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Managerial Compensation, Corporate Governance, and Business Performance in Japan: Evidence Using New Micro Data

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Managerial compensation, corporate governance, and business performance in Japan: Evidence using new micro data

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Abstract

This paper examines the relations between the disciplinary role of Japanese relationship-oriented corporate governance mechanisms, such as keiretsu memberships and bank-appointed directors, and pay–performance sensitivity in Japan. Previous studies show that pay–performance sensitivity is positive and almost the same as in a market-oriented system like that of the USA. However, under the Japanese relationship-oriented system, pay–performance sensitivity may be controlled by financial keiretsu ties and bank-appointed directors. We find that the disciplinary mechanism of keiretsu memberships and bank-appointed monitors did not function well in Japan in the 1990s.

1. Introduction

Japanese corporate governance mechanisms are relationship oriented systems and are different from the US market-oriented systems. In the 1990s, there were no Japanese firms with compensation committees that included 'outside' directors to monitor executives and provide incentives, unlike in the United States. Aoki (1990) indicates that some kind of discipline may be imposed by the main banks during financial distress. Furthermore, financial keiretsu ties are organized around the main bank and the disciplinary roles of banks are expected to be stronger in firms having financial keiretsu ties. Therefore, bank-appointed monitors and financial keiretsu ties are expected to be features of Japanese disciplinary mechanisms.

These differences in governance mechanisms between the US and Japan might affect the incentive mechanisms for executives. However, there remains an empirical question as to whether bank-appointed monitors and keiretsu memberships help to provide the executives with desirable incentive compensation packages.

The purpose of this paper is to examine the relations between the role of bank-appointed monitors and financial keiretsu memberships, and pay–performance sensitivity. We implicitly assume that banks and financial keiretsu members can better observe the behavior of executives, and the information gained is used to determine the structure of compensation and incentives for executives. Previous studies show positive relations between changes in managerial compensation and firm performance in the 1980s and 1990s in Japan. In the Japanese relationship oriented system, there is an important perception about the effect of bank-appointed monitors and keiretsu memberships on pay–performance relations.

Our findings in this paper are summarized as the following two main points. The first finding is that there is no significant relation between pay–performance sensitivity and firms with and without financial keiretsu ties from 1992 to 1995, which is consistent with previous studies. Second, pay–performance sensitivities for stock returns and sales growth decrease in firms with bank-appointed directors. We

3

conclude that the disciplinary mechanism of the Japanese relationship-oriented system such as financial keiretsu memberships and bank-appointed directors did not function well in Japan during the 1990s.

2. The determination of managerial compensation in Japan

Holmstrom (1979) and Jensen and Meckling (1976) predict pay–performance relations based on agency theory. Their approach is based on a misalignment between the interests of stockholders and managers in the public firm. If conflicts between stockholders and managers are not resolved, the stockholders design compensation packages for managers to minimize the conflicts. These agency models suggest that different corporate governance mechanisms may result in differences in compensation packages. We empirically analyze managerial compensation under the Japanese relationship-oriented system.

There are some basic differences between the US and Japanese systems in who sets managerial compensation and how it is set. In large US corporations, the compensation level of directors is approved by the firm's compensation committee including two or more 'outside' directors. Murphy (1999) indicates that such compensation committees are expected to be independent of the CEO to some extent and function as a kind of effective corporate governance mechanism. In Japan, however, there were no compensation committees before the amendment of commercial law in 2002. Directors provide initial recommendations for their own compensation levels, which are approved by the annual general meeting of stockholders. As a result, the sensitivity of managerial compensation to firm performance is weaker in Japan.

In the USA, from this agency view, the board of directors looks after shareholders' interests and provides desirable incentives for managers. Previous empirical studies in the USA such as Mehran (1995), Bertrand and Mullainathan (2000), and Hartzell and Starks (2003) show that the board's monitoring

4

intensity and the pay–performance sensitivity of the CEO's compensation are increase with the board's independence from the CEO.[1]

The Japanese corporate governance system is relationship-oriented (Aoki, 1990; Milgrom and Roberts, 1992). In a relationship-oriented system, banks and business groups such as financial keiretsu would effectively function as a corporate governance mechanism. In previous Japanese studies, Kaplan and Minton (1994) and Morck and Nakamura (1999) find that banks are more likely to appoint their employees as directors when a company is in financial distress and investigate whether main banks monitor and control the firms with financial keiretsu ties. Kato (1997) and Basu et al. (2007) find that compensation for CEOs of firms with financial keiretsu ties is lower.

