

Independent directors, Return to Shareholders and Executive Compensation

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On the Association between Corporate Governance and Employee Stock Bonus

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Abstract

There have been constant debates over employee stock bonus in recent years. The issue is not only related to accounting procedures that whether it should be expensed or measured by fair value, but also on the potential wealth transfer from shareholders to employees. The purpose of this study is to examine what is the role that corporate governance plays in restraining firms from overpaying stock bonus to employees when investors have not been favorably compensated by their returns from the stock market.

The results show that there is a negative association between the independence of board of directors and the ratio of employee stock bonus to the current earnings, especially when firms' stocks do not perform well during the year. We also find that the restraining function of board independence is more effective in non-family- controlled companies than their counterparts. It might be that the agency problems are more severe in family-controlled firms where family shareholder holds both the positions as a board director as well as the CEO who is eligible for receiving stock bonus. As such, it is more difficult for independent directors and supervisors to restrain the board's decision from distributing excessive stock bonus to employees, and small investors' interests are easily sacrificed.

Keywords: Independent director, Independent supervisor, Employee Stock Bonus, Family-controlled company, Corporate governance

1. Introduction

There have been constant debates over employee stock bonus in recent years. The issue is not only related to accounting procedures that whether it should be expensed or measured by fair value, but also on the potential wealth transfer from shareholders to employees. According to the Taiwan's Company Law, if the maximum amount or distribution ratio of stock bonus has been set in the articles of the company, the board of directors can determine the current distribution ratio of stock bonus to employees without prior approval by the shareholders if the ratio does not exceed the established ceiling ratio. It is quite common that board directors also work as top managements who are beneficiaries of the stock bonus. Obviously, it is highly plausible that board of directors will approve undue stock bonus for themselves. As most of the listed companies in Taiwan specify their maximum amount or distribution ratio of stock bonus in their company articles, consequently, small shareholders having no incentive and sufficient voting rights are at the mercy of the board of directors. The purpose of our study is to examine the impact of corporate governance on the protection of the wealth of outside shareholders. Specifically, we investigate whether independent directors and supervisors are effective in restraining the board from over-paying stock bonus to employees.

Some argue that stock bonus to employees will effectively reduce the agency cost between investors and management (Chang, 1990; Change, 2000; Liu, 2002). It helps align the incentives of employees with the interests of shareholders and will maximize the wealth of the shareholders. It will motivate the employees to improve their performance and increase the value of the company. On the other hand, some concern that the free distribution of stock bonus to employees is essentially to reduce the earnings available to the original shareholders. Therefore, the resulting effect of stock bonus to employees on the value of shareholders is an empirical question. Specifically, it depends on the relative strength of these two effect—the incentive effect and the entrenchment effect (Chang, 1999; Wu, 2000).

The GAAP in Taiwan currently does not require the companies to record stock bonuses as expenses. Consequently the reported earnings are over stated for companies that issue stock bonuses. The over statement of earnings is getting worse year by year, especially in the information technology (hereafter we refer it as IT) industry. It is shown that the reported earnings in IT companies in 1996 are on average over stated by 55% (Chang, 1999). It is not surprising that on July 18th, 2002, the headline news of the Asia Wall Street Journal furiously accuses that too much stock bonuses are being paid to employees and which causes the erosion in the interests of the foreign institutional investors who will in turn take actions against the listed companies that deliver unwarranted stock bonus to employees.

As mentioned above, it is difficult for small shareholders to monitor the board's decision on stock bonus. What make the situation even worse are the poor corporate governance and the weak legal system in protecting the interests of small shareholders in Taiwan. Overall, there is lack of effective mechanism to restrain firms from transferring wealth from small shareholders to employees. Classens et al., (1999), Yeh (2000), Joseph and Wang (2000), and Lin (2001) indicate that there exists controlling

shareholder in Taiwan's companies and these controlling shareholders usually utilize pyramid structure to enhance their controlling right. Controlling shareholders also arrange high-level management that can be trusted by them or introduce their relatives to serve as directors. Controlling shareholder can also perform both as the chief executive officer and the chairman of the board of directors. As a result, the board may pinch the wealth out of the companies by issuing excessive stock bonuses to themselves. The majority of the investors in Taiwan's stock market are individual shareholders instead of institutional investors also make it difficult to hinder the controlling shareholders. In sum, the undue distribution of stock bonuses seems not being well scrutinized in Taiwan.

In order to improve the corporate governance, the Taiwan Securities Exchange Corporation (TSEC) had amended the regulations of "Taiwan Stock Exchange Listing Rules" to mandate that IPO firms must set up at least two independent directors and one independent supervisor on their boards since February 19, 2002 to enhance corporate governance. Companies that already listed are encouraged, but not required to follow the new rule. Our study is to examine whether independent directors and independent supervisors can restrain stock bonus to employee in those companies that set up independent directors and independent supervisors voluntarily, especially, when investors can not make reasonable returns. If investors do not earn good returns, they would probably concern more about the magnitude of the stock bonus. Similarly, independent directors and supervisors are more likely to address their concern over the distribution of stock bonus and try not to invade the interests of shareholders.

