Governance Change Under the Interactional Impact of Deregulatory and Institutional Forces

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Prior research demonstrates that deregulation leads to changes in the governance systems of firms. Although researchers highlight deregulation as a significant source of governance change, the way in which institutional forces interplay with regulative change seems to have been largely ignored. Over the years, compensation consultants and critics have emphasized incentive plans as innovative compensation schemes that better align the interests of managers with the concerns of owners. In fact, the number of firms that adopt incentive plans has significantly increased in the U.S. since the-mid 1970s. Similarly, board reform critics, institutional investors, and shareholder activists have persistently advocated board independence as a vital component of sound monitoring systems over the last couple decades. Thus, to the extent that these institutional trends coincide with deregulatory periods of major U.S. industries such as airlines, banking, railroads, and public utilities, one might argue that the changes observed in governance systems of firms after deregulation are equally identifiable in other firms that have not experienced regulative changes. In other words, the observed changes in governance systems of firms following deregulation can be attributed to the impact of institutional trends. Thus, there is a need to reexamine the impact that deregulation has on corporate governance by investigating the interplay between regulative changes and institutional trends. Therefore, we attempt to delineate between the effect of deregulation and the effect of institutional forces in the governance change process. In doing so, we extend and supplement prior research on the deregulation-governance adaptation link by incorporating a broad scope of governance variables that include both compensation and monitoring systems. Using a sample of banks in the U.S. banking industry and a matched sample of non-regulated firms observed between 1981 and 1990, we find evidence that deregulation acts as a catalyst on institutional forces. Results demonstrate that institutional forces and deregulation have similar but distinct effects on changes in governance mechanisms. Our findings establish an enhanced understanding that institutional trends point the way for legitimized changes while deregulation provides a catalyst for the rapid adoption of those legitimized practices. Our study indicates the importance of analyzing the impact of institutional forces and the catalytic nature of deregulation in the study of the governance adaptation-deregulation linkage. Furthermore, we explore the sequence of governance change firms follow in the governance adaptation process. Results indicate that banks adjust compensation systems first and alter monitoring systems later. Our findings suggest that firms make initial changes to incentive systems followed by relatively slow progress toward changes to monitoring systems. Thus, our research clarifies the firms' inclination of changing high-impact elements and less resisted systems early in the adaptation process. Additionally, our study reveals that incentives and monitoring act as substitutes in the short-term but act as complements in the long-run.

Key words: Governance change; Deregulatory change; Institutional trends; Agency theory

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Drawing on critical implications of deregulation for organizational performance and managerial action, scholars in corporate governance have examined diverse forms of governance adaptation. Such adaptations include executive compensation (e.g., Hubbard & Palia, 1995; Rajagopalan & Finkelstein, 1992), ownership structure (Saunders, Strock, & Travlos, 1990), board composition (Hillman, Cannella, & Paetzold, 2000), executive staffing (Gutherie, Grimm, & Smith, 1991), and CEO succession (Haveman, Russo, & Meyer, 2001). One common conclusion across these studies is that deregulation leads to changes in the governance systems of firms. For example, in a series of studies that examined the relationship between deregulation and executive compensation, scholars demonstrate that firms increase the level of executive salary and adopt incentive plans as important forms of governance adaptation following deregulation (e.g., Becher, Campbell, & Frye, 2005; Crawford, Ezzell, & Miles, 1995). Although these studies have enhanced our understanding of how governance systems are adapted to deregulation, our review of the literature points to issues that warrant more explicit attention.

First, although researchers highlight deregulation as a significant source of changes in executive compensation (Rajagopalan & Finkelstein, 1992) and monitoring systems (Hillman et al., 2000), the way in which institutional forces interplay with regulative changes seems to be largely ignored. Over the years, compensation consultants and boards of directors have emphasized incentive plans as innovative compensation schemes that better align the interests of managers with the concerns of owners. Jarrell (1993) notes that the number of firms that adopt incentive plans has significantly increased in the U.S. since the-mid 1970s. Similarly, board reform critics, institutional investors, and shareholder activists have persistently advocated board independence as a vital component of sound monitoring systems over the last couple decades (Nadler, Behan, & Nadler, 2006). Thus, to the extent that these institutional trends coincide with deregulatory periods of major U.S. industries such as airlines, banking, railroads, and public utilities, one might argue that the changes observed in governance systems of firms after deregulation are equally identifiable in other firms that do not experience regulative changes. Indeed, the changes in governance systems of firms observed following deregulation can be attributed to the impact of institutional trends. Thus, there is a need to reexamine the impact that deregulation has on corporate governance by investigating the interplay between regulative changes and institutional trends.

Second, very few studies to date have examined the relation between deregulation and the potential changes in a broad scope of governance mechanisms (Kole & Lehn, 1999).

Past research focused heavily on examining issues related to executive compensation while paying limited attention to other aspects of governance adaptation (e.g., Becher et al., 2005; Cho & Shen, 2007; Hubbard & Palia, 1995). However, agency theory suggests that managerial incentives and vigilant monitoring represent the two primary governance mechanisms utilized to reduce agency problems (Berle & Means, 1932; Fama & Jensen, 1983; Jensen & Meckling, 1976). While executive pay is an essential dimension of governance adaptation to deregulation, change in monitoring structure is another key aspect of governance adaptation that should also be implemented (Hillman et al., 2000). As such, a more comprehensive study of governance adaptation is needed. As will be discussed later, deregulation accompanies a large amount of uncertainty. An interesting research question to examine is whether both aspects of the governance mechanisms (incentive systems and monitoring systems) are changed simultaneously or if there is a general pattern or order in terms of governance adaptation in this uncertain context.

We find that extant literature offers little explanation for these questions. We aim to fill these considerable gaps in the literature through examination of the U.S. banking industry during a period of significant regulatory transition in the 1980s. Specifically, we attempt to answer these questions by analyzing a sample of firms in the banking industry and a matched sample of non-regulated firms. We test our hypotheses using a panel data design for the two samples totaling 156 firms for the years 1981-1990 which are considered to be a critical period in the deregulation of the banking industry as well as a period of increasing popularity of outcome-based incentive systems and board reforms (Hartzell & Starks, 2003; Jarrell, 1993; Nadler et al., 2006; Ward, 1991).

We first examine whether the changes of governance mechanisms (incentive systems and monitoring systems) after the deregulation transcends the effect of institutional trends. To address the interplay between regulative changes and institutional trends, we conceptualize and examine deregulation as an environmental catalyst (Dubin, 1978) that pressures firms to accelerate important governance changes beyond institutional trends. Next, we examine the governance adaptation with regard to incentive systems and monitoring systems in three different time windows between 1981 and 1990. We argue that the adjustment to a compensation system is less resisted, more influential, and more visible than change to a monitoring system, and thus banks are likely to adopt incentive plans first while altering monitoring systems at a later time. This study contributes to the literature on the deregulation-governance adaptation linkage by addressing these theoretically im-

portant but empirically under-studied questions, providing more definitive insight into governance adaptation processes.

II. Theory Development and Hypotheses

2.1 Regulative changes and uncertainty for agency controls

The separation of ownership and control is a common aspect of large organizations in the U.S. (Berle & Means, 1932). Agency problems arise because of this separation (Eisenhardt, 1989). The potential for agency problems is exacerbated in industries undergoing deregulation (Kim & Prescott, 2005) and, for several reasons, deregulation creates increased uncertainty and a greater need for agency controls.

