Regulating Banks in the Era of Shadow Banks

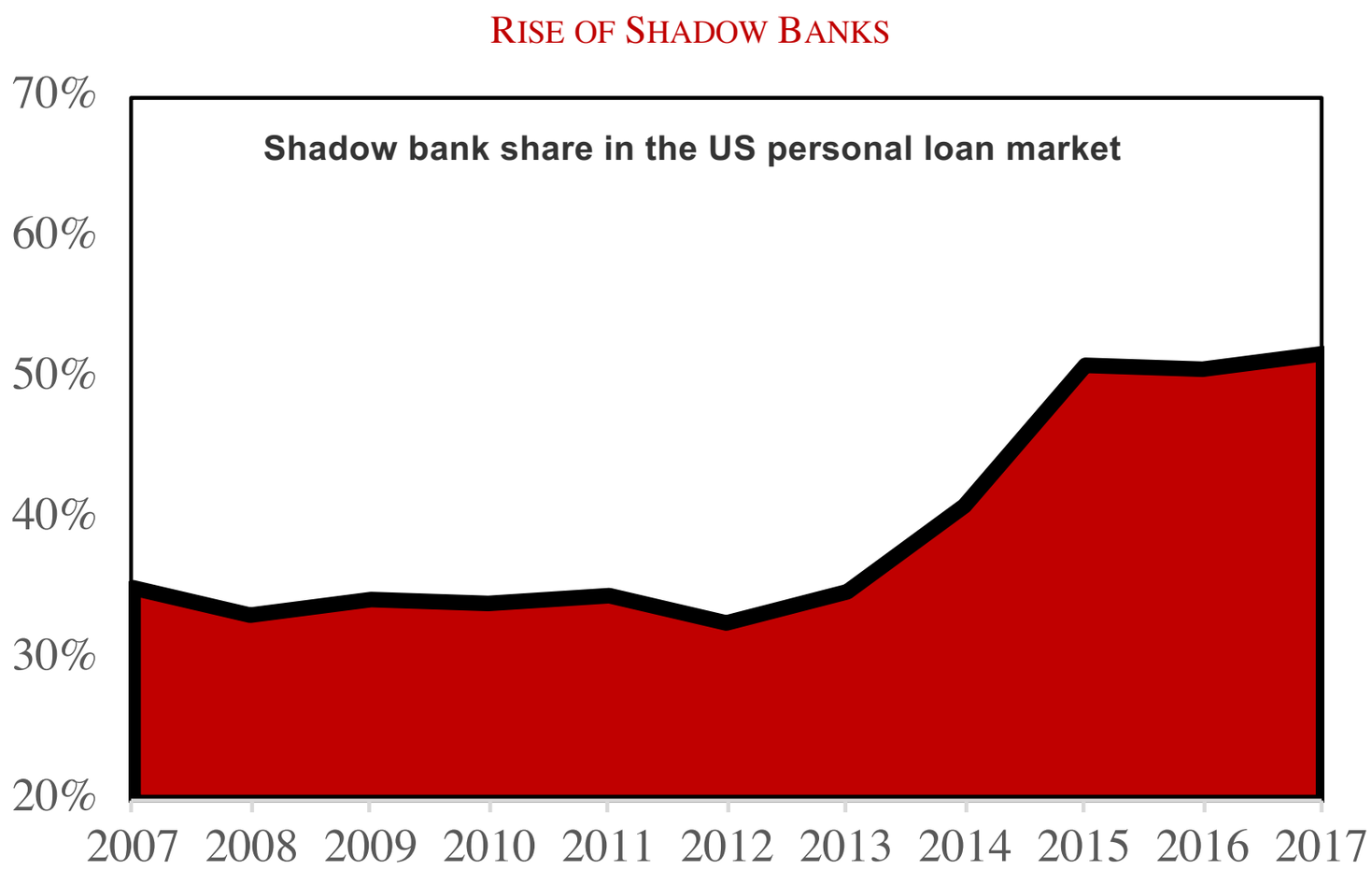
Amit Seru

Stanford GSB, Hoover and NBER

Andrew Crockett Memorial Lecture

June 30, 2019

Dramatic Change in Lending Landscape



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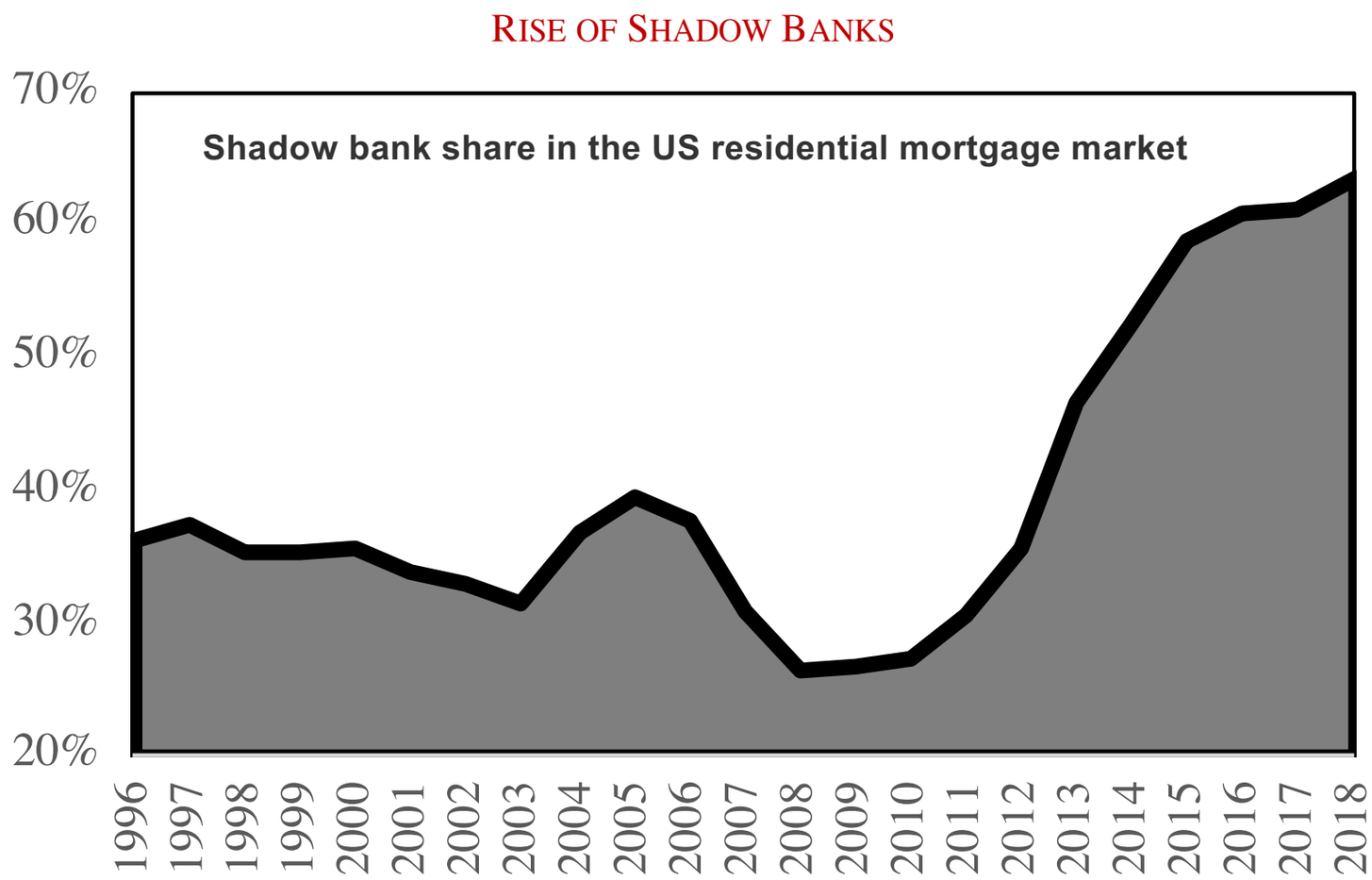
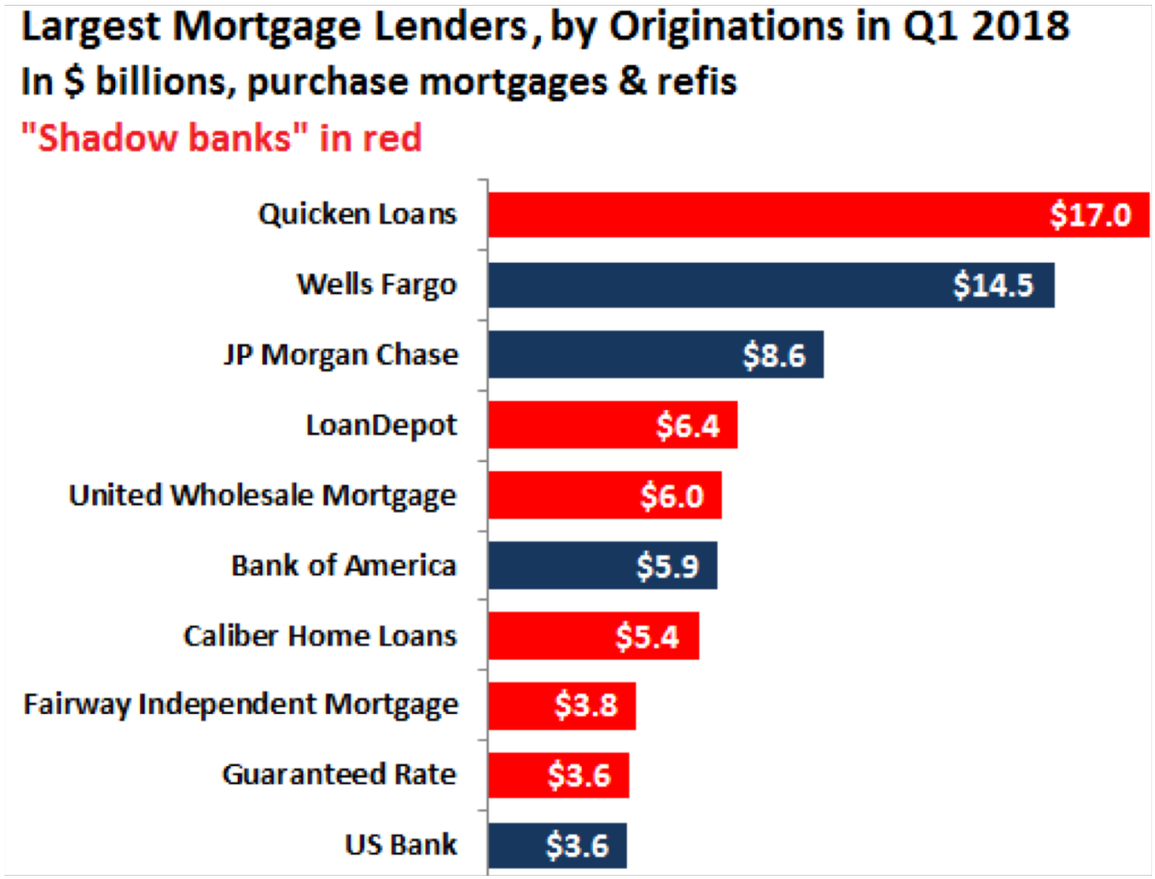


