Journal of International Business and Economy (2015) **16**(2): 41-63 (23 pages)

Journal of International Business and Economy

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BOARD STRUCTURE, BOARD ACTIVITY AND FIRM PERFORMANCE: THE CASE OF KOREA*

ABSTRACT

In agency theory, it is asserted that boards with a high ratio of outside directors can monitor management effectively, but empirical results from past studies are not consistent. We suggest the "process perspective" as an alternative approach, arguing that the board activity, rather than the board structure, impacts the firm's financial performance; and apply this perspective to Korean companies. We test the impact of board structure on both board activity and profitability, and then the impact of board activity on firm profitability. The test results were: the board structure [measured by the ratio of outside directors in the board membership] does not have positive influence on either board activity or profitability [measured by ROA] in Korean firms; however, the board activity, measured by the rate of outside directors' participation in board meetings, has a positive relationship with a firm's profitability. We explain this as a decoupling, based on institution theory, which occurred in the process of forced Korean governance reform of 1998.

Key Words: board activity, participation rate, institution theory, decoupling

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*This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (NRF-2013S1A2A1A01033404)

INTRODUCTION

In the United States, agency problems of top management have been recognized since the report of Berle and Means (1932), while in Korea, corporate governance has been an important issue in both academia and management since the Asian Financial Crisis of 1997. Berle and Means (1932) reported that professional managers controlled most large US companies and the significant power of these top managers could sacrifice the interests of shareholders in pursuing their own profit. In Korea, chaebol, Korean business groups, led the rapid economic growth of the country duringthe 1970s and 1980s, but their governance failure was blamed for the collapse of many of them during the crisis (Cho and Kim, 2007). The chaebol were not successful in developing their core competences (Prahalad and Hamel, 1990) to compete in the global market of 1990s.Prior to the Asian crisis, Korean corporate board of directors were actually powerless (Cho and Kim, 2007). A Korean firm's board was composed only of insider directors who were the subordinates of top management and did not have controlling power over management. In 1998, all companies listed in Korean Stock Exchanges were required to recruit outside directors into their boards, meeting the minimum required outsider ratio of 25% of total directors. This first-time inclusion of outside directors in the boards of large Korean firms was a major change in the structure of these boards.

Corporate governance is a popular topic in current management research; however, it is argued that corporate governance structures are different across nations, because each nation has different institutional environments (Aguilera and Jackson, 2003). Most countries have different backgrounds for the study of corporate governance. In this sense, a comparative study of corporate governance across nations is meaningful. In studying international corporate governance, integration and diversity should be considered concurrently (Chizema and Kim, 2010). During the last two to three decades, the US model of governance structure spread to the rest of the world, establishing itself as the global standard. The governance structure of firms around the world converged to the US model. In the aftermath of the Asian crisis of 1997, the appointment of outside directors was forced on the most large Korean companies. Regarding the outside director regulation of 1998, there are still disputes whether this new system functions well in Korean companies.

The primary purpose of this paper is to assess the immediate, short-term impact of the outside directors in the newly reformed boards of large Korean firms on the firms' financial performance. Our assessment concurrently applies two approaches (*i.e.,* the *structure* and *process* approaches) to examine corporate board effectiveness. In agency theory, a board with a high ratio of outside directors can monitor the management effectively. In most studies about board effectiveness, the main concern is whether this board "structure"may influence the firm's financial performance positively. Applying the structure approach, we question if the ratio of outside directors on a Korean board impacted the board's activeness and the firm's profitability. However, past studies about the relationship between the board structure and corporate performance did not produce consistent results (Dalton *et al.*, 1998). Therefore, we apply also the *process* approach to our assessment of Korean boards' effectiveness. This*process* approach highlights the roles of board of directors in corporate management process, and by applying this approach, we intend to introduce the board *process* that is regarded to influence corporate management directly. We subscribe to a view that the effectiveness of outside directors is dependent on whether the directors work well as a team or a working group in board meetings rather than on how the board is structured. Even if the ratio of outside directors on a Korean board is relatively low, the outsiders may play their roles of monitoring and/or supporting the management effectively as long as they participate in the board meetings actively. Applying the process approach, we question if the level of a Korean board's activity, measured by the rate of outside directors' participation in board meetings, impacted the firm's profitability positively. We apply these two approaches concurrently to our assessment of the effectiveness of the outside directors on Korean corporate boards during the three-year period of 2002 to 2004.

THEORETICAL BACKGROUND

Past studies about board of directors and their limitations

Most existing studies on corporate governance assumed that effective boards are comprised of a high proportion of outside directors (Lorsh and MacIver, 1993; Mizruich, 1983; Zahra and Pearce, 1989). In these studies, effective boards were represented by a high ratio of outside directors. Such a preference for outsider-dominated boards was largely based on agency theory.

