

# Go Along to Get Along? Pay-Performance Sensitivity and CEO Membership of the Compensation Committee \*

Glenn Boyle<sup>†</sup>

*NZ Institute for the Study of Competition and Regulation  
Victoria University of Wellington*

and

*Department of Economics and Finance  
University of Canterbury*

Helen Roberts

*Department of Finance and Quantitative Analysis  
University of Otago*

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<sup>†</sup>Corresponding author: PO Box 600, Wellington, New Zealand. Email: glenn.boyle@vuw.ac.nz Phone: 64-4-463-7487 Fax 64-4-463-5566

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## Abstract

Although CEO membership of the compensation committee is extremely rare in the United States, it is relatively common in New Zealand. Motivated by this institutional difference, we estimate a standard model of executive compensation using 1997–2005 New Zealand data and compare the results to those previously obtained from the United States. We find that: (i) the average pay-performance sensitivity is relatively low in New Zealand, (ii) the sensitivity is significantly lower in firms that have CEOs on the compensation committee, and (iii) this difference is asymmetrical — CEOs with compensation committee membership achieve a lower average sensitivity in high-return years, but not in low-return years. Having a direct input into one's own pay discussions apparently pays off.

JEL classification: G34, J33

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## 1 Introduction

Many papers have examined the relationship between chief executive officer (CEO) remuneration and firm performance, e.g., Murphy (1985), Jensen and Murphy (1990), Boschen and Smith (1995), Hall and Liebman (1998), Schaefer (1998) and Zhou (1999). Although concerns initially arose about its economic magnitude, virtually all studies have found the pay–performance sensitivity to be significantly positive, consistent with efficient governance and the predictions of agency theory. Nevertheless, some doubts remain about whether such a conclusion is justified: Bertrand and Mullainathan (2001) and Garvey and Milbourn (2006) provide evidence suggesting that at least some of the sensitivity reflects payment for ‘luck’ rather than performance, while Bebchuk and Fried (2004) argue that the observed sensitivity masks a process that is weighted towards the interests of the CEO.

At the individual firm level, the most crucial role in the executive pay process is played by a subgroup of the board of directors known as the compensation committee: typically this committee is responsible for setting the parameters and objectives surrounding executive pay policy, and for making specific package recommendations. Thus, CEO membership of this 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. Several studies have examined this issue, with somewhat mixed results: although Newman and Mozes (1999) report some evidence from 1992 data suggesting that CEOs who sit on the compensation committee are able to obtain more favourable performance–contingent packages, more extensive studies by Daily et al. (1998), Anderson and Bizjak (2003) and Vafeas (2003) fail to find any such relationship.

A singular feature to emerge from these United States (US)-based studies is the very small number of CEOs who are members of their firm’s compensation committee. For example, Vafeas (2003) finds that only two of the 271 largest firms in the Forbes compensation survey for 1997 fall into this category. Similarly, Anderson and Bizjak (2003, p1325) note that by 1998 insiders “are essentially absent” from a random sample of 110 New York Stock Exchange firms. Using different firm groupings and time periods, Klein (1998) and Newman and Mozes (1999) report slightly higher (in the range of 5%–10%), but still small, numbers.<sup>1</sup> At least in part, this seems likely to reflect the US regulatory environment – both the Internal Revenue Service and the Securities and Exchange Com-

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<sup>1</sup>Note also that only Klein and Vafeas distinguish between CEOs and other insider representation. Thus, the percentages quoted by Anderson and Bizjak and Newman and Mozes almost certainly overstate the true participation of US CEOs in compensation committees.

mission provide firms with strong incentives *not* to include their CEO in the compensation committee. As a result, only firms with particularly good reasons are likely to do so (a positive selection effect), making it unsurprising that researchers have struggled to detect any adverse impact on CEO pay structure. A more powerful test of the ‘opportunistic behaviour’ hypothesis requires an environment where regulations have not evolved to the point where CEO membership of the compensation committee is effectively prohibited.

In this paper, we examine just such an environment. In New Zealand (NZ), there are no adverse tax or regulatory consequences to having CEO membership of the compensation committee. Presumably as a result, such membership is by no means uncommon, suggesting that a significant number of NZ CEOs have the opportunity to favourably influence their own pay. In addition, a smaller number of CEOs sit on neither the compensation committee *nor* the board of directors (again in contrast to the US where CEO board membership is virtually automatic), so these executives have little ability to directly influence discussions about their remuneration. The result is a setting where the range of potential CEO influence is much greater than is available in US data, and hence permits a more powerful test of CEO propensity to behave opportunistically.

