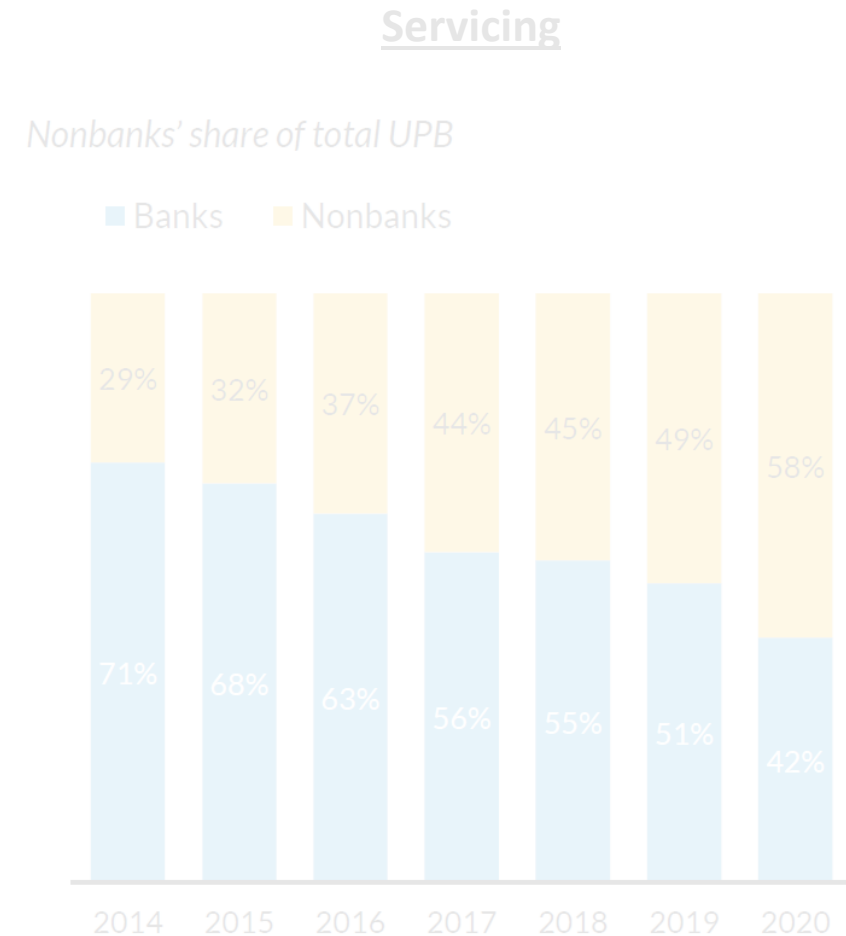
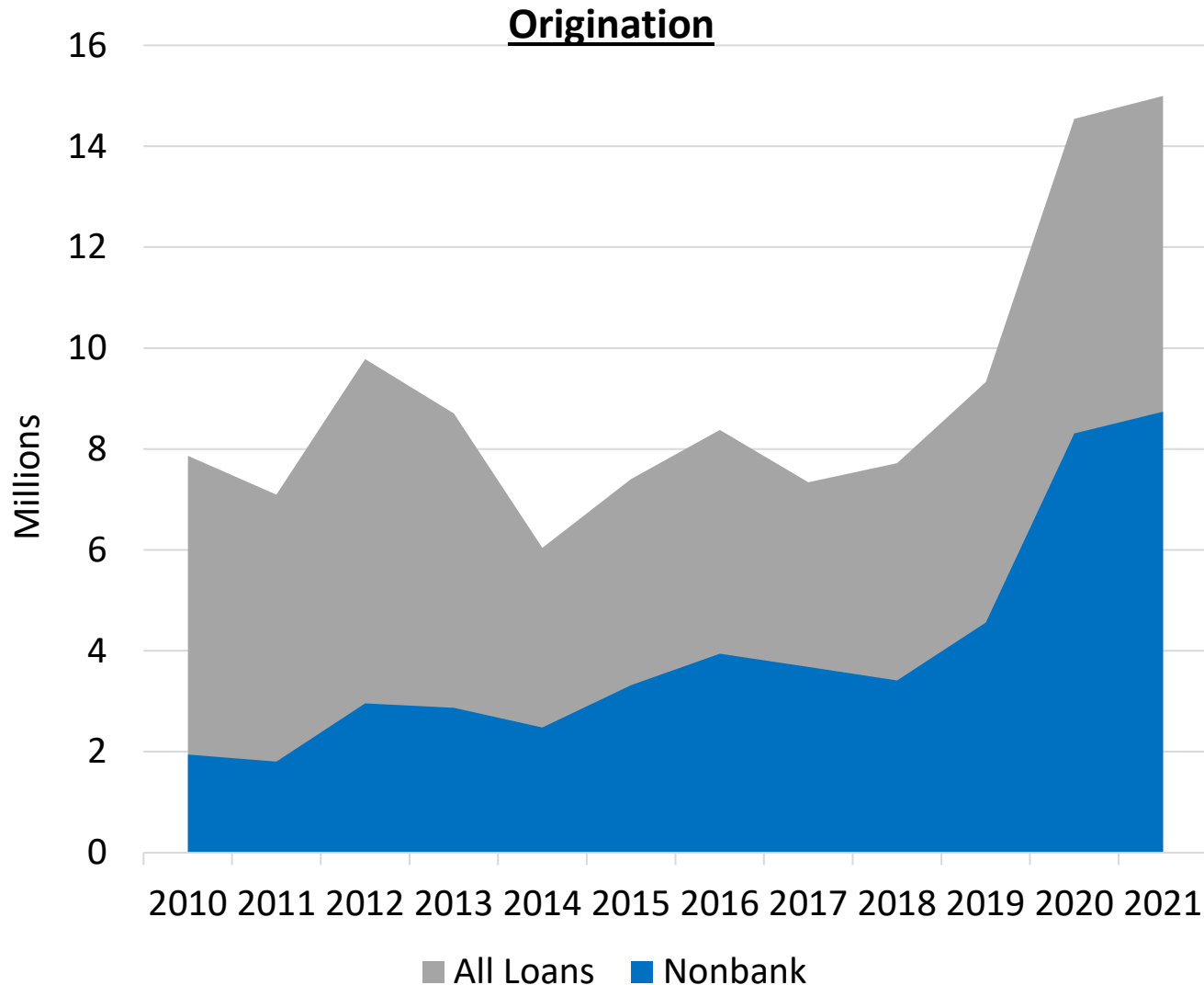


# Risk in the shadows: Leverage and liquidity in nonbanks

Taylor Begley, University of Kentucky  
Kandarp Srinivasan, Northeastern University

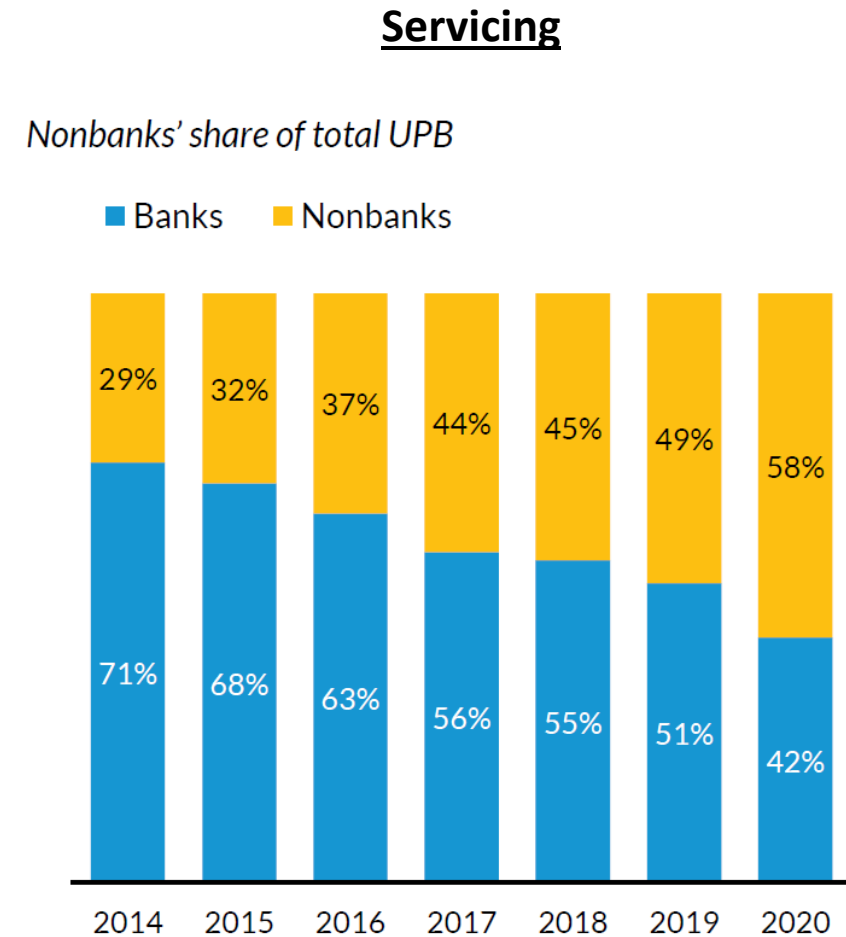
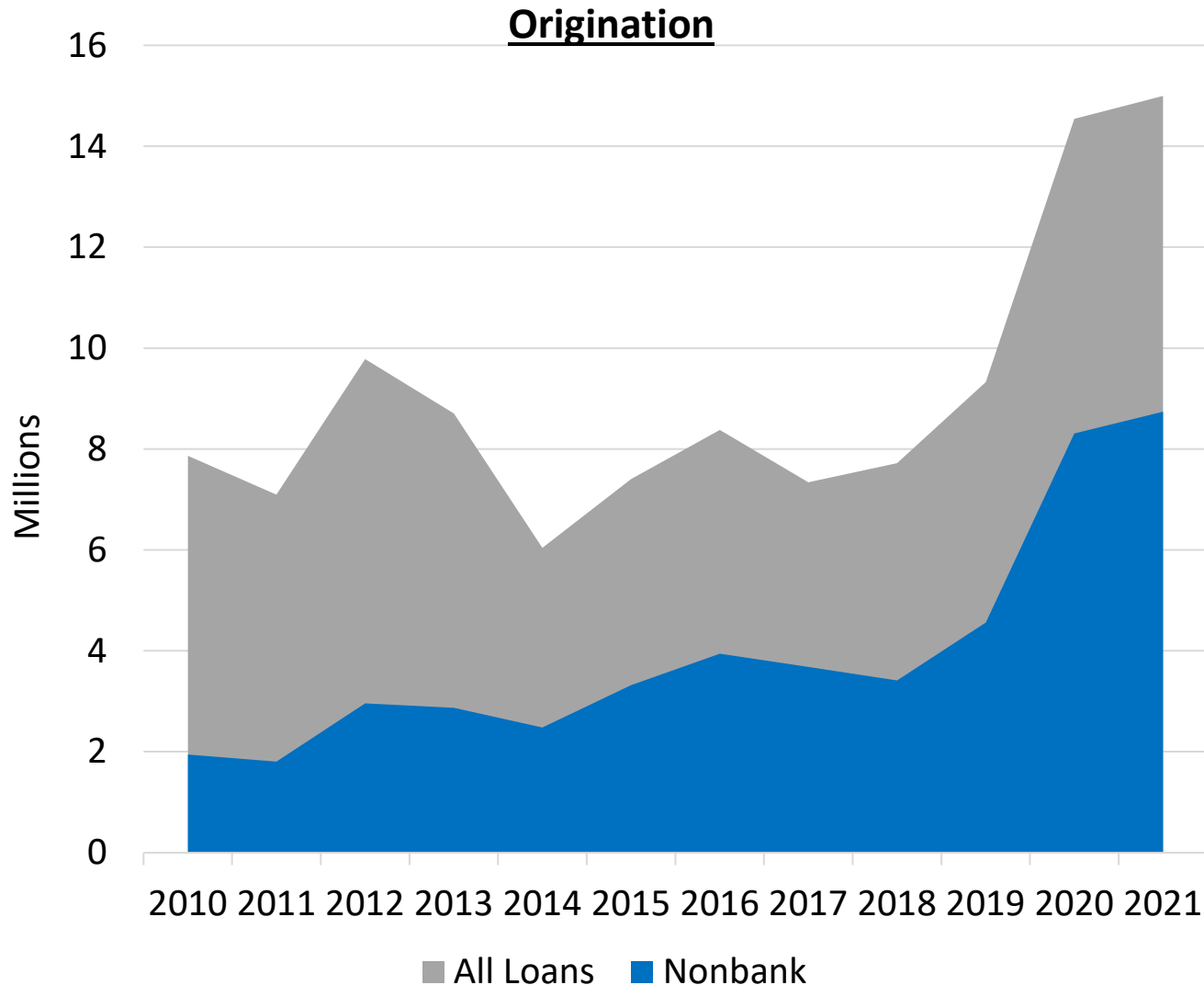
September 2023

# Nonbanks now lead in mortgage origination & servicing



Source: Urban Institute calculations based on Inside Mortgage Finance

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# Causes for concern?

