

DIRECTORS' REMUNERATION AND CORPORATE GOVERNANCE IN MALAYSIA

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ABSTRACT

Using a cross-sectional analysis of 428 listed firms on the Bursa Malaysia for the financial year ending 2008, this study examines the association between directors' remuneration, firm performance, and corporate governance structures. The results show that directors' remuneration is positively and significantly related to firm performance, CEO tenure, board size, and the existence of remuneration committee. The study also finds that directors' remuneration is negatively and significantly related to board independence. Consistent with prior research, the study finds a positive and significant association between directors' remuneration and firm size and a firm's growth opportunity. The findings can be useful to regulators since the recent proposal by market regulators to limit director's influence over remuneration packages and require disclosures of directors' remuneration. The study also contributes to the growing literature on executive and directors' remuneration and it provides international evidence on the effects of corporate governance reforms in recent years in influencing boardroom pay. Although the results of prior studies are largely supported, the period of analysis is short. The use of panel data allows us to assess changes in corporate governance and directors' remuneration over time in a more meaningful way. Further, the potential limitations of using total directors' remuneration as the only dependent variable may not provide us a more meaningful insight of the impact of other components of total remunerations such as bonuses, salaries, and other benefits have on firm performance.

Keywords: directors' remuneration, board of directors, firm performance, compensation.

1. Introduction

Recent financial crisis has raised serious criticism particularly regarding the role of corporate governance in determining executive compensation (Fahlenbrach and Stulz, 2011; Bebchuck *et al.*, 2010; Kirkpatrick, 2009). Remuneration and incentive systems have been shown to play a key role in influencing risk taking behaviors of managers in recent years. Empirically, the positive link between compensation and risk-taking has remained strong throughout recent financial crisis as reported by several studies (e.g., Adams, 2012; Chesney *et al.*, 2012; Bolton *et al.*, 2011; Balachandran *et al.*, 2010). For more than a decade, executive remuneration has also attracted unfavorable attention from regulators and media, who have focused on the large amounts received by executives, both in absolute terms and in comparison with the pay received by lower level employees. As a result, remuneration of top management has been subject to continued regulation, with government directives and voluntary codes focusing on the nature of pay disclosure¹.

Improvement of corporate governance standards and disclosures has been at the forefront of international debate in recent times, and remuneration or compensation of directors and executives is one of the key issues in this debate. For instance, in 2003, the Australian Securities Exchange (ASX) reinforced the corporate governance principles and at the same time responded to community concerns with a policy change that has resulted in greater disclosure about CEO remuneration. Since May 2003, listed companies on the ASX have been required to make full disclosure about the remuneration packages of newly appointed CEOs. Such disclosure now includes information about the components of the pay package which might govern the actions of the CEO and drive levels of performance. While in the United Kingdom, the Directors' Remuneration Report Regulations were introduced in 2002 to further strengthen the powers of shareholders in relation to directors' pay. The regulations increase the amount of information shareholders are given on directors' remuneration, certain disclosures, as well as performance graphs. Shareholders also may vote in an advisory capacity to approve the directors' remuneration report. The Combined Code on Corporate Governance (FRC, June 2006) also recommends that boards establish a remuneration committee to help the board design remuneration packages aligning to their interests with those of shareholders.

In July 2006, the Securities and Exchange Commission in the United States voted unanimously to revise the disclosure requirements for executive and director compensation, related-party transactions, director independence and other corporate governance matters. The rules require, among others, firms to disclose dollar amounts for salary, bonus, stock awards, option awards, non-stock incentives, pension plans and total compensation. The Malaysian Code on Corporate Governance (MCCG, amended 2012) recommends that directors' remuneration packages should be aligned with the business strategy and long-term objectives of the company. Board remuneration also should reflect the board's responsibilities, expertise and the complexity of the firm's activities. As part of corporate governance best practices, listed firms are encouraged to establish a

¹ In 2009, the US economic stimulus bill, the American Recovery and Reinvestment Act of 2009 includes a provision limiting executive compensation for TARP (Troubled Asset Relief Program) recipients. The provision includes limit on compensation excluding incentive for senior executive officers to take unnecessary and excessive risks, non-payment of bonuses, retention rewards or incentive compensation to senior executive officers, and non-payment of golden parachute to senior executive officers.

remuneration committee and explain director remuneration procedures. As stipulated in the Listing Requirements of Bursa Malaysia 2001, listed firms are also required to disclose the details of the remuneration of each director in its annual reports.

These regulatory changes are part of the efforts to address the widespread criticisms of previous remuneration practices by seeking to make the pay determination process more transparent, more accountable, and less subject to influence of directors. Given the focus on remuneration practices and their relations to corporate governance, this current study makes a timely contribution to the debate. This study attempts to document empirical evidence on the association between corporate governance mechanisms and boardroom pay of Malaysian firms. This study is particularly important due to heightened attention given by numerous stakeholders, such as regulators, shareholders, and employees on excessive director remuneration in recent years. This study also can inform the debate surrounding optimal governance, board and remuneration practices.

