

員工獎酬資訊揭露對公司治理結構的影響

The Impact of Employee Compensation Disclosure on Corporate Governance Structure¹

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摘要：本文主要探討證期局強制員工獎酬資訊揭露，對公司治理機制中的股權結構、會計資訊在獎酬與績效關聯性監督角色的影響。預期在獎酬資訊揭露前，會計資訊治理功能不彰，股權結構扮演績效與獎酬關聯性重要監督的角色；獎酬資訊揭露後，提升會計資訊治理的功能，此時股權結構監督績效與獎酬關聯性的重要程度降低。

實證結果發現：1. 強制獎酬資訊揭露前，大股東持股對績效與獎酬關聯性存在顯著正向的影響；獎酬資訊揭露後，大股東持股監督績效與獎酬關聯性重要程度降低。2. 獎酬資訊揭露前，外資機構持股對績效與獎酬關聯性扮演重要監督的角色；獎酬資訊揭露後，外資機構持股監督績效與獎酬關聯性的重要程度降低。3. 獎酬資訊揭露前，管理者持股對獎酬政策的影響支持利益掠奪假說，即管理者持股對績效與獎酬關聯性存在負向影響；但強制獎酬資訊揭露無法顯著改善管理者持股對績效與獎酬間負向的影響。進一步發現管理者持股外，若公司同時存在大股東持股或外資機構持股，獎酬資訊揭露使大股東或外資投資機構更容易觀察獎酬決策的制定，提升資訊揭露在降低管理

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者持股對績效與獎酬關聯性負向影響的治理功能。

關鍵詞：員工獎酬；資訊揭露；公司治理；股權結構

Abstract: Mandatory compensation disclosure can have great impact on the structure of corporate governance. Our empirical results show that mandatory compensation disclosure decreases major stockholders' and foreign investment institutions' importance in overseeing performance-contingent rewards. Also, consistent with the entrenchment hypothesis, our findings indicate that managerial stock ownership exerts a negative effect on the link between employee compensation and firm performance and that mandatory information disclosure does not mitigate this negative effect. Compared with regular shareholders, major stockholders and foreign investment institutions are more capable of and motivated in monitoring managers' self-interested behavior. Mandatory disclosure facilitates compensation oversight and contributes to the improvement of corporate governance.

Keywords: Employee compensation; Information disclosure; Corporate governance; Ownership structure

1. Introduction

During the 2009 global financial crisis, many banks in the United States asked for federal financial assistance as they were on the verge of bankruptcy. However, while the Obama administration released billions of dollars to bail them out, the failing banks were found to engage in abusive distribution of bonuses to their employees. The compensation scandals, criticized as highly irresponsible behavior by President Obama, have brought executive compensation plans to the forefront of public attention and debate³. After surveying 162 directors and 72 institutional investors in the US, Watson Wyatt⁴, concluded that companies

³ China Daily News. (2009), Obama Denounced the Financial Industry, High-dividend Shameless, Available at: <http://www.cdnnews.com.tw/20090131>. (In Chinese)

⁴ Chi, M. (2008), From Four Large View Look Advanced Charge Reward Design, Watson Wyatt,

should strengthen the link between managers' compensation and their performance.

Compensation plans usually include three components: cash bonus, stocks bonus and stock options. Prior to the amendment of Commercial Accounting Law in May 2006, Taiwan companies used to recognize granted stock bonus at par value instead of market value and treat employee bonus as an earnings distribution rather than an expense item. An ideal compensation plan should be closely tied to firm performance and should motivate managers to work toward the goal of maximizing shareholders' wealth. However, this accounting method underestimates the cost of employee compensation, potentially encouraging companies to pay employee bonuses while their businesses are suffering great losses.

Corporate ownership structure has become widely diffused nowadays. Information asymmetry between shareholders and management causes the principal-agency problem, which in turn affects the performance-compensation relationship. Disclosing more useful information and enhancing information transparency is the most direct solution to this agency problem. The Securities and Futures Bureau (SFB) requires that public companies disclose compensation information, effective on January 31, 2003. With the mandatory disclosure of compensation information, the governance mechanism of accounting information can help investors protect their interests by effectively monitoring employee compensations plans.

Corporate governance structure comprises various mechanisms among which substitution effect exists. Depending on its characteristics, a firm can adopt different mechanisms to optimize its governance structure. Studying the interaction between accounting information and other governance mechanisms, La Porta *et al.* (1998) find that ownership concentration across countries is inversely related to the extent of a country's accounting disclosures. Also, good accounting standards and shareholder protection law are associated with lower concentration of ownership. This suggests that ownership concentration is an

outcome of poor investor protection. When accounting information and regulations fail to protect investors' interests, major shareholders will play a more important role in overseeing compensation plans. Bushman *et al.* (2000) assert that the less information the accounting system provides, the higher cost the shareholders bear to collect data and monitor the link between firm performance and employee compensation. Young (2003) investigates how corporate governance structures vary with the timeliness of accounting earnings. His empirical results point out a significant negative relation between the timeliness of earnings and the equity-based incentives of all officers and directors, and the equity-based incentives of outside shareholders.

All the above studies demonstrate how critical a firm's accounting information is in its governance structure. The regulatory change on compensation disclosure in Taiwan provides us a unique opportunity to examine the corporate governance role of accounting disclosure. This study particularly focuses on the moderating effect of corporate compensation information on the governance role of major shareholder ownership structure and foreign investment ownership under the convergence-of-interest and entrenchment hypotheses, which to the best of our knowledge, have not been examined by prior studies.

When compensation information disclosure is not mandatory and employee bonus is recognized as earnings distribution, accounting reports provide investors limited information for judging the performance-compensation association. Information insufficiency forces major shareholders to spend extra efforts in collecting information to evaluate the performance-compensation relationship. Mandatory disclosure of compensation information allows regular shareholders to monitor and evaluate compensation plans and thus reduces the governing roles of major shareholders and foreign investment institutions. Existing literature provides two hypotheses that can be extended to examine the effect of managerial ownership on compensation policy: convergence-of-interest hypothesis and entrenchment hypothesis (Jensen and Meckling, 1976; Jensen and Ruback, 1983). The convergence-of-interest hypothesis asserts that shareholding aligns the interests of managers and shareholders and therefore will induce managers' efforts to maximize shareholders' wealth. Consequently, managerial ownership

exerts a positive effect on the performance-compensation relationship. On the other hand, the entrenchment hypothesis asserts that managerial ownership protects the incumbent managers from displacement. Their positions in the company being consolidated, managers, in spite of their ownership stakes, are tempted to adopt a compensation plan in their own interest that decreases the firm value and shareholders' wealth. This implies a negative performance-compensation relationship.

As proposed by the convergence-of-interest hypothesis, managers in pursuit of their self-interests should be motivated to adopt a proper compensation policy. Therefore, information disclosure should reduce the positive effect of managerial ownership on the performance-compensation relationship. However, the entrenchment hypothesis suggests that stock-holding managers may adopt a compensation policy that hurts shareholders' wealth. Information disclosure will prevent managers from adopting a compensation plan that decrease shareholders' wealth. In other words, based on the entrenchment hypothesis, information disclosure should alleviate the negative effect that managerial ownership exerts on the performance-compensation link.

