CEO Presence on the Compensation Committee: A Puzzle[*]

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Abstract

Conventional wisdom suggests that CEO membership of the compensation committee is an open invitation to rent extraction by self-serving executives. However, using data from New Zealand – where CEO compensation committee membership is relatively common – we find that annual pay increments for CEOs with this apparent advantage averaged six percentage points *less* than those enjoyed by other CEOs during the 1997–2005 period. After controlling for variation in firm performance, the difference is a still-sizeable four percentage points. This puzzling result cannot be explained by risk-return tradeoff considerations, interaction with other governance variables, selection bias, or variable mis-measurement.

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1 Introduction

Chief Executive Officer (CEO) membership of the firm's compensation committee would seem to provide an ideal setting for opportunistic CEO behaviour. Even when such CEOs are excluded from discussions relating to their own remuneration, committee membership can still be advantageous: for example, by the negotiation of favorable pay structures and packages for their subordinate executives – which then need to be passed on to CEOs in order to maintain 'relativity'. At the other end of the spectrum, CEOs who are not part of the board of directors would appear to be in a relatively weak bargaining position when it comes to negotiating their personal remuneration. In this paper, we ask whether such extremes of CEO 'influence' on the pay-setting process are reflected in remuneration outcomes. We find that they are, but not in the way intuition would suggest.

Precisely because of the bargaining-power imbalances they potentially create, situations where the CEO sits on the compensation committee, or is off the board altogether, are extremely rare, at least in the United States (US). For example, Anderson and Bizjak (2003), Klein (1998), Newman and Mozes (1999) and Vafeas (2003) all report a general absence of CEOs from US firm compensation committees, while LeBlanc and Gillies (2005, p92) claim that: "(i)t is almost unheard of for the chief executive officer of the corporation not to be a member of the board of directors."

Such homogeneity does not exist everywhere, however. One country where much greater variation in CEO involvement occurs is New Zealand (NZ): in a sample of NZ listed firms during the 1997–2005 period, approximately 1/3 appoint their CEO to the compensation committee, while slightly fewer than 1/4 of CEOs are excluded from the board altogether.

We find that this variation in CEO pay-setting involvement has an unexpected outcome: after controlling for firm performance, CEO membership of the compensation committee is associated with an approximately four percentage point *reduction* in average annual pay growth. That is, CEOs with the most direct involvement in the setting of their own remuneration are, on average, rewarded *less* generously than those who are kept at arms-length. This puzzling result cannot be explained by mis-measurement of CEO remuneration or board involvement, or a risk-return tradeoff by risk-averse CEOs, or omitted governance variables, or selection considerations. Overall, these results present a challenge to conventional wisdom about the link between governance structures and CEO remuneration.

In the next section, we describe our data sources and properties. Section 3 contains our results linking CEO pay outcomes to participation in the pay-setting process,

while section 4 considers the impact of such participation on subsequent firm performance. Finally, section 5 offers some concluding remarks.

2   Data

Our initial sample consists of companies listed on the NZ Stock Exchange (NZX) between 1997 and 2005. We begin in 1997 because NZ firms were not required to disclose executive compensation details prior to that time.[1] Compensation and governance information come from a hand-collected dataset obtained from company annual reports. Older reports were obtained from the now-defunct Commerce Resource Library at Otago University; more recent report information comes from the NZX Company Research database. Stock return data, including adjustment factors, were sourced from the Otago University Sharemarket Database, with supplementation from NZX. In each year, firms were excluded from the sample if (i) there was missing information, (ii) they were only listed on the secondary board, (iii) they delisted during the year, or (iv) the CEO was not in office for the entire current and previous year. The final sample consists of 502 firm-year observations for 114 different NZX firms over the nine year period between 1997 and 2005. With 55 such observations in 1997, this leaves 447 'first-difference' observations over the sample period.

We focus on what Newman and Mozes (1999) call 'firm-awarded' compensation, i.e., remuneration that is under the direct control of the firm. This has two components: (i) salary, bonus and allowances, and (ii) new stock and option grants. NZ annual reports directly provide, in a manner to be described below, data on the first component. They also report information on any stock or option grants made during the year, which in principle allows estimation of the second. However, stock and option awards occur infrequently in NZ firms during the sample period (11% of firm-years) and are of minor value (approximately 6.4% of the value of component (i) for the firms where we are able to value option grants). Moreover, 36 option grants in our sample (70% of those issued) are unable to be valued due to insufficient information being reported. Given the low frequency and limited importance of such grants in NZ, we avoid any further reduction in sample size by henceforth confining our attention to component (i). We examine the importance of this restriction in section 4.