First, deregulation decreases the programmability of managerial action while increasing the ambiguity surrounding cause-effect relationships, thereby amplifying the potential for agency problems (Eisenhardt, 1989). In addition, deregulation eliminates or reduces restrictions imposed on the strategic actions of managers (Grucia & Nath, 1994), enlarging a firm's investment opportunity set (Smith & Watts, 1992). As a result, deregulation provides managers with the opportunity to use newly found managerial discretion while increasing the potential impact of managerial action on organizational performance (Hambrick & Finkelstein, 1987). It is argued in financial economics literature that a high degree of managerial discretion is likely to increase the freedom managers have to pursue personal objectives rather than maximizing shareholders' interests (Jensen & Meckling, 1976; Shen & Cho, 2005). Furthermore, deregulation increases environmental uncertainty by removing regulatory mechanisms that buffer from market and competitive forces and limit excessive competition among firms (Delmas, Russo, & Montes-Sancho, 2007). Deregulation alters market boundaries, increases interfirm rivalry, and creates additional pressures to manage interdependence among competitors' value networks as they compete to attain advantageous resource positions (Delmas & Tokat, 2005; Rajagopalan & Finkelstein, 1992; Raviv, 1985). In such a highly uncertain environment, it becomes more problematic for principals to clearly define and identify optimal managerial action. Lastly, it is also important to note that deregulation increases information asymmetry between principals and agents, compounding the potential for agency problems (Eisenhardt, 1989). To cope with increased environmental uncertainty, managers face greater demand for information processing (Daft & Lengel, 1986; Daft & Macintosh, 1981; Daft, Sormanen, & Parks, 1988). As managers

become directly involved in environmental scanning activities (Mangaliso, 1995), a gap in the quantity and quality of knowledge and information pertaining to competitive dynamics is created between principals and agents. Growing information asymmetry makes it more difficult for principals to implement appropriate agency controls and is considered a prime source of agency problems (Jensen & Meckling, 1976).

The uncertainty resulting from deregulation creates a paradoxical dilemma for shareholders and boards of directors. On the one hand, they require talented managers for their information processing capabilities and discretionary actions to survive in a highly competitive environment. On the other hand, they need to impose tighter governance systems so that those managers concurrently behave in the best interests of shareholders. It is in this context that governance adaptation is implemented.

2.2 Effects of deregulation and institutional forces on incentive systems

Scholars demonstrate that firms increase the level of executive salary and the adoption of incentive plans as crucial forms of governance adaptation following deregulation (Cho & Shen, 2007). As deregulation elicits a more competitive environment and provides greater investment opportunities, firms require greater management skills in top executives. The need for greater cognitive complexity and information processing capabilities results in higher and more responsive pay structures for top executives (Hubbard & Palia, 1995). Compensation schemes are based on outcomes, not behaviors, because deregulation is accompanied with a high degree of uncertainty (Walsh & Seward, 1990). Such an emphasis on executive compensation as a response to deregulation reverberates with previous studies (Becher et al., 2005; Crawford et al., 1995; Hubbard & Palia, 1995; Rajagopalan & Finkelstein, 1992; Smith & Watts, 1992) that generally support the hypothesis that firms increasingly adopt incentive plans after deregulation.

However, it is well documented that there has been an institutional trend toward greater adoption of incentive plans by many firms regardless of whether their industry goes through deregulation (O'Connor, Priem, Coombs, & Gilley, 2006; Sanders & Tuschke, 2007; Westphal & Zajac, 1994). Over the last decades, compensation consultants, institutional investors, and shareholder activists have increasingly advocated the importance of incentive contracts as a vital component of a sound governance structure (Jensen & Murphy, 1990). It is asserted that when executive compensation is tied to firm performance, the interests of executives and those of shareholders are well aligned, particularly when control of managerial action is problematic or inappropriate (Jensen & Meckling, 1976). Thus, outcome-based in-

centive plans have been regarded as legitimate, appropriate, and consistent with wider societal values (Scott, 2001). For example, Jarrell (1993) reports that stock options have become an institutionalized practice among large U.S. firms. Given the increasing popularity of outcome-based incentive plans as an institutionally contested organizational practice (Sanders & Tuschke, 2007), one might speculate that such adoption increases observed in firms following deregulation can be attributed to institutional forces.

We contend that there is a need for further investigation to clarify whether the increased adoption of incentive plans in firms in industries undergoing deregulation is due to institutional isomorphism (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Scott, 2001) or to the effect of deregulation. Given these ubiquitous institutional trends, many firms are likely to adopt outcome-based incentive plans regardless of the regulatory conditions. However, following deregulation, uncertainty of agency controls increases the need for aligning interests of top managers with those of shareholders. Because of this very uncertainty, the isomorphic tendency of firms can be boosted. Therefore, we assert that deregulation is likely to act as a catalyst (Dubin, 1978) that accelerates the pace of adoption of incentive plans. We state this as the following hypothesis:

Hypothesis 1: Deregulation has a positive effect on the adoption of incentive plans above and beyond the effect of institutional trend.

2.3 Effects of deregulation and institutional forces on monitoring systems

During the regulation period, regulators and their policies/laws serve as (partial) substitutes for corporate governance mechanisms (Kim & Prescott, 2005; Walsh & Seward 1990) because managerial action is subject to closer supervision by regulatory agencies (Demlas et al., 2007; Hubbard & Palia 1995; Smith & Grimm 1987). Following deregulation, agency controls are transferred to boards of directors and owners from regulatory bodies. In the face of deregulation, some external (e.g., institutional) investors may also want to increase their shareholdings in order to increase their power to govern (Kole & Lehn, 1999). Prior research indicates that deregulation provides an impetus for change in board composition and ownership structure (Hillman et al., 2000; Saunders et al., 1990).

In the governance literature, the question of what constitutes an effective governance structure remains a subject of debate. For example, research on the relationship between board structure and firm performance has produced inconsistent and mixed results (Dalton et al., 1998, 1999). While the best board configuration has not yet been resolved,

agency theory suggests that to effectively control managerial behavior, boards must be comprised of a high percentage of outside directors, and that the roles between the CEO and the chairperson be separated. Furthermore, it is argued that the first step in establishing an effective board is to shrink its size in order to improve a board's ability to function as a governing body (Jensen, 1993; Ward 1991). As such, a central thrust of agency theory is based on an appropriate degree of independence between boards and management for effective agency controls (Baysinger & Hoskisson, 1990). This position is also advocated by numerous acts and government reports such as the Sarbanes Oxley Act of 2002, the 2004 Australian Federal Corporate Law Economic Reform Act and the Higgs and Cadbury Reports in the United Kingdom. In addition, it also has been argued that the involvement of shareholders with a large number of shares (i.e., blockholders) contributes to effective monitoring (Bethel & Liebeskind, 1993). Although others question the monitoring effectiveness of blockholders (Chaganti & Damanpour, 1991; Lowensein, 1991), agency theory suggests that owners of large blocks of shares not only have strong incentives, but also have the power to govern through the voting process. It is relatively easy for large shareholders (e.g., institutional owners) to coordinate actions and demand information from management, thereby overcoming information asymmetry (Berle & Means, 1932) and allocating more power to shareholders (Salancik & Pfeffer, 1980).