Bank-appointed directors on company boards may be expected to provide desirable incentives for executives in Japan.[2] Abe et al. (2005) point out that the bank-appointed directors can affect the determination of executive salaries and bonuses because they have access to information on the firm's decision making because they attend the firm's board meetings.

3. Data and empirical strategies

3.1 Data

We choose the sample period 1992–1995 because we can only compare the same managerial compensation package for all manufacturing firms as cash compensation.[3] Stock options were unavailable

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[1] Ozerturk (2005) constructs a theoretical model to explain these empirical findings.

[2] Essentially, the main bank is the largest lender and it gathers vital information on its lender firms and sends their employees to the borrower's board.

[3] Many previous studies such as Joh (1999) focus on manufacturing firms. This paper also analyzes how manufacturing firms control for some of the industry-specific effects on pay–performance relations. In particular,

until they were legalized in 1997 and so all executives were paid cash compensation and bonuses during this period.

The sample consists of 2088 observations from 1992 to 1995 for 522 Japanese manufacturing firms publicly trading on the first section of the Tokyo Stock Exchange. The firms were subdivided into 15 manufacturing industry groups. The financial data were obtained from the Nikkei NEEDS database. The Nikkei NEEDS data were sourced from annual company reports that contain a panel of cash compensation data in the financial statements. Data on characters and number of board members were manually collected from *Yakuin Shiki Ho* (1992–1996). The financial keiretsu ties data are collected from *Kigyo Keiretsu Souran* (1991). We construct the financial keiretsu dummy which indicates whether or not each firm belongs to an executive gathering known as *Shacnokai* (presidents' club)[4] following Hoshi and Kashyap (2001).

Data on compensation for Japanese CEOs are not publicly available, and are only available for total salaries and bonuses earned by all directors. Prior studies by Kaplan (1994), Ang and Constand (1997), and Joh (1999) calculate the average director's compensation by dividing total salaries and bonuses of all

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nonmanufacturing industries such as construction suffer from 'bad loan' problems. Therefore, we exclude the nonmanufacturing industry.

[4] Japanese financial keiretsu consists of six major financial groups: Mitsui, Mitsubishi, Sumitomo, Fuyo, Sanwa, and Daiichi-Kangyo.

directors by the number of directors.[5] We also use the average director's compensation as a measure of managerial compensation.[6]

3.2 Descriptive statistics

We provide the definitions of the variables (ΔCashComp, ΔROA, RET, GSALE, LOSS, K, and B) in Table 1 and their descriptive statistics in Table 2. Table 2 shows that the change ratio of managerial cash compensation (ΔCashComp) was –0.17% from 1992 to 1995.

INSERT TABLE 1 and 2 HERE

We employ four firm performance variables: the first difference in ROA (ΔROA), stock returns (RET), the growth rate of sales (GSALE), and a loss/profit dummy variable (LOSS). The average of ΔROA was –0.187%, and that of lagged ΔROA was –0.493%. The average of RET was approximately –6.29%, and that of lagged RET was –9.135%. This means that firm accounting performance was slightly negative, but market performance was highly negative. The average of the growth rate was –1.66%, and that of the loss

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[5] Joh (1999) points out that the incentive compensation of directors on the board as a group is more adequate than that of the top manager alone because the board members make decisions regarding the firm's product market strategy as a group. Regarding this point, Kubo and Saito (2008) try to estimate a proxy for top manager compensation. Kato and Rockel (1992), Kato (1997), and Kato and Kubo (2006) adopt CEOs' individual compensation data of Japanese largest firms.

[6] Some kind of less visible compensation such as perquisites cannot be included in this average compensation. Kato and Long (2006), for example, calculate executive compensation including perquisites in China. In this paper, we cannot use such compensation data; however, the time-invariant heterogeneity of compensation such as perquisites are controlled by using first differences of the estimation.

dummy was 16.2%. The average of the financial keiretsu dummy (K) was 11.3%. The average of the bank-appointed monitor ratio (B) was 38.7% and is smaller than that of the 55 electronics firms used in Abe et al. (2005).