To find evidence for the above propositions, we study information technology companies listed in the stock exchange market during the years 1998–2005. Our empirical results indicate that before compensation information disclosure is made mandatory, accounting reports fail to provide timely information. Major shareholders and foreign investment institutions play a dominant role in overseeing the performance-compensation relationship. After mandatory information disclosure becomes effective, accounting reports provide more useful information to facilitate the monitoring function of regular shareholders, which then reduces the oversight role of major shareholders and foreign institutional investors. We also find that the monitoring function of major shareholders and foreign investment institutions encourages managers to adopt performance-contingent rewards and prevent them from pursuing their self-interests at the expense of shareholders' wealth. Furthermore, as proposed by the entrenchment hypothesis, mandatory information disclosure mitigates the negative effect of managerial ownership on the performance-compensation

relationship. Mandatory compensation information disclosure enhances the transparency of information and acts as an effective corporate governance mechanism.

2. Literature Review

2.1. Substitution Effects of Corporate Governance Mechanisms

Substitution effects exist among corporate governance mechanisms, which can be categorized into two types: internal and external. Internal governance mechanisms include oversight by the board of directors, incentive schemes, ownership structure, and accounting information. External governance mechanisms include regulations and laws, oversight by shareholders and creditors, capital and managerial labor market, as well as threat of takeover. The findings of Aggarwal and Samwick (1999) show that in a competitive industry, a firm's incentive schemes are sensitive to and positively related to the rival firm's performance. Numerous studies demonstrate the substitution effects between accounting information and ownership structure. Verrecchia (1982) asserts that capital market participants will gather private information at a higher expense when the quality of the disclosed accounting information deteriorates. If the benefits of private information gathering exceed its costs, stakes in stock ownership motivate shareholders to collect private information to monitor managers' activities. Warfield *et al.* (1995) examine how the level of managerial ownership impacts the informativeness of earnings information. Their empirical results show that managerial ownership positively moderates the association between the earnings and the stock price of the company. When the accounting regulations and laws are unable to protect investors, major shareholders will monitor management activities (La Porta *et al.* 1998). Bushman *et al.* (2000) claim that the less a firm discloses its accounting information, the higher costs its shareholders pay to collect information and monitor the activity of the management. Fan and Wong (2002) investigate the relation between corporate

ownership structure and the informativeness of earnings in East Asia. Their research shows that the informativeness of earnings is negatively related to the level of an ultimate owner's voting control and to the discrepancy between the voting rights and cash flow rights of the ultimate controlling owners. Young (2003) conducts a cross-sectional analysis on how the timeliness of earnings information impacts corporate governance structure. Young (2003) finds that there is a significant negative relation between the timeliness of earnings and the equity-based incentives of officers and directors, and the equity-based incentives of outside shareholders respectively. When the earnings report provides an inefficient forecast, corporate structure will substitute the external higher-cost investor-monitoring mechanism for the internal accounting information mechanism.

2.2. The Effect of Compensation Disclosure on the Performance-Compensation Relationship

On October 15, 1992, the US Securities and Exchange Commission (SEC) approves new compensation disclosure rules and requires more compensation disclosures in the annual proxy statements. Murphy (1996) examines the impact of the 1992 proxy disclosure rules on company compensation. He finds that managers bear nonpecuniary cost of reporting high level of compensation, and will adopt reporting methodologies that reduce compensation cost. A lower level of reported employee compensation alleviates managers' pressure from politics and shareholders. Vafeas and Afxentiou (1998) also investigate how the 1992 SEC regulation affected the pay-for-performance relationship. The results suggest that accounting and market performance measures following the new rule explain more of the cross-sectional variation in CEO pay compared to the pre-rule period.

A paper by Ke *et al.* (1999) indicates the relation between CEO compensation and accounting performance measures as a function of ownership structure. They compare the use of accounting-based incentive pay contracts across widely held firms and closely held firms. Ke *et al.* find closely held insurance firms use objective accounting measures to determine the employee

compensation less often than do widely held insurance firms. Park et al. (2001) also find that the advent of mandatory executive compensation disclosure encourages the use of performance-contingent compensation. Craighead *et al.* (2004) investigate how mandatory compensation disclosure affects the CEO compensation practices in widely-held firms versus in closely-held firms. The results show that in the absence of mandatory disclosure, CEO cash compensation is less performance-contingent in widely held firms than in closely held firms. With the advent of mandatory disclosure, performance-contingent cash compensation increases more in widely held firms than in closely held firms. Compensation is less responsive to accounting performance information in closely held firms than in widely held firms. The above research suggests that mandatory compensation disclosure increase the use of performance-contingent compensation; however, the firm's ownership structure could sway the increase. This paper studies the governance interaction between ownership structure and accounting information in determining performance-compensation sensitivity.

3. Research Design

3.1. Research Hypothesis

Information asymmetry between managers and shareholders forms the main cause of principal-agency problems. The purpose of corporate governance is to prevent agency problems and protect the interests of small shareholders, who often are unable to oversee the management. Incentive compensation aligns the interests of the managers with those of the shareholders. An effective compensation program should make executive pay sensitive to firm performance. The better the firm performs, the more the executives are compensated, and vice versa. Governance mechanisms such as ownership structure and accounting information help monitor the performance-compensation link and increase the firm value. As firms often possess characteristics of their own, different governance mechanisms evolve to perform the oversight function. Also,

substitution effect exists among the various governance mechanisms. For instance, ownership structure could take the governance role of accounting information if the latter fails to perform its oversight function.

The following sections discuss the monitoring functions of information disclosure, major shareholders, foreign investment institutions, and managerial ownership as well as the hypotheses we propose.

3.1.1 Major Shareholders versus Information Disclosure

When accounting reports provides insufficient information, market participants will try to collect costly private information (Verrecchia, 1982). Since the cost of information collection often exceeds its benefit, small shareholders usually do not have strong incentives to acquire private information themselves. They rely on the major shareholders to perform the monitoring task. Berle and Means (1932) assert that diffuse ownership structure lowers shareholders' incentives to monitor managerial perquisite-consumption so performance-based compensations should be adopted to reduce agency costs. Schleifer and Vishny (1986) claim that compared with small shareholders, major shareholders of a widely-held company have lower marginal cost of information collection and greater incentives to monitor managers' performance. Managers under the close monitoring of major shareholders will thus work toward the goal of maximizing shareholders' wealth. Agrawal and Mandelker (1990) find evidence supporting the active monitoring hypothesis that shareholders owning a large stake of the company will play a more active role in monitoring the management to enhance firm value. In other words, the existence of large shareholders contributes to the monitoring of firm activities, which then orients the managers toward maximizing firm value.

As stated by La Porta *et al.* (1998), the soundness of a financial accounting system has great impact on the implementation of investor protection regulations. When the regulators of a country provide poor protection for its investors, the governance mechanism will shift from legal protection to major shareholders' overseeing. Bushman and Smith (2001) also find that the less information provided by the financial accounting system, the more monitoring needed from

the major shareholders. Young (2003) regards the timeliness of earnings information as an important major determinant of the corporate governance structure. The governance importance of earnings information decreases when the information provided lacks timeliness. Lin and Hu (2003) find that as major shareholders' ownership increases, board members are more likely to adopt incentive contracts that are contingent upon performance. As indicated by the results of Chang's empirical research (2005), managers of a widely-held company tend to grant more stock option compensations in their own interests because the shareholders cannot efficiently monitor the activities of the management. Liao (2007) claims that the higher percentage of stocks the major shareholders possess, the more attention they pay to the relationship between managerial compensation and earnings quality.

