Corporate Performance, Board Structure and its Determinants in the Banking Industry

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Motivation: Why Banking?

- Few studies of banking firm governance
  - How evaluate impact of deregulation?
  - How evaluate recent proposed policies to reform governance?
- Banks uniform
  - May make it easier to identify effect of governance variables

Preview of results

- Board structure appears different than in manufacturing firms
  - Greater proportion outside directors
  - Bigger boards
- Relation between board structure and banking firm performance appears different than in samples of non-financial firms
  - Most surprisingly: Board size is not negatively related to proxy for Tobin's Q
- Board size is plausibly endogenous
    - M&A activity
    - BHC structure
- But,
  - Neither source of endogeneity appears to drive result

$\Rightarrow$ Governance structures may be industry specific

Data

- Random sample of 35 public BHC
  - among largest from 1986-1999
  - 480 observations
- Variables:
  - financial (Y9-C data)
  - collected detailed governance variables from proxies
- Representative?
  - 27% total banking assets 1990→50% 1998
  - 32% top tier assets 1990 →50% 1998

Table 1: Summary Statistics, 1986-1999

	Obs	Mean	Std. Deviation	Min	Max
Total assets in millions	480	40900	59200	3007	633000
Board size	472	17.97	5.33	8	36
Proportion of Outsiders	472	0.69	0.15	0.10	0.95

Findings of Other Researchers

	Vafeas 1999	Shivdasani and Yermack 1999
Board Size	12	11
Proportion of Outsiders	55.6%	46%

Table 2: Fixed Effect Regressions of Tobin's Q on Governance Characteristics, 1986-1999

	Dependent Variable: Tobin's Q			
Independent Variable	**I**	**II**	**III**	**IV**
Ln (board size)	0.0180*	0.0210**	0.0196*	0.0118
% outside directors	0.0178	-0.0078	0.0035	-0.0056
Ln (assets) *Adjustment factor: 1000*	0.0008	-8.8420	-8.0685	-10.6668
Capital ratio	0.5170**	0.7279**	0.7541**	0.9357***
Volatility	-0.1483	-0.1646**	-0.1567**	-0.2144***
Board Activity Controls	-	Yes	Yes	Yes
Interlock Controls	-	-	Yes	Yes
Directors Comp. & Ownership	-	-	-	Yes
Observations	472	446	444	436
R^2	0.77	0.78	0.79	0.80
F-Statistic	43.80	41.21	46.00	37.48

Why is the relation between board size and performance different in banking?

- Two plausible sources of (industry-specific) potential endogeneity:
  - High Q firms undertake mergers and add directors as a consequence
    - Banking industry characterized by high M&A activity during 1986-1999

