“Relation between board composition and firm performance in Japan”

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SECTION 2. Management in firms and organizations

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Relation between board composition and firm performance in Japan

Abstract

This paper presents an examination of the relation between firm performance and board structure in Japan in the early 1990s, considering some other Japanese corporate governance mechanisms such as financial keiretsu. These analyses reveal two salient results. First, a U-shaped relation is apparent between board size and firm performance in Japan, as exists in the U.S. Therefore, very large or small boards are better for firms in Japan. Second, we can find no significant relation between Japanese corporate governance features such as financial keiretsu and firm performance during the early 1990s.

Keywords: board, corporate governance, financial keiretsu, Japan.
JEL Classification: G30, G34, K22.

Introduction

This study examines a large sample of Japanese manufacturing firms to investigate the relation between firm performance to board structure and other Japanese corporate governance mechanisms that might help to mitigate agency problems. This study has two main objectives. First, we attempt to reveal the relations between Japanese board structure and firm performance, which has been insufficiently analyzed in previous studies. In particular, no consensus exists on whether smaller boards perform corporate governance functions better or not. Second, our study is designed to provide more insight into the question of whether or not Japanese governance mechanisms function to mitigate agency problems.

The first contribution of these analyses is the confirmation of a U-shaped relation between board size and firm performance. This U-shaped relation was also identified in recent U.S. studies such as those of Coles et al. (2008): very large or small boards are better boards. One size does not fit all firms. However, prior studies of Japanese board composition found no significant U-shaped relation. We can infer that the optimal size of Japanese boards is also very small or large.

Second, no significant relation was found between firm performance and Japanese corporate governance features such as financial keiretsu. Considering the endogenous relations between board composition and firm performance pointed out by Hermalin and Weisbach (2003), we confirmed that no significant relation exists between performance and such features in Japan.

The remainder of this paper is organized as follows. Section 1 briefly introduces the related literature. Section 2 describes the data and variables used for this study. Section 3 presents the empirical results. Finally, we conclude this paper in the last section.

1. Related literature and our empirical hypotheses

It has been widely argued that smaller boards are more effective in management-monitoring activities. This argument implies that larger boards are not good monitors because of higher coordination cost problems (Lipton and Lorsch, 1992; Jensen, 1993). Previous empirical studies such as those of Yermack (1996) and Eisenberg et al. (1998) found a negative relation between board size and firm performance. These findings support the view that smaller boards are better. However, some studies, such as those of Dalton et al. (1999) point out that larger boards offer better advice to CEOs. Hermalin and Weisbach (1998) showed theoretically that "the CEO might choose an outside director who will give good advice and counsel, who can bring valuable experience and expertise to the board."

No consensus has been found as to whether or not smaller boards provide better corporate governance mechanisms. Regarding Japanese board studies, little evidence exists related to the role of boards. Miwa and Ramseyer (2005) found that no significant negative relation exists between board size and firm performance, but that the number of outside directors and firm performance have a negative relation.

Japanese corporate governance features such as financial keiretsu were investigated in numerous earlier studies. Mixed evidence exists in relation to the effect of financial keiretsu before the 1990s. Miwa and Ramseyer (2002) demonstrated that Japanese financial keiretsu ties were significantly related to firms' profitability. In stark contrast, Morck et al. (2000) found no significant relation. For the 1990s,

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Basu et al. (2007) found that no significant difference for CEO compensation exists between firms with and without financial keiretsu ties.

2. Sample and variables

2.1. Sample. For empirical analyses described herein, we used the listed manufacturing firms of the First Section of the Tokyo Stock Exchange (TSE) during 1991-1995. Two data sources were used for the compilation of our sample. The financial and ownership structure data were collected from the Nikkei NEEDS database. The board composition data were hand-collected from *Yakuin Shiki Ho*. The final sample comprised data of 522 TSE-listed manufacturing firms.