Furthermore, the descriptive statistics classified by K and B are shown in Table 3. In panel A, the change ratio of Managerial compensation and all firm performance variables are insignificant. In panel B, the change ratio of Managerial compensation and firm performance variables (ΔROA, RET, and GSALE) are insignificant. The ratio of LOSS firms with bank-appointed directors was 18.5% and was higher than that without bank-appointed directors. This result is consistent with those of Kaplan (1994) and Kaplan and Minton (1994).

INSERT TABLE 3 HERE

3.3 Empirical strategies

We estimate two equations to check the pay–performance relations and the difference in these relations between firms with and without financial keiretsu ties and with and without bank-appointed directors. The performance variables are chosen following the previous Japanese studies of Kaplan (1994), Kato and Kubo (2006), and Mitsudome et al. (2008).[7] We predict that Japanese managerial compensation is positively affected by a change in the performance measures ΔROA and GSALE, and negatively by a change in LOSS following the previous results.

To provide statistical evidence for the differences in pay–performance sensitivities between firms with and without financial keiretsu ties, we estimate equation (1) below for firms with and without them.

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[7] Kaplan (1994), Kaplan and Minton (1994), and Kang and Shivdasani (1995) show that CEO turnover in Japanese capital markets is closely related to poor stock performance, as it is in the US market.

Previous studies cannot uniquely predict whether or not keiretsu memberships affect the determination of the pay–performance relations.

$$\Delta CashComp_{i,t} = \gamma_{1,t}\Delta ROA_{it} + \gamma_{2,t}RET_{it} + \gamma_{3,t}GSALE_{it} + \gamma_{4,t}LOSS_{it} + \gamma_{5,t}\Delta ROA_{it}*K_{it} \\ + \gamma_{6,t}RET_{it}*K_{it} + \gamma_{7,t}\Delta GSALE_{it}*K_{it} + \gamma_{8,t}\Delta LOSS_{it}*K_{it} + \gamma_{9,t}K_{it} + d_t + \varepsilon_{it}$$ (1)

There are two predictions about the discipline of financial keiretsu ties in Japan. Some scholars point out that the discipline of executives is characterized by their keiretsu relationships.[8] Berglof and Perotti (1994) argue that the financial keiretsu system plays a role in effectively monitoring and controlling managers. Therefore, managerial compensation should be lower for firms with financial keiretsu ties. On the other hand, Gurati and Singh (1998) argue that coordination costs among keiretsu memberships reduce profits of firms with financial keiretsu ties. In addition, Miwa and Ramseyer (2002) point out that financial keiretsu takes only a ceremonial role. These studies imply that the financial keiretsu system might be an ineffective discipline mechanism.

We cannot initially determine whether or not the disciplinary mechanisms of firms with keiretsu membership are effective. We construct two hypotheses about their disciplinary roles. The null hypothesis is that financial keiretsu memberships take important roles in monitoring the executives of firms and helping to enhance the incentive of executives. Some scholars, such as Berglof and Perotti (1994), argue that the financial keiretsu system takes a role in the effective monitoring and controlling of managers and compensation should be lower for firms with financial keiretsu ties. Kato (1997) and Basu et al. (2007) show that top managerial compensation is lower for firms with financial keiretsu ties. In other words,

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[8] Sheard (1989) and Aoki (1990) argue that Japanese main bank relationships play an important role in corporate governance and discipline managers for poor performance. Aoki (1990) further argues that the main bank monitors its keiretsu firms in the roles of major stockholders and principal lenders.

financial keiretsu ties are expected to be important corporate governance mechanisms for monitoring the executives of firms and helping to enhance the incentives of executives.

We alternatively hypothesize that the main bank does not monitor the executives of firms with financial keiretsu ties effectively and does not enhance but rather decreases the incentives of executives with them. Hoshi and Kashyap (2004) suggest that the Japanese economy began to underperform in 1992 and McGuire and Dow (2008) point out that this under-performing economy during 1990s may have affected the roles of the financial keiretsu. Hoshi (2006) concludes that Japanese resource allocations are inefficient because of support for weaker keiretsu member firms, which they call "Zombie" firms. These results suggest that pay–performance relations might be weaker in the 1990s in firms with financial keiretsu ties.