We find that more than 1/3 of NZ listed firms appointed their CEO to the compensation committee during the 1997–2005 period and that this is associated with three indications of opportunistic behaviour. First, the average pay–performance sensitivity is much lower than in the US. Second, firms where the CEO is a member of the compensation committee have a significantly lower pay–performance sensitivity than other firms. Third, CEOs who sit on the compensation committee seem able to extract a more favourable incentive structure. Overall, these results suggest that membership of the compensation committee can provide significant advantages to CEOs, and perhaps provide some justification for regulations that discourage such membership.

In the next section, we describe our data sources and properties. Section 3 contains our principal results, while section 4 offers some concluding remarks.

## 2 Data

Our initial sample consists of companies listed on the New Zealand Stock Exchange (NZSX) between 1997 and 2005. We begin in 1997 because NZ firms were not required to disclose executive compensation details before then.<sup>2</sup> Compensation and governance information come from a unique, hand-collected dataset obtained from company annual reports.<sup>3</sup> Stock return data were sourced from the Otago University Sharemarket database. 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

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<sup>2</sup>See Andjelkovic et al.(2002) for details.

<sup>3</sup>Older reports were obtained from the annual reports collection in the now-defunct Commerce Resource Library at Otago University; more recent report information comes from the Datex database.

514 firm-year observations for 145 different NZSX firms over the nine year period between 1997 and 2005. With 58 observations in 1997, this leaves 456 ‘first-difference’ observations over the sample period.

Disclosure of executive compensation in New Zealand works in the following way. For executives who are members of the board of directors, the exact value of cash compensation (to be defined below) appears in the annual report, as does the details of any stock or option grants made during the year. The cash remuneration of all other employees earning more than \$100,000 per annum is reported in \$10,000 intervals in a separate table, so we calculate cash compensation for any CEO not on the board of directors as equal to the midpoint of the highest payment band.<sup>4</sup> For example, if the CEO is not a member of the board of directors and the maximum salary band in the annual report is \$150,000-160,000, then CEO compensation is estimated to be \$155,000.<sup>5</sup>

We calculate two measures of what Newman and Mozes (1999) call ‘firm-awarded’ compensation, i.e., remuneration that is under the direct control of the firm. First, annual cash compensation is the sum of salary, bonus, superannuation, health insurance coverage, and motor vehicle allowance. Second, total compensation is the sum of cash compensation and the value of any new stock or option grants made during the year.<sup>6</sup> We estimate the value of new option grants using the model of Black and Scholes (1973) and Merton (1973). In 34 cases, there was insufficient detail about the grants to undertake this calculation. As a result, the total compensation sample contains 422 observations.

For each firm-year in both the cash and total compensation samples, we collect performance and governance data. To proxy for performance, we calculate the market-adjusted 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). For governance, we record whether or not the CEO was a member of the compensation committee: a total of 164 (163) firm-years in the cash (total) compensation sample. We also identify those CEOs who are on neither the compensation committee *nor* the board (107 and 77 in the cash and total compensation samples respectively), as these executives might be expected to exert particularly little influence over the compensation process.

Some summary statistics for various pay and performance variables appear in Table 1. A comparison of the mean dollar values of cash and total compensation indicates that only a fairly small proportion of NZ CEO remuneration is directly tied to stock performance. The most interesting feature is the finding that firms whose CEOs sit on the compensation committee perform worse on average, pay their CEOs less, and increase their pay at a slower rate. However, the pay differences are small relative to the performance differences, suggesting that CEOs on the compensation committee may be successful in decoupling their pay from firm performance while at the same time maintaining a similar

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<sup>4</sup>Exceptions to this rule occur when there are identifiable employees who receive special retirement or redundancy payments that take them into the top band.

<sup>5</sup>All monetary values in this paper are expressed in NZ dollars.

<sup>6</sup>Stock awards are rare in NZ — only one exists in our sample — so the equity-based component is essentially limited to option grants.

Table 1: Pay and Performance Summary Statistics

This table reports means and standard deviations (in parentheses) for various pay and performance measures from listed New Zealand firms between 1997 and 2005. Cash compensation is the sum of salary, bonus, superannuation, health insurance coverage, and motor vehicle allowance; total compensation is the sum of cash compensation and the Black-Scholes value of any new stock or option grants made during the year. Some firms do not provide sufficient details to calculate the value of option grants, so these firms do not appear in the total compensation sample. The first two columns report statistics for all firms appearing in the cash and total compensation samples respectively. The final two columns use only those firms whose CEO is a member of the compensation committee.

