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Institutional Change and its Economic Consequence in Japan: The bright and dark sides of hybridization

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Abstract

Central to recent changes in corporate Japan is the dominance of hybrid firms which combine market-based principles and relational governance in different economic domains such as finance and organizational architectures (employment system). Since hybridization is opposed to the institutional complementarity that is at the core of the varieties of capitalism argument, the natural questions are whether it is transitional to the Anglo-Saxon model or if it has stabilized in a new equilibrium, and whether it is productive or counterproductive. The purpose of this paper is to address these questions. First, by examining several key variables concerning corporate governance, the paper tentatively concludes that the hybrid pattern has been more dominant. Second, this paper illustrates the impact of changing governance arrangements on corporate behavior such as research and development (R&D) investment, mergers and acquisitions (M&A), business reconstruction decisions, distribution policy, and performance. Overall, the hybrid pattern of corporate governance has actually affected corporate behavior, and by doing so, had productive effects among Japanese firms. Lastly, the paper considers the potential costs of hybridization. Hybridization, almost by definition, implies declining system effects of former complementarities (e.g. main bank system and long-term employment), but what we are concerned with is whether the hybrid pattern of institutional change is associated with additional costs that diminish the competitiveness of Japanese firms. The paper raises some conjectures on this issue.

***Keywords*: Institution, Corporate ownership, Organizational architecture, Hybrid, performance, Complementarity, Variety of capitalism, Japan**

***JEL classification*: G30, G32, P52, L25**

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1. Introduction

While globalization raises the question of whether distinctions among capitalist systems are eroding, more studies have begun to show that changes in corporate governance systems are path dependent, thus enabling the persistence of current systems (Bebchuk and Roe 2004; Schmidt and Spinder 2004)[1]. In Japan, changes have also been path dependent, but no single, clear pattern has emerged with regard to the future of the Japanese model. My recent analysis with Gregory Jackson demonstrates that multiple forms of corporate governance mechanisms coexist within the Japanese economy: the traditional, J-type firms which retain the old relational patterns coexist alongside hybrids which combine old relational and new market-oriented elements of governance (Jackson and Miyajima 2007, pp. 1-47).[2]

Two types of hybrid firms have been identified. The Type I Hybrid Firm is exemplified by so-called "blue chips" such as Toyota, Canon, and Kao, as well as by Hitachi, NTT DoCoMo, and other large firms listed on the Tokyo Stock Exchange. They are based on market-oriented finance and outsider dominated ownership characteristics, combined with relational employment and partially insider board structures. The Type II Hybrid Firm is characterized by the combination of relational finance and market–based organizational characteristics such as a formal, contract-based employment system, performance based payment, stock options, and board structures based partly on the U.S. model. Type II Hybrid Firms are mainly located in IT-related industries and distribution, and are of relatively recent provenance. Central to my analysis is the supposition that the hybrid firm is the result of mixing market-based principles and relational governance in different economic domains such as finance and organizational architectures (employment system). In this regard, the concept of hybridization does not conflict with but is nonetheless different from the layering suggested by Streeck and Thelen (2004), which describes the coexistence of old and new institutions within an economic domain.

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[1] For convergence and divergence controversies, see Hansmann and Kraakman (2001), Hall and Soskice (2001), Yamamura and Streeck (2003), Streeck and Thelen (2005), Shishido (2007), Jackson and Miyajima (2007), and Aoki (2010:chap.5).

[2] For recent works on this perspective, see Aoki (2010), Whittaker and Deakin (2009).

Their emergence is a sign of neither convergence nor persistence of traditional practices, but rather a sign that firms have partially adapted to convergence pressures, but in ways significantly conditioned by existing national constraints. The hybridization of the Japanese firm system has been underway since the banking crisis of 1997, as is documented in chapters of a book that I co-edited (Aoki et al. 2007).

Since hybridization is opposed to the institutional complementarity that is at the core of the varieties of capitalism argument (Hall and Soskice 2001), the natural questions that immediately arise are whether the hybridization is transitional to the Anglo Saxon model, or has stabilized in a new equilibrium, and whether the hybridization is productive or counterproductive[3].

The purpose of this paper is to address these questions. This paper addresses three concrete issues. First, I examine the recent evolution of corporate governance in Japan, following up on the findings of Jackson and Miyajima (2007), which mainly analyzed developments through the early 2000s. By examining several key variables concerning the corporate governance of Japanese firms, I tentatively conclude that the hybrid pattern of corporate governance has been more dominant. This understanding is consistent with the recent work of Whittaker and Deakin (2009), Olcott (2009), and the interpretation of Aoki (2010, chap.5).

Second, this paper illustrates the impact of changing governance arrangements on corporate behavior. Compared to the growing research on formal changes in corporate governance arrangements among Japanese firms, research on the real impacts of the evolution of these arrangements on corporate behavior and performance is less developed.[4] Combining recent empirical work with some new estimations, I insist that the changes in corporate governance structures, in particular, the emergence of external market based governance, significantly affect corporate R&D investment, M&A and

[3] Another natural question is why and how the hybridization occurred given tightly complimentary institutions in Japan. I prepare another paper that addresses this issues, which emphasizes several characteristics; 1) the exogenous shock and rational response, 2) the role of deregulation, 3) the importance of behavior factors, 4) the inducing effect of institutional changes in a domain on the changes in the other domain.

[4] Several chapters in Aoki et al. (2007) take this approach. Ahmadjian and Robinson (2005), is an exception in showing the role of foreign investors on corporate restructuring.

business reconstruction decisions, distribution policy, and performance. Overall, the hybrid pattern of corporate governance has actually affected corporate behavior, and by doing so, had productive effects among Japanese firms.

Lastly, however, we consider the potential costs of hybridization. The Japanese economy grew at a much slower pace than other developed countries during a transitional period that is now referred to as Japan's "lost two decades." After the modest boom from 2003 to 2007, and subsequent Lehman Brothers shock, Japanese firms appear not to have fully recovered their competitive edge over their international rivals in spite of massive organizational reforms. Hybridization, almost by definition, implies declining system effects of former complementarities (e.g. main bank system and long-term employment), but what we are concerned with is whether the hybrid pattern of institutional change is associated with additional costs that diminished the competitiveness of Japanese firms. If the answer is, at least partly, yes, then the next questions to ask are, what are the extent of these costs, which areas incur these costs and what are the mechanisms that cause these institutional factors to be counterproductive. I raise some conjectures on the issues.

This paper is organized as follows. The next section summarizes my understanding of current J-type firms. Section 3 addresses the impact of changing corporate governance arrangements on firm behavior. Section 4 raises several hypothetical conjectures regarding the costs of institutional change in current Japan. Section 5 provides a conclusion and perspectives on problems that will need to be addressed going forward.

2. The Diversification of Corporate Governance and Hybridization

2-1. Analytical Framework

Since the middle of 1980s, the financial structure of traditional Japanese firms has undergone a gradual evolution, and since the banking crisis of 1997, their ownership structure and internal governance, along with internal organizations and employment

systems, have also been revamped[5]. It should be pointed out, however, that since change did not occur equally across firms, there has been a great increase in the diversity of the corporate governance arrangements of Japanese firms. This paper, which draws on the findings of Jackson and Miyajima (2007), attempts to provide a snap shot of these arrangements as they existed after the realignment wave that followed the banking crisis had run its course in order to confirm that such an evolution has occurred.[6] This analysis utilizes the questionnaire survey of firms listed on the First and Second Sections of the Tokyo Stock Exchange carried out by the Ministry of Finance's Policy Research Institute in December 2002. The sample for the survey consists of the 723 non-financial firms that provided responses to the questionnaire.[7] The study employed a cluster analysis methodology, which tends to magnify differences between the corporate groups of the sample firms, and to minimize the differences between firms within the same group. I focus on the 14 data items in **Table 1**, which are grouped into the following three categories.

- **External governance**: These data items measure the characteristics of corporate finance and ownership structure, and distinguish between market-based external governance characterized by institutional investor ownership and high reliance on raising capital from the stock market, and external governance based on long-term relationships characterized by bank borrowing and stable shareholding.
- **Internal governance**: These data items capture the characteristics of boards and management, and are based on a Corporate Governance Score (CGI) compiled from responses provided to the questionnaire survey, and distinguish between structures characterized by the separation of ownership and management, the appointment of outsiders to boards, and active disclosure of information, and

[5] For perspectives on the evolutional process and recent changes of traditional Japanese firms, see Aoki, Jackson and Miyajima (2007), Franks, Mayer, and Miyajima (2009), and Whittaker and Deakin (2009).

[6] For details on this framework, see Aoki and Jackson (2008), and Aoki (2010).

[7] For details, see Miyajima (2007). Firms such as Sony, Orix, and others which have received considerable attention for having adopted U.S.-style boards are not included in the sample.

structures which allow insiders to dominate and control boards, and privilege private information.

- **Organizational architecture**: These data items capture the characteristics of the compensation system (availability of stock options) and employment system, and the degree of decentralization within the organization, and allow us to determine whether the characteristics of external and internal governance are tied to either an employment system based on fixed-term employment, performance-based pay, and clear and formal contracts, or to an employment system based on long-term relationships and characterized by implicit long-term employment contracts, and seniority-based wages correlated closely to the number of years worked.

The results of the analysis conducted on the data items described above are summarized in **Table 1**. The analysis indicates that Japanese firms fall into six clusters, which in turn can be concentrated into three broader clusters. **Figure 1** plots the six clusters along three dimensions. The size of each circle indicates each cluster's share of total sample firm employment.

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Table 1 and Figure 1 about here

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2-2 Three Broad Clusters and Recent Evolution

Type I Hybrids

If one assumes that U.S.-model firms are characterized by their combining of market-oriented finance and ownership structures, and organizational architectures (appointment of outsiders to boards, compensation closely tied to performance, and fluid employment), then one would expect them to be plotted in the lower left section of **Figure 1**. According to the analysis of Jackson and Miyajima (2007), Japanese firms as of 2002 did not cluster in the region that one would expect to find U.S.-model firms. Instead, a hybrid pattern that combines market-based finance and ownership structures

and relational organizational architectures is emerging as the dominant pattern for Japanese firms.