Dramatic Change in Lending over last Decade

RISE OF SHADOW BANKS



ROCKET MORTGAGE by Quicken Loans

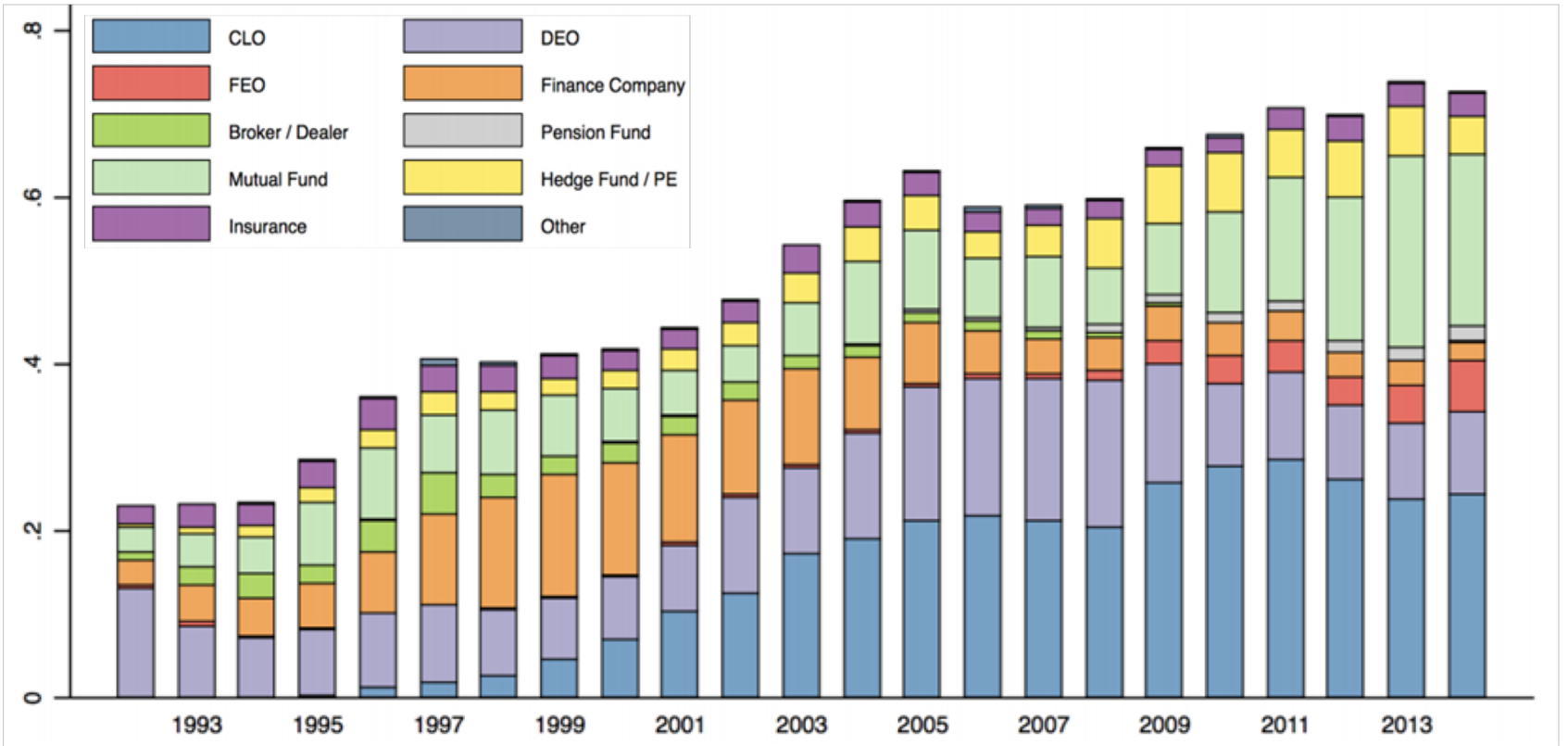
Dramatic Change in Lending Landscape

RISE OF SHADOW BANKS

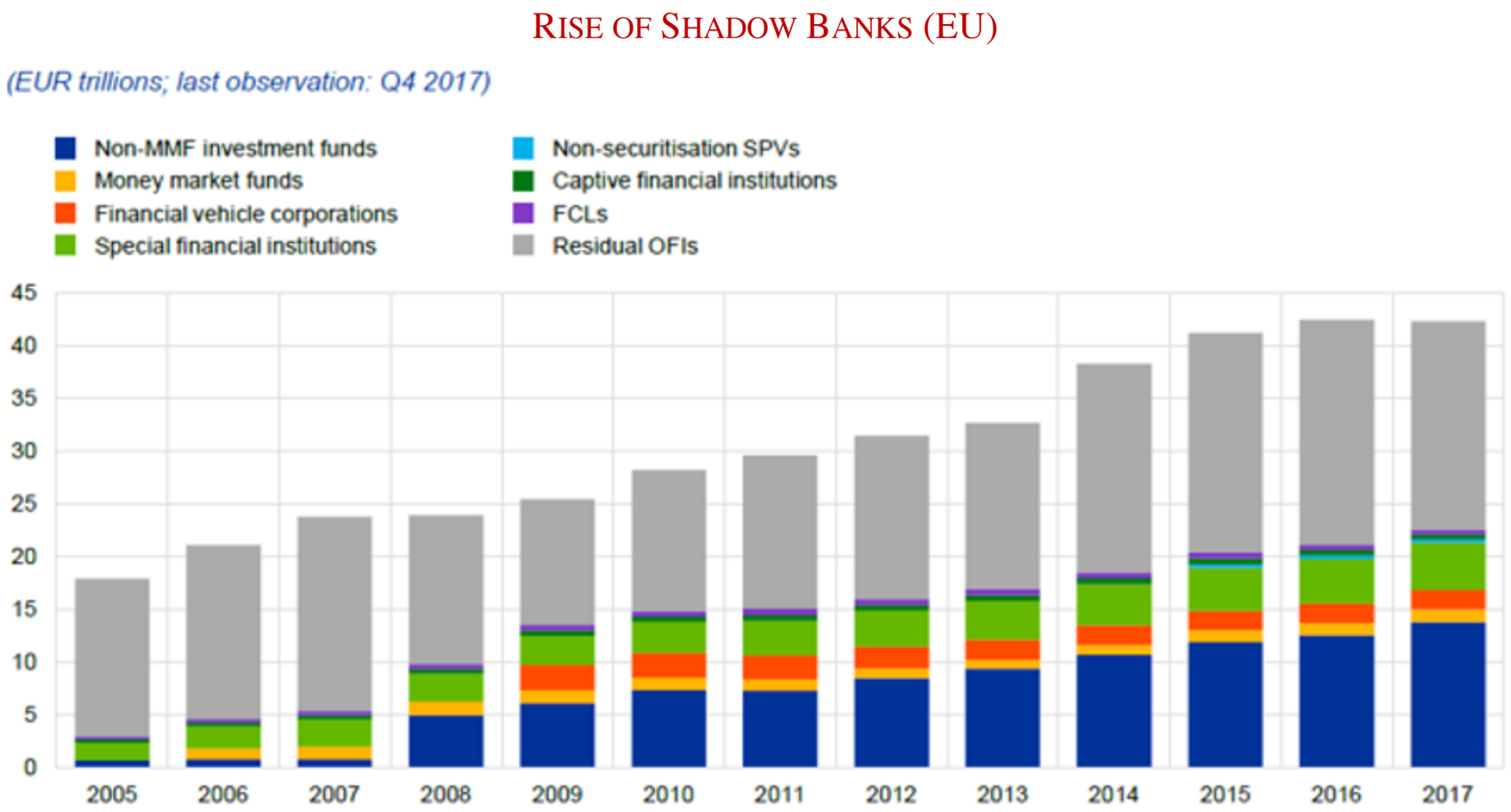
Type	Market size	% inside banking system	% in banking system at risk	Select disruptors
Personal Loans	$843bn	81	31	Lending Club, Prosper
Small Business Loans	$186bn	95	100	On Deck, Kabbage
Leveraged Loans	$832bn	7	34	Alternative AM, BDCs
Student Loans	$1,222bn	5	100	SoFi, Earnest
Mortgage Loans	$1,169bn	58	100	Quicken, PFSI, Freedom
CRE Loans	$2,354bn	56	9	Commercial REITs

Dramatic Change in Lending Landscape

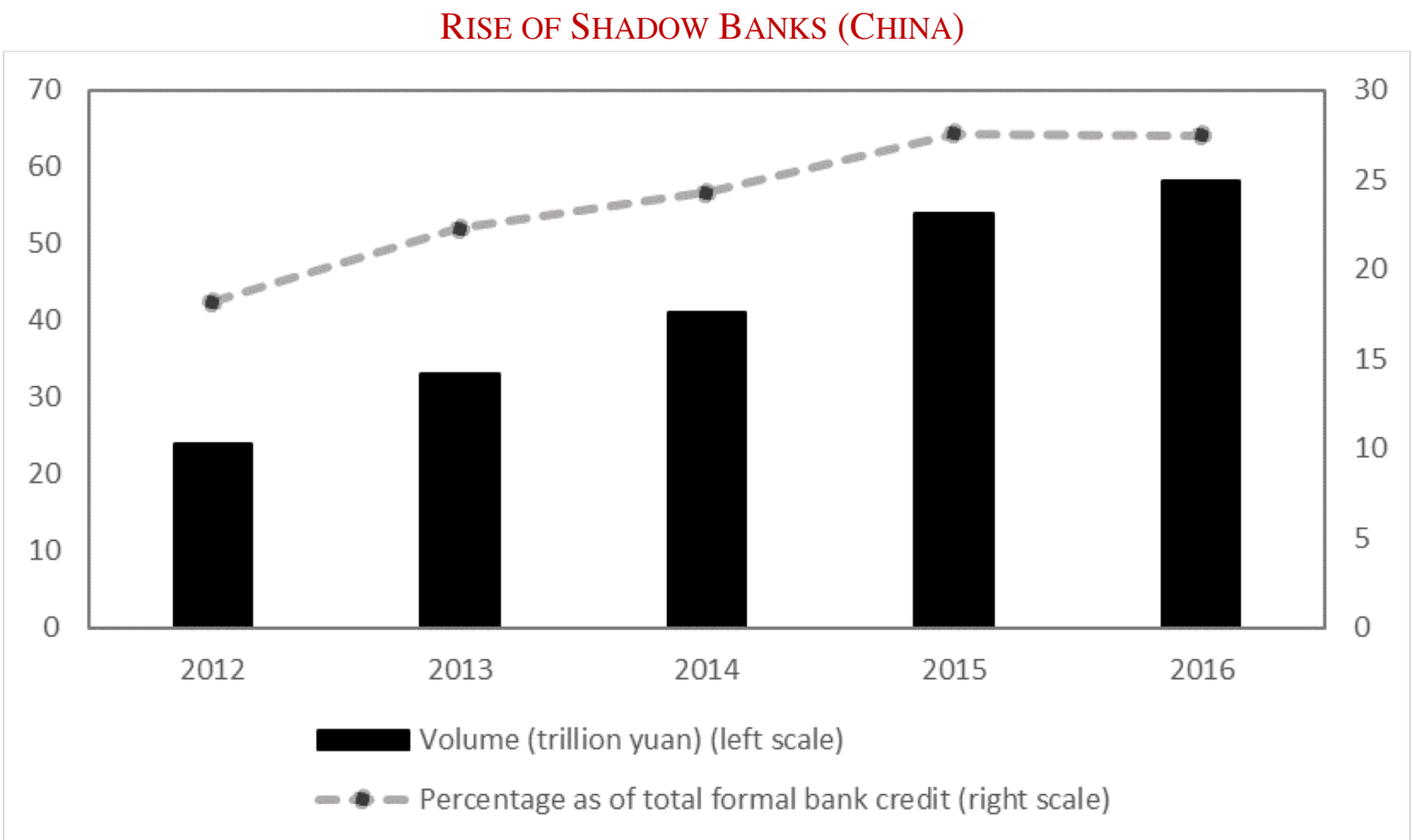
Rise of Shadow Banks



Dramatic Change in Lending Landscape

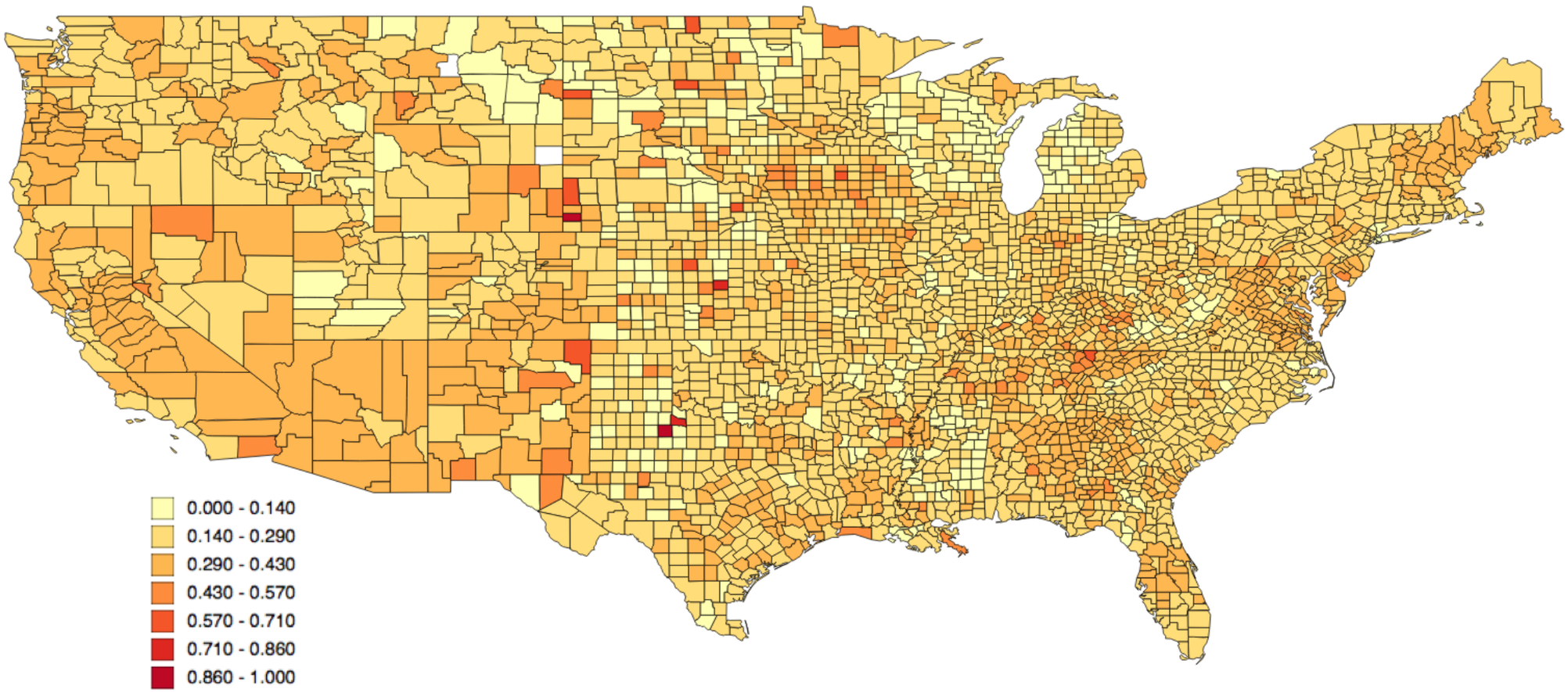


Dramatic Change in Lending Landscape

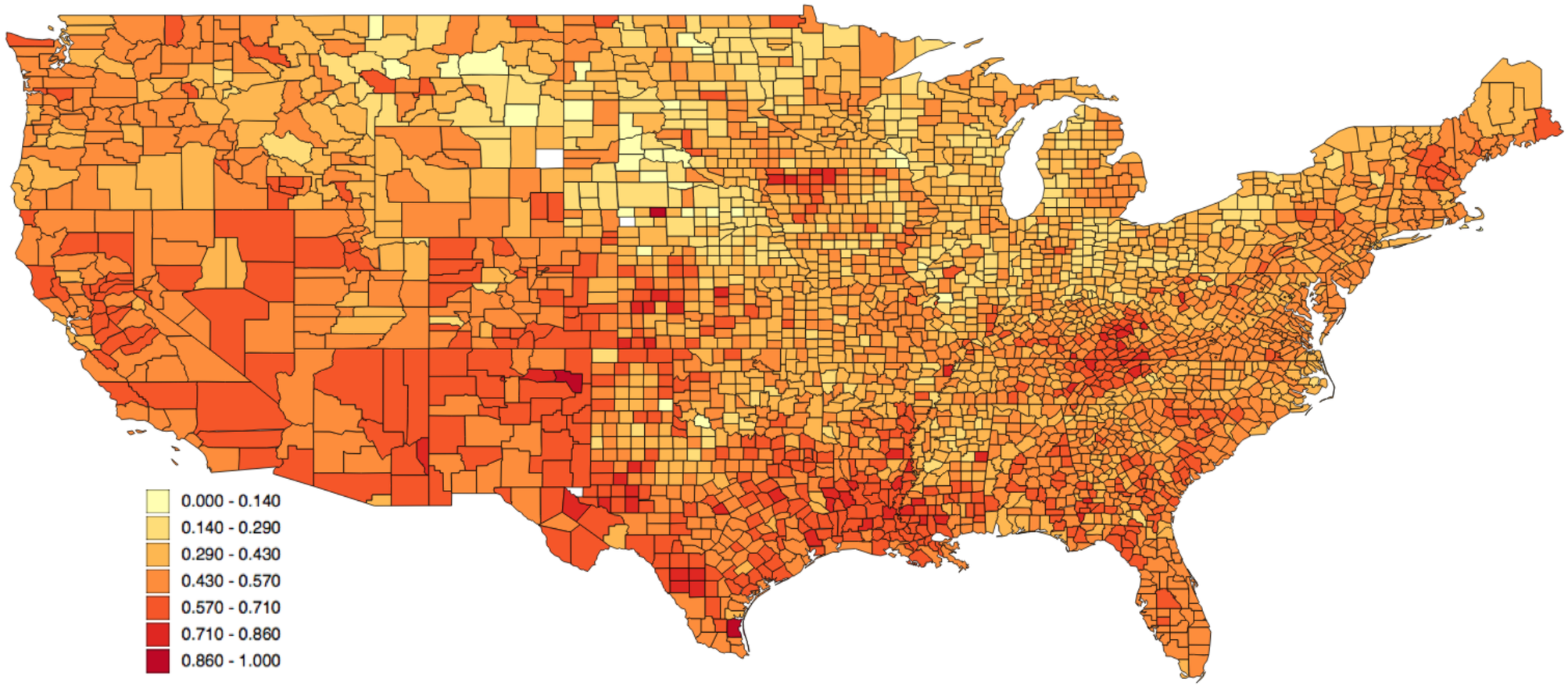


REGULATION?

