DETERMINANTS OF DIRECTORS' REMUNERATION PACKAGES AMONG PUBLIC LISTED COMPANIES: MALAYSIAN EVIDENCE

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ABSTRACT

Studies conducted on the basis of agency theory and the recent developments of the managerial power theory have triggered many issues especially centered on the corporate governance mechanisms. Thus, this paper aims to investigate the effect of key variables – corporate governance structures, corporate performance, pay performance alignment policy and the use of remuneration consultants on directors' remuneration packages. The components of directors' remuneration packages tested are salary, fees, bonus, benefit-in-kind and other emoluments. The study also tests total directors' remuneration to investigate any significant different in the regression results. The study controls the effect of firm size and sector. Fourty one Malaysian public listed companies are selected based on the result from the survey conducted by the Minority Shareholder Watchdog Group (MSWG) and published in the Malaysian Corporate Governance Report.

Based on the multiple regression analysis, it is found that corporate governance structures – board size, board and remuneration committee independence and board diversity (gender and nationality) are significantly affect individual component of directors' remuneration packages. However, the impact of board diversity (nationality) on total directors' remuneration is insignificant. Corporate performance does affect the determination of total directors' remuneration for the component of other emoluments. The study also shows that companies that disclose pay performance alignment policy in the annual report do reward their directors according to what they declare with concentration on salary, fees and benefit-in-kind components without significantly affect the total directors' remuneration. The use of remuneration consultants does influence the design of directors' remuneration packages. Finally, the results show that agency theory and managerial power theory is relevant in partially explaining the components of directors' remuneration packages in Malaysia.

Keywords: Directors' remuneration, corporate governance, Malaysia

ABSTRAK

Kajian yang dijalankan berdasarkan teori agensi dan perbincangan terkini terhadap teori kuasa pengurusan telah mencetuskan banyak isu terutamanya tertumpu kepada aspek tadbir urus korporat. Oleh itu, kajian ini bertujuan untuk mengkaji kesan pembolehubah utama - struktur tadbir urus korporat, prestasi korporat, polisi pembayaran imbuhan berdasarkan prestasi dan penggunaan khidmat perunding ke atas setiap komponen pakej imbuhan pengarah. Komponen pakej imbuhan pengarah yang dikaji termasuklah gaji, yuran, bonus, manfaat berupa barangan dan emolumen lain. Kajian ini juga mengkaji jumlah imbuhan pengarah bagi mengenal pasti kewujudan perbezaan ketara dalam keputusan regresi. Kajian ini mengawal kesan saiz syarikat dan sektor. Empat puluh satu syarikat tersenarai di Malaysia telah dipilih berdasarkan hasil kajian yang dijalankan oleh Pengawas Pemegang Saham Minoriti (MSWG) dan disiarkan dalam Laporan Tadbir Urus Korporat Malaysia.

Berdasarkan analisis regresi, didapati bahawa stuktur tadbir urus korporat - saiz lembaga pengarah, kebebasan lembaga pengarah dan jawatankuasa imbuhan serta kepelbagaian lembaga pengarah (jantina dan kewarganegaraan) mempengaruhi dengan ketara setiap komponen pakej imbuhan pengarah. Bagaimanapun, kesan kepelbagaian lembaga pengarah (kewarganegaraan) terhadap jumlah imbuhan pengarah adalah tidak ketara. Prestasi korporat mempengaruhi penetapan jumlah imbuhan pengarah meliputi elemen emolument lain. Kajian ini juga menunjukkan bahawa syarikat yang menyatakan polisi pembayaran imbuhan berdasarkan prestasi di dalam laporan tahunan melaksanakan seperti yang dinyatakan dengan fokus kepada elemen gaji, yuran dan manfaat berupa barangan tanpa mempengarui secara ketara jumlah imbuhan pengarah. Penggunaan perunding imbuhan mempengaruhi penetapan pakej imbuhan lembaga. Akhirnya, keputusan menunjukkan bahawa teori agensi dan teori kuasa pengurusan adalah relevan dalam menjelaskan sebahagian hubungan bagi komponen pakej imbuhan pengarah di Malaysia.

Kata kunci: Imbuhan pengarah, tadbir urus korporat, Malaysia

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I dedicated this dissertation to all.

Muhammad Fareez Yahya
November 2013

LIST OF TABLES

LIST OF ABBREVIATION

CEO	Chief Executive Officer
ESOS	Employee Stock Option Scheme
MCCG	Malaysian Code on Corporate Governance
MCG	Malaysian Corporate Governance Report
MSWG	Minority Shareholder Watchdog Group
ROA	Return on asset
ROE	Return on equity
SC	Securities Commission Malaysia
VIF	Variance Inflation Factor

TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Discussions on the issues of directors' remuneration packages are global phenomena (Jensen, 1993; Ewers, 2002; Clarkson et al., 2005; Chen, 2006; Abdullah, 2006; Salim and Wan-Hussin, 2009). Most of the earlier studies use a group of directors' remuneration packages namely, non-contingent pay (salary + other cash compensation), contingent pay (stock options + bonus + long-term incentives), cash compensation (salary + bonus), total remuneration (salary + bonus + fees + benefits + others), etc. (Mangel and Singh, 1993; Daily et al., 1998; Dogan and Smyth, 2002). Essentially, there are only a few researches which separate the directors' remuneration components and test its relationship with one or two key variables. For example, study by Ewers (2002) in UK examines four components of directors' remuneration packages namely (i) ownership income; (ii) salary; (iii) short term bonus; and (iv) longer term incentive to test its relationship with corporate performance. Correspondingly, study by Clarkson et al. (2005) in Australia identifies four components of directors' remuneration packages namely (i) total remuneration; (ii) salary; (iii) bonus; and (iv) options to explain directors' remuneration.

The fundamental theory supporting the discussion on directors' remuneration packages is the agency theory. The agency theory reflects the separation of power between owner (shareholders) and management which typically lead manager to pursue their own goals (agency problem) and

require higher compensation (agency cost) in taking more risk to obtain more return for firms (Mustapha, 2012). Thus, the code on corporate governance is established in order to realign and safeguard shareholders' interest by governing the management. In Malaysia, the Securities Commission Malaysia (SC) has published the Malaysian Code on Corporate Governance to promote best practices in corporate governance among public listed companies. Many aspects of corporate governance mechanisms are studied in order to understand the nature of the code and the effects that they have on realigning the interest of both parties which include board size, board composition, board structures, board of directors' demographic profiles, board diversity and ownership structures. In addition, discussions on managerial power theory have also started which focuses on the Chief Executive Officers (CEOs) having more power and influence to effectively set their own pay through the appointment of proxy committee leading indirectly to the CEOs overpower the board. (Bebchuk and Fried, 2004; Berle and Means, 1932). The discussions focus more on the relationship between directors' pay in the form of salary, bonus and other remunerations with the determination of the directors power elements in the form of ownership structures and their correlation with pay performance sensitivity (Salim and Wan-Hussin, 2009; Choe et al., 2009).

1.2 Problem Statement

Researches conducted on the basis of agency theory and the recent discussions on the managerial power theory have triggered many issues especially focusing on the corporate governance aspects vis-à-vis functions of board of directors and the relevant remuneration committee. Study by Salim and Wan-Hussin (2009) on the relationship between remuneration committee and ownership structures on pay-for-performance found that closely held companies with managerial ownership above 35% appear not to practice performance-related pay scheme which is consistent with the managerial power theory. The study by Choe et al. (2009) in the perspective of managerial power theory highlights the issues on the mix results between power and firm performance while largely supports the relationship between power and pay. The study by Mustapha (2012) highlights the independence issue of directors when he finds significant positive relationship between proportions of independent directors with the directors' remuneration level. It is also found that additional number of independent directors does not positively impact the pay-performance alignments which suggests that independent directors fail to utilise their power and roles to monitor managers. Mace (1986) agues the ineffective monitoring by independent director is likely due to loopholes in the selection of directors which are based on CEO's discretion or the selection criteria for directors emphasis solely on title and prestige.

In the Malaysian context, there are limited studies on individual components of directors' remuneration packages with the corporate governance

variables. This may be due to the restrictive disclosure by the public listed companies in their annual reports on the individual directors' remuneration. However, the initiative by the Minority Shareholder Watchdog Group (MSWG) which is a body that protects the interests of minority shareholders through shareholder activism, in publishing the Malaysian Corporate Governance (MCG) report has significantly promote the best practice in corporate governance among public listed companies including the disclosure of individual directors' remuneration packages in the companies' annual reports. The MCG report which was first published in 2009 has screened out the best 100 public listed companies in Malaysia with the highest score in corporate governance and business ethics. This has led to the additional disclosures by public listed companies in their annual reports that have assisted the data collection for this study.

1.3 Research Questions

Based on the agency theory and managerial power theory, the study aims to answer the following research questions:

1) Do corporate governance structures of companies affect the determination of directors' remuneration packages? Specifically, do board characteristics affect the determination of directors' remuneration packages? The board characteristics apply in this study are (i) board size; (ii) board independence (measured by proportion of independent directors in board and proportion of independent directors in

remuneration committee); (iii) board diversity (gender) and (iv) board diversity (nationality).

2) Does corporate performance affect the determination of directors' remuneration packages? The corporate performances in this study are proxied by (i) Return on Assets (ROA) and (ii) Return on Equity (ROE).

3) Does the positive declaration disclose by companies in annual report that pay to executive directors is linked to individual and group performance affect the determination of directors' remuneration packages?

4) Does the use of remuneration consultants to advise on the pay packages affect the determination of directors' remuneration packages?

1.4 Research Objectives

The main objective of this study is to investigate the key variables that explain the determinants of directors' remuneration packages among selected Malaysian public listed companies. In particular, this study intends to know whether (i) corporate governance structures; (ii) corporate performance; (iii) pay performance alignment on linking individual and group performance to directors' remuneration; and (iv) the use of remuneration consultants to advise on directors' remuneration packages may affect the directors' remuneration packages offered by Malaysian public listed companies.