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## Research Questions

- How risky are nonbank mortgage companies?
- To what extent are market forces governing these lightly-regulated firms?

Data

# Data

## Source:

- California Department of Financial Protection & Innovation
- All firms that originate or servicing at least one loan in CA.



# Data

## Source:

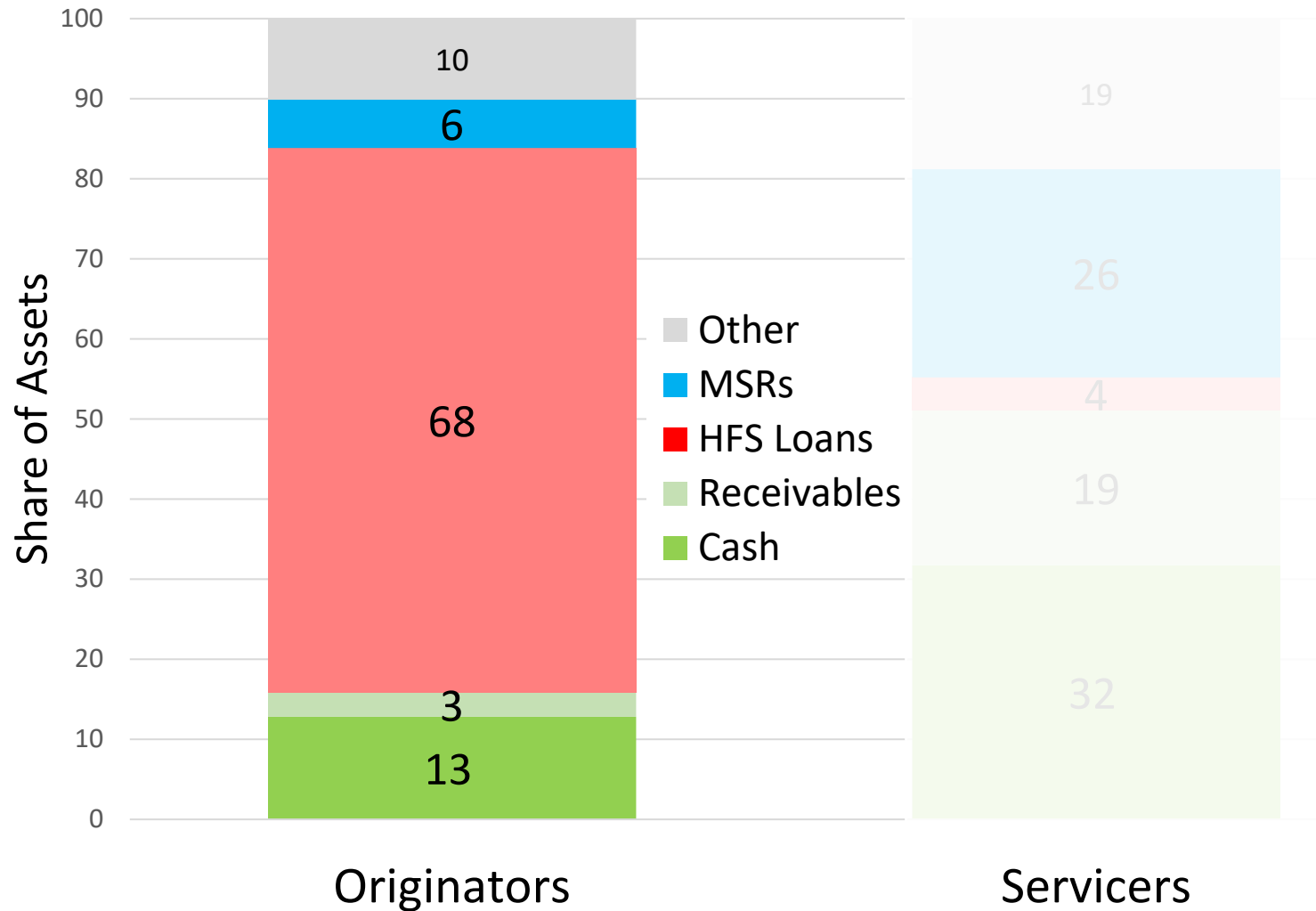
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## Coverage:

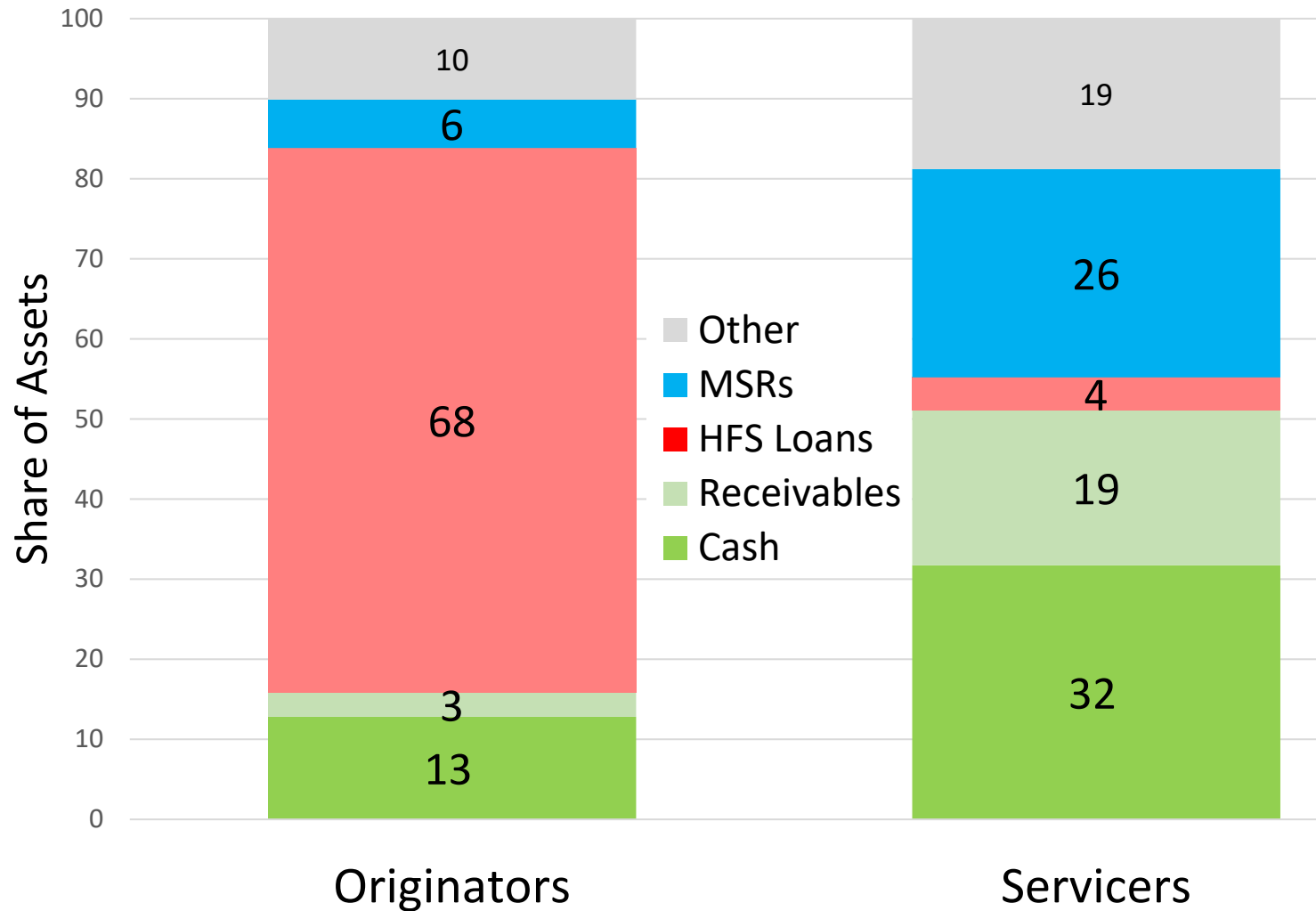
- Detailed *company-level* financial statements
- 527 firms from 2011q1-2021q3
- 80%+ of all *nationwide* nonbank originations by the end of the sample

# Characterizing Business Models

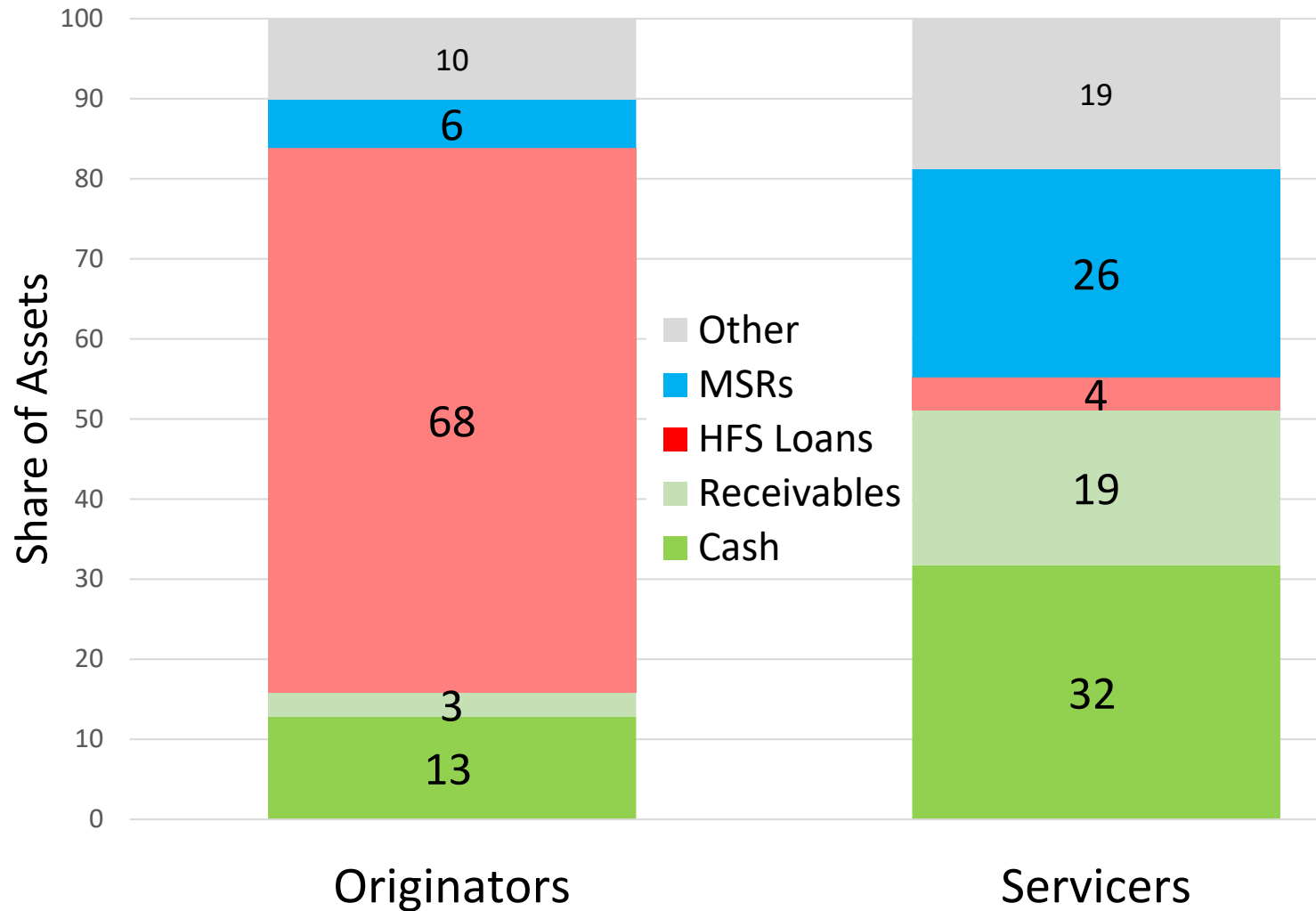
# Comparing Business Models: Balance Sheet