Board reform critics, institutional investors, and shareholder activists persistently advocate board independence and concentrated ownership as vital components of an effectual governance structure (Bethel & Liebeskind, 1993; Nadler et al., 2006). Research suggests that there have been increases in the proportion of outside directors (Hillman & Dalziel, 2003; Zahra & Pearce, 1989), changes in board leadership toward non-duality (Dayton, 1984; Dobrzynski, 1991), and decreases in the size of boards (Jensen, 1993). Researchers (Baums, Buxbaum, & Hopt, 1994; Chaganti & Damanpour, 1991) report that the proportion of shares of large U.S. firms managed by institutions rose dramatically during the 1970s and 1980s. The influence and role of blockholders in the corporate governance of firms has increased over the last decades (Hartzell & Starks, 2003).

These structural arrangements have been argued to promote a firm's ability to control managerial behavior. Thus, one may expect that changes toward vigilant board structure and increased participation of large shareholders can be observed in firms regardless of the regulatory context.

Building on the premise of agency theory that board independence and concentrated ownership are an important tool that enhances

a firm's governance ability, we expect to observe changes in monitoring systems designed to mitigate potential agency problems and accommodate the uncertainty of agency controls following deregulation. Similar to the effects of deregulation on the adoption of incentive plans, the high uncertainty caused by deregulation will increase the isomorphic tendency of firms. Hence, we assert that deregulation is likely to act as a catalyst that promotes the pace of change toward monitoring systems with enhanced control capabilities. We suggest the following hypothesis:

Hypothesis 2: Deregulation has a positive effect on the change toward tighter monitoring structures above and beyond the effect of institutional trend.

2.4 Sequence of governance adaptation: incentive and monitoring mechanisms

Our discussion thus far has treated firms as having the same inclination toward the adoption of managerial incentives and the establishment of tighter monitoring structures through which conflicts between managerial interests and shareholders' interests are minimized under deregulation. An interesting question to ask is, "What is the propensity of a firm to prioritize governance adaptation between the two governance mechanisms to cope with the uncertainty of agency controls?"

While we have proposed that firms will enhance their governance function through incentive compensation and effective monitoring, it seems unlikely that firms change, or are able to change, the two governance mechanisms simultaneously. In most cases, adaptation or change is difficult and subject to strong inertia (Hanna & Freeman, 1984). Under the heightened uncertainty resulting from deregulation, it is risky to initiate these changes simultaneously because it is disruptive and may set back the liability-of-newness clock, ultimately jeopardizing firm (Amburgey, Kelly, & Barnett, 1993). Accordingly, it seems reasonable to expect that firms choose to sequence their governance adaptation behaviors.

Understanding of sequence of change is important because much of the literature on governance adaptation has been based on the general assumption that all elements of a governance system are changed simultaneously. Despite the surge of interest in examining governance adaptation to deregulation, the order or sequence in which different parts of the governance system of a firm are altered is still unclear.

To understand the priority or sequence of adaptation firms follow to resolve agency control problems, we consider the following points. We believe that some governance systems will play a more direct role in controlling the agent's actions than others. Some scholars suggest that changes should be made to the

more peripheral parts of an organization (Beer, Eisenstat, & Spector, 1990) while the majority of evidence points toward the need to change more central or "high impact" elements early on (Hinings & Greenwood, 1988). Amis and colleagues (2004) argued that the changing of high impact elements early in the change process is compelling because high symbolic value associated with central elements helps to convey the importance of the adaptation being instigated.[1] In the context of governance, control by managerial incentives could be seen as more direct in nature (producing a more candid response to agency problems) because this type of control affects the agent's behavior in a more straightforward or measurable manner by linking the agent's performance to compensation. On the other hand, monitoring by boards of directors could be viewed as less direct in nature because the agent's behavior is controlled by the observation and judgment of another agent.

Agency theory corroborates the discussion above. While there is a general agreement regarding the role that monitoring and incentives play in controlling agency problems, there is little consensus about the nature of relationship between the two (Rutherford, Buchholtz, & Brown, 2007). Monitoring and incentives have been characterized as acting as substitutes (Rediker & Seth, 1995) and as complements (Tosi, Katz, & Gomez-Mejia, 1997). However, agency literature in general stresses the primacy of incentive contracting as a first-best solution to agency problems. Agency literature emphasizes that the optimal level of board monitoring would be based on the magnitude of the incentive gap between principals and agents (Beatty & Zajac, 1994; Zajac & Westphal, 1994). For example, vigilant monitoring by boards of directors is appropriate or suitable when managerial compensation is only weakly tied to firm performance. In this case, the benefits of vigilant monitoring outweigh the costs associated with board monitoring. Prior research has empirically demonstrated the existence of a substitution relationship between incentives and monitoring (Beatty & Zajac, 1994; Rediker & Seth, 1995; Zajac & Westphal, 1994), suggesting that incentives and monitoring represent alternative solutions to agency problems such that shareholders' demand for greater monitoring declines as managerial incentive alignment increases.

Based on these arguments, we expect that firms are less likely to alter all of their governance mechanisms at the same time. Instead, firms will change governance mechanisms earlier by adopting managerial incentives

1) Notions of high impact elements in the context of corporate governance are important areas that require further investigation and that go beyond the scope of this paper. Firms are more likely to view various governance mechanisms differently in their responsiveness (or effectiveness) to reducing agency problems.

rather than making changes in monitoring systems.

Hypothesis 3: After deregulation, the process of governance adaptation is characterized by a change sequence that involves early adoption of incentive plans followed by change of monitoring systems.

III. Methods

3.1 Empirical setting

To test the hypotheses, we examined the U.S. banking industry during the period 1981-1990. The banking industry has been one of the most highly regulated industries in the U.S. (Calomiris, 2000; Ramaswamy, 1997). Government regulation played a major role in industry stabilization by limiting excess competition and maintaining profitability within a relatively clearly defined boundary (Cargill & Garcia, 1985; Gart, 1994; Roussakis, 1997). However, the long history of strict government regulations imposed on the banking industry began to end in the late 1970s. In fact, the 1980s is known as the era of deregulation in the banking industry (Cargill & Garcia 1985; Gart, 1994; Hawawini & Swary, 1990; Rose, 1989; Roussakis, 1997). Banks underwent important regulative changes in 1980 when Congress passed the Depository Institutions Deregulation and Monetary Control Act (Cargill & Garcia, 1985; Gart, 1994, Rose, 1989). This legislation reduced the level of regulatory oversight by phasing out interest rate ceilings, permitting transaction accounts at all depository institutions, rationalizing reserve requirements, increasing federal deposit insurance, and implementing changes that introduced a degree of competitive dynamism (Gart, 1994; Roussakis, 1997). Banking experienced a further reduction of government regulation in 1982 when Congress passed the Garn-St. Germain Depository Institutions Act. This legislation expanded the sources of funds available to depository institutions and provided for emergency takeovers of failing institutions (Roussakis, 1997). These two pieces of legislation served to significantly deregulate the banking industry and generated unprecedented challenges for banks in a relatively short amount of time. The banking industry is a good example of an industry which provides an ideal setting for examining the interactions of regulative changes, incentive plans, and monitoring characteristics.

3.2 Sample, data collection, and analytical approach

For our study, we collected and analyzed data on the sample of all publicly traded bank holding companies that existed during the

period between 1981 and 1990. We employed a panel data design that begins with 1981, the year after the passage of the Depository Institutions Deregulation and Monetary Control Act and before the passage of the Garn-St. Germain Depository Institutions Act. We constructed a panel at a three-year interval, resulting in four years (1981, 1984, 1987, and 1990). We limited our sample to the bank holding companies for which corporate proxy statements were available for all four years. Among less than 200 publicly traded bank holding companies that existed during this 1981-1990 period, only 110 bank holding companies issued proxy statements for all four years. Because of missing proxies, the final sample we used in this study comprised of 78 publicly traded bank holding companies.

