Compensation Committee and Executive Compensation in Asia

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ABSTRACT

Using a sample of firms in East Asian economies, we find that level of CEO compensation is positively associated with CEO power. The positive association between the level of CEO compensation and CEO power is attenuated by the proportion of independent directors on the compensation committee and the equity ownership held by external block-holders. Furthermore, CEO pay-performance sensitivity is lower in firms with powerful CEOs. In the sub-sample of firms with powerful CEOs, CEO pay-performance sensitivity is higher in firms with higher compensation committee independence and higher proportion of equity held by block-holders. Additional tests indicate that excessive CEO compensation in firms with more powerful CEO is associated with lower subsequent operating performance and lower future stock returns. The negative association between excessive CEO compensation and future firm performance is attenuated by stronger corporate structures.

JEL Classifications: *G30, G34, J33, L22*

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I.   INTRODUCTION

There is a considerable body of research on executive compensation. A large proportion of these studies examine listed firms in United States, which requires extensive and detailed disclosures on executive compensation such as the individual compensation data for the top executives. However, outside United States, many countries do not mandatorily require firms to provide detailed disclosures on executive compensation. For example, most countries in East Asia require limited disclosure of executive compensation, resulting in the majority of firms reporting of (at most) the cash compensation for the top management with little information on individual executive compensation. In this study, using a proprietary dataset based on a compensation survey conducted by a large international consulting firm, we examine the CEO compensation of listed firms in East Asia.[1] Specifically, using a sample of listed firms in East Asia, this paper examines the association between CEO power and CEO compensation level. We also investigate whether the independence of the compensation committee and the equity ownership by external block-holders affect the compensation setting process in firms run by with powerful CEOs.

In general, there are two views of executive compensation in the literature. Under the optimal contracting view, CEO compensation arrangements are the product of arm's length contracting between the board of directors and executives, which results in compensation contracts that provide efficient incentives to reduce agency problems (Holmstrom, 1979). In contrast, under rent-seeking view, CEOs influence the design and setting of compensation contracts to personally benefit themselves, which results in greater agency problems between executives and shareholders (Bebchuk and Fried, 2003). Overall, the empirical evidence on the executive compensation is mixed. Some studies provide evidence supporting the optimal contracting view (Oyer, 2004; Rajgopal, Shevlin, and Zamora, 2006; Gabaix and Landier, 2008; Kaplan and Rauh, 2010). Other studies provide evidence that CEOs exercise substantial influence over the executive compensation process resulting in wealth transfer from shareholders to managers (Core, Holthausen, and Larker, 1999; Hartzell and Starks, 2003; Bebchuk and Fried, 2004).

We posit that in East Asia, powerful CEOs have the incentives and ability to engage in private rent seeking over the compensation setting process for at least three reasons (Section II.A contains more details). First, the regulations in many countries in East Asia do not explicitly mandate detailed disclosure of top executives' compensation. Thus, the less stringent disclosure requirements on executive compensation provide an opportunity for powerful CEOs to use executive compensation as a rent-seeking mechanism. Second, CEOs in East Asia may face lower disciplinary forces from the managerial labor market (Klapper and Love, 2004; Lee, 2007). Third, in East Asia, the information environment is opaque because monitoring by external analysts is weak (Lang, Lins, and Miller, 2004). Thus, in these countries, the likelihood of entrenched CEOs' compensation attracting external scrutiny by analysts and is likely to be low.

Following prior studies (Adams, Almeida, and Ferreira, 2005; Rosentein and Wyatt, 1990; Shivdasani and Yermack, 1999), we measure CEO power with CEO-chairman duality, the proportion of insider directors on the board and the percentage of directors on the board appointed during the CEO tenure[2]. Using a sample of firms in East Asian economies, we find that the level of CEO compensation is positively

associated with CEO power. In other words, after controlling for the economic determinants of executive compensation, we find that more powerful CEOs receive higher compensation level. This result is robust across several measures of CEO power such as CEO-chairman duality, the proportion of insider directors on the board and the percentage of directors appointed during the CEO tenure. The result supports the agency hypothesis that powerful CEOs are more likely to pursue private benefits at shareholders' expense. Moreover, we find that the positive association between the level of CEO compensation and CEO power is less pronounced in firms with higher proportion of independent directors on their compensation committee. This result indicates that in firms helmed by powerful CEOs, the CEOs receive lower level of compensation when more effective compensation committees monitor the CEO compensation setting process. Furthermore, we document that in firms with powerful CEOs, the sub-sample of firms with higher external block-holders have lower CEO compensation levels. This result is consistent with the notion that external block-holders play an important corporate governance role to reduce excessive CEO compensation levels in firms run by powerful CEOs.

Our second set of tests examines the pay-performance sensitivity of firms with CEO power. Consistent with the rent-seeking hypothesis, we find that CEO pay-performance sensitivity is lower in firms with powerful CEOs. Thus, the changes in the compensation of powerful CEOs are less sensitive to changes in firm performance. We also document that the lower pay-performance sensitivity in firms with powerful CEOs is mitigated by external block-holders and the proportion of outside directors on the compensation committee. Collectively, these results suggest that in firms run by more powerful CEOs, better monitoring by block-holders and independent compensation committee increases the sensitivity of CEO compensation to firm performance.

Our third set of tests investigates whether the positive association between CEO compensation and CEO power affect future firm performance. Following Core, Holthausen, and Larker (1999), to distinguish the optimal contracting and rent seeking hypothesis, we examine the association between excessive CEO compensation arising from the CEO power and future firm performance, proxied by subsequent operating performance and future stock returns. If excessive CEO compensation associated with CEO power reflects omitted economic determinants of CEO compensation, we expect a positive association (or no association) between excessive CEO compensation and subsequent firm performance. However, if excessive CEO compensation associated with CEO power reflects unresolved agency problems, we expect a negative association between excessive CEO compensation and subsequent firm performance.

We find that excessive CEO compensation arising from CEO power is associated with lower subsequent operating profitability and lower future stock return. Thus, our result suggests that excessive CEO compensation from higher CEO power reflects unresolved agency problems. Moreover, the negative association between excessive CEO compensation and future firm performance is less pronounced in firms with higher proportion of independent directors on their compensation committee and those with higher proportion of equity held by external block-holders. Collectively, our results are consistent with the rent-seeking hypothesis, namely that powerful CEOs will influence their own compensation packages to the detriment of shareholders.

Our paper makes several contributions. First, we show that in firms run by powerful CEOs, excessive CEO compensation is a channel of shifting wealth from

shareholders to managers (Bebchuk and Fried, 2003 and 2004). Second, prior studies provide mixed evidence on the association between CEO compensation and the structure of compensation committee. Using a sample of US firms, Anderson and Bizjak (2003) find no association between the independence of the compensation committee and CEO compensation[3]. In contrast, Vafeas (2003) provides some evidence that CEO compensation is negatively associated with the proportion of independent directors on the compensation committee. Our paper contributes to this stream of literature by documenting that the positive association between CEO power and CEO compensation is mitigated by the proportion of independent directors on the compensation committee. More generally, our result provides evidence that effective compensation committees constrain the CEO's influence over his compensation. Third, we shed light on the role of external block-holders in curtailing the ability of powerful CEOs to earn excessive compensation level in firms from countries with weak investor protection. This result complements prior finding on the corporate governance role of block-holders in improving valuation of firms in countries with weak investor protection (Lins, 2003; Dennis and McConnell, 2003).