Furthermore, family-controlled companies are popular in Taiwan (Yeh, 2001). As the structure of the board of directors of family-controlled companies are generally different from that of non-family-controlled companies, it is plausible that the influence of independent directors and independent supervisor might be different at these two different types of companies. Therefore, we also examine the differential effectiveness of independent directors and independent supervisors in restraining the distribution of stock bonus between family-controlled companies and non-family-controlled companies.

Few literatures have discussed the relationship between the stock bonus to employees and corporate governance. Fong (2003) examines whether the impact of stock bonus on corporate performance will change under different corporate governance mechanisms. The variables they used to proxy for corporate governance are: the existence of controlling shareholders, the deviation between cash flow right and control right, the majority of the board of directors are served by controlling shareholders and the existence of independent directors and supervisors. Their results show that the effect that stock bonus has on the performance of firm is not dependent on the structure of corporate governance. Our research contributes to existent literature by examining the differential decision formulation regarding the distribution of stock bonus to employees under the situations that shareholders are earning excess returns vis-à-vis shareholders' wealth are decreasing. We believe that the board of directors should be under greater scrutiny when their stock prices are depressed, thus will be more prudent in their decisions on the stock bonus to employees, especially when independent directors and supervisors are present. Additionally, our study also investigates whether the

family-controlling factor will affect the role that independent directors and independent supervisors play in restraining the distribution of stock bonus.

We find that independent directors and independent supervisors are effective in restraining the firm from paying excessive stock bonuses to employees, particularly when the investors are not earning excess returns. We also find that the restraining function of board independence is more effective in non-family-controlled companies than their counterparts. It might be that the agency problems are more severe in family-controlled firms where family shareholder holds both the positions as a board director as well as the CEO who is eligible for receiving stock bonus. As such, it is more difficult for independent directors and supervisors to confine the board's decision on distributing excessive stock bonus to employees, and small investors' interests are not well protected.

The rest of the paper is structured as follows: research hypotheses are discussed first, descriptions on the methodology, variable measurements and data collections are described next, then the empirical results are presented and analyzed, and are followed by our conclusions and suggestions.

2. Research Hypothesis

How would the stock bonus to employees will impact on the valuation of firms has attracted many discussions. Some argue that stock bonus to employee can align the incentive of employee with the interest of shareholders to maximize the wealth of the shareholders. It will motive the employees to improve their performance and consequently increase the value of the company. Others concern that the stock bonus to employees are free distribution to employees so it will reduce the retain earnings available to the original shareholders. In addition, there is no requirement on the holding period of those stocks; therefore, the incentive effect of stock bonus is only temporary at best. Therefore, the resulting effect of stock bonus to employees on the value of shareholders is an empirical question. Specifically, it depends on the relative strength of these two effects—the incentive effect and the entrenchment effect (Chang, 1999; Wu, 2000).

The existent literatures present inconsistent results. Chang (1990), Chang (2000), and Liu (2002) support that stock bonus can improve the performance of company and find significantly positive relation between stock bonus and stock prices. But Chang (1999), Wu (2002) find that there is significantly negative relationship between stock bonus and stock prices. According previous discussion and as the basis for further examination, we expect that there is an association between the stock bonus ratio and the value of the company. The way to measure the distribution ratio of stock bonus is also diverse in previous researches. Some measure the stock bonus ratio by shares issued to employees over the average of the outstanding shares (Change, 2003; Yeh, 2003; Tasi, 2003). Others calculate the ratio by the value of stock bonus over the average of total salaries (Hsu, 2004). However, these two measures cannot capture the relative magnitudes of the compensation earned between the employees and shareholders. Therefore, we measure the stock bonus distribution ratio as the value of employee stock bonus divided by current earnings.

H1 : There is an association between the ratio of the value of employee stock bonus over current earnings and firm value.

Many previous literatures indicate that outside directors can reduce the agency problem among different interest parties. Fama and Jensen (1983) state that outside directors can do their best on their positions to provide their expertise opinions to the management and improve the performance of the firms because of management incentives for building reputations. Weisbach (1988) points out that compared with the board which is dominated by inside directors, the board dominated by outside directors has higher frequency to fire the poor performing CEO. Other researches support that outside directors can mitigate the agency problems between management and other stakeholders (Weisbach 1988; Brickley et al. 1994), reduce the information asymmetry (Chtourou, Bedard, and Courteau, 2001; Beasley, 1996), improve the performance of operation (Brickley, et al., 1994; Lee, et al., 2003), reduce earnings management (Klein, 2002), reduce the probability of financial report restatement (Abbott, Parker, & Peters, 2004) and financial frauds (Beasley, 1996).