The above studies indicate that major shareholders serve an effective monitoring role because they have lower marginal costs of acquiring and disseminating information, and receive a bigger share of the monitoring benefits owing to their large shareholdings. Prior to January 2003, when the FSB had not mandated the disclosure of bonus information, accounting reports provided insufficient information for investors to evaluate the performance-compensation association. Major shareholders were motivated to collect information and evaluate how managers' compensations were aligned with their performance. Before the disclosure of compensation information is made mandatory, corporate governance relies on the monitoring mechanism of major shareholders. Accordingly, we propose *H1*.

H1: Prior to the mandatory compensation disclosure, major shareholders' ownership has a positive effect on the performance-compensation relationship.

The main criterion of corporate governance is to provide reliable, timely, and transparent information. However, unless requested by laws or regulations, companies usually are reluctant to fully disclose their important information and decisions. Morck *et al.* (2000) find that stock prices do not efficiently reflect firm value in countries whose regulations and laws provide poor investor protection.

Ball *et al.* (2000) conclude that establishing higher standards of common-law reduces the agency cost to monitor the management. In the wake of the Enron and WorldCom financial scandals, US Congress enacted a new law known as Sarbanes-Oxley Act (SOX) in July of 2002. SOX Section 404 mandates information disclosure, monitoring responsibilities, internal controls, and external auditing. Increasing stringency of procedures and requirements for financial reporting is expected to improve information transparency and reduce agency problems.

Performance-contingent compensation plans motivate employees to work toward enhancing firm value. Given disclosure on compensation, shareholders can evaluate whether compensation plans are designed to enhance the firm value. Managers under the oversight of shareholders will implement a compensation plan that is tied to the performance of the firm. Vafeas and Afxentiou (1998) find that compensation disclosure mandated by the SEC strengthens the correlation between performance and compensation. This result upholds the new disclosure rule that aims to improve the governance of public companies. Ke *et al.* (1999) assert that the association between cash bonus and accounting performance is stronger in widely-held companies that disclose more significant information than in closely-held companies that disclose less information. Their results show that within closely-held firms, CEO compensation is based less on objective measures such as accounting information and more on subjective measures. Craighead *et al.* (2004) find that, in the absence of mandatory disclosure, CEO cash compensation is less performance-contingent in widely-held firms than in closely-held firms. Also, with the enforcement of mandatory disclosure, performance-contingent cash compensation plans become more popular in widely-held firms than in closely-held firms.

Ownership structure and information disclosure may substitute each other for governing the performance-compensation link. When compensation information is not disclosed and accounting reports provide insufficient information, small shareholders do not have much incentive to conduct cost-ineffective information collection. Major shareholders, on the other hand, have greater incentive to oversee the management and thus play a critical role in

monitoring the performance-compensation link. After compensation disclosure is mandatory and the governance function of accounting information improves, external investors such as small shareholders are better able to monitor the alignment between compensation and performance. Different governance mechanisms involve different costs. The cost of information disclosure by companies is generally lower than that of information collection by shareholders. Hence, it is expected that mandatory information disclosure should improve the governing function of accounting information and reduce major shareholders' monitoring role. That is, compensation information disclosure substitutes monitoring mechanism of major shareholders for governance mechanism of accounting information. Consequently, we propose *H2*.

H2: After mandatory compensation disclosure, the positive effect of major shareholders' ownership on the performance-compensation relation is decreased.

3.1.2 Foreign Investment Institutions Versus Information Disclosure

Institutional investors also play an important monitoring role in corporation governance. Schleifer and Vishny(1986)point out that institutional investors have more abilities and incentives to monitor managers and to enhance the relationship between compensation and performance. Pound (1988) advocates the efficient monitoring hypothesis that institutional investors have lower monitoring costs because of their professional knowledge and expertise. Denis (2001) asserts that institutional investors can monitor and restrain managers' self-interested behavior by either private recommendation or negotiation. Therefore, compared with regular shareholders, institutional investors are more efficient in monitoring the management to increase company value. Hartzell and Starks (2003) find that institutional investor ownership has a significant negative impact on managerial compensation. Yeh at al. (2002) indicate that compared with small shareholders, institutional investors, holding relatively more shares, are more motivated to protect their interests by monitoring management activities. Song (2006) finds that active institutional investors are more capable of preventing directors'

self-interested behavior than are passive institutional investors.

All taken together, the more shares institutional investors own, the more they are motivated to monitor the activities of the management. In Taiwan, employee bonus under the regulation of commercial accounting law used to be regarded as earning distribution before 2006. It wasn't until 1998 when accounting treatment of employee bonus in Taiwan was highly criticized by foreign institutional investors, had the capital market started to regard employee bonus as company expenses. When compensation disclosure is not mandatory and compensation reports provide insufficient information, foreign institutional investors with their professional expertise act as the main corporate governance mechanism. Formally,

H3: Prior to mandatory compensation disclosure, institutional investor ownership has a positive effect on the performance-compensation relationship.

Foreign investment institution ownership and information disclosure interact with each other to impact the performance-compensation relationship. When compensation disclosure is not mandatory and accounting reports provide insufficient information, foreign institutional investors have greater incentives to utilize their professional knowledge for monitoring firm activities. After mandatory compensation disclosure, accounting information augments its monitoring role and accordingly decreases the positive effect of foreign investment institution ownership on the performance-compensation relationship. Consequently, we propose

H4: After mandatory compensation disclosure, the positive effect of foreign investment institution ownership on the performance-compensation relationship decreases.

3.1.3 Managerial Ownership versus Information Disclosure

The effect of managerial ownership on the performance-compensation relationship is opposite to the convergence-of-interest hypothesis and the

entrenchment hypothesis. Agency theory argues that the separation of ownership and management results in managers' perquisite-consumption behavior in the pursuit of self interests and thus harms the firm value. An increase in managerial ownership aligns managers' interests with shareholders' interests and prevents the losses resulting from managers' perquisite-consumption behaviors (Jensen and Meckling, 1976). Core and Guay (1999) find that incentive-based compensation such as stock option, a corporate governance mechanism, reduces the agency problems between shareholders and managers. Watson Wyatt (2008) surveys S&P 1500 companies and finds that total shareholder return is about 30% higher in companies with more managerial ownership than in those with less managerial ownership⁵. In order to improve the correlation between top executive's compensation and shareholders' equity, many American firms have established Executive Share Ownership Guidelines. Based on the Executive Share Ownership Guideline, top executives should not sell their company stocks when their shareholding does not meet the lowest required level. Tsai (2007) finds that the positive relation between the timeliness of earnings information and measures of manager compensation-earnings sensitivity increases when integration degree between board incentive and shareholder incentive improved. The higher the managerial ownership, the more the shareholders' and the managers' interests converge. Managerial ownership motivates managers to adopt an effective compensation system and strengthens the performance-compensation relationship. Moreover, when board members make compensation decisions, managers with higher ownership have more power to decide their own compensation package. With the alignment of shareholder and manager interests, managers tend to adopt a compensation policy that increases firm value. Hence, we conclude that managerial ownership has a positive effect on the performance-compensation relationship (Finkelstein and Hambrick, 1989).