According to agency theory, separation of ownership and control led to the self-interested actions of managers (Fama and Jensen, 1983; Jensen and Meckling, 1976). Managers, using their power in and knowledge of management, tended to sacrifice shareholders' wealth in pursuit of their own interest. Agency theorists argued that the opportunistic behaviours of managers should be monitored to protect shareholders' interest. One of the monitoring mechanisms was an effective board of directors (Walsh and Seward, 1990). Effective boards would include many outside directors. Because outside directors, being independent of management, could play monitoring roles, they were believed to make the board effective.

A limited number of empirical studies demonstrated that outside directors were positively associated with corporate financial performance (Ezzamal and Watson, 1993; Baysinger and Butler, 1985; Rosenstein and Wyatt, 1990; Schellenger, Wood, and Tashakori, 1989). However, other empirical studies found that the purported positive impact of outsiders on corporate performance did not exist consistently (Zahra and Pearce, 1989; Finkelstein and Hambrick, 1995; Dalton *et al.*, 1998). Dalton, Daily, Ellstrand and Johnson. (1998) offered two explanations about the negative relationships between outside directors and firm's performance. First, stewardship theory, favoring inside directors, explained that managers were inherently trustworthy and not prone to misappropriate corporate resources (Donaldson, 1990; Donaldson and Davis, 1991, 1994). Because managers were stewards in their organizations and worked diligently to attain the maximization of shareholders' wealth, it was argued that independent monitoring by outside directors would not be necessary. The second explanation was that inside directors have superior knowledge about the firm and this made them evaluate management issues more effectively (Baysinger and Hoskisson, 1990; Baysinger, Kosnik, and Turk, 1991; Boyd, 1994; Hill and Snell, 1988). Other research papers could not find any significant relationship between board composition and firm's performance (Chagantti, Mahajan, and Sharma, 1985; Daily and Dalton, 1992, 1993; Zahra and Stanton, 1988).

In the existing studies about boards based on agency theory, numerous debates emerged regarding the appropriateness of CEO duality (Rechner and Dalton, 1991), board size (Dalton *et al.*, 1999), board ownership (Barnhart, Marr, and Rosenstein, 1994; Morck, Shleifer, and Vishiny, 1989; Sundaramurthy and Lewis, 2003) in addition to the outsider ratio. These factors were also suggested to make boards effective in practice, and were incorporated in the guidelines or codes for corporate governance. Soon, many firms started to adopt these guidelines to signal their efforts at governance reform, and to acquire legitimacy and support from the public (Meyer and Rowan, 1977). This "institution theory perspective" could offer another explanation about the inconsistent results from empirical studies about the relationship between board structure and corporate performance.

The institution theory perspective supported a *process* approach to governance research. Under this approach, a board of directors was regarded as a team that played the roles of monitoring and advising top management. An effective board as a team required various kinds of conditions, among which the board's independence from management might be only one. This *process* approach, by which scholars believed that the board effectiveness was dependent on the process, was adopted by several studies. Payne, Benson and Finegold (2009) pointed out that a limited number of studies examined various attributes of boards that were believed to contribute to the effectiveness of boards at playing positive roles to improve corporate performance. Other studies explored what made boards function well as a group to influence organization's performance (Forbes and Miliken, 1999; Daily, Dalton, and Canella, 2003; Hermalin and Weisbach, 2003; Ruigrok, Peck, and Keller, 2006; Steils, 2001). When one studied a board as a team, it was usually difficult to examine what was happening inside the board. The researcher had, in many cases, only limited access to examine the inner workings of a board. Many directors feared that revealing boardroom activities, or rating the effectiveness of the board, could have adverse effects on their relationship with investors and other board members (Kesner and Johnson, 1990). Therefore, a corporate board was regarded as a "theoretical black box" to those researchers (Daily *et al.*, 2003; Leblanc, 2004).

Forbes and Miliken (1999) asserted, based on their integration of past studies, board effectiveness shared the same attributes as many pre-existing models of team effectiveness. Many studies already explained the differences between high and low performing teams. The same elaborations could be made to construct an effective board as a team. Sonnenfeld (2002) explained that an effective board functioned as a robust social system. He added that structural characteristics of boards as the criteria for "most-admired board" in magazines did not vary much across companies. Sonnenfeld argued that considering how a board operated well as a social system was as important as evaluating what kinds of structural characteristics were present in a board.