In order to improve the corporate governance, the Taiwan Securities Exchange Corporation (TSEC) had amended the regulations of “Taiwan Stock Exchange Listing Rules” to mandate that IPO firms must set up at least two independent directors and one independent supervisor on their boards since February 19, 2002 to enhance corporate governance. Companies that already listed are encouraged, but not required to follow the new rule. Our study is to examine whether independent directors and independent supervisors can restrain stock bonus to employee in those companies that set up independent directors and independent supervisors voluntarily, especially, when investors can not make reasonable returns. If investors do not earn good returns, they would probably concern more about the magnitude of the stock bonus. Similarly, independent directors and supervisors are more likely to address their concern over the distribution of stock bonus and try not to invade the interests of shareholders. Hence, we expect that the independent directors and independent supervisors can restrain firms from paying undue stock bonus to employees, especially when the shareholders are not earning negative returns. Following is the second hypothesis:

H2 : The greater the independence of board of directors, the lower the ratio of employee stock bonus to current earnings, especially when the investors’ standardized cumulative abnormal returns are negative.

Large shareholders often exploit their dominating control right and influence over firms decision, and agency theory suggests they have incentives to over consume the firm’s resources because they bear only part of the total cost. Faccio, Lang, and Young (2001) find that family shareholders are prone to exploit minority shareholders’ portion of the firm’s wealth, if being lack of effective mechanism to monitor the family shareholders. DeAngelo and DeAngelo (2000) point out that family shareholders in public firms entrench the firm’s wealth through special dividends, excessive compensations schemes, and with related-party transactions. Others related literatures also find that family shareholders may engage in self-dealing by reducing firm risk, directly expropriating wealth from other stackholders and put their interest over the objective of maximum the profit of the firms (Schulz et al., 2001; Faccio,

Lang, and Young, 2001; Anderson, Mansi, and Reeb, 2003; Schulz, Lubatkin, and Dino, 2003; Gomez-Mejia, Larraza-Lintana, and Makri, 2003).

But family shareholders have more incentive and power to monitor managers, thereby minimizing the free-rider problem in firms with more widely dispersed ownership structures. Therefore, for family-controlled companies, we expect that the agency problem between family shareholders and minor shareholders is more severe. Those mechanisms used to mitigate the agency problem between shareholders and management including market takeover, institutional investors, and incentive compensation are less effective in dealing with the conflicts between shareholders groups (Gomez-Jejia, Larraza-Lintana, and Makri , 2003, Shivdasani, 1993; Kole, 1997). Contrast to the companies with widely dispersed ownership structures, family shareholders are more easily control the board of directors by arranging their relative or employee to enter the board of directors. In sum, the agency problems in family-controlled companies are different from those of the non-family-controlled companies.

Family companies are common in Taiwan. Yeh (2000) finds that 51.44% of listed companies have family controlling characteristics in 1994-1995. Weng(2000)·Lin(2001) also point out that it is obvious that the ownership structure of listed companies in Taiwan are family-controlled. As described above, the agency problem is different for family-controlled companies and for their counterparts. Family-controlled companies are more easily to dominate the board of directors through the mechanisms of arranging their relatives or employees or by using pyramid structure, consequently it is more difficult for independent directors and supervisors to confine the board's decision on distributing excessive stock bonus to employees to mitigate the conflicts of interest between management and shareholders.

Therefore, we will examine the differential effectiveness of independent directors and independent supervisors in restraining the distribution of stock bonus between family-controlled companies and non-family-controlled companies.

The third hypothesis is as follows:

H3 : Independent directors and independent supervisors are more effective in restraining the distribution of stock bonus in family-controlled firms than in non-family-controlled companies.

3. Research Design

3.1 Research models and variables measure

$$P_{i,t} = \beta_0 + \beta_1 EPS_{i,t} + \beta_2 PERBV_{i,t} + \beta_3 PERCOMP_{i,t} + \beta_4 SBONUS_{i,t} + \varepsilon_{i,t} \dots\dots\dots(1)$$

Our study tries to discuss the stock bonus to employee from the corporate governance. To examine hypothesis 1, we refer to the models of Ohlson (1995), Chang (1999), and Hung (2001) to build our regression model. The model is as following:

$$P_{i,t} = \beta_0 + \beta_1 EPS_{i,t} + \beta_2 PERBV_{i,t} + \beta_3 PERCOMP_{i,t} + \beta_4 SBONUS_{i,t} + \varepsilon_{i,t} \dots \dots \dots (1)$$

In equation (1),

$P_{i,t}$ = the closing price on the year end of company i in year t;

$EPS_{i,t}$ = the earnings per shares of company i in year t;

$PERBV_{i,t}$ = the book value per share of company i in year t;

$PERCOMP_{i,t}$ = the total of cash bonus and stock bonus calculating by the adjusted-market price as if the bonus stock shares issue on the end of the year per share of company i in year t;

$SBONUS_{i,t}$ = the ratio of stock bonus to employee calculating by the adjusted-market value on the end of year as if the stock bonus shares issues at the end of the year to current earnings of company i in year t.