Variable	<i>All Firms in Samples</i>		<i>Firms with CEO on Compensation Committee</i>	
	Cash ( <i>N</i> = 456)	Total ( <i>N</i> = 422)	Cash ( <i>N</i> = 164)	Total ( <i>N</i> = 163)
Raw stock return (%)	16.62 (48.5)	16.38 (48.7)	10.86 (51.5)	10.72 (51.7)
Market-adjusted stock return (%)	7.05 (45.4)	6.75 (45.6)	2.13 (49.2)	1.97 (49.2)
Annual cash compensation (\$000)	442.46 (325.7)		426.15 (348.2)	
%age change in annual cash compensation	12.63 (29.4)		10.30 (32.7)	
Annual total compensation (\$000)		476.99 (397.2)		452.49 (407.4)
%age change in annual total compensation		12.84 (35.0)		10.36 (40.4)

level of, and growth in, remuneration. In order to shed more light on this issue, we need to directly estimate the pay-performance sensitivity for the different classes of firm, a task to which we now turn.

### 3 Regression Results

CEOs who sit on their own compensation committees have the potential to favour their own interests at the expense of stockholders, either by achieving greater overall pay, or by decoupling their pay from firm performance in a self-beneficial manner, or both. To investigate this possibility, we estimate regression models of the general form:

$$\begin{aligned} \text{\%age change in CEO Compensation} = & \alpha_0 + \alpha_1 R + \alpha_2 D_H + \alpha_3 D_L + \alpha_4 (D_H * R) \\ & + \alpha_5 (D_L * R) + \epsilon \end{aligned} \tag{1}$$

where:

$R$  = annual market-adjusted stock return;

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

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

In equation (1),  $\alpha_1$  is the pay-performance sensitivity for CEOs who are on the board, but not the compensation committee;  $\alpha_4$  and  $\alpha_5$  represent the incremental effects of being on the compensation committee and not being on the board respectively. Similarly,  $\alpha_2$  and  $\alpha_3$  are the corresponding incremental effects on the average growth in pay itself. Our primary interest is in the estimates of these incremental-variable coefficients.

The results obtained from estimating equation (1) appear in Table 2. All reported models also include a full set of time dummies (1998 being the excluded year); and because some CEOs appear in the data multiple times, we report both OLS and robust White standard errors, the latter allowing for error clustering at the CEO level. In the first two columns, we include only the (market-adjusted) firm stock return as an explanatory variable. The resulting coefficient estimates of 0.077 and 0.134 for cash and total compensation respectively are statistically significant at the 5% level or better, but are economically small compared to those previously obtained from US data. For example, three representative US-based studies that estimate (1) – Murphy (1985), Hall and Lieberman (1998) and Zhou (1999) – report estimates for cash compensation ranging from 0.16 to 0.23, and from 0.21 to 0.33 for total compensation. Lower sensitivities are what would be expected if opportunistic CEOs use their presence on the compensation committee to divorce their remuneration from firm performance.

The remaining columns in Table 2 explore this idea more directly by estimating separate pay-performance sensitivities conditioned on CEO involvement in the pay-setting process. When the change in cash pay is the dependent variable, the estimated sensitivity for CEOs who are on the board but not the compensation committee (the typical US situation) is 0.164, comparable to the US-based estimates noted above. By contrast, the incremental effect of compensation committee membership is  $-0.164$ , leaving a net sensitivity of exactly zero for such powerful CEOs. Perhaps surprisingly, this impact is less marked (although the overall picture is similar) when the change in total pay is the dependent variable. This may indicate ‘bird-in-the-hand’-type behaviour by CEOs who sit on compensation committees – they prefer to focus their efforts on maintaining bonuses (which are received immediately) rather than option grants (which pay off only over time, if at all).

Table 2 contains two other interesting features. First, being on the compensation committee has no discernible impact on the average growth in pay: although negative, the estimated coefficients are insignificant at conventional levels. This can be viewed in different ways: on the one hand compensation committee membership does not seem able to command higher overall compensation; on the other hand, it does seem able to achieve a reduction in pay risk without having to sacrifice any base remuneration. Second, not being on the board of directors has little impact on both pay growth and its relationship to performance – while a presence in the pay-setting process appears to benefit CEOs, an absence of direct influence does not appear to hurt.

The results in Table 2 are consistent with CEOs using the power attained via compensation committee membership to reduce the sensitivity of their pay to firm per-

Table 2: Pay, Performance and CEO Influence: Regression Results

The dependent variable is the annual percentage change in CEO compensation (cash or total as defined in Table 1). All regressions include a full set of time dummies (1998 being the omitted year). OLS standard errors are in parentheses; terms in square brackets are robust standard errors clustered at the firm level. \*, \*\* and \*\*\* indicate that the corresponding coefficient estimate statistically differs from zero at the 10%, 5% and 1% levels respectively.