The firms that fall into this cluster rely primarily on corporate bonds for external borrowing, and are characterized by their high foreign ownership ratios. Furthermore, they have taken active steps to reform their boards. The majority of firms discussed in the previous section that had adopted the executive officer system and stock options would fall into this cluster. They also had a high degree of information disclosure. On the other hand, these firms also maintained the standard of long-term employment, and had high rates of labor unionization. Type I Hybrids can be further divided into a group with a higher degree of information disclosure and higher rate of adoption of performance-based pay (Hybrid in **Figure 1** and 2a in **Table 1** such as Toyota, Canon, and Kao), and a group with a lower degree of information disclosure and lower rate of adoption of performance-based pay (Hybrid J-Firms in **Figure 1** and 2b in **Table 1** such as Hitachi and NTT DoCoMo).

As of 2002, this type of hybrid firm, which combined market-based finance and ownership structures with relational internal governance and employment systems accounted for 23% of all firms, and 67% of total employment. In other words, these hybridized firms were Japan's leading firms. They tended to be large in scale, to have been in business for many years and to have high export and R&D ratios.

We can confirm the trajectory that Type I Hybrids have followed since 2002 from **Table 2**, which summarizes the governance related variables in 2007 by modifying the 2002 cluster analysis. While the bond dependence has slightly declined, their foreign shareholding ratio has continued to rise, reaching 21.9% in 2007. The executive officer system has become popular, while firms that had at least one outside director accounted for over half of firms belonging to this cluster.

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Table 2 about here

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It is important to note that from the latter half of the 1990s, the relational internal governance and employment systems of Type I Hybrid Firms have continued to evolve

in a path-dependent manner. For instance, their internal governance reforms included steps taken to promote sharing of information by management and employees, and while maintaining long-term employment, they attempted to achieve organizational separation of execution and oversight, and to decrease the size of their boards. Toyota adopted the executive officer system in 2003, for example, and insisting that local knowledge on the shop floor was vital for directors who were in charge of making strategic decisions, abolished their outsider director system, and introduced an external auditor system. They also installed managers in joint appointments as directors/executive officers (Inoue 2003).

Furthermore, it is also worth noting that firms in this cluster also exhibited institutional stratification associated with such developments. This stratification could be understood as the institutional modification that Streeck and Thelen (2005) note occurs when old and new institutions coexist. For instance, firms in this cluster reorganized their organizational architectures by establishing holding companies, delegating authority to subsidiary firms (Aoki and Miyajima 2011). This decentralization introduced a new hierarchical monitoring system into the existing, shop floor based horizontal structure. Type I Hybrid Firms are also likely to introduce performance based compensation such as stock options to top management as well as mid-level managers. While maintaining their traditional long-term employment system, they abolished seniority pay, and adopted performance-based pay (at least to some extent).

Type II Hybrids

Figure 1 shows that there were firms that formed a unique cluster because, in spite of a high degree of reliance on bank borrowing and low institutional investor shareholding, actively embraced fixed-term employment, performance-based pay, and stock options. The firms in this cluster are hybrids because, contrary to the expectations of complementarity, combined two different modes – relational finance and market-based organizational architecture, which is the reverse of the combination found in Type I

Hybrids. We shall call them Type II Hybrids. It is noteworthy that such market-based firms emerged as a cluster in the Japanese corporate sector from the late 1990s.

Type II Hybrids pursued board reforms more actively than traditional Japanese firms, but when compared to Type I Hybrids, they tended to rely more heavily on insiders, and their level of information disclosure tended to fall in the middle of the pack. The noteworthy characteristics of these firms are their active embrace of performance-based pay including stock options, and lack of attachment to the standard of long-term employment, and low unionization rates. Many of these firms are found in the IT-related and distribution sectors, and most of them are new firms led by founders. The firms in this cluster either had a low reliance on highly skilled employees (distribution), and their highly skilled employees tended to have general-purpose skills (IT-related sector), and they are plugged in to a more fluid external labor market. While the performance of Type II Hybrids is highly dispersed, it is generally high. They account for 21% of all firms, and 10% of employment.

With the establishment of new capital markets such as JASDAQ, Mothers and Hercules, there was a boom in IPOs, and the number of firms with the above characteristics began to increase. Between 1999 and the LiveDoor shock in 2006, 1,081 firms listed on these new capital markets. About 40% of these new firms were in IT-related industries (information and telecommunications) and 30% were in services. Note that there is layering of new market based financing coexisting with conventional bank financing (Sako 2007). In terms of corporate governance, these new firms exhibited some of the characteristics of Type II Hybrids, with high shareholding ratios for controlling shareholders and individuals, and a high degree of reliance on bank borrowing. In addition, the board structures gave insiders the upper hand. On the other hand, they were more likely to introduce pay schemes tied to performance, and to adjust their employment systems to respond to their greater reliance on mid-career hires. While many new firms in the U.S. adopt specialized stand-alone organizational forms, a substantial number of new Japanese firms were part of efforts to expand corporate groups (subsidiary formation) by establishing holding companies and aggressively acquiring other firms (Arikawa and Miyajima 2010).

According to **Table 2**, Type II Hybrid gradually introduced the executive officer system, while outsider directors were not actively introduced. Furthermore, there are no significant changes in corporate finance. Their bond dependence is still at a low level -- 10% on average. Of 110 firms, only 16 depended on corporate bonds for over 30% of their debt. The increase of foreign ownership between 2002 and 2007 is small – the median increase was 2.3%. However, some Type II Hybrids with high growth opportunities or profitable assets were likely to be a target of foreign investors, including activist funds[8] apparently because of their relatively small asset size, and relatively high liquidity of shares due to high individual share ownership, Thus, the market for corporate control of these firms was most active among the three types.

Traditional Japanese Firms

As the Japanese corporate system evolved from the late 1990s, changes did not proceed at a uniform pace across all firms. In the cluster analysis referred to above, as of 2002, traditional Japanese firms which combined relational finance, ownership structures, and organizational architectures continued to have significant representation among listed firms. Firms in this cluster continued to rely on bank borrowing for their financing, and had a low level of dependence on the capital market (bonds). These firms were passive in their efforts to reform their internal governance and employment systems, were reluctant to appoint outsiders to their boards, and chose to limit information disclosure.

This cluster includes J-Firms, which recorded the highest scores on all three dimensions, as well as listed subsidiaries (Modified J-Firms in **Figure 1** and 3a in **Table 1**) and family-run (paternalistic, 1b) firms with long histories (Jackson and Miyajima, 2007, pp. 36-7).[9] These firms were often found in the construction, chemical, electric

[8] Seventeen out of 110 firms saw foreign ownership rise over 15% between 2002 and 2007. Consequently, 13 firms had over 20 % foreign ownership. Aderansu Co., Maezawa Ind. Co., and Noritsu Co. were typical targets of activist funds, while foreign investment banks held large blocks of shares in Miraka HD, and Nifco Co.

[9] Daioh-Paper Co, which is involved in big scandal due to the owner-manager's private lending from its subsidiary, belongs to the traditional J-firms, paternalistic, 1b.

machinery, and transport machinery sectors. As of 2002, they accounted for more than half of all listed firms, and 25% of total employment.

Thereafter, there were two significant changes observed. First, a segment of firms showed a remarkable increase in foreign ownership. Firms that have unique technologies in industrial machinery or high functional materials were the main targets of foreign institutional investors[10]. However, these cases are still limited, and only 27 of 327 traditional Japanese firms experienced an increase in foreign ownership over 15% from 2002 to 2007.

Second, it is important to note that there has been a gradual weeding out of these firms, and many have undergone reorganizations. According to **Table 3**, which summarizes the delisting and reasons for the three types, 60 of the 380 firms classified as traditional J-type firms in 2002 had delisted between 2002 and 2007, with 27 of these having been acquired by parent companies, or by firms that had already held large blocks of their stock, and 12 had been purchased by rival firms. In addition, 2 of these firms were bought out by management (MBOs), and 13 had to undergo rehabilitation under the civil rehabilitation law.[11] Thus, it is possible to state that there has been a steady winnowing of traditional Japanese firms since 2002 through diverse means.

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Table 3 about here

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3. Diversification of Corporate Governance Structure and Corporate Behavior

3-1 Investment behavior

Since the banking crisis, Japanese firms have greatly diversified their governance structure and organizational architecture. The question to ask is, have the changes in CG arrangements actually affected firm behavior?

[10] Foreign institutional investors invested in Nihon Yakin Co. (high functional metal producer), Toso Co. (electronic materials producer), and Chugoku Paint Co. (producer of industry-specific paints). On the other hand, traditional J-firms were rarely targeted by activist funds probably because their ownership structures were mainly insider dominated.

[11] The rest of 6 firms delisted in connection with the establishment of holding companies and the integrations or merger with other firms.

During the zenith of the traditional Japanese firm, corporate investment accounted for a major portion of domestic real investment. Furthermore, most investment was greenfield investment, and there was little M&A activity. However, from the 1990s there has been a major redirection of the investment by Japanese firms. As firms began to make technological innovations, exemplified by the information technology revolution, and to approach technological frontiers, they began to shift from physical investment to R&D investment. And since 1999, Japanese firms have actively turned to mergers and acquisitions both as a strategy for achieving new growth and as a means of promoting reorganization. Furthermore, as domestic demand stagnated, Japanese firms redirected their real investment away from domestic activities and toward foreign direct investment (Jackson and Miyajima 2008).

The changes in corporate governance and organizational architecture appeared to have a real affect on investment priorities by acting through the following pathways.