To examine the hypothesis 2 and 3, we draw on Core and Guay (2001), Lin (2003) and Wu (2002) to identify variables that influence the ratio of stock bonus to current earnings. The Regression model is as following:

$$SBONUS_{i,t} = \beta_0 + \beta_1 INDBOARD_{i,t} + \beta_2 GW_{i,t} + \beta_3 CASHRATIO + \beta_4 HR_{i,t} + \beta_5 CASHLIM_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 PRIROA_{i,t} + \beta_8 IND_{i,t} + \beta_9 IDRISK_{i,t} + \varepsilon_{i,t} \dots \dots \dots (2)$$

INDBOARD is the ratio of the seats of independent directors and independent supervisors to the all seats of board of directors. Prior literatures use this ratio to measure the independence of board of directors (Baysinger and Bulter, 1985; Shivdasani and Yermack, 1998; Pearce and Zabra, 1992). GW, the growth opportunity, is measured by the ratio of totaling market value of equity and book value of total debt to the book value of total assets. This ratio is used to measure growth opportunity in many literatures (Smith and Watts, 1992 ; Yermack, 1995 ; Core and Guay, 2001). Yermack (1995) find that the board will give managers more stock options to mitigate the agency problem between managers and shareholders in high-growth companies. CASHRATIO is the ratio of total cash compensation to the total compensation. Total cash compensation includes the cash salaries and cash bonus. Total compensation includes the total cash compensation and stock bonus calculating by the adjusted-market price. Anderson, Banker and Ravindran (1999) point out that cash compensation and stock compensation are substitute in their CEO compensation research.

HR, importance of human capital, is proxy by the growth options per employee which is defined as the market value of equity minus the book value of equity divided by the number of employees. Core and Guay (2001) find that the importance of retaining employees is greatest in firms requiring higher-quality managers and in firms where human capital is a relatively more important factor of production. In these companies, the companies are prone to issue stock options. We proxy for cash constraints (CASHLIM) with measures of cash flow shortfall and interest burden. We refer to Core and Gury (2001) to use three-year average of common and preferred dividends plus cash flow used in investing activities less cash flow from operations, all

divided by total assets. Beatty (1995), Mauldin (1999), Core and Guay (2001), Kedia and Mozumdar (2002) also point out that companies are prone to use cash compensation if the companies have more cash constrain.

We predict that companies provide equity incentives more intensively to non-executives when direct monitoring of employees is costly, i.e., when the company is larger or when the company is greater noise in the company's operating environment (Demsetz and Lehn, 1985; Jensen and Meckling, 1992; Smith and Watts, 1992). On the other hand, the lower-level employees in large companies are less likely to be able to influence the stock price through their individual actions (Ittner et al., 2003). Hence, the relation between company size and the use of stock options to provide incentives is ambiguous. Referring to Core and Guay (2001), we use the logarithm of the market value of assets to measure size (SIZE). PRIROA, the return on asset in prior year, is measured with the ratio of net income in last year divided by the total assets. Mehran(1995) and Ittner et al.(2003) find that the company will consider the performance of last year before grant the stock option. If the performance of last year is good, the company will grant more stock options.

We control the industry factor (IND) by setting indicator variable. If the company is IT industry, the indicator variable is 1; otherwise, 0. Referring to the Demsetz and Lehn (1985) and Core and Guay (2001), we use the logarithm of idiosyncratic risk as a proxy for noise in the company's operating environment (IDRISK). We measure idiosyncratic risk as the standard deviation of the residual return from a 36-month market model regression. Demsetz and Lehn (1985) find that equity incentives will increase at a decreasing rate with the idiosyncratic risk.

3.2 Data

In order to match the implement the policy of independent directors and independent supervisors, The "Criteria Governing Information to be Published in Annual Reports of Public Companies" also amend in 2002. According the modify rule, all the list companies must disclosure the information of independent directors and independent supervisors in the annual report in the same format since year 2001. Therefore, we can collect the data of independent directors and independent supervisors since 2001. The information of independent directors and independent supervisors need to be disclosed are as follow:

If the independent directors and independent supervisors are

- (1) Over five years of experience in business, finance, legal or areas required by the Company
- (2) Not an employee of the Company, nor a director, supervisor or employee of affiliated companies
- (3) Not a natural person shareholder directly or indirectly owning more than 1% of the Company's outstanding shares, nor one of the Company's top ten natural person shareholders
- (4) Not a spouse nor first- or second degree relative to any person specified in columns (3) and (4)
- (5) Not a director, supervisor or employee of a shareholder of juridical person of the Company directly or indirectly owning more than 5% of the Company's outstanding shares, nor one of the

Company's top five shareholders of juridical person

- (6) Not a director, supervisor, manager or shareholder holding more than 5% of the outstanding shares of certain companies or institutions that have financial or business relationship with the Company
- (7) Not an owner, partner, director, supervisor, manager of any sole proprietor, partnership, company or institution and his/her spouse, or the specialist and his/her spouse, that provides finance, commerce, legal consultation and services to the Company or affiliated companies within one year
- (8) Not a juridical person or its representative as defined in Article 27 of Company Law

The regular define that independent directors and independent supervisors must meet all the eight conditions above. Hence we can judge independent directors and independent supervisors through annual report. Our sample period is in the year 2001 and 2002 that had issued stock bonus to employee. After year 2002, the new IPO companies would set up independent directors and supervisors mandatory. We only focus on those who set up independent directors and independent supervisors voluntary. We define the family-controlled firms as that the family members serve the directors or supervisors over half of the seats of board of directors. The relationship of family members can be observed in annual report.