# Comparing Business Models: Balance Sheet



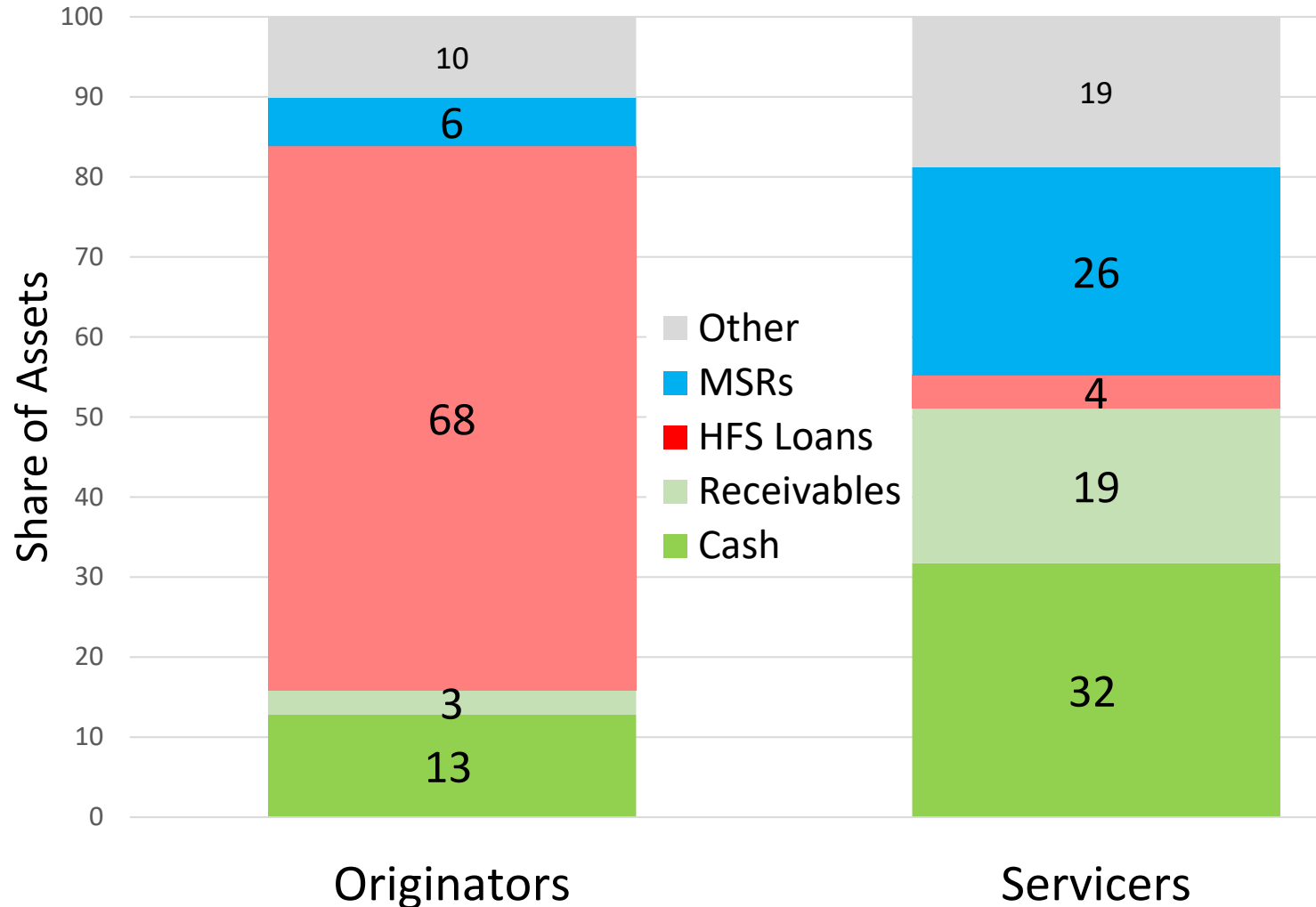
# Comparing Business Models: Balance Sheet



## Originators vs Servicers

- Debt/Assets
  - 75% vs 47%

# Comparing Business Models: Balance Sheet

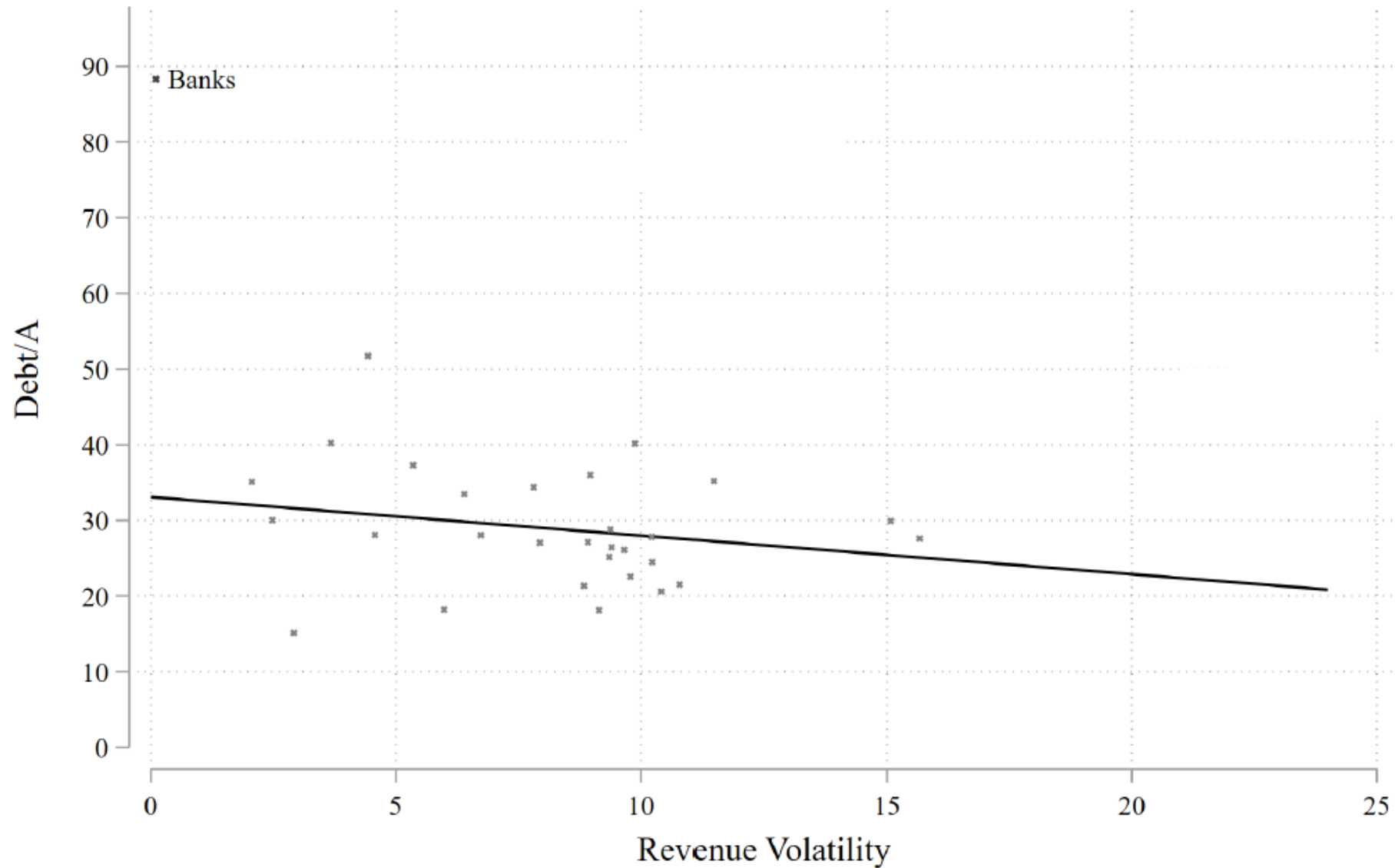


## Originators vs Servicers

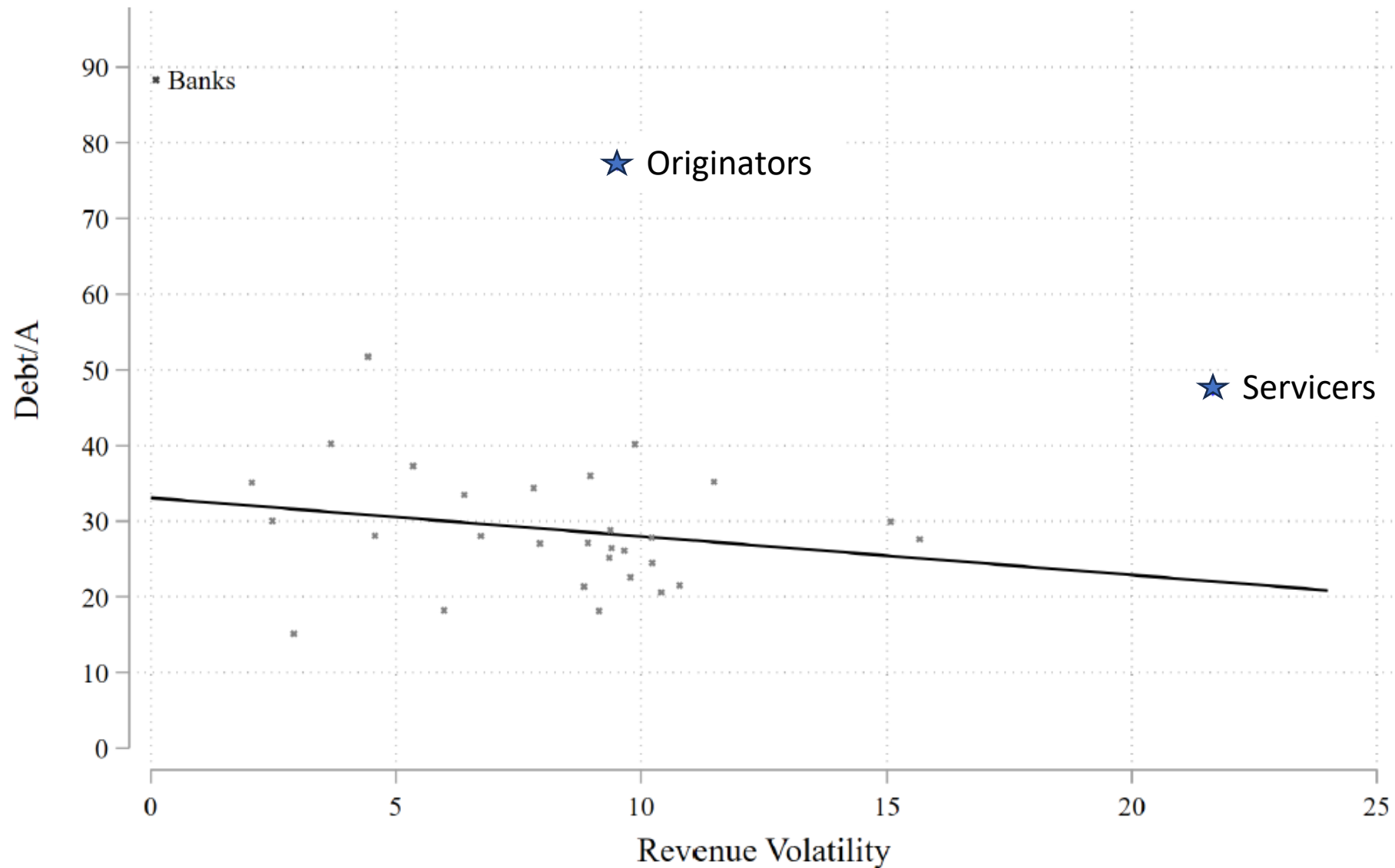
- Debt/Assets
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How risky is nonbank business?