The aim of this study is to provide understanding of boardroom pay in Malaysia in several ways. Most studies have been concerned with the remuneration in developed economies such as the United States and the United Kingdom. This study examines remunerations of corporate directors in Malaysia, a country with a similar form of corporate governance regime as that of the United Kingdom². This study also draws upon a much wider range of firms including very large firms to smaller sized firms listed on the Bursa Malaysia. Unlike other studies, this study attempts to capture different dimensions of governance practices and ownership structure variables, and uses mandatory disclosed remuneration data in annual reports rather than data collected via surveys and interviews.

The main contributions of this study are twofold. First, it provides estimates of the statistical links between boardroom pay, board control, and monitoring. Second, it provides Malaysian evidence on the effects of corporate governance reforms in influencing boardroom pay. The analysis allows international comparison and evaluation of the robustness of other existing research. The remainder of this paper is structured as follows: The next section briefly reviews existing remuneration literature. Section 3 describes the method employed in the study. The expected empirical results are reported in the fourth section while in the final section conclusions are drawn and the implications of the study are discussed.

2. Literature Review and Research Hypotheses

2.1 Remuneration and Research Perspectives

Agency theory addresses the issue of how the interests of less informed owners can be aligned with that of powerful and sometimes opportunistic executives through pay-for-performance (Fama, 1980; Fama and Jensen, 1983; Baker *et al.*, 1988; Jensen and Murphy, 1990). Agency theory also suggests a number of mechanisms to alleviate agency problems. These mechanisms include board (i.e., smaller boards and greater board independence) and ownership structures (i.e., managerial ownership) (Yermack, 1996; Rosenstein and Wyatt, 1990; McConnell and Servaes, 1990). Pay-for-performance

² The recommendations and provisions of the Malaysian Code on Corporate Governance are derived from Greenbury Committee, Hampel Committee, Cadbury Committee, and Higgs Committee which led to the United Kingdom's Combined Code on Corporate Governance.

remedy as suggested by agency theory has been challenged in recent years due to exorbitant amount of compensation packages paid to corporate executives (Friedrichs, 2009). Agency theory has also been criticized for its inability to explain cross-country differences (Haubrich and Popova, 1998; Bruce *et al.*, 2005; Filatotchev and Allcock, 2010).

Organizational theorists have addressed some of the limitations of agency theory by examining executive remuneration as a political process, and thus they take a descriptive approach to the issue. These scholars have focused particularly on CEO power and board in investigating factors that may influence the executive remuneration decisions (see for example Finkelstein, 1992; Boyd, 1994; Zajac and Westphal, 1996; Elhagrasy *et al.*, 1998 and 1999). One of the arguments presented is that CEOs are in a unique position to determine their own compensation, based on their ability to influence board behavior. Literature suggests a number of factors that potentially relate to CEO power. These factors include CEO tenure, CEO ownership, board size, firm size, and board ownership (Elhagrasy *et al.*, 1998 and 1999).

Previous research has identified systematic country differences in areas such as corporate law, investor protection, and firm ownership structures (La Porta *et al.*, 1997, 1998 and 1999; Gugler, 1999). As a result, the effect of agency cost and CEO power may be mediated by country-specific factors, such as national culture, business practices, national tax incentives, and differences in national legal structures. Factors such as the location of the headquarters and foreign board membership might also have an impact on the level of executive remuneration (Elston and Goldberg, 2003). The existing corporate governance literature has largely dealt with an analysis of institutional arrangements in American, British, Australian, German and Japanese firms, with much less attention paid to firms from emerging markets and their executives and boards of directors. Sun *et al.*, (2010) point out that executive remuneration research in Asia has not received attention from Western researchers and publications, making Asia a fertile ground for future research in executive remuneration. Further, due to structural differences in the national political economies, executive remuneration needs to be understood in the context of specific legal, political, and regulatory systems.

Against this backdrop, it is far less known about executive pay in developing markets such as Malaysia. In Malaysia, prior findings on board remuneration have yielded mixed results. For instance, Dogan and Smyth (2002) report that board remuneration are positively related to sales turnovers but negatively associated with ownership concentration for Malaysian listed firms over a period of 1989 to 2000. Using a sample of 100 public-listed companies in Malaysia, Sim (2004) finds a weak but positive relationship between directors' remuneration and firm performance. Abdullah (2006) documents a negative and significant association between directors' remuneration and lagged profitability for distressed firms before the incorporation of the Malaysian Code on Corporate Governance into the Listing Requirements of the Exchange in 2001. Further, Abdullah (2006) also finds a negative relationship between board independence, the extent of outside directors' interests and directors' remuneration.

