Reliance on Third Party Verification in Bank Supervision

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Research Question

How does reliance on third parties (auditors) affect regulatory (bank) supervision?

Trade-off

- Relying upon third parties allows bank examiners to focus on critical risk areas within a bank.

- However, reliance also incentivizes examiners to not substantively test the underlying quality of external assurance.

Institutional Background

- Er
- Assess
- Examin
- Determ
  has
- Evaluate ICFR effectiveness

2005 change to FDICIA:

Banks between $500 million - $1 billion no longer were mandated to receive an audit of internal control over financial reporting (ICFR).

We compare banks affected by the FDICIA amendment to banks that never had an ICFR audit (e.g. below $500 million).

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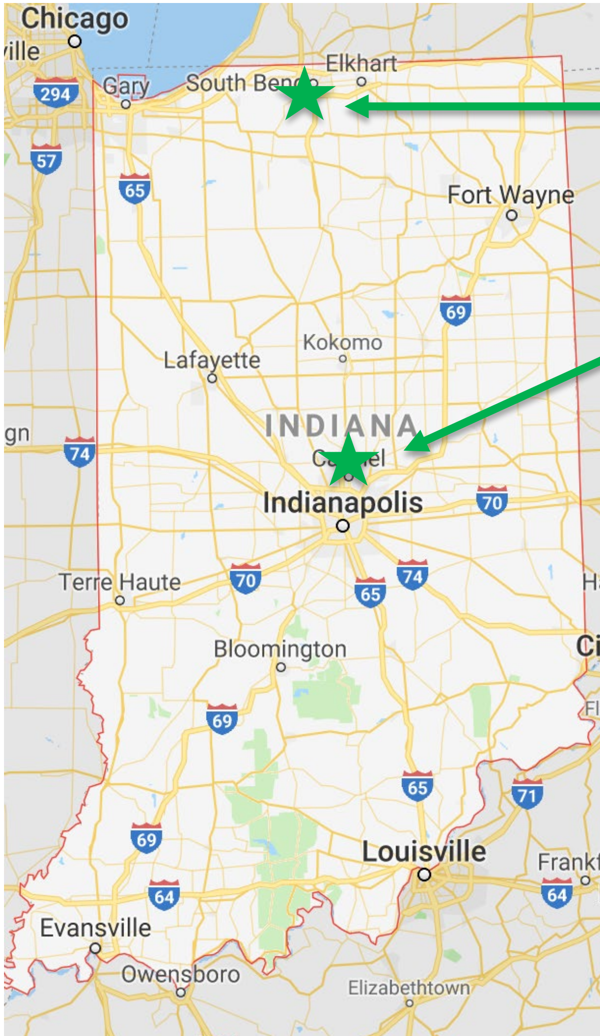
- Attest to ICFR effectiveness

Bank

Visual Depiction of Research Design



We have a \$400 million bank in South Bend, IN ("control")

We have a \$700 million bank in Carmel, IN ("treated")

We net out time-invariant characteristics (bank charter, riskiness, managerial quality, urban/rural) are absorbed by bank-level fixed effects

We isolate our effects by comparing banks just above and just below \$500 million at the ***same time*** and the ***same state***.

Summary of Findings

- **Examiners become stricter after mandatory ICFR audit removal**

- Examiners downgrade affected banks CAMELS composite ratings
  - No effect for "L" and "S" components

- Increases in non-performing loans
  - No effect for past due loans
  - Increases concentrated in areas of discretionary classification (TDRs)
  - Strongest during the examination time-period
  - Driven by *well-managed banks*