# Business volatility and debt: a puzzle?

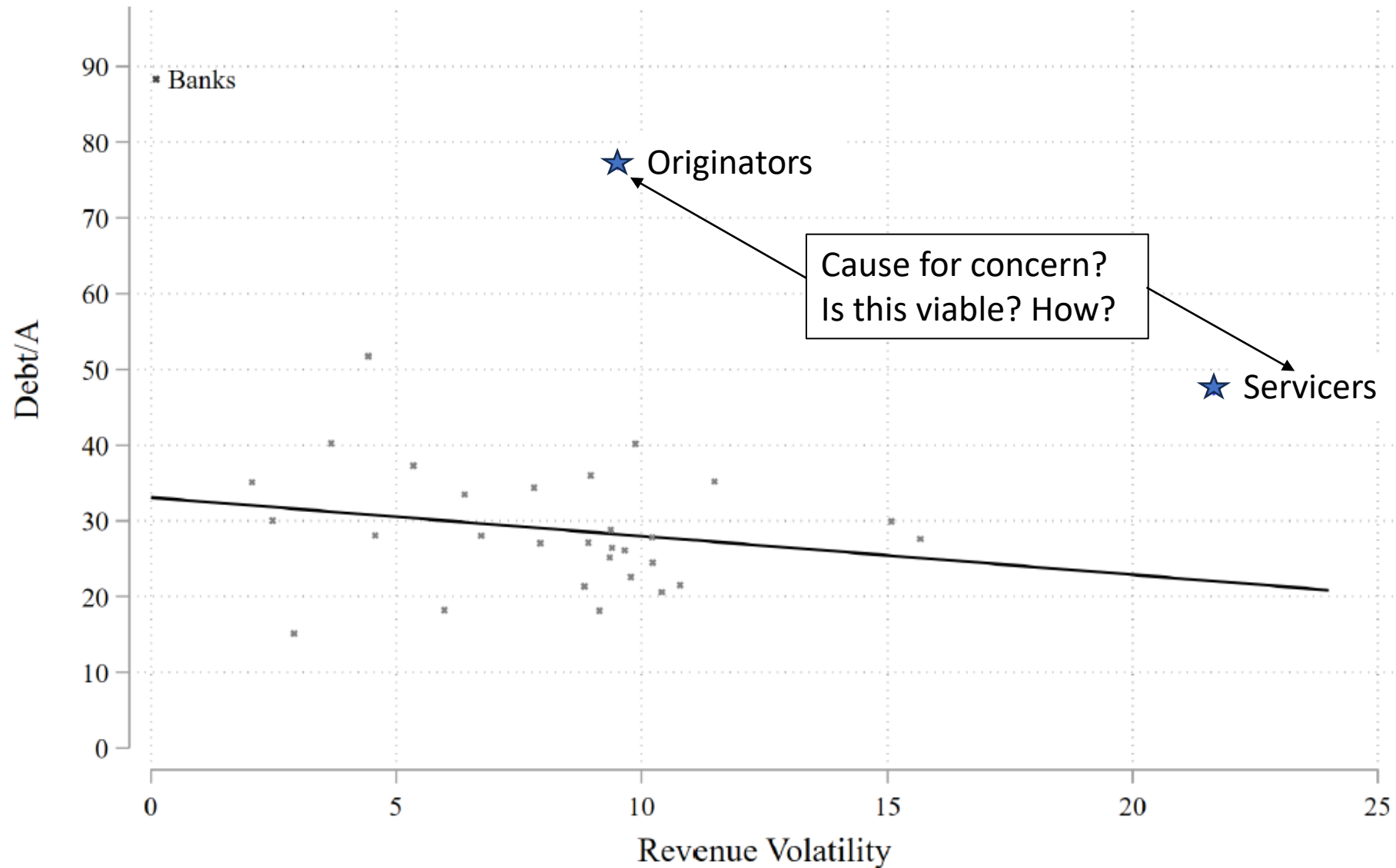


# Business volatility and debt: a puzzle?

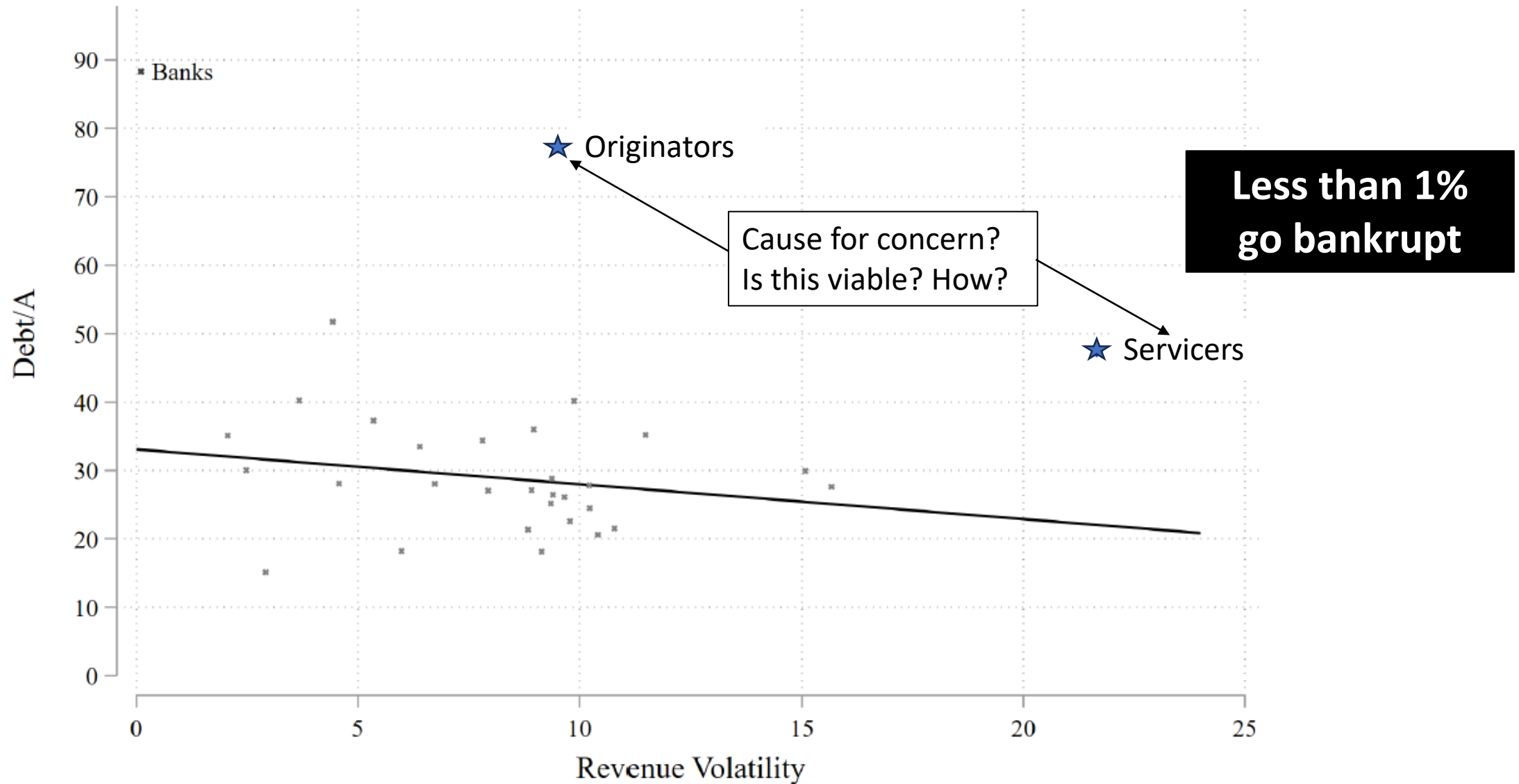




# Business volatility and debt: a puzzle?



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# Business volatility and debt: a puzzle?



# Nonbank Flexibility

# Operating and Financial Flexibility

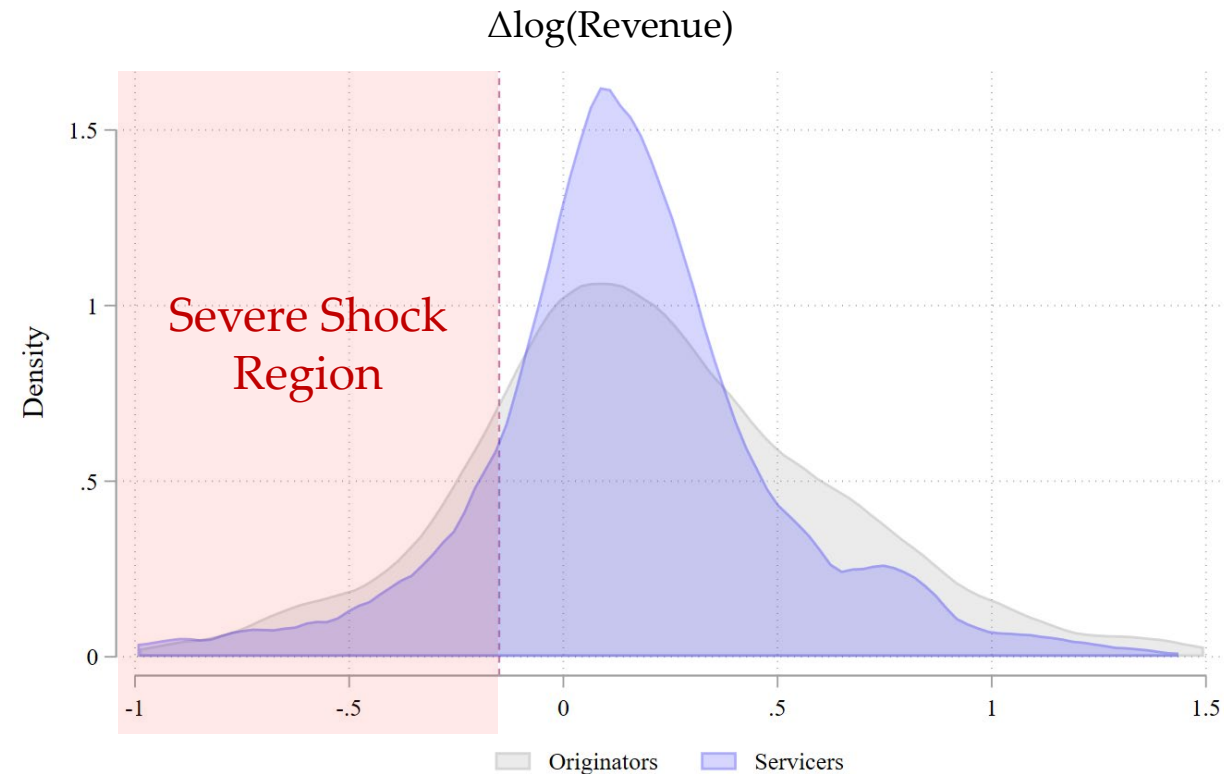
- What is the cost structure for nonbank mortgage companies?

# Operating and Financial Flexibility

- What is the cost structure for nonbank mortgage companies?
- Aims:
  1. Estimate operating flexibility
    - i.e., variable vs. fixed costs
  2. Estimate financial flexibility

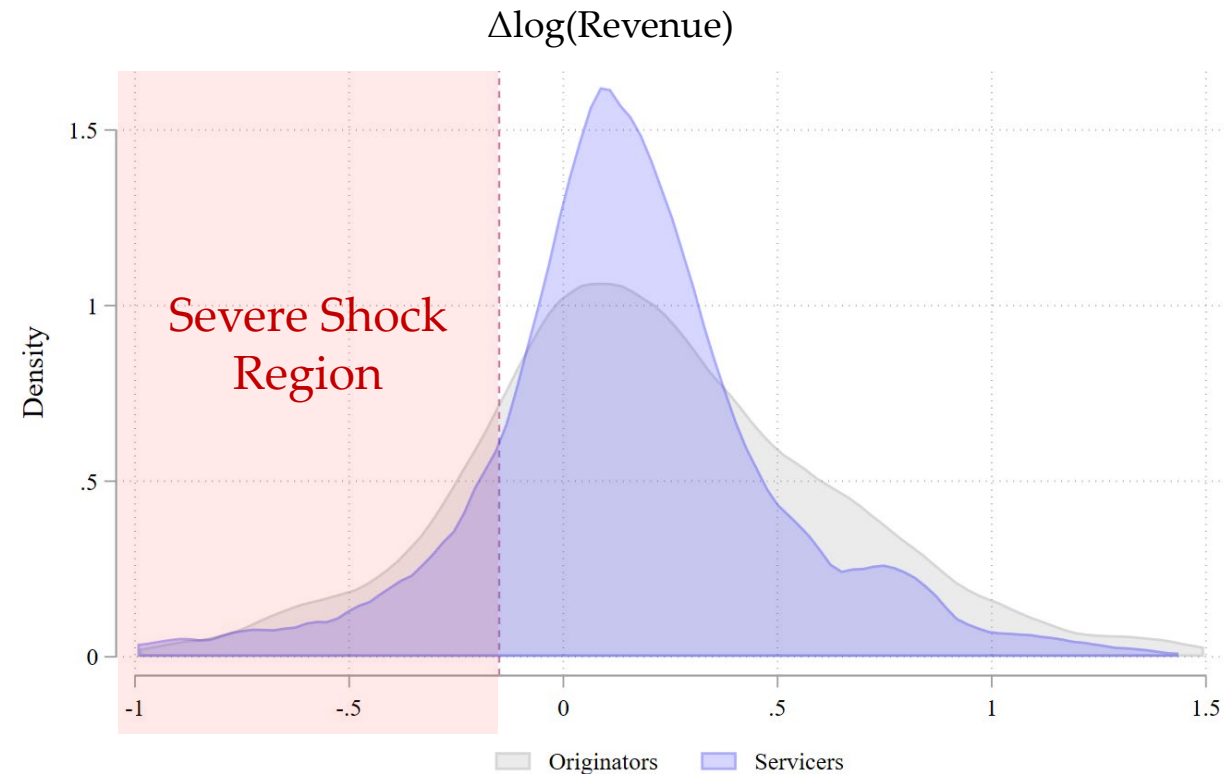
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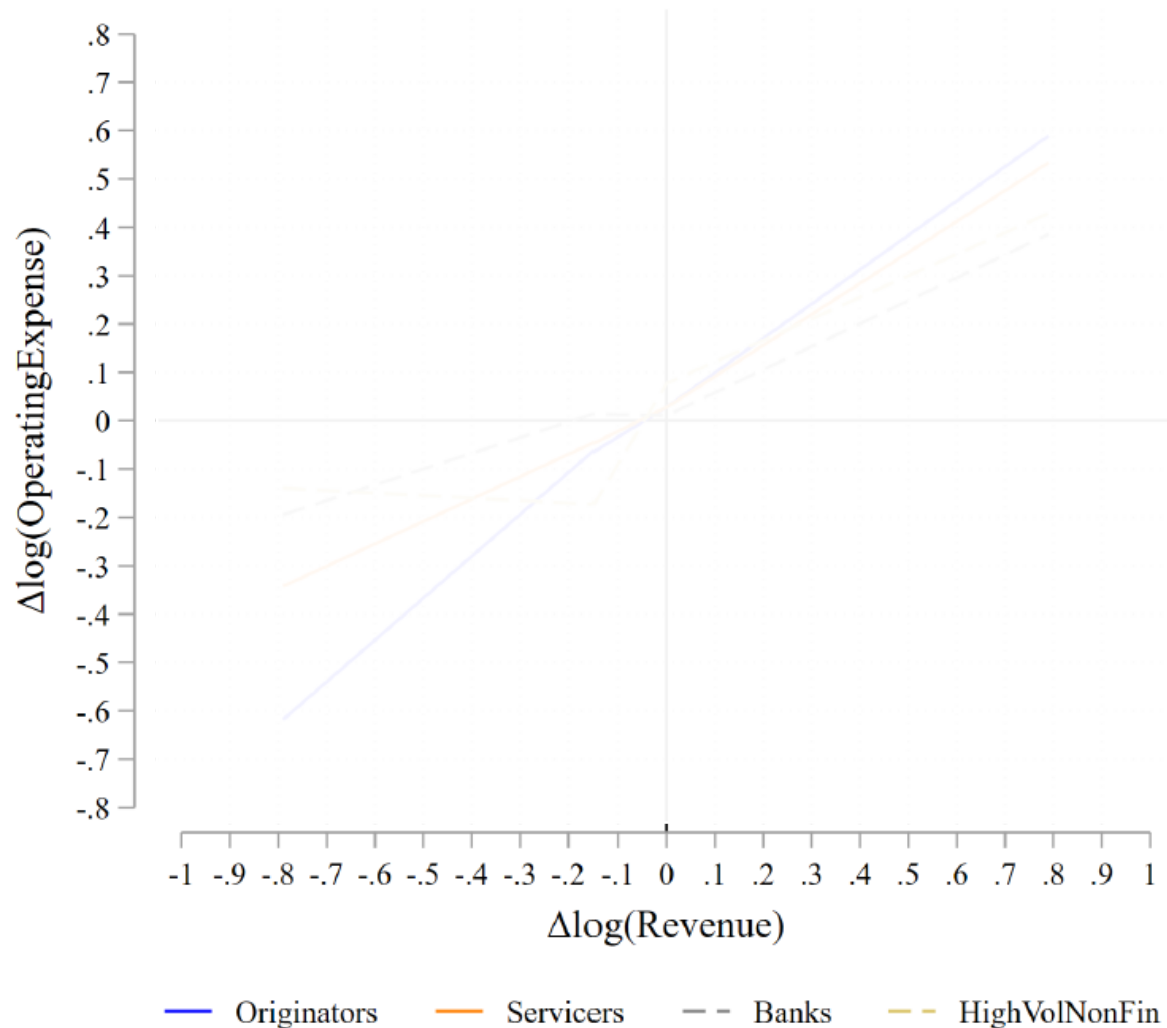
# Operating and Financial Flexibility

