

The Role of Compensation Consultant in Executive Pay Governance

Marizah Minhat*

October 23, 2008

Abstract

I examine the role of the pay consultant in influencing the Chief Executive Officer (CEO) pay. Firstly, I find that the use of a pay consultant is common and large risky firms tend to employ more than one pay consultant. Secondly, by isolating the effect of leading pay consultants, I find that in the pursuit for the largest market shares, these consultants have contributed to the unintended consequence of an upward ratcheting of the overall level of CEO pay. This paper contributes to the executive pay literature that has scarcely studied pay consultant despite its central role in the executive pay governance.

JEL classification: G3

Keywords: CEO compensation; Corporate Governance; Pay Consultant

* The author is a PhD-Student at the Division of Accounting and Finance, University of Stirling, FK9 4LA Stirling, Scotland, United Kingdom. The author is grateful for comments from Ruth Bender, Rezaul Kabir and Chris Veld, and the participants at 2008 Multinational Finance Society (MFS) Conference in Orlando, Florida, and the 2007 European Financial Management Association (EFMA) doctoral seminar in Vienna. The financial support from the Overseas Research Students Awards Scheme (ORSAS) and PhD scholarship from the Division of Accounting and Finance, University of Stirling are gratefully acknowledged. All errors are the responsibility of the author. The author can be contacted at Tel: ++ 44 (0) 1786 467304; Fax: ++ 44 (0) 1786 467308; Email: marizah.minhat@stir.ac.uk.

The Role of Compensation Consultant in Executive Pay Governance

Abstract

I examine the role of the pay consultant in influencing the Chief Executive Officer (CEO) pay. Firstly, I find that the use of a pay consultant is common and large risky firms tend to employ more than one pay consultant. Secondly, by isolating the effect of leading pay consultants, I find that in the pursuit for the largest market shares, these consultants have contributed to the unintended consequence of an upward ratcheting of the overall level of CEO pay. This paper contributes to the executive pay literature that has scarcely studied pay consultant despite its central role in the executive pay governance.

JEL classification: G3

Keywords: CEO compensation; Corporate Governance; Pay Consultant

1. Introduction

With the separation of ownership and control that describes public listed firms, the manager of a firm is assumed to be pursuing self-interest at the expense of the shareholders. In this context, the agency theory predicts that a managerial pay package can be designed to promote the manager-shareholder interest alignment (Jensen and Murphy, 1990). In contrast, the managerial power theory views that the managerial pay can be a source of the agency cost itself (Bebchuk and Fried, 2003; Jensen, Murphy, and Wruck, 2004). The pay package is seen as a means for the managerial extraction of private benefit at the expense of the shareholders.

If the executive pay is seen as a source of the agency cost itself, it needs to be governed. Prior studies have examined the role of a number of governance mechanisms in influencing the executive pay. These include the board of directors, outside directors, remuneration committee, blockholders, institutional shareholders, managerial ownership, CEO duality, and debtholders (i.e. through the effect of firm leverage). With few exceptions (Conyon, Peck, and Sadler, 2006; Bender, 2008), the role of pay consultant remains understudied worldwide (Bonet and Conyon, 2005). How this governance mechanism influences the executive pay outcomes remains largely unknown.

There are, at least, four reasons why examining the role of pay consultant is important to increase our understanding on the state of executive pay. Firstly, the use of a pay consultant is common to the executive pay setting. I find that more than eighty per cent of the 700 firm-years observed employ pay consultant. Secondly, the use of a pay consultant is central to the executive pay setting. Pay consultants are not only regarded as pay data providers but also experts that legitimising the remuneration

committee's decisions (Bender, 2008). Thirdly, there is a widespread belief that the pay consultant is not totally independent from the influence of the firm executives (Crystal, 1991; Bender, 2008; Bebchuk and Fried, 2005). Fourthly, competition among the pay consultants is seen to have driven up pay rises for the firm executives:

“...the role of this army of pay consultants is coming under fire. They are accused of fuelling boardroom pay rates to win business for themselves. The Association of British Insurers, whose members speak for a fifth of the stock market, claims that the advisers are soliciting business by hinting to prospective clients that they could drive up pay rises for directors.”

The Mail on Sunday (Feb 6, 2005)

Interestingly, I find some evidence that the consultant's market share is positively related to the client firm's CEO pay level. This relation is evident for the consultants competing for the largest market share (i.e. New Bridge Street Consultants and Towers Perrin). It implies that these consultants compete by advising towards higher pay for their client's CEO. This line of interpretation is reasonable from the managerial power theory whereby the client firm's CEO is perceived as having the power to appoint the consultant. By advising towards higher pay for the CEO, the consultant reduces the risk of losing its business with the client firm.

The remainder of this paper is structured as follows. Section 2 presents the extant literature and the development of hypotheses. Section 3 and 4 are on the research methods and findings respectively. Section 5 presents the conclusions.

2. Literature review and hypotheses

The design of the executive pay package is commonly placed under the responsibility of the remuneration committee. Because the committee commonly lacks the expertise and information about competitive pay, it often works with a pay consultant (Jensen et al., 2004; Bender, 2008). The committee is indeed made responsible on the appointment of consultant who advises on the executive pay (Combined Code, 2006). On one hand, the reason for using pay consultant is for the manager-shareholder interest alignment (Conyon et al., 2006). On the other hand, the pay consultant is seen as being the hidden force behind the spiralling executive pay (Crystal, 1991; Bebchuk and Fried, 2005). Empirical evidence on the role of pay consultant is sparse despite the widespread use of this governance mechanism in the executive pay setting. Bonet and Conyon (2005, p. 150) suggest that:

“...one potentially important avenue for research would be the role of the compensation advisor to the compensation committee. Anecdotal evidence suggests that such compensation consultants are used widely and so investigating their influence may further help our understanding of executive pay and corporate governance.”

2.1. Agency theory

Agency theory predicts that a managerial pay package will be designed in a way to incentivise manager to increase shareholder wealth (Jensen and Meckling, 1976; Jensen and Murphy, 1990). The pay package is seen as a tool, within the control of the shareholders, to link the managerial pay with the firm performance (Bertrand and

Mullainathan, 2000). In this context, the pay consultant who advises on the executive pay is deemed to act in the best interest of the shareholders. The demand for compensation service arises because firm seeks to determine the optimal executive pay. Ideally, the pay consultant is perceived as an independent and dependable source of knowledge and skill in the executive pay design due to its prolonged market experience and established reputation. It is thus reasonable to suggest that a fundamental reason for using the pay consultant is to ensure the manager-shareholder interest alignment (Conyon et al., 2006).

2.2. *Managerial power theory*

The managerial power theory suggests the absence of effective shareholders' control over the executive pay design. The shareholders are almost powerless to the extent that the executive pay design is left under the significant influence of the executive themselves. Executive pay thus becomes a source of the agency cost itself (Bebchuk and Fried, 2003; Jensen et al., 2004). The use of the pay consultant is viewed as one expression of the managerial self-interest that drives executive pay for the benefit of the executive at the expense of the shareholders (Conyon et al., 2006).

CEOs can have a significant influence over the pay consultant's advice on their pay although they are not directly involved in the firing or hiring the pay consultant. Crystal (1991) argues that the external directors that form the remuneration committee normally have no economic ties with the firm. The committee thus lacks the incentive to ensure the consultant it appointed advising towards a CEO pay package that is in favour of the shareholders. If the client firm's human resources department involves

in appointing the consultant, Bebchuk and Fried (2005) argue that, being a subordinate to the CEO incentivises the department to favour the CEO.

