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

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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.
Research Question

• 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
• 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
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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Little Rock
Dallas

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• All but 11 employees quit (including the chief). Only 2 were field agents, remainder were clerical/admin staff

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Field Agents’ Line of Demarcation: Federal S&Ls

William Churchill
Charles Brooks

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Examination Intensity: Examinations per Institution

9th District FHLB System

Examinations per institution

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<table>
<thead>
<tr>
<th>Trainee Examiners</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th district, Atlanta</td>
</tr>
<tr>
<td>7th district, Chicago</td>
</tr>
<tr>
<td>9th district, Dallas</td>
</tr>
<tr>
<td>10th district, Topeka</td>
</tr>
<tr>
<td>All FHLB districts</td>
</tr>
</tbody>
</table>
Supervisory Fees Paid by S&Ls

Percent

Supervisory fees as a share of assets (June 1981 = 1)

9th District

Other FHLB Districts

Post-treatment

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• 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

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Methodology: Difference-in-Differences

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

\[ Y_{i,t} = \alpha + \gamma (Post_t \times Treatment_i) + \phi' (Post_t \times B_{i,1982}) + \zeta' S_{i,t-1} + \theta' C_{i,t-1} + \eta_t + \psi_i + \varepsilon_{i,t} \]
9th District Relative to 4th District

Additional examiners arrive

Little Rock relocation

Coefficient estimate

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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
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

\[ Y_{i,t} = \alpha + \beta \cdot 9th \ District_i + \Phi' X_{i,t-1} + \eta_t + \varepsilon_{i,t} \]
### Panel A: Weighted Average Costs of Failure by FHLB District and Charter Type

<table>
<thead>
<tr>
<th>FHLB District</th>
<th>Rank</th>
<th>Resolution Costs/Assets (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Savings &amp; Loans</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dallas</td>
<td>1</td>
<td>80.7</td>
</tr>
<tr>
<td>Topeka</td>
<td>2</td>
<td>35.7</td>
</tr>
<tr>
<td>Des Moines</td>
<td>3</td>
<td>21.8</td>
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<tr>
<td>Atlanta</td>
<td>4</td>
<td>19.8</td>
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<tr>
<td>New York</td>
<td>5</td>
<td>18.4</td>
</tr>
<tr>
<td>Chicago</td>
<td>6</td>
<td>18.1</td>
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<tr>
<td>Boston</td>
<td>7</td>
<td>15.8</td>
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<td>Cincinnati</td>
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<td>13.5</td>
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<td>Indianapolis</td>
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<td>12.6</td>
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<tr>
<td>Seattle</td>
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<tr>
<td>Pittsburgh</td>
<td>11</td>
<td>9.9</td>
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<tr>
<td>San Francisco</td>
<td>12</td>
<td>9.3</td>
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<tr>
<td><strong>Commercial Banks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dallas</td>
<td>1</td>
<td>25.9</td>
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<td>Topeka</td>
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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)

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

![Graph showing resolution costs as a percent of assets for S&Ls and commercial banks. The graph indicates significantly higher costs for S&Ls compared to commercial banks.]
9th District Assets Passed to Acquirer as a Percent of Assets (1983-1990)
9th District Probability (Net Worth< 3%) 1yr Before Failure (1983-1990)

Odds Ratio

S&Ls  Commercial Banks

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Conclusion

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