Payne *et al.* (2009) suggested five attributes to measure the effectiveness of boards of directors: knowledge, information, power, incentives and opportunity/time. These five attributes could promote board effectiveness, which in turn, influenced corporate performance. Effective boards played two roles (Daily *et al.*, 2003; Dalton *et al.*, 1998; Hillman and Dalziel, 2003; Sundaramurthy and Lewis, 2003). Boards could monitor management (*i.e.*, monitoring role) and also provided resources to management (*i.e.*, resource role). To play these roles well, boards required sufficient knowledge, information, power, incentives and time to function. Boards met periodically and consisted of interdependent groups of people and therefore, boards—more than other groups—faced interaction difficulties that could prevent them from fulfilling their tasks (Hambrick, Werder, and Zajac, 2008). In the circumstances, board effectiveness depended on social-psychological processes, particularly those relating to group participation, coordination, and open discussion (Finkelstein and Mooney, 2003; Forbes and Miliken, 1999; Hambrick *et al.*, 2008; Zattonney, Gnan, and Huse, 2015). The relevance of these three processes for the effectiveness of boards was supported empirically by recent studies (*e.g.*, Minichilli *et al.*, 2012; Zona and Zattoni, 2007).

Boards in Korea

Prior to the Asian crisis of 1997, board of directors were actually powerless in Korea (Cho and Kim, 2007). A Korean firm's board was composed only of insider directors who were subordinates of top management and did not have controlling power over management. In 1998, outside directors were introduced in Korea and all companies listed in Korean Stock Exchanges had to include outside directors for 25% or more of total directors.

In recent studies on corporate governance in large Korean companies (or chaebol), agency problems were understood to exist in the controlling shareholders (Joh, 2003; Chang, 2003; Kim, Kim, and Lee, 2008). Contrary to the American corporate governance structure that was mentioned earlier, the controlling shareholder of a chaebol possessed a supreme power in managing the affiliates, and in pursuit of his or her own interest, tended to sacrifice the wealth of a large number of minority shareholders. This was called the principal-principal conflict (Young *et al.*, 2008). The self-interest pursuing behaviors of the chaebol's controlling shareholders were blamed for the widespread corporate failures during the Asian crisis of 1997; and various stakeholders stressed the necessity for a major governance reform in large Korean companies. A condition of the IMF bailout program in Korea after the crisis was the introduction of outside directors in the boardrooms in Korea.

Chizema and Kim (2010) explained the process of board reform in Korea in terms of institution theory perspective. In institution theory, managers make decisions not only to improve internal efficiency but merely to adapt to outside pressure (DiMaggio and Powell, 1983). The same logic could be applied to the board reform in Korea. Korean chaebol did not want to reduce their controlling power in response to the Korean governance reform in the aftermath of the Asian financial crisis of 1997, but in order to adapt to the post-crisis outside pressure for restructuring, they had to accept the well-known governance standards that required them to include outside directors on their boards. As a result, many Korean firms appeared to use the best practices of corporate governance. Yet, many critics in Korea still had serious doubts about the independence of outside directors in Korean firms. Most outside directors were believed to be recruited by the controlling shareholders or the management and were not regarded to be independent from management.

Some researchers tried to determine the influence of the reformed board composition on corporate performance in Korean firms. Given the fact that most outside directors in Korean companies were not independent from the management, they could not play their monitoring role effectively. Between the two kinds of roles of outside directors *(i.e.,* the monitoring and resource roles) that were expected, only the resource role of outside directors were valued in Korean firms. Due to their lack of independence from management, outside directors were not able to monitor the opportunistic behaviors of the controlling shareholders; instead, they could only provide outside resources, such as their social networks with the government and financial institutions.

RESEARCH MODEL

As we mentioned earlier, most past studies on boards' function measured the effectiveness of the board in terms of board composition, but their results were not consistent. In Korea, the inconsistent role of board composition in corporate performance seemed to be more evident since the reformed boards of directors in Korean firms were in their infancy. Outside directors were newly introduced to Korean companies in 1998 and only about 15 years have passed from their introduction. During the governance reform process after the crisis of 1997, most Korean firms adopted a set of generally accepted codes of corporate governance. Among these codes, a high ratio of outsiders in the boards was regarded as a symbol of good corporate governance. In addition, the Korean government required all firms listed in Korean stock exchanges to maintain the proportion of outside directors for at least 25% of total directors.

After the crisis, all Korean firms faced strong pressure for restructuring to improve competitiveness. Their governance reform was, in some sense, their effort to adapt to this institutional pressure. Their "forced" governance reform was understood not as a means to protect their shareholders' interest based on agency theory, but as a mechanism to adapt to their outside pressure. This interpretation was plausible only by the institution theory perspective, which was a sociological approach in explaining governance reform process.

A number of scholars also performed similar studies in a purely Asian context. Peng (2004) and Yoshikawa and McGuire (2008) examined governance reforms in Japan and China from the institution theory perspective. The pressure for governance reform was applied to Japanese and Chinese companies and these two studies also explained governance reform in Japan and China as a process to adapt to the external pressure. Peng (2004) reported that the introduction of outside directors in Chinese companies was made as an institutional isomorphism process and therefore, outside directors in Chinese companies did not effectively play their roles in monitoring management. Yoshikawa and McGuire (2008) also showed that governance reform process in Japanese companies, being a forced reform, often led to decoupling.