Nevertheless, Holmstrom (1979) suggests that while performance-contingent compensation contracts, such as variable compensation, align the interests of shareholders and managers, they also expose managers to

⁵ Chi, M. (2008), From Four Large View Look Advanced Charge Reward Design, Watson Wyatt, Available at: <http://www.watsonwyatt.com/asia-pacific/taiwan/pubs/articles/2008>. (In Chinese)

risks. Risk-averse managers will choose a fixed compensation system over a performance-contingent one unless the board members impose pressure them not to (Gomez-Mejia *et al.*, 1987). The more shares the managers own, the more power they possess to act against the monitor of the board members. In the pursuit of their self-interests, managers may increase perquisite-consumption or choose policies that hurt shareholders' wealth. Jensen and Ruback (1983) find that managers controlling the majority of the shares may maintain their power and self-interests by choosing alternatives that are less beneficial to the shareholders. Yermack (1997) find that when actual level of compensation is greater than expected, managers will lower the value of stock option on a grant day. Core and Guay (1999) suggest that managers, being opportunistic, decide the quantity of option in order to increase their compensation. Hung (2004) finds that an increase in top managers' ownership decreases the positive relation between stock compensation and accounting performance. Tsai (2006) asserts that an increase in director ownership decreases the relation between director compensation and firm performance. Therefore, as proposed by the entrenchment hypothesis, when managerial ownership gets higher, the board has less power in constraining managers' decision making. Managers are likely to establish compensation policies such as increasing fixed compensation to promote their own interests. This leads to a decrease in the positive effect of managerial ownership on the performance-compensation relationship.

No previous studies conclude whether the effect of managerial ownership on the performance-compensation relationship is consistent with that proposed by either the convergence-of-interest hypothesis or the entrenchment hypothesis. This paper aims to seek evidence for the following competitive hypothesis:

H5: Under the convergence-of-interest hypothesis, prior to mandatory compensation disclosure, managerial ownership has a positive effect on the performance-compensation relationship.

H6: Under the entrenchment hypothesis, prior to mandatory compensation disclosure, managerial ownership has a negative effect on the performance-compensation relationship.

Mandatory compensation disclosure makes it possible and easy for outside shareholders to gain compensation-related information. Shareholders are thus empowered to monitor whether managers adopt compensation plans that are contingent upon the firm performance. Zeckhauser and Pound [1990] support that mandatory compensation disclosure strengthens corporate governance by helping shareholders exert pressure on the board if necessary. Ball *et al.* (2000) find that common law disclosure guidance reduces the agency costs of monitoring the managers. The governance mechanisms of managerial ownership and information disclosure are interrelated. Increasing transparency of compensation information can lead to the decreasing importance of managerial ownership in corporate governance. Therefore, we expect that under the convergence of interest hypothesis, mandatory compensation disclosure reduces the positive effect of managerial ownership on the relationship between performance and compensation.

Agency problems occur when shareholders and managers have asymmetric information. Mandatory information disclosure reduces the information asymmetry problems and protects shareholders' interests. Bushman and Smith (2001) point out that financial accounting information serves the monitoring function and helps avoid manager opportunism. Lobo and Zhou (2001) and Hunton *et al.* (2006) suggest that information disclosed or transparent information limits managers' manipulation of earnings, and reduces the profits getting from earning management, which in turn discourages managers to manage earnings. Chang and Fang (2006) assert that manipulations of earnings information substantially reduce after the enforcement of the "Information Disclosure Evaluation System". Disclosing compensation information, such as the relationship between compensation and performance, reduces information asymmetry between managers and shareholders, and prevents managers from increasing their personal wealth through excessive compensation. Mandatory compensation disclosure increases managers' risks of engaging in abusive compensation plans. Coulton *et al.* (2003) find a negative association between the transparency of compensation information and the monetary amount of compensation. The government authority regulates the compensation information

disclosure based on persuasion effect. According to the entrenchment hypothesis, mandatory compensation disclosure can increase information transparency, monitor managers' decision making of compensations, and thus consolidate the compensation-performance relationship. *H7* and *H8* are accordingly established based on the above analysis.

H7: Under the convergence-of-interest hypothesis, mandatory compensation disclosure leads to a reduction in the positive effect of managerial ownership on the performance-compensation relationship.

H8: Under the entrenchment hypothesis, mandatory compensation disclosure leads to a reduction in the negative effect of managerial ownership on the performance-compensation relationship.

4. Empirical Results

4.1 Descriptive Statistics and Correlation Analysis

Table 1 presents the descriptive statistics of the variables used in this study. The means of STOCK, ROE, and ROA are \$67,547(in thousands), 16.29%, and 13.48%, respectively. The average values of BIG, FOR, and CEO are 14.66%, 8.27%, and 2.90%, respectively. The means of the controlled variables (SIZE = 15.27 and MVBV = 2.22) signify that the sample is composed of high-growth companies. The BETA of 0.98 is used as the measurement variable of firm risk. Table 2 presents the Pearson correlation matrix for dependent and independent variables. As indicated by the univariate analysis, STOCK is positively related to ROE, ROA, SIZE, and MVBV, implying that employee stock bonus increases with the firm size and performance.

4.2 Empirical Results

4.2.1 ROE as Proxy for Company Performance

Table 3 presents the results of regression model (1), which has strong

explanatory power because the F -value of 53.15 has a significance level of 0.01 and the adjusted R^2 is 0.21. As predicted, before mandatory disclosure of bonus information, the coefficient of ROE*BIG (172.86) is positive and significant (t -stat = 2.26). This means that when information governance is ineffective, major shareholders will monitor the performance-compensation relationship. Thus, we find support for $H1$. Furthermore, the coefficient of ROE*BIG*DIS (-143.16) is negative and significant (t -stat = -2.95). This means that mandatory compensation disclosure strengthens information governance function and reduces the positive effect of major shareholders on the relation between compensation and performance. This finding supports $H2$. The control variable SIZE has a coefficient of 72,614, which is positive and significant (t -stat = 15.93), meaning that more stock bonus is distributed as the size of the company increases.

Table 4 presents the results of regression model (2), which also has strong explanatory power because the F -value of 80.72 has a significance level of 0.01 and the adjusted R^2 is 0.29. The coefficient of ROE*FOR (500.04) is positive and significant (t -stat = 7.80). As stated in $H3$, before the mandatory compensation information disclosure, ownership by foreign investment institutions exerts positive effect on the performance-compensation relationship. The coefficient of ROE*FOR*DIS (-290.14) is negative and significant (t -stat = -6.07), implying that information disclosure reduces foreign investment institutions' importance in compensation oversight. Accordingly, $H4$ is sustained.

Table 5 presents the results of regression Model (3), which has strong explanatory power because the F -value of 52.24 has a significance level of 0.01 and the adjusted R^2 is 0.20. The coefficient of ROE*CEO (-276.27) is negative and significant (t -stat = -2.09), meaning that managers make compensation decisions to seek self-interests rather than to maximize shareholder wealth. Managerial stock ownership exerts negative effect on the performance-compensation relationship; hence, $H6$ is supported.

