

Discussion of
“Tech-Driven Intermediation in the
Originate-to-Distribute Model”
by Zhiguo He, Sheila Jiang, and Douglas Xu

Vadim Elenev
Johns Hopkins Carey
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Model: No Middlemen

- ~~Prabha~~ Jerry makes good widgets; I make bad widgets.
 - We make them out of the same clay. Upward-sloping supply curve.
- We want to sell them (retention has convex cost) to you
 - But can't sell all: must retain a fixed fraction of inventory
- Social planner would
 - Have Jerry do all the production so that I don't waste scarce clay on my bad widgets
 - Have me bear some of the retention costs and compensate me for this
- Equilibrium: You want to buy widgets but don't observe their quality
 - Retention constraint avoids lemons market failure
 - Pooled price, inefficiently low production by Jerry
 - My production drove up the clay price ("productive inefficiency")
 - Marginal cost of retention all borne by Jerry, who limits his production accordingly ("allocative inefficiency")

Model: ideal(ized) fix

- Jerry and I are absolute widget experts, can tell each other's quality perfectly
- Jerry sells some of his widgets to me first
- Then I no longer have a reason to produce my bad widgets
 - Solves productive inefficiency
- And we equalize our marginal retention costs
 - Solves allocative inefficiency
- Perfect information assumption here seems unrealistic. But can some other kind of technology accomplish a similar result?

Model: Middlemen

- Douglas is a widget expert. What if he starts a middleman business?
 - He can tell how shiny the widgets are
 - Shiny ones are (probably) good, dull ones are (probably) bad
 - “Probably” – effectiveness of Douglas’s screening technology
- Two markets: for shiny widgets and for dull widgets
- What if Douglas is not much of an expert after all? Still pooling equilibrium
 - More production overall (+ welfare)
 - Bigger wedge in retention cost (- welfare)
 - Net effect ambiguous, could be negative **in the “tech-irrelevant” region**
- What if Douglas really has high expertise? He doesn’t buy dull widgets
 - I retain more than Jerry because his are more likely to be shiny
 - More production without higher retention cost wedge!
 - Net positive effect on welfare **in the “tech-relevant” region**

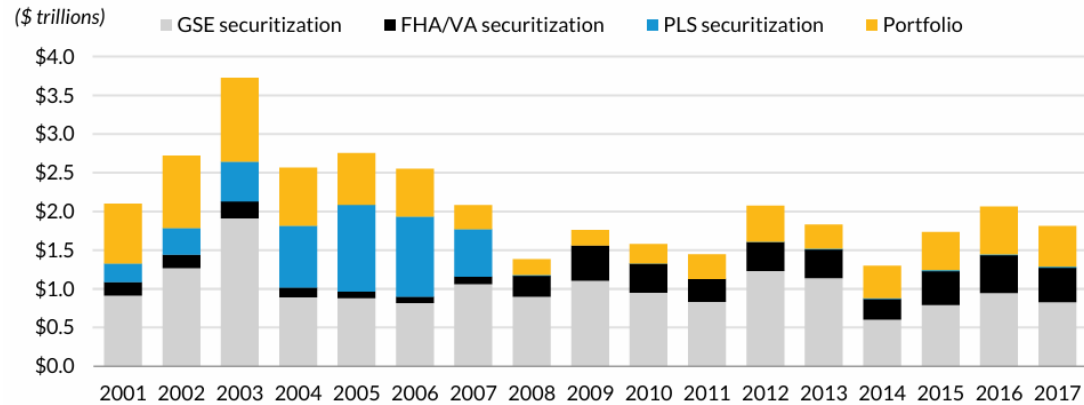
Application: Securitized Asset Markets

- Originators are widget makers (Jerry and me)
- Investors are the ultimate buyers (you)
- Either originators securitize themselves or securitization is done by specialized intermediaries (middlemen, Douglas)
- Policy implication: if the intermediaries have an effective screening technology, they should have higher balance sheet capacity
 - E.g., lower capital requirements
 - And vice versa