First, institutional investors had an impact on R&D investment. Arikawa, Kawanishi, and Miyajima (here after AKM, 2011), examined how the increase in institutional investors, especially those from abroad, affected R&D investment[12]. While it is often asserted that institutional investors shorten management's time horizon, our study did not uncover evidence supporting this view[13]. We divided firms into large firms with a consolidated asset base of 300 billion yen or more, mature firms with assets of 100 billion or less, and new firms, and then measured the influence of the foreign investor shareholding ratio on the cash flow sensitivity of R&D expenditures, and found that cash flow had very little impact on the R&D investment of large firms, and that the level of foreign shareholding did not affect R&D investment's sensitivity to cash flow. On the other hand, the R&D investment of mature firms with assets of 100 billion yen or less, and of new firms was highly sensitive to cash flow, but foreign investor shareholding

[12] AKM (2011) followed the methodology of Brown et al. (2009), which extends the dynamic investment model of Bond and Meghir (1994) to R&D investment. AKM added the foreign ownership and the interaction term between cash flow and ownership to the basic model.

[13] This result is consistent with Hall and Weinstein (1996), which insists that foreign investors have never had a negative effect on corporate investment and growth, and conflicts with the suggestion by some observers that institutional investors impose myopic pressure on Japanese firms, resulting in lower R&D investment.

lowered this sensitivity. In other words, it is highly likely that foreign investors served to promote corporate R&D through a certification effect.

Second, I have found that the higher the institutional investor shareholding ratio (foreign ownership ratio), the higher the likelihood of M&A activity; and the higher the percentage of insiders on boards of directors, the lower the likelihood of M&A activity (Arikawa and Miyajima 2010)[14]. The former finding suggests that external governance ties the firm to the market, and that firms are more likely to adopt an M&A strategy as their risk of becoming a takeover target rises[15]. The latter finding supports the view that firms whose boards are comprised of members who are more committed to representing the interests of employees are more likely to prefer internal growth rather than M&A in order to avoid the costs of merging organizations.

Furthermore, the adoption of decentralized organizational forms also had a real impact on M&A activity. Firms were motivated to establish holding companies as a means of promoting M&A. For example in April 2005, it was announced that Mitsubishi Chemical Holdings would be established in order to "facilitate M&A and tie-ups with other companies."[16] Indeed, a Mitsubishi group company Mitsubishi Pharma did merge with Tanabe Pharmaceutical in 2007. The systematic analysis of Arikawa and Miyajima (2010) demonstrates that the establishment of a holding company increases the

[14] Arikawa and Miyajima (2010) estimated the M&A probability for listed firms in the First and Second Sections of Tokyo Stock Exchange from 2005 to 2007, when the M&A boom in Japan reached at peak. Using a logit model, we regress the yearly M&A probability of a firm on growth opportunities (Tobin's q), business risk (standard deviation of stock returns over 36 months, log of consolidated assets, net cash, and corporate governance variables, which included the % share held by institutional (foreign) investors, the share of insider directors (promoted from within a firm) to all directors. The regression also includes a dummy variable, which is 1, if a company takes a holding company form.

[15] Arikawa and Miyajima (2010) report that corporations with a foreign shareholding ratio of 40% had an M&A ratio that was 2.9% higher than that of average corporations (with a foreign shareholder ratio of 14.5%).

[16] "Mitsubishi Chemical Corporation and Mitsubishi Pharma Corporation to Establish Holding Company." *Nihon Keizai Shinbun*. April 27, 2005. This newspaper article also cites a Mitsubishi Chemical official who said "the pharmaceutical industry has traditionally been resistant to control by chemical companies. If our company stands abreast with Mitsubishi Pharma under a holding company, this provides the benefit of moderating this resistance" and that "with a stock transfer, the shares in the holding company that Mitsubishi Chemical will own can be utilized as part of an investment strategy that includes M&A through stock swaps."

likelihood of M&A activity by a statistically significant degree. Corporations that had adopted the holding company structure had an M&A incidence ratio (probability of choosing M&A) which was 10.2% higher than corporations that had other forms of organization. This impact, other things being equal, accounted for 80% of M&A activity on average every year.

Third, changes in corporate governance and organizational architecture promoted corporate reorganization. Foreign investors preferred that firms concentrate on their core businesses, and tended to discount diversification. Furthermore, as corporate management began to emphasize stock-related indices, the pressure to downsize low-profit businesses rose. Institutional investors also expected firms to allocate resources in a way that increased added value. Pressure from capital markets encouraged firms to divest low-profit businesses and adopt the merit based compensation schemes correlated to productivity. Indeed, Ahmadjian and Robinson (2005), Vogel (2006) and Ahmadjian (2007) have shown that as the percentage of shares held by foreigners increases, there is a higher likelihood of downsizing and asset sales.

3-2 Distribution of Profits and Value Added

The changes in corporate governance (CG) and organizational architecture (OA) that have occurred since the 1997 banking crisis have not simply had an influence on corporate investment and finance. CG/OA reforms had already been exerting a major impact on value-added distribution patterns. **Table 4** summarizes the distribution of value added among firms listed on the First Section of the TSE. Panel 1 reports the aggregated base share, and Panel 2 reports the simple average among samples respectively. Three points are noteworthy.

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Table 4 about here

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First, labor's share of value added has clearly declined since 2003, as CG/OA arrangements have undergone substantial changes[17]. Considering that labor's share of value added tends to be low in a business upturn, we compared this period (2003-2007) with the bubble period (1986-91), and found that labor's share for the period 2003-2007 is six percentage points lower than for the bubble period. Looking at the simple average among samples (Panel 2), labor's share for the period 2003-2007 is three percentage points lower than for the bubble period.

Second, dividends' share of value added increased from 3.3% in the bubble period to 7.1% in the recovery period from 2003 to 2007. As is often emphasized (e.g. Dore 2000, Jackson 2007), the distribution of value added clearly changed in the direction of "shareholder capitalism" Third, however, what should be noted is that the share of internal reserves also increased from 6.5% in the bubble period to 8.8% in the 2003-2007 recovery period. This result is consistent with the fact that the payout ratio in the recovery period is almost the same level as that of the bubble period, approximately 30% at the median (Panel 2). The remarkable difference between two periods is the increase in the variance of the payout ratio among firms. Since the internal reserves belonged not only to shareholders, but also to corporate insiders, these facts suggest that the distribution did not exclusively move in the direction of shareholder capitalism, but rather to the hybridization—the balance between the outside shareholders and corporate insiders (core employees).

Table 5 illustrates the effect of changing ownership structures on the distribution of the value added. From Panel 1, we found that the elasticity of wages to value added significantly increased; the higher foreign ownership raised the elasticity of wages to value added before the banking crisis, while the higher cross-shareholding ratio slightly decreases its elasticity; however, after the banking crisis, and especially during the recovery period, the effect of ownership shows reverse results. The latter result suggests that increasing foreign ownership was associated with constraints on wages, while

[17] Labor's share of value added began to decline from 1999. For yearly distribution of shares, see Jackson (2007).

maintaining cross-shareholding was likely to encourage wage increases, when value added increases.

Table 5　Elasticity and Ownership structure

The effect of ownership structure on payout policy was also observed. Panel 2 of **Table 5** shows that the elasticity of payout to profit is unchanged pre-and post-banking crisis, similarly both exaggerating the effect of foreign ownership and mitigating the effect of cross-shareholding on the elasticity of payout to profit. However, the magnitude of the effect remarkably increased in the post-banking crisis period.　After the banking crisis, a one standard deviation increase of foreign ownership (11.5%) was associated with a 3.3% point increase in the marginal payout ratio, and a one standard deviation increase in the cross-shareholding ratio (8.8%) was associated with a 3.0% point decrease in the marginal payout ratio.　Thus, it is safe to say that the effect of ownership structure on payout policy had strengthened as ownership structures diversified.

Furthermore, changes in CG/OA also affected the choices of CEOs facing financial challenges requiring that they either cut dividends or slash their workforces. Until the 1990s, Japanese firms that faced a deteriorating ROA would in the event that they were forced to reduce employment also cut dividends at the same time, and rarely ever cut employment alone, or cut employment while simultaneously increasing dividends. However, the latest estimates from Kubo (2011) indicate that since the crisis, there has been an increase in the likelihood of employment reduction as a response to declining ROA, and this trend has accelerated since then. This finding is consistent with recent research pointing out that there has been an increase in the degree of employment adjustment and supports the view that overall Japanese firms are beginning to behave like their U.S. counterparts in terms of their employment policies.

Moreover, it is important to note that the differences in corporate governance and organizational architecture between firms had a real effect on employment reductions and dividend cuts. For example, the analysis in Kubo (2011), who divides his sample between Reformist Firms that had a high foreign shareholding ratio and had

implemented board reforms (these firms overlap fairly closely with our Type I Hybrid Firms), and other traditional firms (which overlap with our traditional Japanese firms), the likelihood that traditional firms would cut dividends alone in response to significant declining ROA （-4.8%）remained high at 77.7%. Based on his simulation analysis, the percentage of traditional firms that cut dividends alone, or cut either dividends or employment was 83%, while only 0.8% of traditional firms maintained their dividend rate while only slashing employment. On the other hand, 39.2% of Reformist Firms cut only their dividends, and 83% of those firms cut both dividends and employment, while a significantly higher percentage – 9.8% – cut employment alone. One could state that firms that have high foreign shareholding ratios and have implemented board reforms (i.e. Type I Hybrid Firms) tend to cut employment even when their performance deteriorates, and conclude that changes in corporate governance have a real impact on employment adjustments and dividend policy, and that Type I Hybrids are beginning to exhibit behavior that puts an emphasis on shareholder value.

3-3 Impact on Corporate Performance

Then, have the changes in corporate governance and organizational architecture really impacted on subsequent corporate performance? Many studies have examined whether shareholding by foreigners has a positive effect on corporate performance. However, as I have already noted, there is a strong tendency for foreign investors to invest in high-performing firms. Accordingly, the relations between high performance and high foreign ownership might not be the result of their governance effect, but the result of their ability to find firms with high performance (the smart investor hypothesis). Furthermore, even if the large stake of foreign ownership associated with high return on stocks, it might be a result of their strong preference to a certain type of firms such as with large size, high liquidity, and high familiarity due to the overseas sales[18] (the demand shock hypothesis; Gompers and Metrick 2001).

