MANAGERIAL COMPENSATION WHEN MANAGERS ARE PRINCIPALS[*]

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Abstract

Prior research has used the principal-agent framework to examine managerial compensation. However, in a number of corporations, managers own enough of their firms' voting rights to be able to decide with relative impunity how they will be compensated. In a real sense, they are the principals. Using a sample of the largest U.S. corporations, I examine the compensation of such CEOs to see if they are paid more than other CEOs. My overall results provide no support that such CEOs are paid more in cash compensation as well as all forms of direct compensation. The only exception is in some smaller firms, where CEOs are paid more in total compensation when management controls enough of the company's stock. However, such firms constitute a tiny fraction of the sample firms. For dual-class firms and firms where CEOs control enough of the company's stock, I find no evidence that such CEOs are paid more.

Keywords: CEO Compensations; Managerial Control; Salary; Stock Options

1. Introduction

Bertrand and Mullainathan (2000a, 2000b) point out that there are two competing views of CEO pay. They identify the "contracting" view as holding that pay is used to solve an agency problem and is designed to maximize shareholder wealth. On the other hand, the "skimming" view holds that pay is the result of an agency problem in which CEOs have captured the pay process so that they set their own pay. The continuing debate between these two points of view is expressed in a number of ways. For example, there is debate over whether the sensitivity of managerial compensation to corporate performance is consistent with one or the other viewpoint. Another debate concerns whether managers are paid more than they should be paid. One issue of this particular debate, and the one that motivates this paper, concerns whether managers are paid more when they are effectively in control of the internal governance of their firm, or as some would say, entrenched. Fama and Jensen (1983) suggest that one private benefit of such control accruing to managers is the ability to pay themselves more than comparable managers. Similarly, Zingales (1995) argues that one of the private benefits of control accruing to managers whose firms issue stock with differential voting rights is higher compensation than comparable managers in firms without such differential voting right structures.

Recognizing the paucity of evidence on such firms, Holderness and Sheehan (1988) conducted an exploratory study of 114 NYSE- or AMEX-listed corporations in which a stockholder held more than 50 percent of the corporation's stock. Holderness and Sheehan found mixed evidence on whether the managers of such firms are paid more, when they included corporate and individual blockholders in the analysis. They, however, did find evidence that identity of the majority share-

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holder matters. Specifically, firms in which the majority shareholder is a person, rather than another corporation, tend to pay their managers differently. Focusing on the manager's cash compensation (salary and bonus), Holderness and Sheehan provide some evidence that managers pay themselves marginally more when they are in control of their companies. In addition, the excessive managerial pay is correlated with firm size.

Stronger evidence of managers' using their controlling position in their firms to pay themselves more is provided in Zingales (1995) and Core, Holthausen, and Larcker (1999; hereafter CHL). Zingales (1995) studies the determinants of the value of voting rights in U.S. corporations. In the course of his study, Zingales examines the compensation of the largest shareholder in firms with differential voting rights. He finds evidence that such shareholders, who are typically the CEO, are paid significantly more and that the amount is correlated with their voting power. CHL studied CEO compensation in a sample of 205 publicly traded U.S. corporations from 1982 through 1984. They found that CEOs are paid more in corporations with weak corporate governance such as larger board size, boards with less independent directors, and boards with the CEO holding title as chairman of the board. Further, they found evidence that a measure of excess compensation that they create is negatively correlated with future firm performance. They interpreted this result as suggesting that these managers were receiving an unwarranted amount of compensation. Thus these studies suggest that when management controls enough of a firm's voting rights, the CEOs may be paid more, or at least differently than other CEOs. Such evidence supports the "skimming" view of managerial compensation as it suggests that such managers are paying themselves more.

However, the ways in which a manager is compensated have changed significantly during the past 20 years due to the explosive use of equity-based compensation. Most CEOs today are paid not only in the form of cash compensation (salary and bonus) but also in the form of equity compensation (stock options and restricted stocks) and other benefits.[1] Thus, these studies might not reflect the current managerial compensation practices. Holderness and Sheehan (1988) and Zingales (1995) all focus on the salary and bonus components of managerial compensation. One might conjecture that when a manager owns a lot of his firm's stock, he might not want to increase his equity in the firm, as it makes his portfolio even more undiversified, and so he might want to be paid more in cash or cash equivalents. Certainly, the evidence in Ofek and Yermack (2000) is consistent with this argument. They found that company executives that have larger ownership stakes are more likely to sell their personal stocks when new stock options/restricted stocks are granted to them, in order to reduce their risk exposure. Just focusing on cash or cash-equivalent compensation may lead one to infer that these managers are paying themselves more when they are simply paying themselves differently.

Although CHL included equity compensation in their study, the nature of compensation has changed since that time. The equity-based compensation was relatively unimportant during their sample periods (1982-1984) but has since grown significantly. Hall and Liebman (1998) examined CEO compensation and showed that the mean value of stock options granted was about 25 percent of the total direct compensation during the period 1982 to 1984, but the same value increased to about 50 percent of total direct compensation in ten years (1992-1994).

To address the issues raised earlier, I focus on the compensation of CEOs in firms in which management has sufficient voting rights to decide CEO compensation with relative impunity. Crystal (1991) points out that there are two basic CEO compensation decisions made by a corporation's board: how much and how to pay the CEO. Thus, I focus on these two questions by examining both cash components of CEO compensation and all forms of direct components of CEO compensation. Unlike prior literature, I find no evidence that CEOs are paid more when management is in control of their firms and when their compensation is measured by their salaries and bonuses. However, my results indicate that CEOs in smaller firms are paid more in total compensation when the management controls enough of the company's voting rights. Even in those cases, they constitute a very small fraction of the sample firms. For larger firms, such CEOs are paid significantly less when one considers all forms of direct compensation. For dual-class firms and firms with CEOs owning a significant share of the company's stock, I find no evidence that such CEOs are paid more. My findings

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[1] Some authors classify executive compensation as current and deferred compensation. Our cash compensation grouping is equivalent to their current compensation grouping, and our equity compensation grouping is equivalent to their deferred compensation grouping.

call into question the argument that managers in public corporations pay themselves more when they are in control of their firms. My evidence supports the "contracting" view of managerial compensation. To present our examination, I organize the paper as follows. Section 2 describes the sample and various data sources used in this study. I present my empirical findings in Section 3 and discuss the implications of my findings in Section 4. Section 5 concludes.

2. Sample and Data

I begin with the sample described in the Forbes 800 (1997). From this sample, I identify 557 firms with CEO compensation data for 1997 in the Standard & Poor's ExecuComp database. The final sample comprises 542 firms after excluding 15 observations with missing values. I obtain the data on CEO compensation, CEO age, and CEO stock ownership from the ExecuComp database. I collect data on ownership, board composition, and voting rights of company's stocks from companies' proxy statements during 1997. I also collect the accounting data and security return data from the Compustat and CRSP, respectively. For each of these corporations, I use several variables to capture different dimensions of concern in this study: managerial control, economic determinants of CEO compensation, CEO compensation, board characteristics, and ownership structure. A discussion of what variables I use, and why, follows.

