Small Bank Lending in the Era of Fintech and Shadow Banking: A Sideshow?*

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The mortgage industry is undergoing major changes

MarketWatch

Big banks are fleeing the mortgage market

The Economist

Homing in

Non-bank firms are now big players in America's mortgage market

THE CRISIS: A DECADE LATER

THE WALL STREET JOURNAL

The New Mortgage Kings: They're Not Banks

Business

International Business Times

Shadow Banking Now Dominates The Mortgage Market, Edging Out Wall Street Giants

DealBook

INVESTMENT BANKING | LEGAL/REGULATORY

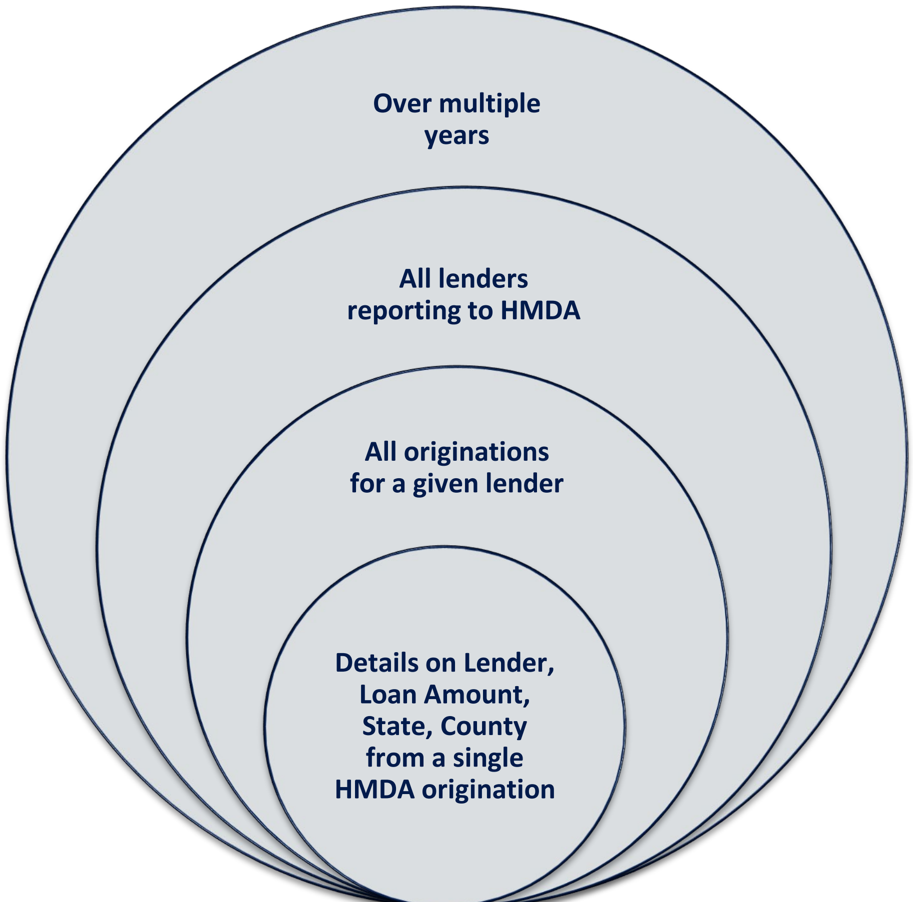
In Deal, Bank of America Extends Retreat From Mortgages

