/post Chase $\rightarrow$ look at differences in credit scores and interest rates on the loans originated post relative to pre?
  - Currenly include issuerType-originatorType-originationChannel-county-quarter FE
  - Thus seems the same originator can sell to more than one issuer (issuers of different type)
  - Possible to use this variation to isolate how an originator changes its loans for one issuer (that changes) relative to its loans for another issuer (that stays the same)?

Main Comment 2 - Disentangling Servicer Effect

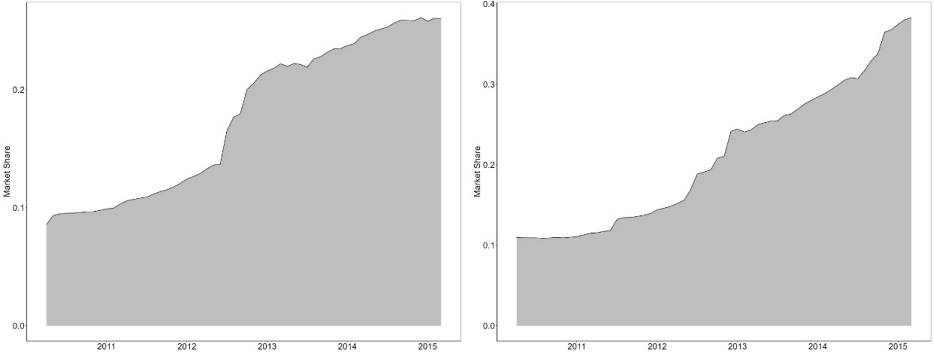
- Difficult to disentangle effect of servicer rather than issuer
- 2012Q3-2013Q3 Basel 3 passed MSR rule change – made it more costly for banks to service mortgages, led non-banks to move into the servicing market, which may affect incentive to be an issuer.
- Best piece of evidence is that Chase market share is not correlated with higher bank marketshare overall.
  - If it was, treatment would be correlated with exposure to the Basel 3 rule change
- BOA robustness test result are also helpful since BOA announced its exit in 2011Q3, before the Basel III MSR rule change was adopted

- Possible to observe whether servicer changed or remained the same?
- If so, could apply comment 1 and further partition it to loans whose servicer remained the same versus changed

Main Comment 2 - Servicer Growth in FHA/GSE Market

- NB servicing grew in GSE and FHA market, so this could be a global change that is correlated with Chase (or other banks) leaving the FHA market

Figure E1. Rise of Non-Bank Servicers



(a) GSE **(b)** FHA

Main Comment 3 - Continuous DiD

- Continuous DiD estimator utilizes the normal distribution across treatment “dose"
- Parallel trend assumption assumes that the response of a county increasing treatment does by 1% is the same for counties with a dose of 2% and 99%
  - More likely to hold if county doses are clustered around the mean
  - For example, increasing Chase Mkt Shr 1% is more likely to have the same effect if the dose level of two counties is 54% and 55%

Main Comment 3 (Cont'd) - Continuous DiD

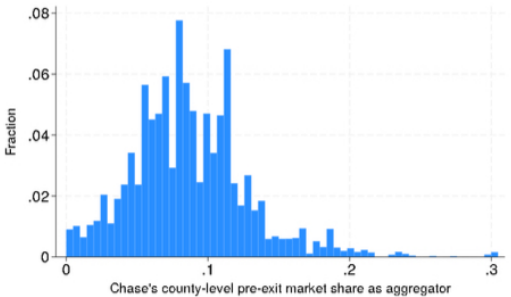
- Plot the TWFE weights at each treatment dose that the estimator uses (discussion in Lewis JFE (2023) Online Appendix)
  - TWFE more heavily weights observations that fall near the mean of the support of treatment "dose"
- If effect on the dependent variable is stronger at these higher levels of treatment than it is near the median of the support, then the estimated coefficient can be biased up (at each time period in a dynamic event plot)

Possible Remedy:

- Do not think that this will change results but would be good to plot treatment distribution against the TWFE weights.
- Can also run a robustness windsorizing the Chase Mkt Shr variable
- Add discussion of why increase in treatment effect will likely be the same at all treatment "dose" levels

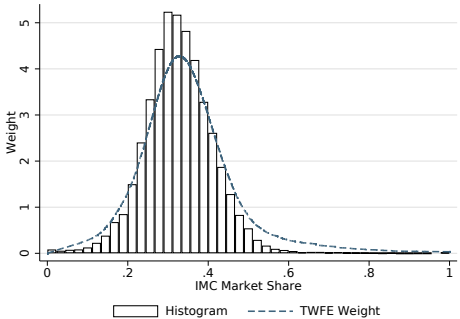
Main Comment 3 (Cont'd) - Continuous DiD

Figure 1: Chase Mkt Shr Wgt



(a) Cross-County Variation in Exposure to Chase Exits

Figure 2: Treated Mkt Shr v TWFE Wgt (Lewis '23)



Thank You!