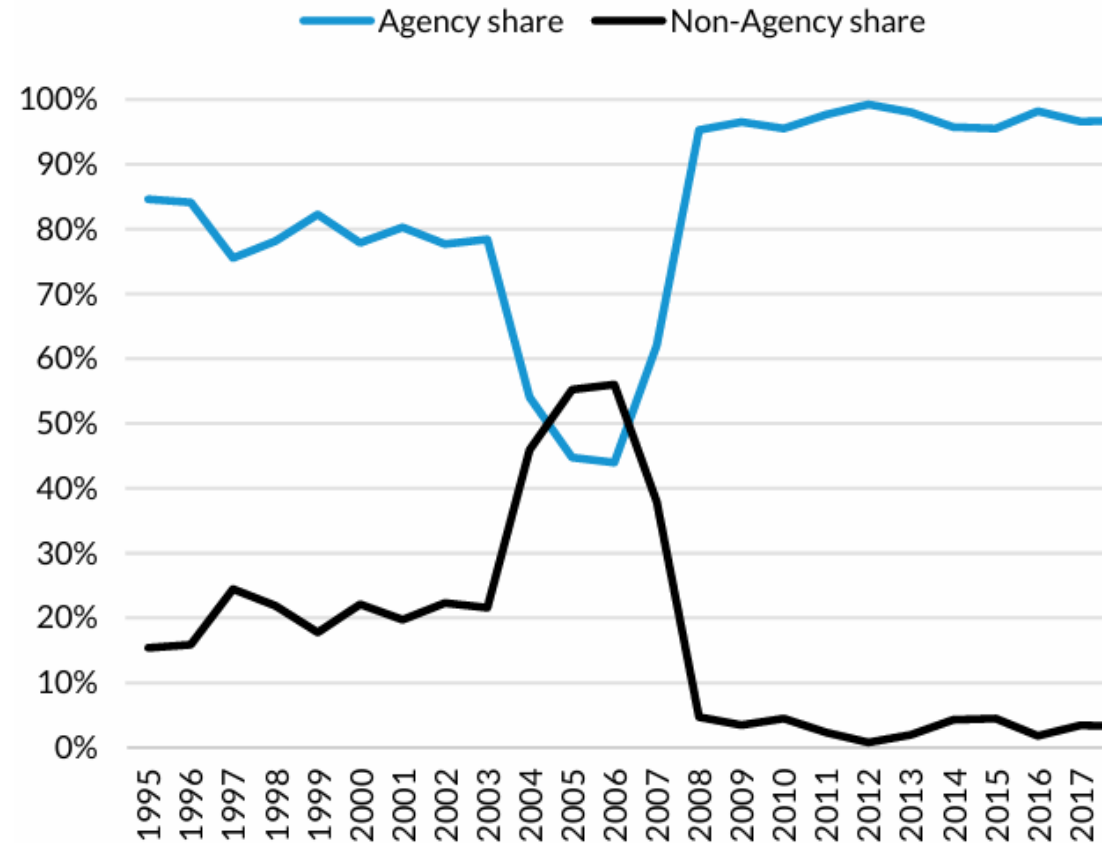
My Thoughts

- I learned a lot!
- Elegant model with clear implications – what other policy lessons does it teach us?
- Comment 1: 2000s Housing Boom through the lens of this model
 - Scope for an extension
- Comment 2: Peculiarities of the CMBS market through the lens of this model
- Comment 3: What do we learn from parameter restrictions and cutoffs?

The 2000s Housing Boom



Sources: Inside Mortgage Finance and Urban Institute. Last updated March 2018.



Housing Boom in the Model





- Idea 1: prime and subprime mortgages are entirely different assets
 - Comparative static within existing model
 - It is easier to screen prime mortgages (e.g., better documentation)
 - GSEs are in the “tech-relevant” region, PLS issuers are not
 - DSS + this paper: monetary policy shifted capital to worse screeners
 - More credit, worse welfare
- Idea 2: heterogeneous technologies in the same market
 - What are the implications?



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How monetary policy shaped the housing boom ☆

[Itamar Drechsler](#)^{a 1} , [Alexi Savov](#)^{b 2} , [Philipp Schnabl](#)^{b 3}  

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Abstract

Between 2003 and 2006, the Federal Reserve raised rates by 4.25%. Yet it was precisely during this period that the housing boom accelerated, fueled by rapid growth in mortgage lending. There is deep disagreement about how, or even if, monetary policy impacted the boom. Using differences in exposure to the deposits channel of monetary policy, we show that Fed tightening induced a large reduction in banks' deposit funding, which led banks to contract portfolio mortgage lending by 32%. However, this contraction was largely offset by substitution to privately-securitized (PLS) mortgages, led by nonbank originators. Fed tightening thus induced a shift in mortgage lending away from stable, insured deposit funding toward run-prone and fragile capital markets funding with little impact on overall lending. We find similar results during the most recent tightening cycle over 2014–2017 when PLS lending reemerged.

B-Piece Investors in the CMBS Market

Institutional Context

- Specialized investors hold junior tranches of CMBS
- Dodd-Frank: cannot sell for 5 years
 - Attract long-term investors, i.e., investors with low retention costs
- B-Piece Investors essentially responsible for due diligence in CMBS markets



The screenshot shows the top portion of a web article. At the top left is a hamburger menu icon. To its right is the logo for 'Real Estate Capital Europe', which consists of a vertical red bar followed by the text 'Real Estate Capital Europe'. Further right is a magnifying glass search icon. Below the navigation bar is a breadcrumb trail: 'Home > News & Analysis'. A blue pill-shaped button with the text 'NEWS & ANALYSIS' is positioned above the article title. The article title is 'The B-piece niche in CMBS'. Below the title is a sub-headline in italics: 'Tighter regulation of CMBS in the US has created opportunities for those willing to hold riskier bonds for long periods.' Below the sub-headline is the author's name and date: 'Lisa Fu - 20th September, 2019'. At the bottom of the screenshot is a red navigation bar containing four buttons: a share icon with the text 'Share', a button with 'A⁻', a button with 'A⁺', and a button with '100%'.

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Model Extension

- Costly investment into improving the screening technology
- Intermediaries with lower retention costs endogenously choose to develop a better technology
- Does Dodd-Frank incentivize a shift into the tech-relevant region?

When is intermediation inefficient?

- Screening is not effective enough
 - Q, k, p_A are equilibrium outcomes
 - Hard to see what parameter changes expand the tech-relevant region

$$\alpha < = \max \left\{ \frac{1}{2'} \left[\frac{\lambda^2 \frac{\rho_I Q}{\rho + \rho_I}}{\rho [(1 - \lambda) p_A - k]} + 1 \right]^{-1} \right\}$$

AND

- $\pi X < 1$
 - The uninformed agent's expected asset payoff is less than 1
 - What does this mean?
 - Marginal cost isn't 1 – it's $k = K'(Q)$ increasing in quantity
- How can we assess these inequalities in the data?

Conclusion



Interesting model with many applications!



I look forward to reading the next version