Bebchuk and Fried (2005) also argue that the consultant also lacks the incentive to favour the shareholders because the consulting fee is not linked to firm performance. The consultant instead has understood that a pay recommendation that displeases the CEO may risk the consultant's future employment. This argument is consistent with Warren Buffet's remark in the 2004 letter to the shareholders of Berkshire Hathaway Inc. that highlights both the human relations departments and the pay consultants "had no trouble perceiving who buttered their bread". Similarly, Crystal (1991) argues that if the consultant recommendation does not cause the CEO to earn more money than he was earning before the consultant appeared on the scene, the consultant risks losing business with the client firm. Therefore, it can be envisaged that it is almost impossible for the consultant to advise openly and critically on the CEO pay design in order to remain in business. In this context, the use of pay consultant is viewed as increasing the pay-related agency cost.

Pay consultant is indeed increasingly being accused of being the hidden force behind the spiralling boardroom pay (e.g. Crystal, 1991)¹. A US-based study by Bizjak, Lemmon, and Naveen (2008) suggests that about sixty-five per cent of the firms they examined employ pay consultant and set pay at or above the fiftieth percentile of the peer group. Similarly, by using UK-based cross-sectional sample of the year 2003, Conyon et al., (2006) find that firms using consultant pay CEO more than firms without one. They argue that pay consultant is responsible for the unintended consequence of an upward ratcheting of the overall level of executive pay.

¹ A similar remark was reported in 'Pay consultants: Hidden force behind salary boom', The Guardian (August 1, 2003).

But they did not examine the marginal effect of leading consultants on the overall level of executive pay.

2.3. *Multiple consultant hypothesis*

Whilst some firms use only one pay consultant, using more than one consultant is common among firms (Bender, 2008). Although there is no requirement for the firms to disclose the information on the pay consultant fees, some anecdotal evidence suggests that these consultants do not come cheap. Consultants may charge about five hundred pounds an hour for their services.² If a consultant does not come cheap, then it poses a question on why some firms use more than one consultant.

Based on a survey, Bender (2008) finds that different consultants are used to advise the management team and the remuneration committee separately i.e. the consultants giving their views on the same aspect of pay. This could be a means to overcome the conflict of interest associated with consultants advising pay for the people who appointed them. Alternatively, the employment of multiple consultants may benefit the firm through the input supplied by the consultant specialising in different aspect of pay (Bender, 2008). For example, it is reported in the Aggreko plc's Annual Report 2005 that:

“...Towers Perrin provided remuneration with respect to basic salary, bonus plans and executive long-term incentive plans. New Bridge Consultants provided advice on the implementation and administration of share plans. Mercer Human Resource Consulting provided advice on

² ‘Get me an above-average pay consultant’, The Mail on Sunday (February 6, 2005)

retirement benefits in the UK and overseas and administers the UK defined benefit pension scheme.”

However, the employment of multiple pay consultants may reflect the attempt to shop around to find the highest rate of pay for the executives (Sunday Telegraph, Jan 4, 2004). This argument is consistent with the managerial power theory. Since CEO is assumed to have great influence over the consultant’s appointment, a CEO may increase her chance of getting the best rate of pay by employing multiple consultants. The presence of more than one consultant serving the same firm increases the competition among the consultants. Every consultant will act in favour of the CEO i.e. will advise towards greater pay for the CEO in order to remain in business. In light of the managerial power hypothesis, this paper intends to test the following hypothesis:

H1: Firm with multiple pay consultants will be associated with higher CEO pay.

2.4. *Competition hypothesis*

Just like in any other business, the consultants are competing to maximise their market shares. The effect of competition among the consultants has not been examined by prior studies. For the first time, this paper examines this issue in light of the managerial power theory.

The managerial power theory implies that a pay consultant has a strong incentive to serve the interest of the client firm’s CEO in order to retain its consulting business with the client firm. Having perceived the CEO as having a significant influence in

rehiring the consultant, it encourages the consultant to compete with the rest by proposing a pay package that is in the best favour of the CEO. If the consultant competes by way of advising towards higher pay for its client firm's CEO, then consultant with greater market share (i.e. the more successful consultant) tend to be associated with higher client firm's CEO pay. This argument leads to the hypothesis:

H2: After controlling for firm size, pay consultant with greater market share will be associated with higher client firm's CEO pay.

3. Data and variables

3.1. Sample

The sampling begins with a database on CEO pay for 181 non-financial FTSE350 firms³. Seven firms did not disclose whether or not they employ pay consultant and are eliminated from the sample. The final sample is thus made up of 175 companies. The non-disclosure of the name or number of pay consultant is found to be common prior to 2002. Firms are required to disclose the name of entity that provides advice, or service, that had materially assisted in the executive pay setting only beginning the financial year ended on or after 31st December 2002 with the introduction of Directors' Remuneration Report Regulations (DRRR) 2002. 700 firm-years (175 public listed firms over 2003-2006 period) have complied with the requirement and

³ The database lists the most important public listed non-financial companies in the UK during an eight-year sample period of 1999-2006. The firms had to appear at least four times consecutively between 1999 and 2006 as FTSE350 Index constituents. The selection of four years is consistent with that in Yermack (1995). Consistent with many prior studies, financial related firms are eliminated from the sample. Due to data non-availability for, at least, one year during the eight-year period (resulting from mergers and acquisitions, new companies and non-disclosure) the sample is reduced to 181 firms.

thus have been considered in the final sample. Firms are classified according to the Primary Standard Industrial Classification (SIC) Code that reflects the firms' main business activity. The codes are obtained from the Financial Analysis Made Easy (FAME) database. Table I shows the characteristics of the sample firms.

(Insert Table I Here)

The regulation on the disclosure of directors' pay such as salary, bonus, benefit, stock option, restricted stock and pension, is also enforced beginning the financial year ended on or after 31st December 2002 (DRRR, 2002). Following the approach of many studies (Conyon, Core, and Guay, 2006; Ozkan, 2007), pay data are hand-collected from the director remuneration report section of the firms' annual reports. Data on firm characteristics are obtained from the Datastream. Data on CEO characteristics and governance variables are collected from the firms' annual reports.

3.2. Variables

3.2.1. *CEO pay.* The pay components considered in this paper are: 1) salary; 2) bonus; 3) benefit⁴; 4) defined benefit (DB) pension increment⁵ 5) restricted stock grant; and 6) stock option grant. The values of the first three components are available in the firm's annual reports. The actuarial present value of DB pension is also reported in the annual reports. The pension increment is derived from the difference between the pension value in year t and the pension value in year $t-1$. Stock grant is measured at the face value of the equity and is discounted at 20% to reflect its performance-

⁴ This refers mainly to benefit such as car allowance and insurance premium paid on behalf of CEOs.

⁵ Data on other deferred compensation are not available.

contingent character (Conyon and Murphy, 2000; Stathopoulos, Espenlaub, and Walker, 2004). As normally adopted in prior studies (e.g. Ozkan, 2007; Bizjak et al., 2008), the Black-Scholes-Merton value of stock option which is given as the price of a European call option on a dividend-paying stock, is employed (refer to Appendix A for detailed information)⁶.

3.2.2. Pay consultant. To test the first hypothesis, the number of pay consultant is used.⁷ To test the second hypothesis, the market share of each consultant is estimated as the number of pay consulting contracts it has secured divided by the total number of pay consulting contracts in the market. As part of robustness checks, the estimated market share is also multiplied by the client firm's sales in order to account the contract size. The big six consultants are also identified by using dummy variable in order to test their isolated effects on the CEO pay outcomes.

3.2.3. Firm performance. Market-based performance measures are widely used in prior studies. Accounting-based measures such as earnings per share and return on asset have gained greater attention in recent studies (Perry and Zenner, 2001; Brick, Palmon and Wald, 2006; Bizjak et al., 2008). Our knowledge remains incomplete as to which performance measure is placed as the most important in measuring corporate director performance (Conyon and Sadler, 2001). For ease of comparisons, this paper focuses on the most popular market-based performance measures, namely, shareholder return (SHR) (Hall and Liebman, 1998; Core et al., 1999; Perry and

⁶ I acknowledge that the stock option values estimated by the Black-Scholes model assumes CEOs as fully diversified investors that may not be the case in reality (Veld, 2003). But, the International Financial Reporting Standard 2 has recognised the model as providing the fair values for stock option.