Big banks cede market share to nonbanks

Nonbanks grab market share as banks retreat

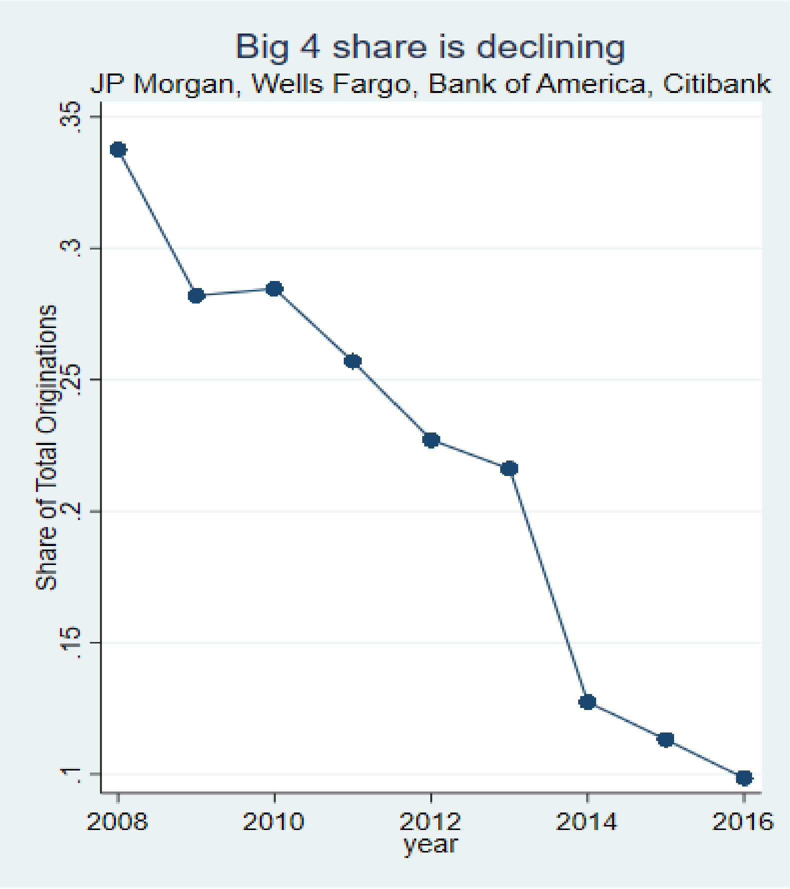
inman

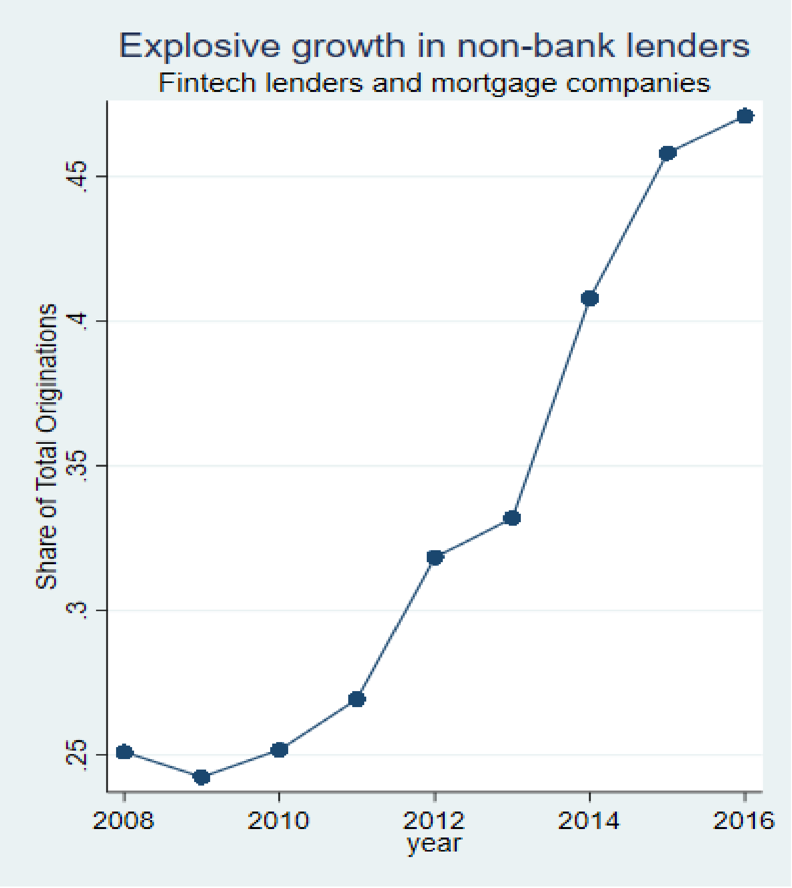
To study this market, we use rich, extensive data on mortgages