The selection of a three-year time interval was mainly determined by the constraints of proxy data availability. A two-year time interval substantially reduced the sample size due to missing proxy statements. Our intention was to determine an optimal interval that would generate a reasonably large sample of bank holding companies. By covering periods of relative regulation (1981) and deregulation (1984, 1987, and 1990), this panel data design allowed us to longitudinally examine the effect of deregulation on corporate governance. The panel data design here consists of repeated measures in which observations are made on many of the same entities over time (Markus, 1979). Panel designs with repeated measures require fewer observations than designs with non-repeated measures (McCall & Applebaum, 1973).

Although this panel design built on these archival data could provide systematic evidence on the hypothesized relationships and provide findings with generalizability, we recognized that there is a need to discern the effect of institutional trend from the effect of deregulation. In order to capture the hypothesized catalytic effect of deregulation, we constructed an additional panel sample: a matched set of non-regulated firms. This matched sample was used as a control group to test if the deregulation has a unique effect on the changes of governance mechanisms in banks (e.g., Hambrick & D'Aveni, 1988). We introduced a number of controls through our matching procedures, employing seven matching variables: public ownership, firm independence, U.S. citizenship, 1981-1990 time period, firm size, firm performance, and market capitalization value (O'Connor et al., 2006; LaPlante & Muscarella, 1997). This matching process performed until each bank holding company was assigned to its matched firm. The variables of interest were collected from the annual proxy statements and the S&P Compustat database.

Our main interest was to explore if the sample of deregulated firms and the sample of control firms differed in the rate of incen-

tive plan adoption and monitoring structure change over time. Given that we attempt to control the effects of institutional trend during the 1981-1990 period, we needed to examine both the differences across time and differences between the two groups. Accordingly, we conducted analysis of variance (ANOVA) with a two-way (i.e., time and group) repeated-measure design (SAS Institute, Inc., 1989). We compared mean value of the each variable of the two groups in terms of 1981 value vs. 1984 value, 1984 value vs. 1987 value, and 1989 value vs. 1990 value.

3.3 Variables

3.3.1 Change of incentive systems

To examine the adoption of incentive plans within the context of regulative changes in the banking industry, we used an indicator variable to designate whether a firm adopted an incentive plan. If a firm had an incentive plan during the year, the firm received a score of 1 indicating the adoption of an incentive plan. Following Rajagopalan and Finkelstein (1992), we created dummy variables and coded as 1 for the existence of a stock option plan, a restricted stock plan, and a bonus plan, all of which have been widely examined by other researchers (Rajagopalan, 1996; Saunders & Tuschke, 2007). Because the low correlations among the adoption rate of each type of plan (shown in Table 1) suggest that these incentive plans may serve as a potential substitute for one another, we also developed a total incentive plan index of such programs. We counted the total number of incentive plans adopted by a firm. The maximum of the total incentive plan index for each firm is three and the minimum is zero.

3.3.2 Change of monitoring systems

In examining changes of monitoring systems, we examined three common board structural characteristics (board size, outside director ratio, and CEO duality) and the number of blockholders for each firm (Hartzell & Starks, 2003). Board size was measured as the total number of board members listed as active members on a board of directors (Goodstein, Guatam, & Boeker, 1994; Pearce & Zahra, 1992). The outside director ratio was calculated by dividing the number of non-affiliated outsider directors on a board by the total number of board members (Hillman & Dalziel, 2003; Kesner, 1988; Mallette & Fowler, 1992). Each firm was coded as 1 for the case in which the CEO was also the chairperson of the board. Otherwise, it was coded as 0 (Boyd, 1995; Daily & Dalton, 1995). A blockholder is defined as the owner of 5 percent or more of a firm's shares (Hartzell & Starks, 2003). We counted the total number of bolockholders for each firm (Bethel & Liebeskind, 1993).

Ⅳ. Results

Table 1 reports the means, standard deviations, and correlations of all the governance variables used in the analyses. As touched upon earlier, the correlations of the adoption rate of each of the three incentive plans are generally low, while moderately high correlations are observed between board size, outsider ratio, and the number of blockholders.

Table 2 shows the two-way ANOVA results testing the Hypotheses 1 through 3. In the column labeled with year, we showed mean values of each group.

In Hypothesis 1, we predict that deregulation has the additional catalytic effects on the adoption of incentive plans beyond the effects of institutional force. Our contention is that the ratio of adoption of incentive plans in banks responding to both institutional effects and deregulation effects will be higher than that found in control firms that responded to only institutional effects. Thus, to confirm Hypothesis 1, two conditions should be simultaneously observed: (1) the adoption rate of incentive plans increases across both groups over time due to the effects of institutional force and (2) the rate of adoption is higher among banks than control firms due to the additional effects of deregulation. The former institutional effects are examined as common tendency across different groups over time (the column labeled "Time difference"). The latter deregulation effects are examined as interaction effects between group and time (the column labeled "Group x Time") because deregulation makes the rate of adoption higher in banks than in control firms (group effects) while the institutional force increases the adoption rate in both groups over time (time effects).

For stock option plans, the column labeled "Time difference" indicates statistically significant time effects between 1981 and 1984 ($F=6.85$, $p<0.01$) as well as between 1987 and 1990 ($F=8.24$, $p<0.01$). The column labeled "Group x Time" demonstrates that the interaction effects are significant both in the 1981-1984 comparison ($F=6.85$, $p<0.01$) and the 1984-1987 comparison ($F=12.31$, $p<0.001$). While there is a trend of increasing adoption of stock option plans across both groups, we observe that the bank group adopted stock option plans more quickly than the control group. As a result, the column labeled "Group difference" shows that the significant difference between the bank and control groups existed in the 1981-1984 comparison actually disappeared by 1987.

For restricted stock plans, the "Time difference" column demonstrates statistically significant time effects between 1981 and 1984 ($F=16.37$, $p<0.001$), between 1984-1987 ($F=11.72$, $p<0.001$), and between 1987-1990 ($F=13.36$, $p<0.001$). The "Group x Time"