[18] In fact, Miyajima and Hoda (2012) reported that a standard deviation of increasing shareholding by foreign and domestic investors associated with 7% and 8% rise of rate of return on stocks respectively from 2005 to 2008.

Considering these possible reverse causalities, Miyajima and Nitta (2011), and Miyajima and Hoda (2012) attempted a simultaneous estimation that takes account of the home bias of overseas institutional investors. Measuring both Tobin's Q and accounting performance (ROA, Operating profit/sales) by three stage Ordinary Least Square model, we found that foreign investors had a significant effect on disciplining management even considering reverse causality. This is basically consistent with the finding that the higher the ratio of stable shareholders and insider shareholding, the lower the firm's performance (Miyajima and Kuroki 2007).

Moreover, the empirical analysis of the performance effects of internal governance reform has yielded rather complicated findings. Almost all studies have not been able to confirm that the introduction of the executive officer system has had a positive effect on performance. This can be explained by the fact that organizational reform may not be accompanied by real changes such as reductions in scale, or has often been implemented in order to emulate other firms.[19] On the other hand, what is clear is that shrinking the size of boards tends to boost performance. Smaller boards are believed to contribute to improved performance by speeding up decision-making (Miyajima 2007).

On the other hand, Miyajima and Ogawa (2012) ran a careful estimation on the effect of the outside directors on corporate performance. They found that although the appointment of outside directors did not have any positive effect on performance in general, if firm's managerial and operational information is relatively easy to be acquired by the outside directors, they are likely to demonstrate that the appointment of outsiders in boards had a positive effect. Analyzing the determinants of board composition, they conclude that a certain type of firms in Japan that benefitted from a outside board-reform effect – namely, firms with easy access to information by outsider, and with low shareholding of institutional investors which would make them less likely to implement reform, but which nonetheless introduced outsiders to their boards – had

[19] According to Miyajima (2007), board reform – whether involving changing the size of the board, implementing an executive officer system, or introducing outside directors – was positively correlated to the introduction of reforms by other firms in the same industry in the previous period. This finding is an indication that board reform is implemented not only to send a signal to external investors, and due to organizational necessity, but also to emulate other firms that have reformed their boards.

significantly higher improvements in profitability than firms which did not adopt reform. In short, the introduction of outsiders to boards, even to those boards in which outsiders were believed to be relegated to a comparatively proscribed role, contributed to an improvement in corporate performance.

To sum up, I would like to compare the performance of the three types of firms. Panel 1 of **Figure 3** presents the average performance measured by rate of return on consolidated assets (ROA) and its standard deviation for firms on the First Section of the Tokyo Stock Exchange. Confirming Ito and Lechevalier (2009), which analyzed labor productivity, I also found that the dispersion of firm performance, which had been quite low up to 1997, began to widen from the late 1990s. It is clear that institutional reforms and organizational diversification were associated with an increasing variance (heterogeneity) in corporate performance. From Panel 2, the gaps in the performance of the three types of firms expanded from the latter half of the 1990s, and since 2003, the performance gaps between traditional firms and Type I Hybrids have remained steady, or have increased somewhat. These results suggest that differences in firm size, capital market reputation, and corporate performance that existed in the early 1990s led to a differentiation in stock ownership structures due to the home bias of institutional investors, and in main bank system due to choices made by firms and banks, and the differentiation of ownership structure in turn locked in performance gaps due to the discipline effect, and the effect of internal governance and organizational architecture reforms, or in some cases, even led to a widening of performance gaps (Miyajima and Nitta 2011).

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Figure 3 Performance about here

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４． The Costs of Institutional Changes

As noted above, the changes in corporate governance and organizational architecture impacted performance by changing firm behavior, and the widening dispersion of corporate performance may be attributed in part to these CG/OA changes. From 2003 to

2007, the Japanese economy, buoyed by the expansion of the global economy, experienced a gentle boom. However, from around the time of the subprime crisis, which occurred in the summer of 2007, the Japanese economy began to slow down, and the Lehman Brothers shock led to performance declines in Japanese firms that were of greater severity than those experienced by their counterparts in other advanced industrialized countries. Subsequently, the implementation of CG/OA reforms notwithstanding, Japanese firms have not been able to sufficiently recover their growth potential and restore their profitability.[20]

One piece of evidence is the fact that Japan's leading companies, Type I Hybrids, have lost their dominant position in the global market. While 141 Japanese firms made the *Fortune Global 500* in 1993, accounting for a 35.2% share of revenues, only 68 Japanese firms made the list in 2008, accounting for only 11.2% of revenues. This declining presence is not exclusively due to the new entrants to the list from emerging countries, because US firms largely sustained their share of revenues at 28.4% in 2008 compared to 30.0% in 1993, while firms from the EU and Switzerland even increased their share from 31% in 1993 to 36% in 2008. This suggests that Japanese firms lagged far behind their counterparts in developed countries in terms of realizing economies of scale and scope, which may have resulted in organizational inefficiencies.

Another piece of evidence is the trend in Japan's TFP (total factor productivity) compared to that of developed countries. According to **Figure 4**, based on EU KLEMS database, Japan's TFP level and increase (based on 1995) ranked last among the five countries for total industry.[21] Even if we look at manufacturing sectors, and surprisingly even transportation equipment, for which Japanese firms are supposed to be competitive, the Japanese economy still comes in last. Even for the general machinery

[20] Keiretsu (business groups), which have recently been cited as impediments to economic efficiency for diametrically opposing reasons, were less responsible for the low performance of Japanese firms. Group relationships with listed subsidiaries, for example, are also less likely to induce lower performance among Japanese firms, though some observers have criticized such relationships as a source of exploitation of parent firms (and their controlling shareholders) by minority shareholders. See Miyajima, Shishido and Nitta (2011).

[21] Fukao et al. (2011) attributes Japan's low ranking to differences in usage of information technology. Nakamura (2011) also paid attention to this evidence from a corporate governance perspective.

and electrical equipment industries, two of Japan's most globally competitive sectors, Japan is not ranked first. Although TFP is a comprehensive measure of a nation's technological progress, it is to a large extent driven by corporate performance, which in turn depends on the level of efficiency generated by corporate governance and management practices.

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Figure 4 Performance about here

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These pieces of evidence suggest the possibility that institutional change and hybridization may have associated costs which cannot be ignored. To put it differently, the combination of relational-based schemes and market-based schemes, and institutional stratification may negatively impact the efficiency of resource allocation and/or organizational efficiency, furthering the stagnation of the Japanese economy, and hinder Japanese firms in their efforts to restore competitiveness. If institutional change and hybridization indeed have such effects, what is the extent of these effects? Where are the effects felt? And what are the mechanisms that deliver these effects? I would now like to present some tentative hypothetical answers to these questions.

4-1. Institutional Rigidity

The slowness of institutional change may be contributing to the stagnation in corporate performance. Or to put it differently, even though traditional institutions may be contributing to a decline in productivity, there has not been a seamless process of replacement by newer institutions.[22] One typical example is the slow adoption of corporate governance reforms by traditional Japanese firms. In the past, low performance triggered an intervention by banks, which then counseled replacement of management. This was a form of contingent governance (Aoki 1994). However, as banks began to lose their ability to monitor firms, and firms increased their cash holdings, fewer firms were subjected to meddling by banks. On the other hand, since employees

[22] Hoshi and Kashyap (2001), Peek and Rosengren (2005), and Caballero, Hoshi and Kashyap (2008) also emphasize this point from a different angle.

exercised weak governance, lower corporate performance was less likely to lead to an overhaul of management.

Thus, while traditional governance mechanisms receded for a segment of traditional Japanese firms, new governance mechanisms were not implemented. Moreover, this situation is structural rather than temporary due to a kind of organizational lock-in. As I noted earlier, since the banking crisis of 1997, firms that were slow to eliminate their cross-shareholding arrangements were, due to their low level of exposure to pressure from capital markets, also slow in addressing board reform, and were also reluctant to adopt stock options. After hostile takeovers and massive stock buying became a reality from 2005, these firms actively adopted takeover defenses and entered into cross-shareholding arrangements that could not necessarily be described as strategic (Miyajima and Nitta 2011).[23] As a result, there is a possibility that the restructuring of firms that should have been weeded out has been delayed, and that inefficiencies in resource allocation have arisen.

Among the listed firms, these firms tend to be in mature industries and comparatively small in scale (with around 1,000 to 2,000 employees), and their weight in the Japanese corporate sector as a whole is quite low and they have, as noted earlier, been on a gradual decline, so this problem is, in a sense, relatively minor. Indeed, the more pressing problems of the Japanese corporate sector are those affecting Type I and Type II Hybrids that have up until now not been sufficiently acknowledged.

4-2. Rising Costs of Adjustment within Institutions: Costs of Layering

After the banking crisis, large firms, Type I Hybrids made a transition to market-based external governance, while they implemented reforms of internal governance and organizational architecture. But there is a possibility that the reforms instituted by relational firms were accompanied by modifications and stratifications of their institutions, and substantial associated adjustment costs reduced the organizational efficiency of these firms. Two of these costs are particularly noteworthy.

[23] The complementarity between long-term employment and takeover defenses may be an international phenomenon. (Pagano and Volpin 2005)

The first is the cost that accompanies organizational decentralization. Type I Hybrids that have lead the Japanese economy responded to changes in the external environment by increasing their scale through group expansion while at the same time proceeding with decentralization of their organizations. However, the redesign of organizational architecture that has accompanied group expansion activities remains in a trial and error phase as firms continue their search for the optimal organizational form. According to the analysis in Aoki and Miyajima (2012), there are three dimensions to the problem:.