2.2. Variables. We measure firm performance as the ratio of market value of equity to the book value of assets (Market to Book Ratio (*MTB*)). We adopt the following independent variables to represent Japanese relation-oriented governance mechanisms: the number of directors on the board (*BOARDSIZE*), the percentage of directors from outside (*OUTSIDE*), a dummy variable of financial Keiretsu (*Keiretsu*), and the ratio of total debt to total assets (*LEVERAGE*). Firm performance is also controlled for the logarithm of sale size (*SALESIZE*). We control firm profitability for the return on assets (ROA). Table 1 presents descriptive statistics for all these variables.

3. Empirical results

Table 2 presents regression results with the nonlinear relation to board size. This study starts with a nonlinear model in terms of board size resembling that used by Coles et al. (2008). Regarding Japanese firms, no previous studies exist to check a nonlinear relation between firm performance and board size. In the OLS estimation of models 1 and 2, it is apparent that U-shaped relations exist between Market to Book Ratio (MTB) and board size. Regarding empirical evidence for Japanese non-financial firms, Miwa and Ramseyer (2005) found no significant relation between Japanese board size and firm performance. In contrast, our results indicate that the discretionary power of Japanese boards to reduce opportunistic managerial behavior depends on the board size. This result is consistent with earlier findings reported by Coles et al. (2008).

Regarding control variables, leverage is positively and significantly related to MTB; ROA is also positively and significantly related to MTB, which suggests that Japanese investors highly evaluate more risk-taking and highly profitable firms.

We also use the GMM method in models 3 and 4. We can build instruments for those variables (bank ownership, managerial ownership, insurance companies' ownership, number of bank directors, and block holder dummy variable) that are potentially endogenous because board characteristic variables might be determined endogenously by firm performance (Hermalin and Weisbach, 2003). Furthermore, our findings reveal that U-shaped relations between board size and firm performance also exist after controlling for potentially endogenous problems.

As for the role of outside directors, none of the four models support any significant relation consistent with the findings of Miwa and Ramseyer (2005), which suggests that the discretionary role of Japanese outside directors in controlling opportunistic managerial behaviors was unclear in Japanese relation-oriented corporate governance systems during the early 1990s.

Considering features of the Japanese corporate governance system, models 2 and 4 analyze effects of financial keiretsu. Neither model's results reflect existence of a significant relation between financial keiretsu and firm performance. The disciplinary power of financial keiretsu did not function well during the early 1990s.

Conclusion

This study examined the impact on firm performance of Japanese corporate governance structures in terms of board size, board composition, and unique Japanese disciplinary mechanisms of financial keiretsu. Additionally, we attempted to ascertain whether or not these corporate governance structures function as substitutes in mitigating agency problems.

Consistent with previous Japanese studies undertaken by Miwa and Ramseyer (2005), results show no significant relation between the outside directors' ratio and firm performance. However, results reveal that a U-shaped relation exists between board size and firm performance after adding the squared terms of board size into the estimation equation. In other words, Japanese board members had discretionary power to mitigate opportunistic managerial behavior to some degree during the early 1990s, which is inconsistent with the findings of Miwa and Ramseyer (2005). Furthermore, Japanese keiretsu systems had no significant effect on firm performance. These results suggest that these Japanese corporate governance systems did not function to mitigate agency problems during the early 1990s.