NZ compensation disclosure requires that the sum of salary, bonus, superannuation, health insurance coverage, and motor vehicle allowance be reported in the following ways. For executives who are members of the board of directors, the exact value of this remuneration appears in a separate table of the annual report. For other employees, individual details are not reported, only the number of workers receiving remuneration lying within each $10,000 interval over and above $100,000 per annum. Consequently, we record compensation for any CEO not on the board of directors as being equal to the midpoint of

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[1]See Andjelkovic et al.(2002) for details of the legislative change and surrounding controversy.

Table 1: Summary Statistics

This table reports means and standard deviations (in parentheses) for pay and performance measures from listed New Zealand firms between 1997 and 2005. Raw stock return is the annual percentage change in firm value; market-adjusted stock return is raw stock return minus the return on the market index; annual compensation is the sum of salary, bonus, superannuation, health insurance coverage, and motor vehicle allowance. The first column reports statistics based on all firm-years appearing in the sample, while the remaining columns focus on three subsets: CEOs who sit on the board of directors, but not the compensation committee, CEOs who sit on both the board and the compensation committee, and CEOs who sit on neither.

	All Firms	CEO on Board	CEO on Compensation Committee	CEO not on Board
	$(N = 447)$	$(N = 186)$	$(N = 157)$	$(N = 104)$
Performance				
Raw stock return (%)	16.71 (48.7)	19.03 (44.8)	10.89 (52.9)	21.33 (48.3)
Market-adjusted stock return (%)	5.85 (45.5)	7.47 (41.3)	1.17 (50.2)	10.01 (44.9)
Compensation				
Annual CEO compensation ($000)	439.23 (318.2)	534.98 (369.1)	388.81 (280.0)	344.10 (231.5)
Annual change in CEO compensation (%)	11.34 (22.2)	14.72 (24.9)	8.60 (20.9)	9.42 (17.9)

the highest payment band.[2] For example, if the CEO is not a member of the board of directors and the maximum remuneration band in the annual report is $150,000-160,000, then CEO compensation for that firm-year is estimated to be $155,000.[3]

For each firm–year, we collect performance and governance data. To proxy for performance, we use the firm's one-year market-adjusted stock return — the difference between the firm's stock return over the year and the aggregate stockmarket return (calculated using the broad-based All Ordinaries Index).[4] We also record the extent of the CEO's formal involvement in the pay-setting process: a member of the compensation committee as well as the board (157 firm-years), a member of the board only (186), not a board member (104). CEOs who sit on the compensation committee might be expected to have a particularly strong influence on the compensation process, while those who are excluded from the board may be in the opposite situation.

Some summary statistics for various pay and performance variables appear in Table

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[2]Exceptions to this rule occasionally occur when when there are identifiable employees who receive special retirement or redundancy payments that take them into the top band.

[3]All monetary values in this paper are expressed in NZ dollars. Inflation during the nine-year period covered by our data averaged less than 2% per annum, so the difference between real and nominal values is small. Re-estimating our models in real terms yields virtually identical results to those reported below.

[4]Because the relatively small and illiquid nature of NZ capital markets means that NZ firms may reward factors other than stock market performance, we also used the firm's one-year return on assets – the ratio of after-tax profit to total assets – as a measure of performance. However, the results were very similar to those appearing in the following tables and changed nothing of substance, so we do not include them in the paper. They are, however, available from the authors on request.

1. Across the whole sample, firms on average achieve an annual stock return of 17%, while CEOs receive compensation that grows by 11.34% per annum. More interesting are the differences between the three categories of formal CEO involvement in the pay-setting process. CEOs who sit on the compensation committee receive the *lowest* annual growth in compensation, but the firms they lead also perform significantly less well. At the other end of the scale, CEOs who are not on the board lead the best-performing firms, but receive relatively little reward for doing so.