Section II reviews related prior literature and formulates the hypothesis. Section III describes the sample construction and method. Section IV presents the results. Section V contains the conclusions.

II.   PRIOR LITERATURE AND HYPOTHESIS

A.   CEO Compensation and CEO Power

We posit that in East Asia, powerful CEOs have the incentives and ability to engage in private rent seeking over the compensation setting process for at least three reasons. First, unlike the extensive disclosure requirements on top executives' compensation in the United States, the laws and regulations in many countries in East Asia do not explicitly mandate detailed disclosure of top executives' compensation. Consequently, in practice, many firms in East Asia do not provide detailed disclosure of individual compensation of top executives and these firms often cite "confidentiality reasons" as a main reason for not disclosing detailed compensation information on their top executives[4]. Thus, ex ante, the less stringent disclosure requirements on executive compensation provide an opportunity for powerful CEOs to use executive compensation as a rent-seeking mechanism. Second, CEOs in East Asia may face lower disciplinary forces from the managerial labor market (Dennis and McConnell, 2003; Lee, Lee, and Yeo, 2009). Defond and Hung (2004) find that in countries with weak investor protection, CEO turnover is less associated with poor firm performance. Similarly, Lel, and Miller (2008) find that in firms from weak investor protection countries that cross-list in exchanges that do not require stringent investor protection, CEO turnover is not sensitive to firm performance. Third, in East Asia, the information environment is opaque because monitoring by external analysts is weak. Based on a sample of emerging economies, Lang, Lins, and Miller (2004) find firms with entrenched managers have low analyst following. Thus, the likelihood of entrenched CEOs' compensation attracting external scrutiny by analysts and media in East Asia is likely to be low.

In contrast, based on the optimal contracting theory, it is possible that more powerful CEOs are more talented managers. Hence, an alternative argument is that powerful CEOs receive higher compensation because firms compete to attract high quality professional CEO (Oyer, 2004; Rajgopal, Shevlin, and Zamora, 2006). Thus, the association between CEO compensation and CEO power is ultimately an empirical question.

If the rent-extraction hypothesis dominates the optimal contracting hypothesis in the setting of executive compensation in East Asia, we predict that:

H1: CEO compensation level is positively associated with CEO power[5].

B.   Structure of Compensation Committee and CEO Compensation

Prior studies find that firms with weaker strong corporate governance structures have excessive CEO compensation level (Core, Holthausen, and Larcker, 1999). Since compensation committees are responsible for establishing, administering and monitoring CEO compensation contracts, the corporate governance quality of these committees directly affects executive compensation (Bebchuk and Fried, 2003). Committees with high governance quality can mitigate agency problems, and thus enhance incentive alignment. In this study, we examine a key corporate governance quality of compensation committees – their independence. We posit that the greater the independence of the compensation committee, the greater the incentive alignment in the CEO compensation contracts.

The empirical evidence on the association between compensation committee independence and CEO compensation is mixed. On one hand, some studies find little evidence that greater compensation committee independence reduces opportunistic CEO pay structure. Daily, John, Ellstrand, and Dalton (1998) find that participation of insider directors and CEOs on compensation committee is not related to the excessive level of CEO compensation. Based on a sample of US firms, Anderson and Bizjak (2003) find that CEO pay levels, pay mix and pay sensitivities are largely unrelated to compensation committee independence[6]. On the other hand, other studies provide evidence that greater compensation committee independence is associated with greater pay-performance sensitivity. Based on a sample of US firms, Vafeas (2003) provides some evidence that firms grant less fixed pay and more contingent pay[7] to CEOs when more outside directors serve in the compensation committee. Similarly, using United Kingdom firms, Conyon and Peck (1998) find that the sensitivity of top management's compensation to performance is an increasing function of the proportion of outside directors in the compensation committee.

Our maintained assumption is that if outsider directors are effective monitors over the pay setting process, then powerful CEOs in firms with higher proportion of outsiders in their compensation committee will receive lower compensation levels than those in firms with lower proportion of outsiders in their compensation committee. An alternative hypothesis is that powerful CEOs dominate the compensation committee in setting CEO compensation (Bebchuk and Fried, 2003)[8]. If the compensation committee is ineffective in Asia, then compensation committee independence should not affect the association between CEO power and CEO compensation. Ultimately, in our sample of Asian economies, whether compensation committee is effective in curbing the

opportunistic actions of powerful CEOs over the CEO compensation setting process is an empirical issue.

Under the assumptions that (i) the rent-extraction hypothesis dominates the optimal contracting hypothesis in the setting of executive compensation in firms run by powerful CEOs in East Asia, and, (ii) compensation committees are effective monitors in East Asia, we expect that high proportion of outside directors on the compensation committee constrains the opportunistic actions of powerful CEOs over the CEO compensation setting process. Thus, we predict that:

H2: In firms with powerful CEOs, CEO compensation level is lower in the sub-sample of firms with higher compensation committee independence.

C.   Large Non-management Shareholder and CEO Compensation

There is considerable evidence that large external shareholders play an important corporate governance role (Shleifer and Vishny, 1997; Lee, Lev, and Yeo, 2007). Lins (2003) finds firm valuation finds that large non-management blockholders can mitigate the firm valuation discount associated with managerial entrenchment. In studies of CEO turnover, Kang and Shivdasani (1995) and Denis, Denis, and Sarin (1997) find that the sensitivity of CEO turnover to performance is higher in firms with a large non-management shareholder.

In the area of executive compensation, prior studies find that stronger monitoring by large external shareholders constrains excessive executive compensation packages. Core, Holthausen, and Larcker (1999) find that CEO compensation level is negatively associated with presence of an external blockholder who owns at least 5% of the equity. Bertrand and Mullainathan (2001) find that CEO compensation is positively associated with luck, where luck is defined as changes in firm performance that are beyond the CEO's control[9]. An example of "pay for luck" is an increase in compensation for CEO following an increase in world price of oil. They find that pay for luck is lower when large external block-holder sits on the board. Furthermore, they find that there is higher pay for luck as CEO tenure increases but this positive relation is mitigated in firms with large external block-holder. Thus, monitoring by large external block-holder constrains the ability of entrenched CEOs set their own pay. Hartzell and Stark (2003) find a positive relation between institutional investors' equity ownership and the pay-performance sensitivity of managerial compensation.

In sum, external block-holders have better monitoring incentives to influence a firm's decision making including its executive compensation policies. Under the assumptions that (i) the rent-extraction hypothesis dominates the optimal contracting hypothesis in the setting of executive compensation in firms run by powerful CEOs in East Asia, and, (ii) block-holders play an effective corporate governance role over entrenched managers, we predict that more effective monitoring by block-holders reduces the ability of powerful CEOs to undertake private rent-seeking activities.[10] Thus, our third hypothesis is:

H3: In firms in powerful CEOs, CEO compensation level is lower in the sub-sample of firms with higher equity ownership by large external block-holders.