〈Table 1〉 Descriptive Statistics and Correlations

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. restricted stock plans (81)	.115	.321	1												
2. restricted stock plans (84)	.205	.405	.71**	1											
3. restricted stock plans (87)	.295	.457	.56**	.72**	1										
4. restricted stock plans (90)	.417	.495	.39**	.57**	.62**	1									
5. stock option plans (81)	.808	.395	.07	.01	-.04	-.08	1								
6. stock option plans (84)	.878	.328	-.05	-.00	-.02	-.00	.56**	1							
7. stock option plans (87)	.936	.246	-.15	-.06	-.06	-.04	.34**	.62**	1						
8. stock option plans (90)	.929	.257	-.21**	-.11	-.15	-.12	.25**	.51**	.75**	1					
9. bonus plans (81)	.859	.349	-.13	.02	.02	.01	.04	.07	.12	.18*	1				
10. bonus plans (84)	.827	.380	.01	.06	.07	.04	.08	.24**	.16*	.21**	.64**	1			
11. bonus plans (87)	.840	.368	-.01	.09	.05	.05	.05	.10	.10	.15	.48**	.63**	1		
12. bonus plans (90)	.877	.329	-.06	.04	.07	.07	.02	.11	.14	.14	.47**	.66**	.75**	1	
13. total incentive plans (81)	1.782	.635	.54**	.38**	.27**	.14	.68**	.37**	.20**	.14	.56**	.40**	.29**	.24**	1
14. total incentive plans (84)	1.910	.704	.39**	.61**	.44**	.35**	.31**	.60**	.34**	.29**	.40**	.69**	.44**	.43**	.61**
15. total incentive plans (87)	2.071	.654	.33**	.53**	.71**	.45**	.13	.28**	.39**	.26**	.33**	.47**	.64**	.52**	.43**
16. total incentive plans (90)	2.226	.660	.19*	.41**	.45**	.75**	.04	.25**	.33**	.37**	.31**	.44**	.47**	.61**	.29**
17. board size (81)	14.506	6.311	-.04	.14	.27**	.21**	-.19*	-.09	.18*	.15	.30**	.19**	.21**	.20*	.03
18. board size (84)	14.756	6.424	-.08	.10	.22**	.26**	-.23**	-.08	.18*	.13	.31**	.19*	.24**	.24**	-.01
19. board size (87)	14.096	5.946	-.03	.09	.21**	.21**	-.23**	-.08	.17*	.06	.34**	.18*	.22**	.19*	.03
20. board size (90)	13.186	5.133	-.06	.03	.16*	.18*	-.26**	-.11	.13	.04	.32**	.18*	.16*	.17*	-.02
21. outsider ratio (81)	.697	.158	-.08	.02	.19*	.09	-.14	-.05	.15	.16*	.29**	.19*	.13	.19*	.03
22. outsider ratio (84)	.696	.154	-.13	-.03	.12	.08	-.11	.02	.20**	.21**	.29**	.18*	.13	.18*	.03
23. outsider ratio (87)	.717	.154	-.15	-.05	.06	.06	-.10	.03	.18*	.21**	.23**	.18*	.11	.19*	-.01
24. outsider ratio (90)	.724	.148	-.17*	-.06	.08	.09	-.14	.03	.19*	.21**	.24**	.18*	.08	.21*	-.04
25. duality (81)	.526	.501	.06	.01	-.03	-.11	.06	-.04	.01	.04	.06	.14	.15	.12	.10
26. duality (84)	.558	.495	-.12	-.09	-.02	-.03	-.04	-.06	-.07	.01	.20**	.14	.17*	.18*	.02
27. duality (87)	.673	.471	-.05	.02	.03	-.06	.08	.03	.04	.08	.03	.08	.11	.12	.04
28. duality (90)	.716	.452	-.01	.06	.06	.15	-.01	-.00	.07	.01	.15	.09	.19*	.16*	.08
29. number of blockholders (81)	1.434	1.211	-.08	-.12	-.14	-.01	.02	-.00	-.08	-.07	-.18*	-.06	-.00	-.01	-.13
30. number of blockholders (84)	1.406	1.366	.01	-.01	-.05	-.07	.01	-.02	-.08	-.05	-.23**	-.07	-.06	-.11	-.12
31. number of blockholders (87)	1.539	1.304	.02	-.02	-.05	-.06	.09	.06	-.11	-.04	-.17*	-.08	-.02	.03	-.03
32. number of blockholders (90)	1.760	1.372	-.03	-.05	-.04	.08	-.06	.05	.05	.10	.18*	-.04	-.07	.02	-.16*

〈Table 1〉 Descriptive Statistics and Correlations (continued)

Variables	Mean	s.d.	14	15	16	17	18	19	20	21	22	23	24	25	26
14. total incentive plans (84)	1.910	.704	1												
15. total incentive plans (87)	2.071	.654	.69**	1											
16. total incentive plans (90)	2.226	.660	.59**	.71**	1										
17. board size (81)	14.506	6.311	.14	.38**	.32**	1									
18. board size (84)	14.756	6.424	.12	.36**	.36**	.88**	1								
19. board size (87)	14.096	5.946	.11	.34**	.29**	.77**	.83**	1							
20. board size (90)	13.186	5.133	.06	.25**	.24**	.74**	.79**	.91**	1						
21. outsider ratio (81)	.697	.158	.09	.26**	.22*	.54**	.52**	.50**	.51**	1					
22. outsider ratio (84)	.696	.154	.09	.23**	.22**	.54**	.54**	.50**	.50**	.86**	1				
23. outsider ratio (87)	.717	.154	.08	.17*	.21**	.48**	.43**	.42**	.43**	.77**	.87**	1			
24. outsider ratio (90)	.724	.148	.07	.17*	.25**	.48**	.45**	.44**	.44**	.71**	.75**	.84**	1		
25. duality (81)	.526	.501	.06	.06	-.01	.05	.02	-.02	-.01	.11	.11	.14	.09	1	
26. duality (84)	.558	.495	-.00	.06	.07	.09	.12	.11	.10	.16*	.13	.18*	.21**	.58**	1
27. duality (87)	.673	.471	.07	.10	.13	.02	-.00	.02	-.01	.09	.08	.13	.18*	.41**	.53**
28. duality (90)	.716	.452	.08	.17*	.19*	.26	.27**	.22**	.19*	.12	.11	.12	.14	.29**	.34**
29. number of blockholders (81)	1.434	1.211	-.10	-.12	-.04	-.29**	-.24**	-.25**	-.22**	-.28**	-.27**	-.29**	-.22**	-.07	-.05
30. number of blockholders (84)	1.406	1.366	-.06	-.10	-.12	-.28**	-.27**	-.25**	-.24**	-.23**	-.26**	-.24**	-.16*	-.03	-.10
31. number of blockholders (87)	1.539	1.304	-.09	-.09	-.04	-.26**	-.30**	-.32**	-.32**	-.18*	-.24**	-.17*	-.08	.02	-.15
32. number of blockholders (90)	1.760	1.372	-.03	-.05	.11	-.12	-.15	-.15	-.11	-.15	-.14	-.10	-.04	.06	-.11

Variables	Mean	s.d.	27	28	29	30	31	32
27. duality (87)	.673	.471	1					
28. duality (90)	.716	.452	.48**	1				
29. number of blockholders (81)	1.434	1.211	-.04	-.08	1			
30. number of blockholders (84)	1.406	1.366	-.09	-.15	.59**	1		
31. number of blockholders (87)	1.539	1.304	-.12	-.14	.33**	.49**	1	
32. number of blockholders (90)	1.760	1.372	-.11	-.12	.25**	.37**	.52**	1