Although these simple statistics suggest that variation in CEO board and compensation committee involvement can influence CEO remuneration, they do not control for differences in firm performance across the three levels of involvement. This is the task to which we now turn.

3 A puzzling result

We regress annual CEO pay increments on firm performance and allow for different intercept coefficients corresponding to the extent of direct CEO involvement in the pay-setting process. Because NZ firms are relatively small, we estimate the pay-performance relationship in elasticity form so as to counter the observed tendency for the dollar sensitivity to decline with firm size – see, for example, Jensen and Murphy (1990), Gibbons and Murphy (1992), and Schaefer (1998). Thus, we begin by estimating the simple model:[5]

$$\Delta Pay \quad = \quad \alpha_0 + \alpha_1 R + \alpha_2 D_H + \alpha_3 D_L + \epsilon \tag{1}$$

where:

ΔPay = annual change in the natural log of CEO pay;

R = annual firm performance, measured as excess stockmarket return (the change in the natural log of (firm market value/stock market index));

$D_H = 1$ if the CEO sits on the compensation committee and 0 otherwise;

$D_L = 1$ if the the CEO does not sit on the board of directors and 0 otherwise.

Because some CEOs appear in the data multiple times we estimate robust standard errors that allow for clustering at the firm level. We also include a full set of time dummies (1998 being the excluded year). Our primary interest is in the estimates of α_2 and α_3 – the incremental effects on CEO pay growth of compensation committee membership and board exclusion respectively.

The results from estimating equation (1) appear in Column (1) of Table 2, and reveal two intriguing phenomena. First, very little of the variation in pay growth of NZ CEOs is attributable to variation in firm performance. Although statistically significant, the estimate of α_1 is economically small, especially when compared to those previously

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[5]Although unreported, we also estimate models that include lagged values of R – see, for example, Hall and Liebman (1998). However, this leaves the principal results below unaffected.

Table 2: CEO Influence and Pay: Basic Regressions

The dependent variable is the annual change in the natural logarithm of CEO pay. Firm performance is the annual change in the natural logarithm of firm value minus the annual change in the natural logarithm of the stock market index. Ex-officio membership of the compensation committee arises when the CEO attends committee meetings without being a member. All regressions include a full set of year dummies (1998 being the omitted year) and are based on 447 firm-year observations. Terms in parentheses are robust standard errors clustered at the firm level. ***(**)(*) denotes significance at the .01 (.05) (.10) level.

Variable	(1)	(2)
Intercept	0.131***	0.134***
	(0.019)	(0.019)
Firm performance	0.076***	0.076***
	(0.029)	(0.029)
CEO on Compensation Committee	−0.039**	
	(0.018)	
CEO not on Board of Directors	−0.040**	−0.039**
	(0.019)	(0.020)
CEO on Compensation Committee (ex-officio)		−0.043**
		(0.017)
R^2	0.05	0.06
F-statistic	2.51***	2.63***

obtained elsewhere. For example, three representative US-based studies that estimate the elasticity form of the pay-stockmarket performance sensitivity – Murphy (1985), Hall and Liebman (1998) and Zhou (1999) – report estimates ranging from 0.16 to 0.23, two to three times the NZ value. This suggests that NZ CEO remuneration is, on average, relatively well insulated from fluctuations in firm performance. Second, and most strikingly, the estimate of α_2 is *negative* and statistically significant at the 5% level. Specifically, after controlling for variation in firm performance, CEO membership of the compensation committee is associated with annual pay growth that is approximately four percentage points *lower* than that enjoyed by CEOs who sit only on the board. Just as surprisingly, this 'penalty' is almost identical to that associated with not being on the board at all (α_3). Quantitatively, the CEO of the average-performing firm in our sample receives an annual pay increment of 13.5% if he has board membership, but this falls to 9.5% if he isn't a board member, *or* to 9.6% if he is a board member who also sits on the compensation committee – a monetary difference of just under $20,000.[6]

One possible objection to this puzzling finding is that some CEOs may exert influence over the compensation committee even when they are not members, resulting in a misclassification of those CEOs. If these CEOs are highly paid, then our estimate of the

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[6]From Table 1, the average firm-year performance is 5.85%, so the estimated pay growth from column (1) of Table 2 is 0.131 + 0.076*0.0585 = 0.135 if the CEO is on the board but not the compensation committee, and 0.131 + 0.076*0.0585 − 0.039 = 0.096 if on the compensation committee as well.