Based on the entrenchment hypothesis, information disclosure facilitates the compensation oversight job of regular shareholders, which then leads managers to adopt performance-contingent rewards. The coefficient of ROE*CEO*DIS (61.92) is positive and non-significant (t -stat = 0.55). It shows

that information disclosure fails to reduce the negative effect of managerial ownership on the relationship between performance and compensation. This finding does not support *H8*.

Table 1
Descriptive Statistics

Variables	Mean	Standard Deviation	Max	Min
<i>STOCK</i>	67547.00	242315.00	4674426	0.00
<i>ROE</i>	16.29	11.31	79.10	0.02
<i>ROA</i>	13.48	8.40	56.85	-7.24
<i>BIG</i>	14.66	8.65	55.95	0.01
<i>FOR</i>	8.27	11.41	71.16	0.01
<i>CEO</i>	2.90	3.49	25.16	0.01
<i>SIZE</i>	15.27	1.42	20.33	11.90
<i>MVBV</i>	2.22	1.63	22.53	0.33
<i>BETA</i>	0.98	0.29	1.98	-1.15

Variable Definitions: *STOCK* = employee stock bonus; *PER* = measurement of firm performance, defined as *ROA* and *ROE*; *ROE* = return on equity, defined as net income divided by average shareholders equity; *ROA* = return on assets, defined as income before interest and tax divided by average total assets; *BIG* = major shareholder ownership, defined as major shareholder stockholding divided by outstanding shares; *FOR* = ownership of foreign investment institution, defined as foreign investment institution stockholding divided by outstanding shares; *CEO* = managerial ownership, defined as managerial stockholding divided by outstanding shares; *SIZE* = firm size, defined as natural logarithm of assets; *MVBV* = ratio of market-to-book, defined as market value of common equity divided by the book value of common equity; *BETA* = firm risk, defined as firm systematic risk.

Table 2
Pearson Correlation Analysis

Variables	STOCK	ROE	ROA	BIG	FOR	CEO	SIZE	MVBV	BETA
STOCK	1.00								
ROE	0.10***	1.00							
ROA	0.17***	0.88***	1.00						
BIG	0.02	0.06**	0.07***	1.00					
FOR	0.38***	0.08***	0.10***	0.13***	1.00				
CEO	-0.10***	0.15***	0.13***	-0.11***	-0.13***	1.00			
SIZE	0.44***	0.12***	0.02	-0.06**	0.38***	-0.13***	1.00		
MVBV	0.12***	0.63***	0.58***	-0.01	0.14***	0.15***	0.11***	1.00	
BETA	0.19***	-0.09***	-0.07**	-0.25***	0.05*	-0.13***	0.41***	-0.06**	1.00

Variable definitions are given in Table 2. (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively.

Table 3
**The Effect of Major Shareholders Ownership and Employee Bonus
information Disclosure on the Performance-Compensation Relationship: Using
Return on Equity (ROE) as proxy for Firm Performance**

$$STOCK_{it} = \alpha_0 + \alpha_1 ROE_{it} + \alpha_2 BIG_{it} + \alpha_3 ROE_{it} * BIG_{it} + \alpha_4 ROE_{it} * BIG_{it} * DIS_{it} + \alpha_5 SIZE_{it} + \alpha_6 MVBV_{it} + \alpha_7 BETA_{it} + \varepsilon_{it}$$

Variables	Sign	Coefficient	t-statistic
INTERCEPT		-1101695.00***	-16.85
ROE		-344.68	-0.31
BIG		782.55	0.64
ROE*BIG	+	172.86**	2.26
ROE*BIG*DIS	-	-143.16***	-2.95
SIZE		72614.00***	15.93
MVBV		7557.22	1.60
BETA		24478.00	1.07
Adj R ²		0.21	
F-value		53.15***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

Table 4
The Effect of Foreign Institutional Ownership and Employee Bonus
information Disclosure on the Performance-Compensation Relationship: Using
Return on Equity (ROE) as Proxy for Firm Performance

$$STOCK_{it} = \beta_0 + \beta_1 PER_{it} + \beta_2 ROE_{it} + \beta_3 ROE_{it} * FOR_{it} + \beta_4 ROE_{it} * FOR_{it} * DIS \\ + \beta_5 SIZE_{it} + \beta_6 MVBV_{it} + \beta_7 BETA_{it} + \varepsilon_{it}$$

Variables	Sign	Coefficient	<i>t</i> -statistic
<i>INTERCEPT</i>		-836133.00***	-13.14
<i>ROE</i>		-1077.13	-1.47
<i>FOR</i>		720.02	0.72
<i>ROE*FOR</i>	+	500.04***	7.80
<i>ROE*FOR*DIS</i>	-	-290.14***	-6.07
<i>SIZE</i>		55232.00***	11.81
<i>MVBV</i>		1293.80	0.29
<i>BETA</i>		29327.00	1.38
<i>Adj R²</i>		0.29	
<i>F-value</i>		80.72***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

Table 5

**The Effect of Manager Ownership and Employee Bonus information
Disclosure on the Performance-Compensation Relationship:
Using Return on Equity (ROE) as Proxy for Firm Performance**

$$STOCK_{it} = \gamma_0 + \gamma_1 ROE_{it} + \gamma_2 CEO_{it} + \gamma_3 ROE_{it} * CEO_{it} + \gamma_4 ROE_{it} * CEO_{it} * DIS \\ + \gamma_5 SIZE_{it} + \gamma_6 MVBV_{it} + \gamma_7 BETA_{it} + \varepsilon_{it}$$

<i>Variables</i>	<i>Sign</i>	<i>Coefficient</i>	<i>t-statistic</i>
<i>INTERCEPT</i>		-1088234.00***	-16.71
<i>ROE</i>		1055.33	1.33
<i>CEO</i>		1034.67	0.35
<i>ROE*CEO</i>	?	-276.27**	-2.09
<i>ROE*CEO*DIS</i>	?	61.92	0.55
<i>SIZE</i>		72284.00***	15.73
<i>MVBV</i>		12895.00***	2.72
<i>BETA</i>		16096.00	0.72
<i>Adj R²</i>		0.20	
<i>F-value</i>		52.24***	

Variable definitions are given in Table 2. DIS, a indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

4.2.2 ROA as Proxy for Firm Performance

Table 6 presents the results of model (1) with Return on Assets (ROA) as the proxy for firm performance. The coefficient of ROA*BIG (451.01) is positive and significant (t-stat = 4.78). This finding is consistent with *HI* that before mandatory disclosure of compensation information, major shareholders ownership has positive effect on the performance-compensation relationship. The

Table 6
The Effect of Major Shareholders Ownership and Employee Bonus
Information Disclosure on the Performance-Compensation
Relationship: Using Return on Assets (ROA) as Proxy for Firm Performance

$$STOCK_{it} = \alpha_0 + \alpha_1 ROA_{it} + \alpha_2 BIG_{it} + \alpha_3 ROA_{it} * BIG_{it} + \alpha_4 ROA_{it} * BIG_{it} * DIS \\ + \alpha_5 SIZE_{it} + \alpha_6 MVBV_{it} + \alpha_7 BETA_{it} + \varepsilon_{it}$$

<i>Variables</i>	Sign	Coefficient	t-statistic
<i>INTERCEPT</i>		-111741.00***	- 17.17
<i>ROA</i>		2376.24	1.61
<i>BIG</i>		-1696.03	-1.34
<i>ROA*BIG</i>	+	451.01***	4.78
<i>ROA*BIG*DIS</i>	—	-274.97***	-4.81
<i>SIZE</i>		74015.00***	16.66
<i>MVBV</i>		-8512.06*	-1.90
<i>BETA</i>		20729.00	0.93
<i>Adj R²</i>		0.24	
<i>F-value</i>		64.16***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

coefficient of ROA*BIG*DIS (-274.97) is negative and significant (t-stat = -4.81), implying that information disclosure decreases major shareholders' importance in overseeing the performance-compensation relationship. This finding also supports *H2*.