⁷ I also use a dummy variable that equals zero if a firm uses one pay consultant and one if a firm uses multiple consultants.

Zenner, 2001; Brick et al., 2006)⁸. Lagged performance measure is also considered, not just to make the causality issue less contentious, but also because prior year good performance is rewarded through the increase in future salaries and, bonus for last year may be paid in the current year (Hermalin and Wallace, 2001; Perry and Zenner, 2001). The use of lagged measure demonstrates a clear causal from (past) performance to (current) pay hence eliminate joint endogeneity problem between pay and performance (Hermalin and Wallace, 2001). Lagged measure is also commonly used (Jensen and Murphy, 1990; Hall and Liebman, 1998; Perry and Zenner, 2001; Brick et al., 2006).

3.2.4. Other variables. Tosi, Werner, Katz and Gomez-Mejia (2000) suggest that firm performance explains only five per cent of the pay variance. Besides, prior studies have examined the role of board of directors (Core et al., 1999; Ozkan, 2007), outside directors (Ozkan, 2007), remuneration committee (Canyon and Peck, 1998; Bonet and Canyon, 2005), blockholders (Core et al., 1999; Ozkan, 2007), institutional shareholders (Almazan et al., 2005; Ozkan, 2007), managerial ownership (Brick et al., 2006; Ozkan, 2007), CEO duality (Canyon and Peck, 1998; Core et al., 1999; Brick et al., 2006) and debtholders (through the effect of firm leverage) (Almazan et al., 2005; Brick et al., 2006; Ortiz-Molina, 2007) in mitigating the agency cost associated with executive pay. Apart from controlling for firm heterogeneity by employing fixed and random effects estimations, the effects of a number of variables are also isolated.

Table II lists the variables and its definitions. Firm size is measured by the natural logarithm of sales for the year. Sales are common measure for firm size (Brick et al., 2006; Ozkan, 2007; Bizjak et al., 2008; Liu and Stark, 2008). Firm leverage is the

⁸ ROA (return on assets), calculated as the ratio of earnings before interest and taxes (EBIT) to total assets (Ozkan, 2007), is also used as part of robustness check.

ratio of book value of total debt to book value of total asset (Yermack, 1995; Almazan et al., 2005; Brick et al., 2006). Firm risk is the stock return volatility (i.e. the standard deviation of annualised monthly stock return over prior 120-month or throughout the firm's life). Standard deviation of return is employed in Core et al. (1999). The governance variables are measured by the natural logarithm of total number of directors on the board (Core et al., 1999), the number of non-executive directors divided by the number of executive directors, the natural logarithm of total number of remuneration committee members (Bonet and Conyon, 2005), the natural logarithm of total number of outside blockholders (Core et al., 1999; Ozkan, 2007), the percentage of total institutional ownership that is greater than three per cent (Almazan et al., 2005; Ozkan, 2007), the percentage of the firm common stock owned by CEO (Brick et al., 2006) and a dummy variable that equals one if the CEO is also the chair of the Board and zero otherwise (Conyon and Peck, 1998; Core et al., 1999; Brick et al., 2006). CEO characteristics are measured by the natural logarithm of the CEO age (Garen, 1994; Conyon and Murphy, 2000) and the natural logarithm of the number of years of the CEO has held the position of CEO at the firm (Perry and Zenner, 2001).

(Insert Table II Here)

4. Empirical tests and findings

4.1. Descriptive statistics

Table III reports the descriptive statistics for the sample of 700 firm-years (175 firms during 2003-2006 periods). The mean (median) of CEO annual pay is about £1.9

million (£1.4 million). Current shareholder return, which is a market-based measure of firm performance, has an average (median) of 14% (17%). Stock return volatility has an average (median) of 33% (32%). Sales, which is a measure of firm size, have an average (median) of £4.0 billion (£1.3 billion). The mean (median) for firm's leverage is 27% (26%). On average, a firm employs two pay consultants. For the sake of brevity, the statistics for other governance variables are not described here.

(Insert Table III Here)

Figure 1 shows two pie charts describing the pay consultants used by the 700 firm-years. Chart 1 shows the frequency distribution of the consultants used by the firm-years. More than 50% of the 700 firm-years I observed use multiple pay consultants. This is comparable to 45% reported in Conyon et al. (2006). The number of consultants employed varies from one to eight. 44.4% (i.e. 311) of the firm-years use only one consultant. This implies that 55.6% (i.e. 389) of them use multiple consultants i.e. 29.0%, 16.1%, 7.6% and 2.9% use two, three, four and more than four consultants respectively. Our findings are not substantially different from that of Conyon et al. (2006)⁹. 46.8% of their sample firms use one consultant.

(Insert Figure 1 Here)

It is found that 83 consulting firms were employed by the 700 firm-years observed. Chart 2 shows the six leading pay consultants used by the firm-years in our sample. These are the consultants with more than five per cent market share. The most

⁹ I did not test for statistical significance.

frequently used consultant is the New Bridge Street Consultants that captures about 17.9% of the total pay consulting contracts offered by the firm-years, followed closely by its US rival, Towers Perrin (15.1%). The rest are Mercer (7.6% each), Monks (6.9%), Watson Wyatt (6.4%) and Deloitte (6.4%).

The big six takes up about 60.3% of the total pay consulting businesses during 2003-2006 periods. Similar big six consultants are identified in Conyon et al. (2006) and they capture about 67.2% of the total pay consulting contracts offered in 2003 by their sample firms. The Herfindahl index, calculated as the sum of the market shares squared, is 0.073. This is comparable to 0.093 reported in Conyon, et al. (2006). This indicates high degree of competition facing the pay consulting business.¹⁰

4.2. *Multivariate analysis*

Pooled Ordinary Least Squares (OLS) regressions are employed to test the hypotheses. Panel data regressions are also employed as part of robustness check to account for the unobservable firm-specific effects (Baltagi, 2005). Pooled OLS may produce biased estimates since the sample contains repeated observations per individual firm in which the observations are not independent. Fixed effect or random effect models consider the repetition and control for fixed or random individual firm differences.

Pooled OLS regressions explain the variation both between firms and across time. Fixed effect regressions explain the variation across time while controlling for the unobservable or omitted time-invariant firm characteristics. The firm-specific characteristics are captured in the firm-specific intercept. This model assumes

¹⁰ The Herfindahl index below 0.1 indicates an unconcentrated index reflecting the high degree of competition facing the pay consulting business.

different intercepts across firms or time periods.¹¹ In random effects model, the difference among firms (or time periods) is captured in the variance of the error term.

The F-test is used to test the fixed effects. The null-hypothesis is that equal intercepts across firms. The Breusch and Pagan Lagrangian multiplier (LM) test is used to test random effects (Breusch and Pagan, 1980). The null-hypothesis is that variances of firms are zero. The Hausman Specification test is then used to compare the fixed effect and random effect model. The null hypothesis is that the individual effects are uncorrelated with the other regressors in the model (Hausman, 1978).

To test the first hypothesis, that is the effect of the use of multiple pay consultants on the CEO pay level, the following OLS model is first employed:

$$\begin{aligned}
& Ln(TotPay_{jt}) \\
& = \alpha + \beta_1 Ln(PayCon_{jt}) + \beta_2 (SHR_{jt}) + \beta_3 (SHR_{jt-1}) \\
& + \beta_4 Ln(Sales_{jt}) + \beta_5 (Leverage_{jt}) + \beta_6 (Risk_{jt}) \\
& + \beta_7 Ln(BoardSize_{jt}) + \beta_8 (OutsideDir_{jt}) + \beta_9 Ln(RemcoSize_{jt}) \\
& + \beta_{10} (Blockholders_{jt}) + \beta_{11} (Inst_Own_{jt}) + \beta_{12} (CEO_Own_{jt}) \\
& + \beta_{13} (CEO_Chair_{jt}) + \beta_{14} Ln(Age_{jt}) + \beta_{15} Ln(Tenure_{jt}) + \lambda_j + \delta_j + \varepsilon_{jt}
\end{aligned} \tag{1}$$

Following many prior studies (Perry and Zenner, 2001; Brick et al., 2006; Conyon, Core and Guay, 2006), the natural logarithm of pay is used to adjust for the non-normality of pay distribution. $TotPay_{jt}$ is the total pay of CEO in firm j at time t , made up of salary, bonus, benefit, DB pension increment, restricted stock grant and stock option grant. $PayCon_{jt}$ is the number of pay consultants used by firm j at time

¹¹ For example, if a particular firm required unique management skills, the firm-specific intercept in the fixed effect regression would capture the additional compensation needed to employ a CEO with such skills (Brick et al., 2006).

t^{12} . λ_j and δ_j denote industry and time dummy respectively. ε_{jt} is an idiosyncratic error term.