- Examiners increase the length of targeted examinations for affected banks

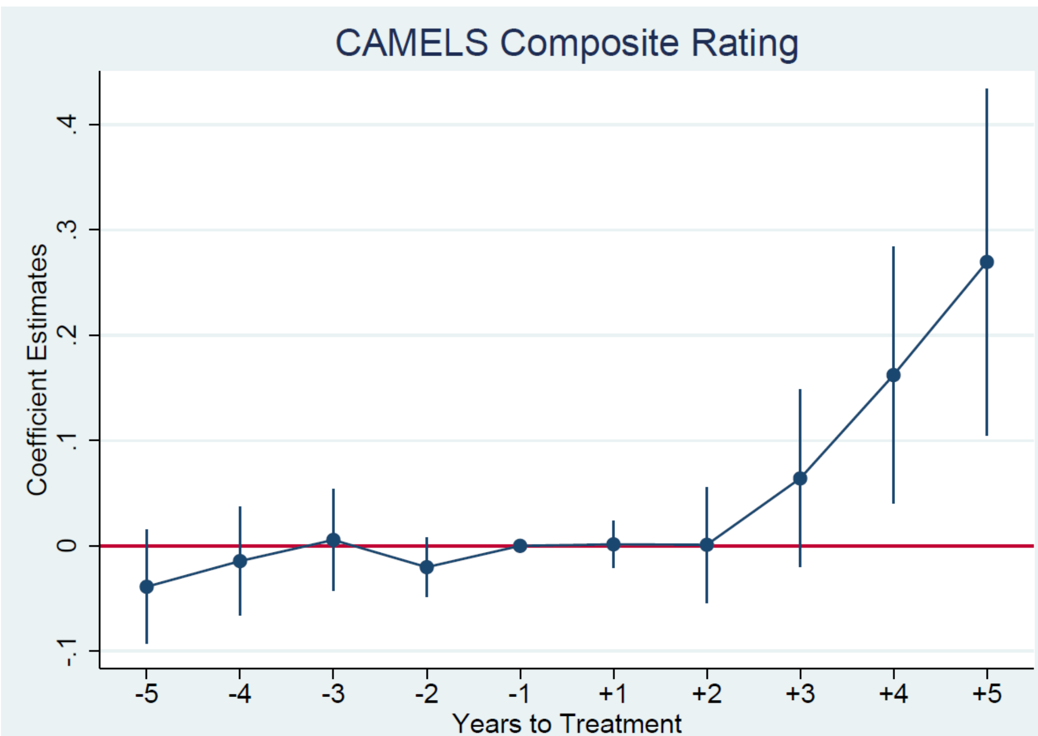
Research Design

$$Outcomes_{it} = \beta_1 Treat_i \times Post_t + \gamma Controls + \alpha_i + \alpha_{st} + \epsilon_{it}$$

- Outcomes
  - Ratings: Composite, C, A, M, E, L, and S components
  - Asset Quality: Loans 30-89 days past due, 90+ days past due, non-accrual loans
    - Troubled Debt Restructured loans
  - Resource Allocation: Duration (in days) of bank examinations by exam type

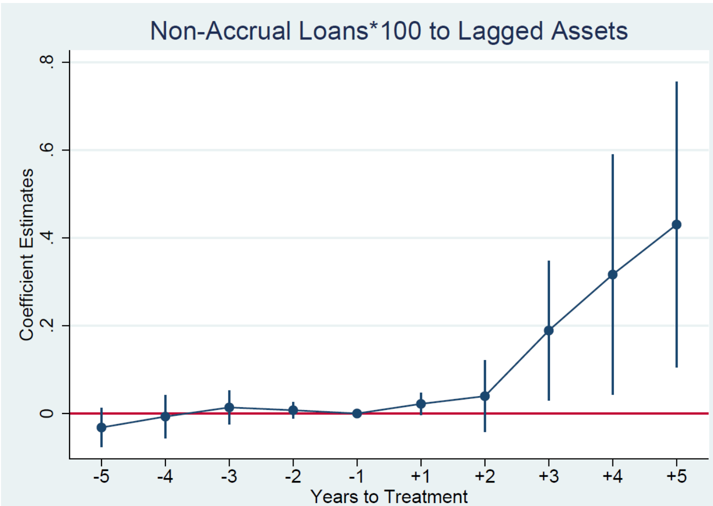
Multivariate Results

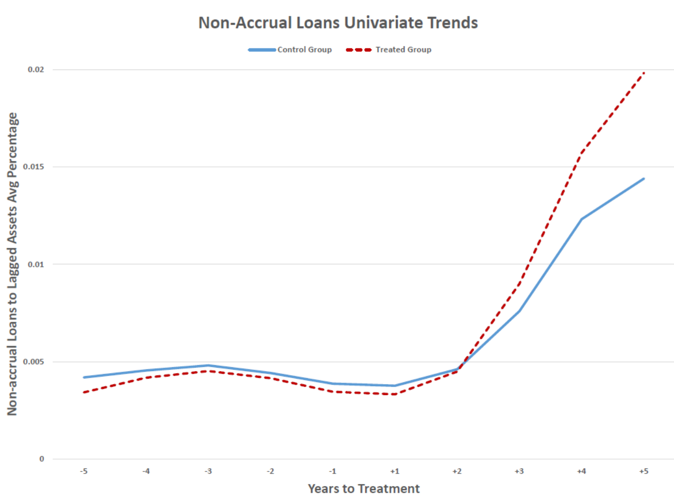
Table 2 Panel A: Effect of Removing ICFR Audit Mandate on Supervisory Assessments