Community Banking in the 21st Century | Research and Policy Conference

Two Big Trends

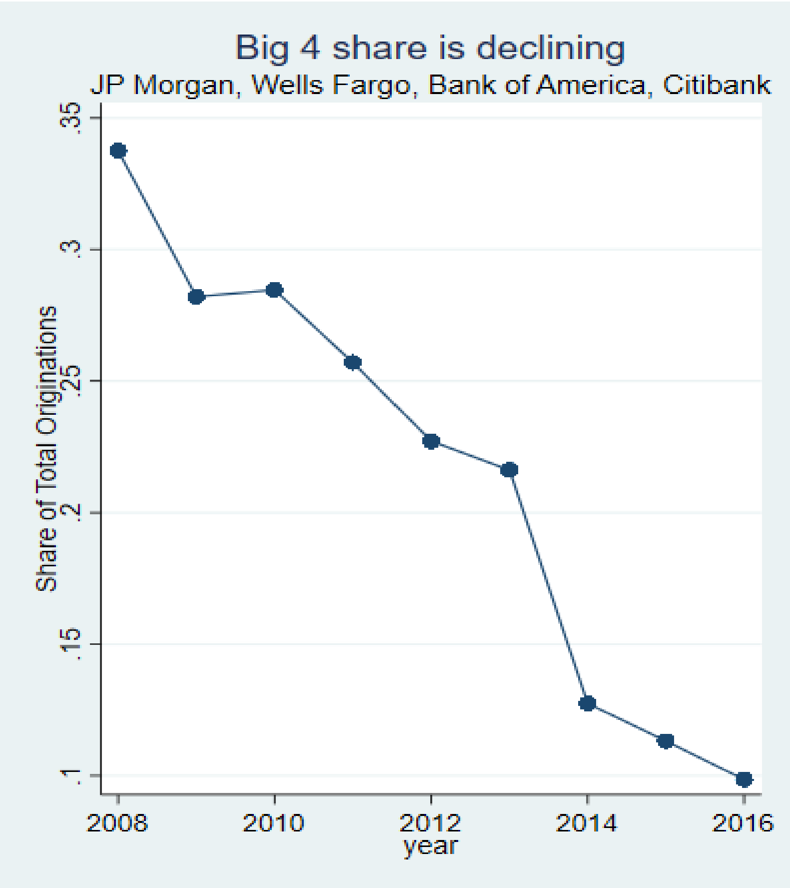




CSBS SINCE 1902 CONFERENCE OF STATE BANK SUPERVISORS

FDIC

Why?