1) Progress in decentralization in tandem with diversification gives rise to duplication and coordination problems among business units, and thus increases costs. For example, since multiple independent business units and wholly owned subsidiaries have indirect divisions, this gives rise to a duplication of resources. Furthermore, there are cases in which a rise in the degree of decentralization of business units poses an obstacle to mutual collaboration. Increasing business-unit responsibility for profits has a substantial influence on the incentive structure, giving rise to a tendency to avoid development or operations that do not provide direct profits to one's own division or company. Firms began to consciously address this problem after the initial spurt of decentralization had leveled off around 2004, and corporate groups have attempted to form group-wide arrangements. For example, after the collapse of the information technology bubble, NEC implemented organizational reforms from 2002 to 2003 that were accompanied by a major transfer of authority, and then attempted to strengthen the ties between business units[24].
2) Conversely, there are cases in which necessary decentralization has been delayed. According to Aoki and Miyajima (2012), the more globalized a firm (i.e. those firms with higher overseas sales ratios), the lower the degree of decentralization of strategic decision-making to subsidiaries. As an explanation of this pattern, three reasons have been suggested: 1) globalization has proceeded so rapidly that firms have lagged in implementing governance frameworks for their overseas

[24] Indeed, even Sony, which was the first firm to introduce the company system, changed its organizational form again in 2005.

subsidiaries; 2) there has been little progress in localizing management; and 3) the overseas subsidiaries are viewed primarily as production centers and still not appreciated for their strategic value. For example, there is a high likelihood that the problems that forced Toyota to recall its defective automobiles in 2010 were caused by its delays in implementing a plan for delegating authority optimally. Its decentralization efforts did not keep up with its rapid globalization, and it is quite plausible that delays in delegating decision-making authority to overseas subsidiaries, and monitoring arrangements that did not respond sufficiently to the decentralization exacerbated the problems that ultimately led to a recall.

3) While firms have made strides in decentralization, their efforts to design institutions that complement the decentralization have not been adequate and designing organizations in an efficient manner in order to promote internal governance remains a challenge. For example, in spite of subsidiaries enjoying significantly higher decentralization, Aoki and Miyajima (2012) could not confirm the complementarity of decentralization and monitoring. In other words, the monitoring of subsidiaries was not proportional to the degree of decentralization. Japanese firms have created large numbers of subsidiaries via spinoffs and M&A, but major problems with their governance could arise in the future if they diverge from group strategy, engage in morally hazardous behavior, and increase coordination costs. Furthermore, aside from the lack of coherent monitoring and compensation systems, clear standards for withdrawal have usually not been established, and even if established, are not strictly applied, so firms have been slow to withdraw from low-profitability sectors, giving rise to inefficiencies.

The second cost is a problem internal to the employment system – the cost associated with introducing performance-based pay schemes. These schemes, which were introduced against a backdrop of sluggish growth and the aging of regular, full-time employees, cannot be expected to constantly raise performance. On the one hand, when a firm whose characteristics suggest that its introduction of performance-based pay was based not on an entirely rational decision, but solely on a

desire to reduce labor costs, there is a possibility that it has instead only succeeded in undermining its employees' motivation to work.[25]

On the other hand, if the firm's technological and business profile suggests that it would be able to improve employee morale by introducing performance-based pay, this reform will nevertheless fail to increase performance unless it is accompanied by the introduction of complementary institutions. Up to now, studies on performance-based pay have shown that the higher the level of information disclosure regarding personnel evaluations including feedback on evaluation standards and actual evaluations, the higher the degree of employee satisfaction, and that when this reform is accompanied by changes in the way work is done by "expanding the scope of discretion" and "clarifying how work is apportioned," or by providing "opportunities to nurture skills," it has a positive influence on employees' will to work. [26]

4-3. Inter-Institutional Complementarity: Costs of Hybridization

Institutional changes imply that the gains from introducing new institutions are larger than the losses from the system effects connected to erstwhile complementary institutions. Accordingly, there is a possibility that hybridization is associated with new costs arising from the combination of two different modes – one market-based and the other relational-based.

First, it is possible that the differences in modes between institutions are generating additional adjustment costs. In the case of Type I Hybrid Firms, over which domestic and foreign institutional investors wield control, management decides the composition of the board of directors, which in turn supervises management, so there is the danger of self-supervision. Thus, management may introduce outsiders to their boards in order to send a signal to investors. Whether the appointment of outsiders to boards contributes to corporate value via monitoring and the provision of advice depends on several conditions including the business environment that the firm faces

[25] For example, recall a firm in which main operations among employees composed of the indecomposable task, i.e. the multi-task rather than the decomposable-single task.

[26] For a detailed summary, see Kikutani, Noda and Saitoh (2011). Jacoby (2005) addresses the counterproductive effect of performance pay.

(Harris and Raviv 2008), technological and business structure, etc., and there are considerable costs associated with appointing outsiders as directors because Japan's market for outsider managers is undeveloped. Indeed, Saitoh (2011) shows that the more hidebound firms are more likely to appoint outsiders to their boards. Miyajima and Ogawa (2012) document that the appointment of outside director often associated with low performance, if a firm's managerial and operational information is relatively difficult to be acquired by the outside directors. These cases are observed in firms which ownership structure has been dominated by foreign institutional investors, reflecting that those firms overly responded to the external pressures.

On the other hand, ownership structures that place outsiders in a dominant position are discomfiting to insiders. For example, there is a possibility that institutional investors, in their role as trustees, may respond to takeover offers made at a sufficient premium even if such offers may be problematic in terms of creating corporate value, and this possibility poses a latent threat to managers. Thus, a segment of firms have an incentive, in spite of the large risks associated with holding the shares of other firms, to stabilize their shareholding even if this means that they have to pay a price to do so. Miyajima and Nitta (2011) points out that a firm with rising overseas institutional investor shareholding had a higher probability of increasing cross-shareholding from 2005 to 2007.

Second, as the complementarity between institutions has dissipated, there is a possibility that corporate behavior has become more biased. For example, even though Type I Hybrid Firms face substantial pressure from capital markets, insiders retain a dominant position over corporate governance, and thus may develop a bias in their strategic decision-making. Debt, for instance, could impose excessive constraints on investment behavior. A changing external environment and increase in uncertainty may saddle a firm with a greater risk of bankruptcy even if its debt ratio remains unchanged. On the other hand, the traditional risk-sharing mechanisms have disappeared as main-bank relationships have receded and cross-shareholdings have been unwound. Such changing conditions may have convinced managers (and long-term core employees with high sunk costs) that a lower debt level is "optimal." This is consistent with

estimation results that indicate that the more firms increased their debt in a previous period, the more they constrained their R&D investment in the current period, and this pattern is magnified in firms with high debt levels (AKM 2011). And Hirota (2011) shows that from the latter half of the 1990s, Japanese firms began to choose financial policies that ensured their continuing existence, and thus the higher the initial debt ratio at the beginning of a period, the stronger the tendency to reduce debt (by choosing a lower debt ratio).

Although the managers at firms situated in IT-related industries and other sectors with abundant business opportunities are willing to take risks, the undeveloped state of venture capital and market-based arrangements has stanched off the flow of money available to be put at risk, and this has put a financial constraint on innovation. According to the analysis in AKM (2011), the R&D investment of new firms that have been listed for 15 years or less is sensitive to cash flow, unlike that of mature firms, so they can be considered to be operating under financial constraints. But a more important point is that the R&D investment of these firms is not sensitive to capital increases. New firms are financially constrained, and have difficulty raising funds through equity issues. Their experience departs from the predictions of theory and is markedly different from that of firms that raised capital in the U.S. during the IT bubble (Brown et al. 2009). The IPO experiences of new firms confirm Japan's slowness in developing similar capital markets. Miyajima, Nitta, and Shishido (2011) demonstrated that independent firms are forced to accept a large discount when making IPOs. Although Type II Hybrids have adopted contract-based corporate governance and organizational architecture, they have lagged in implementing complementary institutional arrangements, so it is possible that they are suffering from the consequences of a distortion in the allocation of funds.

4-4. Lack of New Dynamics of Institutional Complementarity

Finally, there is a possibility that complementarities between institutions have still not emerged. As shown in **Figure 5**, the two types of hybrids arose through different pathways, but both had the potential to benefit from dynamic human resources complementarities via the labor market. Some Type II Hybrids were founded and led by

managers who had retired from large firms, and hired people who had left Type I Hybrids undergoing reorganization.

The increasing fluidity of the labor market helped the employees of Type I Hybrids to reconcile their desire for long-term employment and aspirations for external job opportunities (Aoki et al. 2010: chap.5). Ideally, one would hope that the growth of Type II Hybrids will provide job opportunities for the employees of Type I Hybrids, which in turn will sustain efforts by Type I Hybrids to reform their employment systems; and that Type I Hybrids will begin to take on talented employees of Type II Hybrids as mid-career hires. This scenario would hopefully lead to complementary growth for these two types of hybrids (Aoki 2010). Another scenario would involve spinoff through the MBO of a non-core division in diversified firms, which is different from the former pattern of group formation (via carve-outs). On the other hand, new firms including the MBO cases mentioned above would be acquired by Type I Hybrids as their exit option. But in fact, there is unfortunately very little movement of labor between Type I and Type II Hybrids, and the expected dynamic complementarities have not materialized.

5. Conclusion and Perspectives

Three conclusions could be derived from our analysis. First, following up on the evolution of corporate governance arrangements that have occurred after the banking crisis, I suggest that the hybridization of corporate governance in leading Japanese firms resulted in changes that pushed firms toward market based external governance on the one hand, and in modifications of internal governance and organizational architecture controls on the other. It is also plausible that given the dominance of insiders in corporate governance at Type 1 Hybrid firms, and the coherence of organizational architectures, the costs of switching from a relation-based system to market based system seem to be very high. Although it is too early to give a final assessment, I tentatively conclude that the hybrid CG/OA arrangements have stabilized and do not represent a transitional stage leading toward the Anglo American system.