	<i>Dependent Variable</i>			
	%age change in Cash Pay	%age change in Total Pay	%age change in Cash Pay	%age change in Total Pay
Intercept	14.54 (3.85)*** [3.65]***	17.74 (4.62)*** [5.06]***	16.05 (4.23)*** [4.16]***	19.19 (5.05)*** [5.23]***
Market-adjusted return	0.077 (0.03)** [0.04]**	0.134 (0.04)*** [0.05]***	0.164 (0.05)*** [0.05]***	0.219 (0.06)*** [0.06]***
CEO on Compensation Committee			-3.055 (3.20) [2.89]	-2.540 (3.74) [3.21]
CEO not on Board of Directors			-3.062 (3.66) [2.69]	-3.89 (4.78) [3.48]
Market-adjusted return *CEO on Compensation Committee			-0.164 (0.07)** [0.09]*	-0.147 (0.08)* [0.10]
Market-adjusted return *CEO not on Board of Directors			-0.085 (0.08) [0.07]	-0.107 (0.10) [0.08]
R <sup>2</sup>	0.03	0.06	0.04	0.07
N	456	422	456	422
Time Fixed Effects	Yes	Yes	Yes	Yes

formance. Of course, a lower sensitivity is only attractive when firm performance is poor; when performance is strong, CEOs will prefer as high a sensitivity as possible. This suggests that truly opportunistic behaviour by CEOs who sit on compensation committees will result in a pay-performance sensitivity that is asymmetric across return states: high when returns are high and low when returns are low.

We examine this idea by estimating two separate coefficients for the interaction variable ( $D_H * R$ ): one when market-adjusted returns are positive and one when they are negative. We report the results of this exercise in Table 3 (all other coefficients are suppressed as they are similar to those already tabulated), which reveals a significant asymmetry: the incremental effect of CEO compensation committee membership on pay-performance sensitivity exceeds 0.3 in absolute value and is statistically significant when returns are negative, but close to zero and statistically insignificant when returns are positive. Thus, compensation committee membership apparently allows CEOs to reap the benefits of good performance while avoiding the costs of poor performance.

Table 3: CEO Influence and the Pay-Performance Sensitivity: Further Evidence

This table repeats the analysis of Table 2, but estimates separate (market-adjusted return)\*(CEO on Compensation Committee) coefficients according to whether the market-adjusted return is positive (in which case the CEO benefits from a positive pay-performance sensitivity) or negative (in which case he prefers to pay to be independent of performance). Other coefficients are not reported as they are similar to those appearing in Table 2. \*, \*\* and \*\*\* indicate that the corresponding coefficient estimate statistically differs from zero at the 10%, 5% and 1% levels respectively.

	<i>Dependent Variable</i>	
	%age change in Cash Pay	%age change in Total Pay
Market-adjusted return < 0	-0.373	-0.330
*CEO on Compensation Committee	(0.12)*** [0.22]*	(0.14)** [0.24]
Market-adjusted return ≥ 0	-0.006	-0.006
*CEO on Compensation Committee	(0.08) [0.06]	(0.09) [0.08]

## 4 Concluding Remarks

How important is the appearance of a CEO on his firm's compensation committee? Jensen et al. (2004) claim that even when not a member, CEOs tend to be fully involved in all compensation committee discussions except for those directly relating to their own pay. Viewed in this light, explicit membership of the compensation committee might seem to be of minimal importance. In this paper, we put this idea to the test by examining the relationship between pay and performance in New Zealand, where, in contrast to the United States, CEO membership of the compensation committee is common. We find that compensation committee membership is associated with pay structures that benefit the CEO, suggesting that rules and regulations discouraging this kind of arrangement may have a useful role to play.

Of course, our results are open to other interpretations and it remains to be seen whether this conclusion is robust. It may be, for instance, that CEO membership of the compensation committee is correlated in our sample with other known determinants of the pay-performance sensitivity, such as firm volatility and leverage. Further work is clearly needed to clarify and, if necessary, isolate the role of such variables.

Finally, we have focused on the implications of a particular governance arrangement for the efficiency of CEO pay structures. A more fundamental issue is the effect of this arrangement on firm investment and performance. Does, for example, CEO membership of the compensation committee, and the consequent ability to insulate one's remuneration from firm performance, encourage the taking on of riskier investment projects and, hence, result in more volatile firm performance? Although such questions are beyond the scope of this paper, they may well be worthy of further research.

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