Table 7 shows the results of model (2) with ROA as the proxy for firm performance. The coefficient of ROA*FOR (874.89) is positive and significant (t-stat = 15.97). The coefficient of ROA*FOR*DIS (-3109.48) is negative and significant (t-stat = -3.92). Accordingly, Hypotheses 3 and 4 are sustained.

Table 8 displays the results of regressing the performance-compensation relationship on managerial ownership and compensation information disclosure,

when using ROA as the proxy for firm performance. The coefficient of ROA*CEO (-688.80) is negative and significant (t -stat = -3.95); the coefficient of ROA*CEO*DIS (-74.90) is negative but non-significant (t -stat = -0.52). The results support the entrenchment hypothesis. Mandatory information disclosure does not mitigate the negative impact of managerial stock ownership on the performance-compensation relationship.

Table 7

The Effect of Foreign Institutional Ownership and Employee Bonus Information Disclosure on the Performance-Compensation Relationship: Using Return on Assets (ROA) as Proxy for Firm Performance

$$STOCK_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 FOR_{it} + \beta_3 ROA_{it} * FOR_{it} + \beta_4 ROA_{it} * FOR_{it} * DIS + \beta_5 SIZE_{it} + \beta_6 MVBV_{it} + \beta_7 BETA_{it} + \varepsilon_{it}$$

<i>Variables</i>	<i>Sign</i>	<i>Coefficient</i>	<i>t-statistic</i>
<i>INTERCEPT</i>		-788037.00***	-13.21
<i>ROA</i>		625.55	0.54
<i>FOR</i>		-7767.99***	-8.17
<i>ROA*FOR</i>	+	874.89***	15.97
<i>ROA*FOR*DIS</i>	-	-3109.48***	-3.92
<i>SIZE</i>		54588.00***	12.73
<i>MVBV</i>		-10121.00**	-2.49
<i>BETA</i>		26933.00	1.38
<i>Adj R²</i>		0.39	
<i>F-value</i>		130.92***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The t -statistics are based on White (1980) standard errors.

Table 8

The Effect of Managerial Ownership and Employee Bonus information Disclosure on the Performance-Compensation Relationship: Using Return on Assets (ROA) as Proxy for Firm Performance

$$STOCK_{it} = \gamma_0 + \gamma_1 ROA_{it} + \gamma_2 CEO_{it} + \gamma_3 ROA_{it} * CEO_{it} + \gamma_4 ROA_{it} * CEO_{it} * DIS + \gamma_5 SIZE_{it} + \gamma_6 MVBV_{it} + \gamma_7 BETA_{it} + \varepsilon_{it}$$

Variables	Sign	Coefficient	t-statistic
<i>INTERCEPT</i>		-1164127.00***	-18.13
<i>ROA</i>		8222.60***	8.07
<i>CEO</i>		7100.23**	2.46
<i>ROA*CEO</i>	?	-688.80***	-3.95
<i>ROA*CEO*DIS</i>	?	-74.90	-0.52
<i>SIZE</i>		73240.00***	16.38
<i>MVBV</i>		-1918.30	-0.42
<i>BETA</i>		18640.00	0.86
<i>Adj R²</i>		0.24	
<i>F-value</i>		63.35***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

4.3 Additional Analysis

4.3.1 The Roles of Major Shareholders and Foreign Investment Institution Ownership in Overseeing Managerial Entrenchment Behavior

This paper aims to examine the effect of mandatory compensation disclosure on the performance-compensation relationship. Offering employee stock bonus increases the level of managerial ownership. Managers used to have a great deal of power over compensation policy making before compensation information disclosure became mandatory. Under the entrenchment of managers,

managerial ownership exerts a negative effect on the performance-compensation relationship. Unexpectedly, this negative effect does not decrease after compensation information disclosure is made mandatory even though the governance ability of information disclosure is supposed to increase. We then investigate whether managerial ownership, in the presence of ownership by major shareholders or foreign investment institutions, reduces its negative effect on the performance-compensation relationship⁶. Model (4) is formed by adding major shareholders ownership to Model (3), and Model (5) by adding foreign investment institution ownership.

$$\begin{aligned}
 STOCK_{it} = & \lambda_0 + \lambda_1 PER_{it} + \lambda_2 BIG_{it} + \lambda_3 CEO_{it} + \lambda_4 PER_{it} * BIG_{it} + \lambda_5 PER_{it} * BIG_{it} * DIS \\
 & + \lambda_6 PER_{it} * CEO_{it} + \lambda_7 PER_{it} * CEO_{it} * DIS + \lambda_8 SIZE_{it} + \lambda_9 MVBV_{it} \\
 & + \lambda_{10} BETA_{it} + \varepsilon_{it}
 \end{aligned} \tag{4}$$

$$\begin{aligned}
 STOCK_{it} = & \theta_0 + \theta_1 PER_{it} + \theta_2 FOR_{it} + \theta_3 CEO_{it} + \theta_4 PER_{it} * FOR_{it} + \theta_5 PER_{it} * FOR_{it} * DIS \\
 & + \theta_6 PER_{it} * CEO_{it} + \theta_7 PER_{it} * CEO_{it} * DIS + \theta_8 SIZE_{it} + \theta_9 MVBV_{it} \\
 & + \theta_{10} BETA_{it} + \varepsilon_{it}
 \end{aligned} \tag{5}$$

The regression results of model (4) with ROA as proxy for firm performance is displayed in Table 9. The coefficient of ROA*BIG (435.03) is positive and significant (t -stat = 4.44). The coefficient of ROA*BIG*DIS (-348.44) is negative and significant (t -stat = -5.43). The results are similar to those of Model (1). Before compensation information disclosure is made mandatory, managerial ownership has a negative effect on the performance-compensation relationship (coefficient = -892.38, t -stat = -4.90),

⁶ Multi-collinearity problem was found among the variables of major shareholders' ownership, foreign investment institutions' ownership, and managerial ownership in the model.

which supports the entrenchment hypothesis. After mandatory compensation information disclosure, managerial ownership exerts a positive effect on the performance-compensation relationship (coefficient = 325.87, t -stat = 2.02). The results, while supporting $H8$, are divergent from the empirical result of Model (3). We suspect that information disclosure can reduce managers' self-interested behavior because major shareholders possess great incentive to monitor compensation plans. Mandatory disclosure of bonus information facilitates major shareholders' job of overseeing compensation plans and thus improves the governance function of information disclosure. Similar empirical results are achieved either by using ROE or by using ROA as the proxy for firm performance.