	$CAMELS_{i,t}$
Variables	(4)
$Treat_i$ x $Post_t$	0.081 ***
	(2.43)
Controls	Yes
Bank FE	Yes
Year-Quarter FE	No
State x YQ FE	Yes
Std Errors Clusters	State, YQ
N	278,166
Adj. R-sq	0.663

Non-Accrual Loans





	NPL to Lagged Assets	
Variables	(1)	(2)
Treat $_i$ x Post $_t$	0.178 ***	0.197 ***
	(2.34)	(2.53)
Controls	No	Yes
Bank FE	Yes	Yes
State x YQ FE	Yes	Yes
Std Errors Clusters	State, YQ	State, YQ
N	278,166	278,166
Adj. R-sq	0.502	0.512

Table 3:
Effect of Removing ICFR Audit Mandate on Asset Quality

Isn’t there an easier explanation?

Our Story

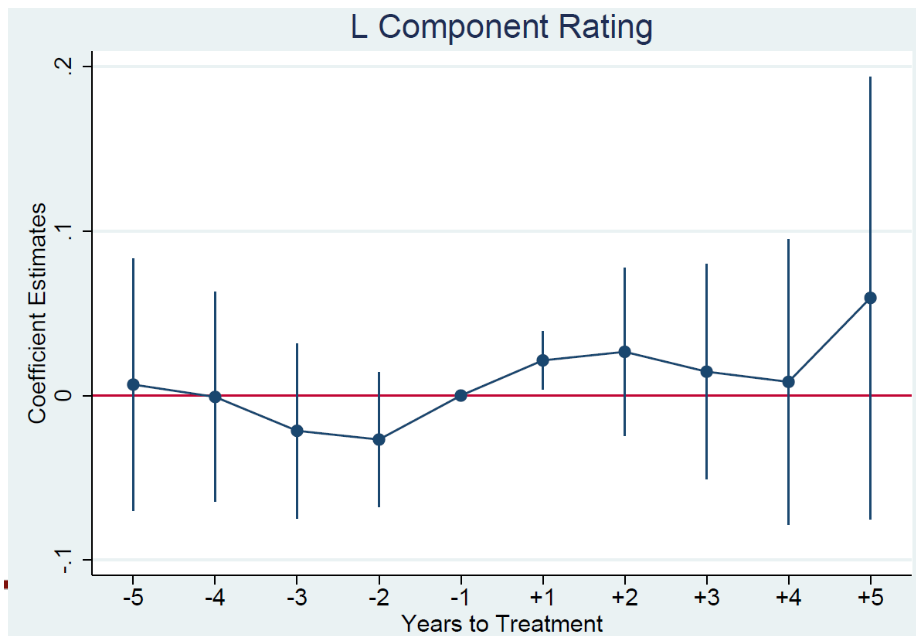
Removing ICFR mandate reduces regulatory reliance on auditor ICFR attestations → Supervisors increase scrutiny → Regulators downgrade ratings and banks recognize more bad assets on their balance sheets