We propose a hypothesis about the cross terms of the keiretsu dummy and four performance variables: ΔROA*K, RET*K, GSALE*K, and LOSS*K. In the null hypothesis (Hypothesis 1N), we predict that the contribution of keiretsu memberships is to strengthen pay–performance sensitivity. On the other hand, the pay–performance relations in firms with financial keiretsu ties are predicted to be weakened in the alternative hypothesis (Hypothesis 1A).

Hypothesis 1

The null hypothesis (Hypothesis 1N) is that $\gamma_5, \gamma_6,$ and γ_7 will be positive or zero, and γ_8 will be zero or negative. The alternative hypothesis (Hypothesis 1A) is that $\gamma_5, \gamma_6,$ and γ_7 will be significantly negative, and γ_8 will be significantly positive.

$$H_{1N} : \gamma_{5,t}, \gamma_{6,t}, \gamma_{7,t} \geq 0, \gamma_{8,t} \leq 0 \text{ vs } H_{1A} : \gamma_{5,t}, \gamma_{6,t}, \gamma_{7,t} < 0, \gamma_{8,t} > 0.$$

To analyze the differences of the pay–performance relations between firms with and without bank-appointed directors, we estimate the following equation (2) including the cross term of performance measures and the bank director's dummy variable (B).

$$\Delta CashComp_{i,t} = \gamma_{1,t}\Delta\text{ROA}_{it} + \gamma_{2,t}\text{RET}_{it} + \gamma_{3,t}G\text{SALE}_{it} + \gamma_{4,t}LOSS_{it} + \gamma_{5,t}\Delta\text{ROA}_{it} * \text{B}_{it}$$
$$+ \gamma_{6,t}\text{RET}_{it} * \text{B}_{it} + \gamma_{7,t}\Delta GSALE_{it} * \text{B}_{it} + \gamma_{8,t}\Delta LOSS_{it} * \text{B}_{it} + \gamma_{9,t}\text{B}_{it} + \text{d}_t + \varepsilon_{it} \quad (2)$$

There are two predictions about the disciplines of bank relationships in Japan. Some scholars point out that the discipline of executives is characterized by their bank relationships.[9] We cannot initially determine whether or not the discipline of bank-appointed directors is effective.

The null hypothesis is that bank-appointed directors monitor the executives of firms and help to enhance the incentive of executives. Some scholars, such as Grundfest (1990), argue that bank relationships reduce the agency cost and allow investors to monitor managers more effectively than in the USA. Kaplan (1994) shows that the likelihood of new bank-appointed directors is closely positive with negative profit. Kaplan and Minton (1994) and Morck and Nakamura (1999) find that banks are more likely to appoint one of their employees as a director when a company is in financial distress.[10] Kaplan and Minton (1994) show that bank-appointed directors take an important discipline role, which affects top executive turnover in the case of poor performance. In other words, bank-appointed directors are expected to monitor the executives of firms and to help enhance the incentive of executives.

We alternatively hypothesize that bank-appointed directors do not monitor the executives of firms effectively and do not help to enhance, but rather decrease, the incentives of executives. Aoki (1990) points out that Japanese executives earn profit to satisfy the interests of debt-holders. Weinstein and Yafeh (1998) show that bank-appointed directors consider the repayment of bank loans and do not think

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[9] Aoki (1990) and Sheard (1989) argue that Japanese main bank relationships play an important role in corporate governance and discipline managers' poor performance.

[10] Hoshi and Kashyap (2001) discuss the role of bank-appointed directors in detail.

of maximizing firm value. Abe et al. (2005) show that the bonus ratio of firms with bank-appointed directors decreases firm performance in Japanese electronics firms.[11] These results suggest that pay–performance relations are weaker in firms with bank-appointed directors.

We also propose a hypothesis about the cross terms of the bank-appointed directors' dummy and the four performance variables: ΔROA*B, RET*B, GSALE*B, and LOSS*B. In the null hypothesis (Hypothesis 2N), we predict that bank-appointed directors help to strengthen pay–performance sensitivity. On the other hand, the pay–performance relations in firms with bank-appointed directors are predicted to be weaker in the alternative hypothesis (Hypothesis 2A).