N = 156; * p < .05; ** p < .01

〈Table 2〉 Results of Repeated ANOVA *F*-tests

	1981	1984	Group difference	Time (81-84) difference	Group x Time (81-84)	1987	Group difference	Time (84-87) difference	Group x Time (84-87)	1990	Group difference	Time (87-90) difference	Group x Time (87-90)
COMPENSATION													
Stock option plans													
Bank	0.692	0.833				0.962				0.949			
Control	0.923	0.923	10.35**	6.85**	6.85**	0.91	0.21	8.24**	12.31***	0.91	1.43	0.2	0.2
Restricted stock plans													
Bank	0.128	0.294				0.423				0.551			
Control	0.103	0.115	3.7	16.37***	12.03***	0.167	12.46***	11.72***	2.15	0.282	16.07***	13.36***	0.04
Bonus plans													
Bank	0.949	0.859				0.859				0.896			
Control	0.769	0.795	5.46*	1.72	5.58*	0.821	0.9	0.25	0.25	0.859	0.49	3.64	0
Total incentive plans													
Bank	1.769	1.987				2.243				2.403			
Control	1.795	1.833	0.44	7.29**	3.57	1.897	6.49*	14.17***	5.10*	2.051	13.50***	15.84***	0.03
MONITORING													
Board size													
Bank	18.9	19.2				17.9				16.4			
Control	10.1	10.4	161.5***	1.03	0.03	10.3	145.72***	5.42*	3.91*	9.99	11.29***	23.6***	10.98**
Outside director ratio													
Bank	0.79	0.778				0.794				0.795			
Control	0.604	0.614	79.88***	0.02	3.03	0.641	62.0***	11.2**	0.67	0.652	55.3***	0.79	0.56
CEO duality													
Bank	0.512	0.577				0.641				0.792			
Control	0.538	0.538	0.01	0.76	0.76	0.705	0.04	9.54**	1.89	0.641	0.56	1.15	7.91**
Blockholder number													
Bank	1.07	1.1				1.27				1.62			
Control	1.78	1.71	12.8***	0.01	0.47	1.79	9.82**	1.42	0.14	1.9	4.6*	4.44*	1.29

* $p < .05$
** $p < .01$
*** $p < .001$.

column shows that the interaction effects are significant in the 1981-1984 comparison ($F=12.03$, $p<0.001$). Despite the increase in the number of firms that adopted restricted stock plans across both groups, the bank group adopted restricted stock plans more quickly than the control group. The "Group difference" column shows no statistically significant difference in the 1981-1984 comparison. But, the difference grew over time (in favor of the bank group) and became statistically significant in the 1984-1987 comparison ($F=12.46$, $p<0.001$) and 1987-1990 comparison ($F=16.07$, $p<0.001$).

For bonus plans, the "Time difference" column indicates no statistically significant time effects over time. The "Group x Time" column shows that the interaction effects are significant in the 1981-1984 comparison ($F=5.58$, $p<0.05$).

As shown in Table 1, variables reflecting these incentive plans have very low correlations among them. Thus, it is possible that alternative incentive plans can substitute for each other (Rediker & Seth, 1995). Accordingly, we developed an index variable (total incentive plans) that adds all the three variables. As shown in Table 2, we find a consistent trend. The "Time difference" column demonstrates statistically significant time effects between 1981-1984 ($F=7.29$, $p<0.01$), between 1984-1987 ($F=14.17$, $p<0.001$), and between 1987-1990 ($F=15.84$, $p<0.001$). The "Group x Time" column shows that the interaction effects are significant in the 1984-1987 comparison ($F=5.10$, $p<0.05$). The "Group difference" column shows no statistically significant difference in the 1981-1984 comparison. But, the difference grew over time (in favor of the bank group) and became statistically significant in the 1984-1987 comparison ($F=6.49$, $p<0.05$) and 1987-1990 comparison ($F=13.50$, $p<0.001$).

Overall, we observed statistically significant time effects in two out of three different plans. We also observed statistically significant interaction effects in all the three different plans. Additionally, the total incentive plan index variable also showed statistically significant both time effects and interaction effects. Hypothesis 1 was generally supported. In order to assist the interpretation, the change in the value over time between banks and control firms is visually shown in Figure 1

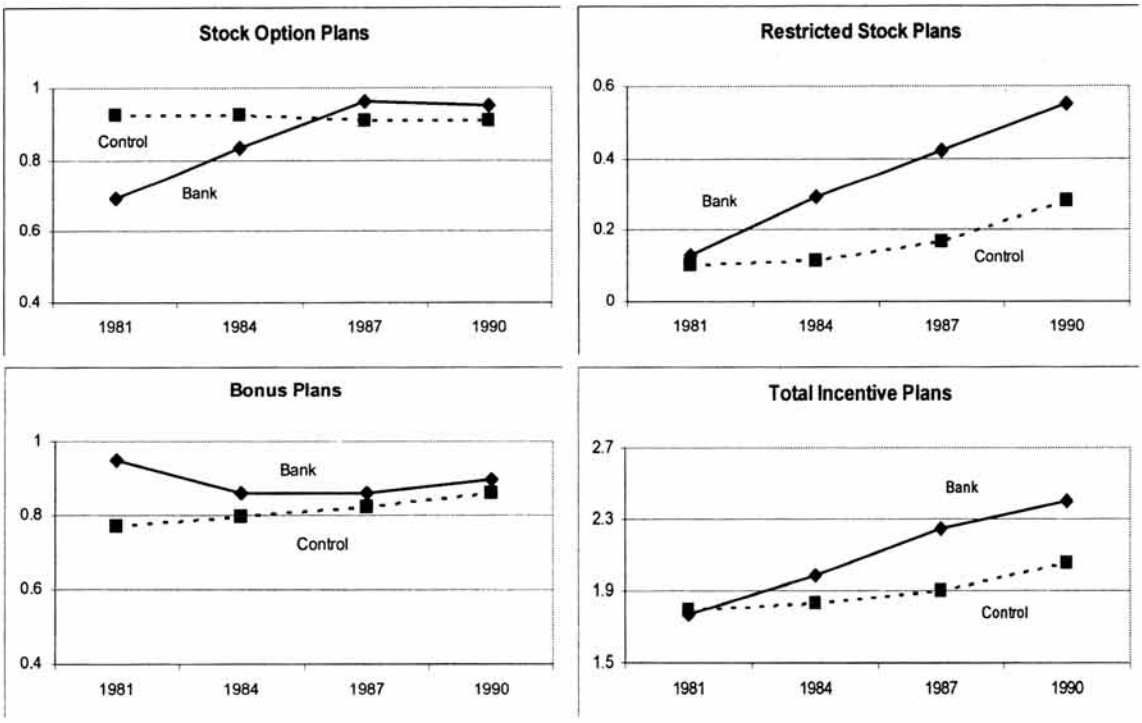
In Hypothesis 2, we predict that deregulation has an additional catalytic effect on the change of monitoring systems beyond the effects of institutional force. Similar to Hypothesis 1, we expect these two conditions be met: (1) the change of monitoring systems proceeds across both groups over time due to the effects of institutional force (time effects) and (2) the rate of change is higher among banks than control firms due to the effects of deregulation in addition to the time effects (interaction effects between time and group).