County Level Shadow Bank Share: 2008

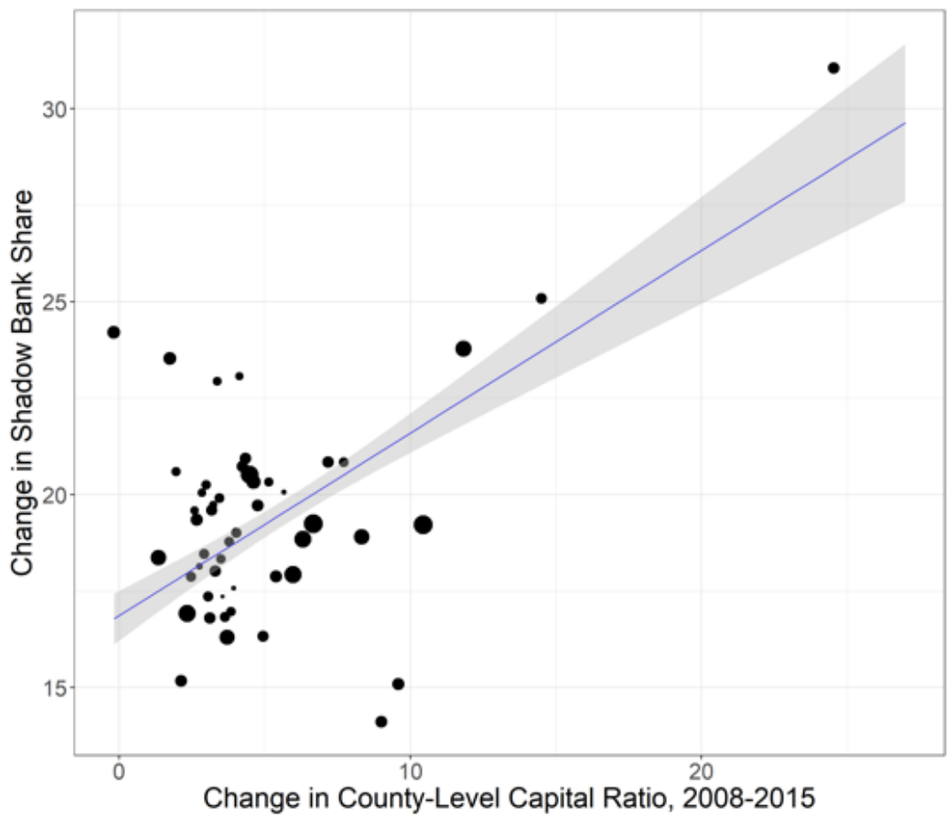


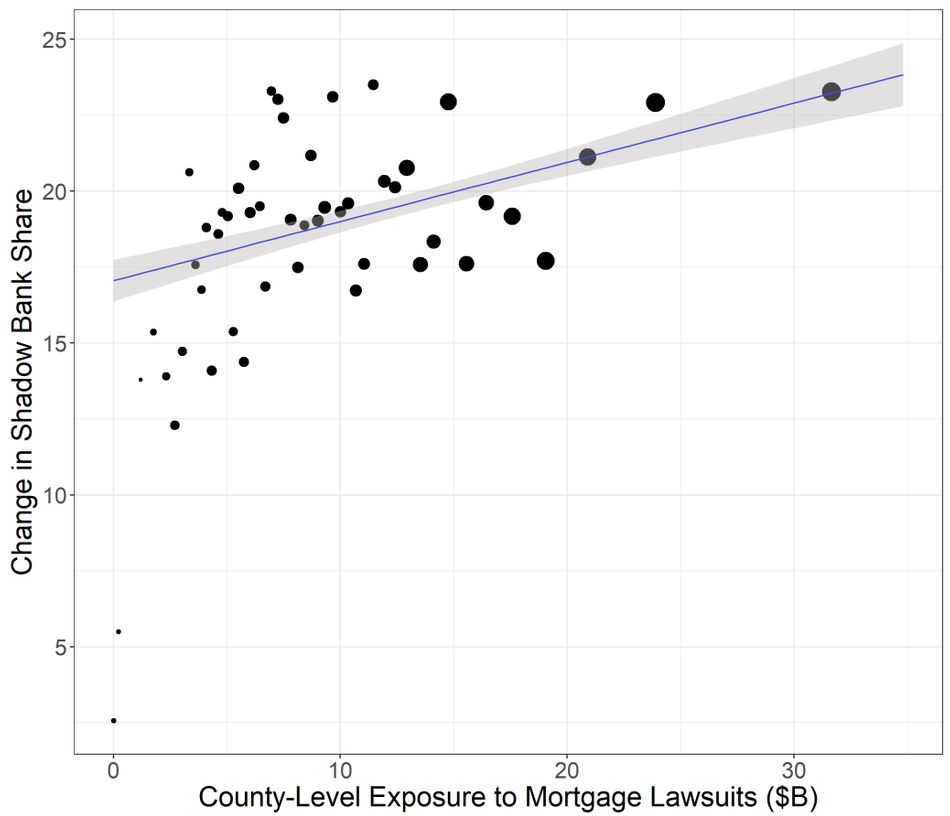
County Level Shadow Bank Share: 2015



Change in Shadow Bank Share and Regulation

Change in Shadow Bank Share and Regulatory Pressure

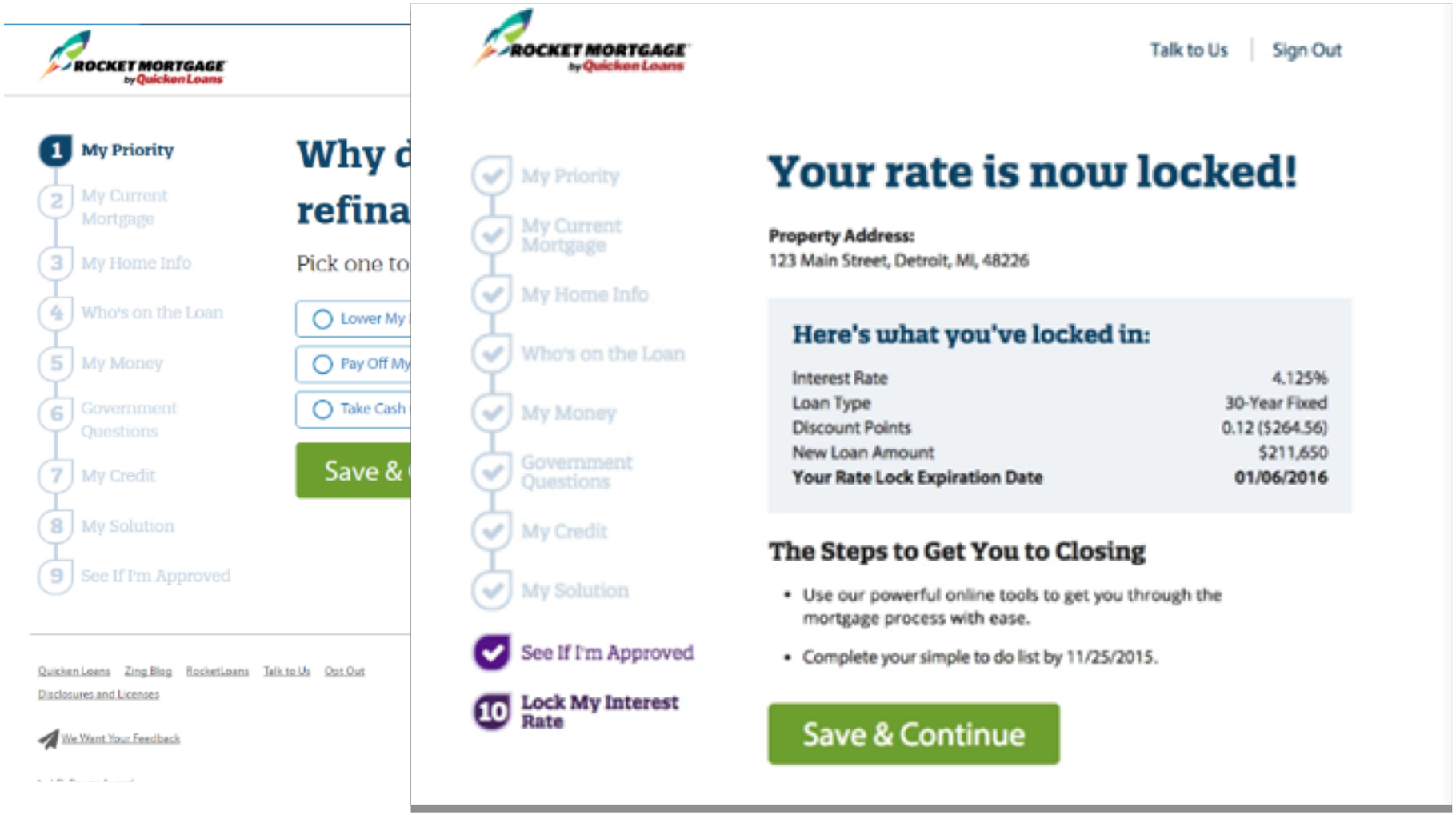




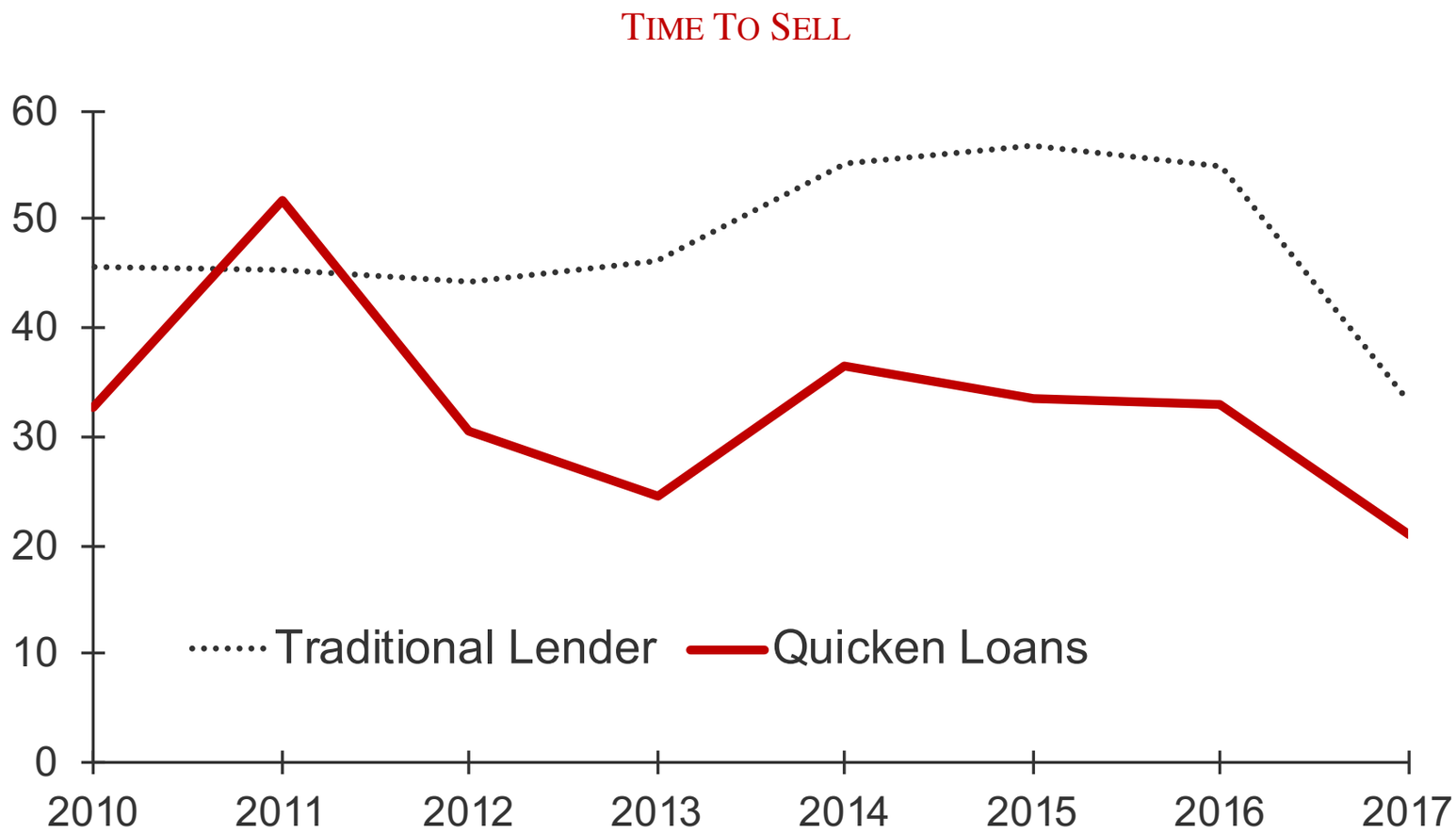
TECHNOLOGY?