- What is the cost structure for nonbank mortgage companies?
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  2. Estimate financial flexibility
- Spline regression
  - regress  $\Delta\log(\text{Costs})$  on  $\Delta\log(\text{Revenue})$
  - Focus on Severe Shocks Region
    - $\Delta\log(\text{Revenue}) < -0.15$





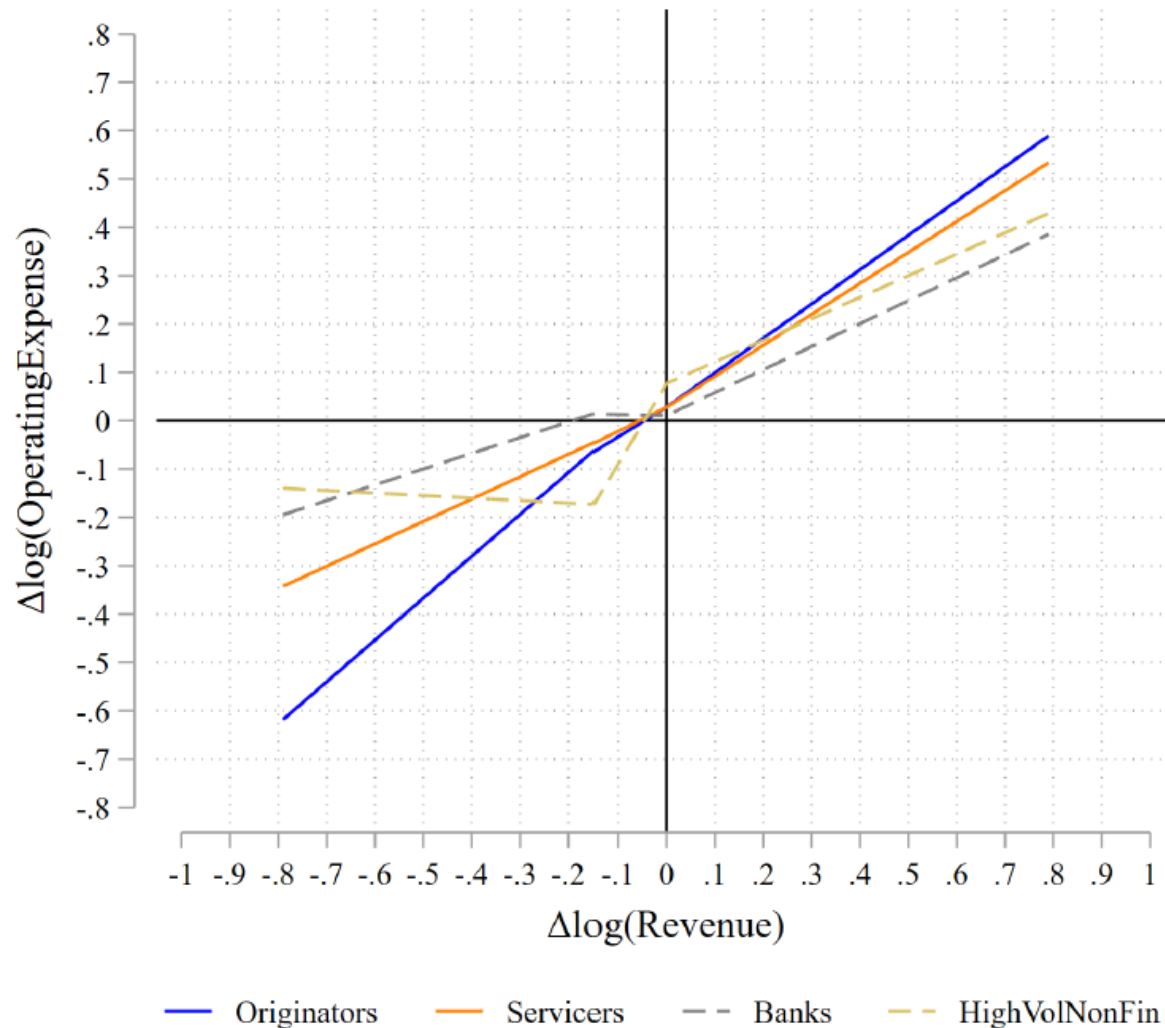
# Operating Flexibility



$\Delta \log(\text{Operating Costs})$  on  $\Delta \log(\text{Revenue})$

Severe Shock Region Estimates:

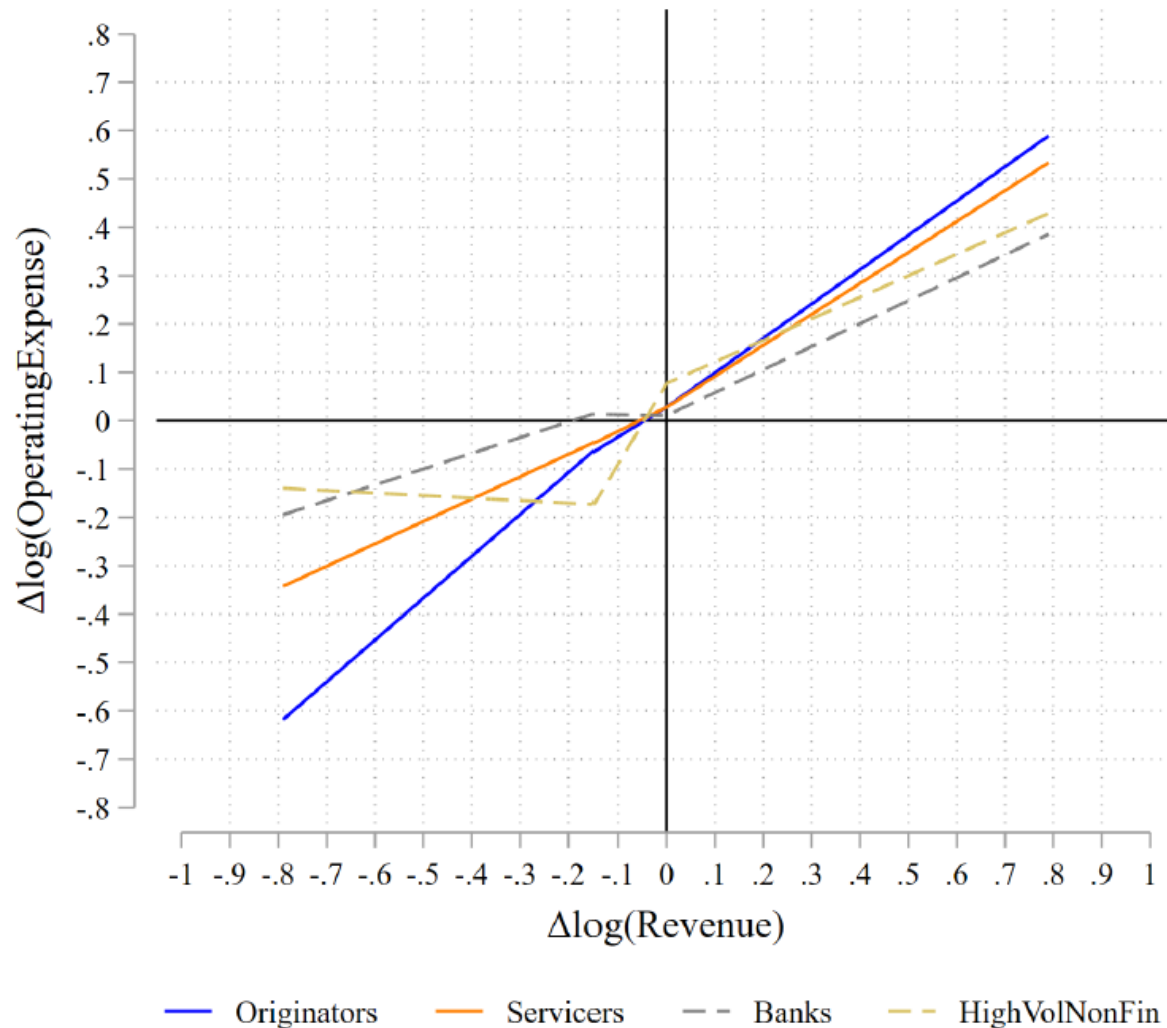
# Operating Flexibility



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Severe Shock Region Estimates:

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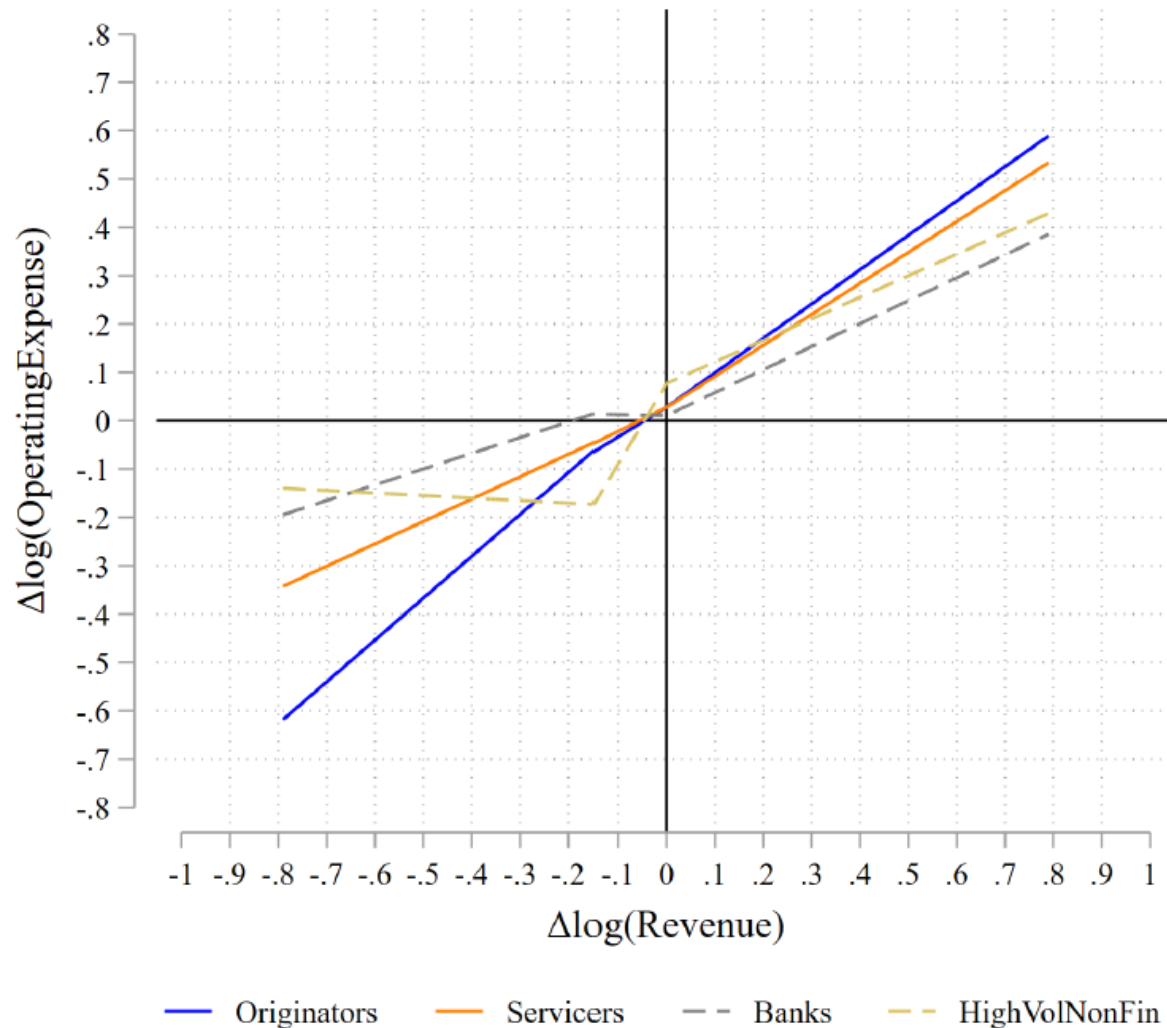


