

Does Corporate Governance Matter in Determining CEO Compensation in the Publicly Listed Companies in New Zealand?

Sazali Abidin*, Krishna Reddy*¹, Linjuan You*

* Department of Finance, Waikato Management School, University of Waikato, Hamilton, New Zealand

This study investigates the relationship between Chief Executive Officers' (CEOs) cash compensation and corporate governance practices of publicly listed companies during the period 2005 to 2010. The ownership structure and board structure are the two important corporate governance monitoring mechanisms relating to CEO compensation. After controlling for size, performance, industry and year effects, we report that internal but not external features of corporate governance practices influence CEO compensation. Companies with CEO on boards pay more to their CEOs, suggesting CEOs in boards have power to influence board decisions and therefore, boards become less effective in monitoring CEO compensation in New Zealand context. Companies that pay their directors more tends to reward their CEOs more as well, thus supporting managerial entrenchment hypothesis. Although the proportion of independent directors on boards does not significantly influence CEO compensation, it does indicate that outside directors are passive and are not more effective than insiders when it comes to the oversight and supervision of CEOs compensation. In New Zealand, proportion of institutional and/or block shareholders are positively associated with CEO compensation and negatively associated with company performance, suggesting that it is not an effective mechanism in monitoring CEOs compensation. Our findings confirm findings of prior studies that geographical location of institutions makes them ineffective in monitoring managerial decisions; therefore they tend to focus on decisions that benefit them on short term basis.

JEL Classification: G11, and G15

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¹ Corresponding author: Krishna Reddy, Department of Finance, Waikato Management School, The University of Waikato, Private Bag 3105, Hamilton 3240, New Zealand, Tel: +(647) 838-4916, Fax: +(647) 838-4331, Email: krishna@waikato.ac.nz

The Relationship between Corporate Governance Practices and CEO Compensation in the Publicly Listed Companies in New Zealand

Introduction

Chief executive officers' (CEOs) compensation over the last two decades or so has come under an increased level of scrutiny by the academia, general public, policymakers and the shareholders, especially regarding its magnitude and design mechanisms. International evidence provide support to the view that CEOs compensation has not only increased considerably over the years (Murphy, 1998) but they are paid differently as well, in terms of cash, stocks and stock options² (Core, Guay, & Larcker, 2003; Denis, 2001; Murphy, 1999). Concerns being raised whether the rise in CEOs compensation is the result of manipulation and self-dealing (Bebchuk & Fried, 2004). Some argue that large pay packets are the result of optimal contracting in a competitive market for managerial talent (Fama, 1980; Gabaix & Hribar, 2008; Himmelberg & Hubbard, 2000; Hubbard, 2005; Rajan & Wolf, 2006; Rosen, 1990), while others argue that it is the outcome of the powerful CEOs setting their own pay (Bebchuk & Fried, 2003, 2004; Fama, 1980; Fama & Jensen, 1983a; Hall & Murphy, 2003; Jensen, 1983) and therefore, are extracting rents.

Evidence from the US³, UK⁴ and as well as New Zealand⁵ provide support to the extracting rent argument that some are performing such activities with an intention of camouflaging it (Bebchuk, Fried, & Walker, 2001). It is not clear whether the companies that are rewarding CEOs for poor performance are just few bad cases or this is just a tip of the iceberg and worse is yet to be discovered. Some view the vast increases in CEOs compensation is the

² Granting stock and stock options do not require outlay of cash by the company, thus provide a way for cash-constrained companies to compete for managerial talent as well. In addition, stock and option grants have added advantage as they are treated as deferred compensation, providing both the executive and the company with timing advantages for taxation purposes (Denis, 2001)

³ Top five executives of CEO of Enron between 1996 and 2000 was paid more than \$500 million in compensation while shareholder was declining, debt was rising and margins dwindling (Ackman, 2002). Similar situation was also discovered in WorldCom (The Special Investigative Committee of the Board of Directors of Worldcom Inc., 2008), Global Crossing (Trigaux, 2002), Countrywide Angelo Mozilo (Minow, 2012), Affiliated Computer Services Inc., Dell Inc., Eli Lilly and Company, Ford Motor Company, Home Depot Inc., Pfizer Inc., Time Warner Inc., Verizon Communications Inc., Wal-Mart Stores Inc., Abbott Laboratories, Qwest Communications International Inc., and Wyeth (The Corporate Library, 2007), and many others.

⁴ Britain's shareholder revolt against executive pay packages after an industry report revealed that FTSE 100 CEOs had a median total pay increase of 10 percent for last year, following a 13 percent hike in 2010 (Brinded, 2012). According to Madden (2012) this is hardly surprising, given that average executive pay for CEOs in the UK increased last year by 11%, while at the same time the value of FTSE 100 shares declined by an average of 6%.

⁵ CEO's salary doubles despite Telecom's \$4.7b drop in value ("Despite Telecom's \$4.7b drop in value, CEO's salary doubles," 2004).

result of the board of directors in modern corporations becoming too dependent on the CEOs rather than being dependent on the shareholders. Consequently, boards' interest misalignment have contributed to the suboptimal compensation practices, such as overcompensation (Bebchuk & Fried, 2003, 2004). In Jensen's (1983) view, quality of monitoring by the board members may have been comprised due to CEOs having greater influence over the nomination of the new directors and as a consequence, those directors are obligated to the CEOs. Fama (1980), Fama and Jensen (1983a) and Cadbury (1992) postulated that compensation decisions should be delegated to the independent directors, that is, directors who do not work for the company or have an affiliation with the officers of the company. In their view independent directors will be better at making unbiased judgement about the quality of the CEOs and as a result, efficient compensation, hiring and firing decisions will be made.

In response to the corporate scandals in the United States in 2001 countries around the world revised their corporate governance practices, some introduced mandatory rules-based regime⁶, while others opted for principles-based guidelines where companies are required to explain the reasons for not complying with the set guidelines. Irrespective of the nature of corporate governance regime adopted by the companies, focus of the corporate governance reform was mainly on strengthening the structure and operations of the boards of the publicly listed companies. The main focus of the corporate governance reform was on: (1) separation of chair and CEO positions, (2) independent directors on boards⁷, (3) separate audit, remuneration and nomination committees whose members are to be independent⁸, and (4) clear policy for setting remuneration of executives and non-executive directors⁹.

Agency theoretic literature suggests that an effective corporate governance practices may help to mitigate the agency conflicts existing between the shareholders and the managers, and hence can have an impact on the compensation policy of the companies. The mechanisms that have potential to mitigate agency conflict include ownership structure and board

⁶ United States promulgated Sarbanes-Oxley Act in 2002.

⁷ Differs between countries, some requiring majority board members should be non-executive and at least one third of the board members should be independent (New Zealand), at least three non-executive directors on publicly listed companies boards in the UK, while others requiring a majority to be independent (United States).

⁸ Depending on size of companies in some countries, having separate audit, remuneration and nomination committees may not be possible. In the US, companies are required to have all three board committees whose members are required to be independent. However, in New Zealand all companies are required to have an audit committee. The members of the audit committee should be non-executive directors and a majority of the members should be independent. At least one director should be a chartered accountant or have one recognised as one and the chairperson should be independent and not be the chairperson of the board.

⁹ Remuneration of directors and executives should be transparent, fair and reasonable.

structure; hence represent the external and internal features of corporate governance practices. However, questions that have been asked by many include: How effective are the corporate governance mechanisms in monitoring CEO compensation design? What role do large shareholders play in affecting the compensation policy? How effective are the board of directors in determining and supervising CEO compensation?

Research investigating the effectiveness of the board and the concentrated ownership in providing oversight on CEOs compensation in both, the US and the UK has reported mixed and inclusive evidence. Some argue that the effectiveness of the corporate governance mechanisms in controlling and supervising CEO compensation is not easily observable, especially when the corporate governance systems and structures are heterogeneous. This suggests that corporate governance may be specific to a country and its institutional structures.

To boost investor confidence, the New Zealand Securities Commission in 2004 promulgated nine high level principles and guidelines that are intended to contribute to high standards of corporate governance practices in New Zealand listed companies. No studies have been undertaken to date that have investigated the effectiveness of the principles and guidelines adopted by New Zealand listed companies in monitoring CEO compensation. Furthermore, block ownership is an important feature of the ownership structure of the New Zealand listed companies (Gunasekarage & Reed, 2008; Prevost, Rao, & Hossain, 2002; Reddy, Locke, & Scrimgeour, 2010) and since different block shareholders' have different geographical origin, it is not clear the role block shareholders' play in determining and monitoring CEOs compensation in New Zealand context. Also, the adoption of principles-based governance structures since 2004 would mean that the publicly listed companies in New Zealand have complied with the recommendation of having independent directors on board and therefore, the role the independent directors' play in determining and supervising CEO compensation is not well understood. Since listed companies in New Zealand were only required to disclose CEOs and directors' remuneration information after 1997 (New Zealand Parliament, 1993) and to have independent directors on board after 2004 (New Zealand Securities Commission, 2004), enough time has now elapsed to investigate how principle-based corporate governance practices influences CEO compensation in New Zealand, which is a useful complement to the UK and the US based research. Furthermore, studies relating to pay-performance sensitivity have reported inclusive results. Some reported a strong relationship between company performance and CEO compensation (Hall & Liebman, 1998; Jensen & Meckling, 1976), while others reported that CEO compensation have a weak relationship with performance

(Gregg, Machin, & Szymanski, 1993; Jensen & Murphy, 1990)¹⁰. Since New Zealand has a small and open financial market which has many small and medium size companies listed, as well as, is geographically located further away from other financial markets, we postulate that pay misalignment will be easy to detect and therefore, would be publicly reported. For this reason, we expect the relationship between pay-performance to be different to that reported in large economies with larger companies.