Hypothesis 2

The null hypothesis (Hypothesis 2N) is that $\gamma_5, \gamma_6,$ and γ_7 will be positive or zero, and γ_8 will be zero or negative. The alternative hypothesis (Hypothesis 2A) is that $\gamma_5, \gamma_6,$ and γ_7 will be significantly negative, and γ_8 will be significantly positive.

$$H_{1N} : \gamma_{5,t}, \gamma_{6,t}, \gamma_{7,t} \geq 0, \gamma_{8,t} \leq 0 \text{ vs } H_{1A} : \gamma_{5,t}, \gamma_{6,t}, \gamma_{7,t} < 0, \gamma_{8,t} > 0 .$$

4. Results

Table 4 shows the estimated results of equations (1) from 1992 to 1995. In the second column, we show the results of the relations between changes in managerial compensation and each individual performance measure and cross terms of the performance measures and financial keiretsu ties (K). In the third column, we show the estimated results of equation (1).

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[11] Abe et al. (2005) find that the bonus ratio of firms with bank-affiliated directors is lower.

INSERT TABLE 4 HERE

In the second column, all of the performance measures are statistically significant at the 1% level, and their coefficients are 1.163, 0.223, 25.770, and –9.176. These results show the positive pay–performance relations. On the other hand, the cross terms of keiretsu memberships and each of performance measures (ΔROA*K, RET*K, GSALE*K, and LOSS*K) are insignificant. This indicates that financial keiretsu memberships do not affect pay–performance sensitivities.

In the third column, the estimated result of equation (1) is reported. We find that the relations between changes in managerial compensation and ΔROA, RET, and GSALE are significantly positive, and LOSS is significantly negative. The coefficients of all the performance measures show positive pay–performance relations, as does the individual performance measure. The cross terms of keiretsu memberships and performance measures (ΔROA*K, RET*K, GSALE*K, and LOSS*K) are also insignificant as they were in the second column. We also find no significant relation between change in managerial compensation and financial keiretsu ties (K).

In the third column, the F-statistic for the cross terms of keiretsu memberships and performance measures (ΔROA*K, RET*K, GSALE*K, and LOSS*K) is 1.78 and insignificant at the 10% level. This indicates that there is no significant difference in sensitivities between firms with and without financial keiretsu ties. We also find that there are no significant relations between changes in managerial compensation and these cross terms. This result is consistent with Hypothesis 1N. This implies that the pay–performance sensitivity of firms with financial keiretsu ties is almost the same as firms without them.

INSERT TABLE 5 HERE

13

Table 5 shows the estimated results of equation (2). In the second and third columns, we show the relations between changes in managerial compensation and each of the performance measures and the cross terms of the performance measures and the bank-appointed dummy variable (B).

In the second column, we find that changes in managerial compensation are significantly positive for ΔROA, RET, and GSALE and negative for LOSS. All of the estimates are statistically significant at the 1% level, and their coefficients are 1.056, 0.260, 34.531, and −9.548. These results show positive pay–performance relations. Only the cross term of stock returns and the bank-appointed dummy (RET*B) is significantly negative, but the other cross terms (ΔROA*B, GSALE*B, and LOSS*B) are insignificant. This indicates that bank-appointed directors do not help to enhance pay–performance sensitivity measured as RET, but rather weaken them.

In the third column, the estimated result of equation (2) is reported. We find that the relations between change in managerial compensation and ΔROA, RET, and GSALE are significantly positive and LOSS is significantly negative. The coefficients on all the performance measures show the positive pay–performance relations as well as the individual performance measure. The F-statistic for the cross terms of the bank-appointed dummy and the performance measures (ΔROA*B, RET*B, GSALE*B, and LOSS*B) is 2.35 and significant at the 10% level. This means a difference in the sensitivities between firms with and without bank-appointed directors. We also find that there are positive relations between change in managerial compensation and ΔROA, RET, and GSALE, whereas the relation between that and LOSS is negative. The coefficients on RET*B and GSALE*B are significantly negative. This result is consistent with hypothesis 2A. This implies that the pay–performance sensitivity of firms with bank-appointed directors is relatively weak.