(Insert Table IV Here)

Table IV reports the regression results for pooled OLS (Column 1 and 2) and random effects regressions (Column 3 and 4).¹³ Consistent with prior studies, CEO pay is positively related to current shareholder return, firm sales, board size, and CEO tenure (Perry and Zenner, 2001; Brick et al., 2006; Ozkan, 2007). However, the positive association between CEO pay and number of pay consultant employed is not statistically significant across four different specifications.¹⁴ Since there is no evidence that CEO pay is affected by the number of pay consultant employed, it poses a question why some firms do employ more than one pay consultant.

(Insert Table V Here)

$$\begin{aligned}
& Ln(PayCon_{jt}) \\
& = \alpha + \beta_1(SHR_{jt}) + \beta_2(SHR_{jt-1}) \\
& + \beta_3 Ln(Sales_{jt}) + \beta_4(Leverage_{jt}) + \beta_5(Risk_{jt}) \\
& + \beta_6 Ln(BoardSize_{jt}) + \beta_7(OutsideDirs_{jt}) + \beta_8 Ln(RemcoSize_{jt}) \\
& + \beta_9(Blockholders_{jt}) + \beta_{10}(Inst_Own_{jt}) + \beta_{11}(CEO_Own_{jt}) \\
& + \beta_{12}(CEO_Chair_{jt}) + \beta_{13} Ln(Age_{jt}) + \beta_{14} Ln(Tenure_{jt}) + \lambda_j + \delta_j + \varepsilon_{jt}
\end{aligned} \tag{2}$$

¹² The use of a lagged and dummy variables produce similar results. In this case, a dummy variable equals one for firm with more than one pay consultant and zero otherwise.

¹³ The F-test rejects the null hypothesis that the unobservable firm-specific effects do not vary. The Breusch and Pagan Lagrangian multiplier (LM) test rejects the null hypothesis that variances of firms are zero. Both tests suggest that the pooled OLS regressions are biased. The Hausman Specification test is then conducted to compare the fixed effect and random effect model. The null-hypothesis is that the individual effects are uncorrelated with the other regressors in the model. The test cannot reject the null hypothesis, indicating the random effect regressions are appropriate.

¹⁴ There has been no change in the results when ROA (return on assets) is used as proxy for firm performance.

The above OLS model is employed to examine why some firms do employ more than one pay consultant. As reported in Table V (Column 1, 2 and 3), both firm size and risk are positively and significantly related to the number of pay consultants employed by a firm. These results provide some evidence that large risky firms tend to use more than one pay consultants. Consistent with Bender's (2008) finding, large firm can afford using multiple consultants to advise the management team and remuneration committee separately, or to advise on a different aspect of pay. More than one pay consultant may also be needed to design the executives' pay in firms facing complex operating and information environment. The pay design for the CEO of large risky firms tends to be more complex due to greater use of equity-linked pay.

The pooled OLS model in Eq. (1) is also adopted to test the second hypothesis about the effect of competition among the pay consultants on the CEO pay. $PayCon_{jt}$ is replaced with $ConShare_{jt}$ that represents the market share of pay consultant used by firm j at time t . Because there is a need to match a firm-year with a consultant, only the firm-years with one consultant (i.e. 311 observations) are considered. The firm-years with multiple consultants are excluded because it is almost impossible to determine the consultant with the greatest influence over the firm-year's CEO pay.

Table VI reports the regression results for pooled OLS regressions. Consistent with the second hypothesis, consultant with greater market share is associated with higher client firm's CEO pay. The managerial power theory implies that a pay consultant has a strong incentive to serve the interest of its client firm's CEO in order to retain its consulting business with the client firm. The probability of losing business with the client firm is greater for the pay consultant if it does not act in favour of the

CEO. It is thus sensible for the consultant advising towards higher pay for the client firm's CEO in order to maintain or increase its market share.

(Insert Table VI Here)

If the consultant competes by way of advising towards greater pay for the client firm's CEO, it is unsurprising to observe that successful consultant (i.e. consultants with greater market share) tend to associate with greater pay for the client firm's CEO. It is thus reasonable to expect that New Bridge Street Consultants, Towers Perrin, Mercer, Monks, Watson Wyatt and Deloitte have become the big six pay consultants as a result of their advices towards relatively higher pay for their client firms' CEO. The empirical evidence provided here seems supporting this argument.

Consistent with prior studies, CEO pay is also found positively related to sales. Positive and significant pay-sales coefficient is indeed a stylised fact in the directors' pay literature (Core et al., 1999; Conyon and Murphy, 2000; Almazan et al., 2005; Brick et al., 2006; Ozkan, 2007). Larger firms reward CEOs with higher pay because of their demand for higher quality managerial talent (Core et al., 1999). Alternatively, it can be argued that large firms which tend to reward their CEOs with higher pay may choose to employ pay consultant with greater market share or reputation. This argument is valid but after considering firm size (as reported in Table VII), the marginal effect of the consultant's market share remains statistically significant¹⁵.

CEO pay is also positively related to board size. This is consistent with the argument that a larger board is less effective and more susceptible to the influence of the CEO due to greater problems with coordination, communication and decision-

¹⁵ As mentioned earlier, sales are commonly adopted in recent studies to proxy for firm size (Brick et al., 2006; Ozkan, 2007; Bizjak et al., 2008; Liu and Stark, 2008). There has been no change in the results when total asset is used as proxy for firm size.

making (Core et al., 1999; Ozkan, 2007). Consistent with Ozkan's (2007) finding, the outside directors do not seem to perform a disciplinary function in monitoring (i.e. lowering) CEO pay. CEO tenure is also positively related to CEO pay. CEO with longer tenure is rewarded with higher pay probably for possessing greater human capital (Perry and Zenner, 2001; Brick et al., 2006; Conyon et al., 2006).

4.3. *Additional tests and robustness checks*

(Insert Table VII Here)

A further analysis is performed in this section to isolate the effect of each of the big six consultants on the client firm's CEO pay. After considering firm size, the results in Table VII suggest that the New Bridge Street and its US rival, Towers Perrin, have significantly contributed to the upward ratcheting of the overall level of CEO pay. It shows that they are competing closely for the largest market share by advising towards higher pay for their client's CEO. The results are consistent with a media survey:

“...there is a clear link between companies with controversial remuneration practices and their pay consultants...A recent survey found that, together with its larger US rival Towers Perrin, New Bridge had effectively cornered the market...” The Mail on Sunday (Feb 6, 2005)

As part of the regression diagnostics, the Breusch-Pagan/Cook-Weisberg test is used to test for heteroskedasticity. The null hypothesis of constant variance cannot be

rejected. The result of Ramsey regression-specification error test cannot reject the null hypothesis that the regression model has no omitted variable bias. The variance inflation factor (VIF) of each of the independent variables is much less than 10^{16} indicating the absence of serious multicollinearity problem.