Table 0 presents the regression results of model (5) with ROA as the proxy for firm performance. Before mandatory compensation information disclosure, foreign investment institution ownership has a positive effect on the performance-compensation relationship (ROA*FOR coefficient = 849.87, t -stat = 15.48). The mandatory compensation information disclosure reduces the importance of foreign investment institution in monitoring the performance-compensation relationship (ROA*FOR*DIS coefficient = -4500.85, t -stat = -4.41). The results are similar to those of model (2). Moreover, managerial ownership has a negative effect on the performance-compensation relationship (ROA*CEO coefficient = -632.46, t -stat = -3.72) before mandatory compensation information disclosure and a positive effect (ROA*CEO*DIS coefficient = 306.07, t -stat = 1.85) after mandatory disclosure. The results of model (5) are different from those of model (3). We suspect that foreign investment institutions have greater incentive to monitor managers' self-interested behavior. Mandatory disclosure makes the job of compensation oversight easier for foreign investment institutions. Mandatory disclosure thus improves the governance function of compensation information disclosure and decreases the negative effect of managerial ownership on the performance-compensation relationship.

Table 9

The Effect of Major Shareholders Ownership, Manager Ownership and Employee Bonus information Disclosure on the Performance-Compensation Relationship: Using Return on Assets (ROA) as Proxy for Firm Performance

$$\begin{aligned}
 STOCK_{it} = & \lambda_0 + \lambda_1 ROA_{it} + \lambda_2 BIG_{it} + \lambda_3 CEO_{it} + \lambda_4 ROA_{it} * BIG_{it} + \lambda_5 ROA_{it} * BIG_{it} * DIS \\
 & + \lambda_6 ROA_{it} * CEO_{it} + \lambda_7 ROA_{it} * CEO_{it} * DIS + \lambda_8 SIZE_{it} + \lambda_9 MVBV_{it} \\
 & + \lambda_{10} BETA_{it} + \varepsilon_{it}
 \end{aligned}$$

Variables	Sign	Coefficient	t-statistic
<i>INTERCEPT</i>		-1144997.00***	-17.14
<i>ROA</i>		5892.31	3.50
<i>BIG</i>		-990.14	-0.78
<i>CEO</i>		6324.79**	2.19
<i>ROA*BIG</i>	+	435.03***	4.44
<i>ROA*BIG*DIS</i>	-	-348.44***	-5.43
<i>ROA*CEO</i>	?	-892.38***	-4.90
<i>ROA*CEO *DIS</i>	?	325.87**	2.02
<i>SIZE</i>		73098.00***	16.51
<i>MVBV</i>		-4358.14	-0.96
<i>BETA</i>		20376.00	0.91
<i>Adj R²</i>		0.25	
<i>F-value</i>		48.66***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

Table 10

The Effect of Foreign Institutional Ownership, Manager Ownership, and Employee Bonus information Disclosure on the Performance-Compensation Relationship: Using Return on Assets (ROA) as Proxy for Firm Performance

$$STOCK_{it} = \theta_0 + \theta_1 ROA_{it} + \theta_2 FOR_{it} + \theta_3 CEO_{it} + \theta_4 ROA_{it} * FOR_{it} + \theta_5 ROA_{it} * FOR_{it} * DIS_{it} + \theta_6 ROA_{it} * CEO_{it} + \theta_7 ROA_{it} * CEO_{it} * DIS_{it} + \theta_8 SIZE_{it} + \theta_9 MVBV_{it} + \theta_{10} BETA_{it} + \varepsilon_{it}$$

Variables	Sign	Coefficient	t-statistic
INTERCEPT		-813024.00***	-13.36
ROA		-3429.13**	2.50
FOR		-7610.34***	-8.01
CEO		4257.59*	1.65
ROA*FOR	+	849.87***	15.48
ROA*FOR*DIS	-	-4500.85***	-4.41
ROA*CEO	?	-632.46***	-3.72
ROA*CEO*DIS	?	306.07*	1.85
SIZE		54763.00***	12.80
MVBV		-7658.27*	-1.87
BETA		27169.00	1.39
Adj R ²		0.40	
F-value		94.06***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The t-statistics are based on White (1980) standard errors.

4.3.2 Adding Employee Bonus Information Disclosure and Firm Performance of Previous Year as Independent Variables

In Models (1), (2) and (3), we use the dummy variable of employee bonus information disclosure and its interaction term with ownership structure to test the

effect of bonus information disclosure on corporate governance. The dummy variable of employee bonus information disclosure is not treated as an independent variable in any of the three regression models. We then add the dummy variable of employee bonus information disclosure and firm performance of the previous year into models (1), (2) and (3) because firm performance of the previous year can impact the amount and type of employee bonus of the current year. We use ROA as the proxy for firm performance and present the regression results in Table 11. The F -value of 48.68 has a significance level of 0.01 and the adjusted R^2 is 0.24. The coefficient of ROA*BIG (514.29) is positive and significant (t -stat = 4.68). After the mandatory compensation information disclosure, the coefficient of ROA*BIG*DIS (-340.55) is negative and significant (t -stat = -4.22). These results are similar those results of model (1), providing further support for Hypotheses 1 and 2.

Table 12 displays the effect of foreign investment institution and compensation information disclosure on the performance-compensation relationship. The F -value of 105.86 has a significance level of 0.01 and the adjusted R^2 is 0.41. The coefficient of ROA*FOR (1096.92) is positive and significant (t -stat = 16.20). After the mandatory compensation information disclosure, the coefficient of ROA*FOR *DIS (-265.95) is negative and significant (t -stat = -4.72). These results are similar those of Model (2), also supporting Hypotheses 3 and 4.

Table 13 shows the effect of managerial ownership and compensation information disclosure on the performance-compensation relationship. The F -value of 48.77 in this model has a significance level of 0.01 and the adjusted R^2 is 0.24. The coefficient of ROA*CEO (-764.34) is negative and significant (t -stat = -4.6) after the mandatory compensation information disclosure. The coefficient of ROA*CEO*DIS (59.05) is positive but non-significant (t -stat = 0.36). These results are also similar to those of Model (3), supporting $H5$ but not $H6$.

As indicated by the above analysis, adding the dummy variable of employee bonus information disclosure and corporation performance of the previous year as independent variables does not change the regression results. Major shareholders and foreign institutional investors can supervise the

performance-compensation relationship before information disclosure is mandatory. Mandatory information disclosure helps improve the governance function of accounting information, which then reduces the governing roles of major shareholders and foreign investment institutions. Before compensation information disclosure is made mandatory, the negative effect of managerial ownership on the performance-compensation relationship supports the entrenchment hypothesis. After mandatory, information disclosure still fails to perform its governance function to reduce managers' self-interested behavior.