2.2 Research Hypotheses

From an agency theory perspective, the link between firm performance and directors' pay should provide an important incentive mechanism for corporate success. However,

research on the pay-performance relationship has yielded inconsistent results. Existing empirical evidence shows a weak but significant positive relationship between profitability and CEO pay (e.g., Jensen and Murphy, 1990; Murphy, 1999; Core *et al.*, 1999). Several empirical studies using non-US data also consistently document the positive pay-performance relationship. For instance, using Australian and Japanese data respectively, Merhebi *et al.*, (2006) and Kato and Kubo (2006) both confirm the positive pay-performance relationship. The positive pay-performance relationship supports the role played by compensation in aligning managerial interests with those of the shareholders, hence reducing agency costs. Several studies, on the other hand, do not find a positive relationship. For example, Core *et al.*, (1999) report that excess CEO compensation has a negative association with subsequent stock returns as well as operating performance. Similarly, Brick *et al.*, (2006) also find that there is a negative relationship between excess director compensation and firm performance. The negative association between excess compensation and firm performance is consistent with rent extraction and managerial power argument (Bebchuk *et al.*, 2002; Bebchuk and Fried, 2003). Other studies such as by Firth *et al.*, (1995) and Fernandes (2008) do not find any link between pay and performance for Norwegian and Portuguese firms respectively. Randoy and Nielsen (2002) find a positive and significant correlation between accounting performance and CEO compensation. However, when examined in a multivariate setting, the positive significance disappears. Based on the standard agency theory model that there is a positive link between firm performance and pay, the study therefore proposes the following hypothesis.

Hypothesis 1: There is a positive relationship between financial performance and directors' remuneration.

Since salary negotiation is really a bargaining process, the directors' relative bargaining power is likely to come into play. That is, the more power, the greater the bargaining strength and higher potential remuneration. The CEO's dominance of the board of directors in most firms has been widely recognized (e.g., Vance, 1983; Whisler, 1984; Lorsch, 1989; Crystal, 1991; Hermalin and Weisbach, 1998 and 2000; Bebchuk *et al.*, 2002). Remuneration is one area in which CEOs exercise their power over the board. To the extent that boards concern themselves with executive remuneration, they may favor high remuneration because it enhances the status of directors (Finkelstein and Hambrick, 1988) and of the firm (Crystal, 1991). Outside directors, who more often than not are also CEOs of other firms (e.g., Booth and Deli, 1996; Brickley *et al.*, 1999), benefit from board norms of supporting the CEO's pay recommendation and from the linkage between CEO pay and director pay (Hallock, 1997; Cordeiro *et al.*, 2000). Inside directors stand to benefit directly from higher executive remuneration because of the proportional scaling of remuneration across hierarchical levels (Lambert, *et al.*, 1993; Conyon *et al.*, 2001; Ezzamel and Watson, 2002).

The CEO's control of director selection and boardroom pay helps explain the CEO's influence over the board on executive remuneration, and provides additional insight on the CEO's dominance of the board in general. Elhagrasy *et al.*, (1998, 1999) suggest CEO tenure and CEO ownership are related to CEO power. Empirical evidence related to CEO tenure in particular is somewhat mixed. Yermack (1995) finds that older CEOs and

CEOs with longer tenure receive more option awards. Hill and Phan (1991) suggest that long tenure helps directors influence the board through the director selection process. Hill and Phan (1991) also contend that through increased tenure, directors may gain control over the pay setting process and in turn design remuneration schemes to his or her preference. Moreover, Brick *et al.*, (2006) show that CEOs with longer tenure are rewarded with higher pay for possessing more valuable human capital. Finkelstein and Hambrick (1989) find a curve-linear relationship exist between CEO tenure and pay, while Hogan and McPheters (1980), O'Reilly *et al.*, (1988) and Attaway (2000) find no relationship between these two variables. Consistent with the majority of empirical findings indicating a positive association between tenure and pay, this study hypothesizes the following:

Hypothesis 2: There is a positive relationship between CEO tenure and directors' remuneration.

Prior studies show that larger boards are associated with ineffective monitoring and are negatively related to firm performance (Yermack, 1996; Conyon and Peck, 1998; Dalton *et al.*, 1999; Core *et al.*, 1999). Yermack (1996) finds that the pay-performance relationship for CEOs decreases with board size, suggesting that small boards give CEOs larger incentives and force them to bear more risks than do large boards. Holthausen and Larcker (1993a) argue that board size might influence directors' pay, in particular that of the CEO. Other studies such as Holthausen and Larcker (1993b) and Core *et al.*, (1999) document a positive association between board size and executive remuneration. Similarly, Coakley and Iliopoulou (2006) find that larger boards award CEOs significantly higher bonuses and salary post mergers and acquisitions for 100 completed bids in the UK over the period of 1998-2001.

