Bank Competition and Personal Bankruptcy: Evidence from Large Bank Mergers

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Motivation

- Over the last two decades of the 20th century, the personal bankruptcy rate in the US increased rapidly.
  - 1 per thousand in 2004 to more than 5 per thousand in 2004
- Factors affecting bankruptcy rate
  - Household-level factors: job loss, divorce, medical bills
  - Institutional factors: bankruptcy asset exemptions, transaction costs, credit market conditions

Research Question: How does local bank competition affect the personal bankruptcy rate?

Approach: Exploit variation in bank competition induced by large bank mergers to study the impact of bank competition on consumer bankruptcy.

Key Takeaway

- Higher bank competition lead to an increase in household bankruptcies.
- Mechanism: Higher competition $\implies$ increased bank risk-taking (lower credit standards & higher credit supply) $\implies$ higher consumer bankruptcy rate.

Empirical Strategy

- My empirical specification is:

$$Bankruptcy_{c,t} = \beta_0 + \beta_1 HHI_{c,t} + \boldsymbol{\gamma}' \boldsymbol{X_{c,t}} + \delta_c + \lambda_t + \epsilon_{c,t}$$

where $HHI_{c,t}$: bank concentration in county c at time t
$\boldsymbol{X_{c,t}}$: a vector of time-varying county characteristics

- Identification concern: Bank concentration in not randomly assigned

Identification

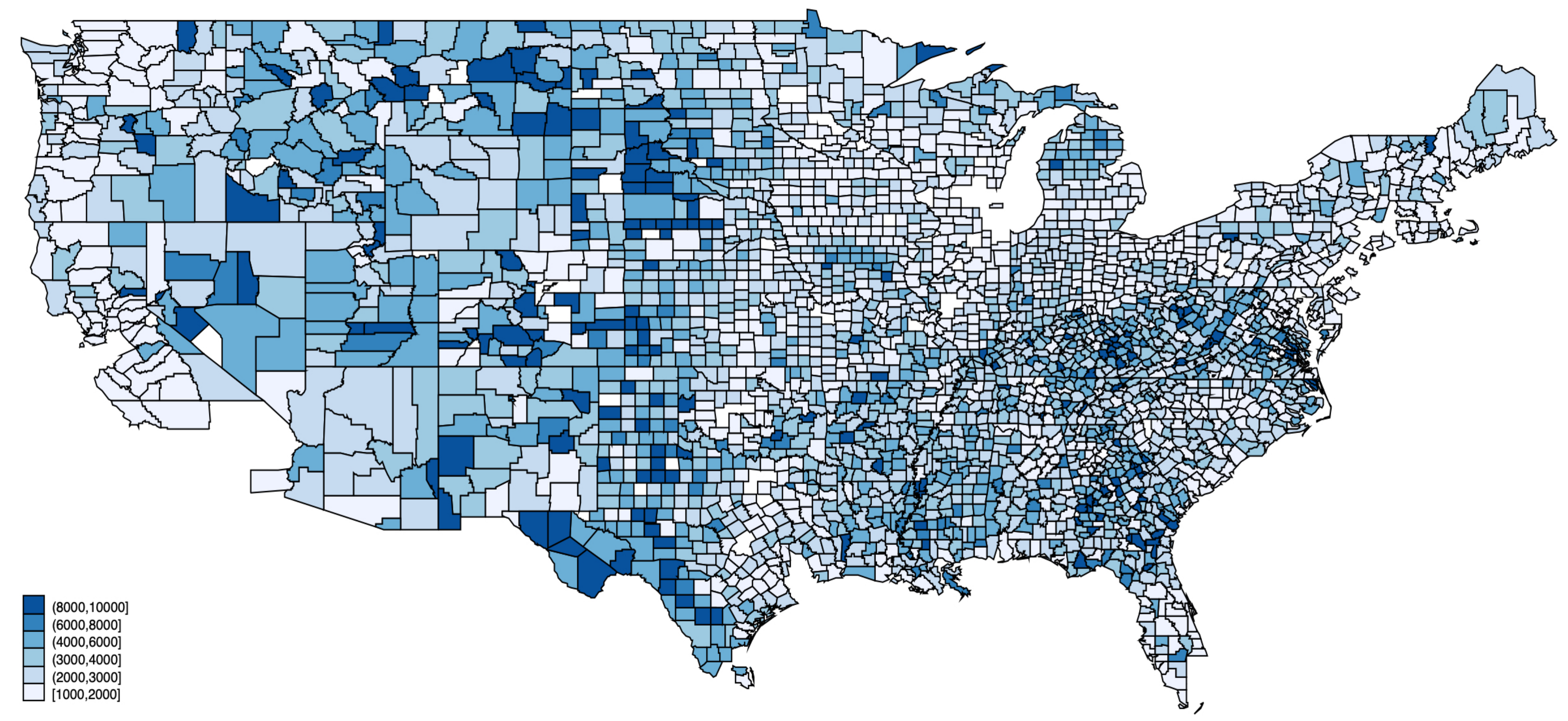
- Use mergers between large non-failing banks as instruments for changes in local market bank concentration
- Both banks must have at least $1 billion in assets in the year preceding the merger
- Variation in bank concentration created by these mergers is plausibly unrelated to county characteristics

Data

- **Consumer Bankruptcy:** Administrative Office of the United States Courts (AOUSC)
- **Bank Competition:** Federal Deposit Insurance Corporation (FDIC)'s Summary of Deposits
- **Bank Mergers:** Commercial Bank Database of the Federal Reserve

Bank Concentration across US Counties (1994)

There exists considerable heterogeneity in local market bank concentration across US counties.