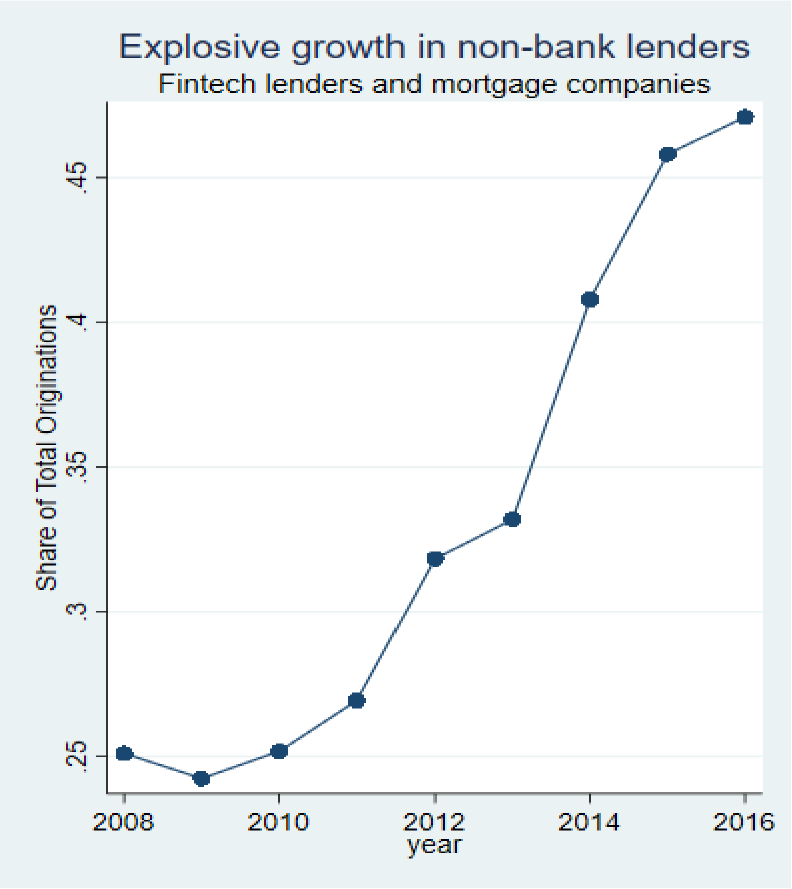
Bank	Crisis-related fines estimates
Bank of America	~$76.1bn
JP Morgan	~$43.7bn
Citigroup	~$19bn
Wells Fargo	~$11.8bn

Growing evidence that fines/regulatory burden is driving big banks out[2]

[2]Buchak, Greg, et al. "Fintech, regulatory arbitrage, and the rise of shadow banks." *Journal of Financial Economics* 130.3 (2018): 453-483.

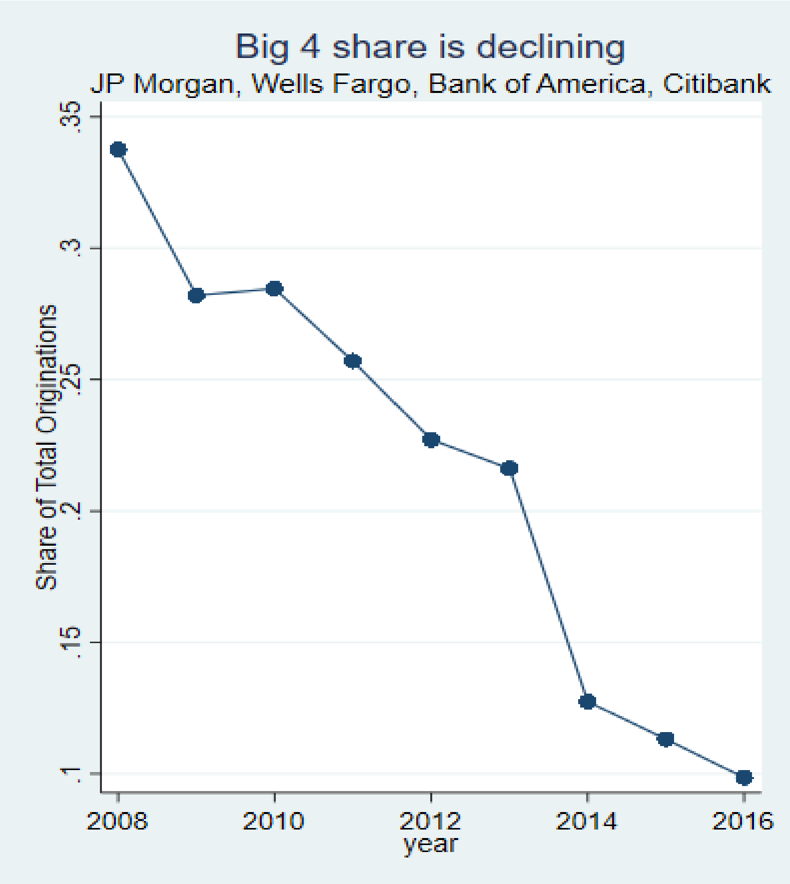
Why?