All the financial data, stock prices are from Taiwan Economic Journal (TEJ). We eliminate the observations for firms in the financial services industry, companies held by the state, regulatory industry and non-calendar companies. We find there are 705 observations in our sample, but not all the observations have stock bonus to employee. After excluding the observation that have not implemented stock bonus plan, the final sample consist of 149 observations.

In order to examine whether the effect of the stock bonus to valuation of the company is different between the companies that have positive excess returns and companies that have negative excess returns, we separate our sample into two groups by the sign of fifteenth-month standardize cumulated abnormal return from January to the March in next year. To examine the hypothesis 2, we also separate our sample into two groups by the sign of fifteenth-month standardize cumulated abnormal return to explore if the independent directors and independent supervisors have different influence in restraining the stock bonus in these two groups.

4. Research Results

4.1 Descriptive Statistics

Table 1 reports descriptive statistics for the variables. The mean and the median of ratio of stock bonus calculating by the adjusted-market price on the year-end to the current earnings (SBONUS) are 15% and 12%. It means that 15% earnings are distributed to the employee through stock bonus. We find that IT companies (IND), 75% of sample firms, are prone to issue stock bonus to attract the employee than others industries. The mean of the growth opportunity is 1.32 (greater than 1). Similar to the result of Yermack (1995) and Core and Guay (2001), high growth opportunity companies are more likely to use equity incentives. Only 18% companies in our sample are family-companies. It is possible that family would like to concentrate their ownership to that they prefer not to issue the stock bonus.

The mean of cash restrains (CASHLIM) is -0.276. It shows that the companies that have cash short have the incentives to use stock bonus. The mean and the median of the ratio of independent directors and independent supervisors (INDBOARD) are 14% and 11%.

Table 1 Descriptive statistic (N=149)

^aSBONUS: Ratio stock bonus calculating by adjusted-market price to current earning; INDBOARD: Ratio of independent directors and independent supervisors to the seats of the board of directors; GW: Growth opportunity, (market value of equity + total debit)/total assets; CASHRATIO: importance of human capital, ratio of total cash compensation to the total compensation; HR: the market value of equity minus the book value of equity divided by the number of employees; CASHLIM: cash flow shortfall and interest burden, three-year average of common and preferred dividends plus cash flow used in investing activities less cash flow from operations, all divided by total assets; SIZE: logarithm of the market value of assets; PRIROA: the return on asset in prior year; IND: indicator variable, IT industry is 1; otherwise, 0.; PRICE: Stock price on the end of year; EPS: Earnings per share; PERBV: Book value per share; PERCOMP: the total cash bonus and stock bonus calculating by the adjusted-market price as if the bonus stock shares issue on the end of the year per share; FAMILY: indicator variable, if family company,1; others,0; IDRISK: logarithm of the standard deviation of the residual return from a 36-month market model

Variables ^a	Means	Median	Maximum	Minimum	Standard Deviation
SBONUS	0.1523	0.1273	1.5263	-1.6295	0.2280
INDBOARD	0.1402	0.1111	0.6667	0.0000	0.1471
GW	1.3228	1.2276	3.4670	0.6668	0.4721
CASHRATIO	0.7562	0.8238	0.9919	0.1080	0.2284
HR	5960.911	2437.951	75040.57	-22813.11	13232.29
CASHLIM	-0.2589	-0.2604	0.2942	-1.0854	0.2199
SIZE	14.9690	14.7246	18.2515	12.1594	1.3986
PRIROA	12.7910	11.5200	37.0700	-9.2900	8.0136
IND	0.7662	1.0000	1.0000	0.0000	0.4246
PRICE	28.1129	23.2400	100.3300	3.1700	18.0082
EPS	2.2574	1.8250	10.1700	-0.2500	1.8308
PERBV	19.6082	16.9456	229.7282	9.7415	17.9298
PERCOMP	0.4441	0.2180	3.6769	0.0038	0.6359
FIFSCAR	-0.315439	-1.3697	26.1266	-12.5351	5.828598
FAMILY	0.1818	0.0000	1.0000	0.0000	0.3870
IDRISK	2.6461	2.6769	3.8636	1.7939	0.3156

Table 2 shows that the correlation coefficient among variables of model (1) and model (2). In model (1) of Table 2, SBONUS has significantly positive relation with stock price. All others independent variables' coefficients correlation are significantly positive. It is possible that there is collinearity problem in the model (1). In the multiple regression models, we test the collinearity through VIF and find all values of VIF are less than 10. In model (2), the correlation coefficient between SBONUS and INDBOARD is not significant. Similar in model (1), there exist possible

collinearity problem in model (2) because high correlation coefficient among variables. But all the value of VIF in model (2) are less than 10.

