

The Effect of Bank Supervision on Risk Taking: Evidence from a Natural Experiment

John Kandrak (joint with Bernd Schlusche)
Federal Reserve Board of Governors

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Disclaimer: The analysis and conclusions set forth are those of the authors alone and do not indicate concurrence by the Board of Governors of the Federal Reserve System or anyone else associated with the Federal Reserve System.

- Does routine supervision limit risk taking at banks?
- Hard to draw causal inference:
 - Changes in supervision often tied to differences between banks or regional changes
 - Difficult to disentangle effects of regulation
- We examine a natural experiment during the S&L crisis

Background: Regulatory and Supervisory Environment

- We focus on federally-chartered S&Ls in the 1980s
- Primary regulator: FHLBB (subject to same regulations)
- Supervisory oversight: purview of regional FHLBs (PSA)
 - Supervisors: FHLB employees, reported to local president

Natural Experiment: Relocation of 9th District FHLB

- Since founding of the FHLB System, the 9th district's principal office was located in Little Rock, AR
- Texas attempted to secure relocation as early as 1950s
- Weakening of Arkansas congressional delegation led to successful relocation vote in 1983
- Directed to move to Dallas “as rapidly as possible”

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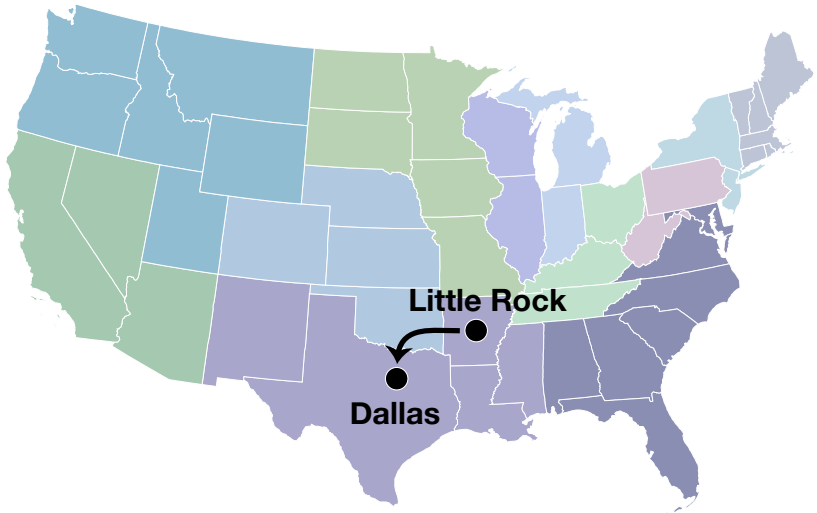
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Natural Experiment: Relocation of the 9th District HQ



Natural Experiment: Relocation of 9th District FHLB

- Rather than relocate, much of the staff simply quit (especially in Bank's division of supervision)
- All but 11 employees quit (including the chief). Only 2 were field agents, remainder were clerical/admin staff
- Restaffing effort was slow; in 1986, chairman of FHLBB brought in 250 supervisory and examination staff from other districts for six-week blitz

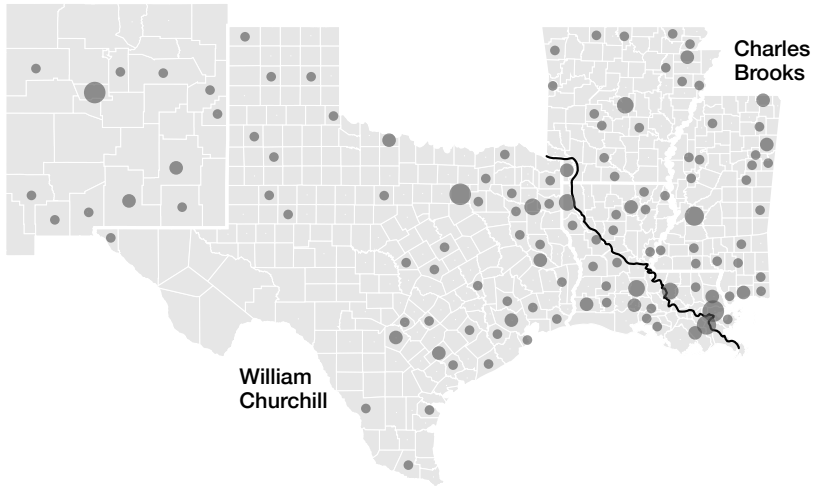
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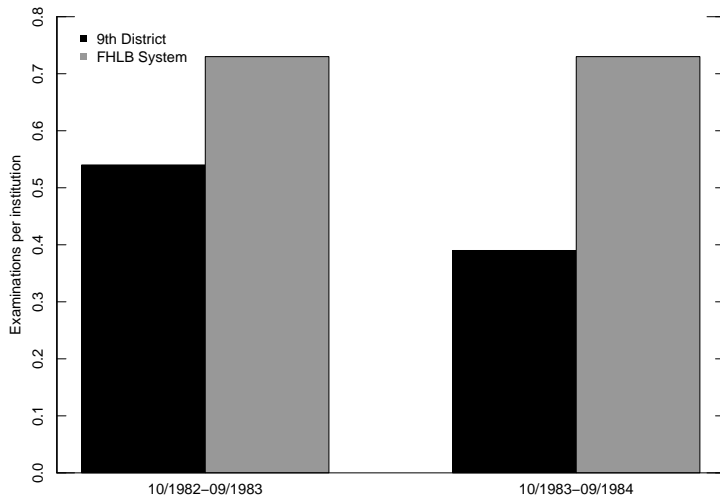
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Field Agents' Line of Demarcation: Federal S&Ls