Second, the hybridization of CG/OA substantially affects corporate behavior. The higher the level of foreign (institutional) ownership, the higher the frequency of

acquisitions; and the less R&D expenditures are constrained; the more rapid the implementation of corporate restructuring. Furthermore, I observed that higher foreign (institutional) ownership was associated with a payout policy that was highly elastic to profits and less elastic to labor's share of distribution. In general, hybrid firms are likely to show high performance after the banking crisis, even after controlling the reverse causality. These results are consistent with the understanding that the hybrid pattern of corporate governance is economically rational, and continues to be stable.

Third, although the hybrid pattern was associated with relatively high performance among Japanese firms, it may also be associated with additional costs. In addition to the delay of reform among traditional J-type firms, which has frequently been pointed out by various authors, I have also emphasized the potential costs of hybridization and the additional costs associated with layering such as introducing merit based wages into long-term employment, and the decentralization of business divisions or subsidiaries. And there are notable non-trivial costs associated with hybridization including the combination of different modes in different economic domains such as the finance and employment system.

Toward a Redesign of Corporate Governance

These findings suggest some policy implications for the new environment that has emerged in the aftermath of the global financial crisis, and steps are being taken to redesign Japan's framework for corporate governance[27]. First, since Japanese firms have diversified, and each firm now faces different challenges and problems, institutional reform could potentially give rise to asymmetrical outcomes. Hence, a one-size-fits-all approach to the redesign would not provide a solution that is appropriate for all firms. For instance, as noted above, the slow implementation of external governance reforms by traditional Japanese firms contributed to their late adoption of internal governance reforms including a redesign of their boards and compensation systems, and consequently, they have continued to perform at a low level, and are stymied by

[27] The Tokyo Stock Exchange revised its listing rules, and in May 2010 began to examine a public company law for listed companies.

organizational lock-in that prevents them from attracting investment from institutional investors. Important steps that will need to be taken to escape this bind include the elimination of cross-shareholding through beefed-up regulations, the adoption of a requirement to force firms to appoint outsiders to their boards, and the establishment of strict rules for takeover defenses by firms. But if these changes are enforced through uniform rules and laws, considerable costs would be imposed on Type I Hybrids. Thus, it is essential that the redesign of corporate governance pay heed to the asymmetrical outcomes that may stem from implementing institutional reform.

Second, the various components of the corporate system are interrelated. The compensation system, for example, is intimately connected to external governance arrangements including the stock ownership structure, provisions that allow creditors to intervene, and the role played by boards, but also complements the organizational architecture including employee incentive systems and internal arrangements for allocating authority. Hence, when designing a compensation system, it is necessary to seek to achieve consistency with these complementary institutions. Changing the compensation system alone will not produce desired results, and in some cases, could negatively impact the function of other institutions.

Last, one issue that is often neglected is how to reduce the cost of the hybridization. The important challenges facing Type I Hybrids are the need to fine-tune corporate governance in response to the increase in institutional investors, the need to expand growing divisions, and the need to establish internal capital markets that will make it possible for firms to withdraw from low-profitability businesses. Type II Hybrids (new firms), on the other hand, seek to promote risk-taking by their managers, and will have to resolve the conflicts of interest that exist between controlling shareholders and minority shareholders. To sum up, figuring out how to cope with the costs associated with the hybridization and layering will be vital to the effort to redesign Japan's corporate governance framework.

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Figure 1. Results of Cluster Analysis

On the ***Finance*** axis, the closer a cluster is to 0, the higher the reliance on financing from capital markets, and the higher the ratio of institutional investor shareholding; and the closer a cluster is to 2, the higher the reliance on bank loans, and the higher the stable shareholder ratio. On the ***Board*** axis, the closer a cluster is to 0, the greater the organizational separation of ownership and management, the higher the percentage of outside directors, and the higher the degree of information disclosure; and the closer the cluster is to 2, the higher the weight of board members promoted from within, and the lower the degree of information disclosure. On the ***Employment*** axis, the closer a cluster is to 0, the higher the degree of implementation of an employment system based on clear and formal contracts, term-limited employment, performance-based pay, stock options, etc.; and the closer a cluster is to 2, the higher the degree of implementation of an employment system based on implicit long-term contracts, and seniority-based pay that is closely correlated to years worked. The size of a circle indicates a cluster's share of total sample firm employment. Source: Jackson/ Miyajima (2007).

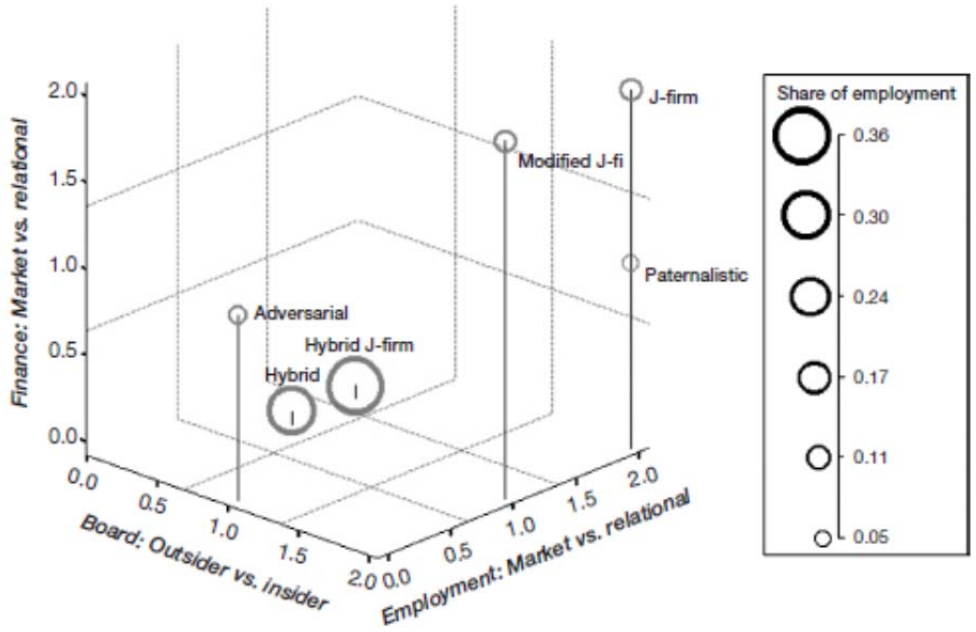
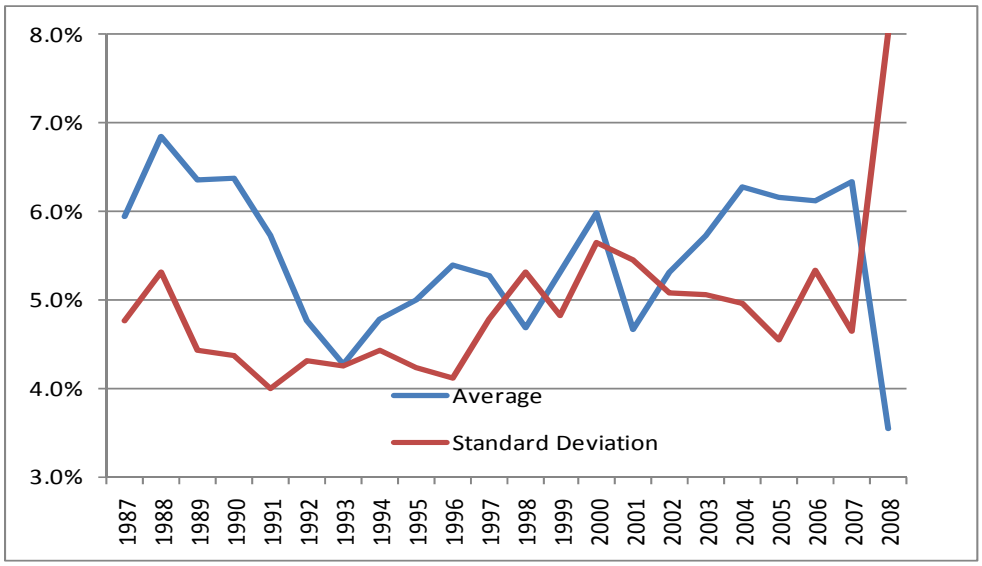


Figure 2. Trends in Corporate Performance (ROA)

Panel 1 presents mean ROA for firms listed on the First Section of the Tokyo Stock Exchange. Panel 2 presents ROA for the 723 firms from the First and Second Sections of the TSE that responded to the 2002 questionnaire survey. The firm types are based on an analysis of the clusters in Figure 1. Firm numbers are highest for 2002, and lower for years before and after. Source: Hideaki Miyajima, ed. *Waseda University Corporate Governance Database.*

Panel 1: Average ROA and Standard Deviation



Panel 2: ROA Trend by Types

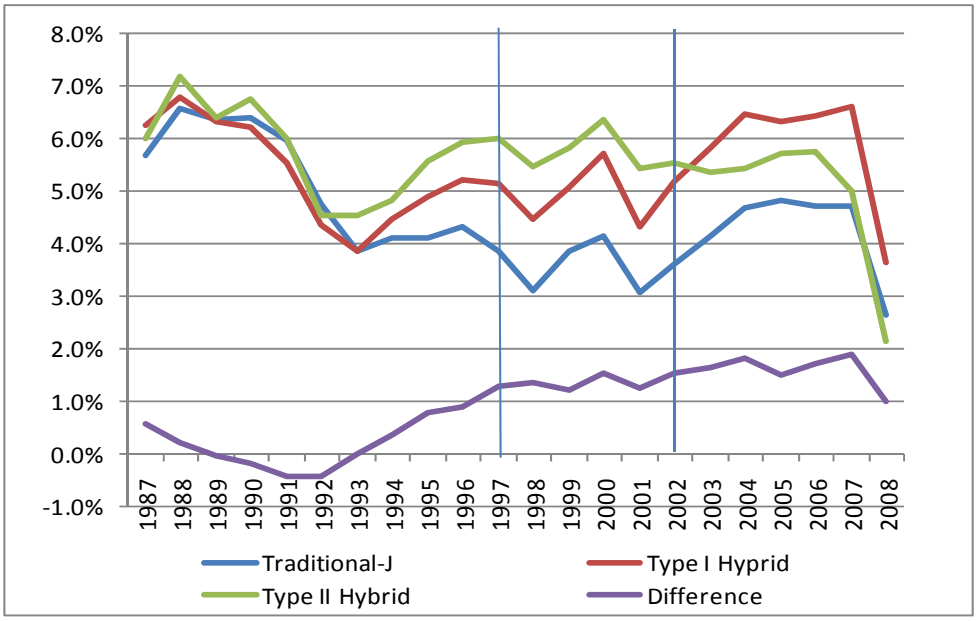


Figure 3. Total Factor Productivity 1991-2006

The value added base. 1995=100, Total Industry, Data: EU KLEMS database, November 2009