    → positive correlation between performance and board size

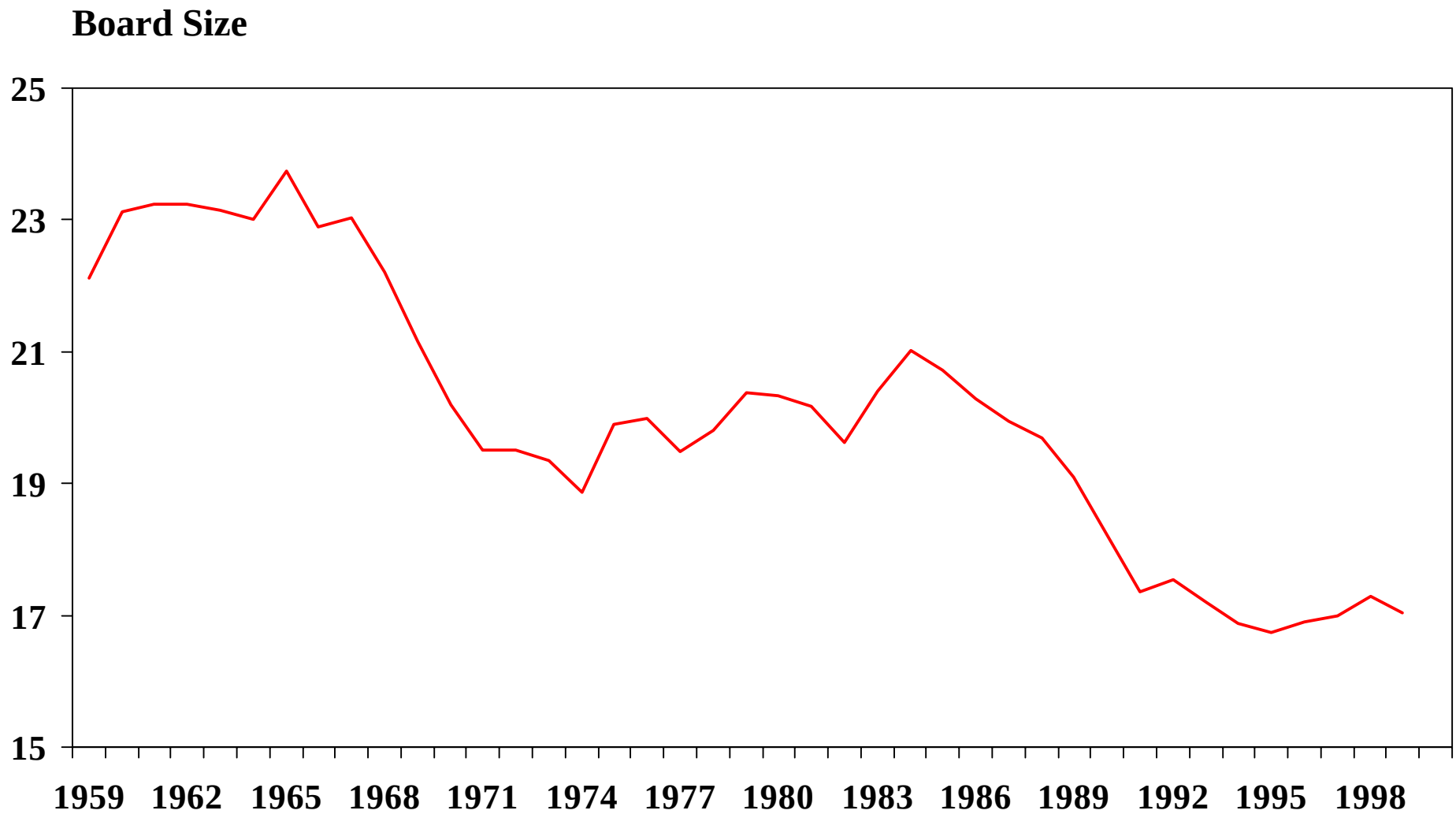
  - Organizational structure affects performance (diversification discount) and board size (division of labor)
    - Banking firms (BHCs) characterized by holding company form as opposed to functional or divisional form
      - Subsidiaries have their own boards

    → positive correlation between performance and board size

Table 3: Summary Statistics for Board Additions Following Mergers and Acquisitions

	Obs.	Mean	Std. Dev.	Min.	Max.
Panel A: Transaction Data					
Number of M&A with additions	35	2.03	1.79	0	6
Number of directors added in M&A transaction	71	3.61	3.03	1	14
Fraction of acquirer's board added in M&A transaction	70	0.17	0.14	0.03	0.56
Panel B: Board Composition					
Number of M&A directors	482	2.52	3.58	0	16
Ratio of M&A directors to board size	472	0.13	0.18	0	0.68

Figure 2: Mean Board Size, 1959-1999



What about organizational structure?

- Examine relation between board size and organizational structure
- Supplement data with
  - BHC dummy-change from bank to BHC form
  - Information on Tier 1 subsidiaries as proxies for organizational structure, e.g. # Tier 1 subsidiaries
- Comparison to manufacturing is informative:
  - Rajan et. al (2000): mean segments: 2.9 max: 10
  - Here: mean tier 1 subsidiaries: 15.3 max: 75

Table 8: Regressions of Board Size on Bank Holding Company Dummy, Firm Size and Past ROAs

	Dependent Variable: Ln (board size)		
Independent Variable	I	II	III
BHC dummy	-0.1436***	-0.1831***	-0.1476***
Ln (assets)	0.1113***	0.1066***	0.1656***
ROA_t	.	1.0535	0.9582
ROA_{t-1}	.	0.2186	-0.7833
ROA_{t-2}	.	-0.3318	-1.1931
Obs	1402	1304	1304
R^2	0.21	0.22	0.58
F-Statistic	11.12	10.25	9.29

Conclusion

- Relation between firm performance and board structure (board size) in BHC sample different (in particular nonnegative) than in samples of manufacturing firms
- Result persists even after accounting for potential endogeneity in several ways

  $\Rightarrow$ BHC boards do not appear to be ineffective
- Industry analysis can be useful:
  - Since suggests factors that may be related to board structure, here: M&A activity and organizational structure
    - may apply also more generally to non-banking holding companies
  - Important for understanding whether governance is industry-specific
- Policy implications:
  - Results suggest that governance policy may affect holding companies differently
  - Suggests caution in applying uniform standards