Δlog(**OperatingCosts**) on Δlog(Revenue)

Severe Shock Region Estimates:

Firm Type	Revenue Shock Sensitivity
Originators	0.87***
Servicers	0.46**
Banks	0.33***
HighVol NonFinancials	-0.05

# Operating Flexibility

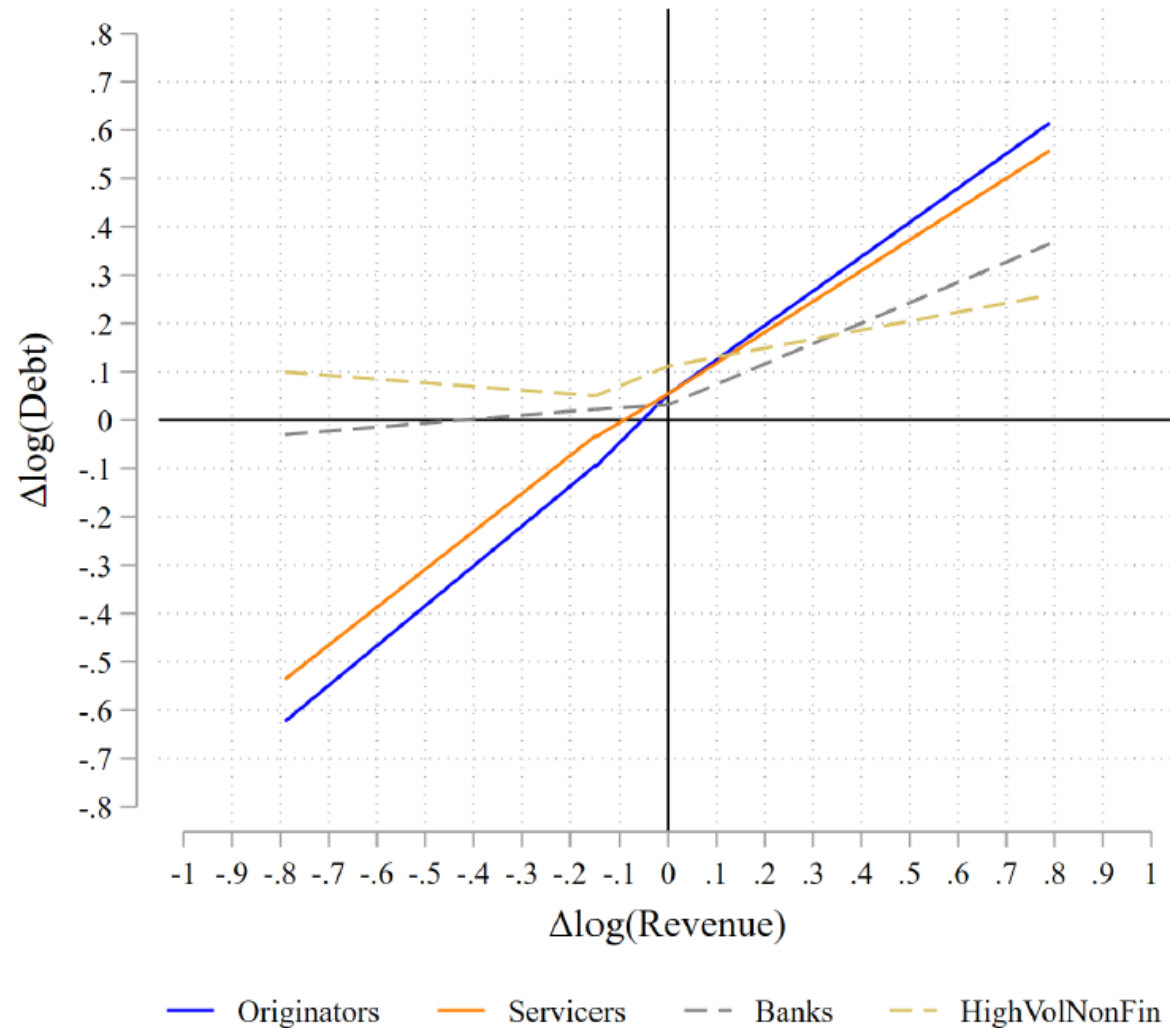


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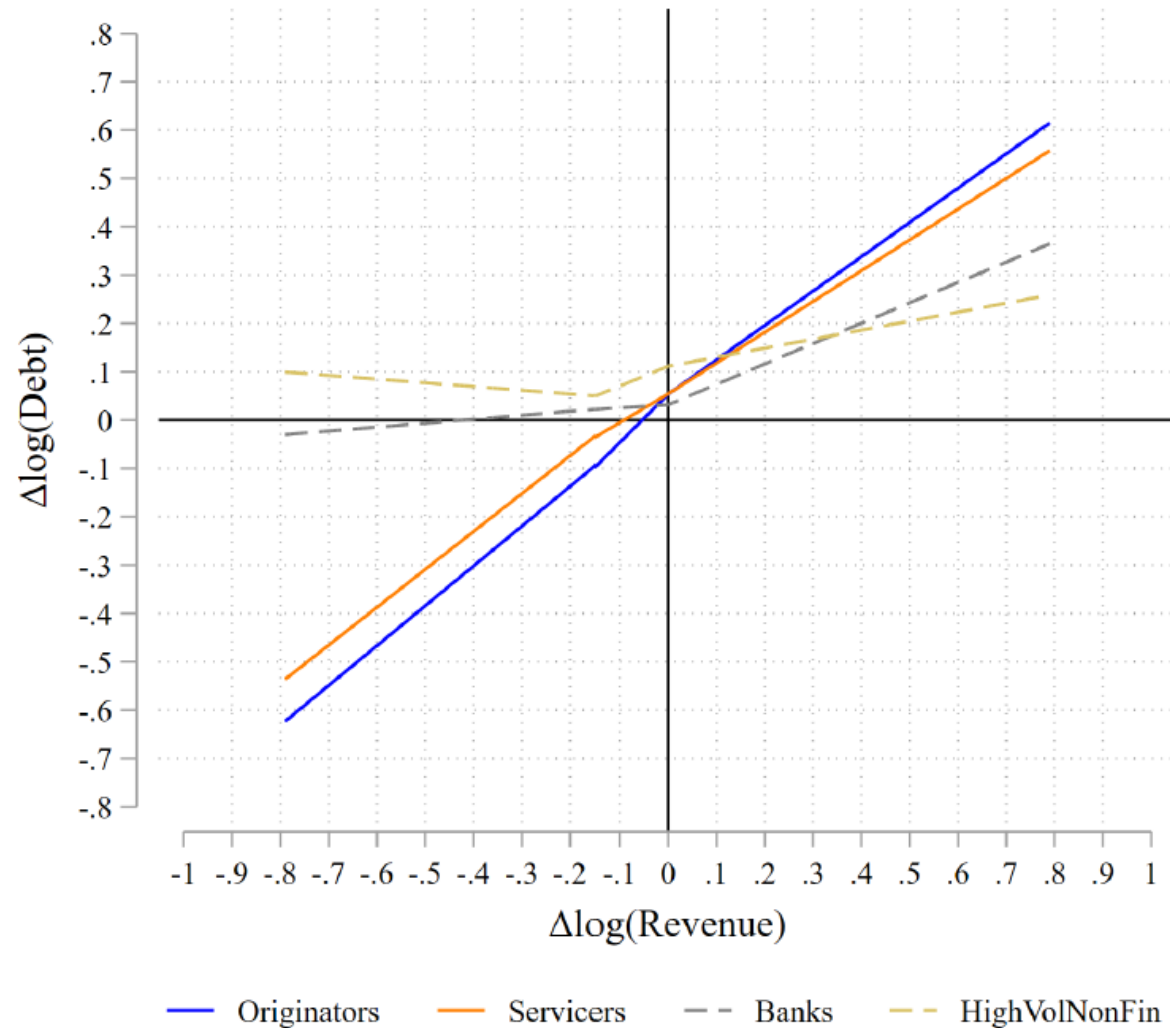


$\Delta \log(\text{Debt})$  on  $\Delta \log(\text{Revenue})$

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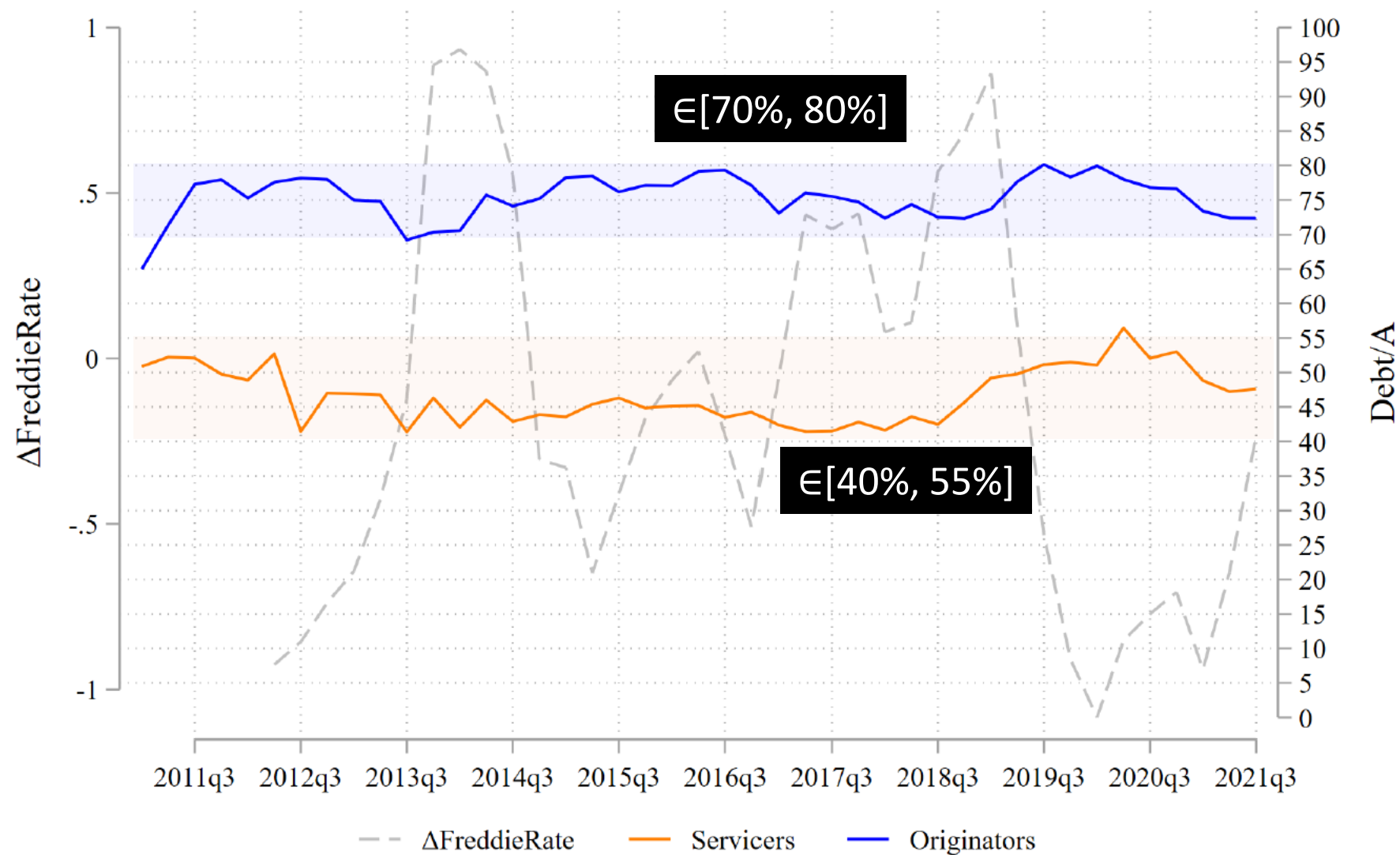