'penalty' for compensation committee membership is overstated. To address this potential problem, we search company annual reports for evidence of 'ex-officio' CEO membership of the compensation committee. This typically shows up in the form of a footnote statement along the following lines: "while (CEO name) is not a member of the compensation committee, he attended these committee meetings in his capacity as CEO". For every firm-year where this occurs, we re-classify it as a CEO who has compensation committee membership, resulting in 19 additional observations in that category (with 11 and 8 respectively fewer in the board-only and not-on-board categories). We re-estimate equation (1) using this alternative measure of compensation committee membership and report the results in column (2) of Table 2. However, this only exacerbates the puzzle – the compensation committee penalty is now slightly larger and is more precisely estimated.

4   How robust is the puzzle?

The result that compensation committee membership is associated with less generous CEO pay increases is surprising and counter-intuitive. In this section, we consider some obvious explanations for this puzzle.

4.1   Omitted governance variables

One possibility is that our CEO board-involvement categorization is inadvertently picking up other more fundamental governance features, thus resulting in a spurious relationship between pay increases and compensation committee membership. To investigate this possibility, we employ three governance variables identified by Core et al. (1999) as being potentially important determinants of CEO pay – board size (the number of directors), independent director representation (the proportion of directors who are independent), and CEO-Chair duality.[7] We re-estimate equation (1) including these three variables and report the results in column (1) of Table 3. Although greater board size is weakly associated with higher pay growth, the inclusion of the governance variables has no effect on our estimate of α_2 – CEO membership of the compensation committee remains associated with annual pay growth that is approximately four percentage points *lower* than that enjoyed by other CEOs. If anything, the puzzle is exacerbated by the inclusion of the governance variables since the α_3 estimate is now statistically indistinguishable from zero, implying that CEOs who sit on the compensation committee are rewarded less generously even than those who are excluded from the board altogether.

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[7]See Core et al. (1999) for a discussion of the economic link between these variables and CEO pay. Boyle and Ji (2011) provide some historical summary statistics for these variables in NZ firms over the period covered by our data.

Table 3: CEO Influence and Pay: Governance, Risk and Selection

The dependent variable is the annual change in the natural logarithm of CEO pay. Board Size is the number of directors on the board; Independent Directors is the proportion of directors who are independent; CEO-Chair = 1 if the CEO is also the board chair and 0 otherwise. Column (3) is the second stage of a two stage procedure in which the first stage accounts for possible selection effects in the board role of the CEO: Lambda is the selection parameter for CEO compensation committee membership and Gamma is the selection parameter for CEOs who are not members of the board. All regressions include a full set of year dummies (1998 being the omitted year) and are based on 447 observations. Terms in parentheses are robust standard errors clustered at the firm level. ***(**)(*) denotes significance at the .01 (.05) (.10) level.

	(1)	(2)	(3)
Intercept	0.196***	0.131***	0.234***
	(0.080)	(0.019)	(0.061)
Firm performance	0.080***	0.122***	0.061**
	(0.026)	(0.033)	(0.031)
CEO on Compensation Committee	−0.039**	−0.042**	−0.232**
	(0.018)	(0.017)	(0.104)
CEO not on Board of Directors	0.001	−0.040**	−0.204
	(0.034)	(0.019)	(0.144)
Board Size	0.009*		
	(0.005)		
CEO-Chair	0.022		
	(0.037)		
Independent Directors	−0.164		
	(0.013)		
Firm performance * CEO on Compensation Committee		−0.074	
		(0.062))	
Firm performance * CEO not on Board		−0.057	
		(0.065)	
Lambda			0.121*
			(0.065)
Gamma			0.099
			(0.088)
R^2	0.07	0.06	0.06
F-statistic	2.42***	2.30***	2.36***

4.2 Risk-return tradeoff

Another possible explanation for the puzzle is that the lower pay growth associated with CEO membership of the compensation committee reflects a risk-return tradeoff by risk-averse CEOs. Specifically, CEOs who sit on the compensation committee may use their 'power' to negotiate a low-risk, low-return remuneration package. According to this story, the negative estimate of α_2 is simply the price risk-averse CEOs pay in order to reduce their compensation risk.