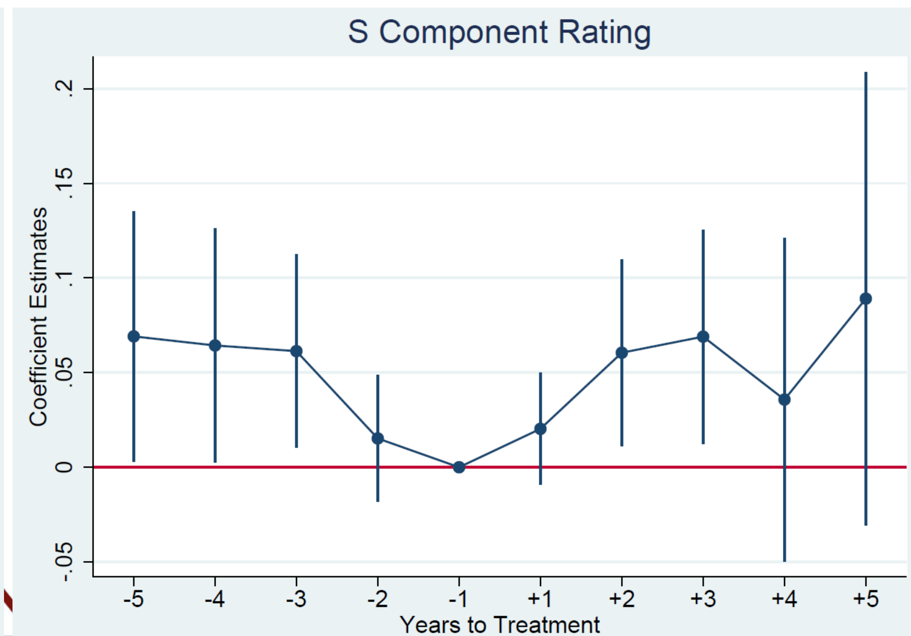
The Alternative

Removing ICFR mandate reduces internal control quality → Managers decrease operating decision quality → Banks’ asset quality deteriorate, operations deteriorate, and regulators downgrade ratings

Empirical Predictions for Alternative Hypothesis

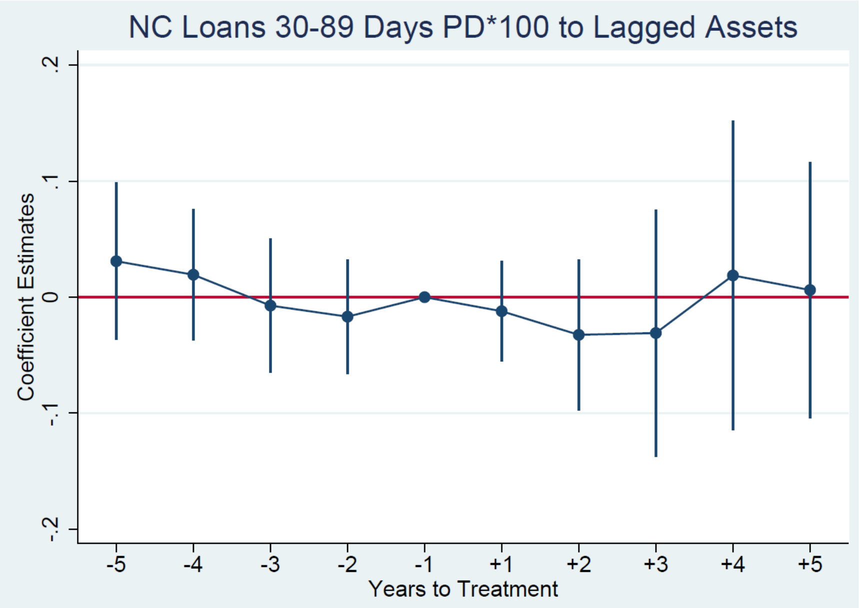
- ICFR mandate removal decreases bank operating quality
  - Treated banks' operations should deteriorate across different operating dimensions