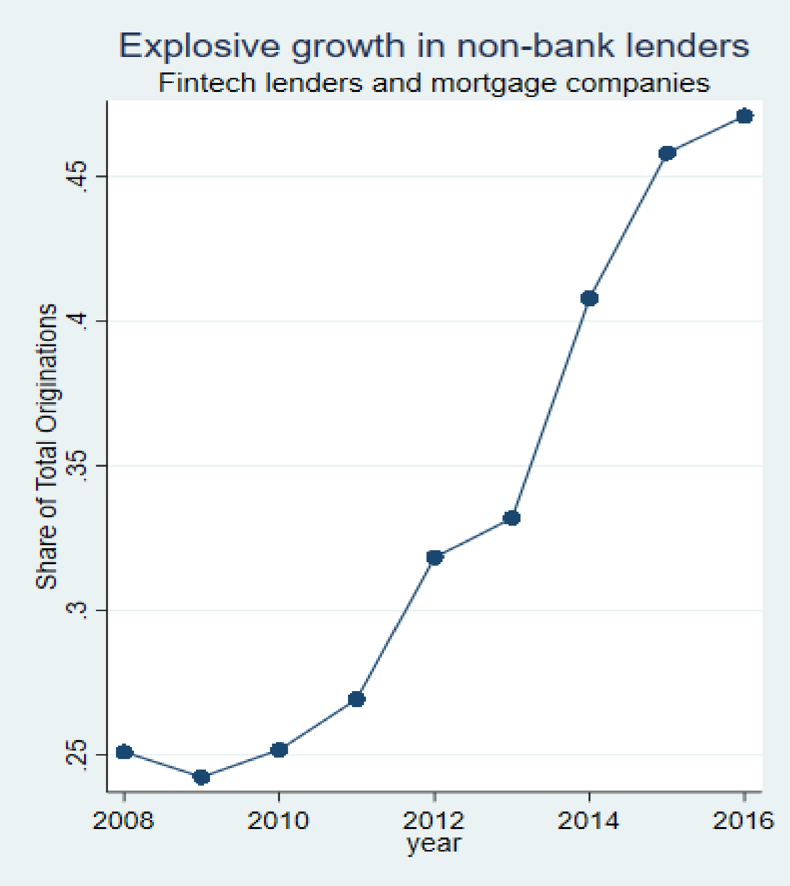
- Regulatory arbitrage
- Technology Improvements[3]:
  - FinTechs process applications about 20% faster than other lenders
  - Faster processing does not come at the cost of higher defaults.



[3]Fuster, Andreas, et al. "The role of technology in mortgage lending." The Review of Financial Studies 32.5 (2019): 1854-1899.