As far as Korean firms, they recruited enough outside directors to meet or exceed the minimum required outsider ratio of 25% of total directors, but this was understood to be an effort to accept outside pressure rather than to protect shareholders and increase corporate competitiveness. Some companies tried to use the new governance structures in order to encourage their managers to make good decisions, but many other firms seemed to employ outside directors only as a gesture to showcase their efforts at restructuring. Therefore, we hypothesize that the relationship between the outsider ratio aboard and the Korean firm's financial performance is insignificant, as follows.

Hypothesis 1: The outsider ratio in a board is not significantly related to the firm's profitability.

When we interpret corporate governance reform in Korea in terms of institutional theory, firms tended to display institutional isomorphism (DiMaggio and Powell, 1983) in the form of accepting outside pressure for governance reform. As DiMaggio and Powell (1983) indicated, institutional isomorphism could be triggered by three sources: coercive pressure, imitational pressure and normative pressure. The pressure from government and various stakeholders (coercive pressure), the pressure coming from uncertainty (imitational pressure), and the pressure from various educational institutions (normative pressure) propelled many Korean firms to adopt generally accepted codes of corporate governance. Institutional isomorphism formed in these companies resulted in two divergent outcomes. In some companies, their reformed governance structures were harmonized with their existing management procedures and functioned effectively. However, in many other companies, a new governance mechanism did not fit in the existing management; and it decoupled. Meyer and Rowan (1977) explained that "decoupling" could happen when a new system could not play suitable roles inside an organization, and the new system became meaningless or functioned differently from how it was supposed to function.

Decoupling, we suspected, was the prevailing outcome of the Korean corporate governance reform that required large Korean corporations to introduce outside directors. This decoupling might mean that the proportion (25% or higher) of the outside directors in a Korean board would not affect the level of their active functioning on the board, which was measured by the rate of outside directors' participation in board meetings (for the theoretical and operational basis for our selection of this attribute, please refer to the second and third paragraphs following our statement of Hypothesis 2).Our second hypothesis, reflecting our assumption of decoupling, is stated as follows.

Hypothesis 2: The outsider ratio in a board is not significantly related to the rate of outside directors' participation in board meetings.

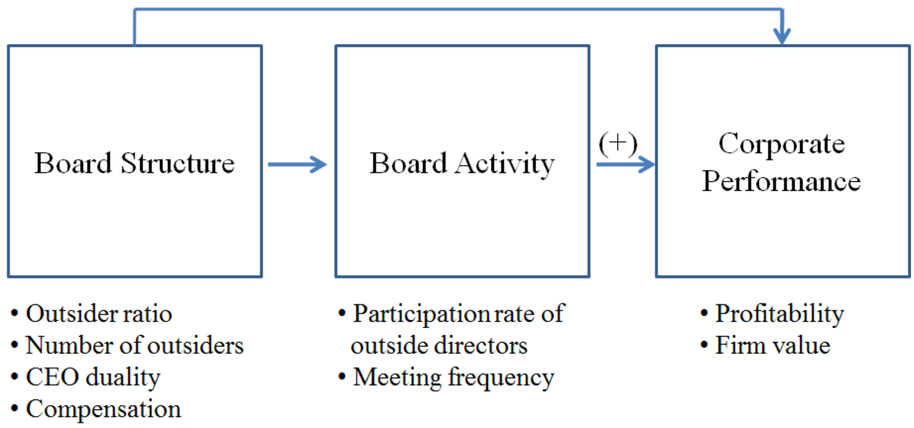
The primary purpose of our paper was to assess the immediate, short-term impact of the outside directors in newly reformed Korean boards of directors on the firms' financial performance. Our assessment was to apply concurrently two approaches (*i.e.,* the *structure* and *process* approaches) to researching corporate board effectiveness. In the course of developing the Hypotheses 1 and 2, we applied the *structure* approach.

Now we turn our attention to using the *process* approach to our assessment of Korean boards' effectiveness. This *process* approach highlights the role of boards of directors in corporate management, and by applying this approach, we intend to introduce the board process that is regarded to influence corporate management directly. We subscribe to a view that the effective process in board meetings is dependent on whether the outside directors work well as a team or a working group. Regardless of the outsiders' ratio, the outside directors can function effectively to monitor or support the management if it works well as a team. Even if a board is composed of relatively small number of outside directors, these outsiders may play their roles of monitoring and/or supporting the management effectively as long as they actively participate in the board meetings. Then, what are the proper attribute(s) of the outsiders' activities in board meetings?