Examination Intensity: Examinations per Institution



Trainee Examiners in Selected FHLB Districts (1984)

Trainee Examiners

4th district, Atlanta	27%
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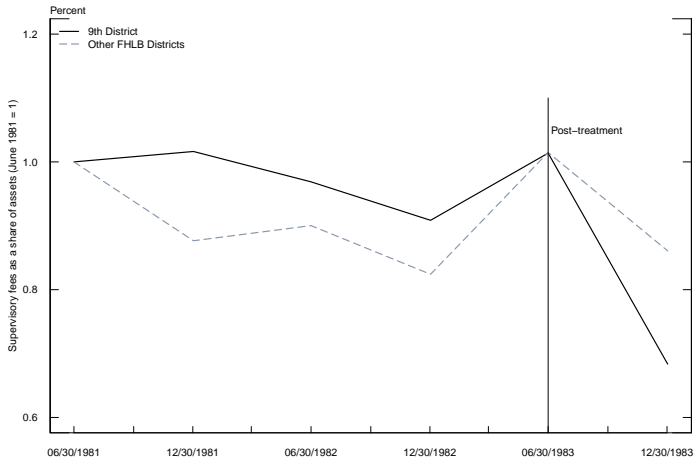
7th district, Chicago	22%
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9th district, Dallas	43%
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10th district, Topeka	19%
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All FHLB districts	22%
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Supervisory Fees Paid by S&Ls

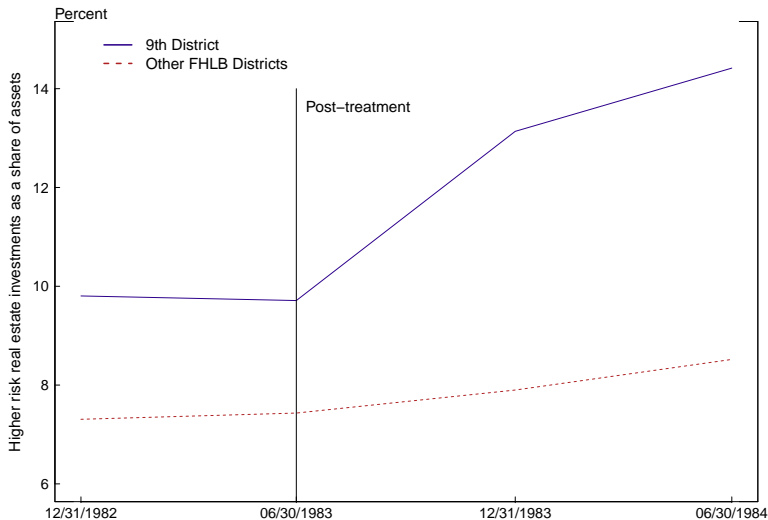


- Measure of risk taking for S&Ls:
 - **“Higher risk real estate investments”** as a percent of assets:

$$\frac{\text{CRE} + \text{ADC} + \text{Service Corps}}{\text{Total Assets}} \cdot 100$$

- Failure Transaction Database (FTDB) from the FDIC

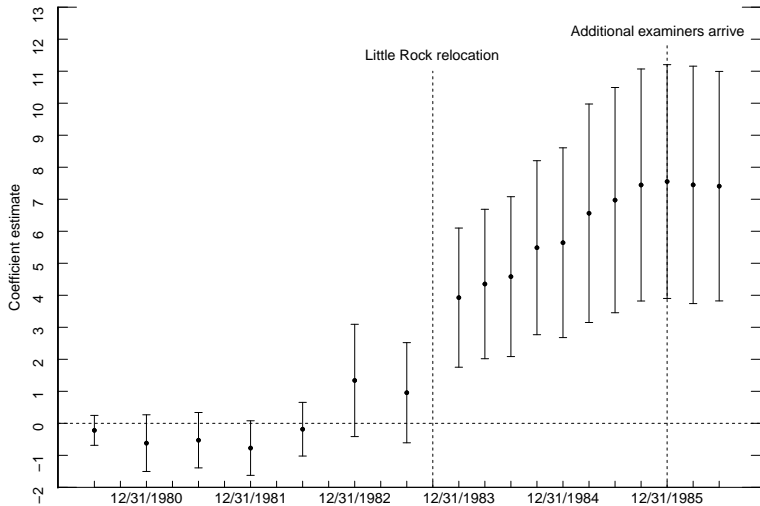
Higher Risk Real Estate Investment by S&Ls