Technology?

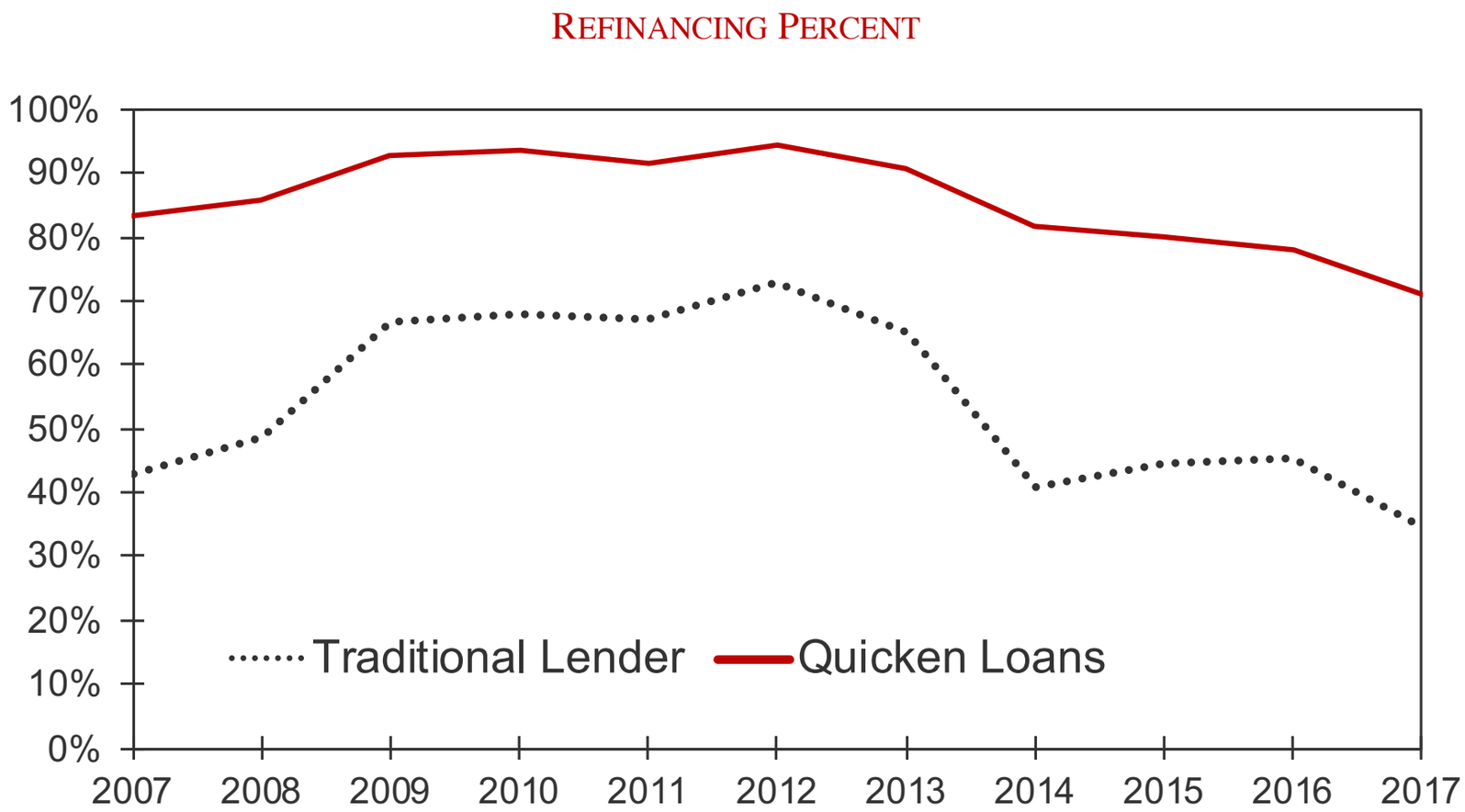
Quicken Loans



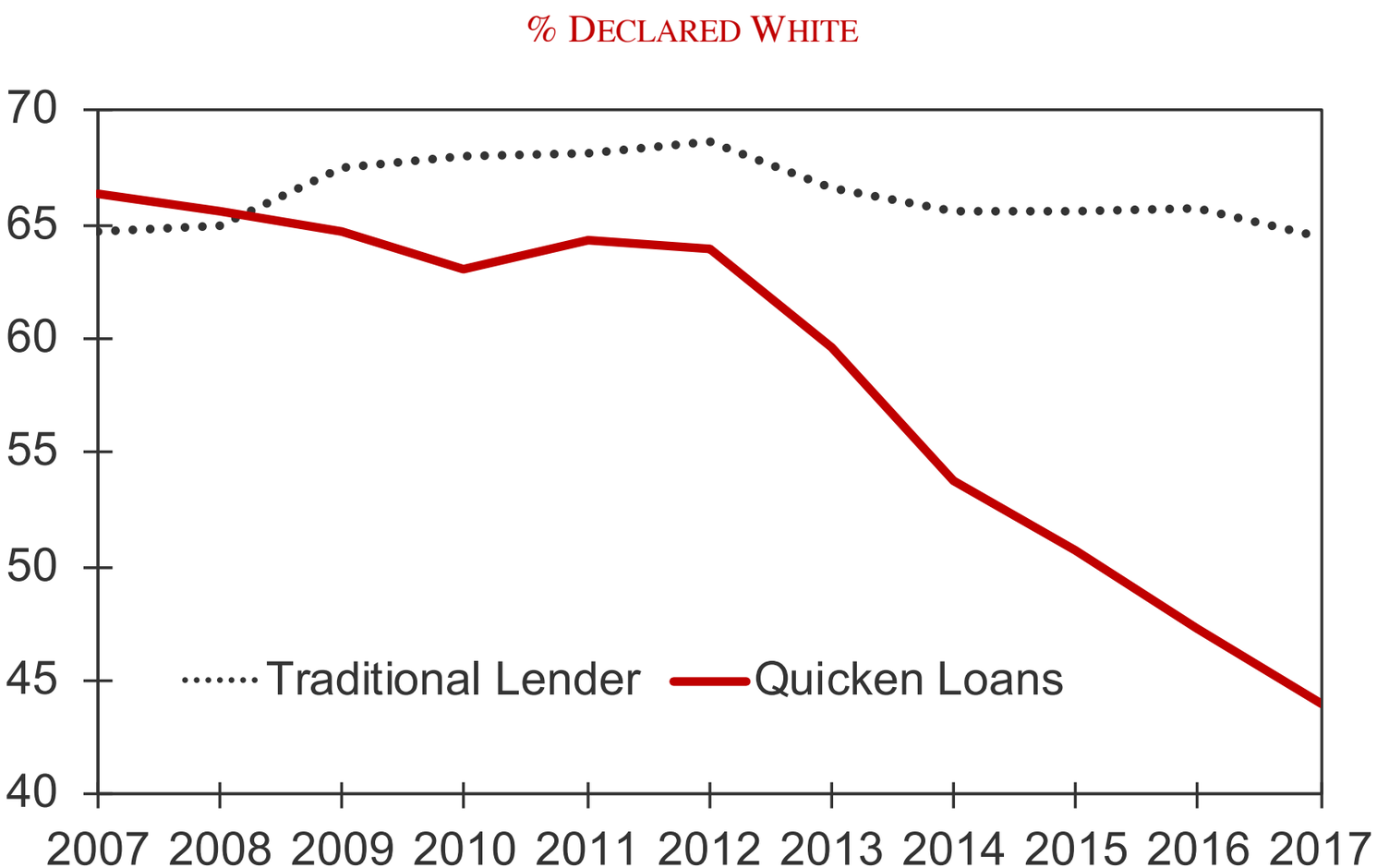
Technology? Faster Processing



Technology? Leveraging Credit Information



Technology? Other Data

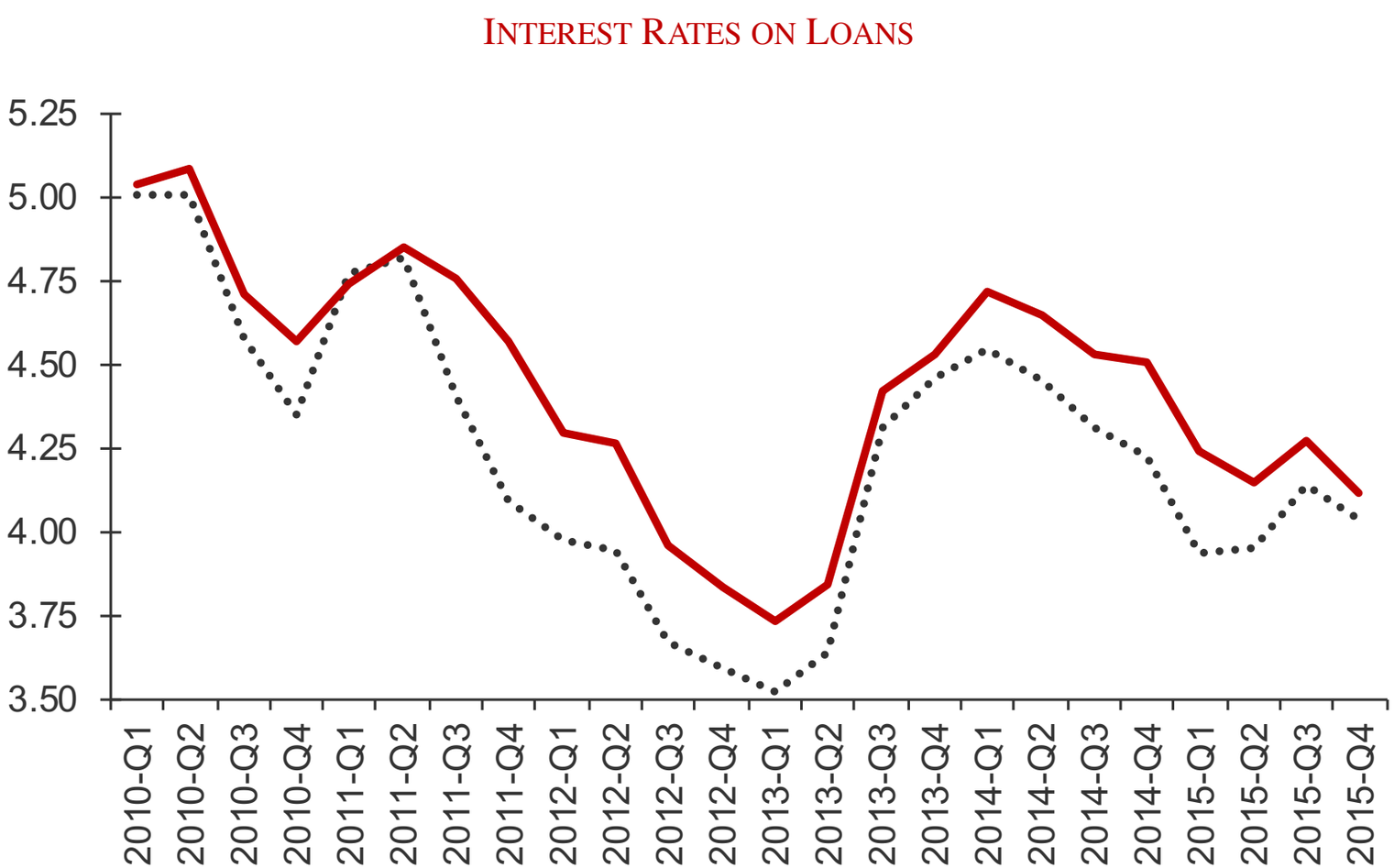


Technology? Quality

J.D. POWER

2015 U.S. Primary Mortgage Origination Satisfaction Study℠

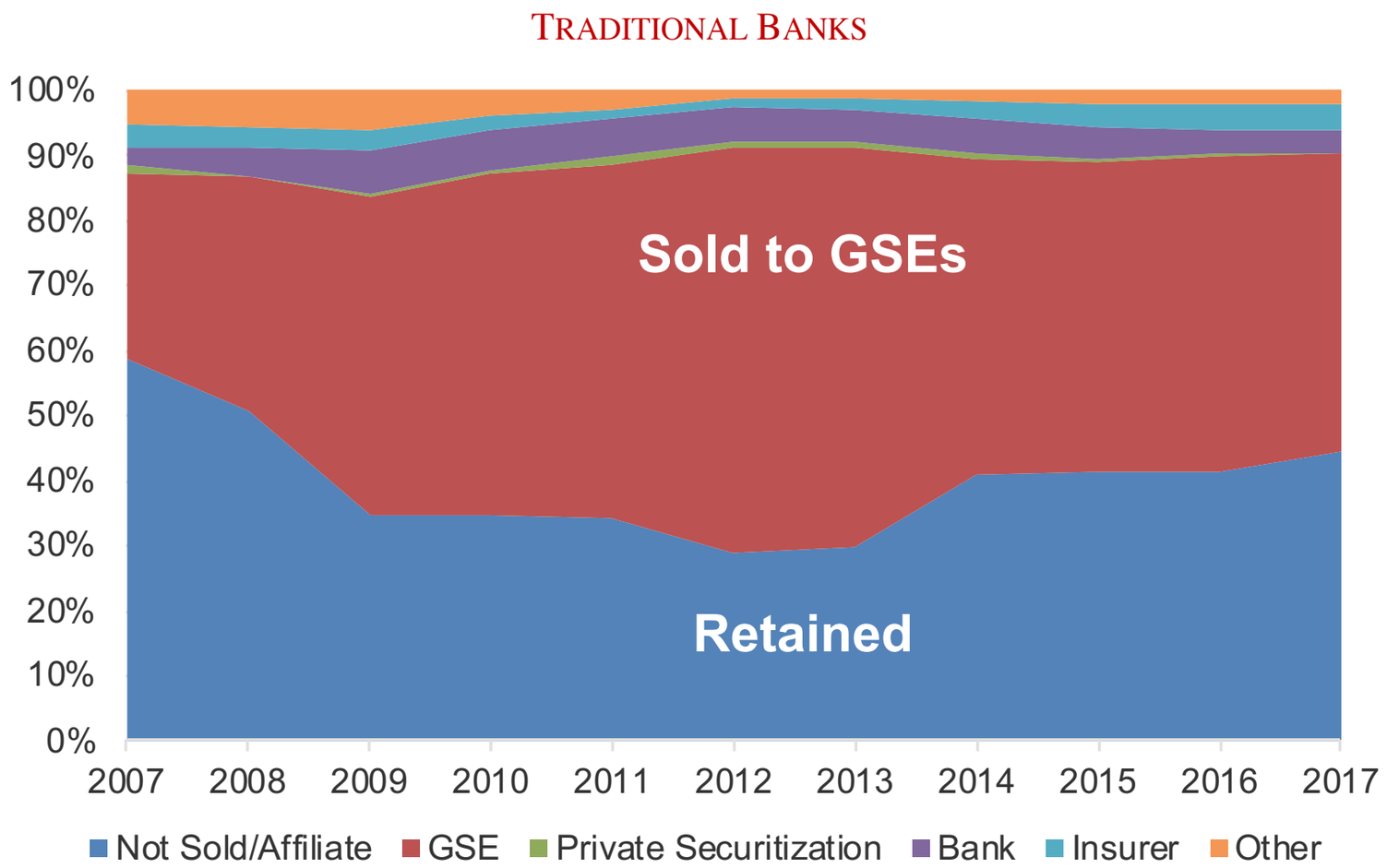