Furthermore, only a paucity of research exist (Andjekovic, Boyle, & McNoe, 2002; Elayan, Lau, & Meyer, 2003; Gunasekarage & Wilkinson, 2002) that investigate the relationship between CEO compensation and corporate governance practices in the New Zealand context, it will be interesting to find out whether the remuneration reporting and recent corporate governance reforms have contributed to pay-performance relationship. Therefore, this research investigates the relationship between the ownership structure, board characteristics and the CEO compensation in New Zealand context. More specifically, we focus on whether institutions and/or block shareholders play an active role in monitoring CEO compensation design and whether board characteristics are an effective mechanism in determining CEO compensation.

The rest of this study is organised as follows: Section 2 provides a brief review of the literature relating to executive compensation and corporate governance, particularly institutional/block ownership and the board of directors. Section 3 describes the research method employed and data used. Section 4 provides a discussion on the descriptive and empirical results and section 5 provides the conclusion.

Literature Review

Both, theoretical and empirical evidence provide support to the view that ownership structure and board of directors are important monitoring mechanisms of managerial behaviour. Since they incorporate both, internal and external mechanisms, they are regarded to be important determinants of CEO compensation (Core, Holthausen, & Larcker, 1999; Talmor & Wallace, 2000). Proponents of the interest alignment hypothesis argue that by giving corporate insiders (officers and directors) equity ownership in companies they manage will lead to an alignment of interest between the principals (shareholders) and the agents (managers). However, it remains to be answered both, theoretically and empirically, exactly what proportion of equity should shareholders relinquish to the managers that will motivate managers to maximise

¹⁰ Weisbach (1988) and Warner, Watts and Wruck (1988) studied whether CEOs are terminated after poor performance, whereas, Antle and Smith (1986) and Gibbons and Murphy (1990) examined whether CEOs are rewarded for the performance that is measured relative to the market or industry.

shareholder value? The findings of prior studies that have linked insider ownership to company financial performance can be grouped into three broad categories. A group reporting a positive linear relationship between insider ownership and financial performance (Elayan et al., 2003; Hossain, Prevost, & Rao, 2001; Kim, Lee, & Francis, 1988; Mehran, 1995; Oswald & Jahera Jr., 1991; Welch, 2003), thus supporting the interest alignment hypothesis. Another group reported non-monotonic relationship (Chen et al., 1993; Griffith, 1999; McConnell & Servaes, 1990; Morck, Shleifer, & Vishny, 1988; Short & Keasey, 1999), that is, confirming convergence-of-interest hypothesis at some low levels of insider ownership and an entrenchment hypothesis at higher levels of insider ownership. A third group claim that there should not be any relationship between insider ownership and financial performance (Demsetz, 1983; Demsetz & Lehn, 1985; Demsetz & Villalonga, 2001) because insider ownership is endogenously determined and therefore cannot be a determinant of company financial performance. Their argument is based on the view that competitive capital market forces ensure that every company chooses its value maximising ownership structure. Therefore, any observed correlation of ownership and financial performance is spurious. In fact, the relationship between insider ownership and financial performance might arise due to some company characteristics that are unobservable for the econometrician. Collectively, these conflicting findings suggest that the precise functional form of the insider ownership is far from being conclusive.

Many researchers have also investigated whether equity ownership by the director can reduce the agency costs. For example, Ozkan (2007) reports that lower CEO compensation is associated with higher director ownership. Sapp (2008) also report that executive compensation tends to decrease in companies where shareholding by the directors' increases. Cyert, Kang, Kumar and Shah (1997) report that CEO compensation decreases with director's ownership and Core *et al.* (1999) report that non-CEO insider ownership over 5% is significantly negatively related to CEO total compensation. Ozkan (2011) report that non-executive director ownership has a significantly negative effect on CEOs compensation levels, suggesting that non-executive directors have more incentive to monitor CEOs compensation packages when they own more shares in companies. On the other hand, Core *et al.* (1999) do not find significant relationship between percentage ownership per outside director and CEO compensation. Ozkan (2011) report that executive director ownership statistically significantly and non-linearly influence CEOs cash and total compensation.

In New Zealand, insider ownership is a relatively underdeveloped practice. However, the trend of issuing warrants and shares to senior staff is growing. The evidence that is available

(Elayan et al., 2003; Hossain et al., 2001; Reddy, Locke, Scrimgeour, & Gunasekarage, 2008a) support the view that the proportion of insider ownership in New Zealand is still less than optimal. The existence of small capital market practically eliminates the market for corporate control activities in New Zealand, thus allowing managers to shelter themselves from corporate control activities. Therefore, it is assumed that by providing managerial ownership incentives may align management interests closely with the shareholders, thus encouraging them to consume fewer perquisites and provide vigilance so that large shareholders do not expropriate outside small shareholders' interests. Furthermore, Kole (1995) suggests that in small cap companies the convergence-of-interest may hold for a larger range of insider ownership compared to large cap companies. Therefore, our first hypothesis is postulated as follows:

H1: Director Ownership will be negatively associated with CEOs compensation levels.

Institutional investors have become dominant participant in many share markets around the world. By managing large pool of funds and holding larger equity stakes in the listed companies, they have gained power to exert greater influence (if required) on corporate monitoring (Gillan & Starks, 2003). In addition, institutions have the expertise and the resources to monitor managerial action and therefore, are an important governance mechanism compared to the smaller or less-informed investors (Almazan, Hartzell, & Starks, 2005). However, evidence show that not all institutional investors are willing or able to serve this function (Almazan et al., 2005). According to Shleifer and Vishny (1986), institutional investors undertake monitoring role when the incentive of monitoring exceeds the costs undertaken. Others take little action in monitoring as they view liquidity to be more important than ownership (Coffee, 1999; Maug, 1998).

Hartzell and Starks (2003) investigated the role of institutional investors in designing and monitoring the executive compensation in the US by using data from 1914 companies for the period 1992 to 1997 and reported that institutional ownership is significantly positively related to the pay-performance sensitivity, which serves as a complementary monitoring device to incentive compensation. They also report that institutional ownership is negatively related to the level of executive compensation, which acts as a monitoring mechanism on the CEO pay levels. They also report that institutions can influence executive compensation structure through their investment preferences. Khan, Dharwadkar and Brandes (2005) investigated whether the institutional ownership concentration and dispersion influence levels of CEO compensation, pay mix, and stock option pay sensitivity. They report that the largest owner is associated with lower levels of compensation and less use of incentive

compensation, such as, stock options. They also report that institutional ownership dispersion measured by the total number of institutional investors, is associated with increased levels of compensation and greater use of incentive compensation. Bertrand and Mullainathan (2001) also report that the large shareholders provide better corporate governance practices and they are less likely to reward their CEOs for ‘luck’.

Ozkan (2007), investigated the UK case by using a sample of 414 large companies for 2003/2004 period, and reported that the level of CEOs cash compensation is significantly negatively related to institutional ownership concentration. Similar to the findings reported for the US, the UK results also suggest that institutional investors play an active role in monitoring and influencing CEOs compensation. In addition, Ozkan (2007) find that CEOs equity based compensation is influenced significantly by block ownership but not by institutional ownership. She reported that companies pay less equity based compensation when the block ownership is large. She argues that block shareholders with larger ownership provide more monitoring to reduce agency problem which reduces the need to offer the equity based incentive compensation to the CEOs. Ozkan (2011), investigated the relationship between CEO compensation and institutional ownership by using a sample of 390 UK non-financial companies for the period 1999–2005, and reported that the institutional ownership is significantly positively associated to CEO pay-performance sensitivity relating to option grants. In addition, she document that institutional and block ownership have a statistically significantly negative effect on the level of CEO cash and total compensation, which demonstrates the existence of active monitoring by both, block and institutional shareholders.

Sapp (2008), reported the findings of study involving over 400 Canadian publicly listed companies for the period 2000-2005, that the pressures from the external shareholders play a significant role in influencing executive compensation. Companies that have a controlling shareholder (including but not limited to family owners) tends to pay their CEOs less and the gap between their CEO and other executive officers tends to be narrower. He also reported that higher degree of ownership by the controlling owner is related to significantly lower levels of CEO compensation.

To the contrary, Cosh and Hughes (1997) report that the presence of major financial institutions as shareowners does not make any significant difference to either the level of executive pay or the pay-performance sensitivity in the UK. Dong and Ozkan (2008) also document that institutional investors, as a whole, make no noticeable difference in director pay and pay–performance relationship. They argue that institutional investors in UK, as a

whole, are passive and ineffective in monitoring corporate issues. Instead, they find that investment horizon of institutional investor matters in controlling director pay. After splitting the institutional investors into two groups according to their investment horizons, they report that pay-performance relationship is stronger in companies with institutional investors that have longer investment horizon and more monitoring incentives. They argue that institutional investors with long investment horizon not only restrains the director pay levels, but also enhance pay-performance relationship, while transient institutional investors with short investment horizons do not have a significant impact on pay-performance relationship. Institutions are more involved in corporate governance and serve an effective monitoring and disciplining role when they have longer investment horizons.