III.   DATA AND METHOD

A.   Sample

Our initial sample consists of CEOs in seven East Asian economies (comprising Indonesia, Malaysia, Philippines, Singapore, Thailand, Hong Kong and Taiwan) from fiscal year 2000 to 2007 covered in a proprietary survey conducted by a large international human resources consulting firm with a regional headquarter in Asia. This survey contains data on the name of the CEOs, CEO tenure, CEO age and CEO compensation. We manually collect data on compensation committee and block-holders from the annual reports of the companies. We obtain financial statement variables from the Worldscope database. These data requirements yield a sample of 2,795 CEO-year observations from 2000 to 2007. The sample contains 536 different CEOs at 402 different companies.

B.   Measures of CEO Power

In our tests examining the effect of CEO power on compensation, we study several of the power measures that have been considered in the literature. As the concept of CEO power has multiple dimensions (Adams, Almeida, and Ferreira, 2005), showing that our results hold across different measures is useful in documenting the robustness of our results. We construct three measures of CEO power.

Following Adams, Almeida, and Ferreira (2005), our first measure of power is, an index (CEOCHAIR) of CEO personal influence over the board. Specifically, CEOCHAIR is a dummy variable that equals one if the CEO is the chairman of the board of directors, and zero otherwise.

Our second measure of CEO power captures the bargaining power of the CEO over the board of directors. Agency theory suggests that insider directors, whose incentives are more aligned to support the CEOs, are less effective monitors compared to outsider directors (Rosenstein and Wyatt, 1990; Weisbach, 1988). Thus, the higher the proportion of insider directors on the board, the higher is the CEO power. We define an insider director as a director who is a current or former executive officer employed by the firm or if the director has related party transactions with the company. We define INSIDER as the number of insider directors divided by the board size at the end of the fiscal year. Higher INSIDER implies lower board monitoring of CEO and thus, higher CEO power.

Our third measure of CEO power captures the actual or potential obligation a director may have to the CEO for being appointed during the CEO's tenure (Shivdasani and Yermack, 1999). The key idea is that directors who are appointed by the CEO are less likely to monitor the CEO. Thus, the higher the percentage of such board members, the more likely it is that the CEO will be able to exert power over the board members. We construct the percentage of the board of directors appointed during the CEOs tenure (APPOINT) based on the information when each director was appointed to the board.

We also construct a composite index of CEO power (CEOPOWER) based on a principal components analysis of the three empirical measures of CEO power (CEOCHAIR, INSIDER and APPOINT). We scale the composite index of CEO power

(CEOPOWER) from zero to one so that higher values of CEOPOWER denote higher CEO power.

C.   Empirical Model

Following Core, Holthausen, and Larcker (1999), we employ the following empirical model to test our hypothesis:-

$$
\begin{aligned}
\text{Log}(\text{TOTALCOMP}_{it}) = \beta_0 &+ \beta_1\text{POWER}_{it-1} + \beta_2\text{POWER}_{it-1}*\text{CCOUT}_{it-1} \\
&+ \beta_3\text{POWER}_{it-1}*\text{BLOCK}_{it-1} + \beta_4\text{CCOUT}_{it-1} \\
&+ \beta_5\text{BLOCK}_{it-1} + \beta_6\text{LOGSALE}_{it-1} + \beta_7\text{MTB}_{it-1} \\
&+ \beta_8\text{ROA}_{it-1} + \beta_9\text{RET}_{it-1} + \beta_{10}\text{STDROA}_{it-1} \\
&+ \beta_{11}\text{STDRET}_{it-1} + \beta_{12}\text{TENURE}_{it-1} + \beta_{13}\text{AGE}_{it-1} \\
&+ \text{YEAR} + \text{COUNTRY} + \varepsilon_{it-1}
\end{aligned} \quad (1)
$$

where

Dependent variable: TOTALCOMP_t = CEO's total compensation in year t where total compensation consists of salary, bonus, value of restricted stock granted, value of stock options granted, long-term incentive payout and other pay for the CEO in year t.

Test variables: POWER = One of the four empirical measures of CEO power (discussed in Section III.B): CEOCHAIR = A dummy variable that equals one if the CEO is the chairman of the board of directors, and zero otherwise. INSIDER = The number of insider directors divided by the board size at the end of the fiscal year. We define an insider director as a director who is a current or former executive officer employed by the firm or if the director has related party transactions with the company. APPOINT= The percentage of the board of directors appointed during the CEOs tenure. CEOPOWER = A composite index of CEO power based on a principal components analysis of the three empirical measures of CEO power (CEOCHAIR, INSIDER and APPOINT). We scale the composite index of CEO power (CEOPOWER) from zero to one so that higher values of CEOPOWER denote higher CEO power. CCOUT= Proportion of outside directors in the compensation committee at the end of year. We define an outside director as a director who is not a current or former employee of the company and he has no related party transactions with the company. BLOCK = Common equity ownership held by external block-holders at the end of year where a block-holder is a non-management shareholder who owns at least 5% of the common equity of the company.

Control variables: LOGSALE = Natural logarithm of total sale for the year. MTB = Market value of common equity divided by book value equity at the end of year. ROA = Income after tax divided by average total assets for year. RET = Firm's stock return for the fiscal year. STDROA = Standard deviation of return on assets over the prior five years. STDRET = Standard deviation of stock returns over the prior five years. TENURE = CEO's tenure at the firm at the end of the year. AGE = CEO's age at the end of the year. YEAR = Dummy variables for years. COUNTRY = Dummy variables for countries. ε_{it-1} = Error term; subscripts i and t are for firm and year, respectively.

Our primary test variable is CEO power. Hypothesis H1 predicts the level of CEO compensation is positively associated CEO power. Thus, we expect coefficient β_1 to be positive. If high proportion of outside directors on the compensation committee curbs excessive CEO compensation level, we expect coefficient β_4 to be negative. Hypothesis H2 predicts that the positive association between the level of CEO compensation and CEO power is less pronounced in firms with compensation committee comprising higher proportion of independent directors. Thus, we expect coefficient β_2 to be negative.

If larger equity ownership by large block-holders implies stronger monitoring over the compensation setting process, we expect coefficient β_5 to be negative. Hypothesis H3 predicts that in firms with powerful CEOs, the sub-sample of firms with higher external block-holders have lower CEO compensation. Hence, coefficient β_3 is expected to be negative.

As for the control variables, we include economic determinants of CEO compensation previously documented in the literature (Smith and Watts, 1992; Anderson and Bizjak, 2003). These include firm size (LOGSALE), growth opportunities (MTB), operating performance (ROA), stock return performance (RET), firm risk (STDROA and STDRET), CEO tenure (TENURE), CEO age (AGE), year and industry fixed effects. Core, Holthausen and Larcker (1999) argue that CEO compensation is positively related to firm size, return on assets, current year stock returns, market-to-book ratio, CEO tenure and CEO age. If CEO is compensated for higher firm risk, we expect CEO compensation to be positively related to standard deviation of return on assets over the prior five years and standard deviation of stock returns over the prior five years.

IV.   RESULTS

A.   Descriptive Statistics

Table 1 reports the descriptive statistics. Mean CEO total compensation is USD 2.962 million. In 52% of the sample, the CEO also chairs the board of directors. The mean percentage of insider directors on the board is 61%. The mean proportion of directors on the board appointed during the CEO tenure is 40%. On average, 48% the compensation committee consists of outside directors. Mean equity ownership by external block-holders is 29%.