We chose the rate of outside directors' participation in their board meetings as the attribute representing how active they were on the boards, because it was the only data item representing the quality of outsiders' board activity that we could obtain from our primary source of data about Korean outside directors), and because of the theoretical support we received from the literature on effective board process (refer to page 3).Boards meet periodically and consist of interdependent groups of people and therefore, boards—more than other groups—have interaction difficulties. Improvement in interaction among directors can make possible the better fulfilment of board tasks (Hambrick *et al.*, 2008). Group participation, coordination and open discussion are very important for the effective social process in the board (Zattoney *et al.*, 2015). The most basic requirement for the effective social process of the board is the high level of commitment by individual directors to participate in the board meetings. The rate of outside directors' participation in board meetings can represent the degree of outside directors' group participation, coordination and open discussion in board meetings. Our third hypothesis states a positive relationship between the rate of outside directors' participation in board meetings and the firm's profitability, as follows.

Hypothesis 3. The rate of outside directors' participation in board meetings is positively related to the firm's profitability.

Figure 1. Research model



METHODOLOGY

Data sources and sample

To test our hypotheses, we collected financial data for Korean companies listed in the Korean stock exchanges from the TS 2000 database. This database was maintained by the

Korean Listed Companies Association based on the annual reports of listed companies. This database was updated annually and was one of the most credible sources of corporate financial information in Korea. The board data were acquired from the website of the Financial Supervisory Service (FSS) of Korea. The board data included the number of total directors and outside directors, and the participation rate of outside directors in the board meetings. The data were collected for the three-year period of 2002 to 2004. The purpose of this study was to investigate the immediate, short-term impacts of the introduction of outsider directors in Korean corporate boards on the financial performance of those Korean firms; and therefore, testing the hypotheses during the early years following the introduction of outsider directors was reasonable. Because the board data from the website of FSS were available only from 2002 and forward, we gathered the data for the three years: from 2002 to 2004. We excluded banks and insurance companies because of their atypical financial structures. As a result, the final sample size was 1,732 firm-year observations.

Research variables

Dependent variables

The dependent variable in our analysis is the financial performance of the sample Korean companies. Among various measurements for financial performance, return on asset (ROA) was chosen. The data to calculate ROA was obtained from the TS 2000 database. Many studies in corporate governance used ROA as the proxy of corporate financial performance (Ezzamal and Watson, 1993; Baysinger and Butler, 1985; Rosenstein and Wyatt, 1990)

Independent variables

The independent variables are certain attributes of a firm’s board composition and outside directors' participation. The data that were available on the website of the FSS included the number of directors, the number of outside directors and participation rate of outside directors. The participation rate was calculated by the number of outside directors attending a board meeting divided by the total number of outside directors. If the board meetings were held multiple times in a year, the multiple participation rates were averaged for the year.

Control variables

Our analysis considered following control variables: firm size, ownership rate of controlling shareholders, ownership rate of foreign investors, debt ratio, R&D ratio, growth rate and year dummy. Firm size was measured by the natural log of total assets. Firm size was believed to be largely related to corporate governance reform and firm performance. Korean economy tended to be dependent on large firms; and, as Chizema and Kim (2007) explained, large firms experienced more outside pressure for governance reform. The ownership rate of controlling shareholders was calculated based on the shares owned by controlling shareholder and his/her family. The controlling shareholders were regarded to bring about agency problems in Korean companies (Chang, 2003; Cho and Kim, 2007; Joh, 2003). Foreign investors were considered to play an important role in corporate governance in emerging markets (Dalquist and Robertson, 2001). In most corporate governance studies about Korean firms, the ownership structure variables, including those two ownership rates stated above, were their primary focus. The debt ratio was usually regarded to be associated with governance changes (Peng, 2004). After the crisis, one of the restructuring pressures on Korean firms was for them to decrease their debt ratios. Therefore, debt ratios could significantly influence the management of Korean firms during the period of 2002 and 2004. The debt ratio was calculated as total debt divided by total capital. R&D intensity was a firm's R&D spending in a year divided by the year's total sales. Growth rate was calculated by the annual increase in sales amount. The R&D ratios and growth rates were related to the performance of Korean firms in many papers. Lastly, because the corporate governance reform and firm performance were understood to be time-dependent, year dummy was included to capture the year effects.

RESULTS

Table 1 shows the descriptive statistics and correlation coefficients. The average outsider ratio in the Korea boards in our sample is about 28.5%, and the average numbers of total directors and outside directors are 7 and 2, respectively. The average rate of outside directors is a little higher than the Korean government's standard of 25%. About 40% of the firms in our sample has outside directors for more than 25% of total number of directors on the board. The average participation rate of outside directors is about 75%. The ownership rates of controlling shareholders and foreign investors in our sample are 40% and 11%, respectively. The average debt size is 129% of capital amount. Before the crisis, the debt ratio of Korean firms was very high; and the Korean government forced all listed companies to reduce the debt ratio to below 200%. The debt ratio in our sample showed the restructuring result of Korean firms after the crisis. It is interesting that the correlation coefficients between board variables and ownership variables are significant. Controlling owners' ownership rate is negatively correlated with board variables, while the foreign investors' ownership rate is positively correlated with board variables. It may be interpreted that controlling shareholders are hesitant to a board reform; while foreign investors tend to support the reform. Another interesting finding is that growth rate measured by the increase of sale volume is correlated significantly to the most board variables and ownership variables. In a corporate governance research, the researcher may need to consider the significant relationship of sales growth with various governance variables.