Managerial Control There is no agreement in the literature on what proportion of a firm's voting rights confers on its holder or holders an ability to exercise control over a firm with relative impunity. Further, there is debate over whose holdings one should focus on in making this determination. I focus on the voting rights of the CEO; and of the officers and directors of each sample firm. I focus on the voting rights of the officers and directors since they represent the management of a public corporation in a broad sense, and because this is a standard measure of managerial control in the managerial entrenchment literature (e.g., Morck, Shleifer, and Vishny, 1988). While there is no broad agreement on what level of this group's ownership represents the appropriate threshold to identify control, there are nevertheless several operative benchmarks that have been used. La Porta, Lopez-de-Silanes, and Shleifer (1999), in their study of corporate ownership around the world, use managerial holdings of 10 percent and 20 percent as benchmarks of managerial control. Weston (1979) reports evidence that firms in which management owns 30 percent or more of the firm's stock are not subject to unwanted takeover attempts. Consequently, I use benchmarks of 10 percent, 20 percent, and 30 percent (MGM10, MGM20, and MGM30, respectively) as potentially identifying the level of managerial voting rights that allows management to act with relative impunity.[2] Table 1 contains detailed description of each variable used in this study. How much stock a CEO needs to own to control his firm personally is an even more contentious issue, as it will depend on the distribution of shareholdings in his firm. After examining the distribution of CEO ownership in our sample firms, I decide to use 5 percent and 10 percent (CEO5 and CEO10, respectively) as benchmarks for CEO control.[3] In addition to these dummy variables, I also create a dummy variable for firms that have stocks with differential voting rights (DUAL).

Table 1. Variable Descriptions

SALARY	Base salary
CASHCOMP	Sum of salary and bonus
TOTCOMP	Sum of salary, bonus, long-term incentive payouts, other annual compensation, stock option granted (Black-Scholes value), restricted stocks granted (market value), and all other compensations

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[2] In most corporations, management will vote the proxies of a substantial number of shareholders. Thus it is not necessary for management to own 50 percent or more of their firm's stock to act with a high degree of impunity. See Bethel and Gillan (2000) for evidence on management control of the proxy process.

[3] The 5 percent level is routinely used in Securities and Exchange Commission and Federal Communications Commission regulations to identify either a "controlling" shareholder or a shareholder whose interest in the firm must be disclosed. Using higher CEO benchmarks does not change any conclusion in this study.

Table 1 continued

SALES	Firm sales during fiscal year-end of 1996
SIZE	Natural logarithm of firm sales
INVOPP	Average year-end market to book value during 1992-1996
INVOPPNUM	Dummy takes the value of one if data on investment opportunities are missing
ROA	Ratio of earnings before interest and taxes to the total assets during 1996
ROANUM	Dummy takes the value of one if data on return on asset are missing
RET	Percentage of stock return during 1996
SDROA	Standard deviation of the annual return on asset during 1992-1996
SDROANUM	Dummy takes the value of one if data on standard deviation of return on asset are missing
SDRET	Standard deviation of the monthly stock return during 1992-1996
CEOCHAIR	Dummy takes the value of one if a CEO is a chairman of the board
CEOFOUND	Dummy takes the value of one if a CEO is a founder of the company
LEVERAGE	Long-term debt to book value of assets during 1996
CEO_AGE	Age of the CEO
BSIZE	Number of directors on the board
OTHFOUND	Dummy takes the value of one if a non-CEO-founder is a member of the board of directors
INSIDE	Percentage of the board that is composed of officers, former employees, and managers' relatives
GRAY	Percentage of the board that is composed of non-inside directors that received excess compensation from the company in addition to the director fees
AGE69	Percentage of the board that is composed of non-inside directors over age 69
BUSY	Percentage of the board that is composed of non-inside directors who serves on three or more boards (six for retired board directors)
CCSIZE	Number of directors who serves on the compensation committee
CCINSIDE	Percentage of the compensation committee that is composed of officers, former employees, and managers' relatives
CCGRAY	Percentage of the compensation committee that is composed of non-inside directors who received excess compensation from the company in addition to the director fees
CEOOWN	Percentage of the company's shares owned by the CEO
PRIN	Dummy takes the value of one if a person, in addition to financial institutions, trusts, and ESOPs, owns 5 percent of the company's shares
INST	Dummy takes the value of one if an institutional investor owns 5 percent or more of the company's shares
MGMOWN	Percentage of the company's shares owned by the officers and directors
MGMVOTP	Percentage of the company's voting right controlled by the officers and directors
MGM30	Dummy takes the value of one if the officers and directors control 30 percent of the firm's voting rights
MGM20	Dummy takes the value of one if the officers and directors control 20 percent of the firm's voting rights
MGM10	Dummy takes the value of one if the officers and directors control 10 percent of the firm's voting rights
DUAL	Dummy takes the value of one if a firm has dual-class stocks with unequal voting rights
CEO5	Dummy takes the value of one if the CEO controls 5 percent of the firm's voting rights
CEO10	Dummy takes the value of one if the CEO controls 30 percent of the firm's voting rights

Economic Determinants As Rosen (1992) points out, if there is a correlation between talent and the productivity of control, then in market equilibrium, the most talented executives will occupy the top positions in the largest companies where their marginal productivity is the greatest. Consequently, the level of managerial compensation should be positively correlated with firm size and their investment opportunities. I use the natural logarithm of a firm's sales as a proxy for firm size (SIZE) because compensation specialists apply this transformation of firm sales to determine pay of CEOs

(see Amacom, 1975). I measure the firm sales during 1996, one year prior to the measurement of CEO compensation. I proxy a firm's investment opportunities (INVOPP) by its average year-end market to book ratio during 1992-1996.

Principal-agent theory suggests that the principal ties managers' pays with their firms' performance. I expect that the CEO compensation will be positively correlated with firm performance; however, what is the right measurement for firm performance is inconclusive. Since the principal cannot observe the marginal product of the agent, the principal might use different proxies for an agent's marginal contribution. Some of these proxies include various measures of firm performances. In this paper, I use both accounting return on asset and stock return to measure a firm performance. I measure the accounting return on asset (ROA) by the ratio of the earnings before interest and taxes to the total assets during 1996, and the stock return (RET) by the percentage of stock return during 1996. The principal-agent theory also suggests that managerial compensation should be influenced by firm risk and a manager's aversion to that risk. What firm risks are compensated and how to measure them are more contentious issues. Some studies have measured firm risk using the variance of some firm return measure (e.g., Carr, 1997) on the argument that managers hold undiversified portfolios and so should be compensated for the total risk faced by the firm. Other studies decompose firm risk into systematic risk and unsystematic risk (e.g., Garen, 1994) on the argument that shareholders will want to remove only systematic risk from a CEO's concerns.[4]

I follow Carr (1997) and use total risk as a proxy for firm risk because many studies (Ofek and Yermack, 2000; Meulbroek, 2000; Hall and Murphy, 2000) indicate that CEOs hold undiversified portfolios. I use an accounting measure and a stock measure of total risk as proxies for firm risks. I use standard deviation of the annual accounting return on asset (SDROA) and standard deviation of the monthly stock return (SDRET) to measure the firm risks. These proxies for firm risks are measured during the period 1992-1996. Since principal-agent theory provides no clear prediction of the relations of firm risks to managerial compensation, I look to the data to tell us the directions of the relations. I include a control variable for capital structure of a firm in my regression because Palia (2001) shows that the CEOs are paid more when their firm leverage is higher. I measure firm leverage (LEVERAGE) by the book value of long-term debt to book value of assets during 1996.