According to Gunasekarage and Reed (2008), in countries where market discipline mechanisms (such as market for corporate control and regulations protecting minority shareholder rights, competition) are ineffective, there is a tendency in those countries to adopt alternative mechanisms such as block holding structure. Evidence shows that blockholding is an important feature of the listed company ownership structure in New Zealand (Gunasekarage & Reed, 2008; Prevost et al., 2002; Reddy et al., 2010). Based on above, we propose our second and third hypotheses are postulated as follows:

H2: Institutional shareholding will have statistically significantly positive effect on company performance measured by Tobin's Q and ROA.

H3: Institutional/Blockholding will have statistically significantly negative effect on CEOs compensation.

Board of directors is considered to play an important role in monitoring the corporate behaviour. One of the roles of the board is to evaluate management and to ensure the manager acts in favour of the shareholders, which includes the establishment and revision of CEO compensation (Jensen, 1983). Ideally, board designs CEOs compensation packages with an aim of minimising agency costs, which require incentivising CEOs enough so that s/he gets motivated to act in shareholders' interest. Research relating to the relationship between board of director and CEO compensation have been extensive, however the results are inconclusive.

Board size is thought to be an important determinant of the board's effectiveness in fulfilling its function (Jensen, 1983). Larger board is believed to be less effective due to coordination, communication and process problems. Jensen (1983) suggests that the optimal board size for the US listed companies to function effectively is to have at least eight members. Yermack (1995) report that when board size is small, CEO's pay tends to be more sensitive to

company performance and therefore, it is more likely to fire poor performing CEOs. Petra and Dorata (2008) report that CEOs are more likely to receive lower levels of performance-based incentives when there are no more than nine members on the board. The findings of prior studies support the view that larger board size is associated with higher CEO compensation (Coakley & Iliopoulou, 2006; Core et al., 1999; Ozkan, 2007, 2011; Sapp, 2008). However, other studies report that board size is not statistically significant in determining CEO compensation. For example, Cyert *et al.* (1997) and Talmor and Wallace (2000), report that the larger board size do not contribute to an increase in CEO compensation. Since there are only a small pool of directors in New Zealand that sit on many different company boards, creating over-boarding problem, as well as, recycling ideas from one company to another makes companies more vulnerable. Finding directors that have new ideas and one having all the required skills is difficult in this environment. For this reason, we postulate that board size in companies in New Zealand may be larger than otherwise expected. Based on above, we propose our fourth and fifth hypotheses as follows:

H4: Board size will be statistically significantly positive effect on company financial performance.

H5: Board size will be statistically significantly negative effect on CEOs compensation.

Prior studies have supported the notion that outside directors play an important role in monitoring corporate behaviour. The conventional distinction between inside and outside directors are based on notion whether they are executive or non-executive. Fama and Jensen (1983a) argue that outside directors are more objective than insider directors, and are likely to provide an effective monitoring and disciplining processes. Executive directors are less independent of CEOs given that their careers are tied to CEOs (Ozkan, 2007). In order for the board to be effective, Jensen (1993) suggest that all board members should be outsiders, with only one being insider, that is, the CEO. A board with a high percentage of insiders is regarded to be a weak governance mechanism. Others report that boards with low percentage of outside directors pay their CEOs higher compensation. Both, Coakley and Iliopoulou (2006) and Talmor and Wallace (2000), argue that boards' strength and effectiveness acts as a substitute to incentive compensation. Arguably, stronger board are related to lower CEO compensation.

To the contrary, Core *et al.* (1999) report that the high proportion of insiders on boards are negatively associated with CEO compensation. Similarly, Hermalin and Weisbach (1991) report that outside directors are less effective in monitoring CEO compensation. Ozkan (2007, 2011) report that the proportion of non-executive directors on board has a positive

relationship with CEO compensation, which suggests that non-executive directors do not serve effective monitoring function in determining CEO compensation. Sapp (2008) also report that the level of CEO compensation increases with the number of independent members on the compensation committee.

The promulgation of the principles and guidelines by the New Zealand Securities Commission in 2004 has led to more independent directors on boards of publicly listed companies in New Zealand. Based on above, we propose our sixth and seventh hypothesis as follows:

H6: Proportion of non-executive/independent directors will have statistically significantly positive effect on company financial performance.

H7: Proportion of non-executive/independent directors will be statistically significantly negative effect on CEOs compensation.

When CEO is a member of the board of directors, other board members can be less objective and less critical, thus weakening the board's function of oversight and control (Boyd, 1994). CEOs on boards mean that they have greater power and are more influential and therefore, are able to increase their compensation packages. This is more the case when the CEO is also the chairperson, or when CEO is a member of compensation committee. Core *et al.* (1999) report that CEO compensation is much higher when CEO is the chairperson of the board. Sapp (2008) did not find any statistically significant relationship between CEO compensation and the presence of CEO on board. He also reported that CEO compensation is significantly higher when CEOs are on the compensation committee. Based on above, we propose our eighth, ninth and tenth hypotheses as follows:

H8: CEOs on boards will have statistically significantly negative effect on company financial performance.

H9: CEOs on boards will have statistically significantly positive effect on CEOs compensation.

H10: CEOs on remuneration committees will have statistically significantly positive effect on CEOs compensation.

New Zealand framework and researches

According to the New Zealand Institute of Chartered Accountants (NZICA, 2003), institutions hold approximately 73 per cent of the shares in the listed companies in, while in the US the figure is 53.1 per cent (Hartzell & Starks, 2003). In spite of having high proportion of institutional shareholding in New Zealand, the overall monitoring effectiveness

is argued to be weak (Healy, 2001). One of the plausible reasons could be the wide dispersion of large institutional investors (Bhabra, 2007). Being a weak monitoring mechanism, one would expect that institutional investors in New Zealand to demonstrate different behaviour in corporate governance and to have different impact on CEO compensation compared with their US and UK counterparts.

Research relating to CEO compensation and performance in New Zealand has been limited. Prior studies have reported that CEO cash compensation is statistically significantly related to company performance (Elayan et al., 2003; Gunasekarage & Wilkinson, 2002). Jiang, Habib and Smallman (2009) investigate the effect of ownership concentration on CEO pay-performance relationship for 431 company-year observations of 112 New Zealand companies from 2001 to 2005. Their findings provide support to the view that ownership concentration has a non-linear impact on the CEO pay-performance relationship. Specifically, CEO compensation is negatively related to company performance (ROE, ROA) in companies with high ownership concentration, while CEO compensation is positively related to company performance (ROE, ROA and Tobin's Q) in companies with low ownership concentration. Cahan, Chua and Nyamori (2005) investigated the relationship between CEO total cash compensation and board structure of 80 public sector companies in New Zealand in 1999. They reported that board size, whether CEO sits on board, and director quality are associated with CEO pay levels in the public sectors. Specifically, after controlling for company size, CEO task complexity and company performance, smaller boards, boards without CEO as a member, and boards with higher quality directors are reported to be more effective in constraining CEOs pay. However, variables representing the percentage of busy directors, grey directors, and inside directors are found to have insignificant impact on CEO pay. Based on their findings, they conclude that weaker boards pay their CEOs more.

Since there is enough difference in the governance structure and markets regulatory structures between New Zealand and other western countries, it would be worthwhile to compare the impact of corporate governance on CEO compensation between them. Such research would provide a useful complement to the standard UK and US-based studies.

Data and the Method

Data

Data for this research was collated from NZX Deep Archive and from the individual company's website. Overseas companies and financial companies were excluded due to the

fact that they comply with different corporate governance and disclosure requirements. Property companies were also excluded because they are managed by management companies and hence, CEO information was not available. To be included in the sample, a company should have consecutive data for all the variables for six years, that is, for the period 2005 to 2010. Our final sample includes 391 company-year observations. The information relating to CEO compensation, board of directors and accounting data was collated from each company's annual reports and information regarding institutional and block ownership was collated from each company's Top Shareholders report.

4.2 Research Method

First, we use generalised least squares regression (GLS) estimation technique to examine the effect ownership structure and the board structure has on CEOs compensation using the following model (1) below:

$$\ln(\text{CEOCComp})_{it} = \alpha + \sum B_k \text{Ownership}_{it} + \sum B_k \text{Board}_{it} + \eta_1 \ln(\text{TA})_{it} + \eta_2 \text{Tobin's } Q_{it} + \gamma_i D_{\text{industry}} + \varepsilon_{it} \quad \dots\dots\dots(1)$$

where,

$\ln(\text{CEOCComp})$ is the dependent variable which is measured by taking the natural logarithm of CEO cash compensation, which is the sum of salary, bonus, allowance and any other monetary benefits in cash. The Ownership is the proportion of shares held by top twenty shareholders (Top20OWN) which includes both: institutional ownership (InstOWN) and block ownership (BOWN). The board variables include board size (BDS), outsiders on the board (PNED), director ownership (DirOWN). BDS is the natural logarithm of board size. PNED is the proportion of the directors that are non-executive and independent. DirOWN is the proportion of the shares held by the directors.

Total assets, Tobin's Q, industry and year effects are the control variables. Total assets and Tobin's Q are the proxies for the company size and company performance, respectively. CEO compensation is reported to have a statistically significant relationship with company size (Conyon & Murphy, 2000). Since company performance is also an important determinant of a CEO's compensation, we also expect both company size and performance to have a significant effect on the level of compensation received by CEOs. We use the natural logarithm of total assets ($\ln(\text{TA})$) as a proxy for company size. We also use Tobin's Q as a proxy for company performance which is determined as follows:

$$\text{Tobin's } Q = \frac{\text{Price} * \text{No. of Shares Outstanding} + (\text{CL} - \text{CA}) + \text{L/T Debt}}{\text{TotalAssets}}$$

A number of researchers have found industry to be an important factor influencing CEO compensation (Murphy, 1999; Talmor & Wallace, 2000; Yermack, 1995). Moreover, both industry and year effect variables are necessary for panel data analysis as they account for any similarity in industries and years, and are represented by industry dummy and year dummy variables. The term $\varepsilon_{i,t}$ is the error term.