Table 2 presents the Spearman correlations among the variables used in this study. Several points are noteworthy. First, CEO total compensation is positively associated with all three proxies of CEO power (CEOCHAIR, INSIDER and APPOINT) at the 5% level or better. Second, CEO total compensation is negatively associated with the proportion of outside directors on the compensation committee and the proportion of equity ownership held by external block-holders at the 5% and 1% level respectively. Thus, stronger corporate structures such as higher independence on the compensation committee and higher equity ownership by block-holders are associated with lower CEO compensation level.

Table 1

Descriptive statistics for the variables with sample consisting of 2,795 firm-year observations from 2000 to 2007

	Mean	25th Percentile	Median	75th Percentile	Standard Deviation
TOTALCOMP (US$ million)	2.962	0.381	1.672	2.905	1.973
CEOCHAIR	0.521	0	1	1	0.467
INSIDER	0.618	0.294	0.552	0.719	0.325
APPOINT	0.405	0.186	0.436	0.632	0.387
CEOPOWER	0.495	0.267	0.514	0.702	0.296
CCOUT	0.483	0.257	0.471	0.718	0.365
BLOCK	0.291	0.019	0.235	0.314	0.271
SALES	3,229	871	2,903	4,352	3,516
MTB	1.518	1.012	1.496	2.312	0.864
ROA	0.082	0.026	0.075	0.098	0.067
RET	0.201	0.035	0.122	0.328	0.259
STDROA	0.157	0.096	0.178	0.285	0.372
STDRET	0.221	0.157	0.215	0.342	0.304
TENURE	9.624	7	9	14	7.951
AGE	54.16	46	51	59	13.22

Variable definitions:
TOTALCOMP = salary, bonus, value of restricted stock granted, value of stock options granted, long-term incentive payout and other pay for the CEO in the fiscal year. CEOCHAIR = a dummy variable that equals one if the CEO is the chairman of the board of directors, and zero otherwise. INSIDER = the number of inside directors divided by the board size at the end of the fiscal year. We define an inside director as a director who is a current or former executive officer employed by the firm or if the director has related party transactions with the company. APPOINT= the percentage of the board of directors appointed during the CEOs tenure. CEOPOWER = a composite index of CEO power based on a principal components analysis of the three empirical measures of CEO power (CEOCHAIR, INSIDER and APPOINT). We scale the composite index of CEO power (CEOPOWER) from zero to one so that higher values of CEOPOWER denote higher CEO power. CCOUT = proportion of outside directors in the compensation committee at the end of year. An outside director is not a current or former employee of the company and he has no related party transactions with the company. BLOCK = common equity ownership held by external block-holders at the end of year. A block-holder is a non-management shareholder who owns at least 5% of the common equity of the company. LOGSALE = natural logarithm of total sale for the year. MTB = market value of common equity divided by book value equity at the end of year. ROA = income after tax divided by average total assets for the year. RET = firm's stock return for the year. STDROA = standard deviation of return on assets over the prior five years. STDRET = standard deviation of stock returns over the prior five years. TENURE= Number of years that the CEO served at the company. AGE = CEO's age at the end of year.

Table 2

Spearman correlations

This table reports the Spearman correlation coefficients among the variables. The sample consists of 2,795 firm-year observations from 2000 to 2007.The two-tailed p-values are in parentheses. All variables are defined in Table 1.

	TOTAL COMP	CEO CHAIR	INSIDER	APPOINT	CEO POWER	CCOUT	BLOCK	LOGSALE
TOTALCOMP	1							
CEOCHAIR	0.375 (0.03)	1						
INSIDER	0.406 (0.01)	0.272 (0.04)	1					
APPOINT	0.391 (0.02)	0.316 (0.03)	0.302 (0.05)	1				
CEOPOWER	0.478 (<0.01)	0.375 (0.03)	0.437 (0.01)	0.411 (0.01)	1			
CCOUT	-0.205 (0.04)	-0.162 (0.04)	-0.274 (0.02)	0.203 (0.01)	0.217 (0.04)	1		
BLOCK	-0.381 (0.01)	0.175 (0.08)	-0.062 (0.09)	-0.115 (0.06)	0.190 (0.28)	0.265 (0.07)	1	
LOGSALE	0.562 (<0.01)	0.083 (0.16)	0.027 (0.39)	0.103 (0.12)	0.164 (0.32)	0.132 (0.14)	0.297 (0.06)	1
MTB	0.207 (0.12)	-0.193 (0.07)	-0.105 (0.08)	-0.113 (0.05)	-0.175 (0.03)	0.089 (0.26)	0.172 (0.09)	0.302 (0.04)
ROA	0.421 (0.03)	-0.162 (0.11)	-0.115 (0.17)	-0.092 (0.08)	-0.102 (0.19)	0.117 (0.12)	0.083 (0.17)	0.265 (0.13)
RET	0.295 (0.06)	0.043 (0.25)	0.091 (0.29)	0.035 (0.17)	-0.131 (0.08)	0.083 (0.19)	0.051 (0.32)	0.120 (0.18)
STDROA	0.159 (0.06)	0.168 (0.19)	0.062 (0.22)	0.079 (0.30)	0.063 (0.41)	0.082 (0.23)	0.113 (0.29)	0.027 (0.38)
STDRET	0.113 (0.15)	0.082 (0.15)	0.051 (0.29)	0.094 (0.37)	0.027 (0.39)	0.103 (0.28)	0.057 (0.30)	0.094 (0.25)
TENURE	0.143 (0.19)	0.127 (0.08)	0.140 (0.03)	0.226 (0.01)	0.094 (0.37)	0.127 (0.09)	-0.203 (0.06)	0.106 (0.21)
AGE	0.096 (0.21)	0.085 (0.34)	0.162 (0.15)	0.091 (0.39)	0.051 (0.40)	0.062 (0.35)	0.113 (0.22)	0.090 (0.28)

Table 2 (continued)

	MTB	ROA	RET	STDROA	STDRET	TENURE	AGE
MTB	1						
ROA	0.162 (0.09)	1					
RET	0.237 (0.11)	0.192 (0.08)	1				

STDROA	-0.082 (0.19)	-0.107 (0.12)	0.063 (0.28)	1		
STDRET	-0.103 (0.16)	0.053 (0.21)	0.142 (0.15)	0.351 (0.08)	1	
TENURE	0.120 (0.25)	0.047 (0.36)	-0.173 (0.09)	0.026 (0.45)	0.051 (0.32)	1
AGE	0.083 (0.27)	0.011 (0.55)	0.112 (0.32)	0.073 (0.28)	0.040 (0.37)	0.426 (0.08)	1

B.   Level of CEO Compensation

Table 3 presents the results of regressions of level of CEO total compensation. In column (1), we examine the main effect of the three measures of CEO power on CEO compensation. Results indicate that all three measures of CEO power are positive and statistically significant at the 5% level or better. Specifically, the estimated coefficient on CEOCHAIR is positive and significant at the 5% level, suggesting that in firms in which CEO chairs the board director, CEOs receive higher level of compensation. The estimated coefficient on INSIDER is positive and significant at the 1% level, suggesting that CEO compensation level is positively associated with the proportion of insider directors on board. The estimated coefficient on APPOINT is positive and significant at the 1% level, suggesting that CEO compensation level is positively associated with the proportion of the board of directors appointed during the CEO tenure. Thus, the results suggest that after controlling for the economic determinants of CEO compensation, more powerful CEOs receive higher compensation levels. In terms of economic significance, based on the mean CEO compensation of US$ 2,962,000, a one-standard deviation increase in CEOCHAIR, INSIDER and APPOINT increases CEO compensation level by US$82,000, US$101,000, and US$146,000, respectively Thus, the results are economically meaningful.