For board size, the "Time difference" column

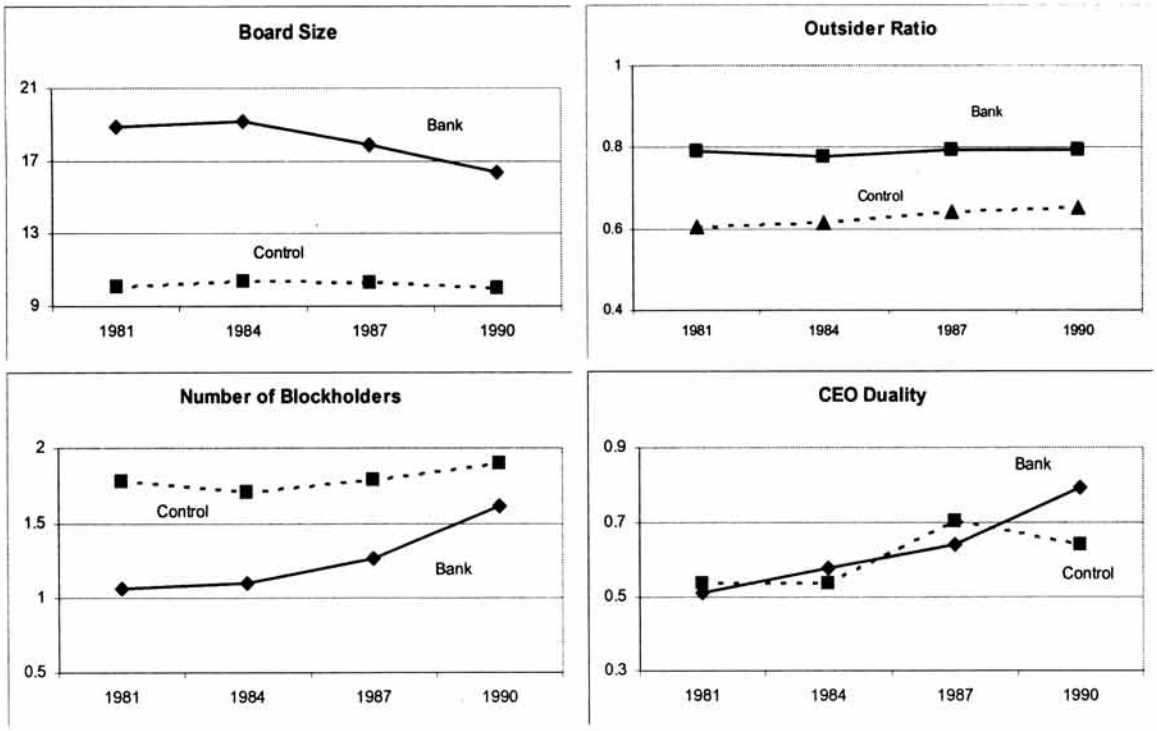
demonstrates statistically significant time effects between 1984 and 1987 ($F=5.42$, $p<0.05$) as well as between 1987 and 1990 ($F=11.29$, $p<0.001$). The "Group x Time" column shows that the interaction effects are significant in the 1984-1987 comparison ($F=3.91$, $p<0.05$) and the 1987-1990 comparison ($F=10.98$, $p<0.01$). Although both groups decreased board size over time, we find that the bank group reduced board size at a much faster rate than the control group.

For outside director ratio, the "Time difference" column indicates statistically significant time effects between 1984 and 1987 ($F=11.2$, $p<0.01$). The "Group x Time" column shows that the interaction effects are not significant over time.

For CEO duality, the "Time difference" column indicates statistically significant time effects between 1984 and 1987 ($F=9.54$, $p<0.01$). The "Group x Time" column shows that the interaction effects are significant in the 1987-1990 comparison ($F=7.91$, $p<0.01$). While there is an institutional trend of increasing reliance on CEO duality, we observe that the bank group increased their reliance on CEO duality at a faster rate than the control group. The direction of change is opposite to what



〈Figure 1〉 Incentive Plan Adoption



〈Figure 2〉 Monitoring Structure Change

the board reform critics suggest, and we address this finding in the discussion section.

For the number of blockholders, the "Time difference" column indicates statistically significant time effects between 1987 and 1990 ($F=4.44$, $p < 0.05$). The "Group x Time" column shows that the interaction effects are not significant over time.

Overall, we observed statistically significant time effects in all of the four monitoring systems. We also observed statistically significant interaction effects in two out of the four monitoring systems. Hypothesis 2 was partially supported. In order to facilitate the interpretation, the change of the value over time by comparing banks and control firms is visually shown in Figure 2.

In Hypothesis 3, we expect that adoption of incentive plans will take place earlier than changes in monitoring systems because they will receive less resistance, are more visible, and are highly influential as a governance mechanism. If both incentive plan adoption and monitoring structure change take place at the same time, the interaction effects of time and group are observed similarly. Alternatively, if the two systems are changed at random, there will be no systematic pattern observed.

With regard to incentive plans, as shown in Table 2, three out of five statistically significant interaction effects were observed in the 1981-1984 comparison, two were in the 1984-1987 comparison, and none were in the 1987-1990 comparison. Figure 1 visually shows that the adoption of incentive plans mostly starts early after 1981 and tapers off around 1987-1990. With regard to monitoring systems, as shown in Table 2, none out of three statistically significant interaction effects was observed in the 1981-1984 comparison, one was in the 1984-1987 comparison, and two were in the 1987-1990 comparison. Figure 2 visually shows that the change of monitoring systems start relatively late (around 1984-1987) and still continues in 1987-1990. Overall, these results are consistent with Hypothesis 3.

V. Discussion

The goal of this study was two-fold. First, we intended to enhance our understanding of the effect of deregulation on governance adaptation by incorporating the effects of institutional forces. In delineating the effect of deregulation from the effect of institutional force in the adaptation process, we conceptualized and argued that deregulation has a catalytic effect on governance change that goes beyond institutional forces, thus accelerating the changes in governance mechanisms. Second, we supplemented prior research by examining a broad scope of variables that incorporate both compensation and monitoring systems, and we explored them from the perspective of the sequence of governance adaptation, which is currently an under-studied area in corporate governance literature. We argued that the adjustment to a compensation system is less resisted, more effective, and more visible than the change to a monitoring system, and thus banks are likely to first adopt incentive plans while altering the monitoring system at a later time.

The results were largely consistent with our hypotheses. As shown in Table 2 and Figure 1, we observed an overall trend of increased adoption of incentive plans both in banks and control firms. Moreover, the statistically significant interaction effects of time and group demonstrate that deregulation had a catalytic effect for banks in accelerating the adoption.

However, we did not observe a significant time effect in the adoption of bonus plans. We believe that it may be related to the fact that most banks (95%) already adopted bonus plans in 1981. Indeed, the number of banks that adopted bonus plans slightly declined while the number of control firms that adopted bonus plans increased over the period between 1981 and 1990. Also, we found a similar phenomenon with board composition.

Given the high outsider ratio of bank boards (about 80%) in 1981, there was little room for the banks to further increase outsider representation. Although there was an institutional trend of having more outside directors, we suspect that there was a ceiling effect in the bank group.

Interestingly, although the number of blockholders increased over time in both the bank and control groups, we did not observe any significant interaction effects of time and group. To the extent that deregulation increases the need to have tighter monitoring systems for effective control of managerial behavior, we expected that outside investors would increase their shareholdings accordingly to obtain more power in an attempt to influence the governance of firms. However, the results show that increases in the number of blockholders were also observed in the control firms during the 1980s. This augmentation in the number of blockholders can be attributed to the fact that ownership activism has increased in the U.S. since 1980s. At this time, corporate restructuring became a preferred course of action to correct over-expansion and over-diversification during the 1960s and 1970s. Major ownership changes have occurred in the 1980s: in particular, institutional owners' holdings in the U.S. corporations grew dramatically (Bethel & Liebeskind, 1993).

Although we did not find support for the number of blockholders, the results provide clear evidence for the importance of controlling this institutional force when studying the impact of deregulation on governance adaptation. In a separate analysis, we found that the increase in the number of blockholders of the bank group between 1981 and 1990 was statistically significant ($F=12.01$, $p<0.01$). That is, without the employment of a control group, we could have concluded that deregulation triggers an increase in the number of blockholders in the bank group after deregulation. This result shows a potential risk of spuriousness in research on the deregulation and governance adaptation relationship.