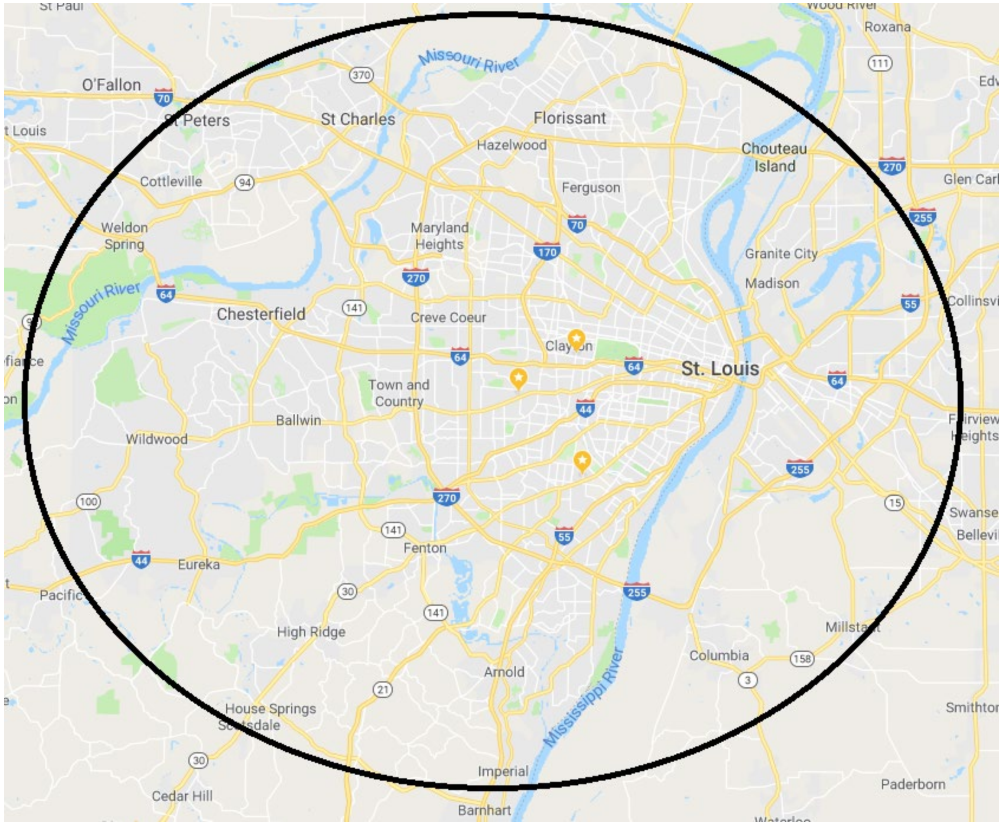
Our Paper: Is this the whole story?





Will local banks* remain relevant in the new environment?

"Small Bank"	
Assets	<$10bn
State	Missouri
Counties	St. Louis, St. Charles, Jefferson



* Defined as banks with assets less than $10bn (c.f. Dodd-Frank, FDIC)

But if it is a well-functioning competitive market, does the question matter?

Yes, there are policy implications

Housing Rents and Wealth Inequality

- Areas where the largest lenders have withdrawn have experienced[4]
  - greater housing rents
  - higher denial rates
  - higher wealth inequality

Systemic Risk

- Nonbanks are heavily dependent on **securitizing** their loans
  - Highly vulnerable to liquidity pressures[5]
  - Unlike banks that rely on stable funding sources

[4]D'Acunto and Rossi (2019), Gete and Reher (2019)
[5]Kim et al (2019)