In column (2), we examine whether the positive association between CEO power and compensation varies systematically with (i) the independence of the compensation committee and (ii) equity ownership by block-holders. We begin our analysis by documenting a positive association between CEO compensation and the three proxies of CEO power (CEOCHAIR, INSIDER and APPOINT). The coefficient on CCOUT is negative and significant at the 1% level, indicating that CEO compensation is negatively associated with the independence of the compensation committee. Our test variable of interest is the interaction between the independence of the compensation committee and our empirical proxies of CEO power in affecting the level of CEO compensation. The interaction term CEOCHAIR x CCOUT is negative and significant at the 5% level, indicating that higher independence in the compensation committee attenuates the positive association between CEO compensation and CEO-chairman of board duality. In terms of economic significance, in firms in which CEO chairs the board (i.e. CEOCHAIR=1), an increase in the proportion of outside directors in the compensation committee by one standard deviation reduces CEO compensation by US$63,000.

Table 3

Regressions of CEO total compensation

This table presents results of pooled cross-sectional ordinary least squares regressions for the logarithm of CEO total compensation. All variables are defined in Table 1. The sample consists of 2,795 firm-year observations from 2000 to 2007. Fixed effects for year, countries and industries are included in the regressions but are not tabulated. t-statistics based on robust standard errors clustered at firm level are presented in parentheses below coefficient estimates. *, **, and *** indicate two-tailed statistical significance at the 10, 5, and 1 percent levels, respectively.

	1	2	3
Dependent variable	Log(TOTALCOMP)	Log(TOTALCOMP)	Log(TOTALCOMP)
CEOCHAIR	0.059 (2.06)**	0.072 (2.03)**	
INSIDER	0.104 (2.72)***	0.119 (2.82)***	
APPOINT	0.125 (3.15)***	0.138 (2.77)***	
CEOCHAIR * CCOUT		-0.058 (-2.02)**	
INSIDER * CCOUT		-0.082 (-2.60)***	
APPOINT * CCOUT		-0.097 (-2.85)***	
CEOCHAIR * BLOCK		-0.061 (-2.01)**	
INSIDER * BLOCK		-0.077 (-2.06)**	
APPOINT * BLOCK		-0.104 (-2.89)***	
CEOPOWER			0.151 (3.39)***
CEOPOWER * CCOUT			-0.103 (-2.52)***
CEOPOWER * BLOCK			-0.129 (-2.83)***
CCOUT	-0.129 (-2.81)***	-0.094 (-2.38)***	-0.116 (-2.45)***
BLOCK	-0.207 (-3.29)***	-0.213 (-3.01)***	-0.201 (-2.88)***
LOGSALE	0.253 (6.51)***	0.258 (5.14)***	0.322 (5.27)***
MTB	0.144 (5.29)***	0.139 (5.35)***	0.116 (4.73)***
ROA	0.370 (5.83)***	0.364 (4.52)***	0.318 (4.30)***
RET	0.161 (4.25)***	0.119 (3.74)***	0.135 (3.76)***
STDROA	0.141 (2.96)***	0.104 (2.88)***	0.115 (2.71)***
STDRET	0.116 (1.07)	0.103 (0.85)	0.094 (0.91)

TENURE	0.032 (2.68)***	0.022 (2.01)**	0.026 (2.71)***
AGE	0.020 (1.19)	0.017 (1.38)	0.021 (1.05)
Intercept	0.031 (2.54)***	0.059 (2.81)***	0.047 (2.61)***
N	2,795	2,795	2,795
Adjusted R^2	32.14%	35.22%	37.03%
F-statistic	53.19***	60.27***	64.17***

Moreover, in column (2), the interaction term INSIDER x CCOUT is negative and significant at the 1% level, indicating that in firms with high proportion of inside directors on the board, CEOs in the sub-sample of firms with higher compensation committee independence receive lower compensation level. Holding constant the proportion of inside directors on the board (INSIDER) at the sample median, if the independence of compensation committee (CCOUT) increases by one standard deviation, CEO compensation decreases by US$49,000.

The interaction term APPOINT x CCOUT is negative and significant at the 1% level, indicating that compensation committee independence mitigates the positive association between CEO compensation and the proportion of board of directors appointed during the CEO tenure. Holding constant the proportion of directors on the board appointed during the CEO tenure (APPOINT) at the sample median, if the independence of compensation committee (CCOUT) increases by one standard deviation, CEO compensation decreases by US$45,000. In sum, our results indicate in firms run by powerful CEOs, these firms with higher independence in their compensation committee have lower level of CEO compensation. Thus, effective monitoring by independent compensation committee limits the ability of the CEO to set excessive compensation.

Next, we turn to the interaction between the equity ownership by external block-holders and our empirical proxies of CEO power in affecting CEO compensation level. In column (2), the interaction term CEOCHAIR*BLOCK is negative and significant at the 5% level, indicating that in firms in which the CEO is also the chairman of the board, CEO compensation level is lower when equity ownership by block-holders is higher. To gauge the economic significance, in firms in which CEO chairs the board (i.e. CEOCHAIR=1), a one-standard deviation increase in the proportion of block-holders' equity ownership reduces CEO compensation by US$48,000.

The interaction term INSIDER*BLOCK is negative and significant at the 5% level, indicating that in firms with higher proportion of insider directors on the board, CEOs receive lower compensation level in those firms with higher equity ownership by block-holders. In terms of economic significance, holding constant the proportion of insider directors on the board (INSIDER) at the sample median, a one-standard deviation increase in the block-holders' equity ownership is associated with US$ 34,000 decrease in CEO compensation.

The interaction term APPOINT*BLOCK is negative and significant at the 1% level, indicating that equity ownership by block-holders mitigates the positive

association between CEO compensation and the proportion of board of directors appointed during the CEO tenure. In terms of economic significance, holding the proportion of directors on the board appointed during the CEO tenure at the sample median, a one-standard deviation increase in the block-holders' equity ownership is associated with US$ 36,000 decrease in CEO compensation. Our result suggests that block-holders play an important corporate governance role to reduce excessive CEO compensation in firms run by powerful CEOs.

In column (3), we replace the three empirical proxies of CEO power with a composite index of CEO power (CEOPOWER). Our results are qualitatively similar. The coefficient on CEOPOWER is positive and significant at the 1% level, indicating the CEO compensation level increases with CEO power. The interaction term, CEOPOWER*CCOUT, is negative and significant at the 1% level, suggesting that in firms with more powerful CEOs, CEOs in firms with more independent compensation committee receive lower executive compensation levels. The interaction term, CEOPOWER*BLOCK, is negative and significant at the 1% level, suggesting that in firms with more powerful CEOs, those with higher equity ownership external block-holders have lower CEO compensation levels. In terms of economic significance, holding constant the composite index of CEO power at its median, an increase in the proportion of outside directors on the compensation committee (block-holders' equity ownership) by one standard deviation reduces CEO compensation by US$62,000 (US$45,000). Thus, the results are economically meaningful.