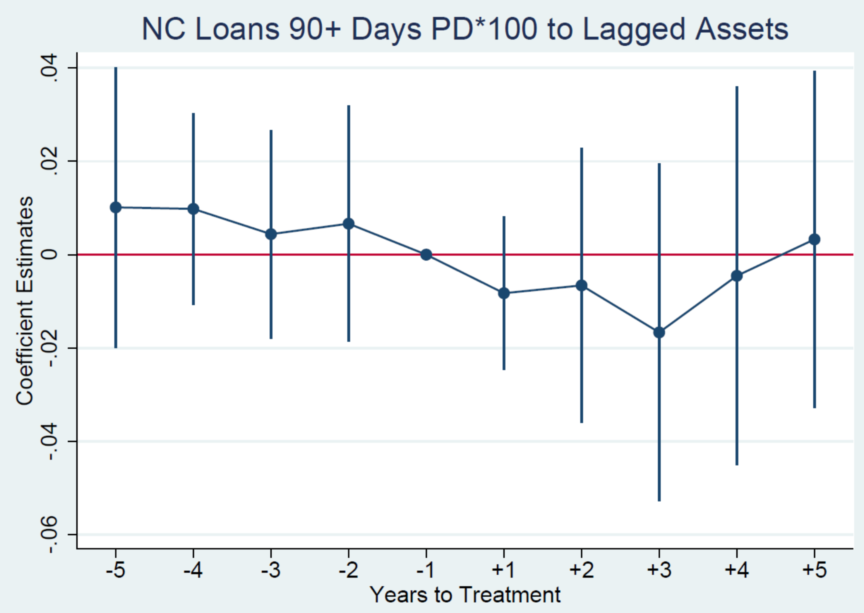




Empirical Predictions for Alternative Hypothesis

- ICFR mandate removal decreases bank operating quality
  - Treated banks' asset quality should deteriorate

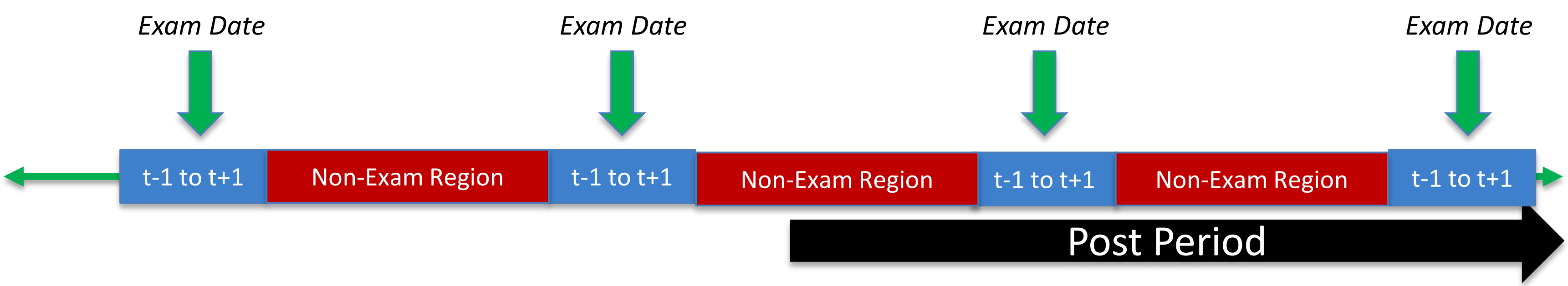




Empirical Predictions for Alternative Hypothesis

- ICFR mandate removal decreases bank operating quality
  - Deterioration in bank operations is not sensitive to regulatory attention

$$\boldsymbol{Outcomes_{it} = Exam_{it} + Treat_i \times Post_t + \boxed{Exam_{it} \times Treat_i \times Post_t} + Controls_{it} + \alpha_i + \alpha_{st} + \epsilon}$$



Effects Concentrated in Exam Periods among Well-Managed Banks

	NPL to Lagged Assets			
Variables	(5)		(6)	
	M <= 2		*M > 2*	
Exam	0.0817	***	0.0828	***
	(4.31)		(4.51)	
Treat x Post	0.053	*	0.614	***
	(1.54)		(2.45)	
Treat x Post x Exam	0.0535	***	-0.159	*
	(2.87)		(-1.66)	
Controls	Yes		Yes	
Bank FE	Yes		Yes	
State x YQ FE	Yes		Yes	
Std Errors Clusters	State, YQ		State, YQ	
N	244,362		33,400	
Adj. R-sq	0.455		0.691	

Table 5:
The Effect of Removing the ICFR Audit Mandate on Bank Asset Quality by Exam Periods and M Rating

Channel of Increased Scrutiny

- Duration of Exam
  - Inferred from exam start date and exam end date in NIC database

- Type of Exam
  - Full scope examinations: occur on a routine basis based on size and complexity

  - Targeted exam: "*performed on an area or risk within the firm and usually entails determining or validating that controls and processes for the target area or risk are effective*" (New York Fed, 2019)

  - Specific to a particular regulation (e.g., Bank Secrecy Act, etc.)