Table 11
The Effect of Major Shareholders Ownership and Employee Bonus Information Disclosure on the Performance-Compensation Relationship: Adding Employee Bonus Information Disclosure and Corporation Performance of Previous Year as Independent Variables

$$STOCK_{it} = \alpha_0 + \alpha_1 ROA_{it} + \alpha_2 BIG_{it} + \alpha_3 DIS_{it} + \alpha_4 ROA_{it} * BIG_{it} + \alpha_5 ROA_{it} * BIG_{it} * DIS_{it} + \alpha_6 ROA_{it-1} + \alpha_7 SIZE_{it} + \alpha_8 MVBV_{it} + \alpha_9 BETA_{it} + \epsilon_{it}$$

Variables	Sign	Coefficient	t-statistic
<i>INTERCEPT</i>		-1141560***	-16.60
<i>ROA</i>		3035.28*	1.84
<i>BIG</i>		-1962.77	-1.49
<i>DIS</i>		20847	1.03
<i>ROA*BIG</i>	+	514.29***	4.68
<i>ROA*BIG*DIS</i>	-	-340.55***	-4.22
<i>ROA_{it-1}</i>		-994.97	-1.16
<i>SIZE</i>		75268***	16.42
<i>MVBV</i>		-8045.45*	-1.69
<i>BETA</i>		17346	0.74
<i>Adj R²</i>		0.24	
<i>F-value</i>		48.68***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and

(0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

Table 12

The Effect of Foreign Institutional Investors Ownership and Employee Bonus Information Disclosure on the Performance-Compensation Relationship: Adding Employee Bonus Information Disclosure and Corporation Performance of Previous Year as Independent Variables

$$STOCK_{it} = \alpha_0 + \alpha_1 ROA_{it} + \alpha_2 FOR_{it} + \alpha_3 DIS_{it} + \alpha_4 ROA_{it} * FOR_{it} + \alpha_5 ROA_{it} * FOR_{it} * DIS_{it} + \alpha_6 ROA_{it-1} + \alpha_7 SIZE_{it} + \alpha_8 MVBV_{it} + \alpha_9 BETA_{it} + \varepsilon_{it}$$

Variables	Sign	Coefficient	<i>t</i> -statistic
<i>INTERCEPT</i>		-778233***	-12.39
<i>ROA</i>		-1100.63	-1.04
<i>FOR</i>		-7644.96***	-7.91
<i>DIS</i>		-7313.32	-0.5
<i>ROA*FOR</i>	+	1096.92***	16.20
<i>ROA*FOR*DIS</i>	-	-265.95***	-4.72
<i>ROA_{it-1}</i>		-1167.84	-1.54
<i>SIZE</i>		55110***	12.57
<i>MVBV</i>		-9223.47**	-2.21
<i>BETA</i>		19688	0.98
<i>Adj R²</i>		0.41	
<i>F-value</i>		105.86***	

Variable definitions are given in Table 2. *DIS*, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

Table 13

The Effect of Manager Ownership and Employee Bonus Information Disclosure on the Performance-Compensation Relationship: Adding Employee Bonus Information Disclosure and Corporation Performance of Previous Year as Independent Variables

$$STOCK_{it} = \alpha_0 + \alpha_1 ROA_{it} + \alpha_2 CEO_{it} + \alpha_3 DIS_{it} + \alpha_4 ROA_{it} * CEO_{it} + \alpha_5 ROA_{it} * CEO_{it} * DIS_{it} + \alpha_6 ROA_{it-1} + \alpha_7 SIZE_{it} + \alpha_8 MVBV_{it} + \alpha_9 BETA_{it} + \varepsilon_{it}$$

Variables	Sign	Coefficient	t-statistic
<i>INTERCEPT</i>		-1144630***	-16.92
<i>ROA</i>		9160.93***	7.37
<i>CEO</i>		6641.27**	2.20
<i>DIS</i>		-35561**	-2.22
<i>ROA*CEO</i>	?	-764.34***	-4.6
<i>ROA*CEO *DIS</i>	?	59.05	0.36
<i>ROA_{it-1}</i>		-710.31	-0.82
<i>SIZE</i>		74603***	16.20
<i>MVBV</i>		-4859.29	-1.01
<i>BETA</i>		10981	0.48
<i>Adj R²</i>		0.24	
<i>F-value</i>		48.77***	

Variable definitions are given in Table 2. DIS, an indicator variable, equals 0 if observations are from 1998-2001 (pre-mandatory disclosure) and equals 1 if from 2002-2005 (post-mandatory disclosure). (*), (**), and (***) represent being statistically significant at (0.1), (0.05), and (0.01) levels, respectively. The *t*-statistics are based on White (1980) standard errors.

5. Conclusions

The topic of corporate governance has gained prominence worldwide after the 1997 Asian financial crisis and the outbreak of a series of financial scandals and accounting frauds such as the Enron and WorldCom cases in the United States. The foundation of corporate governance lies in information transparency. Accurate and transparent accounting information helps companies effectively allocate their resources and efficiently manage their operations to achieve business goals. Divergent from the practices of International Accounting Standards, companies in Taiwan used to treat employee bonus as an earning distribution item, which underestimates the costs and overstates the earnings of the companies. In order to improve information transparency, the SFB mandated publicly issued companies to disclose information about employee bonus and executive compensation commencing January of 2003. The purposes of offering employee compensation are to reduce agency problems between managers and shareholders, encourage employees to work hard, and improve firm performance. A good compensation plan should be closely linked to firm performance. To prevent managers from pursuing self-interests at the expense of shareholder interests, some governance mechanisms are needed to establish a performance-contingent compensation plan.

Substitution effect exists among various corporate governance mechanisms. When one corporate governance mechanism fails to perform its monitoring function, the other mechanism will rise to serve the purpose. For instance, accounting information and ownership structure can substitute for each other in corporate governance. Our empirical results show that (1) when compensation information is not disclosed and accounting reports provide insufficient information, ownership structure provides major shareholders and foreign investment institutions incentives to perform costly monitoring activity. After information disclosure is made mandatory, timely and public information improves the governance efficiency of accounting information, thus reducing the importance of major shareholders and foreign investment institutions in monitoring the performance-compensation relationship. (2) Consistent with the

entrenchment hypothesis, managerial ownership exerts a negative effect on the performance-compensation relationship. This negative effect does not decrease after information disclosure of employee compensation is made mandatory. In conclusion, our empirical evidence shows that information disclosure mandated by the SFB enhances information transparency and improves corporate governance.

In August 2006, the Financial Supervisory Commission announced that companies must recognize employee bonus and executive compensation as expenses in their financial reports effective as of 2008. Do expense recognition and mandatory disclosure have differential effects on corporate governance? According to regulators of accounting standards, market participants value the substance of information rather than the presentation of information. In other words, information being recognized or disclosed in the statement provides the same informativeness for investors. Aboody (1996) studies the valuation relevance of stock-based employee compensation that is disclosed but not recognized in determining net income under Statement of Financial Accounting Standards (SFAS) No. 123. He finds that stock-based compensation has a negative relation with share price, consistent with the view that investors see compensation as an expense of the firm.

Some researchers find that market participators view disclosed information less reliable than recognized financial statement items. This standpoint weighs recognized financial information greater value relevance (Bernard and Schipper, 1994; Cotter and Zimmer, 2003). Future research can investigate whether information disclosure and recognition of employee compensation have differential effects on corporation governance.

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