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# Debt/Assets are stable over time

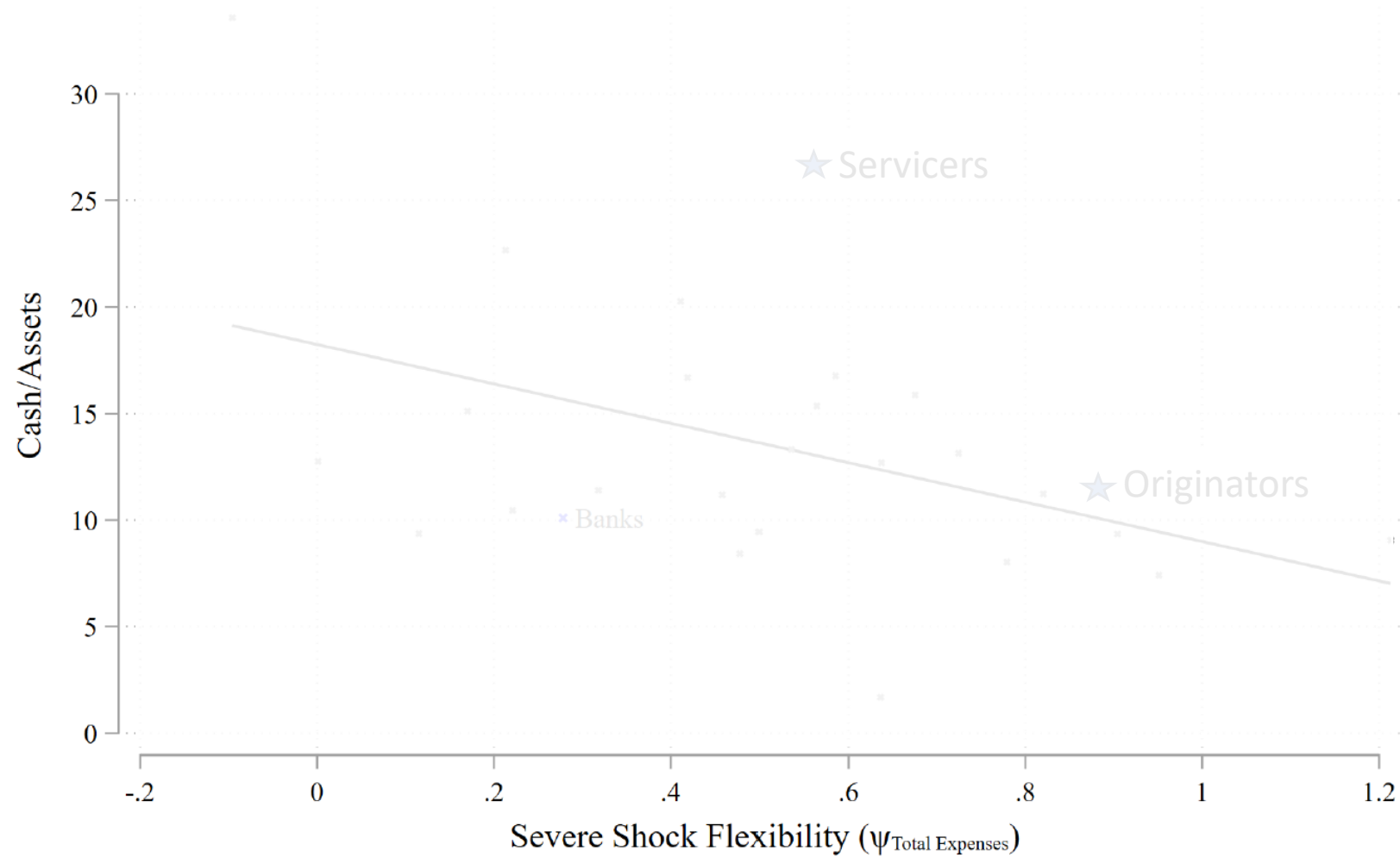




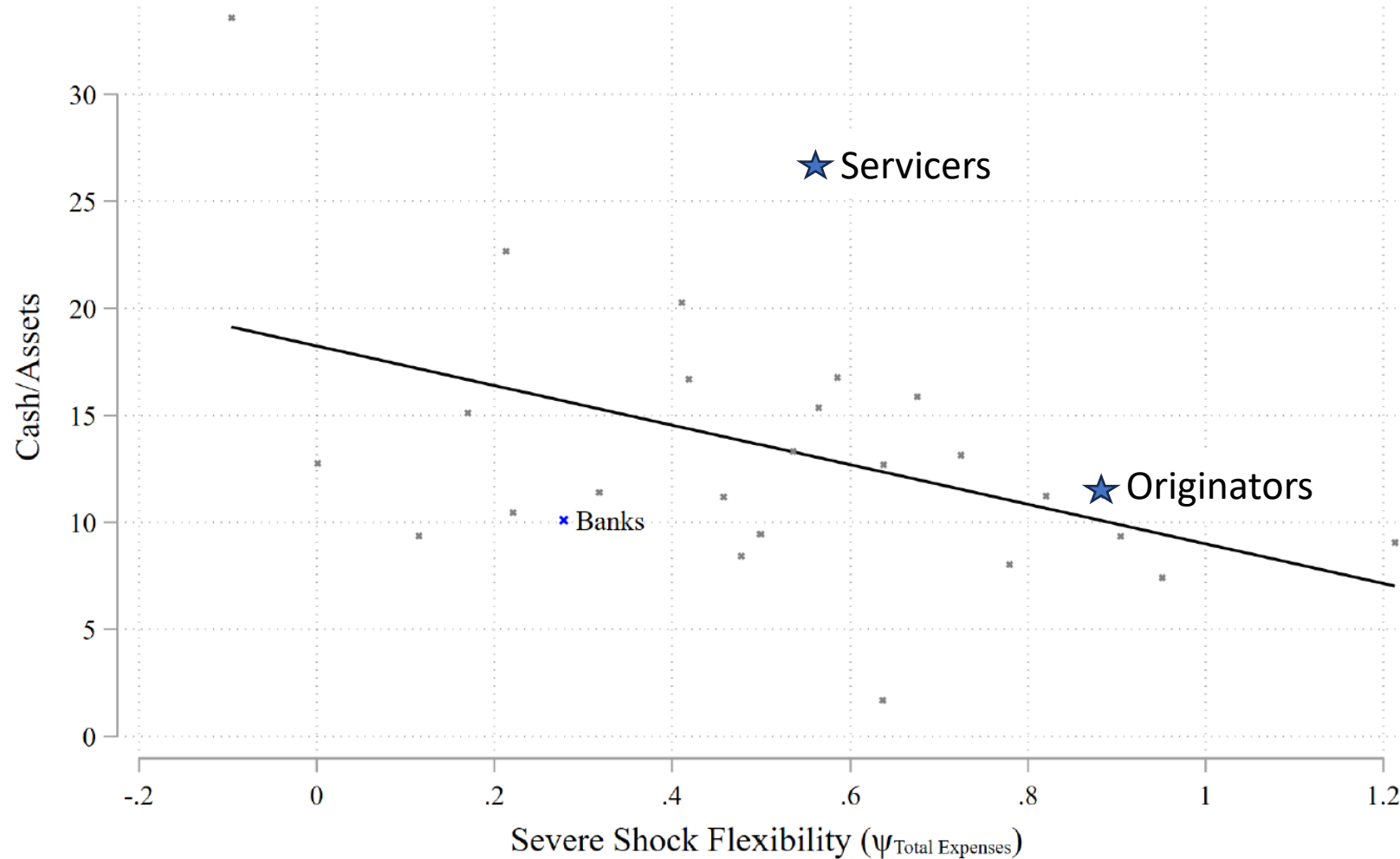
# Liquidity



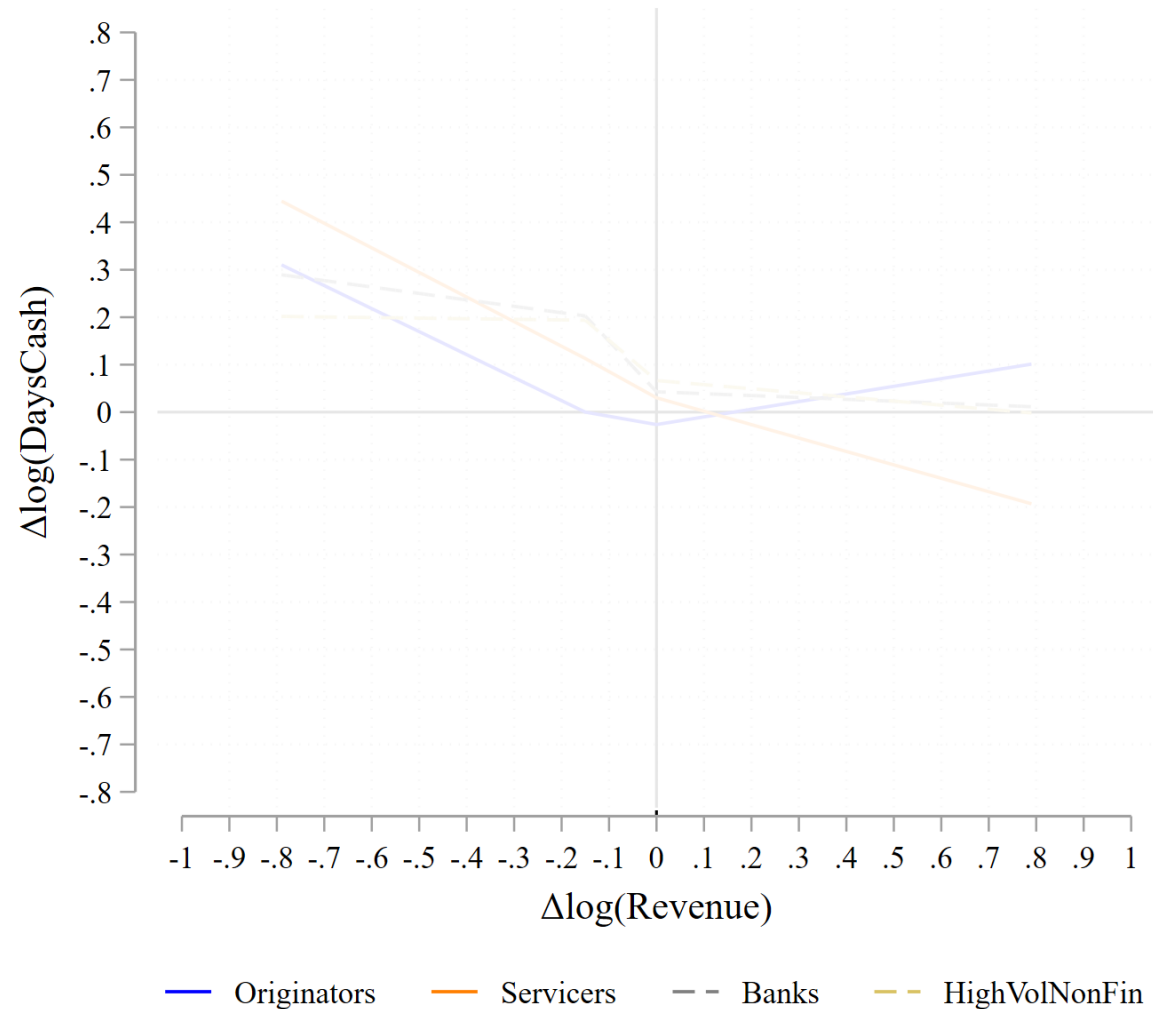
# Flexibility and Cash Holdings



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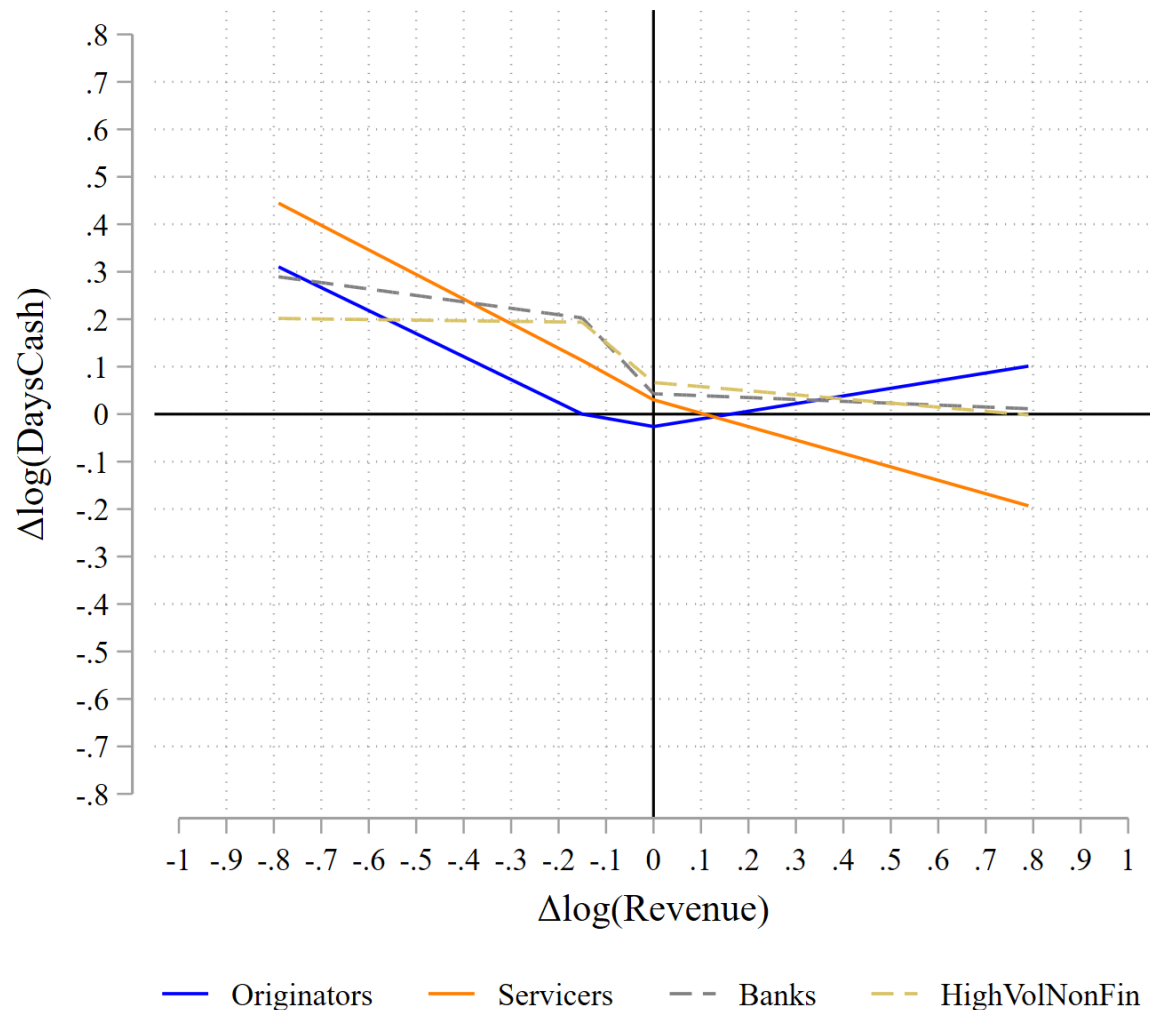
# Liquidity response to shocks



## Operating Liquidity

- “Days’ Cash on Hand”
- Cash/Daily Operating Expenses

# Liquidity response to shocks



## Operating Liquidity

- “Days’ Cash on Hand”
- Cash/Daily Operating Expenses

Days’ cash on hand *increases*

- Reducing costs fast enough to maintain operating liquidity.

# Conclusion

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# Conclusion

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- Despite high leverage, they have very risky assets.
  - But...bankruptcy is rare.
- How?
  - Highly flexible cost structure (esp. Originators)
  - Higher liquidity buffers (esp. Servicers)
- Any potential nonbank regulations should take into account:
  - the nature of nonbanks' risks
  - the extent that nonbanks' flexibility allows them to respond to shocks



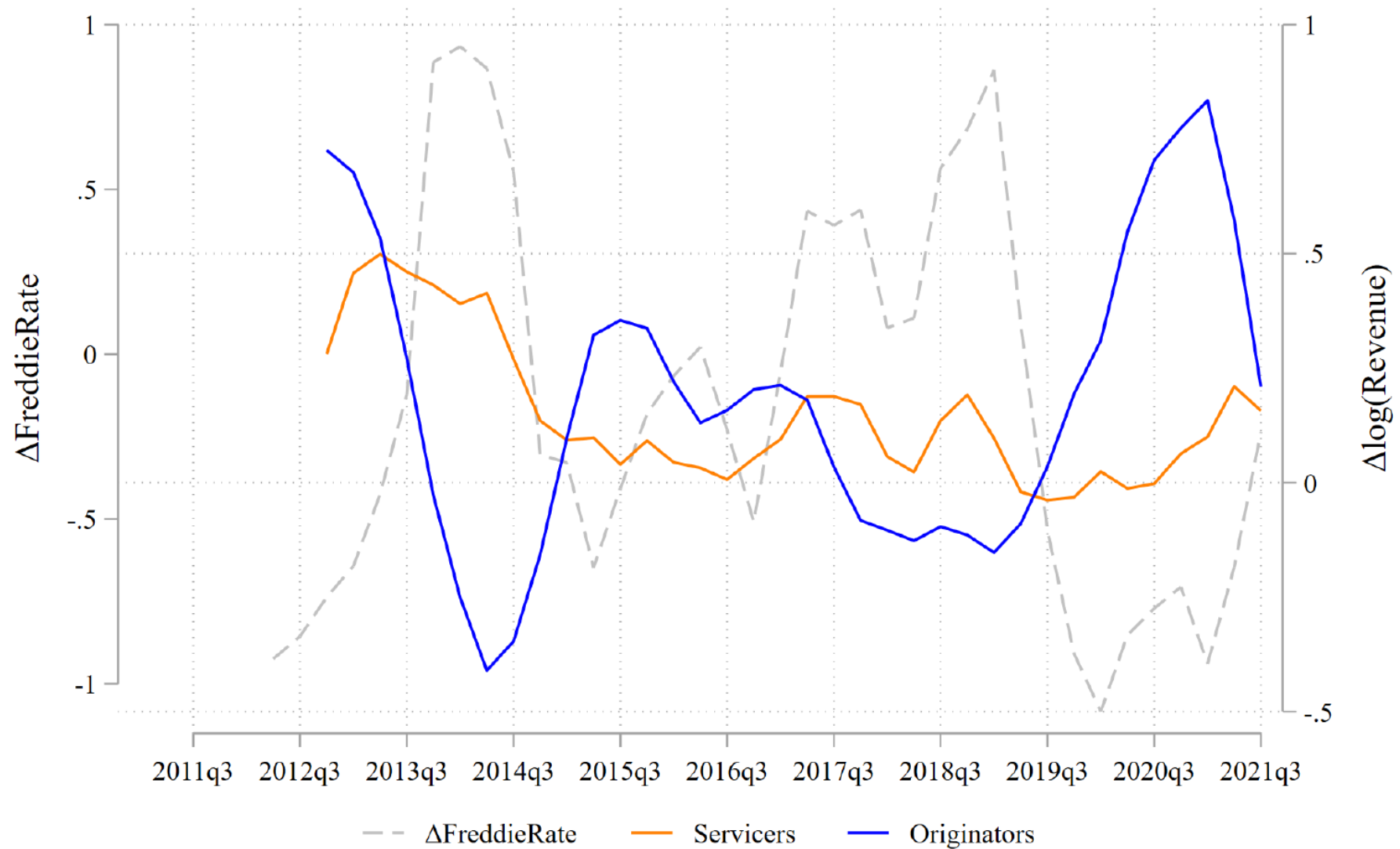