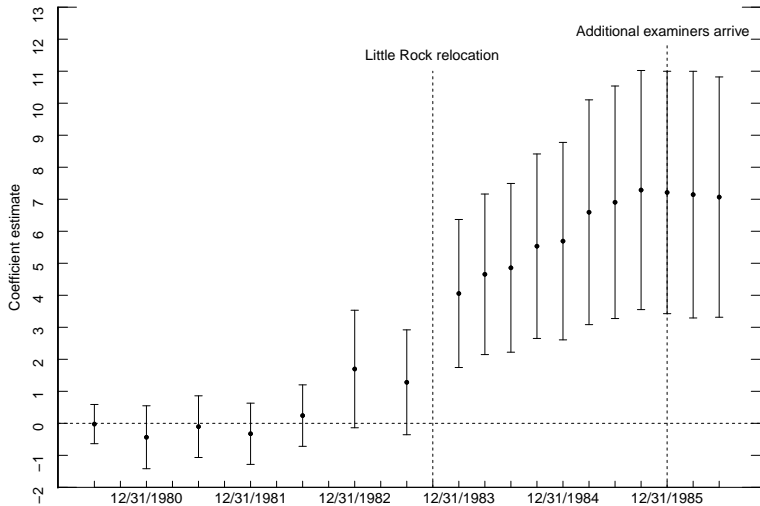
- Basic difference-in-differences specification, with 9th district thrifts composing the treatment group:

$$Y_{i,t} = \alpha + \gamma(Post_t \times Treatment_i) + \phi'(Post_t \times \mathbf{B}_{i,1982}) + \zeta' \mathbf{S}_{i,t-1} + \theta' \mathbf{C}_{i,t-1} + \eta_t + \psi_i + \varepsilon_{i,t}$$

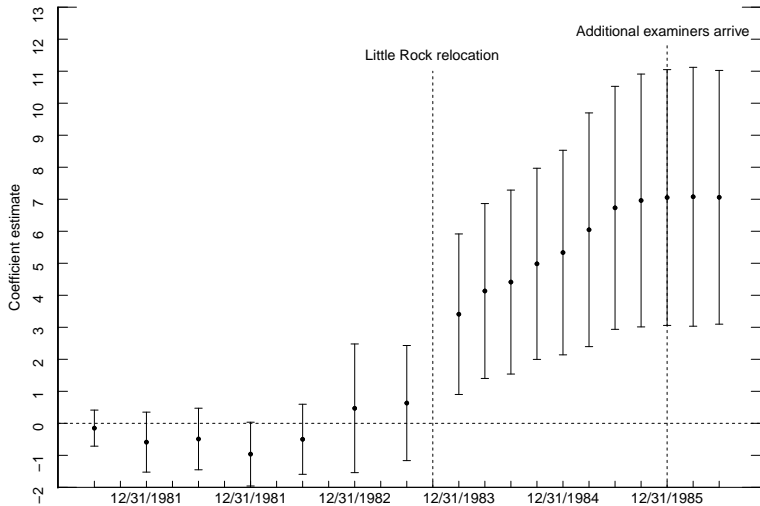
9th District Relative to Other Districts



9th District Relative to 4th District



9th District Relative to Matched Thrifts



Robustness and Placebo Tests

1. Not related to the oil price boom/bust
2. Texas thrifts do not solely drive the results
3. No similar pattern exists for commercial banks

Consequences of Bank Risk Taking

1. We show that the risky loans increased the probability of failure
2. Failure costs would likely be higher in 9th district
 - 2.1 **Poorer quality assets** \Rightarrow fewer assets passed to acquirers, more bad assets passed to FSLIC
 - 2.2 Less oversight should lead to **delays in resolution**

$$Y_{i,t} = \alpha + \beta \cdot 9th\ District_i + \Phi' X_{i,t-1} + \eta_t + \varepsilon_{i,t}$$

Resolution Costs by FHLB District (1983-1990)