More recently, Ozkan (2011) documents a positive and significant association between CEO compensation and board size. He argues that coordination and communication problems associated with larger boards hinders board effectiveness, which results in higher compensation for CEOs as the number of board members increases. This is consistent with the suggestion that larger boards are easily controlled by the CEO and the CEO may be able to "divide and rule" (Jensen, 1993). Further, Pfeffer (1981) argues that inside board members are more loyal to CEOs and therefore CEOs are more likely to exert greater influence over them than over outside directors. This current study takes the view of the agency theory whereby larger boards perceived as weak governance and poor monitoring by the board of directors. The agency view is also consistent with organizational behavioral studies which suggest that productivity decreases when work groups get too large (Latane *et al.*, 1979; Hackman, 1990). If increased board size leads to less effective monitoring, director remuneration is expected to be positively associated with the number of directors on the board. Hence, Hypothesis 3 is stated as follows:

Hypothesis 3: There is a positive association between board size and directors' remuneration.

Prior studies have shown that ownership structure is one of the determinants of executive remuneration. Intuitively, directors can determine their own remuneration packages if they have some ownership in the firm. Allen (1981) examines CEO power by analyzing the family stock ownership of the CEO and other directors of the firm and he finds that executive remuneration is highest in management-controlled firms. Holderness and Sheehan (1988) provide similar evidence in which managers who are majority shareholders receive marginally higher salaries than other officers. Lambert *et al.*, (1993) show that CEO compensation is lower when CEO's ownership is higher and when there is an internal member on the board other than CEO who owns at least 5% of the shares. Finkelstein and Hambrick (1988) also find that executive remuneration is negatively related to CEO family holdings and CEO pay increases is more likely in management-controlled firms. McConaughy (2000) confirms the findings of Finkelstein and Hambrick (1988) where he shows that family CEOs' compensation levels are lower and that they receive less incentive-based pay, confirming the family incentive alignment hypothesis. Similarly, Attaway (2000) finds a similar effect of managerial ownership on executive remuneration. Werner *et al.*, (2005) report that ownership structure not only affects top management's pay, but also the pay of all levels of employees. Overall, the impact of ownership structure on executive pay is unclear given the mixed nature of the empirical results. Following incentive-alignment hypothesis as suggested by McConaughy (2000) and Attaway (2000), this current study predicts that managerial ownership, proxied by directors' shareholdings is negatively associated with directors' remuneration. Hypothesis 4 is therefore stated as follows:

Hypothesis 4: There is a negative association between directors' shareholdings and directors' remuneration.

Agency literature also suggests that board independence from management provides, among other things, effective monitoring and controlling of firm activities in reducing opportunistic managerial behaviors and expropriation of a firm's resources (Fama and Jensen, 1983a, b; Byrd and Hickman, 1992). Boards of directors not only perform oversight functions, they also play an important role in designing effective pay contract so that directors and management have an incentive to serve in the best interest of shareholders (Jensen, 1993; Finkelstein and Hambrick, 1996; Daily *et al.*, 1996; Conyon and Peck, 1998). Several studies have shown that board structure explains cross-sectional variation in compensation. Hallock (1997) finds that when board has directors with interlocking relations (i.e., the CEO of company X sits on the board of company Y, and the CEO of company Y sits on the board of company X), compensation to both CEOs is higher. Core *et al.*, (1999) examine the relationships between board composition, ownership structure, and CEO pay. Their results suggest that firms with weaker governance (i.e., less independent board) tend to pay their CEOs higher compensation packages. This is consistent with the view that insider-dominated boards are likely to be more loyal to management, and the CEO can exert relatively more influence over inside directors as opposed to outside directors (Pfeffer, 1981; Zajac and Westphal, 1994). Brick *et al.*, (2006) provide evidence that excessive compensation for both CEOs and directors is associated with underperformance. They interpret their findings as evidence of cronyism between CEOs and directors. Ryan and Wiggins (2004) find that independent

directors have a bargaining advantage over the CEO, resulting in compensation packages which are more closely aligned with shareholders' interests.

A further independence issue relates to the ability of a board of directors to monitor when the firm has different individuals holding the positions of the board chair and the CEO. The literature and governance guidelines show that a board's ability to perform its governance role is weakened when the CEO is also a board chair (Crystal, 1991; Rechner and Dalton, 1991; Jensen, 1993; the Cadbury Committee, 1992; the Malaysian Code on Corporate Governance, 2000). Further, a number of empirical studies also suggest that agency problems are higher when the CEO is also board chair (Fama and Jensen, 1983a; Yermack, 1996). Core *et al.*, (1999) and Cyert *et al.*, (2002) both show that the level of CEO compensation is higher when the CEO is also board chair while Grinstein and Hribar (2004) find that the size of bonuses CEOs receive is higher when the CEO is also board chair. Since greater board independence results in compensation that is closely aligned with shareholders' interests, hypotheses 5 and 6 state as follows:

Hypothesis 5: There is a negative association between the proportion of non-executive directors on boards and directors' remuneration.

Hypothesis 6: There is a negative association between the separation of the board chair and the CEO positions and directors' remuneration.