The regression results that are summarized in Table 2 appear very interesting. In testing our Hypothesis 1, we examined the relationship between board structure and ROA. This is shown in models 2 through 5 in Table 2. We found that both the outsider ratio in the board and the number of outsiders have a negative relationship with ROA. This result is inconsistent with the general belief that a larger outsider ratio in the board contributes to corporate performance. In the test of Hypothesis 2 in models 8 through 11 in Table 2, the relationships between board variables and the participation rates of outside directors are also negative. From the results of Hypothesis 1 and Hypothesis 2, we found that outside directors in Korean firms do not function positively to improve corporate management. Our finding about Korean firms does not support the widely-held belief that a larger ratio of outside directors is required to make governance structure sounder (Johnson, Hoskisson, and Hitt, 1993; Pearce and Zahra, 1992; Tihany, Hoskisson, and Hitt, 2003). In contrast, our Hypothesis 3 test result, which is summarized in model 6 in Table 2, shows that the participation rate of outside directors is positively related with the firm's ROA.

Table 1. Descriptive statistics and correlation coefficients

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.ROA	0.12	.17	1.0												
2.Outsider ratio	.285	.136	.003	1.0											
3.Outsiders	2.11	1.39	.052*	.829***	1.0										
4.Directors	7.17	2.41	.078**	.203***	.657***	1.0									
5.Above 25%	.40	.489	.005	.736***	.623***	.190***	1.0								
6.Parti. Rate	.75	.272	.069**	.067**	-.008	-.161***	-.043+	1.0							
7.Size	12.47	1.42	.246**	.484***	.627***	.456***	.305***	.091**	1.0						
8.Cont. Share	40.1	16.8	.188**	-.161***	-.167***	-.079**	-.088***	.041	-.089**	1.0					
9.Foreig. Inv.	11.4	16.4	.210***	.244***	.379***	.335***	.118***	..083**	.505***	-.082**	1.0				
10.R&D ratio	.01	.014	-.073**	.054*	.056*	.058*	.006	-.008	-.007	-.059	.062	1.0			
11.Debt ratio	1.29	5.29	-.070*	.048+	.006	-.036	.038	.004	-.030	-.014	-.050	-.019	1.0		
12.Growth rate	4.12	2.47	.051*	.223***	.256***	.124***	.122***	.045+	.310***	-.051*	.143***	.076**	-.007	1.0	
13.Year dummy	1.33	.47	.058*	-.022	-.017	.007	-.030	.018	-.013	-.015	-.001	-.014	.006	.138***	1.0
14.Year dummy	2.35	.47	-.040	.022	.009	-.042+	.046+	.005	.034	.018	.024	.042+	-.021	-.061**	-.513***

***: p < .001, ** : p< .01, * : p< .05, + : p<.10

Table 2. Regression result

Dependent variable: ROA	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-.316(.000)***	-.329(.000)***	-.335(.000)***	-.316(.000)***	-322(.000)***	-.344(.000)***
Outsider ratio		-.092(.006)**				
Outsiders			-.011(.003)**			
Directors				-.001(.433)		
Above 25%					-.008(.280)	
Parti. Rate						.036(.008)**
Control variable:						
Size	.023(.000)***	.026(.000)***	.028(.000)***	.024(.000)***	.024(.000)***	.023(.000)***
Cont. Share	.001(.000)***	.001(.000)***	.001(.000)***	.001(.000)***	.001(.000)***	.001(.000)***
Foreig. Inv.	.001(.000)***	.001(.000)***	.001(.000)***	.001(.000)***	.001(.000)***	.001(.000)***
R&D ratio	-.162(.528)	-.139(.589)	-.141(.582)	-.167(.516)	-.150(.569)	-.142(.587)
Debt ratio	.001(.113)	.001(.166)	.001(.135)	.001(.108)	.001(.125)	.001(.134)
Growth rate	.001(.357)	-8.89E-5(.549)	-8.89E-5(.549)	.001(.358)	.001(.389)	.001(.319)
Year dummy1	.013(.160)	.013(.140)	.013(.143)	.012(.174)	.013(.157)	.013(.172)
Year dummy2	.009(.917)	9.50E-5(.991)	-.001(.929)	-.002(.848)	-.001(.951)	.005(.598)
R^2	.091	.096	.096	.091	.091	.099
Adjusted R^2	.086	.090	.090	.085	.085	.093
F-Statistics	17.257***	16.147***	16.245***	15.294***	12.362***	16.032***