Many studies have found that pay is positively correlated with a person's job experience. Therefore, I use CEO age (CEO_AGE) as a proxy for job experience and expect a CEO's pay to be positively correlated with his age. Aggarwal and Samwick (1999) find that market competition is an important determinant of managerial compensation. To control for the variation of market competitiveness across industries, I create various industry dummies at 2-digit SIC level. Some firms have missing values on return on asset and investment opportunities. To prevent the missing values from biasing my results, I create three dummy variables to control for this problem. ROANUM takes the value of one if the data on return on asset are missing and SDROANUM takes the value of one if the data on standard deviation of return on asset are missing. The INVOPPNUM takes the value of one if the data on investment opportunities are missing.

CEO Compensation I create two measures of CEO compensation to examine if CEOs are paid more when management is entrenched. First, I measure a CEO's cash compensation (CASHCOMP) by his salary and bonus. Next, I measure a CEO's total compensation (TOTCOMP) by all his direct forms of compensation, which include salary, bonus, long-term incentive plan (LTIP) payouts, other annual compensation, stock options granted (Black-Scholes value), restricted stock granted (market value), and all other compensation. Since the distribution of CEO compensation is skewed, I normalize it by taking the natural logarithmic transformation of both measures of CEO compensation.

Board Characteristics CHL (1999) find that a company's corporate governance practices affect its CEO compensation. Thus, I include many of their measures of board characteristics in this study to examine if those board characteristics have the same effect on CEO compensation.

I use nine measures of board characteristics to proxy for the effectiveness of a board of directors in monitoring a firm's managerial compensation policies. I measure board size (BSIZE) by the total number of directors on the board. To measure how entrenched a CEO is in influencing his pay

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[4] Implicitly, this is an argument that shareholders will not wish to compensate managers for risks that they can control, so as to give them incentives to control such risks.

process, I use two proxies for that effect. One such proxy is whether the CEO is a chairman of the board (CEOCHAIR) and another proxy is whether the CEO is a founder of the company (CEO-FOUND). Johnson, Magee, and Nagarajan (1985) provide justification for the use of the second proxy. They show that the stock market reacts favorably to sudden deaths of company founders. This piece of evidence suggests that a company's founder might affect the firm's managerial compensation. To further examine the effect of founder on CEO compensation, I create a non-CEO-founder dummy variable (OTHFOUND). OTHFOUND takes the value of one if a non-CEO-founder is a member of the board of directors. I use the percentage of inside directors on the board and the percentage of gray outside directors on the board to measure the effectiveness of independent directors in monitoring the managerial compensation process. I measure the percentage of inside directors on the board (INSIDE) by the percentage of the board that is composed of officers, former employees, and managers' relatives. I measure the percentage of gray outside directors on the board (GRAY) by the percentage of the board that is composed of non-inside directors that received excess compensation from the company in addition to the director fees. I follow CHL and create two dummy variables to examine the effect of the old outside and busy outside directors on the board on CEO compensation. I measure the percentage of old outside directors on the board (AGE69) by the percentage of the board that is composed of the non-inside directors who are over age 69. I measure the percentage of the board that is composed of busy outside directors (BUSY) by the percentage of non-inside directors who serve on three or more boards (six for retired outside directors).

The compensation committee is responsible for setting managerial compensation. If a CEO wants to influence his pay process, he might want to select his own people for this committee. To capture the effect of composition of compensation committee on CEO compensation, I use the percentage of inside directors on the compensation committee and the percentage of gray outside directors on the compensation committee. I measure the percentage of inside directors on the compensation committee (CCINSIDE) by the percentage of compensation committee that is composed of officers, former employees, and managers' relatives. I measure the percentage of gray outside directors on the compensation committee (CCGRAY) by the percentage of compensation committee that is composed of non-inside directors who received excess compensation from the company in addition to the director fees.

Ownership Structure CHL also show that the CEOs are paid less when they own more of their companies' stock and when their firms have a major shareholder. In this paper, I use three measures of firm ownership. I measure the CEO stock ownership (CEOOWN) by the percentage of company's shares owned by the CEO. According to the types of major shareholders, I create a dummy variable for institutional block ownership and a dummy variable for principal block ownership. The dummy variable for institutional block ownership (INST) takes the value of one if an institutional investor owns 5 percent or more of a firm's stock. The dummy variable for principal block ownership (PRIN) takes the value of one if a person, in addition to financial institutions, trusts, and ESOPs, owns 5 percent or more of a firm's stock.

3. Empirical Results

A. Descriptive Statistics

Table 2 presents the summary statistics of selected variables on CEO compensation, economic determinants of CEO compensation, board characteristics, and ownership structure. Consistent with Hall and Liebman (1998), the results in Table 2 show that the equity-based compensation grew even more significantly during the late 1990s.

Table 2. Descriptive Statistics for Full Sample

This table presents the summary statistics of selected variables on CEO compensation, economic determinants of CEO compensation, board characteristics, and ownership structure.

Panel A: CEO Compensation

	Mean	Median	Std. Dev.
SALARY ($)	755,083	721,689	313,972
CASHCOMP ($)	2,255,639	1,626,353	2,056,000
TOTCOMP ($)	6,312,175	3,562,241	10,688,000

Panel B: Economic Determinants

	Mean	Median	Std. Dev.
SALES ($1,000,000)	$8,492.44	$4,181.18	$15,337
INVOPP	3.18	2.38	3.29
ROA (%)	9.8	9.0	8.6
RET (%)	23.7	23.1	24.5
SDROA	2.6	1.9	2.8
SDRET	7.5	6.6	2.97
CEO AGE	56.7	57.0	6.30
LEVERAGE	0.18	0.16	0.14

Panel C: Board Characteristics

	Mean	Median	Std. Dev.
CEOCHAIR	0.82	1.00	0.39
CEOFOUND	0.05	0.00	0.23
BSIZE	11.64	11.00	3.38
OTHFOUND	0.05	0.00	0.22
INSIDE (%)	24.14	21.42	13.43
GRAY (%)	4.20	0.00	7.71
AGE69 (%)	6.05	0.00	9.29
BUSY (%)	37.27	36.36	22.30
CCSIZE	4.25	4.00	1.36
CCINSIDE (%)	1.12	0.00	7.22
CCGRAY (%)	2.54	0.00	8.92