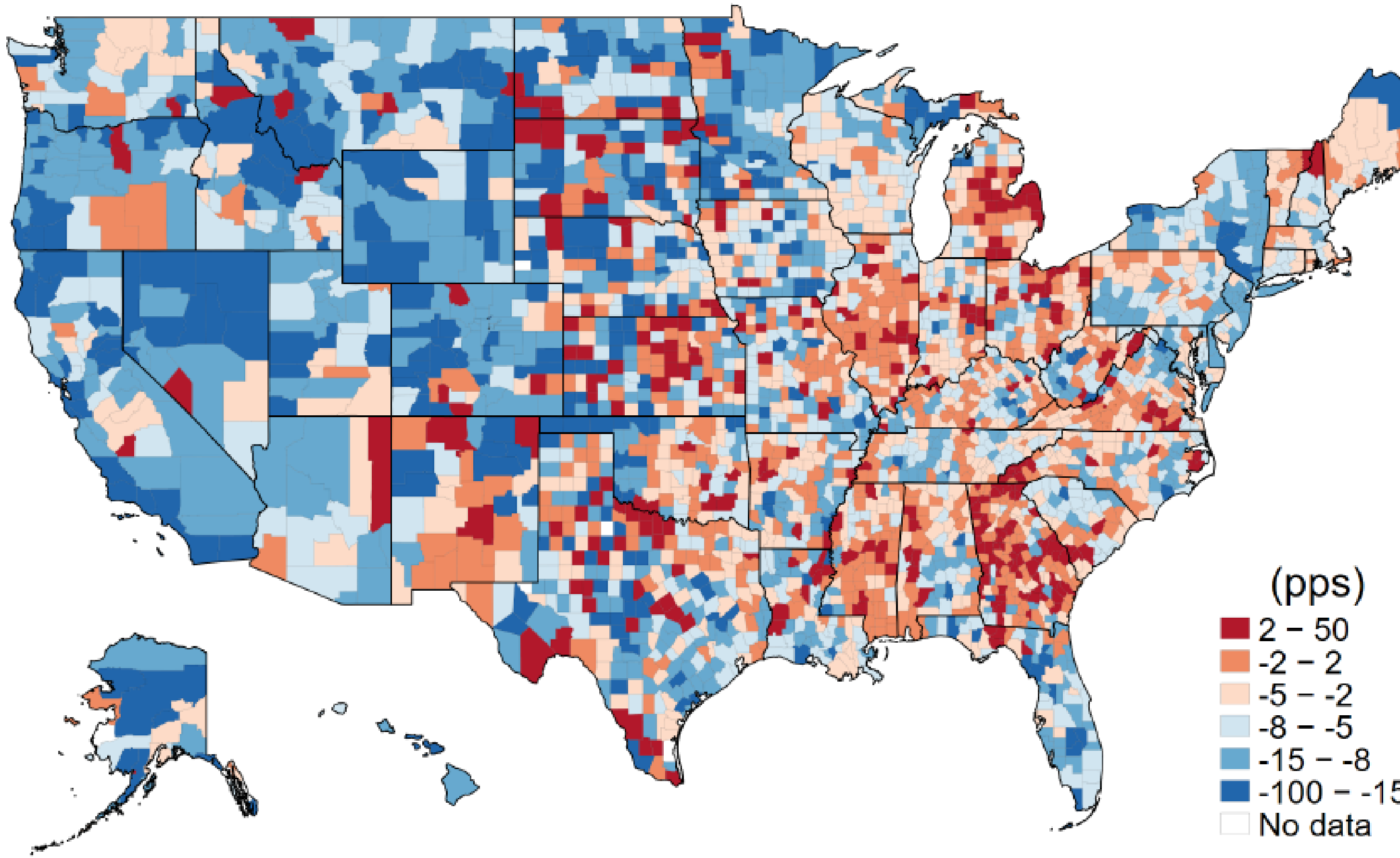
Takeaways

New Facts	• In the aggregate, small bank shares are stable despite regulatory and technological headwinds. • At a local (county) level, they are more responsive to Big4 changes than fintechs and shadow banks.
Why	County heterogeneity in the ease of securitizing mortgages and consumer preferences for dealing with banks
Policy	• Outsize influence of too-big-to-fail banks • Wealth inequality effects of the Big4 are mitigated by the presence of small banks

Continued importance of local lenders in the era of nonbanks

Who is filing the big bank void?

Big 4 market share changes (2009-2013)



Responses to Big4 withdrawal

	2009-2013 Share Change			
	Big4	Small Banks	Shadow Banks	Fintech
Average Change	-5.8%	-1%	5.3%	3.8%

Local Responses to Big4 withdrawal

Big4 Change Quintile	2009-2013 Share Change			
	Big4	Small Banks	Shadow Banks	Fintech
1 (largest drop)	-16.8%			
2	-8.6%			
3	-4.9%			
4	-1.8%			
5 (largest increase)	3.2%			
Average Change	-5.8%	-1%	5.3%	3.8%