***: p < .001, ** : p< .01, * : p< .05, + : p<.10

DISCUSSION AND CONCLUSION

The primary purpose of this paper is to assess the immediate, short-term impact of the outside directors in newly reformed Korean boards of directors on the firms' financial performance. Our assessment was to apply concurrently two approaches (*i.e.,* the *structure* and *process* approaches) to researching corporate board effectiveness. The first two hypotheses (the Hypotheses 1 and 2) were testing the widely-held expectation based on the *structure* perspective of agency theory:(1) a higher outsider ratio in the board could lead to higher corporate performance; and (2) a higher outsider ratio would become the foundation on which the board function actively. In testing Hypothesis 1 (the Models 2-5 in Table 2), the outsider ratio in a board of a Korean firm initially appeared to be negatively related to the firm's ROA. However, the coefficients of variation (R^2) were rather small (with the adjusted R^2 of 0.090 or less across the Models 2-5), perhaps due to the obvious omission in our models in which many other variables determine or explain the firm's ROA. The t-statistics were insignificant with the probability values (p-values in Table 2) that ranged from low values of 0.006 (in Model 2) and 0.003 (in Model 3) to very high values of 0.433 (in Model 4) and 0.280 (in Model 5). Based on these weak statistical parameters, we estimated that the ROA of a large Korean firm was not explained by the ratio of outside members in the firm's board. In our test of Hypothesis 2 (the Model 8 in Table 2), the outsider ratio in the board of Korean firm initially appeared to be negatively related to the rate of outside directors' participation in board meetings. In a close examination, we noticed the R^2 value of the Model 8 for testing Hypothesis 2 was an extremely small number of 0.014. We also noticed the insignificant t-statistics with the probability value, p-value of 0.304 for the same model. Therefore, we estimated that the participation rate of outsiders was not statistically explained by the ratio of outside members in a Korean corporate board; and their board meeting participation rate was not determined by their ratio in the board. These two test results, taken together, indicated a strong likelihood that the proportion of outside directors in a reformed Korean board did not affect their participation in board functions and the firm's return on assets.

The most interesting finding was that the participation rate of outside directors in board meetings of a Korean firm had a positive relationship with the firm's profitability. In our test of Hypothesis 3 (the Model 6 in Table 2) that related the outsider participation rate to the firm's ROA, R^2 was rather small (about 0.1), perhaps due to our omission of many other variables that could determine or explain the firm's ROA in the model. Fortunately, the t-statistics were significant with the probability value, p-value of 0.008, which was less than 0.01 for the same model. We used the *process* approach to relate the outside directors' activity on the board (*i.e.,* board activity) to the firm's performance. We subscribed to a view that, regardless of the outsiders' ratio in the board structure, the outside directors could function effectively to monitor or support the management as long as they actively participated in the board meetings. Their participation rates could represent the degree of outside directors' group participation, coordination and open discussion in board meetings. We chose the rate of outside directors' participation in their board meetings as the attribute representing how active they were on the boards. Therefore, this finding means that those Korean firms in which their outside directors were allowed to play their monitoring and resource roles more actively and effectively tended to achieve higher profitability.

There are two explanations for the insignificant impact of outsiders on the firm's profitability and board activity. The first explanation follows. In 1998, all companies listed in the Korean Stock Exchange were required to recruit outside directors into their board of directors, meeting the minimum required outsider ratio of 25% of total directors. This first-time inclusion of outside directors in the boards of large Korean firms in 1998 was a major change in the structure of these boards. Our sample period was 2002 to 2004, and only 3 to 5 years elapsed since the year when the outside directors were introduced in Korean corporate boards for the first time. Therefore, one would find it difficult to expect them to play positive roles in the governance process, and to help improve the profitability of the large Korean firms.

The second explanation is related to the unique socio-economic circumstances in Korea during the period of the governance reform that took place in the aftermath of the crisis of 1997. The governance reform, including the first-time introduction of outside directors in Korean corporate boards, was accomplished not through the voluntary effort of the firms but their compulsory acceptance of outside pressures (Chizema and Kim, 2010). The introduction of outside directors in their boards was only a signal showing the firms' intent to cooperate with the reform. During the sample period of 2002 to 2004, there were many articles in the Korean press about the outside directors; and a majority of these articles pointed out the ineffectiveness of outside directors in Korean boards. The fundamental problem was noted as the lack of outside directors' independence from management, because most outside directors were suspected to have close relationships with the management. A change in an organization caused by institutional pressures can either adapt to the existing organization or decouple from its intended function.