Technology? Willingness to Pay



INTEGRATED INTERMEDIATION

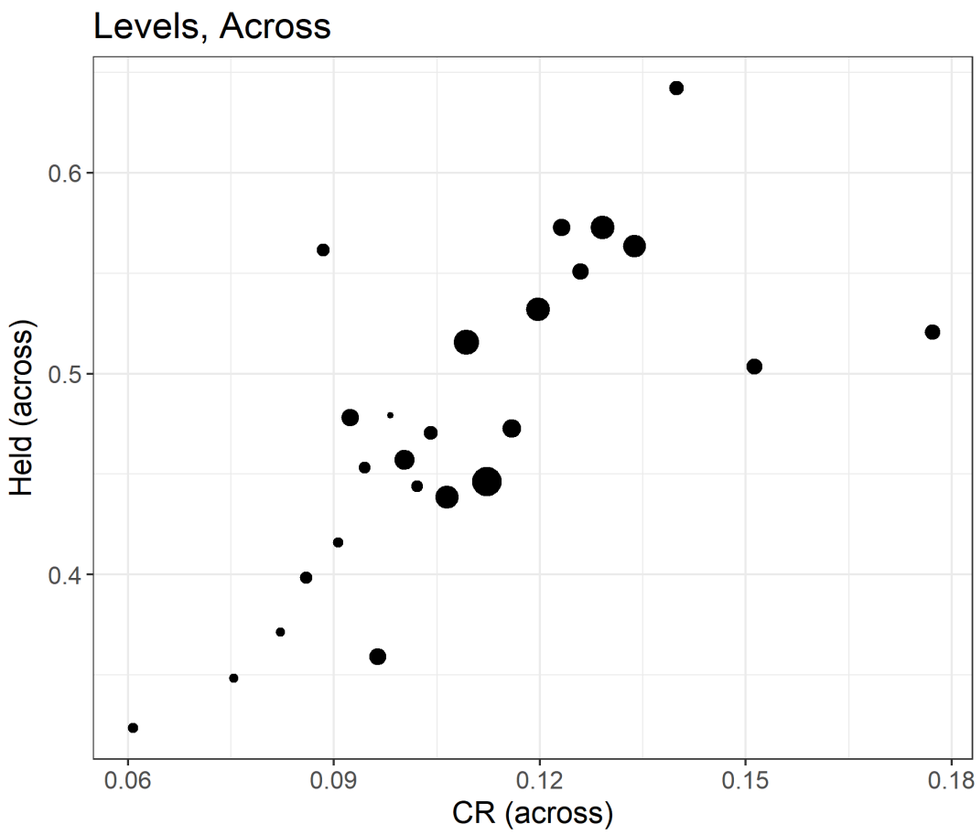
Business Model

Where are the loans?

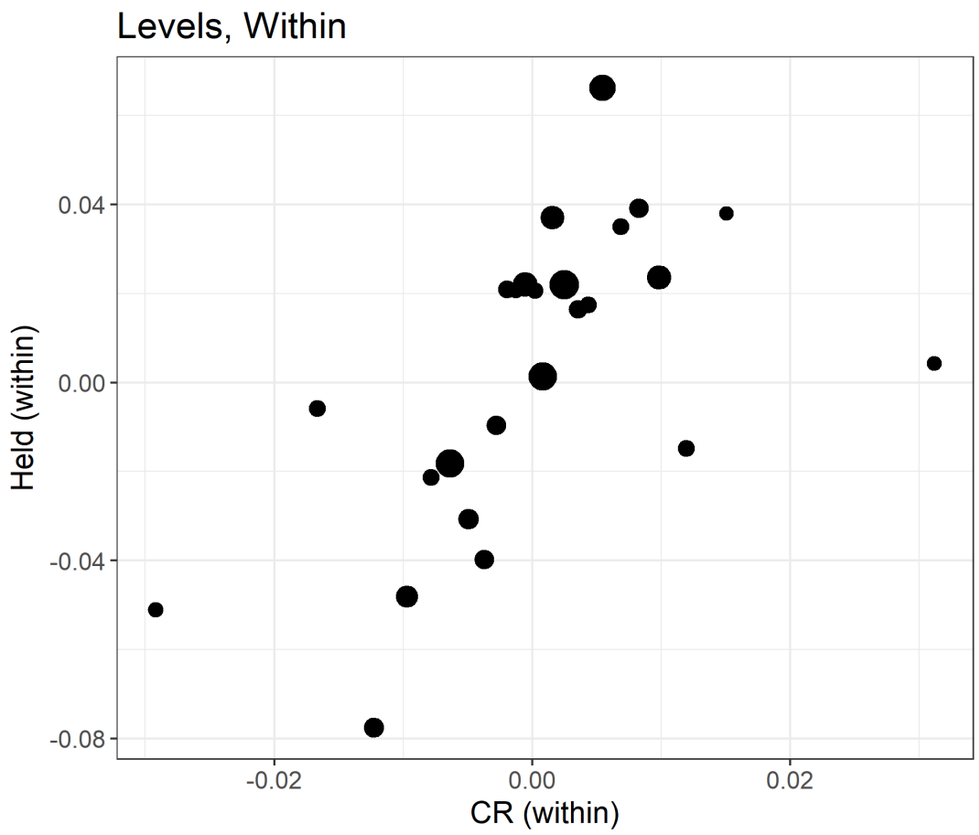


Bank Capitalization and Balance Sheet Retention

Across Lenders



Within Lenders



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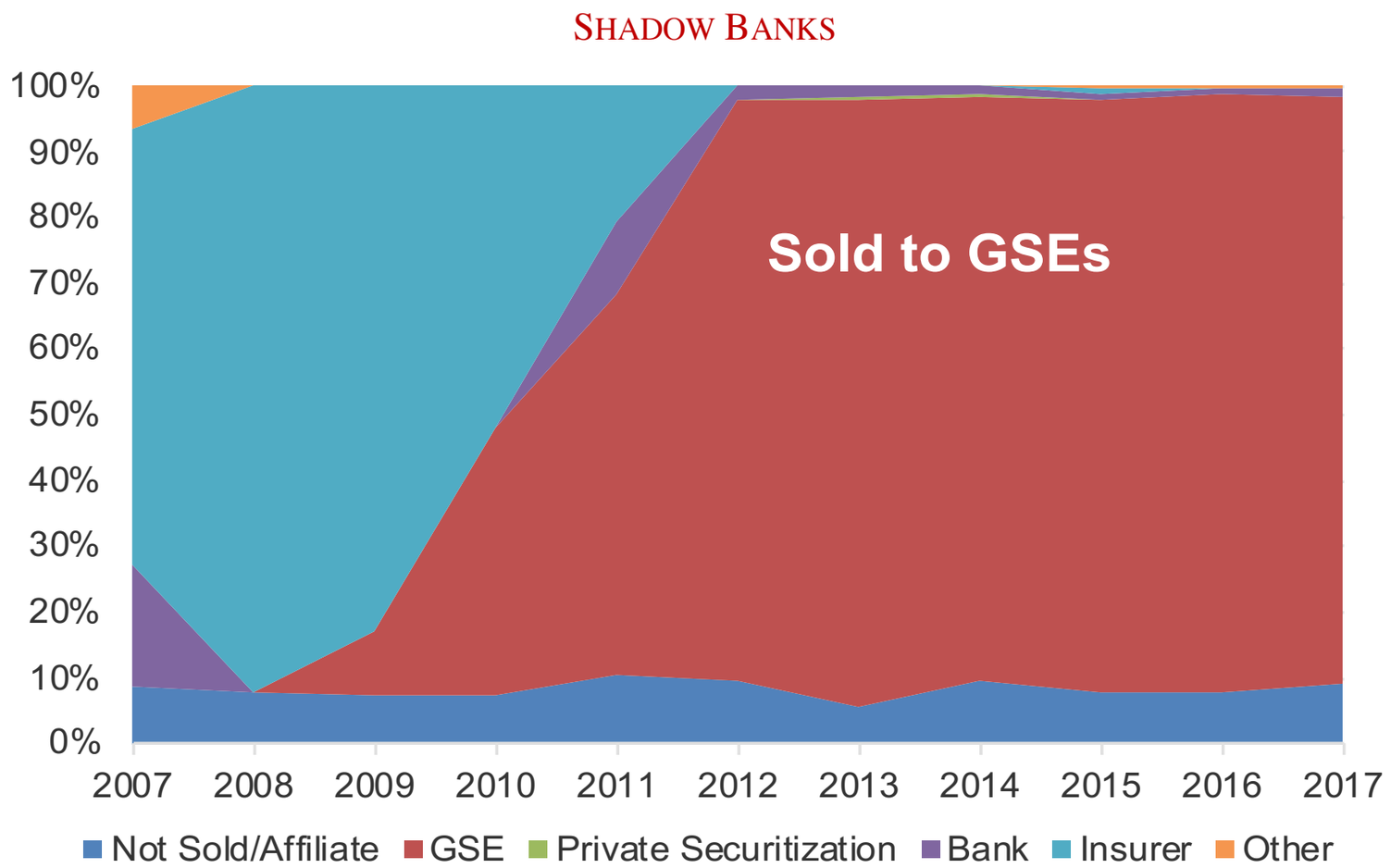
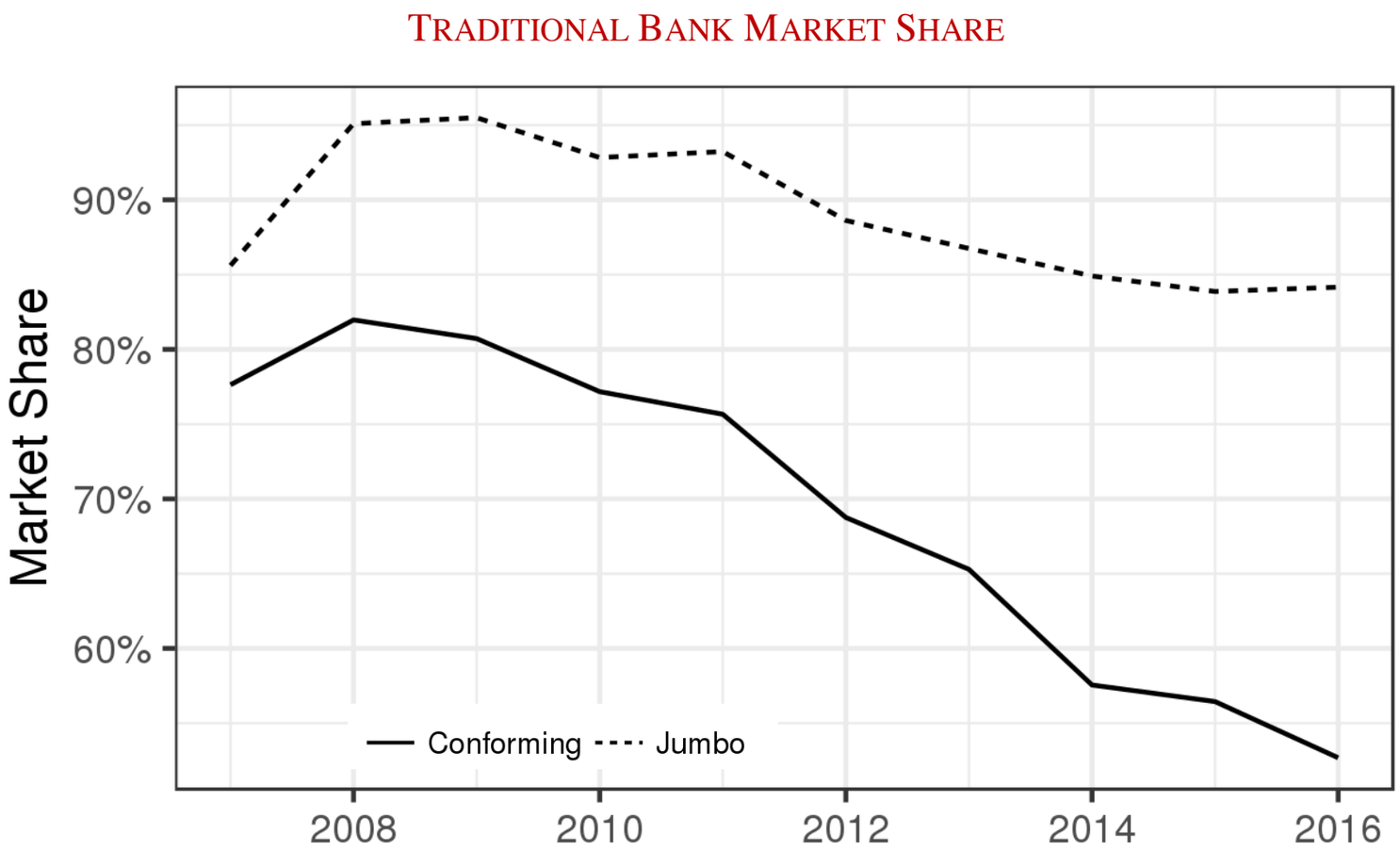