Deliberation about and the determination of top management pay is often delegated to a subcommittee of the board of directors. This board sub-committee plays an important role because it must be concerned with setting and structuring pay packages that provides a viable mechanism for aligning the interests of managers and shareholders (Conyon *et al.*, 1995; Ezzamel and Watson, 1997; Conyon and Peck, 1998; Main and Johnston, 1993). The theoretical importance of a remuneration committee is clear. In its absence, there likely exists an opportunity for executives to award themselves pay raises and this may go against the interest of the firm's shareholders. Williamson (1985) remarks that the absence of an independent remuneration committee may be akin to an executive's writing his employment contract with one hand and then signing it with the other. Main and Johnston (1993, p. 353) states that "there are strong theoretical reasons for expecting a board sub-committee such as the remuneration committee to exert an influence on top executive pay". Main and Johnston (1993) find evidence that management pay is significantly higher in companies that establish remuneration committees. Given that the aim of remuneration committee is to design suitable reward packages, its existence and effectiveness is likely to be related to its structure and membership. The members of a firm's remuneration committee should be independent director and are expected to act as objective decision makers who will ensure that compensation for executives and directors is set at appropriate levels (Bowen, 1994; Mangel and Singh, 1993; Singh and Harianto, 1989). In addition to agency reasons mentioned above, recent corporate governance reforms (i.e., the Cadbury Committee, 1992; the Malaysian Code on Corporate Governance, 2000) which require greater compensation disclosures leads this study to expect that the existence of remuneration committee links to director compensation. This gives rise to the following hypothesis:

Hypothesis 7: There is a negative association between the existence of the remuneration committee and directors' remuneration.

3. Data and Research Method

3.1 Sample and Data Collection

The sample comprises 428 non-financial public listed companies in Malaysia whose annual reports are available in 2008. The firms in the sample are either listed on the Main Board or the Second Board of the Bursa Malaysia. Both financial and corporate governance variables are hand-collected from the published annual reports. In Malaysia, all listed companies are required to disclose details of director remuneration and provide remuneration bands in range of RM50000 (less or more). Director remuneration includes salaries, fees, and other benefits so it represents the total remuneration received by boards of directors.

3.2 Measurement of Variables

The dependent variable, total directors' remuneration in 2008, includes all major components of both executive and non-executive directors' remuneration including salary, bonuses, fees, and benefits-in-kind. It is noted that annual reports of Malaysian listed firms do not provide a consistent reporting of separate components of directors' remuneration. In order to reduce heteroscedasticity, the natural log of total directors' remuneration is used as the dependent variable.

This study uses the return on assets (ROA) as a proxy for financial performance. CEO tenure is the number of years the current CEO (year 2008) has held the CEO position, while board size is the total number of directors on the board of directors. Inside directors' ownership is the percentage of total equity held by inside directors at year end 2008. Two measures are used to measure board independence namely the proportion of non-executive directors on boards and a dummy variable of 1 if a firm separates the positions of board chair and the CEO, 0 if otherwise. The remuneration committee variable is defined as a dummy variable equals to 1 if a firm reports the existence of such a committee in its annual report and to 0 if otherwise.

3.3 Control Variables

The study includes several control variables that are likely to influence directors' remuneration. These variables include firm size, leverage, and growth opportunities. The study also controls for industry differences in the demand for directorial talent or expertise. Prior studies have shown that firm size generally reflects organizational complexity. Larger firms are likely to have larger number of directors on their boards and may pay higher directors' remuneration. Additionally, Jensen and Murphy (1990) also show that CEOs in larger firms receive greater levels of pay. This study measures firm size as the natural logarithm of the book value of total assets. Jensen (1989) argues that firms with high debt is likely to have less free cash flow, and thus are less likely to pay a high level of remuneration. Leverage is measured using the ratio of total liabilities to total assets at the end of 2008. Smith and Wyatt (1992) find that firms with a higher market to book ratio use more performance-based pay. A more recent study by Walker (2010) finds that high-growth firms pay their CEOs a greater proportion of performance-based pay. As

a proxy for growth opportunities, the study uses the ratio of market value of equity to book-value of equity. Finally, industry effects are controlled for by means of sectors classified by both the Main and Second Boards of Bursa Malaysia. Table 1 describes the variables used in this study.

**** INSERT TABLE 1 ABOUT HERE ****

4. Methodology

A cross-sectional ordinary least square (OLS) regression model is used to test the hypotheses presented in Section 2. Drawing on previous research on corporate governance and remuneration, the following model is developed with a variety of independent variables.

$$\text{Directors' remuneration}_i = \alpha + \beta_1 \text{ Firm Performance} + \beta_2 \text{ CEO Tenure} + \beta_3 \text{ Board Size} + \beta_4 \text{ Insider Ownership} + \beta_5 \text{ Board Independence} + \beta_6 \text{ CEO Duality} + \beta_7 \text{ Remuneration Committee} + \beta_8 \text{ Leverage} + \beta_9 \text{ Firm Size} + \beta_{10} \text{ Growth Opportunity} + \beta_{11} \text{ Industry Dummies} + e_i$$