Second, we investigate whether institutional and blockholders have an effect on the CEO compensation. We divide the TOP20OWN into three components, that is, top 5 institutional investors (InstOwnTop5), total institutional investors in top 20 list (InstOwn20) less InstOwnTop5 (InstOWNDiff520) and block holding in top 20 shareholders (BOWN). BOWN is equal to Top20OWN less InstOwn20. We also include additional board variables, such as, CEO on board (COEBOARD), and whether CEO is a new CEO (NewCEO) and whether CEO is member of remuneration committee. CEOBOARD is a binary variable equal to “1” if CEO is member of the board, otherwise “0”. NewCEO is the binary variable equal to “1” if the CEO is new, otherwise “0”. CEORCOM is a binary variable equal to “1” if CEO is a member of the remuneration committee otherwise “0”. Our revised model is similar to model (1) but have additional variables as stated above.

Third, we use GLS to examine whether the ownership, board structures and CEO compensation and director compensation have an effect on the company performance using model (2) below:

$$FP = \alpha + \sum B_k Ownership_{it} + \sum B_k Board_{it} + \eta_1 \ln(TA)_{it} + \eta_2 \ln(CeoCOMP)_{it} + \eta_3 \ln(DirCOMP)_{it} + \gamma_i D_{industry} + \varepsilon_{it} \dots\dots\dots(2)$$

where

FP is the company performance equal to either $\ln(\text{Tobin's Q})$ or ROA. $\ln(\text{CeoCOMP})$ is the natural logarithm of total CEO cash compensation and $\ln(\text{DirCOMP})$ is the natural logarithm of the director compensation.

5 Results

5.1 Descriptive Statistics

Table 1 reports the descriptive statistics for CEO compensation by year-basis for the sample period. The results show that the level of compensation has been growing (on an average basis) over the last six year period. The average CEO compensation has increased from NZ\$565 thousand in 2005 to \$1,065 thousand in 2010, representing a compound annual

growth rate of 14.9%¹¹ and the compound annual increase in median CEO compensation is 4.4%. The differences between minimum and maximum compensation is remarkable. For example, in 2007 the top CEO compensation of NZ\$ 6,631 thousand is 58 times greater than the lowest compensation of NZ\$115 thousand. According to Murphy (1985), the median cash compensation paid to S&P 500 CEOs has more than doubled since 1970 (in 1996 constant dollars) and median total realised compensation (including gains from exercising stock options) have quadrupled (Murphy, 1997).

<Inset Table 1 here>

However, our results show that the increases in CEOs compensation in New Zealand has been much lower compared to the US. The compound annual growth rate in median cash compensation has been 5.26% and compound annual growth rate of total realised compensation has been 4.4 %.

On an industry basis, building industry tends to pay their CEOs the most (\$1,769 thousand) and the second highest is the media/telecommunications industry (\$1,670 thousand). The CEOs in the mining industry are paid the lowest (\$362 thousand) and the second lowest pay is in the services industry (\$395 thousand). The difference between the highest and the lowest paid CEO is \$1,407 thousand or 388 %.

Table 2 report the cross-sectional variation in CEOs package excluding cash base salary. It is interesting to note that only a small proportion of companies in our sample award their CEOs cash and/or other types of incentives. The level of cash bonus and other incentives awarded to the CEOs increased considerably during 2009 and 2010 period. One plausible explanation could be that such incentives were already built into the CEOs performance measures. Because of the global financial crisis, CEOs found it difficult to improve the company's market value; instead they focused on the accounting indicators to get incentives. It is interesting to note that only a small proportion of the companies are awarding options to their CEOs.¹²

<Inset Table 2 here>

Table 3 reports the directors' fees by year for the sample period. Results show that directors' fees have increased from \$366 thousand in 2005 to \$432 thousand in 2010, an increase of

¹¹ According to Valentine (2012), CEO compensation increased by 80 per cent between 2004 to 2010 and in 2011, it increased by 9.9 per cent.

¹² A point to note, some companies options were granted but it lapsed because of not meeting performance targets.

approximately \$66 thousand or 18%. It is interesting to note that the level of fees declined in 2009 compared to 2010. A plausible reason for the decline could be related to new directors being appointed at lower fee levels and/or adjustment of fees being undertaken to reflect the economic situation resulting from the global financial crisis.

It is interesting to note that media/telecommunication industry pays the highest level of fees to the directors' (\$812,046) and the second highest fees is in the building industry. The lowest fees is in the mining industry (195,888) and second lowest is in the textile industry (\$285,285).

<Insert Table 3 here>

Table 4 reports the descriptive statistics of the institutional and block investor holdings over the sample period. Results show that the mean (median) of top twenty shareholders is 67% (70%), indicating that top twenty shareholders hold majority of the voting rights for the decision making processes in New Zealand publicly listed companies. Institutional ownership among top 20 shareholders varies significantly across companies, ranging from 3% at the lowest level to 98% at the highest, with mean (median) of 52% (54%) which is comparatively higher than that reported for the UK (36.48%) (Ozkan, 2011). The five largest institutional investor ownership ranges from 7% to 97%, with mean (median) of 46% (41%) which is comparatively larger than that reported for the US (22.3%) (Hartzell & Starks, 2003). The higher averages of both institutional ownership variables supports the view provided by NZICA (2003), that the collective proportion of institution shareholdings in New Zealand share market is higher than that of other countries. Block shareholding among top 20 ranges from 0% to 79%, with mean (median) of 15% (7%).

The mean (median) director ownership (DirOWN) is 9% (1%) with an inter-quartile range of 0% to 16%. This result indicates that in most companies, directors own only a small proportion of the company with a few exceptions with high director ownerships. The average (median) board size (BDS) is 6.29 (6) with an inter-quartile range of 6 to 7 members. This result indicates that board size in New Zealand publicly listed companies are within the range recommended by Jensen (1983) for the US based companies. The mean proportion of independent directors on board (PNED) is 60% (57%) with the inter-quartile range of 38% to 67%. This result supports our view stated earlier that with a small pool of directors available in New Zealand makes it difficult to find directors that are independent in its true sense. Our results do support the view that boards in New Zealand are not too highly independent of management and there may be entrenchment issues arising, especially regarding control. The mean (median) on the $\ln(TA)$ is 12.36 (12.22), and the mean (median)

of Tobin's Q is 3.56 (1.45) with an inter-quartile range of 1.05 to 2.06. The results for Tobin's Q show that all the values are above one, thus indicating that companies did create shareholder value.

<Insert Table 4 here>

Table 5 reports the average board size and proportion of independent directors on board on a yearly basis. The results show that board size remained fairly constant at six members throughout the sampling period. The results for independent directors show that it increased slightly from 56% in 2005 to 63% in 2010.

<Insert Table 5 here>

Table 6 reports the descriptive statistics regarding whether the CEO is new, on board and on the remuneration committee. The results show that 30 companies in the sample had a new CEO and 9 companies had changed their CEO twice during the year. The figures for the CEOs on board show that 66.67% of the companies have CEOs as the board member whereas 22.73% of the companies do not have CEOs on their boards. However, only 11% of the companies have their CEOs as part of the remuneration committee. The results reported in Table 5 shows that number of companies have their CEOs in remuneration committees declined from 10 in 2005 to 5 in 2010, this show that efforts are being made to make remuneration independent of management.

<Insert Table 6 here>

Table 7 reports the averages of the independent variables by industry over the sampling period. There is no obvious trend present. However, highest number of board members are in the textile industry (8), highest proportion of independent directors are in the Port industry, highest director fees and CEO remuneration are in the Media/Telecommunication industry (\$812,046 and \$1,424,618, respectively), highest proportion of shares held by institutional investors in the port industry (0.77) and blockholders hold highest proportion of shares in the food industry.

<Insert Table 7 here>

Table 8 reports the pay-performance sensitivity by industry for the period 2005 and 2010. Q is the proportional change in Tobin's Q between the period stated and CEOComp is the proportional change in the CEO remuneration for the period. Arguably, there are no obvious trends present apart from the 2009/2010 period, showing positive relationship between CEO pay and company performance.

<Insert Table 8 here>

5.2 *Pairwise Correlation*

Table 9 reports the pairwise correlation coefficients between the explanatory and control variables. The highest correlation is between director ownership (DirOWN) and block ownership (BOWN) (0.72) which is expected as many directors are also the blockholders who are among the top 20 shareholders. The second highest correlation is between $\ln(\text{TA})$ and $\ln(\text{DirCOMP})$ (0.68) which indicates that as director compensation increases with the company size. The correlation between $\ln(\text{DirCOMP})$ and LEV is positive (0.54) and is statistically significant which indicates that as leverage increases so does director compensation. It is interesting to note that the correlation between BOWN and InstOWNTOP5 is negative (-0.53) which indicate that block holding and decreases as institutional holding increases. Apart from those reported, the rest of the correlation coefficients are below 0.50 which indicate that there are no multicollinearity issues in the dataset.