In general, most control variables are in their predicted direction. CEO compensation is higher when firm size is greater, consistent with larger companies hiring more talented managers. CEO compensation is higher when the firm's volatility (measured by the standard deviation of return on assets in the past five years) is greater, suggesting that CEOs of riskier firms are compensated more. CEO compensation is also positively related to firm performance (measured by return on assets and stock returns) and growth opportunities (measured by market value of equity to book value of equity). The level of CEO compensation is positively associated with CEO's tenure.

C.   Pay-Performance Sensitivity

If higher CEO power reflects agency problems between managers and shareholders, we expect firms with more powerful CEOs to exhibit lower CEO pay-performance sensitivity. This section examines whether CEO pay-performance sensitivity is lower in firms with more powerful CEOs. We employ this model to examine the CEO pay-performance sensitivity:

$$\begin{aligned}
\text{CHGCOMP} = & \ \beta_1 \text{RET} + \beta_2 \text{RET*CEOPOWER} + \beta_3 \text{RET* CEOPOWER *CCOUT} \\
& + \beta_4 \text{RET* CEOPOWER *BLOCK} + \beta_5 \text{CHGROA} \\
& + \beta_6 \text{CHGROA* CEOPOWER} \\
& + \beta_7 \text{CHGROA*CEOPOWER*CCOUT} \\
& + \beta_8 \text{CHGROA*CEOPOWER*BLOCK} + \varepsilon_{it-1}
\end{aligned} \qquad (2)$$

where CHGCOMP = change in the natural logarithm of CEO's total compensation from year t-1 to year t. RET = annual stock return in year t. CHGROA = change in return-on-assets from year t-1 to year t where return-on-assets is computed as net income after tax

divided by lagged total assets. ε_{it-1} = Error term. All other variables are defined in Table 1.

Prior studies on pay-performance sensitivity (Core, Holthausen, and Larker, 1999; Hartzell and Starks, 2003) suggest that change is CEO compensation should be positively associated with changes in firm performance, measured by stock return (RET) and change in return on assets (CHGROA), respectively. Thus, we expect coefficient β_1 and coefficient β_5 to be positive. If higher CEO power is associated with higher agency costs, the pay-performance sensitivity should be lower in firms with higher CEO power. Thus, coefficient β_2 and coefficient β_6 should be negative.

To test the incremental effect of the compensation committee's independence on the pay-performance sensitivity in firms with powerful CEOs, we include the interaction term RET*CEOPOWER*CCOUT and interaction term CHGROA*CEOPOWER*CCOUT. If higher proportion of outside directors on the compensation committee mitigates the negative pay-performance sensitivity in firms with powerful CEOs, we expect coefficient β_3 and coefficient β_7 to be positive. Similarly, to test the incremental effect of the large block-holders on the pay-performance sensitivity in firms with powerful CEOs, we examine the interaction term RET*CEOPOWER *BLOCK and interaction term CHGROA*CEOPOWER*BLOCK. If greater equity ownership by block-holders mitigates the negative pay-performance sensitivity in firms with powerful CEOs, we expect coefficient β_4 and coefficient β_8 to be positive.

Table 4 presents the regression results on the pay-performance sensitivities. In Column (1), the estimated coefficients on RET and CHGROA are positive and statistically significant. Thus, changes in the CEO compensation are positively associated with changes in firm performance. The coefficients on the interaction term RET*CEOPOWER and CHGROA*CEOPOWER are negative and statistically significant at the 1% level. Thus, CEO compensation is less sensitive to firm performance in firms run by powerful CEOs.

In column (2), we test the notion that compensation committee's independence mitigates the negative pay-performance sensitivity in firms with powerful CEOs. The coefficients on the interaction term RET*CEOPOWER*CCOUT and interaction term CHGROA*CEOPOWER*CCOUT are positive and significant. Thus, high proportion of outside directors on the compensation committee strengthens the pay-performance sensitivity in firms with powerful CEOs. Furthermore, we examine whether greater equity ownership by block-holders mitigates the negative pay-performance sensitivity in firms with powerful CEOs. The coefficients on the interaction term RET*CEOPOWER*BLOCK and interaction term CHGROA*CEOPOWER*BLOCK are positive and significant. Hence, the negative pay-performance sensitivity in firms with powerful CEOs is mitigated by block-holders, suggesting that better monitoring by block-holders reduces the agency costs associated with powerful CEOs.

D.   Future Operating Income

Our final set of tests examines whether the positive relation between executive compensation and CEO power (as shown in Table 3) exists because: (1) the CEO power is an economic determinant of executive compensation that has been omitted from prior compensation models, or (2) there exist unresolved agency problems similar to those in Core et al. (1999), which allow CEOs to use CEO power to extract rents from the firm.

To distinguish between these two alternative explanations, we examine the relation between the portion of compensation predicted by the CEO power (which we refer to as "predicted excess compensation associated with higher CEO power") and future firm performance.

Table 4
Regressions of pay-performance sensitivity

This table presents results of regressions of change in CEO total compensation. The sample consists of 2,795 firm-year observations from 2000 to 2007. The dependent variable is CHGCOMP which is computed as the change in the natural logarithm of CEO's total compensation from year t-1 to year t. RET is annual stock return in year t. CHGROA is the change in return-on-assets from year t-1 to year t where return-on-assets is computed as net income after tax divided by lagged total assets. CEOPOWER is a composite index of CEO power based on a principal components analysis of the three empirical measures of CEO power (CEOCHAIR, INSIDER and APPOINT). Higher values of CEOPOWER denote higher CEO power. CCOUT is the proportion of outside directors in the compensation committee at the end of year. An outside director is not a current or former employee of the company and he has no related party transactions with the company. BLOCK is common equity ownership held by external block-holders at the end of year. Fixed effects for year, countries and industries are included in the regressions but are not tabulated. t-statistics based on robust standard errors clustered at firm level are presented in parentheses below coefficient estimates. *, **, and *** indicate two-tailed statistical significance at the 10, 5, and 1 percent levels, respectively.