5. Conclusions

Pay consultant is seen as central to the CEO pay governance, yet it is currently understudied worldwide. The question on how this governance mechanism influences CEO pay outcomes remains largely unanswered. Bender's (2008) survey finds that pay consultants are regarded as experts and pay data providers as well as legitimising the remuneration committee's decisions. But there is a widespread belief that the pay consultant is not totally independent from the influence of the firm executives (Crystal, 1991; Bender, 2008; Bebchuk and Fried, 2005). Using a one-year cross-sectional data, Conyon et al., (2006) find that firms using consultant pay CEO more than firms without one.

In response to the recent institutional concern, I re-examine the role of the pay consultant in influencing the CEO pay outcomes by using a larger cross-sectional time series dataset. About 55.6% of the 700 firm-years I observed use multiple consultants. The number of pay consultants employed varies across firm-years from one to eight. Bender's (2008) survey indicates that firms use multiple consultants to advise the management team and the remuneration committee separately. Multiple consultants is also used for different consultant specialises in different aspect of pay. But the

¹⁶ If the VIF of a variable exceeds 10, which will happen if R^2 exceeds 0.90, that variable is said to be highly collinear (Gujarati, 2003).

characters of firms that use multiple consultants remain unknown. By employing pooled Ordinary Least Squares (OLS) and cross-sectional time series regressions, I find that the use of multiple pay consultants is common among large risky firms.

Interestingly, I present some empirical evidence that the competition among pay consultants has resulted in an upward ratcheting of the overall level of CEO pay. This is evident for the consultants competing for the largest market share (i.e. New Bridge Street Consultants and Towers Perrin). This is the first study that isolates the effect of leading pay consultants on the client firm's CEO pay. These consultants compete by advising towards higher pay for their client firm's CEO. This argument is reasonable from the managerial power theory whereby the client firm's CEO is perceived as having the power to appoint the consultant. By advising towards higher pay for the CEO, the consultant reduces the risk of losing its business with the client firm.

The findings of this paper pose some doubts that the use of pay consultant in the executive pay setting is a step towards promoting the shareholders' interest. There seems a need to closely monitor the pay consultants themselves if the shareholders' interest is to be continuously protected. Because pay consultants are central to the executive pay setting, I reckon that it is important for future research to examine the mechanisms that can be deployed to govern the pay consultants.

References

Almazan, A., Hartzell, J. C. and Starks, L. T. (2005), "Active institutional shareholders and costs of monitoring: Evidence from executive compensation", *Financial Management*, Vol. 34 No. 4, pp. 5-34.

Baltagi, B. H. (2005), *Econometric Analysis of Panel Data*, John Wiley & Sons, England.

Bebchuk, L. and Fried, J. (2003), "Executive compensation as an agency problem", *Journal of Economic Perspectives*, Vol. 17 No. 3, pp. 71-92.

Bebchuk, L. and Fried, J. (2005), *Pay without performance: The unfulfilled promise of executive compensation*, Harvard University Press, England.

Bender, R. (2008), "Paying for advice: The role of remuneration consultant in the UK listed companies, 2008 British Accounting Association (BAA) conference paper.

Bertrand, M. and Mullainathan, S. (2000), "Agents with and without principals", *The American Economic Review*, Vol. 90 No. 2, pp. 203-208.

Bizjak, J. M., Lemmon, M. L. and Naveen, L. (2008), "Does the use of peer groups contribute to higher pay and less efficient compensation?", *Journal of Financial Economics*, forthcoming.

Bonet, R. and Conyon, M. J. (2005), "Compensation committees and executive compensation: Evidence from publicly traded UK firms", in Keasey, K., Thompson, S. and Wright, M. (Ed.), *Corporate Governance: Accountability, Enterprise and International Comparisons*, John Wiley & Sons, England, pp. 137-153.

Breusch, T. S., and A. R. Pagan, 1980, "The Lagrange Multiplier Test and its Applications to Model Specification in Econometrics", *Review of Economic Studies* Vol. 47, pp. 239-253.

Brick, I. E., Palmon, O. and Wald, J. K. (2006), "CEO compensation, director compensation and firm performance: Evidence of cronyism?", *Journal of Corporate Finance*, Vol. 12 No. 3, pp. 403-423.

Buffett, W. (2004), letter to shareholders of Berkshire Hathaway, Inc., included in the Annual Report to the Shareholders of Berkshire Hathaway Inc., February 2004, 8; <http://www.berkshirehathaway.com/letters/2003ltr.pdf>

Combined Code, 1998, 2003, 2006, The Combined Code on Corporate Governance, Financial Reporting Council, London.

Conyon, M. J. and Core, J. E. and Guay, W. R. (2006), “How high is US CEO pay? A comparison with UK CEO pay”, SSRN working paper.

Conyon, M. J. and Murphy, K. J. (2000), “The prince and the pauper? CEO pay in the United States and United Kingdom”, *The Economic Journal* Vol. 110 No. 467, pp. F640-F671.

Conyon M. J. and Peck, S. I. (1998), “Board control, remuneration committees and top management compensation”, *Academy Management Journal* Vol. 41 No. 2, pp. 146-157.

Conyon, M. J., Peck, S. I. and Sadler, G. V. (2006), Compensation consultants and executive pay, Wharton School working paper.

Conyon M. J. and Sadler, G. V. (2001), “Executive pay, tournaments and corporate performance in UK firms”, *International Journal of Management Reviews* Vol. 3 No.2, pp. 141-168.

Core, J. E., Holthausen, R. W. and Larcker, D. F. (1999), “Corporate governance, chief executive officer compensation and firm performance”, *Journal of Financial Economics* Vol. 51 No. 3, pp. 371-406.

Crystal, G. S. (1991), “Why CEO compensation is so high”, *California Management Review* Vol. 34, pp. 9-29.

Directors’ Remuneration Report Regulations (2002), Statutory Instrument 2002, No. 1986, HMSO, London.

Garen, J. E. (1994), “Executive compensation and principal-agent theory”, *Journal of Political Economy* Vol. 102 No. 6, pp. 1175-1199.

Gujarati, D. N. (2003), *Basic Econometrics*, McGraw Hill, New York.

Hall, B. J. and Liebman, J. B. (1998), "Are CEOs really paid like bureaucrats?", *Quarterly Journal of Economics* Vol. 113 No. 3, pp. 653-691.

Hausman, J. A., 1978, "Specification Tests in Econometrics", *Econometrica* Vol. 46, pp. 1251-1271.

Hermalin, B. E. and Wallace, N. E. (2001), "Firm performance and executive compensation in the savings and loan industry", *Journal of Financial Economics* Vol. 61 No. 1, pp. 139-170.

Jensen, M. C. and Meckling, W. H. (1976), "Theory of the firm: Managerial behaviour, agency costs and ownership structure", *Journal of Financial Economics* Vol. 3 No. 4, pp. 305-360.

Jensen, M. C. and Murphy, K. J. (1990), "Performance pay and top management incentives", *Journal of Political Economy* Vol. 98 No. 2, pp. 225-64.

Jensen, M. C. and Murphy, K. J. and Wruck, E. G. (2004), "Remuneration: Where we've been, how we got to here, what are the problems and how to fix them", Harvard NOM working paper; ECGI - Finance working paper.

Liu, L. S. and Stark, A. W. (2008), "Relative performance evaluation in board cash compensation: UK empirical evidence", *British Accounting Review*, forthcoming.

Newman, H. A. and Mozes, H. A. (1999), "Does the composition of the compensation committee influence CEO compensation practices?", *Financial Management* Vol. 28 No. 3, pp. 41-53.

Ortiz-Molina, H. (2007), "Executive compensation and capital structure: The effects of convertible debt and straight debt on CEO pay", *Journal of Accounting and Economics* Vol. 43 No. 1, pp. 69-93.

Ozkan, N. (2007), "CEO compensation, performance and corporate governance: An empirical investigation of UK Panel Data", 2007 European Financial Management Association (EFMA) conference paper.

Perry, T. and Zenner, M. (2001), "Pay for performance? Government regulation and the structure of compensation contracts", *Journal of Financial Economics* Vol. 62 No. 3, pp. 453-488.