<Insert Table 9 here>

5.3 **Empirical Results and Discussions**

Table 10 reports the GLS regression results for the CEO compensation ($\ln(\text{CEOCComp})$) as the dependent variable and the ownership, board and insider characteristics as the independent variables. Column 2 of Table 10 reports the regression results of $\ln(\text{CEOCComp})$ as the dependent variable and top 20 shareholders (Top20OWN), board size ($\ln(\text{BDS})$), board independence (PNED) and director compensation (DirCOMP) as the independent variable. Since the coefficient of Top20OWN is positive and statistically significant at 1% level, it indicates that an increase in top 20 shareholders leads to a higher compensation for the CEO. The coefficient of BDS is positive and is statistically significant at 5% level, thus suggest that an increase in the board members leads to higher CEO remuneration. The coefficient of $\ln(\text{DirCOMP})$ is positive and statistically significant at 1% level, indicate that high director compensation leads to higher CEO compensation. Our results for these variables (Top20OWN, BDS and $\ln(\text{DirCOMP})$) suggest that there are entrenchment issues relating to CEO compensation.

The coefficient of $\ln(\text{TA})$ is positive and is statistically significant at 1% level indicate that larger company size is associated with higher CEO compensation levels. The pay-size elasticity is 0.227 which is very close to 0.32, the value for Canadian CEOs obtained for 2000 to 2005 (Sapp, 2008). The pay-size elasticity of 0.227 indicates that increasing company size by 170% would increase CEO total compensation by 22.7%. The positive and statistically

significant coefficient confirms the findings reported in the existing literature that large companies do pay their CEOs more.

The results for Tobin's Q is interesting, the coefficient is positive and is statistically significant at 1% level. The pay-performance elasticity of 0.187 indicate that if company performance measured by Tobin's increases by 170% then CEOs compensation will increase by 18.7%. It indicates that as company's financial performance measured by Tobin's increases, so does the CEOs compensation levels. This suggests that company performance indicators are built into the CEOs compensation negotiations.

Coefficients of most of the industry dummies are significant (except agriculture and fishing, food, intermediate, media/telecommunication, mining and port) suggest that CEO compensations vary across industries in New Zealand. This finding supports the argument that industry factors account for variation in the CEOs total compensation (Murphy, 1999; Talmor & Wallace, 2000; Yermack, 1995).

Since the results for TOP20OWN is statistically significant, we next want to find out whether the presence of institutional and blockholders in the top 20 ownership ladder makes a difference to CEO compensation levels. Also, we want to find out whether having CEOs on Boards, or new CEO and/or CEO on remuneration committees have any effect on CEOs compensation levels. The regression results for the same are reported in Column 4 of Table 10.

The coefficient of the twenty large shareholders that are institutional investors (InstOwn20) is positive and statistically significant at 1% level, thus indicate that it contributes positively to CEO remuneration. Notably, the coefficient of BlkOwn is not statistically significant suggest that they have taken a free-rider approach in regard to providing vigilance to managerial decisions. These results suggest that top 20 shareholders are not a good mechanism for providing supervision relating to CEOs compensation in publicly listed companies in New Zealand. Our findings are contrary to that reported in the US (Hartzell and Starks, 2003) and the UK (Ozkan, 2011), that institutions are actively and effectively involved in monitoring and influencing CEO compensation. However, our results are consistent with existing New Zealand literature that institutions are less effective in monitoring corporate management and CEO compensation (Healy, 2001; Bhabra, 2007). The coefficient of CEOBOARD is positive and is statistically significant at 1% level, thus suggest that CEOs on boards do have power to influence decision regarding their own compensation. Results for In(DirCOMP), In(TA) and in(Tobin's Q) are similar to that reported in column 2 of Table 10.

Table 10, column 6 reports the regression result using three different types of twenty largest ownership: top 5 institutional own (InstOwnTop5), other institutional own in top 20 (InstOwnDiff520), blockholding (BlkOwn). The coefficient of both InstOwnTop20 and InstOwnDiff520 are positive and statistically significant at 1% levels, respectively. These results suggest that top 20 shareholders are not a good mechanism for providing supervision relating to CEOs compensation in publicly listed companies in New Zealand. Rest of the results reported in column 6 are similar to that reported in column 4 of Table 10.

<Insert Table 10 here>

Table 11 reports the GLS regression results for the financial performance (Tobin's Q, ROA) as the dependent variables and the ownership, board and insider characteristics as the independent variables. Column 2 of Table 11 reports the regression results of Tobin's Q as the dependent variable. The coefficient of both IntOwnTop5 and BlkOwn are negative and statistically significant at 5% level, respectively. These results suggest that large owners do not provide required vigilance in terms of motoring CEO behavior and are entrenched, that is, are more interested in their own gain.

However, evidence regarding the proportion of independent directors (PNED) on boards suggests that they do provide the required monitoring regarding corporate behavior. The coefficient of PNED is positive and is statistically significant at 1% level, suggest that increase in the proportion of independent directors leads to improved company performance measured by Tobin's Q. The results for CEORCOM and ln(DirCOMP) suggest that they are not good mechanisms for providing monitoring in terms of improving company value. The coefficients of both the variables are negative and are statistically significant at 10 and 1% levels, respectively. These results indicate that CEOs on remuneration committees and higher director compensations leads to a reduction in company value.

The coefficients of ln(TA) and LEV are negative and are statistically significant 5% and 1% levels, respectively. The result for LEV indicates that increase in leverage leads to lower company value, thus suggest that debtholders are not providing monitoring regarding supervision of CEO behavior. The results of ln(TA) is consist with the finding reported by others that company size is negatively associated with company performance.

Most notable is the result of ln(CEOComp), it has a positive coefficient and is statistically significant at 5% level, thus indicate that higher CEO compensation is associated with higher company performance. This suggests that boards have linked CEO compensation with company performance.

Column 4 of Table 11 reports the regression results of ROA as the dependent variable. The coefficient of IntOwnTop5 is positive and is statistically significant at 1% level. The result suggests that increase in the proportion of top 5 institutional investors will lead to an increase in accounting-based performance measured by ROA. This result suggests that top 5 institutional investors are more interested in receiving cash dividends rather than increasing the market value of the company. The results for both PNEED and DirCOMP suggests that as directors independence and director fees increases, the company performance based on ROA also increases, thus suggesting that directors' reward themselves for achieving accounting based performance measures.

<Insert Table 11 here>

5.4 Check for Robustness

We have undertaken further analysis to check presence of heteroskedasticity and auto-correlation issues in our data. The variance inflation factor (VIF) indicates whether a predictor has a strong linear relationship with other predictors(s) (Field, 2005). Myers (1995) suggest that VIF above 10 is a good value to be concerned about. Furthermore, Field (2005) suggest that value of tolerance statistic (1/VIF) below 0.1 is of concern. Table 12 report both VIF and tolerance statistics which are within acceptable region, thus suggest there are no multicollinearity issues for the models estimated. Our test also showed that there are no auto-correlation issues in the data.

<Insert Table 12 here>

We have taken further two-step two Arellano-Bover/Blundell-Bond estimation to control for auto-correlations issues relating to the data with lags company performance. The results reported in Table 13 for dependent variables ln(CEOComp and Tobin's Q are similar to that reported in Tables 10 and 11, suggest we do not have any auto-correlation issues in the data.

6 Conclusion

This study investigates whether the corporate governance characteristics are related to CEO compensation, by examining the impact ownership concentration and board structure have on the CEO compensation of publicly listed companies for the period 2005 to 2010. We report different finding to that reported by the prior studies. The overall level of CEO compensation of New Zealand companies has been growing fast over the six years from 2005 to 2010. Larger companies pay their CEO more compensation. The level of CEO compensation varies across industries with building and media/telecommunications paying the highest compensation. Companies with better performance (measured by Tobin's Q) reward their

CEO more for the reason that company performance is built into the CEOs compensation. Our results indicate that internal features of corporate governance do influence the level of CEO compensation in New Zealand companies, but not the external features of corporate governance.

Company size is statistically significantly related to the CEO compensation. Companies that pay their directors highly are also associated with high CEO compensation as well. However, the proportion of independent directors on board is found to be positively associated with company performance but not significantly related to CEO compensation, indicating that the outside directors are not more effective than insiders in monitoring CEO compensation, and that they are rather ineffective in New Zealand companies. The presence of CEO on board is found to be positive and statistically significantly associated with CEO compensation. It seems that the presence of CEO on board have an influence on board members relating their objectivity regarding CEO compensation. Therefore CEOBOARD weakens the board functions of oversight and control in CEO compensation.

We found external features of corporate governance (InstOwn, BlkOwn) to have a positive effect on CEO compensation but negative effect on company performance. The results suggest that both institutional and block shareholders are entrenched in New Zealand. Our results are different to that reported in the US and the UK, suggest that New Zealand institutions and individual block shareholders are interested in dividends and work with the CEO to have positive accounting-based measures. A plausible reason could be that institutional investors in New Zealand are geographically dispersed and that local large shareholders own smaller part of shares than overseas institutions (Healy, 2001).