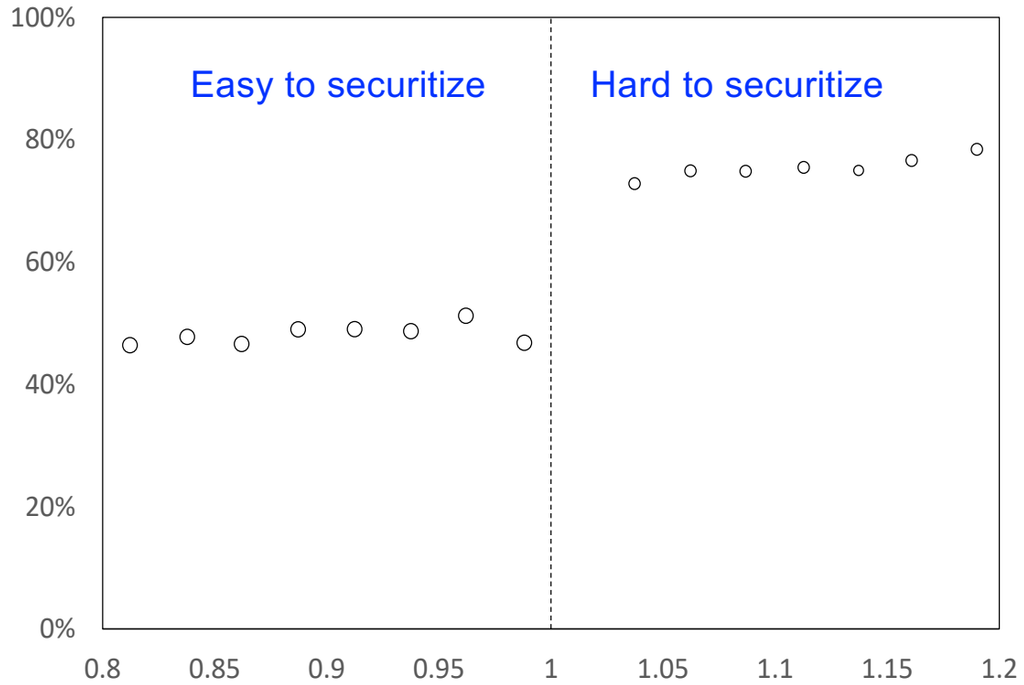
INDUSTRIAL ORGANIZATION

Penetration of Shadow Banks Not Uniform

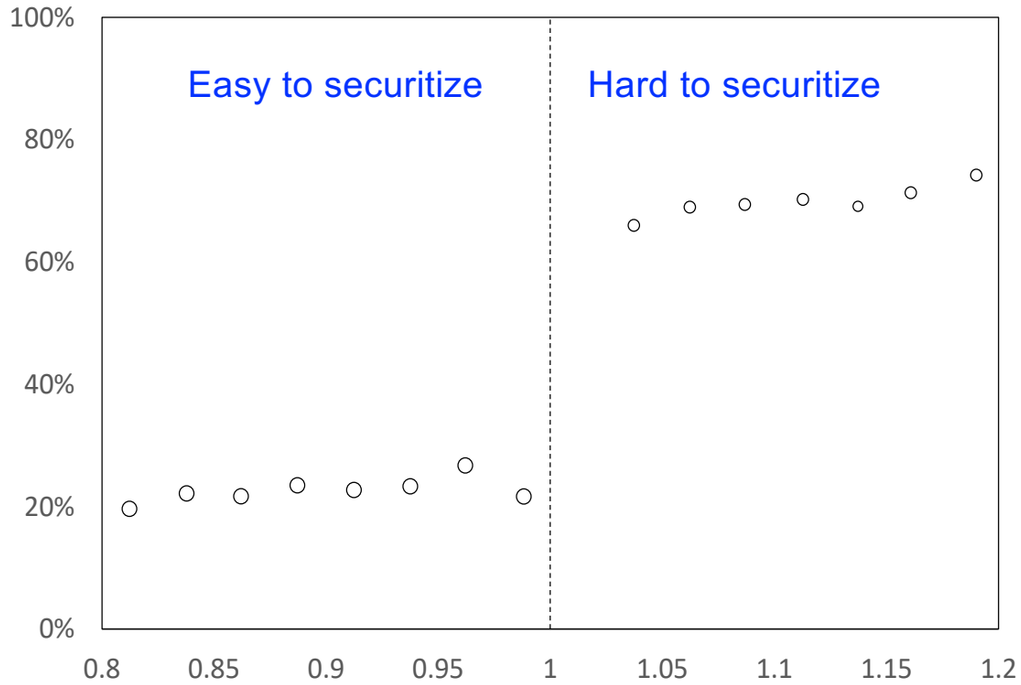


Market Segmentation and Financing

Traditional Bank Market Share



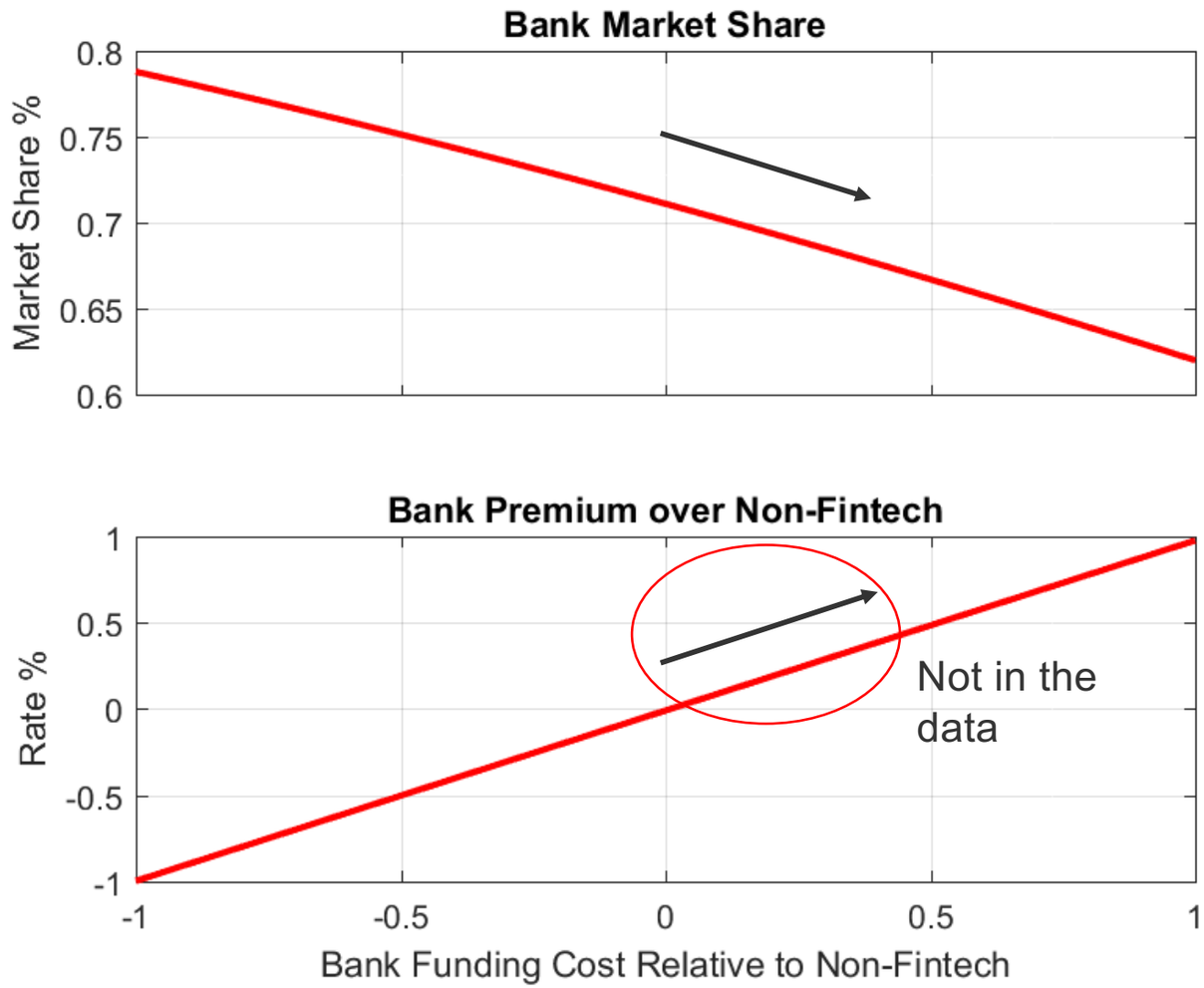
Balance Sheet Financing



EQUILLIBRIUM

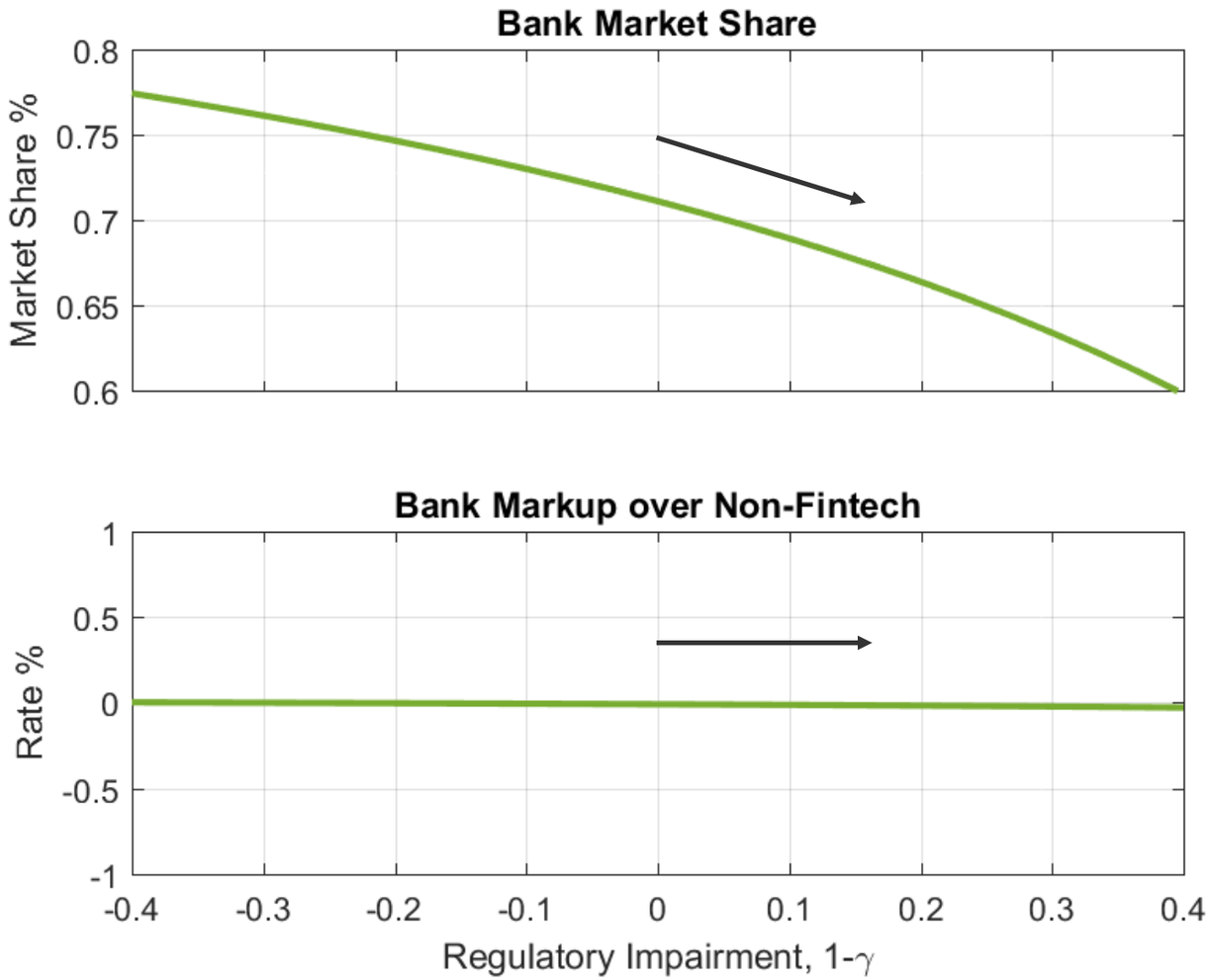
Banks Lose Market Share

Funding Costs?