Panel D: Ownership Structure

	Mean	Median	Std. Dev.
CEOOWN (%)	1.96	0.18	5.81
PRIN	0.13	0.00	0.34
INST	0.62	1.00	0.48
MGMOWN (%)	7.16	2.72	10.73
MGMVOTP (%)	8.18	2.72	13.52
MGM30	0.08	0.00	0.27
MGM20	0.13	0.00	0.33
MGM10	0.21	0.00	0.41
DUAL	0.065	0.00	0.25
CEO5	0.11	0.00	0.31
CEO10	0.076	0.00	0.26

In my sample, the equity-based compensation comprises about 60 percent of the CEO total compensation in 1997 compared to about 35 percent in CHL's sample (1982-1984). The mean (median) CEO total compensation is $6,312,175 ($3,562,241). The mean (median) CEO cash compensation is $2,255,639 ($1,626,353), about one-third of the mean CEO total compensation, and the mean (median) CEO salary is $755,083 ($721,189), about one-ninth of the mean CEO total compensation. My sample firms are comparable in size, stock and accounting performance, and accounting measure of risks with sample firms used CHL's study. In 1996 dollars, the mean (median) firm sales are $8,492 million ($4,181 million) in my sample compared to $9,300 million ($4,424 million) in CHL's sample.[5] In my sample, the mean (median) accounting return on asset is 9.8 percent (9.0 percent) and the annual stock return is 23.7 percent (23.1 percent). In CHL's sample, their comparable figures are 10.7 percent (10.6 percent) for accounting return on asset and 18.8 percent (14.9 percent) for annual stock return. The mean (median) standard deviation of accounting return on asset is 2.6 percent (1.9 percent) in my sample, compared to 3.1 percent (2.5 percent) in CHL's sample.

The mean (median) investment opportunities is 3.18 (2.38) in my sample and the comparable figure is 1.37 (1.17) in CHL's sample. The bull stock market during the 1990s explains why the investment opportunities and annual stock return are larger in my sample than in CHL's sample. In my sample, the mean (median) standard deviation of monthly stock return is 7.5 percent (6.6 percent). The mean CEO age and firm leverage reported in this study is similar to those figures reported in Palia (2001). In my sample, the mean (median) CEO age is 56.7 (57) and the mean (median) firm

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[5] I assume the inflation rate to be 3 percent per annum.

leverage is 0.18 (0.16). The growing significance of shareholder activism has a mild effect on board composition. The current board composition appears to be less entrenched by the managers than what it was 15 years ago. In my sample, the board is smaller and composed of a smaller percentage of inside directors, gray outside directors, busy outside directors, and old outside directors than those in CHL's sample. The average board has 11.6 directors in my sample compared to 13 in CHL's sample. In my sample, the average board is comprised of 24 percent inside directors, 4.2 percent gray outside directors, 6 percent old outside directors, and 37 percent busy outside directors. In CHL's sample, the average board is comprised of 33.1 percent inside directors, 6.8 percent gray outside directors, 8.3 percent old outside directors, and 45.2 percent busy outside directors.

The CEO serving as chairman of the board appears to be more common in 1997 than it was 15 years ago. The CEO serves as chairman in 82 percent of my sample firms compared to 75.6 percent in CHL's sample firms. Five percent of the CEOs in my sample founded their companies. If one considers founders that are not the CEO of the firm, five percent of my sample firms have a non-CEO-founder that serves as a member of the board of directors.

There is no systematic evidence that CEOs try to influence their pay process through electing their "own" people on the compensation committee. In my sample, the average compensation committee is comprised of only 1.1 percent inside director and 2.5 percent gray outside directors.

Although the CEO stock ownership increases slightly during the past 15 years, the block shareholder ownership increases dramatically. The mean (median) CEO stock ownership is 2 percent (0.18 percent) in my sample compared to 1.5 percent (0.08 percent) reported in CHL's sample; 67 percent of my sample have a major shareholder owning 5 percent of the firm's stocks, compared to 47 percent in CHL's sample. For all sample firms, 62 percent of them have an institutional investor owning 5 percent of the company's stock and 13 percent of them have a principal shareholder owning 5 percent of the company's stock. The mean (median) management stock ownership is 7.16 percent (2.7 percent). Examining the managerial control variables suggests that 21 percent of the sample firms have management controlling more than 10 percent of the firm's stock, 13 percent of them have management controlling more than 20 percent, and 8 percent of them have management controlling more than 30 percent. In addition, in 11 percent of my sample firms, the CEOs own more than 5 percent of their firms' stock, and in 7.6 percent of my sample firms, the CEOs own more than 10 percent of their firms' stock. Finally, 6.5 percent of my sample firms have several classes of common stock with differential voting rights.

B. Comparison of Group Means

Table 3 compares the means of various measures of CEO compensation and economic determinants for different subsamples. My results in Table 3 provide no evidence that CEOs are paid more when the management is entrenched. Contrary to the findings of Holderness and Sheehan (1988), my results in Table 3 show that the CEOs are paid less when management owns a significant control right of the firm. The robustness of these results increases with the increase in managerial ownership. However, the CEOs are not paid more when the CEO owns a significant control right, and when the firm has a dual-class of equities with unequal voting rights.

Table 3. Descriptive Statistics for the Selected Subsamples

This table compares the means of CEO compensation and economic determinants of CEO compensation for the selected subsamples and their control firms. *T*-Statistics in parenthesis.

Panel A: Management controls significant share of the company's voting right

	MGM30	Control firm	Difference	MGM20	Control firm	Difference	MGM10	Control firm	Difference
	44	498		69	473		116	426	
SALARY ($1,000)	649.76	764.39	-114.63** (-2.33)	674.73	766.81	-92.075** (-2.28)	698.62	770.46	-71.844** (-2.19)
CASHCOMP ($1,000)	1,559.3	2,317.2	-757.88*** (-3.34)	1,726.8	2,332.8	-606.04** (-2.30)	1,944.6	2,340.3	-395.71 (-1.84)
TOTCOMP ($1,000)	3,976.9	6,518.5	-2,541.6*** (-2.70)	4,404.3	6,590.5	-2,186.2** (-2.40)	5,421	6,554.8	-1,133.9 (-1.01)