	1	2
Dependent Variable	CHGCOMP	CHGCOMP
RET	0.229 (3.23)***	0.173 (2.81)***
RET*CEOPOWER	-0.112 (-2.69)***	-0.102 (-2.48)***
RET* CEOPOWER *CCOUT		0.083 (2.15)**
RET* CEOPOWER *BLOCK		0.071 (2.60)***
CHGROA	0.491 (2.76)***	0.516 (2.98)***
CHGROA* CEOPOWER	-0.406 (-2.86)***	-0.341 (-2.82)***
CHGROA* CEOPOWER *CCOUT		0.149 (2.05)**
CHGROA* CEOPOWER *BLOCK		0.264 (2.59)***
Intercept	0.711 (3.47)***	0.573 (3.01)***
Adjusted R^2	7.28%	9.68%

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Following Core et al. (1999), if the predicted excess compensation associated higher CEO power reflects agency conflicts, we expect a negative relation between the predicted excess compensation associated with higher CEO power and future firm performance. In contrast, if higher CEO power reflects some dimension of the firm's

efficient demand for a high-quality CEO, we expect an insignificant or positive relation between the predicted excess compensation associated CEO power and future firm performance. We first consider the relation between predicted excess compensation associated with CEO power and subsequent accounting operating performance. Similar to Core et al. (1999), we employ the following OLS regression:

$$\begin{aligned} \text{ROA}_{t+1} = \lambda_0 &+ \lambda_1 \text{ POWCOMP}_t \ + \lambda_2 \text{ POWCOMP}_t * \text{CCOUT}_t \\ &+ \lambda_3 \text{ POWCOMP}_t * \text{BLOCK}_t \ + \lambda_4 \text{ CCOUT}_t \\ &+ \lambda_5 \text{ BLOCK}_t \ + \lambda_6 \text{ STDROA}_{t-1} + \lambda_7 \text{ SALES}_{t-1} \\ &+ \text{YEAR} + \text{COUNTRY} + \varepsilon_{t-1} \end{aligned} \tag{3}$$

where ROA_{t+1} = the return on assets for the subsequent year. POWCOMP = the portion of total compensation predicted by the composite index of CEO power (CEOPOWER), based on estimations of equation (1) reported in Table 3. We calculate POWCOMP by multiplying the estimated coefficient $\beta1$ in Table 3 column (1) by the firm's actual measure of the composite index of CEO power (CEOPOWER), scaled by CEO total compensation. CCOUT= Proportion of outside directors in the compensation committee. BLOCK = Common equity ownership held by external block-holders. STDROA = Standard deviation of return on assets calculated over the five years prior to when compensation is awarded. SALES = Logarithm of sales measured in the year prior to the compensation award. YEAR = dummy variables for years. COUNTRY = dummy variables for countries.

Table 5 presents the results of regressions of future ROA on predicted excess compensation associated CEO power. The dependent variables are one–year ahead operating income (column 1), two–year ahead operating income (column 2) and three–year ahead operating income (column 3). The coefficient on the predicted excess compensation associated CEO power is negatively associated with one-, two-, and three–year ahead operating income. Thus, the predicted component of compensation due to higher CEO power exhibits a significant negative association with subsequent return on assets. This result is consistent with the rent extraction hypothesis associated with higher CEO power.

The interaction term between excess compensation and proportion of outside directors on their compensation committee (POWCOMP*CCOUT) is positive and significant for one–, two–, and three–year ahead operating income. Thus, future return on asset is less negatively associated with excess compensation due to higher CEO power in firms with higher proportion of outside directors on their compensation committee.

The interaction term between excess compensation and equity ownership held by external block-holders (POWCOMP*BLOCK) is positive and significant one-, two-, and three–year ahead operating income. These results indicate the negative association between future operating income and excess compensation due to higher CEO power is mitigated in firms with high external block-holders equity ownership.

Table 5

Regressions of future operating income

This table presents results of pooled cross-sectional ordinary least squares regressions of future return on assets on predicted excess compensation associated with CEO power. The sample consists of 2,795 firm-year observations from 2000 to 2007. The dependent variables are one-year ahead return on assets (column 1), two-year ahead return on assets (column 2) and three-year ahead return on assets (column 3). Predicted excess compensation associated with CEO power (POWCOMP) is the amount of compensation due to higher CEO power (estimated with the coefficient from the total compensation regression in Table 3), scaled by total compensation. CCOUT is the proportion of outside directors in the compensation committee. BLOCK is the common equity ownership by external block-holders. STDROA is measured as the standard deviation of return on assets calculated over the five years prior to when compensation is awarded. SALE is the logarithm of sales measured in the year prior to the compensation award. t-statistics based on robust standard errors clustered at firm level are presented in parentheses below coefficient estimates. *, **, and *** indicate two-tailed statistical significance at the 10, 5, and 1 percent levels, respectively.

	1	2	3
Dependent variable	One-year ahead ROA	Two-year ahead ROA	Three-year ahead ROA
POWCOMP	-0.861	-0.779	-0.703
	$(-3.19)^{***}$	$(-2.83)^{***}$	$(-2.59)^{***}$
POWCOMP * CCOUT	0.403	0.385	0.602
	$(2.49)^{***}$	$(2.35)^{***}$	$(2.02)^{**}$
POWCOMP * BLOCK	0.517	0.428	0.406
	$(2.42)^{***}$	$(2.09)^{**}$	$(2.03)^{**}$
CCOUT	0.316	0.287	0.296
	$(2.02)^{**}$	$(1.89)^{*}$	$(1.92)^{*}$
BLOCK	0.372	0.335	0.419
	$(2.31)^{***}$	$(2.04)^{**}$	$(1.88)^{*}$
STDROA	-0.614	-0.550	-0.628
	(-1.03)	(-1.27)	(-0.73)
SALE	0.791	0.702	0.586
	$(2.01)^{**}$	$(2.63)^{***}$	$(2.49)^{***}$
Intercept	0.307	0.691	0.194
	(1.28)	(0.87)	(1.12)
N	2,209	2,067	1,903
Adjusted R^2	25.3%	23.8%	24.1%

E.   Future Stock Returns

Next, we estimate the association between predicted excess compensation associated with CEO power and future stock returns. If investors perceive compensation for powerful CEOs as being associated with opportunistic behavior by managers, then the market may fully impound this information into stock prices as investors become aware of the agency problems associated with powerful CEOs[11]. Similar to Core et al. (1999), we test the relation between the predicted excess compensation associated with CEO power and future stock returns as follows:

$$
\begin{aligned}
RET_{t+1} = {} & \lambda_0 + \lambda_1 \, POWCOMP_t + \lambda_2 \, POWCOMP_t * CCOUT_t \\
& + \lambda_3 \, POWCOMP_t * BLOCK_t + \lambda_4 \, CCOUT_t \\
& + \lambda_5 \, BLOCK_t + \lambda_6 \, STDRET_t + \lambda_7 \, MVE_t \\
& + \lambda_8 \, MTB_t + YEAR + COUNTRY + \varepsilon_t
\end{aligned}
\tag{4}
$$

where RET_{t+1} = the annual buy-and-hold stock return for the subsequent fiscal year. POWCOMP = the portion of total compensation predicted by the composite index of CEO power (CEOPOWER), based on estimations of equation (1) reported in Table 3. We calculate POWCOMP by multiplying the estimated coefficient $\beta 1$ in Table 3 column (1) by the firm's actual measure of the composite index of CEO power (CEOPOWER), scaled by CEO total compensation. CCOUT = Proportion of outside directors in the compensation committee. BLOCK = common equity ownership held by external block-holders. STDRET = The annual standard deviation of return for the five years prior to when compensation is awarded. MVE = The logarithm of the market value of equity. MTB = Market-to-book ratio are measured as of the end of the fiscal year prior to when the compensation is awarded. YEAR = dummy variables for years. COUNTRY = dummy variables for countries.

Table 6 presents the results of regressions of future stock returns on excess compensation associated with CEO power. The coefficient on the predicted excess compensation associated CEO power is negatively associated with one–, two–, and three–year ahead stock return.