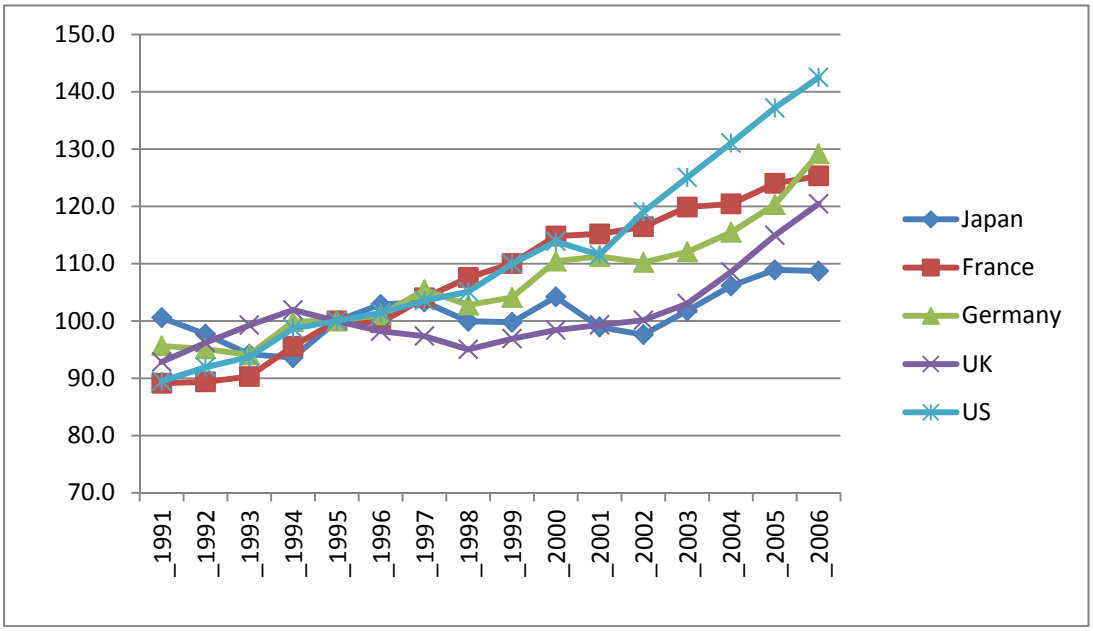


Figure 4. Evolution of Corporate System and Dynamics

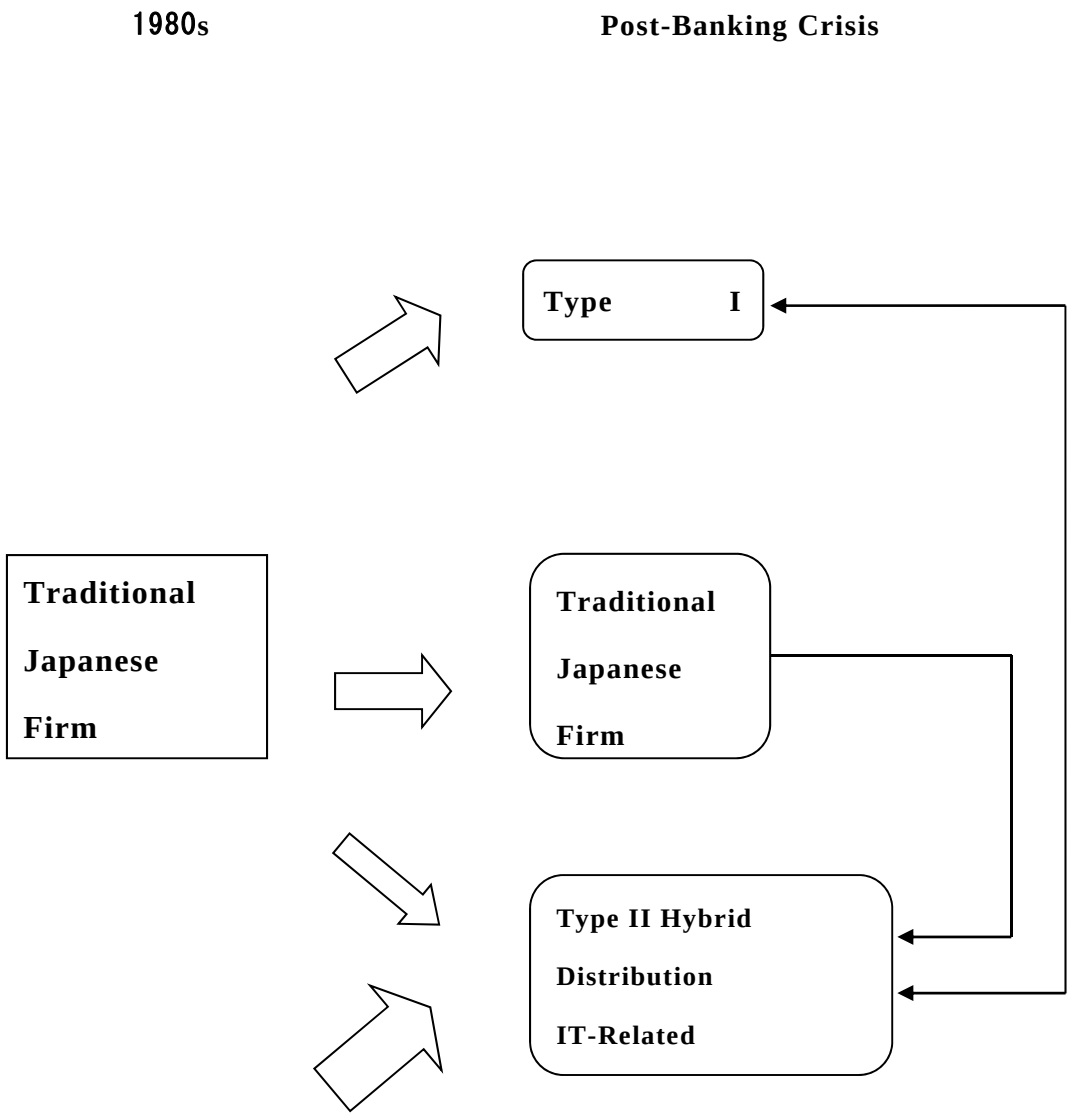


Table 1. Diversification of Corporate Governance Structure: Cluster Analysis

This table summarizes the results of a cluster analysis of variables that used 14 data items. The sample is comprised of the 723 firms from the First and Second Sections of the Tokyo Stock Exchange that responded to a questionnaire survey conducted in 2002. The degree of reliance on bonds and degree of reliance on bank borrowing are calculated as percentages of total debt. The calculation of the individual shareholding ratio includes shares held by managers. The approach to corporate governance reform is assessed using the average Corporate Governance Scores compiled from responses to the questionnaire survey conducted by the Ministry of Finance's Policy Research Institute in 2002. The highest possible CGS is 20. The data items in the employment system subgroup include the mean number of segments each firm operates in; percentage of firms reporting maintenance of "long-term employment," and adoption of "merit- or performance-based pay," and "stock options" in the questionnaire survey; and unionization rate. Employment share is the share of total employment of the sample firms (stand-alone base). The mean of standardized ROA is calculated by subtracting the industry mean from the observed ROA See Jackson and Miyajima (2007).

	Hybrid Firms			Traditional J-Firms			
	Type I		Type II	J-Firm	Paternalistic	Modified J	Total
	2a	2b	3b	1a	1b	3a	
I Financing, Ownership Structure							
Degree of Dependence on Bonds (Bond Ratio)	6%	10%	3%	1%	2%	1%	3%
Degree of Dependence on Bank Borrowing (Bank Loan Ratio)	6%	14%	17%	20%	14%	21%	16%
Financial Institution Shareholding Ratio	45.6	42.5	22.1	23.1	19.9	21.5	27.1
Corporation Shareholding Ratio	16.2	18.5	28.0	34.6	29.5	34.1	28.3
Foreigner Shareholding Ratio	18.3	12.2	4.6	2.0	3.6	3.1	6.0
Individual Shareholding Ratio	19.2	25.9	44.6	39.5	46.2	40.7	37.9
II Approach to Corporate Governance Reform							
Minority Shareholder Protection	7.8	6.8	5.7	3.4	4.7	5.1	5.2
Board Reform	13.9	13.6	10.6	9.4	9.6	10.5	10.9
Information Disclosure	19.7	17.1	11.0	7.1	9.2	9.3	11.2
III Employment System							
Degree of Decentralization	2.6	2.7	2.2	2.4	2.3	2.3	2.4
Ratio of Firms Maintaining Long-Term Employment	84%	100%	29%	100%	100%	100%	84%
Ratio of Firms Adopting Performance-Based Pay	100%	10%	100%	0%	0%	100%	45%
Ratio of Firms Adopting Stock Options	45%	35%	56%	0%	46%	0%	28%
Unionization Rate	100%	99%	51%	100%	19%	70%	73%
IV Employment, Performance							
Percentage of Firms	9.4	14.7	21.0	26.2	15.8	13.0	100
Average Number of Employees	7,574	5,493	1,030	940	718	1,325	2,067
Share of Employees	31%	36%	10%	11%	5%	8%	100
Mean of Standardized ROA	1.74	0.47	1.45	−0.72	1.22	−0.44	0.45

Table 2. Changes of Main CG Variables by Three Types

This table summarizes changes of main variables on corporate governance by three types. Definition of types follows Figure 1 and Table 1. Sample consists of firms that responded to the 2002 questionnaire survey, and continued to exist in 2007, and for whom data is available. The firm types are based on an analysis of the clusters in Figure 1.