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Table 1: Descriptive Statistics of CEO's Cash Compensation

Descriptive statistics of CEO's total cash compensation in NZ\$ for 386 company-year observations over the period from 2005 - 2010. Total cash compensation includes base salary, cash bonus, allowance, incentive and other monetary benefit for each CEO but no options.

| CEO Cash Compensation | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Mean | 564,996 | 645,503 | 802,534 | 830,923 | 1,020,266 | 1,064,675 |
| Median | 463,824 | 505,000 | 532,478 | 588,893 | 620,500 | 573,000 |
| Max | 2,245,000 | 2,883,350 | 5,290,000 | 3,621,025 | 6,718,950 | 6,630,975 |
| Min | 72,000 | 89,246 | 90,000 | 100,000 | 107,500 | 115,000 |
| Std. Dev. | 431,627 | 566,319 | 922,458 | 717,749 | 1,219,823 | 1,259,253 |
| N | 62 | 65 | 66 | 66 | 66 | 66 |

Table 2: Cross Sectional Variation in Bonus, Other Incentives and Options

| | Bonus | | | Other | | | Options | | |
|------|---------|-----------|----|-----------|-----------|----|---------|-----------|---|
| | Mean | Median | N | Mean | Median | N | Mean | Median | N |
| 2005 | 355,929 | 661,250 | 7 | 334,546 | 1,250,000 | 6 | 221,987 | 400,000 | 5 |
| 2006 | 434,964 | 1,700,000 | 11 | 269,945 | 661,250 | 5 | 286,068 | 875,000 | 6 |
| 2007 | 319,514 | 654,750 | 8 | 1,093,340 | 2,019,230 | 4 | 438,234 | 1,525,000 | 8 |
| 2008 | 370,930 | 787,500 | 9 | 659,564 | 3,105,000 | 10 | 419,289 | 1,343,318 | 9 |
| 2009 | 558,857 | 1,240,800 | 10 | 1,503,637 | 4,318,000 | 5 | 496,435 | 2,100,000 | 7 |
| 2010 | 649,279 | 1,971,116 | 12 | 1,518,136 | 4,741,000 | 7 | 333,485 | 900,000 | 8 |

Table 3: Descriptive Statistics of Directors' Fees

Descriptive statistics of Directors' fees in NZ\$ for 386 company-year observations over the period from 2005 - 2010. Directors' fees include fees paid for the year and severance pay, but not include any consultancy work undertaken.

| Directors' Fees | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Mean | 366,936 | 394,705 | 395,383 | 453,048 | 559,501 | 432,609 |
| Median | 219,269 | 242,500 | 256,250 | 307,750 | 315,000 | 291,500 |
| Max | 1,824,003 | 2,993,878 | 1,784,542 | 2,359,433 | 6,050,500 | 1,500,000 |
| Min | 24,000 | 26,400 | 18,900 | 46,731 | 82,998 | 96,000 |
| Std. Dev. | 363,750 | 427,685 | 375,699 | 439,053 | 804,578 | 345,755 |
| N | 62 | 65 | 66 | 66 | 66 | 66 |

Table 4: Descriptive statistics of corporate governance and control variables

This table reports descriptive statistics for corporate governance characteristics and control variables for 386 company-year observations over the period from 2005 to 2010.

| | Mean | Median | Max | Min | Inter-Quartile Range |
|-------------|-------|--------|-------|------|----------------------|
| Top20Own | 0.67 | 0.70 | 0.99 | 0.27 | 0.56 – 0.82 |
| InstOwn20 | 0.52 | 0.54 | 0.98 | 0.03 | 0.32 – 0.71 |
| InstOwnTop5 | 0.46 | 0.41 | 0.97 | 0.07 | 0.30 – 0.63 |
| BlkOwn | 0.15 | 0.07 | 0.79 | 0.00 | 0.02 – 0.25 |
| DirOWN | 0.09 | 0.01 | 0.65 | 0.00 | 0.00 – 0.16 |
| PNED | 0.56 | 0.50 | 1.00 | 0.17 | 0.38 – 0.67 |
| BDS | 6.29 | 6.00 | 12.00 | 3.00 | 6.00 – 7.00 |
| Ln(TA) | 12.36 | 12.22 | 18.54 | 9.06 | 10.90 – 13.67 |
| Tobin's Q | 3.56 | 1.45 | 66.59 | 0.54 | 1.05 – 2.06 |

Top20OWN is the proportion of shares held by the top 20 shareholders. InstOWN20 is the percentage of institutional shareholding among top 20 shareholders. InstOWNTop5 is the percentage of the five largest institutional. BOWN is the percentage of block shareholding in top 20 shareholders. DirOWN is the percentage of shares held by the directors. PNED is the proportion of the directors that are non-executive/independent. BDS is the number of board members on the board. Ln(TA) is the natural logarithm of the total assets and Tobin's Q is the calculated as follows, $(\text{Price} \times \text{no. of shares outstanding} + (\text{net current liabilities} + 1/t \text{ debt}))$ divided by total assets.

Table 5: Yearly average of board size and proportion of independent directors on board

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|------|------|------|------|------|------|
| Average Board Size | 6.29 | 6.22 | 6.24 | 6.18 | 6.24 | 6.38 |
| Average proportion of Independent Directors | 0.56 | 0.59 | 0.60 | 0.60 | 0.60 | 0.63 |
| Number of Companies Having CEO in RCOM | 10 | 8 | 8 | 6 | 6 | 5 |
| N | 62 | 65 | 66 | 66 | 66 | 66 |

Table 6: Descriptive statistics for CEO characteristics variables

This table reports the distribution statistics of CEO characteristics for 66 NZ companies for the period 2005 - 2010. NewCEO is a dummy variable, which equals “1” when a CEO is new, otherwise “0”. CEOBoard is a dummy variable, which equals “1” when a CEO is on board, otherwise “0”. CEOROM is the dummy variable equal to “1” if the CEO is on remuneration committee, otherwise “0”.

| No. of New CEO | NewCEO | | % of CEO on board | CEOBoard | | CEORCOM | |
|----------------|----------------|-----------------|-------------------|------------------|-------------|-----------------|-------------|
| | No. of Company | % of the Sample | | No. of Companies | % of Sample | No of Companies | % of Sample |
| 0 | 27 | 40.91% | 0 | 15 | 22.73% | 8 | 12% |
| 1 | 30 | 45.45% | >0,<50% | 7 | 10.61% | | |
| 2 | 9 | 13.64% | 1 | 44 | 66.67% | | |
| More than 2 | 0 | 0 | | | | | |
| Total | 66 | 100% | Total | 66 | 100% | 66 | |

Table 7: Average of the independent variables related to each industry

Tobin's Q is calculated as follows, (Price*no. of shares outstanding + (net current liabilities + 1/t debt) divided by total assets. ROA is the proportion of profit after tax divided by total assets. BDS is the natural logarithm of the board size. PNED is the proportion of the board members that are non-executive/independent. DirOWN is the proportion of the shares held by the directors. DirCOMP is the natural logarithm of the total director compensation. CEOComp is the total cash compensation of the CEO. Top20Own is the proportion of the shares held by top twenty shareholders. InstOwn20 is the proportion of shares held by top twenty institutional shareholders. BlkOwn is the proportion of shares held by blockholders that are top 20 shareholders. Ln(TA) is the natural logarithm of the total assets. LEV is the proportion of total debt to total assets.

| | Agri./ Fishing | Building | Consumer | Energy | Food | Inter- mediate | Leisure | Media/ Telecom | Mining | Port | Services | Textile | Transport |
|------------------|-------------------|-------------|-----------|-------------|------------|-------------------|-----------|-------------------|-----------|-----------|-----------|-----------|-------------|
| Tobin's Q | 5.28 | 1.35 | 1.55 | 1.27 | 2.05 | 10.48 | 1.19 | 1.55 | 1.27 | 1.52 | 1.55 | 1.67 | 1.62 |
| ROA | 0.01 | 0.06 | 0.07 | 0.04 | 0.02 | -0.02 | 0.06 | 0.07 | -0.05 | 0.06 | 0.07 | 0.08 | 0.07 |
| BDS | 7.37 | 6.41 | 6.18 | 6.76 | 5.52 | 5.88 | 5.21 | 6.83 | 5.92 | 6.38 | 5.47 | 8.00 | 6.94 |
| PNED | 0.57 | 0.63 | 0.53 | 0.60 | 0.49 | 0.55 | 0.70 | 0.56 | 0.56 | 0.90 | 0.57 | 0.46 | 0.80 |
| DirOWN | 0.03 | 0.01 | 0.17 | 0.02 | 0.25 | 0.12 | 0.02 | 0.01 | 0.05 | 0.00 | 0.26 | 0.02 | 0.10 |
| DirCOMP | \$394,130 | \$678,517 | \$302,723 | \$597,783 | \$339,882 | \$346,388 | \$376,152 | \$812,046 | \$195,888 | \$433,659 | \$429,775 | \$285,285 | \$730,055 |
| CEOComp | \$1,026,631 | \$1,611,345 | \$588,772 | \$897,034 | \$770,496 | \$613,186 | \$888,117 | \$1,424,618 | \$362,738 | \$570,138 | \$395,501 | \$544,381 | \$1,203,499 |
| Top20Own | 0.63 | 0.63 | 0.66 | 0.79 | 0.85 | 0.60 | 0.75 | 0.78 | 0.41 | 0.80 | 0.81 | 0.39 | 0.76 |
| InstOwn20 | 0.53 | 0.62 | 0.42 | 0.76 | 0.45 | 0.46 | 0.71 | 0.74 | 0.33 | 0.77 | 0.54 | 0.36 | 0.68 |
| BlkOwn | 0.10 | 0.01 | 0.24 | 0.03 | 0.40 | 0.14 | 0.04 | 0.04 | 0.08 | 0.03 | 0.28 | 0.03 | 0.08 |
| Ln(TA) | \$363,792 | \$710,083 | \$96,413 | \$1,005,859 | \$439,9896 | \$107,523 | \$222,962 | \$847,616 | \$54,637 | \$347,405 | \$148,247 | \$177,596 | \$838,959 |
| LEV | 0.52 | 0.48 | 0.46 | 0.44 | 0.43 | 0.37 | 0.41 | 0.50 | 0.10 | 0.32 | 0.47 | 0.57 | 0.62 |
| N | 30 | 24 | 90 | 41 | 17 | 57 | 24 | 18 | 12 | 24 | 30 | 6 | 18 |