Table 3 continued

SALES ($1,000,000)	7,459.5	8,583.7	-1,124.2 (-0.47)	6,841.5	8,733.3	-1,891.7 (-0.96)	7,089.7	8,874.4	-1,784.7 (-1.11)
MGMVOTP (%)	45.90	4.90	41*** (34.54)	38.10	3.82	34.2*** (16.83)	28.80	2.60	26.2*** (16.34)
INVOPP	3.929	3.116	0.813 (1.58)	4.060	3.053	1.006 (1.54)	3.907	2.984	0.923** (2.11)
SDRET	0.084	0.075	0.009** (2.00)	0.088	0.074	0.014*** (3.82)	0.088	0.072	0.015*** (5.02)
SDROA	0.019	0.026	-0.008*** (-1.75)	0.019	0.027	-0.007*** (-3.00)	0.024	0.026	-0.002 (-0.71)
CEO_AGE	58.66	56.57	2.09 (1.42)	57.54	56.62	0.913 (1.12)	57.03	56.66	0.364 (0.55)
LEVERAGE	0.172	0.185	-0.013 (-0.61)	0.197	0.182	0.015 (0.84)	0.181	0.184	-0.003 (-0.23)

Panel B: CEO controls significant share of the company's voting rights and dual-class firms

	DUAL	Control firm	Difference	CEO5	Control firm	Difference	CEO10	Control firm	Difference
N	35	507		60	482		41	501	
SALARY ($1,000)	778.99	753.43	25.55 (0.47)	729.49	758.27	-28.78 (-0.67)	713.07	758.52	-45.45 (-0.89)
CASHCOMP ($1,000)	2,386.5	2,246.6	139.9 (0.39)	2,190.7	2,263.7	-73.01 (-0.26)	1,689.4	2,302	-758.52*** (-2.69)
TOTCOMP ($1,000)	5,976.1	6,335.4	-359.31 (-0.30)	6,555.8	6,281.9	273.9 (0.19)	4,769.1	6,438.5	-1,669.3 (-0.96)
SALES ($1,000,000)	14,498	8,077.9	-6,420 (-1.02)	4,536	8,884.9	-4,448.9*** (-4.81)	4,678.7	8,804.5	-4,125.8*** (-4.11)
MGMVOTP (%)	29.90	6.70	23.2*** (4.75)	29.60	5.51	24.1*** (10.37)	35.60	5.93	29.7*** (10.57)
INVOPP	3.494	3.160	0.335 (0.58)	4.03	3.07	0.96** (2.15)	4.41	3.09	1.33** (2.29)
SDRET	0.080	0.075	0.005 (0.98)	0.093	0.073	0.019*** (4.61)	0.092	0.074	0.018*** (3.44)
SDROA	0.022	0.026	-0.004 (-1.44)	0.0275	0.0255	0.002 (0.52)	0.024	0.026	-0.002 (-0.37)
CEO_AGE	57.91	56.66	1.26 (1.14)	58.63	56.50	2.13 (1.70)	59.90	56.48	3.42** (2.11)
LEVERAGE	0.220	0.182	0.039 (1.61)	0.155	0.188	-0.033 (-1.41)	0.160	0.186	-0.026 (1.16)

For instance, for firms with management ownership of 30 percent, their CEOs are paid, on the average, $3.98 million in total compensation and $1.56 million in cash compensation, compared to $6.52 million and $2.32 million, respectively, for the control firms. These two differences are significant at the 1% level. For firms with CEO ownership of 10 percent, their CEOs are paid, on the average, $4.77 million in total compensation and $1.69 million in cash compensation. Such CEOs are paid $1.67 million less in total compensation and $0.61 million less in cash compensation than the CEOs of the control firms. Although the difference in cash compensation is significant at the 5% level between the two types of firms, the difference in total compensation is not significant at the 5% level. Firms in which the CEO owns a significant share of the firm's control rights are generally smaller than firms in which they do not. However, firms in which the management owns a significant share of the firm's control rights and dual-class firms are comparable in size with firms in which they do not. The investment opportunities appear to be larger for firms in which management is entrenched than firms in which it is not. Depending how you define firm risk, the firm risk can be larger or smaller for firms in which management is entrenched. The stock measure of firm risk is significantly larger when management is entrenched than in firms in which it is not. The differences in stock measure of firm risk are significant at the 5% level for any measures of managerial control except for the dual-class firms. The accounting measure of firm risk appears to be smaller only for firms in which management owns a significant share of the firm's control rights than for firms in

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which it is not. For firms in which the CEO owns a significant share of the firm's control rights and firms with dual-class stocks, their accounting measures of firm risk are comparable to those measures for the control firms. The CEO's age and firm leverage are comparable between firms in which management is entrenched and firms in which it is not. The coefficient estimates for these two variables are not significant at the 5% level. The only exception is firms in which CEOs own 10 percent of their companies' voting rights. In such firms, their CEOs are older than CEOs in the control firms.

C. Regression Analysis

I first address the question of whether or not CEOs are paid more when management can exercise control with relative impunity, or as some would say, are entrenched. I address this question by examining whether the conditional mean of CEO compensation is greater when management has a controlling interest in the firm. More specifically, I regress different control variables and different proxies for managerial control on the two measures of total CEO compensation identified earlier. I follow previous studies and control for board composition, firm size, investment opportunities, firm risks, firm performances, firm leverage, ownership structure, and CEO work experience. Holderness and Sheehan (1988) find that CEO pay for firms with majority shareholders are different from those of diffusely owned firms. They also find that excessive managerial compensation is related to firm size. To capture those effects, I follow them and add an interaction term to control for the differential excessive CEO pay by firm size. I create various interaction terms by multiplying various proxies for managerial control by firm size. I first focus on a CEO's compensation as measured by his salary and bonus because Holderness and Sheehan (1988) and Zingales (1995) focused on these components of managerial compensation. Table 4 reports the results of a series of regressions of CEO cash compensation that differ according to our different proxies for managerial control. The reported results show that CEOs are not paid more in cash compensation, regardless of how you define the managerial control. None of the coefficient estimates for the various proxies of managerial control and their interaction terms are significant at the 5% level.

Table 4. Regression of Log of CEO's Cash Compensation

This table presents OLS regression of the natural logarithm of a CEO's compensation on selected variables, when that compensation includes only salary and bonus. *T*-Statistics in parenthesis.

	Predicted Signs	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	?	4.56*** (8.88)	4.53*** (8.77)	4.55*** (8.69)	4.49*** (8.52)	4.64*** (9.1)	4.61*** (8.96)
SIZE	+	0.32*** (8.26)	0.32*** (8.21)	0.32*** (7.76)	0.32*** (8.22)	0.31*** (8.15)	0.32*** (8.30)
MGM30	+	1.02 (1.16)					
SIZE* MGM30	?	-0.14 (-1.32)					
MGM20	+		0.95 (1.27)				
SIZE* MGM20	?		-0.13 (-1.40)				
MGM10	+			0.24 (0.42)			
SIZE* MGM10	?			-0.03 (-0.36)			
DUAL	+				0.96 (1.07)		
SIZE * DUAL	?				-0.10 (-1.00)		
CEO5	+					0.31 (0.35)	
SIZE* CEO5	?					0.01 (0.07)	
CEO10	+						0.97 (0.90)