The interaction term between excess compensation associated with CEO power and proportion of outside directors on their compensation committee (POWCOMP* CCOUT) is positive and significant for one-, two-, and three–year ahead stock return. These results indicate the negative association between future stock return and excess CEO compensation due to higher CEO power is attenuated by the independence of the compensation committee.

The interaction term between excess compensation and equity ownership held by external block-holders (POWCOMP*BLOCK) is positive and significant one-, two-, and three–year ahead stock return. These results support the hypothesis that the negative association between future stock return and excess CEO compensation due to CEO power is mitigated in firms with high external block-holders equity ownership.

Collectively, the results in Table 5 and Table 6 suggest that the predicted component of compensation due to CEO power exhibits a negative association with subsequent firm operating performance and stock return performance. These results suggest that CEO power proxy for managerial entrenchment. Furthermore, we provide evidence that equity ownership by block-holders and independence of the compensation committee attenuate the negative relation between CEO power and the firm's future performance.

V.   CONCLUSIONS

Using a sample of firms in East Asian economies, we find that level of CEO compensation is positively associated with CEO power. Furthermore, we document that in firms with powerful CEOs, those firms with higher proportion of independent directors on compensation committee have lower CEO compensation level. We also find that the positive association between CEO compensation and CEO power is mitigated by large external block-holders.

If higher CEO power reflects agency problems between managers and shareholders, we expect firms with more powerful CEOs to exhibit lower CEO pay-performance sensitivity. Consistent with our prediction, CEO pay-performance

sensitivity is lower in firms with more powerful CEOs. We also find that the negative pay-performance sensitivity in firms with more powerful CEOs is mitigated by block-holders and the proportion of outside directors on the compensation committee.

Table 6
Regressions of future stock returns

This table presents results of pooled cross-sectional ordinary least squares regressions of future stock return on predicted excess compensation associated with the CEO power. The sample consists of 2,795 firm-year observations from 2000 to 2007. The dependent variables are one-year stock return (column 1), two-year ahead stock return (column 2) and three-year ahead stock return (column 3). Predicted excess compensation associated with the CEO power (POWCOMP) is the amount of compensation due to higher CEO power (estimated with the coefficient from the total compensation regression in Table 3), scaled by total compensation. CCOUT is the proportion of outside directors in the compensation committee. BLOCK is the common equity ownership by external block-holders. STDRET is the annual standard deviation of return for the five years prior to when compensation is awarded. MVE is log of the market value of equity measured as of the end of the fiscal year prior to when the compensation is awarded. MTB is the market-to-book ratio measured as of the end of the fiscal year prior to when the compensation is awarded. t-statistics based on robust standard errors clustered at firm level are presented in parentheses below coefficient estimates. [*],[**], and [***] indicate two-tailed statistical significance at the 10, 5, and 1 percent levels, respectively.

	1	2	3
Dependent variable	One-year ahead stock return	Two-year ahead stock return	Three-year ahead stock return
POWCOMP	-0.572 (-2.75)[***]	-0.534 (-2.31)[***]	-0.436 (-1.97)[*]
POWCOMP * CCOUT	0.218 (2.30)[***]	0.205 (2.06)[**]	0.174 (1.92)[*]
POWCOMP * BLOCK	0.335 (2.47)[***]	0.296 (2.28)[***]	0.227 (2.02)[**]
CCOUT	0.209 (2.01)[**]	0.227 (1.86)[*]	0.215 (1.87)[*]
BLOCK	0.372 (2.05)[**]	0.294 (1.91)[*]	0.506 (1.52)
STDRET	-0.209 (-2.91)[***]	-0.175 (-2.66)[***]	-0.110 (-2.81)[***]
Log(MVE)	-0.416 (-2.63)[***]	-0.118 (-2.59)[***]	-0.081 (-1.88)[*]
MTB	0.093 (1.35)	0.152 (1.03)	0.106 (1.19)
Intercept	0.217 (3.04)[***]	0.194 (2.74)[***]	0.226 (2.59)[***]
N	2,209	2,067	1,903
Adjusted R^2	6.82 %	7.01%	6.97%

Additional tests indicate that the predicted component of compensation due to CEO power exhibits a negative association with subsequent firm operating performance and stock return performance. Moreover, the negative association between excessive CEO compensation and future firm performance is less pronounced in firms with higher proportion of independent directors on their compensation committee and those with higher proportion of equity held by external block-holders. Collectively, our result are consistent with the rent-seeking hypothesis, namely that powerful CEOs will influence their own compensation packages when they have the incentives and ability to do so.

ENDNOTES

1. We would like to thank the international human resources consulting firm for generously sharing its survey data of CEO compensation of the East Asian countries. We have a strict confidentiality agreement with the consulting firm relating to the usage of the data.
2. CEO power has multiple dimensions and some dimensions are not easily observable. Following Adams, Almeida, and Ferreira (2005), we focus mainly on structural power, in particular the power of the CEO has over the board of directors as a consequence of his formal position in the firm and monitoring effectiveness of the board. Similar to Adams, Almeida, and Ferreira (2005), our paper does not provide evidence on all forms of CEO power.
3. They also find no evidence that presence of CEO on the compensation committee is associated with excessive CEO compensation.
4. For example, in its 2006 annual report, Food Empire Limited (listed in Singapore) discloses that "to maintain confidentiality of staff remuneration, the names of the 5 top executives (who are not Directors) are not stated." Similarly, Macondray Plastic (listed in Philippines) states that "the aggregate compensation of all directors and executives *as a group unnamed (emphasis added)* is $4.5 million" in its 2004 annual report. As another illustration, in its 2006 Annual report, Sime Darby (listed in Malaysia) discloses that the "company has been in compliance with the Malaysian Code of Corporate Governance during the financial year except for the disclosure of details of the remuneration of each top management executive."
5. Under rent-seeking theory (optimal contracting theory), we expect a negative (positive) association between excess CEO compensation in the current period and future firm performance. In subsequent tests, we find a negative association between CEO power and (i) future operating profitability and (ii) future stock return. Thus, the evidence suggests excessive CEO compensation associated with CEO power reflects the rent-seeking arguments.
6. They also find no evidence that CEOs serving on their compensation committee receive higher levels of pay than CEOs who are not members of their compensation committee. Furthermore, there is no evidence that CEO pay decreases or total incentives increase when CEOs step down from their compensation committee.
7. Contingent pay consists of CEO long-term incentive payments and the market value of stock options granted.
8. Bebchuk and Fried (2003) argue that firms can appoint compensation consultants to camouflage compensation rents. Specifically, compensation consultants can

favor CEOs by providing compensation data that are most useful in justifying a high level of pay. For example, when firms do well, compensation consultants argue that pay should reflect performance and should be higher than industry average. Conversely, when firms do poorly, compensation consultants may focus on peer group pay (instead of firm-specific performance data) to argue that CEO compensation should be higher to reflect prevailing industry levels.

9. Under the efficient contracting view of CEO compensation, shareholders use compensation to reduce agency costs. Thus, shareholders will not reward CEOs for observable luck.

10. Under the optimal contracting view on CEO compensation, we do not expect the association between CEO power and CEO compensation to vary with equity ownership of block-holders.

11. Thus, even if the excess compensation associated with CEO power is correlated with future firm performance, we may not observe a significant association between excess compensation associated with CEO power and future stock returns because the information may have already been impounded into stock price.

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