Effect of ICFR Audit Removal on Exam Duration

Dep. Variable	Days	Days	Days	Days
	M <= 2	*M > 2*	*M <= 2*	*M > 2*
	(1)	(2)	(3)	(4)
Treat x Post x Full	-1.366	-2.608	-1.091	0.837
	(-0.97)	(-0.46)	(-0.78)	(-0.15)
Treat x Post x Target	6.776***	4.471	6.673***	8.371
	(3.79)	(0.46)	(4.11)	(0.88)
Treat x Post x Other	2.032	-8.028	2.161	-6.207
	(0.56)	(0.54)	(0.60)	(0.51)
Controls	No	No	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes	Yes
State x Year-Quarter Fixed Effects	Yes	Yes	Yes	Yes
Exam Type Fixed Effects	Yes	Yes	Yes	Yes
Std Errors Clustered at	State, YQ	State, YQ	State, YQ	State, YQ
N	243,220	29,697	243,213	29,697
adj. R-sq	0.632	0.723	0.633	0.725

Table 7b: The Effect of Removing the ICFR Audit Mandate on Bank Exam Duration by M Rating

Effects by Exam Type

Dep. Variable	Loans 30 - 89 Days Past Due	Loans 90+ Days Past Due	Non-Accrual Loans
	(1)	(2)	(3)
Treat x Post x Full	-0.0223	-0.00906	0.0950***
	(-1.21)	(-1.45)	(3.16)
Treat x Post x Target	0.0119	-0.0499	0.414**
	(0.10)	(-1.09)	(2.05)
Treat x Post x Other	-0.00124	0.0173	-0.0254
	(-0.04)	(1.07)	(-0.48)
Base Variables Included	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes
State x Year-Quarter Fixed Effects	Yes	Yes	Yes
Exam Type Fixed Effects	Yes	Yes	Yes
Std Errors Clustered at	State, YQ	State, YQ	State, YQ
N	277,592	277,592	277,590
adj. R-sq	0.479	0.371	0.528

Treat x Post x Target is also statistically stronger *than Treat x Post Full* and *Treat x Post x Other*

Table 8a:
The Effect of Removing the ICFR Audit Mandate on Bank Asset Quality by Exam Type

Effects by Exam Type

Dep. Variable	*Nacc TDRs*	*Disc. Nacc TDRs*
	(1)	(2)
Treat x Post x Full	0.0135*	0.0139*
	(1.91)	(1.94)
Treat x Post x Target	0.0983**	0.0945**
	(2.28)	(2.21)
Treat x Post x Other	-0.0119*	-0.0114*
	(-1.89)	(-1.88)
Base Variables Included	Yes	Yes
Controls	Yes	Yes
Bank Fixed Effects	Yes	Yes
State x Year-Quarter Fixed Effects	Yes	Yes
Exam Type Fixed Effects	Yes	Yes
Std Errors Clustered at	State, YQ	State, YQ
N	277,592	277,592
adj. R-sq	0.479	0.371

Treat x Post x Target is also statistically stronger than *Treat x Post Full* and *Treat x Post x Other*

Table 8b:
The Effect of Removing the ICFR Audit Mandate on Bank Asset Quality by Exam Type

Robustness Tests

- Different size cutoffs
  - Drop all banks <$100 M from control group
  - Banks between $1B and 1.5B as a control group
- Loan portfolio composition
  - Total loans, commercial & industrial loans, consumer loans, real estate loans
- Trend of income during the period

Conclusion

- We examine how reliance on third parties (auditors) affects regulatory (bank) supervision

- Decreased potential to rely upon external assurance increases supervisory strictness

- Third party reliance is an imperfect substitute for bank regulatory oversight

- Policy relevance: our results help inform current efforts to de-emphasize the use of credit ratings and other external assurance in bank supervision

Our Sample Descriptive Statistics

- 278,309 bank-quarter observations
- Size= $172.13 M in total assets
- Profitable
  - Annualized ROA=0.8%
  - Annualized loan loss provision and loan charge-offs each =0.4% of assets
- Well capitalized
  - Tier 1 Risk-Based Capital Ratio=11.3%
- Asset quality
  - Low loan loss reserve (0.9%) and low delinquent assets (1.7%)
  - Low % of past-due loans 0.9% and 0.2% of loans that are 30-89 or 90+ days past due, respectively
- CAMELS mean composite=1.792