INSERT TABLE 6 HERE

14

We also analyze the disciplinary role of financial keiretsu memberships and bank-appointed directors simultaneously. Table 6 also reports the estimated results including cross terms of firm performance measures and each of the financial keiretsu memberships and bank-appointed directors. In the second column, we also confirm the positive pay–performance relations. Only the cross term of stock returns and bank-appointed dummy is significantly negative. This supports the result that the pay–performance sensitivity of firms with bank-appointed directors is relatively weak.

In the third column, we also find that the cross term of stock returns and the bank-appointed dummy is significantly negative. In addition, the F-statistics for the cross terms of the bank-appointed dummy and the performance measures (ΔROA*B, RET*B, GSALE*B, and LOSS*B) are significant at the 10% level and those of both the bank-appointed dummy and financial keiretsu ties and firm performance measures are significant at the 5% level. These results also support the idea that the disciplinary role of the bank-appointed directors is relatively weak.

Our findings are summarized as the following two points. First, the financial keiretsu ties did not function well in enhancing the pay–performance sensitivities. Second, the role of bank-appointed monitors was not effective. We can infer that the discipline of a relationship with financial keiretsu ties and bank-appointed monitors did not operate well in the 1990s, although Japanese executives were motivated by desirable incentive compensation.

5. Conclusions

This paper examined the relations between the role of Japanese disciplinary mechanisms such as financial keiretsu ties and bank-appointed directors and pay–performance sensitivity in Japan. First, we analyzed the differences in pay–performance relations between firms with and without financial keiretsu ties. Second, we compared the differences in managerial compensation and firm performance between firms with and without bank-appointed directors by regressing the cross term of bank-appointed directors and performance measures.

15

Our findings provide new interpretations of previous Japanese studies such as Kaplan (1994), Kato and Kubo (2006), and Mitsudome et al. (2008) and are summarized as the following two points. The first finding is that there is no significant difference in pay–performance sensitivity between firms with and without financial keiretsu ties in this period. This result implies that the disciplinary role of financial keiretsu memberships did not function well in the 1990s. This result suggests that the effective disciplinary role of keiretsu in the 1980s as shown in Kato (1997) was weakened in the 1990s.

Second, we found that the pay–performance relations for RET and GSALE of firms with bank-appointed directors are negative. This result implies that bank-appointed directors were not effective monitors of managerial compensation in the 1990s.

In the 1990s, after the bubble-burst period, the Japanese relationship-oriented system was believed to be mainly supported by the financial keiretsu memberships and bank-appointed monitors. Our results indicate that Japanese executives were not well motivated under the relationship-oriented system in the 1990s.

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Table 1

Definitions of variables

Variable	Definition
Dependent Variables	
The change ratio of managerial compensation (ΔCashComp, %)	The percentage changes in average cash compensation per director. Average cash is comprised of salaries and bonuses of all board members divided by the number of board members.
Firm Performance Variables	
Differences in return on assets (differences in ROA, %)	The first differences in ROA (return on Assets: net profit divided by total assets).
Stock return (%)	The rate of stock return, measured as stock price at year end plus dividend per share for the year dividend per share by the beginning stock price less one.
The growth rate of sales (%)	The rate of growth of sales
Loss/profit dummy	1 if a firm's net profit is negative in year t, 0 otherwise.
Governance Variables	
Financial Keiretsu dummy (K,(1,0))	1 if firms belong to financial Keiretsu, 0 otherwise.
Bank-appointed directors dummy (B, (1, 0))	1 if a commercial bank appoints at least one director to the board, 0 otherwise.

Table 2

Descriptive statistics

Variable	Mean	Median	Std. dev.
Dependent Variables			
The change ratio of managerial compensation (ΔCashComp, %)	−0.179	−1.606	19.178
Firm Performance Variables			
Differences in ROA (ΔROA, %)	−0.187	−0.098	2.673
Stock return (RET, %)	−6.294	−7.250	21.403
Growth rate of sales (GSALE, %)	−1.666	−1.369	9.292
Loss/profit dummy	0.162	0.000	0.369
Governance Variables			
Keiretsu dummy	0.113	0.000	0.317
Bank-appointed director dummy	0.387	0.000	0.487

Note. We report descriptive statistics for the total and split sample. In the right column, the p-value of the mean differential statistics between the two periodically divided groups is reported.