Local Responses to Big4 withdrawal

Big4 Change Quintile	2009-2013 Share Change			
	Big4	Small Banks	Shadow Banks	Fintech
1 (largest drop)	-16.8%	5.9%	7.5%	4.3%
2	-8.6%	0.9%	5.3%	4.1%
3	-4.9%	-1.6%	5.3%	3.4%
4	-1.8%	-3.8%	5.0%	3.4%
5 (largest increase)	3.2%	-6.7%	3.4%	3.6%
Average Change	-5.8%	-1%	5.3%	3.8%
Difference (5-1)	20%	-12.6%	-4.1%	-0.7%

The change in market shares for small banks have a large negative relationship with that of the Big4

$$\Delta Share_{county}^{LenderClass} = \phi(\Delta Share_{county}^{Big4}) + \zeta_{stateFE} + \Gamma X_{county} + \epsilon_{county}$$

↓ Big4, 1 σ

⇒ 4.7%, small banks

⇒ 1.7%, shadow banks

⇒ 0.2%, fintech

↑

Findings confirmed by more rigorous econometrics

Why small banks?

Consumer Preference

- We compute a conversion rate of loan applications submitted to banks and nonbanks

- HMDA has details on:
  - Loan denied
  - Loan originated
  - Approved, but not originated

$$PrefBanks_{county} = \frac{\#originations_{Banks}}{\#apps.not\ denied_{Banks}} - \frac{\#originations_{NonBanks}}{\#apps.not\ denied_{NonBanks}}$$

- **Finding**: Small banks respond more strongly in areas where our consumer preference measure is higher

Ease of Securitization

- Nonbanks act as a pass-through to government sponsored securitization markets (Fannie, Freddie)
- Nonbanks have limited scope to make loans that are either too large or depend too much on soft information
- We compute the long-run (2001-2009) average of the share of loans sold to government programs for each county
- **Finding**: Small banks respond more strongly in areas with lower ease of securitization

Policy

- Large banks make a higher proportion of large-sized loans after the crisis (D'Acunto and Rossi (2019))

- Wealth Inequality: Redistribution of credit away from middle income households to high income households by large lenders

- **Finding**: In areas with greater small bank presence relative to nonbanks, redistributive effects are lower relative to areas with smaller local bank presence.

Conclusion

Strong reallocation of lending: County-level response to Big4 retreat is greater for small banks than any other lender class

Institutional features (securitization) of the mortgage market and consumer preference for banks play a role

TBTF banks have outsize influence even in relatively normal times; small banks have the potential to mitigate redistributive effects of mortgage credit

Continued importance of community banks despite recent disruptions

Appendix

Instrumental Variables

$$\Delta Share_{county}^{Big4} = \theta(Share_{county}^{09Big4}) + \zeta_{stateFE} + \Gamma X_{county} + \eta_{county}$$

$$\Delta Share_{county}^{LenderClass} = \psi(\widehat{\Delta Share}_{county}^{Big4}) + \xi_{stateFE} + \Lambda X_{county} + \epsilon_{county}$$

- We find consistent results using the Big4 lending share in 2009 (prior to the sharp increase in regulatory burden) as a county-level instrument for Big4 withdrawal.
- Note that the instrument does not condition on the actual withdrawal, but rather it simply identifies counties where Big4 had the largest presence and thus a larger scope for withdrawal.

Within Lender Reallocation

$$\Delta \log(loans)_{c,l,g}{}^{2009-2013} = \Theta(\Delta Big4Share_c^{2009-2013} \times \Gamma_g) + \delta_c + \lambda_l + \epsilon_{c,l,g}$$

We find consistent results by examining whether individual lenders tend to adjust their allocation of mortgage lending activity (i.e. lending growth) based on geographical variation in exposure to the Big4 retreat *within their own lending footprint*

Note that this specification includes lender fixed effects as well as county fixed effects.

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