5. Results

5.1 Descriptive statistics and correlations

Table 2 provides descriptive statistics for the variables used in the study and Table 3 reports correlations³. Panel A of Table 2 shows that total directors' remuneration ranges from RM73,000 to RM82,000,000 with an average of about RM3,000,000. The average number of years the current CEO serves on board is approximately 9 years with a minimum of 1 year and a maximum of 42 years. The number of directors on Malaysian boards is between 3 and 15 with an average board size of 7 directors. The mean percentage of directors' shareholding is about 11 percent. Sixty-three percent of overall board members are non-executive directors. Panel B of Table 2 indicates that the majority of firms in the sample separate the positions of the board chair and the CEO (about 84 percent of the firms practice dual leadership). There are 393 firms in the sample have formally established a remuneration committee (92 percent of total firms in the sample). Panel C of Table 2 shows that just over 80 percent of the firms in the sample represent four major sectors classified by the Bursa Malaysia namely industrial products (114 firms), trade and services (103 firms), properties (71 firms) and consumer products (59 firms). The remaining firms in the sample are in sectors such as constructions, plantations, technology, hotels, and infrastructure.

**** INSERT TABLE 2 ABOUT HERE ****

Table 3 reports the correlation between the variables used in the study. As suggested by Hypothesis 1, the study finds a positive and significant correlation (0.273) between accounting firm performance (ROA) and directors' remuneration. Randoy and Nielsen

³ The study performs a number of diagnostics on the results reported in Table 2, 3, and 4. The statistical package used calculates the exact correlation regardless of whether the variables are dummy or continuous. Standard diagnostic tests indicate that multicollinearity is not a serious problem.

(2002) also find similar correlation between ROA and CEO compensation for Norwegian and Swedish firms. Consistent with the prediction of Hypothesis 2, the correlation shown in Table 3 between CEO tenure and directors' remuneration is positive and significant (0.179). Randoy and Nielsen (2002), on the other hand, report that the correlation between CEO tenure and compensation is negative and significant while Finkelstein and Hambrick (1989) show no significant correlation between CEO tenure and total cash compensation. In line with Hypothesis 3, the study finds a strong positive correlation (0.371) between board size and directors' remuneration. There is a weak correlation between insider ownership and directors' compensation (-0.051). As suggested by Hypothesis 5, the study finds a negative and significant correlation (-0.219) between board independence and directors' remuneration, thus supports the view that greater board independence reduces CEO power and bargaining advantages of insider-dominated boards. The correlations between directors' remuneration, CEO duality and the existence of remuneration committee are weak (-0.026 and -0.016 respectively). The study also finds positive and significant correlations between directors' remuneration, firm size and growth opportunity (0.444 and 0.161 respectively).

**** INSERT TABLE 3 ABOUT HERE ****

5.2 Regression analysis

Table 4 presents multivariate regression results for directors' remuneration. The results in Table 4 show the association between total directors' remuneration and both hypothesized and control variables derived from the extant literature as independent variables. The model is significant ($p < 0.01$), with an adjusted R-square of 39.1 percent. Recall that the study predicts that directors' remuneration is positively related to firm financial performance, CEO tenure, and board size. The study also posits that directors' remuneration is negatively associated with insider shareholdings, board independence, CEO duality, and the existence of remuneration committee. The study also includes several control variables commonly found in prior studies that are likely to influence remuneration. These control variables include firm size, leverage and firm's growth opportunity.

**** INSERT TABLE 4 ABOUT HERE ****

The regression results in Table 4 show that there is a strong positive relationship between directors' remuneration and a firm's accounting performance, measured by the return on assets (ROA) (coefficient = 1.232; $p < 0.01$). Hypothesis 1 is, therefore, supported. The positive pay-performance relationship confirms the role played by remuneration in aligning both managerial interests (i.e., CEO and inside directors) and outside directors' interests with those of the shareholders. The positive association between remuneration and firm's financial performance is consistent with the findings of a number of prior studies in developed markets (e.g., Core *et al.*, 1999; Merhebi *et al.*, 2006; Kato and Kubo, 2006). Hypothesis 2 predicts that the relationship between directors' remuneration and CEO tenure will be positive. Consistent with the prediction of Hypothesis 2, the association between directors' remuneration and CEO tenure is significant and positive (coefficient = 0.012; $p < 0.01$). This finding supports the view that

the longer CEOs remain in their position, the more bargaining power they have with regard to pay setting process and remuneration packages that reflect their preferences (Hill and Phan, 1991; Yermack, 1995).

In line with Hypothesis 3, the results in Table 4 shows a strong positive association between board size and directors' remuneration (coefficient = 0.096; $p < 0.01$). From an agency perspective, larger boards hinder board effectiveness. This may result in higher remuneration particularly for CEOs as larger boards are easily controlled by CEOs (Jensen, 1993). Other studies document similar findings include Core *et al.*, (1999) and Ozkan (2011). The results in Table 4 also reveal that insider ownership (i.e., inside directors' shareholdings) has no significant effect on directors' remuneration, hence Hypothesis 4 is not supported. This finding does not support the incentive-alignment hypothesis in which insiders, particularly the CEO, have greater incentives to maximize firm value, therefore, need fewer compensation-based incentives (McConaughy, 2000; Attaway, 2000).