Table 8: Pay-Performance Sensitivity
Compares increases in pay with increases in Performance

| | 2005/2006 | | 2006/2007 | | 2007/2008 | | 2008/2009 | | 2009/2010 | |
|-------------------|-----------|----------|-----------|-----------|-----------|----------|-----------|----------|-----------|----------|
| | Q | CEO Comp | Q | CEO Comp | Q | CEO Comp | Q | CEO Comp | Q | CEO Comp |
| Agri./Fishing | -0.53725 | 0.416711 | -0.07765 | 1.131E-05 | -0.00616 | 1.64761 | -0.17252 | -0.71752 | 0.588015 | 4.658161 |
| Building | 0.027368 | -0.44344 | 0.001025 | -0.264985 | -0.25998 | 0.206317 | -0.06086 | 0.242288 | 0.053019 | 0.379783 |
| Consumer | 0.004193 | 0.090939 | -0.00731 | 0.4178385 | -0.14511 | -0.16737 | -0.03936 | 0.164303 | 0.130602 | 0.064828 |
| Energy | -0.03475 | 0.077485 | -0.06504 | 0.7033233 | -0.0646 | -0.23519 | -0.04781 | 0.109645 | 0.033473 | 0.198578 |
| Food | -0.4381 | 3.172468 | 0.117647 | 0.1583979 | -0.14833 | 0.021662 | -0.0427 | 0.236805 | -0.0939 | 0.036775 |
| Intermediate | 0.055076 | -0.03573 | 0.008176 | 0.1214199 | -0.18964 | 0.075564 | -0.10701 | 0.266173 | 0.223276 | 0.17828 |
| Leisure | -0.00985 | 0.079003 | 0.052239 | 0.728746 | -0.13948 | -0.38335 | -0.16621 | 0.361194 | 0.116969 | 0.239815 |
| Media/ Telecom | -0.00471 | 0.203641 | -0.09461 | 0.5474651 | -0.10867 | -0.21227 | -0.02931 | 0.547166 | -0.01812 | -0.30392 |
| Mining | -0.09789 | 0.361775 | 0.289766 | 0.4542472 | -0.33461 | -0.4932 | -0.09626 | 0.362509 | 0.111288 | -0.10059 |
| Port | -0.09072 | -0.19238 | 0.154292 | 0.1181441 | -0.09849 | 0.182886 | -0.04125 | 0.095483 | 0.054651 | 0.084504 |
| Services | 0.129506 | 0.061212 | 0.34279 | -0.091771 | -0.20246 | 0.230208 | -0.01656 | 0.499679 | -0.08979 | -0.08306 |
| Textile | -0.04193 | -0.05139 | -0.01955 | 0.2163469 | -0.20703 | 0.053356 | -0.07305 | -0.12266 | 0.126615 | 0.199648 |
| Transport | 0.04668 | 0.282258 | 0.089197 | -0.132051 | -0.1929 | 0.389672 | -0.09019 | 0.308603 | 0.069393 | -0.38569 |

Table 9: The unconditional correlation coefficients between explanatory and control variables

InstOwnTop5 is the per cent of shares held by top five institutional shareholders. InstOWNDiff20 is the difference between proportion of shares held by top 20 institutional shareholders and top 5 institutional shareholders. BlkOwn is the proportion of shares held blockholders that are top 20 shareholders. CEOBoard is equal to "1" if the CEO is the member of the board, otherwise "0". NEWZEO is equal to "1" if the CEO is new, otherwise "0". BDS is the natural logarithm of the board size. PNED is the proportion of the board members that are non-executive/independent. DirOWN is the proportion of the shares held by the directors. DirCOMP is the natural logarithm of the total director compensation. CEOROM is the dummy variable equal to "1" if CEO is on the remuneration committee, other "0". Ln(TA) is the natural logarithm of the total assets. Tobin's Q is the calculated as follows, (Price*no. of shares outstanding + (net current liabilities + 1/t debt) divided by total assets. LEV is the proportion of total debt to total assets and Sd(Daily Return) is the standard deviation of the daily stock returns.

| | InstOWN Top5 | InstOWN Diff520 | BOWN20 | CEO Board | New CEO | BDS | PNED | Dir OWN | Dir COMP | CEO RCOM | Ln(TA) | Tobin's Q | LEV | Sd(Daily Return) |
|--------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|
| InstOwn Top5 | - | | | | | | | | | | | | | |
| InstOWN Diff520 | -0.228*** (0.000) | - | | | | | | | | | | | | |
| BlkOwn | -0.533*** (0.000) | -0.391*** (0.000) | - | | | | | | | | | | | |
| CEO Board | -0.413*** (0.000) | 0.243*** (0.000) | 0.155** (0.002) | - | | | | | | | | | | |
| New CEO | 0.057 (0.2590) | -0.018 (0.724) | -0.041 (0.422) | -0.185*** (0.000) | - | | | | | | | | | |
| BDS | 0.091† (0.072) | 0.292*** (0.000) | -0.367*** (0.000) | 0.131** (0.009) | -0.008 (0.979) | - | | | | | | | | |
| PNED | 0.135** (0.008) | 0.136** (0.007) | -0.258*** (0.000) | -0.282*** (0.000) | -0.005 (0.924) | -0.099* (0.051) | - | | | | | | | |
| Dir OWN | -0.351*** (0.000) | -0.192*** (0.000) | 0.719*** (0.000) | 0.182*** (0.000) | -0.007*** (0.885) | -0.263*** (0.000) | -0.284*** (0.000) | - | | | | | | |
| Dir COMP | 0.054 (0.285) | 0.447*** (0.000) | -0.349*** (0.000) | 0.015 (0.774) | 0.021 (0.683) | 0.536*** (0.000) | 0.221*** (0.000) | -0.216*** (0.000) | - | | | | | |
| CEO RCOM | -0.137** (0.007) | -0.006 (0.914) | 0.019 (0.709) | 0.257*** (0.000) | -0.032 (0.530) | -0.093† (0.068) | -0.002 (0.964) | 0.009 (0.852) | -0.096* (0.059) | - | | | | |
| Ln(TA) | 0.283*** (0.000) | 0.303*** (0.000) | -0.426*** (0.000) | -0.027 (0.590) | 0.011 (0.824) | 0.532*** (0.000) | 0.134*** (0.008) | -0.269*** (0.000) | 0.677*** (0.000) | -0.094† (0.064) | - | | | |
| Tobin's Q | -0.1.02** (0.041) | -0.011 (0.823) | 0.033 (0.515) | 0.089† (0.079) | -0.023 (0.654) | -0.107** (0.035) | 0.014 (0.790) | 0.039 (0.432) | -0.196*** (0.000) | -0.080 (0.113) | -0.228*** (0.000) | - | | |
| LEV | -0.096† (0.059) | 0.118** (0.019) | -0.078 (0.125) | -0.024 (0.636) | -0.011 (0.825) | 0.128** (0.011) | 0.157** (0.001) | -0.041 (0.423) | 0.254*** (0.000) | 0.094† (0.063) | 0.303*** (0.000) | -0.283*** (0.000) | - | |
| Daily Return | -0.118** (0.020) | -0.097† (0.055) | 0.197*** (0.000) | 0.061 (0.234) | 0.126** (0.013) | -0.338*** (0.000) | -0.111** (0.029) | 0.242*** (0.000) | -0.384*** (0.000) | 0.049 (0.337) | -0.422*** (0.000) | 0.181*** (0.000) | -0.244*** (0.000) | - |

†denote significance at 10%, **denote significance at 5% and ***denote significance at 1% level

Table 10: Regression between ln(CEOComp) as dependent variable and Ownership, Board Characteristics and Insider Characteristics as Independent variables

ln(CEOComp) is the natural logarithm of the total compensation received by the CEO. Top20Own is the proportion of the shares held by the top 20 shareholders. InstOwnTop5 is the per cent of shares held by top five institutional shareholders. InstOWNDiff520 is the difference between proportion of shares held by top 20 institutional shareholders and top 5 institutional holders. BlkOwn is the proportion of shares held by blockholders that are top 20 shareholders. CEOBoard is equal to "1" if the CEO is the member of the board, otherwise "0". NEWCEO is equal to "1" if the CEO is new, otherwise "0". BDS is the natural logarithm of the board size. PNEI is the proportion of the board members that are non-executive/independent. DirOWN is the proportion of the shares held by the directors. DirCOMP is the natural logarithm of the total director compensation. CEOROM is the dummy variable equal to "1" if CEO is on the remuneration committee, other "0". Ln(TA) is the natural logarithm of the total assets. Tobin's Q is the calculated as follows, (Price*no. of shares outstanding + (net current liabilities + 1/2 debt) divided by total assets. LEV is the proportion of total debt to total assets and Sd(Daily Return) is the standard deviation of the daily stock returns.