Another interesting point to note is the increased reliance on CEO duality. Although the results provide support for our pace of change argument, the nature of the change made in the board leadership of banks was in the opposite direction of what was predicted. As evident in previous studies, CEO duality is a complex issue (e.g., Dalton et al., 1998). Despite the fact that CEO duality has come under heavy censure from board reform critics, it can be observed that CEO duality has been an increasingly institutionalized practice in corporate America. For example, Dalton and Kesner (1987) find that approximately 82 percent of U.S. firms in their sample adopted CEO duality. Brickley, Coles, and Jarrell (1997) also report that about 81 percent of CEOs in their sample of 535 firms held dual

titles. In 2004, around 76 percent of the Fortune 500 firms had dual CEOs (Arlman, 2004). Given the far-reaching influence of this institutional trend, our findings indicate that deregulation actually motivated banks to accelerate their reliance on CEO duality. Banks may have been trying to establish unified decision-making capabilities to respond to competitive uncertainty quickly and decisively, while motivating the CEO to enhance firm performance. Moreover, banks may have tried to provide the CEO with greater decision-making authority and discretion to implement strategies that overcome organizational inertia (Hambrick & Finkelstein, 1987; Pfeffer & Salancik, 1978). Offering a dual position can also attract or maintain talented CEOs. Alternatively, given the higher outsider ratio, CEOs could have demanded joint positions in an effort to keep a power balance in the boardroom.

5.1 Implications

Our work makes several contributions to the governance literature and has clear implications for researchers and practitioners interested in governance adaptation. First, our findings demonstrate the importance of analyzing the impact of institutional force and the catalytic nature of deregulation in the study of the governance adaptation-deregulation linkage. We suggest that institutional forces and deregulation have similar but distinct effects on changes in governance mechanisms. Without employing a control group, it would have been difficult to conclude that the changes observed in the governance mechanisms of firms in the banking industry were the effect of deregulation rather than the effect of institutional forces. Our findings establish an enhanced understanding that institutional trends point the way for legitimized changes while deregulation provides a catalyst for the rapid adoption of those legitimized practices.

Second, in examining a board range of governance variables, our study demonstrates the dynamics of governance adaptation across entire elements. The literature on the relationship between regulative change and incentive system change is voluminous when compared to the literature on the relationship between regulative change and monitoring system change. Both streams of research have largely progressed independently from each other. By integrating these two streams, we provide empirical evidence that firms make adjustments to both incentive systems and monitoring systems in response to deregulation.

Third, in examining both systems, our study also demonstrates a sequence of governance adaptation that has not yet been examined in the literature. There exists an implicit assumption in much of prior research that firms adjust governance mechanisms across entire elements simultaneously. Our findings suggest that firms make initial changes to

incentive systems followed by relatively slow progress toward changes to monitoring systems. Thus, our research clarifies the firms' inclination of changing high-impact elements and less resisted systems early in the adaptation process. Additionally, our findings reveal that incentives and monitoring act as substitutes in the short-term but act as complements in the long-run.

5.2 Limitations and future research opportunities

Despite these potential contributions, our work has limitations. Because our study focused on examining a single industry during a particular historical period, limited generalizability across different contexts must be acknowledged. Deregulation can be a relative phenomenon so the agency control issues arising from regulative changes could be diverse across different deregulated industries. Another limitation is the limited sampling period (1981-1990). Although states began to allow geographic expansion into any compact state in the 1980s, the banking industry underwent dramatic consolidation through mergers and acquisitions with the passage of the 1994 Riegle-Neal Interstate Banking and Branching Efficiency Act. Thus, examination of a longer period of time may yield more comprehensive results that uncover the full extent of governance adaptation in the banking industry.

There are a number of areas that require further exploration. One useful research effort includes the study of the relationship between deregulation and governance adaptation from a different theoretical perspective. Agency theory has dominated exploration into the deregulation-governance adaptation link (Crawford et al., 1995; Hubbard & Palia, 1995; Kim & Prescott, 2005; Kole & Lehn, 1999), however, it represents a relatively narrow theoretical lens to explore governance adaptation processes that take place in a complex setting. While agency theory provides explanations for many of the adjustments in incentive systems, it is not clear that agency theory alone can explain other governance-related adaptive responses to deregulation. For instance, we found the preponderance of the changes made in the board leadership was an increased reliance on CEO duality, which is contrary to the predictions of agency theory. The implications of deregulation on corporate governance may extend far beyond the logic of agency theory. The application of other theoretical views, such as resource dependency and stewardship theories, might be necessary to explain the adaptation dynamics of a broad range of governance variables.

Another potential area is the relationship among regulative change, adaptive governance responses, and firm performance. Studies on the effect of deregulation on governance adaptation predominately examine specific adaptive

mechanisms without taking into account the resulting impact of altered governance systems on organizational performance outcomes. Extant literature offers little explanation or evidence regarding the impact of specific choices in governance adaptation on subsequent firm performance.

Lastly, there is a need for empirical research that explores why firms show a particular sequence of change. We discussed the agency logic, the notion of high-impact elements, and the aspect of least resistance. Additionally, there might be other key issues involved with the sequence of change. For example, boards of directors' values and cognitive perspectives may influence the ways in which governance mechanisms are adjusted. Consideration of other factors is likely to provide useful insight into our understanding of the sequence of governance adaptation.

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산업규제 완화와 제도적 환경의 상호작용이 기업지배구조의 변화에 미치는 영향

김봉진*

요 약

산업의 탈규제화는 시장통제 메커니즘의 완화를 의미하고 그에 따른 기업의 내부지배구조 시스템 상의 변화를 야기하기 때문에 이는 기업지배구조 변화의 중요한 원천으로 강조되고 있다. 그러나 기업의 지배구조는 또한 제도적 환경에 영향 받으며 변화되고 있다. 그럼에도 불구하고 산업규제완화와 기업지배구조변화의 관계를 규명하는 기존의 연구들은 제도적 환경의 영향을 고려하지 않고 진행되어온 것이 사실이다. 다시 말하면 규제 변화와 제도적인 실행력과의 상호작용이 기업의 지배구조 변화에 미치는 영향에 대한 실증적인 연구는 부족한 상황이다. 이에 본 연구는 기업지배구조 상의 변화과정에 있어서 규제완화와 제도적인 실행에 있어서의 효과를 비교 분석하고자 한다. 기업지배구조에서 중요한 쟁점으로 지목되는 기업의 보상구조와 경영진을 통제하는 감시시스템을 아우르는 포괄적인 면에서, 산업규제완화 시에 기업지배구조의 변화를 재규명함으로써 기존의 연구에 좀더 세밀한 설명력을 더하고자 한다. 본 연구는 1981년부터 1990년 사이에 탈규제를 경험한 미국금융산업 내의 은행집단과 같은 기간 동안 탈규제를 경험하지 않은 다양한 산업의 기업집단과의 비교분석을 통하여 규제완화가 제도적인 실행력의 촉진제로써의 역할을 수행하고 있다는 결과를 제시하고 있다. 즉 제도적인 환경은 기업지배구조의 정당성 있는 변화 방향을 제시하는 반면 산업규제완화는 정당성 있는 방향으로의 기업지배구조변화를 가속화시키는 역할을 하고 있다는 것을 보여 주고 있다. 또한 본 연구는 기업지배구조의 변화의 연속선 상에서 기업지배구조변화의 프로세스를 살펴보고자 하였다. 연구 결과로는 규제가 완화된 은행집단은 우선 보상 시스템을 먼저 구축한 후에 감시시스템을 변화하는 프로세스를 가짐이 드러났다.

주제어: 기업지배구조 변화; 규제완화; 제도적 이론; 대리인 이론

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