Table 3 Descriptive statistics

    Panel A Mean differences between firms with or without Financial keiretsu ties

Variable	keiretsu = 0 Mean (n = 1,852)	keiretsu = 1 Mean (n =236)	Differences p-value
Dependent Variables			
The change ratio of managerial compensation (ΔCashComp, %)	-0.014	-1.469	0.273
Firm Performance Variables			
Differences in ROA (ΔROA, %)	-0.204	-0.050	0.403
Stock return (RET, %)	-6.355	-5.819	0.717
Growth rate of sales (GSALE, %)	1.833	-0.204	0.166
Loss/profit dummy	0.161	0.174	0.615

    Panel B Mean differences between firms with or without Bank-appointed director

Variable	Bank = 0 Mean (n = 1,279)	Bank = 1 Mean (n = 809)	Differences p-value
Dependent Variables			
The change ratio of managerial compensation (ΔCashComp, %)	–0.356	0.101	0.596
Firm Performance Variables			
Differences in ROA (ΔROA, %)	–0.127	–0.281	0.201
Stock return (RET, %)	–5.949	–6.841	0.354
Growth rate of sales (GSALE, %)	–1.504	–1.922	0.317
Loss/profit dummy	0.148	0.185	0.023 [**]

Note. In panel A, we report descriptive statistics for the total and split sample if firms belong to financial Keiretsu. In the right column, we report the p-value of the t-statistic to test for differences in the means between the two groups with and without financial keiretsu memberships. Panel B reports descriptive statistics for the total and split sample if the board includes a bank-affiliated director. In the right column, we report the p-value of the t-statistic to test for differences in the means between the two groups with and without bank-affiliated directors.

Table 4 Estimated coefficients for equations (1)

(1)	(2)	(3)
Independent Variable	The change ratio of Managerial compensation (1 Variable, %)	The change ratio of Managerial compensation (4 Variable, %)
Differences in ROA	1.163 ***	0.785 ***
(ΔROA)	(0.000)	(0.000)
Differences in ROA	-0.078	-0.388
(ΔROA)*Keiretsu	(0.873)	(0.334)
R-squared	0.041	
Stock return (RET)	0.223 ***	0.151 ***
	(0.000)	(0.000)
Stock return (RET)	0.087	0.096
* Keiretsu	(0.154)	(0.124)
R-squared	0.048	
Growth rate of sales (GSALE)	25.770 ***	11.164
	(0.000)	(0.105)
Growth rate of sales (GSALE)	19.186	19.156
* Keiretsu	(0.193)	(0.183)
R-squared	0.033	
Loss/profit dummy	-9.176 ***	-5.197 ***
	(0.000)	(0.000)
Loss/profit dummy	-2.297	-1.361
* Keiretsu	(0.283)	(0.607)
R-squared	0.049	0.082
F-statistic (All cross-terms of		1.78
Keiretsu Dummy= 0)		(0.129)

Note. The change ratio of Managerial compensation is regressed against the independent variables in column (1). In column (2), we show the regression results using individual performance variables and their cross-terms of the financial keiretsu dummy. In column (3), we show the regression results using all performance variables and their cross-terms of the financial Keiretsu dummy. All independent variables are measured from t–1 to t. All regressions include dummy variables for the time period. P-values are in parentheses. Superscripts *, **, and *** denote significance at 10%, 5%, and 1% levels, respectively. The null hypothesis of the F test is that all cross terms of keiretsu dummy variables are equal to zero.