Table 2 coefficient correlation of model (1) (N=149)

Variables ^a	PRICE	EPS	PERBV	PERCOMP	SBONUS
PRICE		.710**	.606**	.842**	.595**
EPS			.545**	.760**	.276**
PERBV				.671**	.459**
PERCOMP					.752**
SBONUS					

Table 2 Coefficient correlation of model (2) (N=149)

Variables ^a	INDBOARD	GW	CASHRATIO	HR	CASHLIM	SIZE	PRIROA	IND	IDRISK
SBONUS	-.006	.465**	-.737**	.456**	-.193*	.076	.272**	.555**	.246**
INDBOARD		.056	.081	.018	-.060	-.204*	.038	.163*	.109
GW			-.615**	.930	-.292**	.099	.607**	.134	-.005
CASHRATIO				-.684**	.191*	-.309**	-.475**	-.389**	-.035
HR					-.300**	.242**	.567**	.139	-.076
CASHLIM						.024	-.283**	-.223**	-.115
SIZE							.043	.051	-.403**
PRIROA								.022	-.085
IND									.351**

^aall the definition of variables refer to Table 1; ** , * are significant at 1%,5% and 10%

4.2 Multiple Regression Result

Table 3 reports the results of estimating equation (1) using multiply regression. We find that the coefficient of PERCOMP is significant and positive related to the stock price on the end of the year in full sample. If we separate the sample into two sub-samples by sign of fifteenth month standardize cumulated abnormal return, the relationship does not change. The coefficient of SBONUS is not significant in the full sample and in the sub-sample that have negative cumulated abnormal return but is significantly positive related to the stock price in sub-sample that have positive cumulated abnormal return (coefficient = 12.022, t-value = 2). It means that if investors can gain excess returns, they give positive valuation of stock bonus. Hypothesis 1 is partially supported that the rate of stock bonus is relate to the valuation of the companies.

Table3 Association between Stock bonus and the valuation of the company

^a PRICE: Stock price on the end of year; EPS: Earnings per share; PERBV: Book value per share; PERCOMP: the total cash bonus and stock bonus calculating by the adjusted-market price as if the bonus stock shares issue on the end of the year per share; SBONUS: Ratio stock bonus calculating by adjusted-market price to current earning; IDRISK: logarithm of the standard deviation of the residual return from a 36-month market model

^b If there are predict sign in coefficients, one-tail test; otherwise, two-tail test.

^c The number in () is t value , adjusted by white covariance matrix , ***,** and * are significant at 1%,5% and 10%

Variables ^a	Predicted sign ^b	Full sample N=149	Positive	Negative
			standardize cumulated abnormal return N=56	standardize cumulated abnormal return N=93
C	?	13.6744 *** (6.81) ^c	9.0373 ** (2.06)	13.9465 *** (5.54)
EPS	+	2.721 *** (2.73)	3.1854 *** (2.36)	2.5858 ** (1.92)
PERBV	+	-0.0039 (-0.2)	0.1967 (0.61)	-0.0154 (-0.62)
PERCOMP	?	18.3911 *** (6.28)	13.8887 *** (3.32)	20.4742 *** (5.70)
SBONUS	?	1.3527 (0.22)	12.0222 ** (2.00)	-1.1909 (-0.20)
R-squared		0.79	0.87	0.74
Adjusted R-squared		0.78	0.86	0.72

Table 4 reports the results of estimating equation (2) using multiple regression specifications. In the full sample, we find that the coefficient of INDBOARD is significantly negative related to the SBONUS (coefficient = -0.1603, t-value =2.23). In sub-samples, we find that the relation is not significant in the positive standardize cumulated abnormal returns sub-sample but significant in the negative sub-sample (coefficient = -0.2382, t-value = 1.97). It means that the main effect of negative relation between INDBOARD and SBONUS in full sample is from sub-sample that has negative cumulated abnormal return. The evidence consists with our hypothesis 2 that independent directors and independent supervisors can restrain the stock bonus when the investors can not excess returns. In the positive cumulated abnormal return, the relation is not significant. It might be that if the investors can gain excess return, independent directors and independent supervisors would not debate the stock bonus. They think the motivation effect of the stock bonus is greater than the lost interest of shareholders.

In others control variables, we find the coefficient of CASHRATIO significantly negative related to the SBONUS. It consists with our prediction. The coefficient of GW is marginally statistically significant in the sub-sample that has negative cumulated abnormal return. The coefficients of CAHSLIM and IDRISH are not significant with stock bonus rate. The coefficient of IND significantly

positive related to the SBONUS in positive cumulated abnormal return sub-sample.

Table 4 Association between independence of board of directors and stock bonus ratio

^aSBONUS: Ratio stock bonus calculating by adjusted-market price to current earning; INDBOARD: Ratio of independent directors and independent supervisors to the seats of the board of directors; GW: Growth opportunity, (market value of equity + total debit)/ total assets; CASHRATIO: importance of human capital, ratio of total cash compensation to the total compensation; HR: the market value of equity minus the book value of equity divided by the number of employees; CASHLIM: cash flow shortfall and interest burden, three-year average of common and preferred dividends plus cash flow used in investing activities less cash flow from operations, all divided by total assets; SIZE: logarithm of the market value of assets; PRIROA: the return on asset in prior year; IND: indicator variable , IT industry is 1; otherwise, 0; IDRISK: logarithm of the standard deviation of the residual return from a 36-month market model

^b If there are predict sign in coefficients, one-tail test; otherwise, two-tail test.