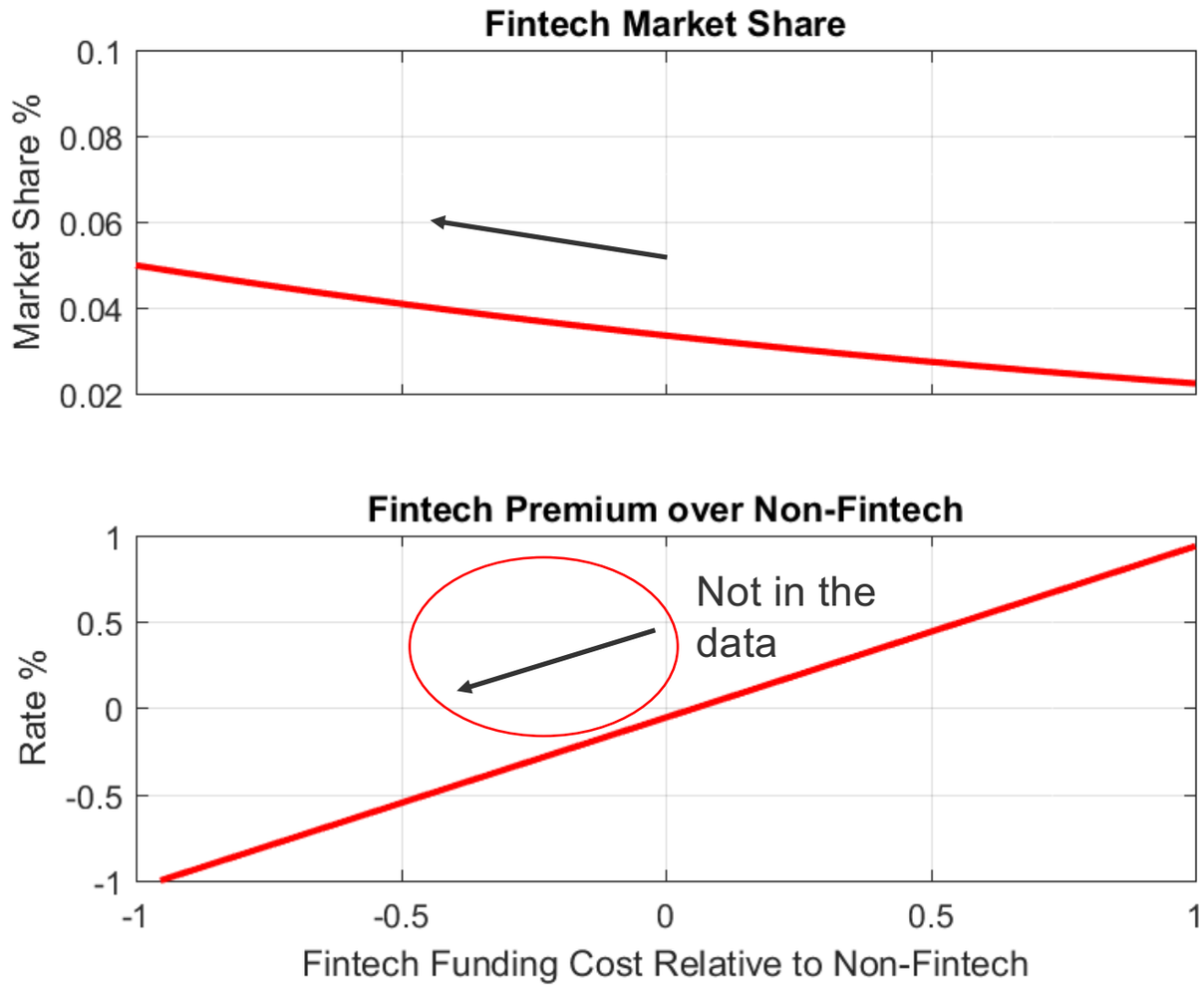
Banks Lose Market Share

Regulation?



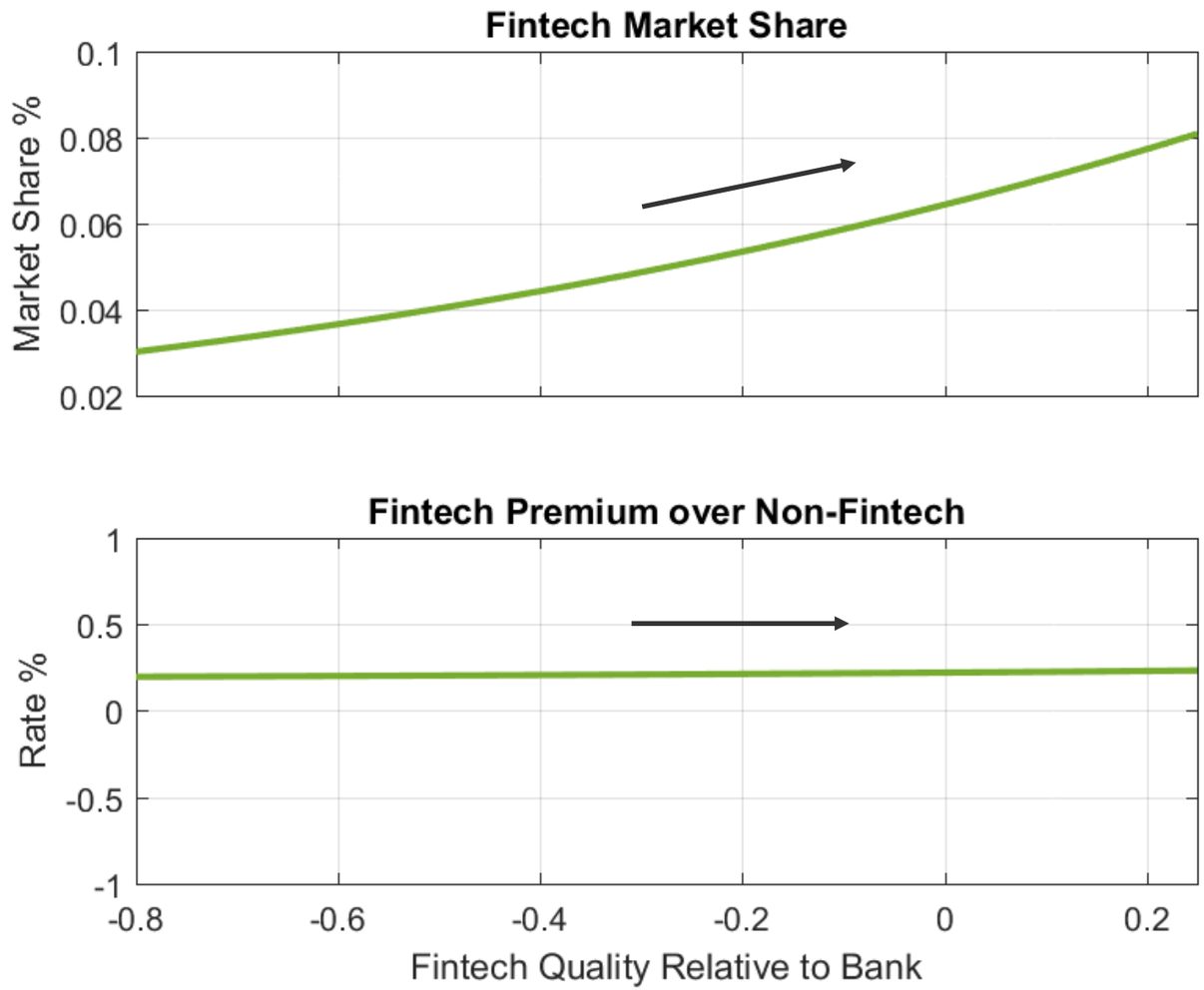
FinTech Gain Market Share

Funding Costs?



FinTech Gain Market Share

Quality?



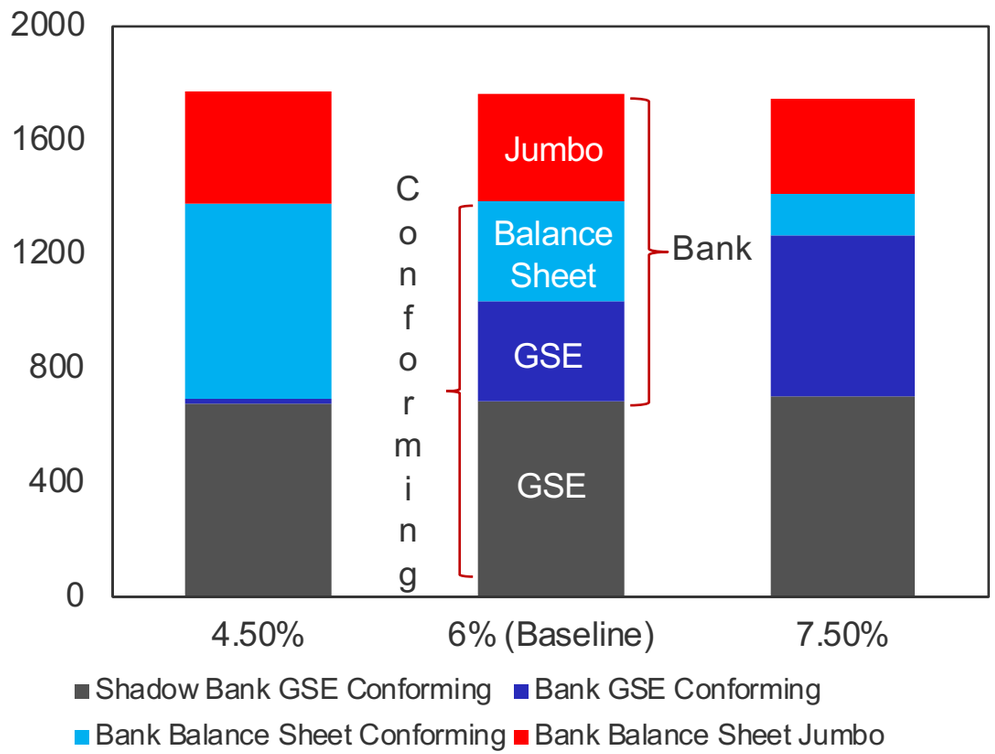
COUNTERFACTUALS

Counterfactuals: Capital Ratios

Capital Requirements 6% → 7.5%

Lender	Loan Type	Financing Source	Change
Total	-	-	-$13b
Bank	Jumbo	Portfolio	-$38b
Bank	Conforming	Portfolio	-$204b
Bank	Conforming	GSE	+$215b
Shadow Bank	Conforming	GSE	+$14b

Lending Volumes ($B)



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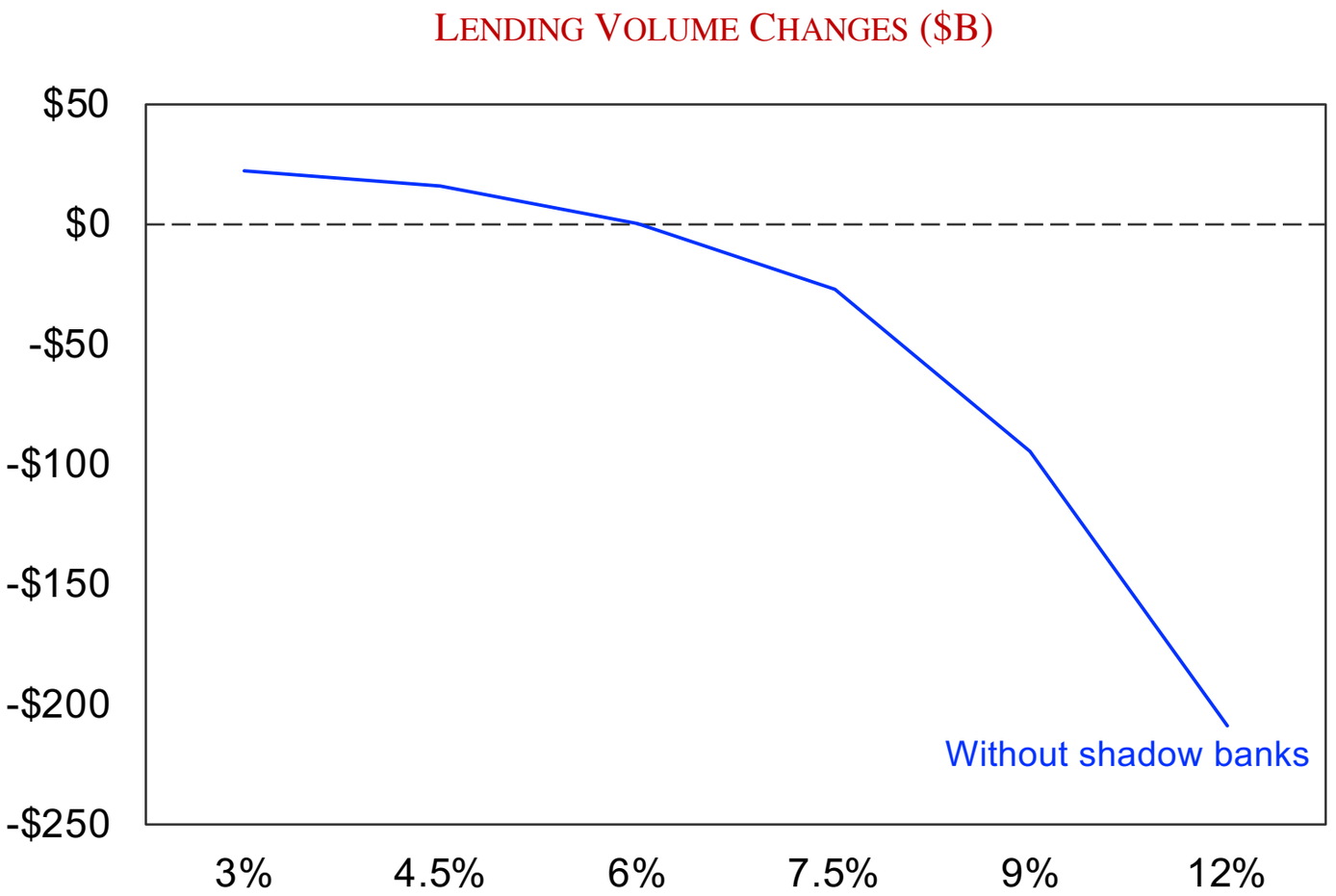