Table 4 continued

SIZE* CEO10	?						-0.09 (-0.68)
BSIZE[a]	+	-0.50 (-0.42)	-0.41 (-0.34)	-0.41 (-0.34)	-0.47 (-0.39)	-0.17 (-0.14)	-0.35 (-0.29)
CEO-CHAIR	+	0.11 (1.28)	0.10 (1.21)	0.11 (1.34)	0.11 (1.36)	0.11 (1.31)	0.12 (1.38)
CEO-FOUND	+	0.15 (0.89)	0.18 (1.03)	0.16 (0.93)	0.15 (0.89)	0.09 (0.52)	0.13 (0.73)
OTH-FOUND	?	-0.25 (-1.56)	-0.28 (-1.71)	-0.26 (-1.61)	-0.27 (-1.64)	-0.22 (-1.34)	-0.23 (-1.43)
AGE69[a]	+	-0.09 (-0.26)	-0.09 (-0.27)	-0.09 (-0.26)	-0.07 (-0.20)	-0.11 (-0.33)	-0.09 (-0.26)
BUSY[a]	+	-0.03 (-0.20)	-0.04 (-0.24)	-0.03 (-0.16)	-0.03 (-0.14)	-0.02 (-0.15)	-0.03 (-0.28)
INSIDE[a]	-	0.04 (0.12)	0.01 (0.03)	-0.06 (-0.19)	-0.05 (-0.17)	-0.16 (-0.52)	-0.07 (-0.24)
GRAY	+	0.01 (1.77)	0.01 (1.83)	0.01 (1.74)	0.01 (1.66)	0.01 (1.48)	0.01 (1.71)
CCGRAY	+	-0.01** (-2.29)	-0.01** (-2.38)	-0.01** (-2.32)	-0.01** (-2.25)	-0.01** (-2.13)	-0.01** (-2.28)
CCINSIDE	+	-0.01 (-1.16)	-0.01 (-1.18)	-0.01 (-1.17)	-0.01 (-1.10)	-0.01 (-1.22)	-0.01 (-1.29)
CEO_AGE	+	0.01 (1.50)	0.01 (1.50)	0.01 (1.50)	0.01 (1.57)	0.01 (1.35)	0.01 (1.30)
CEOOWN	-	-0.02*** (-2.57)	-0.02*** (-2.70)	-0.02*** (-3.18)	-0.02*** (-3.47)	-0.03*** (-4.1)	-0.03*** (-3.16)
PRIN	-	0.06 (0.64)	0.07 (0.70)	0.07 (0.71)	0.06 (0.59)	0.07 (0.76)	0.07 (0.70)
INST[a]	-	0.17 (0.02)	0.24 (0.03)	0.29 (0.04)	0.67 (0.09)	0.67 (0.09)	1.14 (0.16)
INVOPP[a]	+	0.02 (0.02)	0.18 (0.15)	-0.05 (-0.04)	-0.02 (-0.02)	-0.13 (-0.11)	-0.13 (-0.11)
INVOPP-NUM	?	-0.33 (-1.77)	-0.34 (-1.83)	-0.32 (-1.72)	-0.32 (-1.71)	-0.32 (-1.7)	-0.31 (-1.62)
ROA	+	-0.01*** (-2.50)	-0.01*** (-2.51)	-0.01*** (-2.48)	-0.01*** (-2.50)	-0.01*** (-2.43)	-0.01*** (-2.40)
ROANUM	?	-0.38 (-1.48)	-0.40 (-1.56)	-0.39 (-1.50)	-0.39 (-1.51)	-0.37 (-1.42)	-0.37 (-1.44)
RET[a]	+	0.43*** (3.02)	0.43*** (2.99)	0.45*** (3.17)	0.45*** (3.17)	0.41*** (2.89)	0.42*** (2.97)
SDROA	?	0.03** (2.01)	0.03 (1.92)	0.03** (2.00)	0.03** (2.02)	0.03 (1.83)	0.03** (2.00)
SDROA-NUM	?	0.18 (1.12)	0.18 (1.14)	0.18 (1.11)	0.17 (1.04)	0.15 (0.96)	0.15 (0.97)
SDRET	?	-0.02 (-1.33)	-0.02 (-1.26)	-0.02 (-1.25)	-0.02 (-1.15)	-0.02 (-1.13)	-0.02 (-1.18)
LEVER-AGE	+	0.26 (0.84)	0.27 (0.87)	0.28 (0.89)	0.28 (0.90)	0.25 (0.81)	0.22 (0.72)
SIC 2-digit Industry		Yes	Yes	Yes	Yes	Yes	Yes
Adjusted square		0.467	0.468	0.465	0.467	0.471	0.467

[a] indicates coefficient estimates are multiplied by 10^2. *** and ** indicate the measure is significantly different from zero at the 1% level and the 5% level, respectively.

In stark contrast to CHL's results, my results show that the board composition and ownership structure are not important in determining the CEO cash compensation. None of the coefficient estimates for the nine proxies of the effectiveness of board of directors and two proxies for block ownership in monitoring the CEO pay process are significant at the 5% level. The only exception is the percentage of gray outside directors on the compensation committee. Even in that case, the increase in the percentage of gray outside directors on the compensation committee significantly reduces, instead of increases, the CEO cash compensation.

Consistent with principal-agent theory, CEOs are paid less when they own more of their firm's stock. In addition, CEOs are paid more when their firms are larger and when their firms' stock returns are higher. Unexpectedly, the CEOs are paid less when the accounting measure of firm performance improves. The coefficient estimates for both proxies of firm performance are significant at the 5% level. Consistent with Carr's (1997) argument, the CEOs are paid more in cash when their firms' volatility in accounting return on asset increases. The coefficient estimates of this variable are significant at the 5% level except for coefficient estimate in model 5 of Table 4. The CEOs are not paid more even if they have more job experience.

Table 5 reports the results of a series of regressions of CEO total compensation that differ according to our different proxies for managerial control. The results in Table 5 provide limited evidence that CEOs are paid more in total compensation when the management is in control of the company. When I define the phrase "management is entrenched" to mean the management controls 20 percent or more of the company's voting rights, my results show that such CEOs are paid more only in smaller firms. For larger firms, such CEOs are paid less. The coefficient estimates for various proxies of managerial ownership and their interaction terms are significant at the 1% level except for the coefficient estimates on the interaction term for firms with managerial ownership of 10 percent.

I create some examples to illustrate to what extent such CEOs are paid more when management controls enough of the voting power. For a hypothetical firm with firm sales of $1,862 million, the cutoff level, its CEO is paid neither more nor less by firms in which the management controls 20 percent of the firm's voting rights than by firms in which the management does not.[6]

Table 5. Regression of Log of CEO's Total Compensation

This table presents OLS regression of the natural logarithm of a CEO's compensation on selected variables, when that compensation includes salary, bonus, other annual compensation, all other total compensation, long-term incentive payouts, stock option granted (Black-Scholes value), and restricted stock granted (market value). *T*-Statistics in parenthesis.