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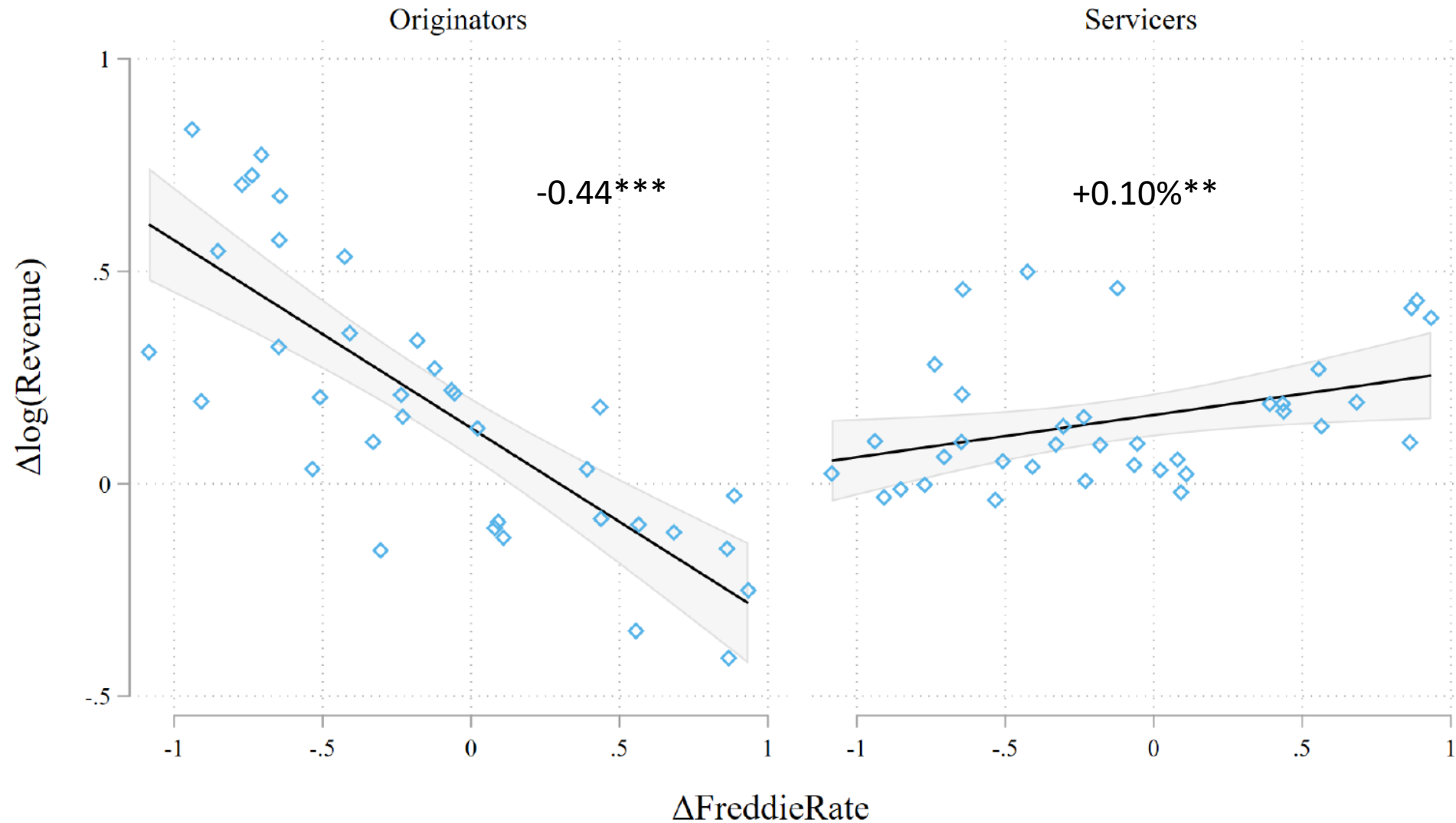
September 2023

# Appendix

# Mortgage rates drive business risk



# Heterogeneity in Business Models: Revenue



# Liquidity response to shocks

	(1) Originators	(2) Servicers	(3) Banks	(4) HighVolNonFin
$\Delta \log(\text{Revenue}) < -.15$	-0.48*** ( $<0.01$ )	-0.52** (0.02)	-0.14*** ( $<0.01$ )	-0.01 (0.88)
$\Delta \log(\text{Revenue}) \in [-.15, 0]$	-0.17 (0.35)	-0.55 (0.42)	-1.06*** ( $<0.01$ )	-0.85*** ( $<0.01$ )
$\Delta \log(\text{Revenue}) > 0$	0.16*** ( $<0.01$ )	-0.28*** ( $<0.01$ )	-0.04*** (0.01)	-0.09** (0.03)
Constant	-0.07** (0.01)	0.04 (0.78)	0.18*** ( $<0.01$ )	0.19*** ( $<0.01$ )
N	7,429	678	212,828	6,895
$R^2$	0.02	0.07	0.01	0.01

*p*-values in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

# Funding Servicer Advances

	(1) Debt/A	(2) Long-term Debt/A	(3) Short-term Debt/A	(4) Credit Util
Advances/Assets	0.17*** ( $<0.01$ )	-0.11** (0.02)	0.28*** ( $<0.01$ )	0.46** (0.02)
MSRs/Assets	0.05* (0.05)	0.12*** ( $<0.01$ )	-0.06** (0.03)	-0.31*** ( $<0.01$ )
Receivables/Assets	-0.11*** ( $<0.01$ )	-0.19*** ( $<0.01$ )	0.09** (0.02)	-0.28*** ( $<0.01$ )
N	878	878	878	324
$R^2$	0.67	0.65	0.57	0.63

$p$ -values in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$