Main Results

- Bank concentration has a substantial and statistically significant negative effect on the county bankruptcy rate.
- IV results suggest that merger counties (less competitive) have significantly lower subsequent bankruptcy rates as compared to non-merger counties (more competitive).

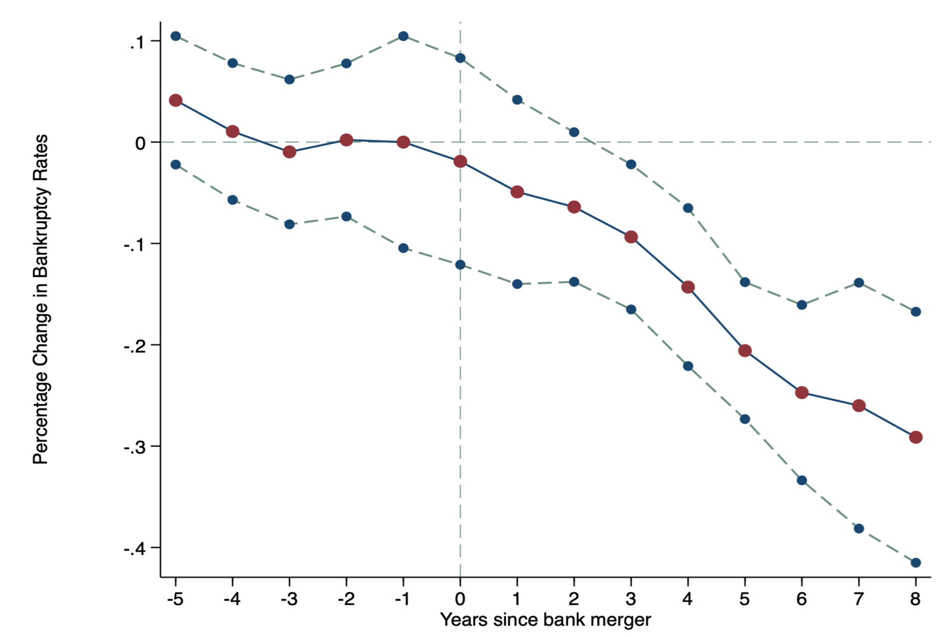
	Personal Bankruptcy Rate (per 1000 people)		
	First Stage	IV	Reduced Form
Merger	176.478***		-0.0965***
	(22.992)		(0.012)
HHI		-1.1625***	
		(0.323)	
Kleibergen-Paap F-statistic	-	58.91	-
County FE	y	y	y
Year FE	y	y	y
Observations	32750	32750	32750

Robustness

- Robust to controlling for different time-varying county observables.
- Results are robust to adding state × year fixed effects.
- Results also hold if I use the Top 4 Banks Share as a measure of concentration

Dynamic Effects

- There are no pre-trends, and the difference in bankruptcy rates between merger and non-merger counties becomes significant three years after the merger.



Mechanism: Bank Risk-taking

County-level Findings

- Using HMDA data, I find that mortgage loan supply is higher in more competitive counties
- Credit standards are lower in more competitive banking markets: a lower loan denial rate

Bank-level Findings

- Banks operating in more competitive banking markets have higher credit supply, a higher charge-off rate and more loan loss provision
- Higher risk-taking leads banks to increase their credit supply and reduce their screening of potential borrowers $\implies$ higher loan losses and consumer bankruptcies.

	Loans	Personal Loans	Charge-Off Rate	Loan Loss Provision Rate
	(1)	(2)	(3)	(4)
Panel A: OLS Estimates				
Bank HHI	-0.022***	-0.017*	-0.043**	-0.047**
	(0.005)	(0.010)	(0.021)	(0.019)
Panel B: Reduced Form Estimates				
Dep-Wtd Merger	-0.015**	-0.101***	-0.124***	-0.124***
	(0.006)	(0.015)	(0.027)	(0.021)
Panel C: IV Estimates				
Bank HHI	-0.252**	-1.714***	-1.892***	-2.193***
	(0.107)	(0.360)	(0.544)	(0.518)
Kleibergen-Paap F	43.08	42.26	41.26	42.13
Bank Controls	y	y	y	y
Bank FE	y	y	y	y
Year FE	y	y	y	y