Panel A: Weighted Average Costs of Failure by FHLB District and Charter Type

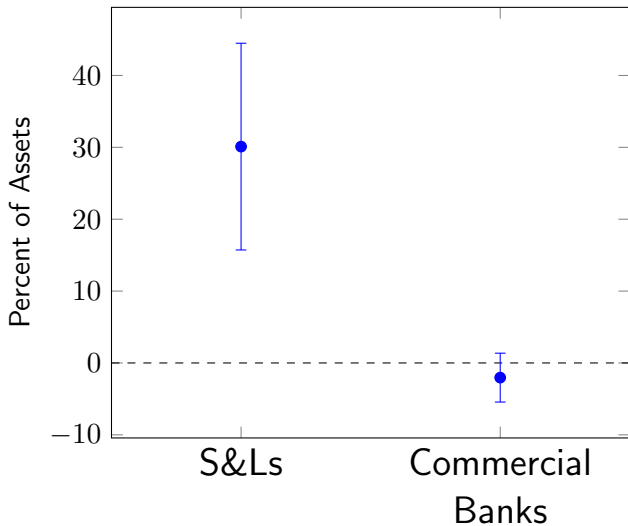
<u>Savings & Loans</u>			<u>Commercial Banks</u>		
FHLB District	Rank	Resolution Costs/Assets (%)	FHLB District	Rank	Resolution Costs/Assets (%)
Dallas	1	80.7	Cincinnati	1	25.9
Topeka	2	35.7	Topeka	2	24.6
Des Moines	3	21.8	New York	3	20.7
Atlanta	4	19.8	Seattle	4	20.7
New York	5	18.4	Chicago	5	19.7
Chicago	6	18.1	San Francisco	6	17.3
Boston	7	15.8	Dallas	7	15.5
Cincinnati	8	13.5	Des Moines	8	13.7
Indianapolis	9	12.6	Indianapolis	9	13.6
Seattle	10	10.4	Pittsburgh	10	12.4
Pittsburgh	11	9.9	Boston	11	7.9
San Francisco	12	9.3	Atlanta	12	5.9

State-level ranks for 9th District S&Ls (commercial banks):

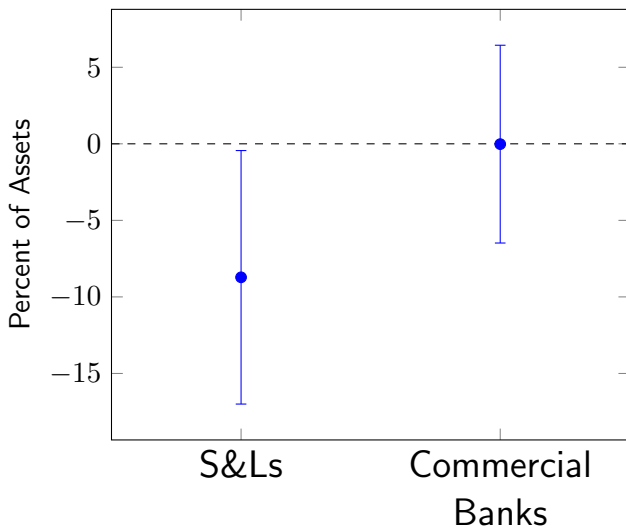
AR:1(6); TX:2(25); NM:3(9)

LA:4(10); MS:12(34)

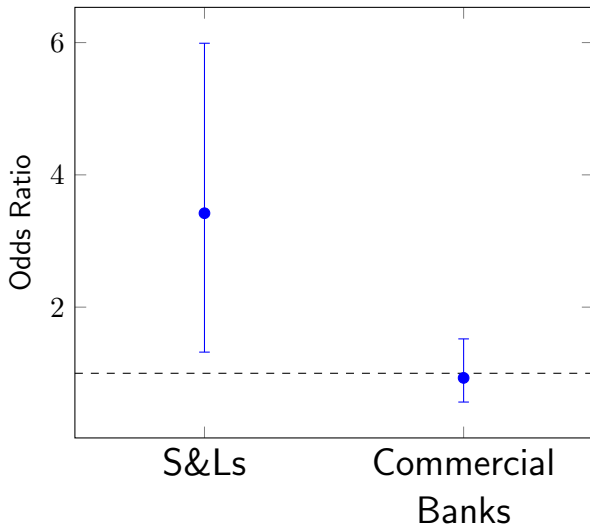
9th District Resolution Costs as a Percent of Assets (1983-1990)



9th District Assets Passed to Acquirer as a Percent of Assets (1983-1990)



9th District Probability (Net Worth < 3%) 1yr Before Failure (1983-1990)



In this paper, we show that supervision (narrowly defined) can significantly affect bank risk taking and is therefore crucial to the success of microprudential regulation

1. Thrifts invested more heavily in most risky classes of loans
2. Risk taking activity ceased upon arrival of additional supervisors/examiners
3. Higher incidence and cost of failures resulted