Table 5 Estimated coefficients for equations (2)

(1)	(2)	(4)
Independent Variable	The change ratio of Managerial compensation (1 Variable, %)	The change ratio of Managerial compensation (4 Variable, %)
Differences in ROA	1.056 ***	0.717 ***
(ΔROA)	(0.000)	(0.000)
Differences in ROA (ΔROA)*	0.290	0.203
Bank dummy	(0.463)	(0.623)
R-squared	0.042	
Stock return (RET)	0.260 ***	0.199 ***
	(0.000)	(0.000)
Stock return (RET)	-0.084 **	-0.127 ***
* Bank dummy	(0.041)	(0.005)
R-squared	0.050	
Growth rate of sales (GSALE)	34.531 ***	22.424 ***
	(0.000)	(0.001)
Growth rate of sales (GSALE)	-17.667	-23.618 *
* Bank dummy	(0.162)	(0.067)
R-squared	0.034	
Loss/profit dummy	-9.548 ***	-4.594 ***
	(0.000)	(0.003)
Loss/profit dummy	0.222	-2.274
* Bank dummy	(0.912)	(0.320)
R-squared	0.049	0.087
F-statistic (All cross-terms of Bank Dummy= 0)		2.35 * (0.052)

Note. The change ratio of Managerial compensation is regressed against the independent variables in column (1). In column (2), we show the regression results using individual performance variables and their cross-terms of the bank-appointed director dummy. In column (3), we show the regression results using all performance variables and their cross-terms of the bank-appointed director dummy. All independent variables are measured from t–1 to t. All regressions include dummy variables for the time period. P-values are in parentheses. Superscripts *, **, and *** denote significance at 10%, 5%, and 1% levels, respectively. The null hypothesis of the F test is that all cross-terms of bank-appointed director dummy variables are equal to zero.

Table 6 Estimated coefficients for equations (1) and (2) simultaneously

(1)	(2)	(3)
Independent Variable	The change ratio of Managerial compensation (1 Variable, %)	The change ratio of Managerial compensation (4 Variable, %)
Differences in ROA (ΔROA)	1.059 ***	0.753 ***
	(0.000)	(0.001)
Differences in ROA (ΔROA)* Keiretsu	-0.038	-0.444
	(0.938)	(0.304)
Differences in ROA (ΔROA)* Bank dummy	0.288	0.204
	(0.468)	(0.626)
R-squared	0.042	
Stock return (RET)	0.255 ***	0.196 ***
	(0.000)	(0.000)
Stock return (RET) * Keiretsu	0.081	0.095
	(0.188)	(0.131)
Stock return (RET) * Bank dummy	-0.082 **	-0.127 ***
	(0.047)	(0.005)
R-squared	0.051	
Growth rate of sales (GSALE)	33.082 ***	21.102 ***
	(0.000)	(0.001)
Growth rate of sales (GSALE) * Keiretsu	20.903	23.770 *
	(0.145)	(0.097)
Growth rate of sales (GSALE)* Bank dummy	-18.313	-25.027 *
	(0.148)	(0.054)
R-squared	0.034	
Loss/profit dummy	-9.238 ***	-4.261 ***
	(0.000)	(0.010)
Loss/profit dummy * Keiretsu	-2.286	-0.941
	(0.285)	(0.719)
Loss/profit dummy * Bank dummy	0.137	-2.533
	(0.946)	(0.271)
R-squared	0.049	0.089

F-statistic (All cross-terms of Keiretsu Dummy= 0)	1.87
	(0.114)
F-statistic (All cross-terms of Bank Dummy= 0)	2.37 *
	(0.052)
F-statistic (All cross-terms of Keiretsu Dummy= cross-terms of Bank Dummy= 0)	1.95**
	(0.049)

Note. The change ratio of Managerial compensation is regressed against the independent variables in column (1). In column (2), we show the regression results using individual performance variables and their cross-terms of both Keiretsu and the bank-appointed director dummy. In column (3), we show the regression results using all performance variables and their cross-terms of both Keiretsu and the bank-appointed director dummy. All independent variables are measured from t–1 to t. All regressions include dummy variables for the time period. P-values are in parentheses. Superscripts *, **, and *** denote significance at 10%, 5%, and 1% levels, respectively. The null hypothesis of the F test (All cross-terms of Keiretsu Dummy= 0) is that all cross-terms of Keiretsu dummy variables are equal to zero. The null hypothesis of the F test (All cross-terms of Bank Dummy= 0) is that all cross-terms of bank-appointed director dummy variables are equal to zero. The null hypothesis of the F test (All cross-terms of Keiretsu Dummy= cross-terms of Bank Dummy= 0) is that all cross-terms of Keiretsu and bank-appointed director dummy variables are equal to zero.