To test this story, we re-estimate equation (1) including two additional variables

that interact firm performance with D_H and D_L respectively. However, as can be seen in column (2) of Table 3, neither interaction variable is even close to being statistically significant, while the estimate of α_2 actually rises slightly. The puzzle does not, therefore, appear to be the result of risk-return considerations by risk-averse CEOs.

4.3 Selection

A third possibility is that the 'selection' of CEOs who sit on the compensation committee is not random. For example, CEOs who expect their future pay growth to be constrained – for whatever reason – may actively seek compensation committee membership in order to best minimize the pain. According to this view, the negative estimate of α_2 reflects self-selection by CEOs (and/or the firms that employ them).

To investigate this idea, we employ the Campa and Kedia (2002) implementation of the two-stage Heckman (1979) procedure. The first stage estimates probit models of the decisions to (i) include the CEO on the compensation committee and (ii) to exclude the CEO from the board. The results of these models are used to estimate selection parameters (corresponding to each of the two decisions) which are then included as additional explanatory variables in equation (1).[8]

The results of this exercise appear in column (3) of Table 3. Allowing for selection makes the puzzle worse: the coefficient on the compensation committee selection variable is positive rather than negative, suggesting that firm characteristics which encourage CEO membership of the compensation committee also tend to encourage high pay growth. As a result, the estimate of α_2 becomes even more negative.[9]

4.4 Cash versus total compensation

Finally, we consider the possibility that our results are at least partly an artifact of our focus on cash, as opposed to total, compensation. It could be, for example, that CEOs who sit on the compensation committee are giving up some cash remuneration in exchange for stock options of greater value. In this case, compensation committee membership would indeed be associated with lower cash remuneration, but there would be no puzzle.

As discussed in section 2, we are unable to test this idea directly by using total compensation growth as an alternative dependent variable in equation (1). However, we can get some idea of its plausibility by comparing the frequency of option awards across the three CEO 'involvement' categories. Such a comparison turns out to be revealing: of the 51 option grants made during our sample period, 13 are to CEOs who serve on the compensation committee, 36 are to CEOs who sit on the board only, and 2 are to non-

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[8]The explanatory variables used in the first-stage probit models are firm performance, firm sales, and firm risk – as measured by the standard deviation of monthly firm stock returns for the five-year period ending the last day of the previous fiscal year.

[9]We also estimate models that include combinations of the variables introduced in the various columns of Table 3, but this has no effect on the puzzle.

board CEOs. Relative to the total numbers of observations (see Table 1), these correspond to 8.3%, 19.3% and 1.9% respectively of firm-years in the three categories. Given that CEOs who are not members of the compensation committee receive option grants at more than twice the rate of CEOs who are members, it seems unlikely that our focus on cash compensation is responsible for the puzzle.

5   Concluding Remarks

Much has been written about executive compensation, but surprisingly little is known about how this is affected by formal CEO involvement in the executive pay-setting process. At one extreme, CEO membership of the rms compensation committee would seem to represent a significant departure from the arms-length bargaining model envisaged by agency theory, and hence create the potential for opportunistic CEO behaviour. At the other, CEOs who are not part of the board of directors would appear to be in a relatively weak bargaining position when it comes to negotiating their personal remuneration. We examine this issue using data from New Zealand, where there exists considerable variation in the extent of formal CEO involvement. After controlling for variation in firm performance, we find, surprisingly, that annual pay increments for CEOs with compensation committee membership averaged four percentage points *less* than those enjoyed by other CEOs during the 1997–2005 period. Moreover, this unexpected outcome cannot be explained by some obvious candidates – risk-return tradeoff considerations, interaction with other governance variables, selection bias, or variable mis-measurement – and so represents something of a puzzle.

Although the last decade, in particular, has seen a significant number of well-documented cases of seemingly-excessive CEO compensation, the evidence in this paper indicates that, at least in NZ, such cases are unlikely to arise as the result of CEO membership of the compensation committee. If anything, our results suggest that highly-visible arrangements which, on the surface, appear an open invitation for CEOs to behave opportunistically, may in fact induce them to exercise greater restraint.

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