Stathopoulos, K., Espenlaub, S. and Walker, M. (2004), "UK executive compensation practices: New economy versus old economy", *Journal of Management Accounting Research* Vol. 16 No. 1, pp. 57-92.

Tosi, H. L., Werner, S., Katz, J. P. and Gomez-Mejia, L. R. (2000), "How much does performance matter? A meta-analysis of CEO pay studies", *Journal of Management* Vol. 26 No. 2, pp. 301-340.

Veld, C. (2003), "Analysis of a practical formula for the valuation of employee stock options", *Applied Economics Letters* Vol. 10, pp. 205-208.

Yermack, D. (1995), "Do corporations award stock options effectively?", *Journal of Financial Economics* Vol. 39 No. 2-3, pp. 237-269.

Table I. Characteristics of Sample Companies

The sampling begins with a database on CEO pay for 181 FTSE350 firms. Seven firms did not disclose whether or not they employ pay consultant and are eliminated from the sample. The final sample is thus made up of 175 companies. The non-disclosure of the name or number of pay consultant is found common prior to 2002. Firms are required to disclose the name of entity that provides advice, or service, that had materially assisted in the executive pay setting only beginning the financial year ended on or after 31st December 2002 with the introduction of Directors' Remuneration Report Regulations 2002. 700 firm-years (175 firms over 2003-2006 periods) have complied with the requirement and thus have been considered in the final sample. Firms are classified according to the Primary Standard Industrial Classification (SIC) Code that reflects the firms' main business activity. The codes are obtained from the Financial Analysis Made Easy (FAME) database.

<i>Panel A. Sample Selection</i>	
Non-financial firms appeared as FTSE350, for at least 4 times consecutively, from 1999 to 2006:	
- 8 times	109
- 7 times	17
- 6 times	51
- 5 times	28
- 4 times	46
	251
Firms with data unavailable, at least in one year, due to:	
- takeover/delisted	(53)
- new/not yet listed in at least one year	(9)
- compensation not disclosed	(1)
- annual report is not accessible	(7)
	181
Firms did not disclosed whether or not employing pay consultant	(6)
	175

<i>Panel B. Industry Classification</i>			
Industry	SIC Code (2003)	Number of Firm	Percentage
Mining	1110-1450	10	6%
Manufacturing	1551-3663	68	39%
Construction	4521	16	9%
Wholesale and Retail	5010-5552	19	11%
Transportation and Communication	6021-6420	20	11%
Utilities	4011-4100	9	5%
Other	7011-9301	33	19%
Total		175	100%
Firm-year observation (2003-2006)		700	

Table II. Variables Definitions and Descriptions

Variable Name	Definitions and Descriptions
<i>Pay Variable</i>	
CEO Pay	The sum of salary, annual bonus paid in cash, benefit, defined-benefit pension increment, the value of restricted stock grant and stock option grant.
<i>Firm Performance</i>	
Shareholder Return	The natural logarithm of one-year change of return index of firm j for year t and $t-1$. Among many others, shareholder return is employed in Hall and Liebman (1998), Core et al. (1999), Perry and Zenner (2001) and Brick et al. (2006).
<i>Firm Characteristics</i>	
Size	The natural logarithm of sales for year t for firm j (Brick et al., 2006).
Leverage	The ratio of book value of total debt to book value of total asset (Yermack, 1995; Almazan et al., 2005; Brick et al., 2006). Book and market leverage will give similar result (Ortiz-Molina, 2007).
Risk	Stock return volatility; the standard deviation of annualised monthly stock return over prior 120-month or shorter (i.e. throughout the firm's life). Standard deviation of return is employed in Core et al. (1999).
<i>Governance Variables</i>	
Pay Consultant	The natural logarithm of the number of pay consultants used
Pay Consultant's Market Share	The number of pay consulting contracts it has secured divided by the total number of pay consulting contracts in the market. The estimated market share is also multiplied by the client firm's sales. The big six consultants are also identified by using dummy variable.
Board	The natural logarithm of total number of directors on the board (Core et al., 1999).
Outside Directors	Number of non-executive directors divided by the number of executive directors.
Remuneration Committee (Remco)	The natural logarithm of total number of remco members (Bonet and Conyon, 2005).
Blockholders	The natural logarithm of total number of outside blockholders (Core et al., 1999; Ozkan, 2007).

Table II. Variables Definitions and Descriptions (cont'd)

Variable Name	Definitions and Descriptions
Institutional Ownership	Percentage of total institutional ownership that is greater than three per cent (Almazan et al., 2005; Ozkan, 2007).
CEO Ownership	The percentage of the firm j common stock owned by CEO (Brick et al., 2006).
CEO is chairman	A dummy variable that equals one if the CEO is also the chair of the Board and zero otherwise (Conyon and Peck, 1998; Core et al., 1999; Brick et al., 2006).
<i>CEO Characteristics</i>	
Age	The natural logarithm of the CEO age for year t of firm j . CEO age is employed in Garen (1994) and Conyon and Murphy (2000).
Tenure	The natural logarithm of the number of years of the CEO has held the position of CEO at firm j (Perry and Zenner, 2001).

Table III. Descriptive Statistics

Table III reports the descriptive statistics for the sample. It shows the statistics for the full sample of 700 firm-years (175 public listed firms during 2003-2006 periods). CEO pay is the sum of salary, annual bonus paid in cash, benefit, defined-benefit pension increment, the value of restricted stock grant and stock option grant. Shareholder return is measured by the natural logarithm of one-year change of return index of firm j for year t and $t-1$. Sales are the dollar value of annual sales. Leverage is measured by the ratio of book value of total debt to book value of total asset. The stock return volatility is the standard deviation of annualised monthly stock return over prior 120-month or shorter (throughout the firm life). Pay consultant is the external entity that provides advice, or service in executive pay setting of firm j . BOD (Remco) size is measured by the total number of directors on the Board (Remco). Institutional and blockholders are those owing more than three per cent of the firm j shares. CEO ownership is the percentage of the firm j common stock owned by CEO. CEO tenure is the number of years of the CEO has held the position of CEO at firm j . The consultant's market share is the number of pay consulting contracts it has secured divided by the total number of pay consulting contracts available in the market.

	Obs	Mean	Median	Min	Max	Std Dev
CEO Pay (£000)	700	1,938	1,403	149	22,792	1,854
Shareholder Return (Current)	700	0.14	0.17	-2.29	1.03	0.29
Shareholder Return (Lagged)	700	0.07	0.13	-2.29	1.03	0.36
Sales (£mil)	700	4,045	1,331	20	155,000	11,900
Leverage	700	0.27	0.26	0.00	1.18	0.17
Volatility	700	0.33	0.32	0.01	0.94	0.12
No. of Pay Consultants	700	2	2	1	8	1
BOD size	700	10	10	5	21	2
BOD Nonexec/Exec Members	700	2	1	0	8	1
Remco Size	700	4	4	2	8	1
No. of Outside Blockholders	700	4	4	0	13	2
Institutional Ownership (%)	700	0.27	0.21	0.00	34.14	1.29
CEO Ownership (%)	700	0.01	0.00	0.00	0.36	0.04
CEO Age	700	53	54	31	69	6
CEO Tenure	700	6	4	1	34	6
Pay Consultant's Market Share (%)	313	0.09	0.08	0.00	0.18	0.07

Table IV. The Effect of Multiple Pay Consultants on CEO Pay

Table IV reports the regression results for pooled OLS (Column 1 and 2) and random effects regressions (Column 3 and 4). The dependent variable is CEO total pay, expressed in the natural logarithm of its value. Shareholder return is the natural logarithm of one-year change of return index of firm j for year t and $t-1$. Leverage is the ratio of book value of total debt to book value of total asset. The stock return volatility is the standard deviation of annualised monthly stock return over prior 120-month or shorter (throughout the firm life). Pay consultant is the external entity that provides advice, or service in executive pay setting of firm j . BOD (Remco) size is measured by the natural logarithm of total directors on the Board (Remco). Institutional and blockholders own more than three per cent of firm j shares. CEO ownership is the percentage of the firm j common stock owned by CEO. Sales, CEO age and the number of years of the CEO has held the position of CEO at firm j , are expressed in the natural logarithm of their values. Standard errors are in parentheses.