	Predicted Signs	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	?	3.82*** (7.24)	3.74*** (7.06)	3.72*** (6.88)	3.72*** (6.82)	3.96*** (7.50)	3.89*** (7.30)
SIZE	+	0.50*** (12.56)	0.50*** (12.61)	0.50*** (11.98)	0.49*** (12.21)	0.48*** (12.29)	0.48*** (12.17)
MGM30	+	2.62*** (2.90)					
SIZE* MGM30	?	-0.34*** (-3.09)					
MGM20	+		2.56*** (3.34)				
SIZE* MGM20	?		-0.34*** (-3.57)				
MGM10	+			1.17** (1.96)			
SIZE* MGM10	?			-0.14 (-1.88)			
DUAL	+				1.73 (1.87)		
SIZE * DUAL	?				-0.20 (-1.83)		

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[6] In model 2 of Table V, the coefficient estimates for MGM20 and SIZE*MGM20 are 2.56 and -0.34, respectively. These estimates imply that, in a firm with sales at the cutoff level of $1,862 million, its CEO is paid neither more nor less than its comparable firms when the management controls 20 percent of its voting rights. I obtain the cutoff level of firm sales by solving the following equation: 2.56 - 0.34*SIZE = 0, where SIZE is defined as the natural logarithm of the firm sales. For firms with sales smaller (larger) than the cutoff level, such CEOs are paid more (less).

Table 5 continued

CEO5	+					1.48 (1.60)	
SIZE* CEO5	?					-0.13 (-1.14)	
CEO10	+						1.51 (1.36)
SIZE* CEO10	?						-0.19 (-1.35)
BSIZE[a]	+	-0.83 (-0.66)	-0.63 (-0.51)	-0.71 (-0.57)	-0.66 (-0.53)	-0.29 (-0.24)	-0.58 (-0.47)
CEOCHAIR	+	0.11 (1.25)	0.10 (1.12)	0.12 (1.35)	0.12 (1.32)	0.12 (1.35)	0.12 (1.39)
CEOFOUND	+	0.09 (0.50)	0.15 (0.88)	0.13 (0.72)	0.09 (0.53)	0.03 (0.20)	0.11 (0.64)
OTHFOUND	?	-0.46*** (-2.77)	-0.53*** (-3.17)	-0.50*** (-2.99)	-0.49*** (-2.94)	-0.43** (-2.55)	-0.47*** (-2.79)
AGE69[a]	+	-0.45 (-1.27)	-0.47 (-1.35)	-0.48 (-1.35)	-0.43 (-1.20)	-0.47 (-1.32)	-0.44 (-1.24)
BUSY[a]	+	0.12 (0.63)	0.09 (0.47)	0.12 (0.64)	0.13 (0.70)	0.12 (0.64)	0.11 (0.60)
INSIDE	-	-0.01 (-1.64)	-0.01 (-1.76)	-0.01** (-2.13)	-0.01** (-2.12)	-0.01*** (-2.56)	-0.01** (-2.10)
GRAY[a]	+	0.27 (0.57)	0.35 (0.74)	0.30 (0.63)	0.25 (0.51)	0.16 (0.32)	0.32 (0.66)
CCGRAY[a]	+	-0.36 (-0.86)	-0.45 (-1.09)	-0.42 (-1.02)	-0.38 (-0.90)	-0.32 (-0.78)	-0.42 (-1.02)
CCINSIDE[a]	+	-0.49 (-0.21)	-0.15 (-0.31)	-0.15 (-0.31)	-0.05 (-0.10)	-0.14 (-0.29)	-0.12 (-0.25)
CEO_AGE[a]	+	-0.48 (-0.87)	-0.46 (-0.82)	-0.47 (-0.84)	-0.37 (-0.65)	-0.62 (-1.09)	-0.50 (-0.87)
CEOOWN	-	-0.02*** (-3.38)	-0.02*** (-3.35)	-0.03*** (-4.09)	-0.03*** (-4.39)	-0.04*** (-4.87)	-0.03*** (-2.95)
PRIN	-	0.12 (1.18)	0.13 (1.28)	0.14 (1.39)	0.12 (1.13)	0.13 (1.34)	0.13 (1.29)
INST	-	0.02 (0.30)	0.02 (0.28)	0.02 (0.28)	0.03 (0.40)	0.03 (0.37)	0.03 (0.34)
INVOPP[a]	+	0.13 (0.11)	0.54 (0.44)	0.15 (0.12)	0.03 (0.03)	-0.08 (-0.06)	0.01 (0.01)
INVOPPNUM	?	-0.40** (-2.06)	-0.44** (-2.26)	-0.39** (-2.02)	-0.39** (-2.02)	-0.37 (-1.92)	-0.38 (-1.93)
ROA	+	0.01*** (2.48)	0.01** (2.42)	0.01** (2.44)	0.01** (2.41)	0.02*** (2.55)	0.01*** (2.46)
ROANUM	?	0.31 (1.17)	0.27 (1.02)	0.28 (1.04)	0.29 (1.09)	0.28 (1.03)	0.27 (1.00)
RET[a]	+	0.29** (2.01)	0.28 (1.94)	0.33** (2.28)	0.34** (2.29)	0.30** (2.05)	0.33** (2.22)
SDROA	?	0.01 (0.63)	0.01 (0.43)	0.01 (0.57)	0.01 (0.52)	0.01 (0.35)	0.01 (0.56)
SDROANUM	?	0.02 (0.11)	0.03 (0.18)	0.02 (0.12)	0.00 (0.02)	-0.01 (-0.08)	0.02 (0.14)
SDRET	?	0.06*** (3.52)	0.06*** (3.65)	0.06*** (3.62)	0.06*** (3.84)	0.06*** (3.78)	0.06*** (3.66)
LEVERAGE	+	0.68** (2.14)	0.69** (2.19)	0.75** (2.35)	0.74** (2.32)	0.68** (2.15)	0.69** (2.16)
SIC 2-digit Industry dummies		Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-square		0.446	0.450	0.439	0.438	0.444	0.436

[a] indicates coefficient estimates are multiplied by 10^2. *** and ** indicate the measure is significantly different from zero at the 1% level and the 5% level, respectively.

For firms with sales smaller than the cutoff level, CEOs with entrenched management are paid more in total compensation than their comparable CEOs in firms with no entrenched management. However, those "overcompensated" CEOs constitute a tiny fraction of the sample firms. CEOs are paid more in total compensation in 3.7 percent of the sample firms. Even in those cases, they are limited to the smallest sample firms in which the CEO total compensation is well below the sample average. When the "excessive" CEO pay is measured in percentage, those figures are large. For example, consider two hypothetical firms with firm sales of $697 million and $815 million (which are 5th

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percentile and 10th percentile of firm size for firms where management controls 20 percent of the firm's voting rights). The CEOs are paid 33.4 percent and 28.1 percent more, respectively, by firms in which management is entrenched than by firms in which management is not. In larger firms, such CEOs are paid significantly less and those "undercompensated" figures are even larger than that for smaller firms. Imagine two hypothetical firms with sales of $11,358 million and $19,647 million (which are 90th percentile and 95th percentile of firm size for firms where management controls 20 percent or more of the firm's voting rights). Such CEOs are paid 61.5 percent and 80.1 percent, respectively, less than firms in which the management does not control enough of the firm's voting rights.