			Type I Hybird Firms			**Type II Hybird Firms**			**Traditional J-Firms**		
			2002	2007		2002	2007		2002	2007	
No. of Firms			164	160		134	132		340	327	
		FY	mean	st. dev.	median	mean	st. dev.	median	mean	st. dev.	median
Variables on External Governance											
Share held by forign investors		2002	13.9	11.2	11.9	4.4	6.1	2.2	3.0	5.8	0.9
		2007	21.9	13.1	21.4	9.5	11.7	5.6	7.5	8.0	4.9
		Δchange	7.9	9.4	8.3	5.4	9.8	2.3	4.6	6.4	2.5
Share held by outsiders (forign investors+domestic investors		2002	23.4	12.5	22.9	8.9	10.2	5.7	6.0	8.0	3.3
		2007	33.0	15.4	33.4	15.9	15.7	11.0	13.1	12.5	9.9
		Δchange	9.6	10.3	8.8	7.5	11.8	4.5	7.1	9.7	4.7
Bond depedence		2002	46.2	34.6	45.0	16.5	28.7	0.0	11.4	23.7	0.0
(bond/borrowing +bond)		2007	32.6	29.8	28.3	9.9	20.3	0.0	7.8	17.8	0.0
Equity ratio		2002	49.6	21.1	50.1	47.3	23.1	50.3	45.4	22.0	43.2
		2007	51.6	20.0	52.4	53.6	20.9	55.1	48.6	31.4	47.0
Variables on Internal Governance											
% of firms introducing exective officer system		2002	45.1	49.9	0.0	35.6	48.0	0.0	21.8	41.3	0.0
		2007	68.1	46.7	100.0	53.7	50.0	100.0	45.3	49.9	0.0
% of firms introducing outside directors		2007	14.3	14.0	12.5	10.8	16.5	0.0	7.4	11.9	0.0
% of firms introducing stock options		2002	41.5	49.4	0.0	54.8	50.0	100.0	15.2	36.0	0.0
		2007	43.9	49.8	0.0	49.6	50.2	0.0	18.3	38.7	0.0
Performance											
Overseas sales ratio		2007	26.9	27.4	17.9	9.5	19.0	0.0	12.2	18.8	0.0
ROA		2002	4.21	3.93	3.30	5.14	5.24	4.03	3.39	4.22	2.73
		2007	5.55	4.44	4.47	4.34	9.38	3.95	4.20	5.62	3.76
Three years moving average (industry standarized)		2007	0.34	4.12	-0.10	-1.07	5.74	-1.46	-1.35	4.28	-1.65
Tobin's q		2002	1.21	0.53	1.07	1.23	0.85	1.03	0.95	0.39	0.88
		2007	1.14	0.32	1.05	1.07	0.43	0.99	0.97	0.34	0.91
Sales volume(billion yen		2002	919.2	1,986.6	288.0	108.5	190.2	41.1	83.0	128.8	37.3
		2007	1,270.2	2,956.5	353.6	124.9	246.5	54.2	105.2	185.7	46.0
		⊿change	37.4	39.3	29.1	29.3	62.1	18.1	34.2	104.8	16.5

Table 3 No of Firms delisted by Firm types

Taking the 723 firms included in the cluster analysis in Figure 1 and Table 1, we attempted to identify any delisting, and verified the status of 701 firms in 2007. If a parents firm owned over 33% prior to acquisition, we categorized the delisting as "acquired by parent firm." Otherwise, the delisting was categorized as "acquired by other firms." Legal reorganization includes cases based on the Civil Rehabilitation Law and Company Reorganization Law.

	Total	Type I Hybird Firms	Type II Hybird Firms	Traditional J-Firms
No. of firms in 2002	701	172	149	380
No. of firms delisted in 2002	87	9	18	60
% of listed firms in 2002	12.4%	5.2%	12.1%	15.8%
Reason for delisting				
Merger and Integration	6	2	1	3
Establising Holding Companies	10	3	4	3
Acquired by parent firms	33	3	3	27
Acquired by other firms (rival, etc)	17	1	4	12
MBO	5	0	3	2
Bankrupt, legal Reorganization	16	0	3	13

Table 4 Value/Profit Distribution

This table summarize the distribution of the value added and profits. Panel 1 reports the aggregated base share, and panel 2 reports the simple average among samples respectively.

Panel 1: Listed firms in First Section of TSE（million yen; %）

period	N.o of firms	average value added(VA)	labor distribution(wage/VA)	interest, corporate tax etc./VA	(reserves + depreciation) /VA	reserve /VA	dividend/ VA
1979-1985	1,365	30,016	48.63	19.68	21.91	5.85	3.32
1986-1991	1,518	41,303	47.80	14.50	26.33	6.50	3.33
1992-1997	1,688	45,838	49.66	13.36	23.97	2.54	3.10
1998-2002	1,766	43,228	47.32	17.29	21.07	-0.71	3.31
2003-2007	1,685	45,134	41.52	11.22	29.08	8.80	7.09
2008-2009	1,615	37,555	48.69	8.41	22.37	-1.76	8.39

Panel 2: Simple average among firms listed on First Section of TSE

period	No of firms	labor distribution ratio			payout ratio		
		median	mean	st. dev.	median	mean	st. dev.
1979-1985	1,350	56.0	52.6	20.4	29.3	34.5	28.4
1986-1991	1,502	55.2	52.1	19.2	27.4	32.1	25.3
1992-1997	1,667	57.7	55.4	18.0	30.0	43.3	56.8
1998-2002	1,739	56.9	55.0	19.6	23.9	37.4	69.3
2003-2007	1,658	52.3	50.1	20.9	30.5	37.5	45.0
2008-2009	1,572	58.2	57.2	27.6	32.3	42.4	95.5

Table 5 Wage / Payout Elasticity and the Effect of Ownership

Sample consisted of firms listed on the First Section of the TSE. Wages, value added, payout, and profits were deflated. Due to the conversion of variables into logarithms, negative profits and payouts are exluded. Estimation based on fixed effect model, which is chosen by Housman test. The t-statistics are in parentheses. ***, **, * significant at the 1 %, 5 % and 10% level, respectively.

Panel 1: Wage Elasiticity to Value Added: Dependent Var. =ln(wage)

	Whole period	Pre-banking crisis	Post-banking crisis	Asset price bubble period	Economic recovery
independent Var	1986-2009	1886-1996	1998-2008	1987-1991	2003-2008
ln(VA)	0.759 ***	0.517 ***	0.762 ***	0.406 ***	0.721 ***
	(137.63)	(81.05)	(93.31)	(42.10)	(70.39)
Share held by foreing investors (%)	-0.760 ***	-1.255 ***	-0.611 ***	-0.118	0.685 *
	(-4.54)	(-5.87)	(-2.47)	(-0.28)	(1.89)
Cross shareholding ratio	2.632 ***	3.093 ***	0.535	2.374 ***	-1.081
	(9.96)	(11.06)	(1.32)	(5.77)	(-1.57)
ln(VA)*Share held by foreign investors	0.048 ***	0.110 ***	0.032	0.001	-0.110 ***
	(2.94)	(5.17)	(1.30)	(0.02)	(-2.94)
ln(VA)*Cross shareholding ratio	-0.259 ***	-0.282 ***	-0.035	-0.221 ***	0.139 **
	(-9.61)	(-9.89)	(-0.84)	(-5.32)	(1.96)
constant	1.713 ***	4.093 ***	1.716 ***	5.192 ***	1.958 ***
	(31.80)	(65.87)	(21.55)	(54.84)	(18.45)
# of obs	30,637	11,579	16,354	5,119	9,622
R-sq	0.836	0.879	0.806	0.873	0.778

Panel 2: Payout Elasiticity to Profit: Dependent Var..=ln(payout)

	Whole period	Pre-banking crisis	Post-banking crisis	Asset price bubble period	Economic recovery
independent Var	1986-2009	1886-1996	1998-2008	1987-1991	2003-2008
ln(profit)	0.197 ***	0.155 ***	0.151 ***	0.164 ***	0.182 ***
	(40.30)	(23.31)	(23.53)	(18.44)	(21.88)
Share held by foreign investors (%)	-1.062 ***	-1.792 ***	-1.108 ***	0.026	0.435
	(-6.45)	(-6.10)	(-5.18)	(0.05)	(1.59)
Cross-shareholding ratio	2.822 ***	0.563 **	2.455 ***	1.044 ***	2.677 ***
	(14.16)	(2.17)	(9.15)	(2.95)	(7.55)
ln(profit)*Share held by foreign investors	0.305 ***	0.277 ***	0.288 ***	0.021	0.053 *
	(16.57)	(7.72)	(11.76)	(0.34)	(1.67)
ln(profit)*Cross shareholding ratio	-0.359 ***	-0.075 **	-0.345 ***	-0.137 ***	-0.341 ***
	(-13.80)	(-2.27)	(-9.84)	(-3.08)	(-7.69)
constant	4.747 ***	5.282 ***	5.287 ***	5.284 ***	4.968 ***
	(122.50)	(103.46)	(108.08)	(76.58)	(77.92)
# of obs	24,661	9,973	12,633	4,692	8,003
R-sq	0.516	0.591	0.515	0.642	0.619