^c The number in () is t value , adjusted by white covariance matrix , ***,** and * are significant at 1%,5% and 10%.

^dWe do not predict the sign of coefficient in full sample and positive standardize cumulated abnormal return sub-sample, do predict negative sign of coefficient in negative standardize cumulated abnormal return

Variables ^a	Predict sign ^b	Full sample	Positive standardize cumulated abnormal return	Negative standardize cumulated abnormal return
		N=149	N=56	N=93
C	?	1.188 *** (2.49) ^c	1.5044 *** (2.82)	1.0164 * (1.70)
INDBOARD	?/ ^d	-0.1603 ** (-2.23)	0.11 (0.92)	-0.2382 ** (-1.97)
GW	+	0.0974 (1.23)	-0.0405 (-0.33)	0.1334 * (1.39)
CASHRATIO	-	-0.6388 *** (-3.63)	-0.8566 *** (-3.34)	-0.565 *** (-2.30)
HR	+	0 ** (-2.02)	0 (-1.15)	0 * (-1.47)
CASHLIM	+	-0.0969 (-1.17)	-0.0184 (-0.22)	-0.1545 (-1.14)
SIZE	?	-0.037 * (-1.76)	-0.0378 ** (-2.19)	-0.035 (-1.31)
PRIROA	+	-0.0068 * (-1.41)	-0.0053 * (-1.62)	-0.008 (-1.18)
IND	+	0.0246 (0.85)	0.0409 * (1.55)	-0.0095 (-0.16)
IDRISK	+	-0.0109 (-0.37)	-0.0114 (-0.17)	0.0196 (0.59)
R-squared		0.31	0.71	0.22
Adjusted R-squared		0.26	0.65	0.13

Table 5 presents the relationship between the SBONUS and the INDBOARD in family companies and non-family companies. In the non-family companies, the coefficient of INDBOARD significantly negative related to the SBONUS (coefficient = -0.103, p-value < 0.05) but the relation is not significant in the family sample. The result shows that independent directors and independent of supervisors have more influence on restraining the stock bonus in non-family companies than family companies. It is consistent with our prediction. Alternative possible explanation is that family companies do not prefer

to issue stock bonus to keep their shares more concentration. We examine whether the family group and non-family group are different in the SBONUS. Untabulate t-test result shows that there is no different in SBONUS between these two groups. We also add the dummy variable (family companies=1; others, 0) to the model (2) and find the coefficient of dummy variable is not significant (the coefficient is -0.24, p-value is 0.81) with the SBONUS. Hence, we exclude that the significant

Table 5 Association between independence of board of directors and stock bonus ratio—family v.s. non-family

^a SBONUS: Ratio stock bonus calculating by adjusted-market price to current earning; INDBOARD: Ratio of independent directors and independent supervisors to the seats of the board of directors; GW: Growth opportunity, (market value of equity + total debit)/ total assets; CASHRATIO: importance of human capital, ratio of total cash compensation to the total compensation; HR: the market value of equity minus the book value of equity divided by the number of employees; CASHLIM: cash flow shortfall and interest burden, three-year average of common and preferred dividends plus cash flow used in investing activities less cash flow from operations, all divided by total assets; SIZE: logarithm of the market value of assets; PRIROA: the return on asset in prior year; IND: indicator variable, IT industry is 1; otherwise, 0; IDRISK: logarithm of the standard deviation of the residual return from a 36-month market model

^b If there are predict sign in coefficients, one-tail test; otherwise, two-tail test.

^c The number in () is t value, adjusted by white covariance matrix, ***, ** and * are significant at 1%, 5% and 10%.

^d We do not predict the sign of coefficient in full sample and positive standardize cumulated abnormal return sub-sample, do predict negative sign of coefficient in negative standardize cumulated abnormal return

Variables	Predict sign	Non-family sub-sample	Family sub-sample
		N=124	N=25
C	?	0.3305 *** (2.52)	3.976 ** (2.16)
INDBOARD	?/- ^d	-0.103 ** (-2.15)	-0.3608 (-0.60)
GW	+	0.1013 *** (3.03)	0.6351 (1.22)
CASHRATIO	-	-0.3303 *** (-6.23)	-1.8983 *** (-2.92)
HR	+	0 *** (-3.36)	0 * (-1.45)
CASHLIM	+	-0.033 (-1.10)	-0.6425 (-1.1)
SIZE	?	-0.0099 ** (-2.31)	-0.1467 (-1.55)
PRIROA	+	-0.0019 (-1.21)	-0.0369 * (-1.51)
IND	+	0.0526 *** (3.79)	-0.1545 (-1.06)
IDRISK	+	0.0346 * (1.58)	-0.1588 (-0.74)
R-squared		0.65	0.60
Adjusted R-squared		0.62	0.36

relation is caused by the different preference in stock bonus between family group and non-family

group. Therefore, the significant relation between INDBOARD and SBONUS could be caused by the influence of independent directors and independent supervisors. Hypothesis 3 is supported by the evidences in Table 5.