Recall that Hypothesis 5 predicts that board independence is inversely related to directors' remuneration. In line with Hypothesis 5, the study finds a strong negative association between board independence (i.e., the percentage of non-executive directors on the board of directors) and directors' remuneration. The negative relationship suggests that greater board independence provides effective oversight function, particularly on matters concerning designing pay contracts and packages. This finding confirms the view that independent directors have a bargaining advantage over the CEO, resulting in compensation closely aligned with shareholders' interests (Core *et al.*, 1999; Ryan and Wiggins, 2004). The study also finds a weak support for Hypothesis 6, which predicts that directors' remuneration is negatively associated with the separation of board chair and CEO positions. The weak relationship between these two variables is likely due to the presence of higher number of independent directors on boards which could be used as a substitute monitoring mechanism in controlling level of boardroom pay.

Finally, in contrast to the prediction of Hypothesis 7, the study finds a significant positive relationship (coefficient = 0.258; $p < 0.05$) between directors' remuneration and the existence of remuneration committee. The positive association between the establishment of remuneration committee and directors' remuneration found here is consistent with findings documented by Main and Johnston (1993) and Conyon and Peck (1998). This finding indicates that recent regulations governing top management pay and board remuneration may not help reduce levels of pay or achieve efficiencies in compensation contracts (Anderson and Bizjak, 2003).

In keeping with the literature, the study includes several control variables in the regression analysis. The regression results in Table 4 show significant positive association between firm size and growth opportunity. These results are consistent with prior evidence suggesting that larger firms typically have larger boards and may pay higher directors' remuneration (e.g., Daily *et al.*, 1998; Core *et al.*, 1999; Randoy and Nielsen, 2002) and high-growth firms are more likely to use incentive-based compensation than low-growth firms (Smith and Watts, 1992; Walker, 2010). The

unreported results also show that directors' remuneration is not significantly related to all industry dummies⁴.

6. Conclusion

Corporate governance literature suggests that the agency conflict between management and owners can be alleviated through a well-designed remuneration packages. Abundance of past research has also concentrated on the link between executive compensation and its determinants such as firm performance, firm-specific factors and corporate governance mechanisms. While past studies have investigated the association between executive remuneration, measured in several ways (e.g., CEO remuneration, cash-based and equity-based remuneration), and these determinants, this current study attempts to examine the link between firm performance, corporate governance structures, and directors' remuneration in Malaysia. The issue of directors' remuneration has not been explored in depth in the context of developing markets where good corporate governance practices are still evolving. The study contributes to the growing literature on directors' remuneration and it provides international evidence on the effects of corporate governance reforms in recent years in influencing boardroom pay.

Generally, the results of the study are consistent with the expectations that firm performance, CEO tenure, board size, board independence, the existence of remuneration are significantly associated with directors' remuneration. Specifically, the results show that directors' remuneration is positively and significantly related to a firm's accounting performance (ROA), CEO tenure, board size, and the existence of remuneration committee. The study finds that directors' remuneration is negatively and significantly related to board independence. Consistent with prior research, the study also finds a positive and significant association between directors' remuneration and firm size and firm's growth opportunity.

While the study makes an important contribution to the corporate governance and remuneration debate, some limitations inherent in the study deserve to be mentioned so that these limitations can be addressed in future research. First, the period of analysis can be extended to include panel data so that directors' remuneration can be estimated or analyzed in a more meaningful way. Although, it poses some challenges due to hand-collected remuneration data, corporate governance recommendations in recent years have called for a full disclosure of executive pay practices in light of recent controversy concerning excessive executive pay. Second, this study considers only total directors' remuneration. The definition of total remuneration can also be broken into several components such as bonuses, benefit-in-kind, salaries, and pension benefits. Several studies from developed markets examine the effectiveness of remuneration committee which includes its composition and its independence from the CEO is likely to provide insights on how remuneration packages are designed and decided. Finally, there can be methodological extensions of the study. A stimulus equation framework to control for endogeneity problems commonly exist in corporate governance studies, a non-linear pay-performance relationship, and market-based performance measures may increase robustness of the study.

⁴ In order to have a parsimonious regression model and also due to their non-significant associations with director remuneration, the industry dummy variables are excluded and the model is re-run. The results remain quantitatively and qualitatively unchanged.

