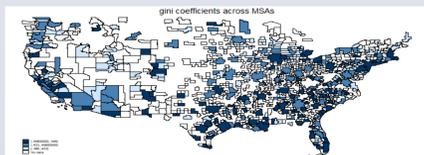


Summary

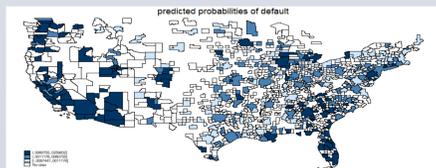
- 1) We provide evidence that regions in the U.S. with higher income inequality tend to have a higher incidence of failed banks.
- 2) However, not all banks are more risky, as reflected in a higher dispersion of bank risk.
- 3) A model based on risk-shifting incentives where banks channel insured deposits into subprime loans can account for both findings.
- 4) In equilibrium, a competition to risk-shift emerges, leading to a subprime lending boom in which loans to high-risk borrowers carry negative NPVs.
- 5) Some banks engage in risk-shifting by lending to high-risk subprime borrowers, while the rest specialize in lending to low-risk prime borrowers.

Motivation: income inequality and bank risk

- 1) Local economic conditions, including the level of income inequality, vary across regions in the US.



- 2) Measures of bank risk on regional level also vary across regions in the US.



- 3) Does income inequality play a role in determining the failure rate of banks in a region?

If so, what are the underlying mechanisms?

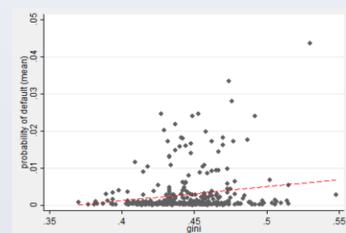
→ We address these questions both empirically and theoretically.

Empirical patterns

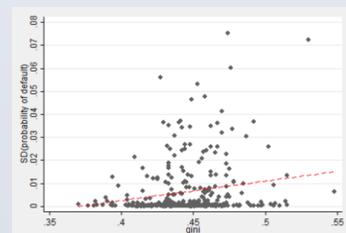
Our focus is on regional banks: with most branches, deposit, loans in one MSA.
 → MSA is the relevant market for most banks.
 → Bank risk = predicted prob. of default (or Z-scores)

We measure MSA level bank risk by percent failed, mean or SD of bank risk.

1) Average bank risk per MSA: data



2) Dispersion of bank risk per MSA: data



Stat. and econ. significant: based on alternative specifications of an OLS model, including controls for average household income and state fixed effects.

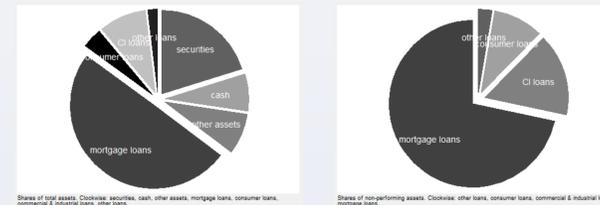
We find robust evidence that:

- (i) the share of failed banks,
- (ii) the average bank risk of the most risky banks,
- (iii) the average bank risk of all banks,
- (iv) and the dispersion of bank risk per MSA

→ is greater in regions with higher income inequality

The rise of housing finance

Banks in the U.S. and elsewhere increasingly rely on mortgage credit as their core line of business.



Many view rising inequality, HH debt, and bank risk as connected.

However, despite the growing interest in both income inequality and bank risk-taking and failure,
 → our understating of whether and how these two phenomena are related remains incomplete.

Keeley's observation

→ But, bank portfolios and leverage choices are endogenous

There is little doubt that increased risk in the economy and declining capital ratios have a lot to do with increased bank risk. But these developments do not explain why banks allow bankruptcy risk to increase. After all, depository institutions have considerable control over the riskiness of their asset portfolios and perhaps even more control over their capital ratios. (Keeley 1990, AER)

To account for the empirical patterns - and more broadly to understand how inequality can affect bank risk
 → we need a model that considers both household sector risk and banking sector risk separately.

Model of inequality and bank risk

The core mechanism is based on Allen and Gale's (2000) rational bubble framework adapted to include

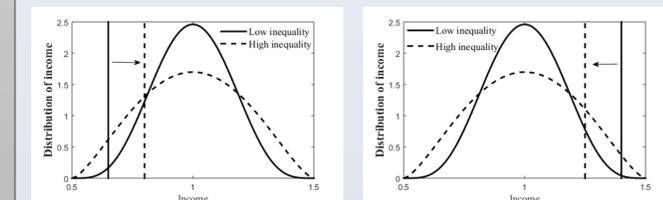
- income inequality, housing market, and mortgage credit.

Competitive banking sector with deposit insurance

- each bank has the option to risk-shift

The equilibrium characterized by sorting of banks into safe and risky

- risky banks to subprime borrowers
- safe banks lend to prime borrowers
- subprime loans carry negative NPV



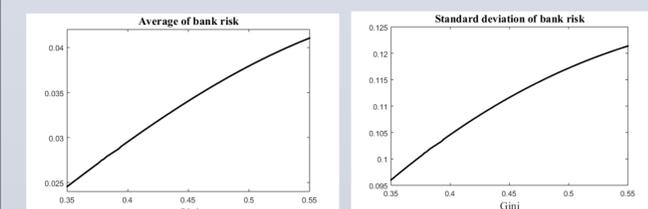
→ Direct effect of inequality: pulls more households into the subprime segment.

→ Indirect effect of inequality: shift the income threshold for being a subprime borrower.

Overall effect: determined by the interaction of the direct and indirect channel.

Bank sorting as consequence of income inequality

Model replicates empirical patterns:



→ Number of risky banks adjusts to satisfy the demand for subprime credit.