In non-family companies, we separate the sub-sample into two groups further by the sign of fifteenth month standardize cumulated abnormal return. In Table 6, we can find the coefficient of

Table 6 Association between independence of board of directors and stock bonus ratio –family, non-family v.s positive-negative standardize cumulated abnormal return

^aSBONUS: Ratio stock bonus calculating by adjusted-market price to current earning; INDBOARD: Ratio of independent directors and independent supervisors to the seats of the board of directors; GW: Growth opportunity, (market value of equity + total debit)/ total assets; CASHRATIO: importance of human capital, ratio of total cash compensation to the total compensation; HR: the market value of equity minus the book value of equity divided by the number of employees; CASHLIM: cash flow shortfall and interest burden, three-year average of common and preferred dividends plus cash flow used in investing activities less cash flow from operations, all divided by total assets; SIZE: logarithm of the market value of assets; PRIROA: the return on asset in prior year; IND: indicator variable , IT industry is 1; otherwise, 0; IDRISK: logarithm of the standard deviation of the residual return from a 36-month market model

^b If there are predict sign in coefficients, one-tail test; otherwise, two-tail test.

^c The number in () is t value , adjusted by white covariance matrix , ***,** and * are significant at 1%,5% and 10%.

^dWe do not predict the sign of coefficient in full sample and positive standardize cumulated abnormal return sub-sample, do predict negative sign of coefficient in negative standardize cumulated abnormal return

Variables ^a	Predicted sign ^b	Family	Non-family	
		N=25	Positive standardize cumulated abnormal return N=43	Negative standardize cumulated abnormal return N=81
C	?	3.41 (1.63)	0.9327 *** (3.17)	0.2373 (1.56)
INDBOARD	?/- ^d	-0.4848 (-0.48)	0.0223 (0.24)	-0.0964 ** (-1.78)
GW	+	0.5903 (1.06)	-0.0415 (-0.56)	0.0935 *** (3.50)
CASHRATIO	-	-1.7978 *** (-2.55)	-0.7151 *** (-4.96)	-0.2351 *** (-4.87)
HR	+	0 * (-1.36)	0 * (-1.28)	0 *** (-2.30)
FREECASH	+	-0.5049 (-0.77)	-0.0879 ** (-1.71)	0.0256 (0.91)
SIZE	?	-0.1231 (-1.15)	-0.015 * (-1.76)	-0.011 ** (-2.11)
PRIROA	+	-0.03 (-1.05)	-0.0065 * (-1.64)	0 (0.01)
IND	+	-0.1388 (-0.78)	0.0597 *** (2.28)	0.0651 *** (2.82)
IDRISK	+	-0.0872 (-0.47)	0.0302 (0.56)	0.041 * (1.51)
Dummy	+	-0.1339 (-0.70)		
Dummy*INDBOARD	-	0.2871 (0.18)		
R-squared		0.61	0.75	0.66
Adjusted R-squared		0.27	0.68	0.62

INDBOARD significantly negative related to the SBONUS in negative standardize cumulated abnormal return group. The relation is not significant in positive group. In family sub-sample, due to the restriction of observations in the sample, we can not separate the family sub-sample by the sign of

standardize cumulated abnormal return. We set the indicator variable “Dummy” in model (2). If the family company has positive cumulated abnormal return, Dummy equal to 1; otherwise, 0. The result in Table 6 shows that the coefficient of interaction item between Dummy and INDBOARD is not significantly. It means that the effect of independent director and independent supervisors has little influence in family company whether it has negative standardize negative cumulated abnormal return or not.

5.3 Robustness tests

We conduct several robustness tests to check as following:

1. If the stock bonus ratio is measure by the par value instead of the adjusted-market value, the results in all hypothesizes do not change. The only different result is that the ratio of stock bonus calculating by the face value of stock to the current earnings is significantly positive with the independence of the board in positive standardize abnormal returns (p-value=0.03).
2. If calculating twelfth-months standardize cumulated abnormal returns instead of fifteenth-month, all the results of hypothesizes do not change.

5. Summary and conclusion

There have been constant debates over employee stock bonus in recent years. The issue is not only related to accounting procedures that whether it should be expensed or measured by fair value, but also on the potential wealth transfer from shareholders to employees. Our study examines what is the role that corporate governance plays in restraining firms from overpaying stock bonus to employees when investors have not been favorably compensated by their returns from the stock market.

The results show that there is a negative association between the independence of board of directors and the ratio of employee stock bonus to the current earnings, especially when firms' stocks do not perform well during the year. We also find that the restraining function of board independence is more effective in non-family- controlled companies than their counterparts. It might be that the agency problems are more severe in family-controlled firms where family shareholder holds both the positions as a board director as well as the CEO who is eligible for receiving stock bonus. As such, it is more difficult for independent directors and supervisors to restrain the board's decision from distributing excessive stock bonus to employees, and small investors' interests are easily sacrificed.

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