Discussion of: Did Technology Contribute to the Housing Boom? Evidence from MERS

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New Perspectives on Consumer Behavior in Credit and Payments Markets

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Technology and the mortgage market

Technology has revolutionized mortgage market in recent decades

- E.g., automated underwriting & use of credit scoring (Foote-Loewenstein-Willen, 2018). Online applications, document capture. Automated processing. Computationally intensive modelling / valuation by capital market investors etc.

This paper: Causal effect of MERS? Central registry holding mortgage deed – records transfers of servicing and beneficial ownership rights

- MERS particularly useful if mortgage is to be securitized (Fannie and Freddie played a big role in creation of MERS)
- Also a way to avoid county recording fees / taxes

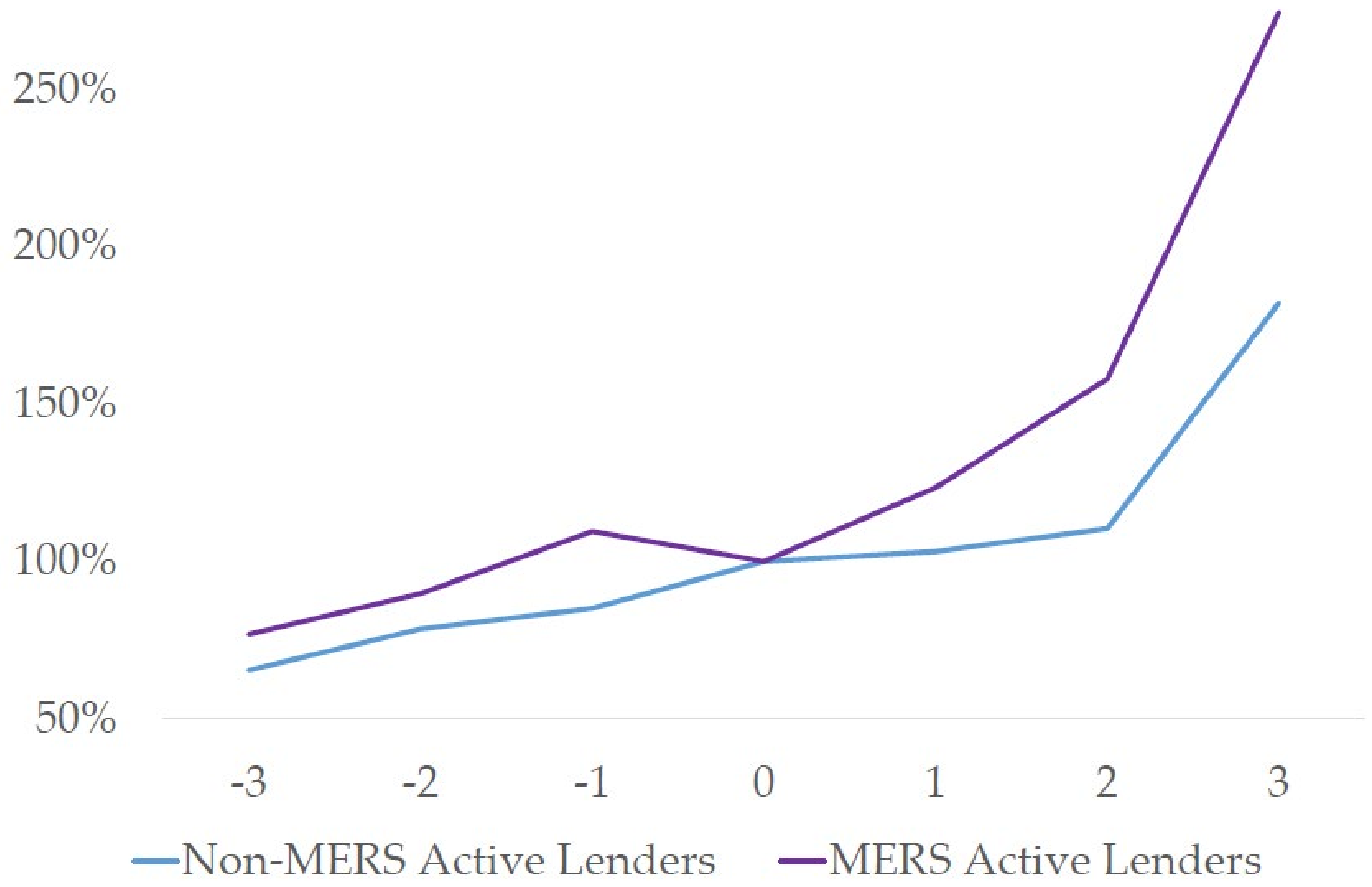
Data

- Novel topic, and particular kudos for lots of painstaking data work with deeds data and HMDA.
- <u>Question</u>: feasible to expand to nationwide sample e.g., using Zillow?
- Would be valuable to present more “simple” descriptive statistics + cross tabs about MERS uptake:
  - **Which types of originators?** Nonbanks! Larger banks?
  - **Which types of mortgages?** E.g., by home price growth in local area? By HMDA purchaser type (e.g., low uptake for portfolio loans)?
  - **Clustering?** Strategic complementarities in joining up.

Identification strategy – exploit network structure

- Result: “MERS active” lender volume ↑11% in “post” period (t+1)

(MERS) membership has its privileges?



Key challenge for the paper

- Large, persistent (multi-year), positive effect on lending. (Magnified if lenders have multiple investors who join in different years?)

- But any lender could join MERS at relatively low cost ($250 fee?). Why would non-adopters leave money on the table?

- Hard to shake concerns about endogeneity in *investor* adoption of MERS.
  - E.g., *reflects business strategy* -- investors join MERS when they have high demand for "PLS-ready" loans, where nonbanks specialize?

- One approach: beef up evidence on parallel trends (but hard during this period)

Control group

Event: Mortgage investor *i* joins MERS in year t

- Treatment = Lenders who sold to investor *i* in t-1 and are MERS members in t-1

- Control = Lenders who sold to investor *i* but **not on MERS in *either* t-1 or t+1**

<u>Suggestion</u>: Don't condition on ex post information to define control group – selecting on "woodhead" originators?

>> Simple tweak -- define groups based on t-1 MERS membership only.

Functional form

- Dependent variable = $\ln(\text{lending}_{ijct})$.
  - What about extensive margin? Ln(0) = missing.
  - E.g., lender becomes more/less specialized? (esp with lender x investor dummies).
  - My experience: estimates very sensitive to functional form (e.g., ln(1+lending), inverse hyperbolic sine etc.) Nonlinearities make interpreting coefficients difficult.
  - This is an issue in many papers!

- Alternative: loan level linear probability model; dependent variable = 1 if lender is in the treatment group
  - Without controls: “post” is raw estimate of how market share of treatment group changes. Can then control for geography fixed effects, loan characteristics etc.
  - This is what we tried in Fuster, Plosser and Vickery (2018)

Work to make empirical choices clear

Lots of work and subtleties here. Try and be clear about the details!

- Lender x purchaser fixed effects, but can't actually measure who buys loan during t+1?
- Explain exactly how is sample defined – give us the "cookbook recipe"
- "Build up" result from summary statistics to show how all the fixed effects matter
- Unit of observation – tract x originator x year? tract x originator x purchaser x year
- How do you deal with overlapping events (e.g., an originator has investors who join MERS in 2001, 2002, 2003). Stack all events?
- Census tracts vs zip codes? etc.

<u>Summing up</u>: Creative, novel paper on the plumbing of the mortgage market. Lots of other issues related to MERS (e.g., foreclosures) for future research.