Independent Variables	(1)	(2)	(3)	(4)
Intercept	3.375*** (0.35)	3.087*** (1.00)	3.618*** (0.41)	3.576*** (1.22)
Number of Pay Consultant	0.077 (0.06)	0.061 (0.06)	0.046 (0.06)	0.040 (0.06)
SHR (Current)	0.268*** (0.10)	0.283*** (0.09)	0.217** (0.09)	0.239*** (0.09)
SHR (Lagged)	0.041 (0.08)	0.012 (0.08)	-0.017 (0.08)	-0.026 (0.08)
Sales	0.265*** (0.02)	0.174*** (0.03)	0.248*** (0.03)	0.171*** (0.03)
Leverage		0.018 (0.14)		0.066 (0.21)
Risk/Volatility		-0.279 (0.24)		-0.102 (0.33)
Board Size		0.789*** (0.14)		0.751*** (0.15)
Outside Directors		0.073 (0.03)		0.025 (0.03)
Remco Size		0.034 (0.10)		0.053 (0.12)
Number of Blockholders		-0.047 (0.05)		-0.073 (0.06)
Institutional Ownership		-0.012** (0.01)		-0.008 (0.02)
CEO Ownership		-0.460 (0.57)		-0.954 (1.07)
CEO is Chairman		-0.458*** (0.12)		-0.398*** (0.13)
CEO Age		-0.082 (0.25)		-0.167 (0.30)
CEO Tenure		0.098*** (0.03)		0.111*** (0.03)
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	No	No
Number of Observations	700	700	700	700
Adjusted R^2	0.218	0.302	0.199	0.292

F Test on equal intercepts ($H_0: u_j = 0$)		
OLS v. Fixed Effect		
F statistic	3.690	3.020
(<i>p</i> -value)	(0.00)	(0.00)
Breusch and Pagan LM Test ($H_0: \text{var}(u) = 0$)		
OLS v. Random Effect		
LM	171.420	106.490
(<i>p</i> -value)	(0.00)	(0.00)
Hausman Specification Test:		
Fixed v. Random Effect		
Hausman statistic	0.840	18.500
(<i>p</i> -value)	(1.00)	(0.42)

***Significant at the 0.01 level; **Significant at the 0.05 level; *Significant at the 0.10 level.

Table V. The Determinant of the Use of Multiple Pay Consultants

Table V reports the regression results for pooled OLS (Column 1 and 2) and random effects regressions (Column 3 and 4). The dependent variable is number of pay consultant, expressed in its natural logarithm. Pay consultant is the external entity that provides advice, or service in executive pay setting of firm j . Shareholder return is the natural logarithm of one-year change of return index of firm j for year t and $t-1$. Leverage is the ratio of book value of total debt to book value of total asset. The stock return volatility is the standard deviation of annualised monthly stock return over prior 120-month or shorter (throughout the firm life). BOD (Remco) size is measured by the natural logarithm of total directors on the Board (Remco). Institutional and blockholders own more than three per cent of firm j shares. CEO ownership is the percentage of the firm j common stock owned by CEO. Sales, CEO age and the number of years of the CEO has held the position of CEO at firm j , are expressed in the natural logarithm of their values. Standard errors are in parentheses.

Independent Variables	(1)	(2)	(3)	(4)
Intercept	-0.999*** (0.21)	-2.073*** (0.69)	-1.234*** (0.32)	0.547 (1.62)
SHR (Current)	-0.199*** (0.06)	-0.176*** (0.06)	-0.072 (0.05)	-0.058 (0.05)
SHR (Lagged)	-0.167*** (0.06)	-0.162*** (0.06)	-0.035 (0.04)	-0.013 (0.05)
Sales	0.092*** (0.01)	0.060*** (0.02)	0.099*** (0.02)	0.073 (0.07)
Risk/Volatility	0.916*** (0.16)	0.895*** (0.16)	1.000*** (0.26)	1.389 (1.04)
Leverage		0.096 (0.13)		0.189 (0.19)
Board Size		0.056 (0.09)		-0.019 (0.14)
Outside Directors		0.027 (0.02)		-0.006 (0.03)
Remco Size		0.232*** (0.08)		0.027 (0.09)
Number of Blockholders		-0.067 (0.04)		0.010 (0.05)
Institutional Ownership		-0.014*** (0.00)		-0.019** (0.01)
CEO Ownership		-0.712** (0.36)		-0.037 (1.04)
CEO is Chairman		0.013 (0.06)		0.009 (0.08)
CEO Age		0.283 (0.17)		-0.405 (0.30)
CEO Tenure		-0.049** (0.02)		0.009 (0.02)
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	No	No
Number of Observations	700	700	700	700
Adjusted R^2	0.152	0.176	0.112	0.066

F Test on equal intercepts ($H_0: u_j = 0$)

OLS v. Fixed Effect		
F statistic	6.900	6.480
(<i>p</i> -value)	(0.00)	(0.00)
Breusch and Pagan LM Test ($H_0: \text{var}(u) = 0$)		
OLS v. Random Effect		
LM	369.790	330.890
(<i>p</i> -value)	(0.00)	(0.00)
Hausman Specification Test:		
Fixed v. Random Effect		
Hausman statistic	4.310	299.640
(<i>p</i> -value)	(0.74)	(0.00)

***Significant at the 0.01 level; **Significant at the 0.05 level; *Significant at the 0.10 level.

Table VI. The Effect of Competition Among Pay Consultants on CEO Pay

The dependent variable is CEO total pay, expressed in the natural logarithm of its value. The consultant's market share for Column 1 and 2 is the number of pay consulting contracts it has secured divided by the total number of pay consulting contracts available in the market. For Column 3 and 4, the estimated market share is multiplied by the client firm's sales. Shareholder return is the natural logarithm of one-year change of return index of firm j for year t and $t-1$. Leverage is the ratio of book value of total debt to book value of total asset. The stock return volatility is the standard deviation of annualised monthly stock return over prior 120-month or shorter (throughout the firm life). BOD (Remco) size is measured by the natural logarithm of total directors on the Board (Remco). Institutional and blockholders own more than three per cent of firm j shares. CEO ownership is the percentage of the firm j common stock owned by CEO. Sales, CEO age and the number of years of the CEO has held the position of CEO at firm j , are expressed in the natural logarithm of their values. Standard errors are in parentheses.

Independent Variables	(1)	(2)	(3)	(4)
Intercept	4.572*** (0.52)	2.217* (1.15)	4.702*** (0.51)	2.371** (1.16)
Consultant's Market Share	0.046*** (0.01)	0.041*** (0.01)	0.054*** (0.01)	0.047*** (0.01)
SHR (Current)	0.083 (0.14)	0.123 (0.14)	0.077 (0.14)	0.116 (0.13)
SHR (Lagged)	0.076 (0.12)	0.065 (0.12)	0.070 (0.12)	0.063 (0.12)
Sales	0.183*** (0.03)	0.104*** (0.03)	0.173*** (0.03)	0.099*** (0.03)
Risk/Volatility		0.061 (0.19)		0.060 (0.19)
Leverage		0.007 (0.42)		0.029 (0.42)
Board Size		0.907*** (0.14)		0.884*** (0.14)
Outside Directors		0.116*** (0.03)		0.117*** (0.03)
Remco Size		-0.160 (0.13)		-0.162 (0.13)
Number of Blockholders		0.025 (0.06)		0.029 (0.06)
Institutional Ownership		-0.006 (0.01)		-0.005 (0.01)
CEO Ownership		-0.600 (0.67)		-0.584 (0.66)
CEO is Chairman		-0.215 (0.19)		-0.214 (0.18)
CEO Age		0.370 (0.27)		0.357 (0.27)
CEO Tenure		0.062* (0.03)		0.064* (0.03)
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes

Number of Observations	311	311	311	311
Adjusted R^2	0.212	0.333	0.226	0.343
Breusch-Pagan/Cook-Weisberg Test for Heteroskedasticity (H_0 : constant variance)				
chi2		0.440		0.470
(p-value)		(0.51)		(0.49)
Ramsey Regression-Specification Error Test (H_0 : model has no omitted variable bias)				
F statistic		1.910		1.680
(p-value)		(0.13)		(0.17)
Variance Inflation Factors (VIF)		2.03		2.03

***Significant at the 0.01 level; **Significant at the 0.05 level; *Significant at the 0.10 level.

Table VII. The Effect of the Big Six Consultants on CEO Pay

The dependent variable is CEO total pay, expressed in the natural logarithm of its value. The big six consultants are ranked based on their market shares and then identified using dummy variable. The consultant's market share for Column 1 is the number of pay consulting contracts it has secured divided by the total number of pay consulting contracts available in the market. For Column 2, the estimated market share is multiplied by the client firm's sales. Shareholder return is the natural logarithm of one-year change of return index of firm j for year t and $t-1$. Leverage is the ratio of book value of total debt to book value of total asset. The stock return volatility is the standard deviation of annualised monthly stock return over prior 120-month or shorter (throughout the firm life). BOD (Remco) size is measured by the natural logarithm of total directors on the Board (Remco). Institutional and blockholders own more than three per cent of firm j shares. CEO ownership is the percentage of the firm j common stock owned by CEO. Sales, CEO age and the number of years of the CEO has held the position of CEO at firm j , are expressed in the natural logarithm of their values. Standard errors are in parentheses.

Independent Variables	(1)	(2)
Intercept	2.881** (1.25)	2.833** (1.25)
SHR (Current)	0.152 (0.14)	0.153 (0.14)
SHR (Lagged)	0.086 (0.13)	0.088 (0.13)
New Bridge Street	0.147* (0.09)	0.149* (0.09)
Towers Perrin	0.491*** (0.12)	0.488*** (0.12)
Mercer	-0.074 (0.14)	0.140 (0.12)
Monks	0.132 (0.12)	-0.116 (0.14)
Watson Wyatt	0.032 (0.11)	0.035 (0.11)
Deloitte	0.064 (0.13)	0.067 (0.13)
Sales	0.102*** (0.03)	0.099*** (0.03)
Risk/Volatility	0.187 (0.20)	0.173 (0.20)
Leverage	-0.062 (0.42)	-0.039 (0.42)
Board Size	0.776*** (0.14)	0.790*** (0.14)
Outside Directors	0.118*** (0.04)	0.119*** (0.04)
Remco Size	-0.163 (0.14)	-0.174 (0.14)
Number of Blockholders	0.040 (0.06)	0.036 (0.06)
Institutional Ownership	-0.003	-0.003

	(0.01)	(0.01)
CEO Ownership	-0.282	-(0.34)
	(0.68)	(0.67)
CEO is Chairman	-0.276	-(0.27)
	(0.18)	(0.18)
CEO Age	0.167	(0.19)
	(0.30)	(0.30)
CEO Tenure	0.084**	(0.08)**
	(0.04)	(0.04)
Year Dummies	Yes	Yes
Industry Dummies	Yes	Yes
Number of Observations	311	311
Adjusted R^2	0.363	0.365
Breusch-Pagan/Cook-Weisberg Test for Heteroskedasticity (H_0 : constant variance)		
chi2	0.450	0.580
(p -value)	(0.50)	(0.45)
Ramsey Regression-Specification Error Test (H_0 : model has no omitted variable bias)		
F statistic	0.790	0.780
(p -value)	(0.50)	(0.51)
Variance Inflation Factors (VIF)	2.01	2.01

***Significant at the 0.01 level; **Significant at the 0.05 level; *Significant at the 0.10 level.

Figure 1. Pay Consultants Used by Large Publicly Traded UK Firms (2003-2006)

Figure 1 shows two pie charts describing the pay consultants used by the 700 firm-years (175 FTSE350 firms during 2003-2006 periods). Chart 1 reports the frequency distribution of consultants used and Chart 2 reports the six largest pay consultants used by the firm-years. The market shares in Chart 2 are derived based on the total pay consulting contracts offered during 2003-2006 periods, which is greater than the total firm-year observations. This is sensible because more than half of the firm-years employ more than one pay consultant.

Chart 1. Number of Compensation Consultants

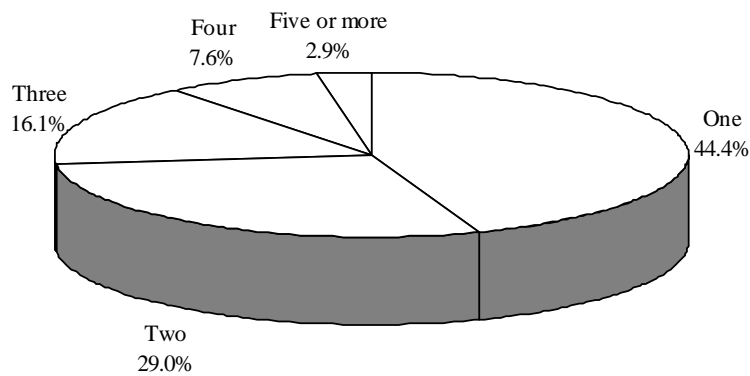
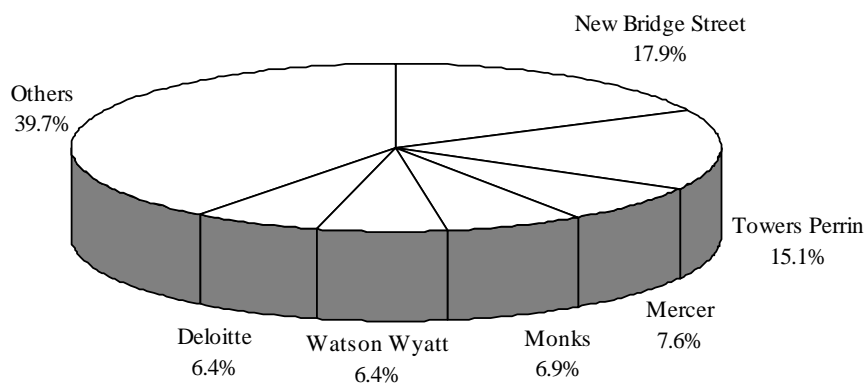


Chart 2. The Big Six Compensation Consultants



Appendix A: The Value of Stock Option

The Black-Scholes-Merton value of stock option granted, V_{jo} , as normally adopted in prior studies is given as the price of a European call option on a dividend-paying stock:

$$V_{jo}(t) = Q_j \left[V_j e^{-d_j \tau} N(z_1) - X e^{-r_f \tau} N(z_2) \right]$$

$$\text{where } z_1 = \frac{\ln(V_j / X) + (r_f - d_j + \sigma_j^2 / 2)\tau}{\sigma_j \sqrt{\tau}}$$

$$z_2 = z_1 - \sigma_j \sqrt{\tau}$$

where

N = cumulative probability function for normal distribution

Q_j = number of shares in firm j covered by award

X = exercise price

V_j = price of underlying stock

τ = time to expiration (its maturity date, T minus t); for newly granted stock option, the longest maturity is ten years (Yermack, 1995; Stathopoulos et al., 2004).

r_f = $\ln(1 + \text{risk-free rate})$; risk free rate for the 10-year UK-government issues; ten-year is of equal length to the longest estimated stock option life, which is adopted in Yermack (1995).

d_j = expected dividend rate over life of option; $\ln(1 + \text{expected dividend yield})$; it is estimated based on the dividend yield at t following the approach of many studies (Yermack, 1995).

σ_j = expected stock return volatility over life of option, which is approximately ten-year for newly issued granted stock option; historical volatility as commonly used in prior studies.