| | ln(CEOComp) | Std. Error | ln(CEOComp) | Std. Error | Ln(CEOComp) | |
|---|-----------------------------|-------------------|-----------------------------|-------------------|-----------------------------|-------|
| Constant | 4.959*** (10.03) | 0.494 | 5.13*** (10.08) | 0.508 | 5.803*** (11.15) | 0.520 |
| Top20Own | 0.632*** (3.65) | 0.173 | | | | |
| IntOwn20 | | | 0.628*** (3.65) | 0.172 | | |
| InstOwnTop5 | | | | | 0.542*** (3.23) | 0.168 |
| InstOWNDiff520 | | | | | 1.857*** (4.11) | 0.452 |
| BlkOwn | | | 0.338 (1.16) | 0.291 | 0.375 (1.29) | 0.289 |
| BDS | 0.330** (2.50) | 0.132 | 0.297** (2.24) | 0.133 | 0.299** (2.27) | 0.132 |
| PNEI | 0.172 (1.22) | 0.141 | 0.169 (1.20) | 0.140 | 0.123 (0.87) | 0.140 |
| DirOWN | 0.102 (0.65) | 0.157 | 0.252 (1.31) | 0.192 | 0.206 (1.07) | 0.192 |
| NEWCEO | | | 0.050 (0.72) | 0.070 | 0.056 (0.80) | 0.069 |
| CEOBoard | | | 0.157** (2.41) | 0.065 | 0.105† (1.95) | 0.066 |
| CEORCOM | | | -0.015 (-0.19) | 0.080 | -0.003 (-0.04) | 0.081 |
| DirCOMP | 0.339*** (7.97) | 0.043 | 0.336*** (7.95) | 0.042 | 0.291*** (6.62) | 0.021 |
| Ln(TA) | 0.199*** (9.68) | 0.020 | 0.197*** (9.45) | 0.020 | 0.189*** (9.02) | 0.021 |
| Tobin's Q | 0.126** (2.80) | 0.044 | 0.120** (2.67) | 0.045 | 0.102** (2.29) | 0.044 |
| LEV | 0.133 (1.45) | 0.091 | 0.131 (1.44) | 0.091 | 0.121 (1.33) | 0.091 |
| SD(Daily Returns) | 0.311 (0.90) | 0.347 | 0.331 (0.95) | 0.347 | 0.325 (0.095) | 0.344 |
| Wald χ^2 (P Value) | 927.69*** (0.000) | | 937.86*** (0.000) | | 956.27*** (0.000) | |
| Fixed Effects | <i>Yes</i> | | <i>Yes</i> | | <i>Yes</i> | |
| Industry Effects | <i>Yes</i> | | <i>Yes</i> | | <i>Yes</i> | |
| N | 391 | | 391 | | 391 | |

** denote significance at 5% and *** denote significance at 1% level

Table 11: Regression between Company Performance Variables (Tobin's Q, ROA) as dependent variable and Ownership, Board Characteristics and Insider Characteristics as Independent variables

Tobin's Q is the calculated as follows, (Price*no. of shares outstanding + (net current liabilities + 1/t debt) divided by total assets. In(CEOCComp) is the natural logarithm of the total compensation received by the CEO. InstOWNTop5 is the per cent of shares held by top five institutional shareholders. InstOWNDiff520 is the difference between proportion of shares held by top 20 institutional shareholders and top 5 institutional holders. BlkOwn is the proportion of shares held by blockholders that are top 20 shareholders. CEOBoard is equal to "1" if the CEO is the member of the board, otherwise "0". NEWCEO is equal to "1" if the CEO is new, otherwise "0". BDS is the natural logarithm of the board size. PNED is the proportion of the board members that are non-executive/independent. DirOWN is the proportion of the shares held by the directors. DirCOMP is the natural logarithm of the total director compensation. CEOROM is the dummy variable equal to "1" if CEO is on the remuneration committee, other "0". Ln(TA) is the natural logarithm of the total assets. LEV is the proportion of total debt to total assets and Sd(Daily Return) is the standard deviation of the daily stock returns.

| | Tobin's Q | Std. Error | ROA | Std. Error |
|---|-----------------------------|-------------------|-----------------------------|-------------------|
| Constant | 2.522*** (3.80) | 0.662 | -0.519*** (-3.55) | 0.146 |
| InstOwnTop5 | -0.491** (-2.57) | 0.191 | 0.092** (2.20) | 0.042 |
| InstOWNDiff520 | -0.214 (-0.81) | 0.522 | 0.081 (0.70) | 0.115 |
| BlkOwn | -0.824** (-2.71) | 0.326 | 0.043 (0.60) | 0.072 |
| BDS | -0.043 (-1.12) | 0.148 | 0.045 (1.37) | 0.033 |
| PNED | 0.431** (2.74) | 0.156 | 0.066† (1.72) | 0.035 |
| DirOWN | 0.218 (1.16) | 0.218 | 0.056 (1.16) | 0.048 |
| NEWCEO | 0.043 (0.54) | 0.080 | -0.013 (-0.73) | 0.017 |
| CEOBoard | 0.036 (0.65) | 0.076 | 0.001 (0.07) | 0.016 |
| CEORCOM | -0.172† (-1.90) | 0.090 | -0.016 (-0.79) | 0.020 |
| DirCOMP | -0.176*** (-3.39) | 0.051 | 0.042** (3.65) | 0.011 |
| Ln(TA) | -0.047** (-1.79) | 0.026 | -0.088 (-1.49) | 0.006 |
| CEOCComp | 0.130** (2.29) | 0.058 | -0.006 (-0.54) | 0.013 |
| LEV | -0.574*** (-5.82) | 0.099 | 0.199*** (9.17) | 0.021 |
| SD(Daily Returns) | 0.553 (1.42) | 0.389 | 0.299*** (3.50) | 0.086 |
| Wald χ^2 (P Value) | 152.10*** (0.000) | | 179.30*** (0.000) | |
| Fixed Effects | Yes | | Yes | |
| Industry Effects | Yes | | Yes | |
| N | 391 | | 391 | |

†denote significance at 10%, ** denote significance at 5% and *** denote significance at 1% level

| Table 12: Check for Multicollinearity | | |
|--|------|-----------|
| | VIF | Tolerance |
| Top5InstOwn | 3.59 | 0.277 |
| Top20InstOwn | 2.81 | 0.356 |
| Top20BlkOwn | 5.44 | 0.184 |
| BDS | 2.28 | 0.184 |
| PNED | 1.70 | 0.589 |
| DirOwn | 2.43 | 0.411 |
| DirCOMP | 3.03 | 0.329 |
| CEOComp | 3.40 | 0.294 |
| LEV | 1.41 | 0.709 |
| Ln(TA) | 3.58 | 0.279 |
| FMRISK | 1.08 | 0.927 |

Table 13: Regression between Company Performance Variables (Tobin's Q, ROA) as dependent variable and Ownership, Board Characteristics and Insider Characteristics as Independent variables

Tobin's Q is the calculated as follows, (Price*no. of shares outstanding + (net current liabilities + 1/t debt) divided by total assets. Ln(CEOCComp) is the natural logarithm of the total compensation received by the CEO. InstOWNTop5 is the per cent of shares held by top five institutional shareholders. InstOWNDiff520 is the difference between proportion of shares held by top 20 institutional shareholders and top 5 institutional holders. BlkOwn is the proportion of shares held by blockholders that are top 20 shareholders. CEOBoard is equal to "1" if the CEO is the member of the board, otherwise "0". NEWCEO is equal to "1" if the CEO is new, otherwise "0". BDS is the natural logarithm of the board size. PNED is the proportion of the board members that are non-executive/independent. DirOWN is the proportion of the shares held by the directors. DirCOMP is the natural logarithm of the total director compensation. CEOROM is the dummy variable equal to "1" if CEO is on the remuneration committee, other "0". Ln(TA) is the natural logarithm of the total assets. LEV is the proportion of total debt to total assets and Sd(Daily Return) is the standard deviation of the daily stock returns.

| | Ln(CEOCComp) | Robust Std. Error | Tobin's Q | Robust Std. Error |
|---|------------------------------------|--------------------------|------------------------------------|--------------------------|
| Constant | -2.16 (-1.00) | 2.16 | 2.98† (1.95) | 1.525 |
| Ln(CEOCComp) (L1) | 0.48** (2.77) | 0.175 | | |
| Tobin's Q | 0.05 (0.33) | 0.140 | | |
| Tobin's Q (L1) | | | 0.576** (2.77) | 0.208 |
| Inst20Own | 0.73† (2.10) | 0.666 | -1.85** (-2.12) | 0.874 |
| BlkOwn | -0.05 (-0.03) | 1.476 | -1.63 (-1.55) | 0.992 |
| BDS | 0.17 (0.65) | | 0.09 (0.74) | 0.131 |
| PNED | 0.08 (0.24) | 0.360 | -0.22† (-1.88) | 0.0116 |
| DirOWN | -0.65** (-2.75) | 0.239 | -0.24 (-1.60) | 0.147 |
| NEWCEO | 0.08 (0.70) | 0.114 | -0.01 (-0.33) | 0.032 |
| CEOBoard | 0.56*** (3.12) | 0.181 | -0.026 (-0.28) | 0.092 |
| CEORCOM | 0.124 (0.47) | 0.262 | -0.10** (-2.70) | 0.040 |
| DirCOMP | 0.07 (1.01) | 0.075 | 0.03 (0.64) | 0.052 |
| Ln(TA) | 0.56*** (4.44) | 0.125 | -0.19** (-2.96) | 0.064 |
| CEOCComp | | | 0.06** (2.24) | 0.025 |
| LEV | -0.24† (-1.76) | 0.136 | -0.45*** (-3.34) | 0.135 |
| SD(Daily Returns) | 1.12** (2.46) | 0.435 | 1.16*** (5.39) | 0.216 |
| Wald χ^2 (P Value) | 124.51*** (0.000) | | 188.23*** (0.000) | |
| Fixed Effects | <i>Yes</i> | | <i>Yes</i> | |
| Industry Effects | <i>Yes</i> | | <i>Yes</i> | |
| N | 325 | | 325 | |

†denote significance at 10%, ** denote significance at 5% and *** denote significance at 1% level