Throughout the 1990s, the US-style of governance practices that included the appointment of outside directors spread to the world. We could recognize both convergence and diversity in understanding the worldwide spread of these governance structures (Chizema and Kim, 2010). Many companies in the world accepted outside directors because they were pressured by outside stakeholders, including governments, international institutions and shareholders. It was the convergence of governance structure across countries that forced firms in many countries to employ outside directors to monitor management, imitating the American governance structure. Even if the American practices were imitated in many countries, their practical applications might differ across countries. Aguilera and Jackson (2003) explained that such differences were brought about by different local institutional environments. These differences in practical application across countries meant the international diversity in corporate governance practice.

In conclusion, our empirical assessment of the immediate, short-term impact of the Korean corporate governance reform that took place in the aftermath of the Asian Financial Crisis of 1997 was that the outside directors were basically accepted into Korean corporate boards only as those Korean firms' adaptation to the outside pressures in Korea. As a result, their actual functioning in many large Korean firms seemed to have decoupled from their intended function in the short run. The results from testing the short-term impact of the reformed Korean board structure with 25% or higher proportion of outsiders, as noted earlier, indicated a strong likelihood that the high proportion of outside directors affected neither the rate of outside directors' participation in board meetings (*i.e.*, their board activity) nor the firm's profitability. However, our process-focused testing of the impact of the varying rates of outside directors' participation in board meetings at Korean firms show a positive relationship between the participation rate (representing the board activity) and the firm's profitability measured by the ROA. It is an encouraging sign that those Korean firms that obtained the outsiders' high degree of participation in their board meetings appeared to have reaped the beneficial impact on the firm's profitability. In other words, those firms with a higher degree of outsider's board activity got higher return from their first-time investment in outside directors, while others with a lower level of outsiders' board activity got a lower return.

One major limitation of this study is the sample period. Outside directors were introduced in Korea about 15 years ago, but our research sample period covered only the early three years: 2002, 2003 and 2004, because our research aim was to examine the immediate, short-term impact of the "forced on" (as opposed to voluntary) introduction of outsider directors in Korean boards in 1998, preferably from the perspective of institution theory. This is because this perspective gave us capabilities to interpret and explain the immediate impact of outside directors during the earliest period after their introduction in Korea. There were two possible scenarios for the introduction of outside directors in Korean companies: decoupling or adaptation. During our sample period of 2002 to 2004, there were wide-spread suspicions that the actual functioning of outside directors in those Korean firms were somewhat decoupled from their original intent. We would need to examine if the perspective of institution theory could still be applied to the sample in the long term, even beyond our sample period. In 2014, outside directors in Korea were still questioned on their independence from the management and their effectiveness as a monitoring mechanism. Other interested researchers may want to examine whether the decoupling continued beyond our sample period. Another limitation is that this paper is only an exploratory study to explain the process of corporate governance reform in Korea. Other interested researchers may want to perform case analysis in depth to validate the process perspective about the role of board activity.

Another limitation is that only the rate of outsiders' participation in board meetings is used to represent the degree of the outsiders' board activity in this paper, and that our selection of only this single attribute value might not be sufficient to validate the relationship between their board activity and the firm's profitability. This limitation of our study was due to the circumstance that the board data that were available on the website of the Financial Supervisory Service of Korea during the period of this study contained no other information than the outsider's participation rate that we could use to represent the board activity. Lastly, the R^2values were rather small in our regression analysis. This limitation was due to our obvious omission in our models of many other variables that could determine or explain the firm's ROA. Fortunately, the t-statistics were significant for model 6 which related the outsider participation rate to the firm's ROA; and the statistical fitness of this key model appeared to be fine. However, the R^2 value of the model 8 for testing Hypothesis 2 was extremely small. Considering also the insignificant t-statistics for model 8, we could readily estimate that the participation rate of outsiders was not statistically explained by the ratio of outside members in a Korean corporate board; and their board meeting participation rate was determined independent of their proportion in the board membership.

Although there have been many papers about the corporate governance of Korean companies, we found that most of these papers analysed the sources of agency problems in Korean chaebols. We could find no paper analysing how the governance reform in Korean companies proceeded after the Asian Financial Crisis of 1997. Our paper intended to provide an explanation to help our audience understand the process of governance reform in Korea in the aftermath of the crisis. Most management innovations were invented in the United States and spread to other countries. We needed to investigate the process through which these innovations were applied to other countries. This paper intended to shed light on the process through which a US-style of governance mechanism was introduced in Korea.

Major implications from this study may be suggested in three dimensions. First, Two viewpoints were presented for academic contribution. The effectiveness of the board should be understood in terms of its activity; and institution theory was employed to help explain the process of governance reform in Korean firms. Second, policy makers need to consider the diversity of corporate governance across nations; and the strong possibility that a forced reform may get decoupled from the originally expected function, at least during the early period after the reform. Third, it is suggested that Korean corporate management develop a governance structure that encourages effective board activities.

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