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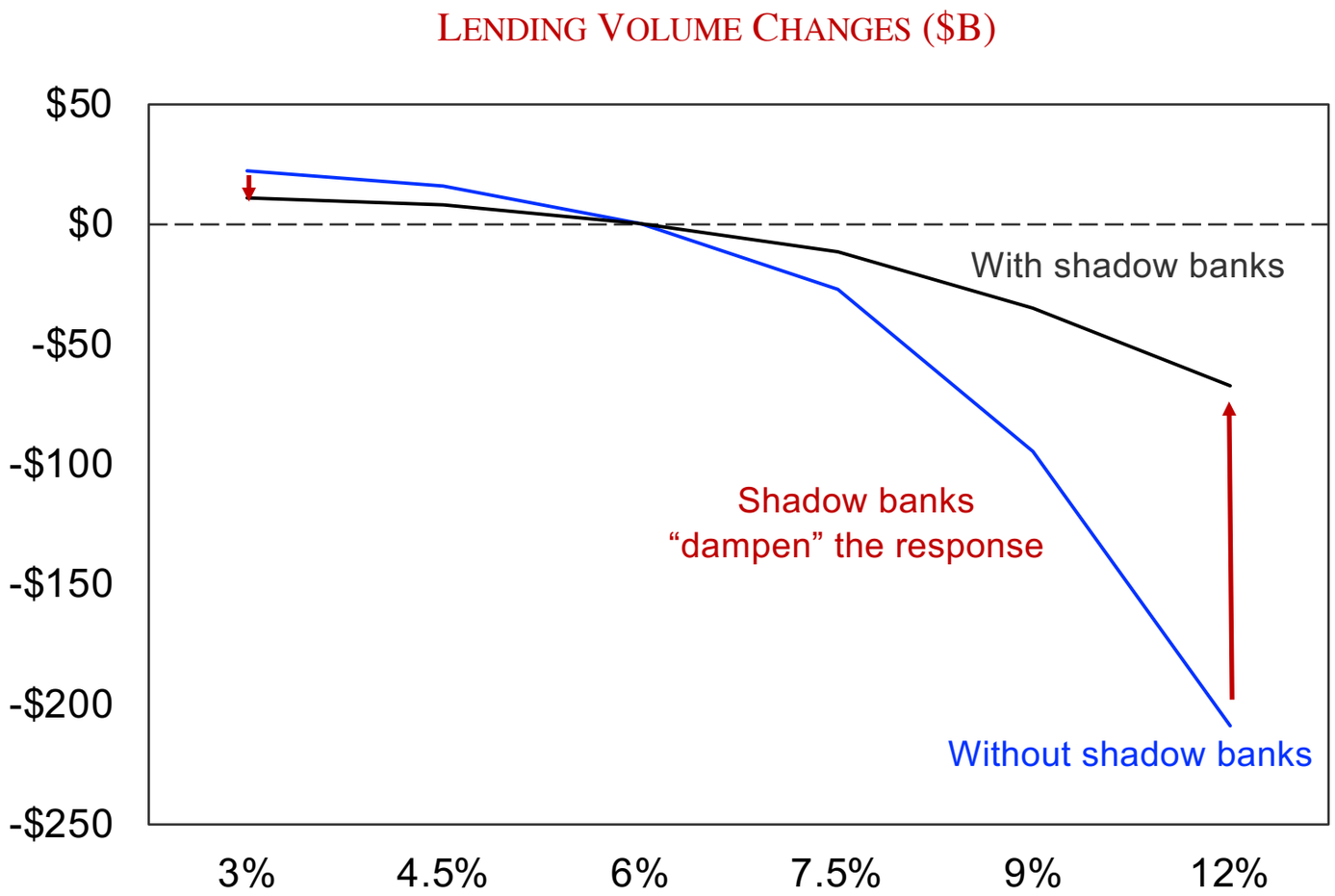
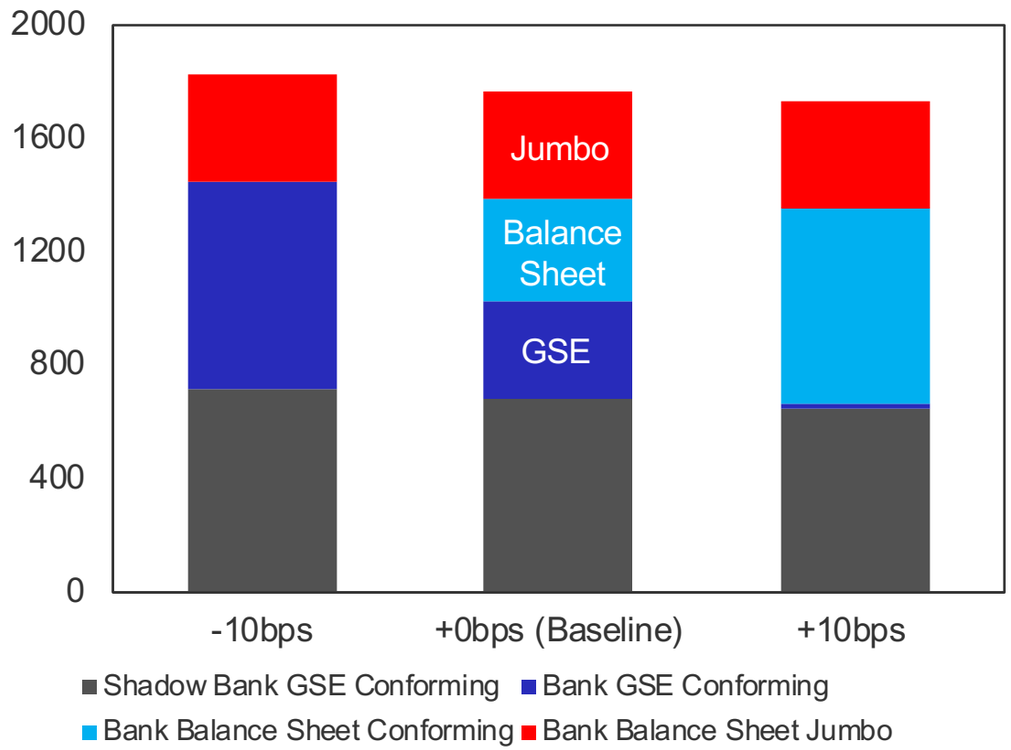


Counterfactuals: QE

GSE Financing Cost -10bps

Lender	Loan Type	Financing Source	Change
Total	-	-	+$61b
Bank	Jumbo	Balance Sheet	-$4b
Bank	Conforming	Balance Sheet	-$357b
Bank	Conforming	GSE	+$389b
Shadow Bank	Conforming	GSE	+$33b

Lending Volumes ($b)



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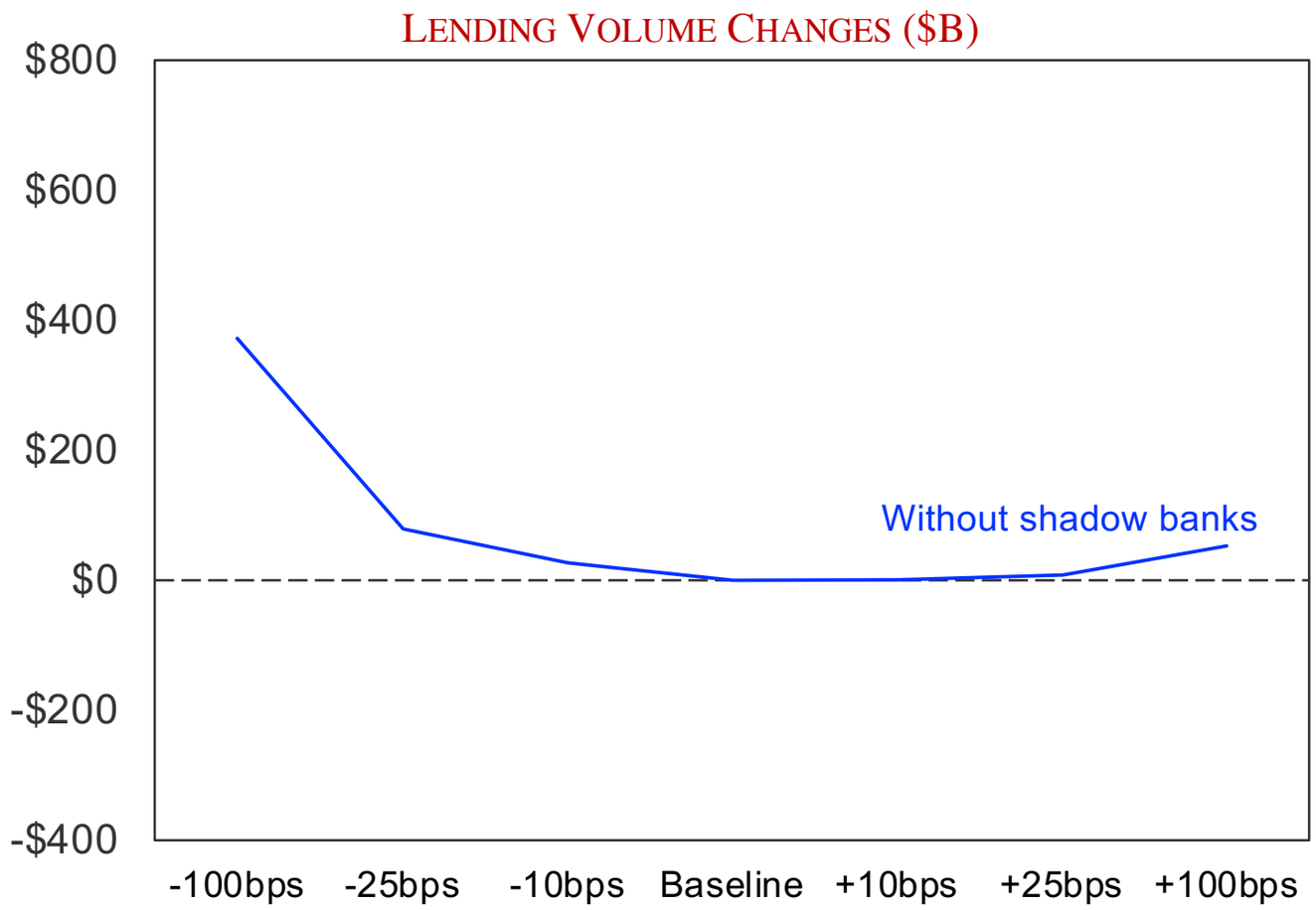

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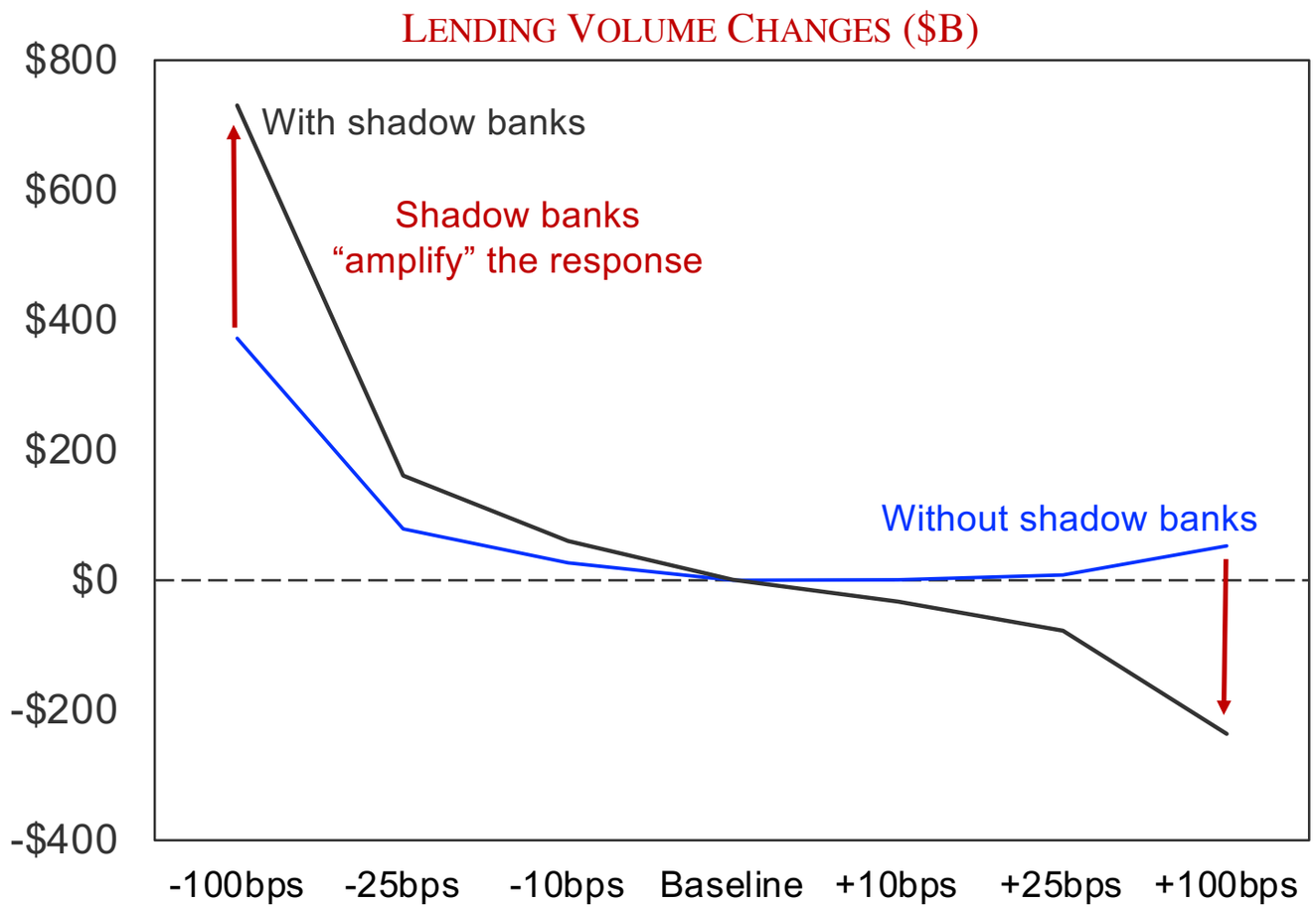

IMPLICATIONS

Interlinkages

TYPICAL SHADOW BANK BALANCE SHEET

A	L
Cash =10	**ST Debt from Banks = 75**
Mortgages for Sale =70	**Equity = 25**
MSR =15	
IT =5	