References

1. Basu, S., Hwang, L-S., Mitsudome, T., and Weintrop, J. (2007) Corporate governance, top executive compensation, and firm performance in Japan, *Pacific Basin Finance Journal*, 15, 56-79.
2. Coles, J.L., Daniel, N.D. and Naveen L. (2008) Boards: Does one size fit all?, *Journal of Financial Economics*, 87, 329-356.
3. Dalton, D., Daily, C., Johnson, J. and Ellstrand, A. (1999) Number of directors and financial performance: a meta-analysis, *Academy of Management Journal*, 42, 674-686.
4. Eisenberg, T., Sundgren, S., and Wells, M. (1998) Larger board size and decreasing firm value in small firms, *Journal of Financial Economics*, 48, 35-54.
5. Hermalin, B. and Weisbach, M. (1998) Endogenously chosen boards of directors and their monitoring the CEO, *American Economic Review*, 88, 96-118.
6. Hermalin, B. and Weisbach, M. (2003) Board of directors as an endogenously determined illusion, *Federal Reserve Bank of New York Economic Policy Review*, 9, 1-20.
7. Jensen, M.C. (1993) The modern industrial revolution, exit, and the failure of internal control systems, *Journal of Finance*, 48, 831-880.
8. Lipton, M. and Lorsch, J. (1992) A modest proposal for improved corporate governance, *Business Lawyer*, 1, 59-77.
9. Miwa, Y. and Ramseyer, J.M. (2002) The fable of the keiretsu, *Journal of Economics and Management Strategy*, 11, 169-224.
10. Miwa, Y. and Ramseyer J.M. (2005) Who appoints them, what do they do? Evidence on outside directors from Japan, *Journal of Economics and Management Strategy*, 14, 299-336.
11. Morck, R., M. Nakamura, and A. Shivdasani (2000) Banks, ownership structure, and firm value in Japan, *Journal of Business*, 73, 539-567.
12. Yermack, D. (1996) Higher market valuation of companies with a small board of directors, *Journal of Financial Economics*, 40, 185-212.

Appendix

Table 1. Descriptive statistics (n=522)

Variables	Obs.	Mean	Std. Dev.	Min	Max
Market to Book Ratio	2610	2.418	1.655	0.512	36.093
BOARDSIZE	2610	19.825	6.541	6.000	53.000
ROA	2610	0.016	0.029	-0.236	0.184
OUTSIDE (%)	2610	0.214	0.172	0.000	0.867
KEIRETSU	2610	0.113	0.317	0.000	1.000
LEVERAGE (%)	2610	0.560	0.174	0.038	0.987
SALESIZE (Million Yen)	2610	183092.4	391407.8	1861.0	4270523.0

Notes: This table presents sample characteristics for 522 firms during 1991-1995. The definitions of all variables are provided in Section 2.

Table 2. Relation between board size and firm performance

Estimation:	OLS	OLS	GMM	GMM
	Model (1)	Model (2)	Model (3)	Model (4)
BOARDSIZE	-0.031 *	-0.031 *	-0.346 ***	-0.319 ***
	0.095	0.095	0.003	0.005
(BOARDSIZE)^2	0.001 ***	0.001 ***	0.008 ***	0.008 ***
	0.004	0.004	0.002	0.004
ROA	5.994 ***	6.046 ***	9.183 ***	9.595 ***
	0.006	0.006	0.000	0.000
Outside (%)	-0.140	-0.130	-0.102	-0.105
	0.458	0.493	0.583	0.569
Keiretsu		0.091		0.011
		0.333		0.928
Leverage	4.465 ***	4.452 ***	4.624 ***	4.579 ***
	0.000	0.000	0.000	0.000
Ln (SALESIZE)	-0.287 ***	-0.297 ***	-0.454 ***	-0.438 ***
	0.000	0.000	0.000	0.000
Constant	3.330 ***	3.449 ***	8.250 ***	7.809 ***

	0.000	0.000	0.000	0.000
Industry Dummies	YES	YES	YES	YES
R^2	0.2714	0.2717	0.1437	0.1645
F test	31.30 ***	30.38 ***		
Wald test χ^2			647.04 ***	662.28 ***
F-test (Industry Dummies =0)	8.23 ***	7.96 ***	95.17 ***	92.39 ***

Notes: The definitions of all variables are provided in Section 2. All regressions include industry dummies, t-statistic values are reported in parentheses. ***, ** and * indicate that the coefficient is significant at the 1%, 5%, and 10% levels, respectively. For OLS estimation we use consistent to heteroscedasticity standard errors. For the GMM estimation, we use instrument variables such as bank ownership, managerial ownership, insurance company's ownership, number of bank directors, and block holder dummy variable.