The reported results provide no evidence that CEOs are paid more when they own a significant share of the firm's stock. Nevertheless, in contrast to Zingales (1995), I find no evidence that CEOs are paid more in firms with dual-class stocks of unequal voting rights. None of the measures of board characteristics except for non-CEO-founder and percentage of inside directors on the board is significant at the 5% level. The results in the first model of Table V show that the CEOs are paid less in total compensation by 46 percent in firms with a non-CEO-founder sitting on the board than in a firm with no such person. Similar to CHL's findings, I also find that CEOs are paid less when the percentage of board members comprised inside directors increases. My results again show that CEOs are paid less in total compensation when they own more of their companies' stock. The coefficient estimates for the CEO stock ownership are significant at the 1% level. The CEOs are paid more when their companies are larger. The coefficient estimates of firm size are significant at the 1% level. The CEOs are also paid more when their companies perform better in both stock and accounting measure of returns. The coefficient estimates of both proxies for firm performance are significant at the 5% level except for coefficient estimates of stock return in model 2 of Table V. In addition, the CEOs are paid more when their companies have larger firm leverage. The coefficient estimate for firm leverage is significant at the 5% level. In contrast to CHL's results, the proxies for firm risks are positively correlated with a CEO's total pay. The CEOs are paid more when their companies' volatility in stock return and volatility in accounting return increase. Although the coefficient estimates for volatility of stock return are significant at the 5% level, the coefficient estimates for volatility of accounting return on assets are not significant at the 5% level. The investment opportunities appear not to be correlated with a CEO's total pay, but the dummy variable for missing value in investment opportunities does. This result suggests that CEOs are paid less by firms that report a missing value in investment opportunities. The coefficient estimates for this dummy variable are all significant at the 5% level except for coefficient estimates in model 5 and model 6 of Table V.

3. Discussions

My overall results suggest CEOs are not paid more when management is entrenched. The only exception is smaller firms in which the management controls a substantial share of the firm's voting rights. I see several possible reasons why such managers may not systematically overcompensate themselves relative to comparable managers. Since I am concerned with public corporations in our study, I will focus on legal and/or disclosure-related constraints.[7]

With respect to legal constraints, I note that Holderness and Sheehan (2000) examine evidence on 114 majority-owned firms from 1978 through 1984 and conclude that legal constraints on individual majority shareholders do influence their behavior. With respect to managerial compensation, even when managers own a sizeable share of their firms' voting rights, there is the possibility of a shareholder bringing suit if the shareholder views managers' compensation as excessive. Whether this particular constraint is binding is unclear, as Clark (1986) points out that the courts have tried to avoid the comparative standard employed by the Internal Revenue Service. Rather, he points out that the courts have tended to focus on procedural questions, such as were "independent" board members

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[7] See Clark (1986) for a discussion of tax-related constraints on "excessive executive compensation" prior to the Revenue Reconciliation Act of 1993, which added further tax constraints. Our search of tax court decisions suggests that the former tax constraints have largely, if not totally, been applied to private corporations. Thus they do not appear to be binding constraints for public corporations.

in control of the compensation-setting process.[8] Management's involvement, particularly when management controls the firm's voting rights, in the determination of its compensation exposes it to legal risk.[9]

With respect to disclosure-related constraints, I note that Andjelkovic, Boyle, and McNoe (2000) examine the introduction of new managerial compensation disclosure requirements in New Zealand and suggest that their evidence indicates the importance of disclosure in constraining managerial compensation in public corporations. I see disclosure as potentially constraining in one of two ways. First, even when managers own a sizeable share of their firms' voting rights, there is the possibility that capital markets will punish their firms for paying them "excessively" by lowering share prices.[10] Such actions would lower such managers' wealth, potentially more than the benefits derived from such "excessive compensation," as it would signal the potential for other, related costs to increase.[11] As a result, corporate boards, particularly ones with a large equity stake in the firm, have an incentive to avoid paying management excessively. Second, Jensen and Murphy (1990) argue that the disclosure of executive compensation terms evokes a number of "political" constraints on managerial compensation and so accounts for the relatively low pay-for-performance sensitivities estimated in their study. Consistent with Jensen and Murphy's concern, during our sample period there was public debate over executive compensation that led to a series of congressional hearings, which resulted in the Securities and Exchange Commission amending Item 402 of Regulation S-K.[12] These regulatory changes not only increased executive compensation disclosure requirements; they also emphasized the SEC's desire to see more "independent" board members on the executive compensation committee. Other changes were also contemplated in this process and so the threat of more onerous regulatory constraints on executive compensation remains.

4. Conclusions

Some have argued that managers have captured the compensation process in many corporations and that the design of their compensation is the result of an agency problem rather than a solution to an agency problem. Further, others have suggested that one of the private benefits that accrue to managers who control their firms is greater compensation. I address these arguments by examining whether managers pay themselves more or differently when they are "entrenched." I find no evidence that CEOs are paid more when they are entrenched, when I consider only the CEO's salary and bonus as compensation. I find weak evidence when I consider a broader measure of a CEO's compensation. Even if such CEOs are paid more, they are limited to smaller firms where the management controls a significant share of the company's voting rights, a small subset of my sample firms. My overall evidence rejects the argument that managers in public corporations pay themselves more when they can control their firms with relative impunity. While I do not examine the effect of managerial control on the pay-for-performance sensitivities of corporations, my results have implications for these sensitivities. Since managers own a substantial share of their firms' stock for firms in which management is entrenched, one should observe higher pay-for-performance sensitivities for such firms. The substantial wealth consequences associated with their personal stockholdings of the firm provide a powerful incentive to deter such managers from overcompensating themselves. Thus, my evidence supports the "contracting" view of managerial compensation and argues that CEOs are not overcompensated even when management is entrenched.

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[8] It is interesting to note that in 1992, the Securities and Exchange Commission codified this case law standard in amending Item 402 of Regulation S-K. Thus, Anderson and Bizjak's (2000) evidence that this regulatory initiative has had no statistically significant effect on corporate compensation processes suggests that the case law precedents may have already influenced such corporate processes.

[9] Holderness and Sheehan (2000) find that individual majority shareholders often participate on the compensation committees of their corporations and so are exposed to this legal risk.

[10] Tadesse (2000) provides evidence consistent with such capital market monitoring.

[11] I focus more on potential wealth losses, rather than on potential increases in the firm's cost of capital, as Holderness and Sheehan (2000) provide evidence that majority-owned corporations do less public financing than diffusely held corporations typically do during their sample period.

[12] At the time Jensen and Murphy (1990) wrote their paper, the threat of regulatory action was the political constraint that concerned them most.

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