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Table 1: Description of variables used in the study

Variables	Description
Total directors' remuneration	The natural log of total directors' remuneration (salary, bonuses, fees and benefit-in-kind).
Firm performance	Return on assets (ROA) (Net Income/Total assets).
CEO tenure	The number of years the current CEO has held the CEO position.
Board size	The number of directors on the board of directors.
Insider ownership	The percentage of total equity held by inside directors at year end.
Board independence	The proportion of non-executive directors on the board of directors.
CEO Duality	A dummy variable of 1 if a firm separates the positions of board chair and the CEO, 0 if otherwise.
Remuneration committee	A dummy variable of 1 if a firm reports the existence of a remuneration committee in its annual report, 0 if otherwise.
Leverage	The ratio of total liabilities to total assets at the end of 2008.
Firm size	The natural logarithm of the book value of total assets.
Growth opportunity	The ratio of market value of equity to book-value of equity.
Industry dummies	A dummy variable of 1 if a firm is in industrial product sector, or in consumer product sector, or in construction sector, or in technology sector, or in trade and services sector, or in property sector, or in plantations sector, or in infrastructure companies sector, or in mining sector, or 0 if otherwise. Sectors are classified by Bursa Malaysia.

Table 2: Descriptive statistics (N=428 firms)

<i>Panel A: Continuous variables</i>					
Variables	Minimum	Maximum	Mean	Standard Deviation	Median
Total Remuneration (ringgit)	73,000.00	81,981,000.00	2,892,030.03	5,507,313.96	1,769,000.00
Executive directors' remuneration (ringgit)	0.00	80,999,000.00	2,543,108.94	5,419,475.61	1,465,324.50
Non-executive directors' remuneration (ringgit)	0.00	8,820,955.00	348,921.09	578,004.70	193,079.00
Fees (ringgit)	0.00	3,073,633.00	293,381.20	305,163.08	205,854.00
Salary & Allowance (ringgit)	0.00	65,382,000.00	1,781,613.60	3,508,522.99	1,184,000.00
Other emoluments (ringgit)	0.00	38,513,000.00	817,035.24	2,858,656.20	205,682.00
Firm Performance (ROA) (%)	-1.3981	0.9832	0.0366	0.1232	0.0412
CEO Tenure (years)	1.00	42.00	8.68	7.59	6.00
Board size (number)	3.00	15.00	7.58	1.81	7.00
Insider ownership (%)	0.00	66.40	11.18	14.94	3.85
Board independence (%)	0.1667	1.0000	0.6276	0.1666	0.6250
Leverage (%)	0.0011	7.7032	0.3656	0.5577	0.2832
Firm Size (Total Assets) (ringgit)	58,017,000.00	38,458,561,000.00	1,591,123,986.00	4,268,777,955.00	485,935,000.00
Growth opportunity (%)	-0.6019	8.9470	1.0167	0.8639	0.8218
<i>Panel B: Dichotomous variables</i>					
Variables	Yes	%	No	%	
CEO Duality	358	83.6	70	16.4	
Remuneration committee	393	91.8	35	8.2	
<i>Panel C: Industry Classifications</i>			Number of firms		
Constructions			35		
Hotels			5		
Industrial Products			114		
Infrastructure Companies			3		
Consumer Products			59		
Plantations			24		
Properties			71		
Technology			14		
Trade and Services			103		
Total			428		

Table 3: Correlation matrix for the variables used in the study (N=428 firms)

Variables	1	2	3	4	5	6	7	8	9	10	11
1 Total Remuneration	1.000	0.273**	0.179**	0.371**	-0.051	-0.219**	-0.026	-0.016	0.444**	0.000	0.161**
2 Firm Performance		1.000	0.071	0.107*	-0.063	-0.021	0.036	-0.061	0.127**	0.039	0.262**
3 CEO Tenures			1.000	0.122*	0.063	-0.133**	-0.068	-0.041	0.032	0.053	-0.092
4 Board size				1.000	-0.021	-0.061	0.177*	-0.013	0.301*	-0.055	0.073
5 Insider Ownership					1.000	-0.267**	-0.034	0.118**	-0.302**	-0.028	-0.051
6 Board Independence						1.000	0.161**	0.013	0.230**	0.027	-0.027
7 CEO Duality							1.000	0.029	0.098*	0.034	0.003
8 Remuneration Committee								1.000	-0.162**	0.027	-0.027
9 Firm Size									1.000	-0.011	0.058
10 Leverage										1.000	-0.013
11 Growth Opportunity											1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4: Regression results (N=428 firms)

Variables	Expected sign	Coefficients	<i>t</i> -statistics
Intercept	?	7.562	11.711 ^{**}
Firm performance	+	1.232	4.227 ^{**}
CEO tenure	-	0.012	2.540 ^{**}
Board size	+	0.096	4.719 ^{**}
Insider ownership	-	0.001	0.236
Board independence	-	-1.523	-6.857 ^{**}
CEO duality	-	-0.120	-1.267
Remuneration committee	-	0.258	2.032 [*]
Firm size	?	0.331	10.233 ^{**}
Leverage	?	0.018	0.298
Growth opportunity	?	0.086	2.073 [*]
Adjusted R-Square	0.391		
<i>F</i> -Statistics	28.398 ^{**}		

^{**} Significance level at p <0.01; ^{*} Significance level at p <0.05