Thus, this study contributes to the understanding of the role of corporate governance structures, corporate performance, pay performance alignment policy and remuneration consultants in explaining the determinants of directors' remuneration packages. It is hoped that this study will be able to provide insight on the relationship between key variables in identifying the significant determinants for directors' remuneration packages in the perspective of emerging economy in Malaysia.

1.5 Findings of the Study

Using data from 2009 – 2011 based on 41 sample companies, the results show that corporate governance structures – board size, board and remuneration committee independence and board diversity (gender and nationality) are associated with individual component of directors' remuneration packages. Subsequent test on total directors' remuneration reveal similar result with the exception of board diversity (nationality) which does not indicate significant association. It appears that corporate performance is relevant in determining the total directors' remuneration when significant relationship exists with other emoluments component. Companies that disclose pay performance alignment policy in the annual report do reward their directors according to the policy with significant positive relationship exist on salary, fees and benefit-in-kind components but do not significantly affect the total directors' remuneration. Finally, the use of remuneration consultants does influence the design of directors' remuneration packages.

1.6 Significance of the Study

This study contributes towards the literature in identifying the determinants of directors' remuneration packages namely salary, fees, bonus, benefit-in-kind and other emoluments including total directors' remuneration. This study assesses the influence of corporate governance structures, corporate performance, pay performance alignment policy and the use of remuneration consultants in directors' remuneration packages. It may provide insight to the practitioners, policy makers, investors and academic scholars in Malaysia and around the world.

This study contributes towards the literature on directors' remuneration in a number of ways. Firstly, the study explains the relationship between components of directors' remuneration packages and corporate governance structures. The corporate governance structures include board size, board and remuneration committee independence and board diversity. Board diversity includes the dimension of gender and nationality of directors in board. The study also examines corporate performance by focusing on accounting performance measurement namely return on assets and return on equity taking into consideration the lagged effect of corporate performance on directors' remuneration. Pay performance alignment policy and the use of remuneration consultants are also included as independent variables in this study. Finally the firm size as measured by market capitalisation and sector are used as control variables.

1.7 Organisation of the Dissertation

The dissertation is organised into six chapters. The first chapter provides the overall background of the study, problem statement, research questions, research objectives, findings and significance of the study.

The remainder of the paper is structured as follows. The literature review consisting of past studies and hypotheses development are presented in chapter two. The third chapter discusses on the research methodology including sample selection, modelling and definition of variables and measurements. Chapter four and five discuss on the analysis and findings. In the final chapter, the conclusion and recommendation are provided.

CHAPTER TWO
LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The Malaysian Code on Corporate Governance (MCCG) issued by the Securities Commission Malaysia (SC) is essentially a blueprint to achieve excellence in corporate governance practice through strengthening self and market discipline as well as upholding good corporate governance culture and compliance. In the latest edition, it focuses on strengthening board structure and composition, recognising the role of directors as active and responsible fiduciaries. It highlights numerous principles across the best practise of corporate governance structures. Among the principles which encompass the ambit of board characteristics and policy on directors' remuneration that are related to this study include (i) establishing clear roles and responsibilities of directors; and (ii) strengthening the composition and reinforcing independence of directors.

To the author's knowledge, there are no studies conducted in Malaysia on examining the relationship between key variables and individual component of directors' remuneration packages. Essentially, there are only a few researches in other countries which separate the directors' remuneration components and test its relationship with one or two key variables. For example, study by Ewers (2002) in UK examines four components of directors' remuneration packages namely (i) ownership income; (ii) salary; (iii) short term bonus; and (iv) longer term incentive to test its relationship with corporate performance. Correspondingly, study by Clarkson et al.

(2005) in Australia identifies four components of directors' remuneration packages namely (i) total remuneration; (ii) salary; (iii) bonus; and (iv) options to explain directors' remuneration. Thus, in developing hypotheses for this study, the literature review encompasses studies by researchers with mix definitions of directors' remuneration packages due to the scarce secondary resources in the related fields.

Board Characteristics

Researches done by scholars in the related fields show mix results. Chen (2006) examines board characteristics in terms of board size and activities and board structures. While Conyon and Peck (1998) and Firth et al. (1999) investigate on board independence. There are studies examining remuneration committee independence undertaken by Conyon (1997) and Daily et al. (1998). The following discussion explains the literature review on each component of board characteristics separately.

Board Size

The Malaysian Code on Corporate Governance does not describe explicitly the exact number of directors for the suitable size of board for public listed companies. However majority of the board members must be of independent directors when the chairman of the board is not an independent director. Studies of previous scholars have shown that relationship exist between board size and directors' remuneration. Study in Asia Pacific regions especially in Malaysia by Abdullah (2006) reflects the positive relationship between board size and directors' remuneration. The same result is reported

in study by Jensen (1993) in developed countries namely US where the high standards of corporate governance are exercised. Study by Randøy and Nielsen (2002) on Norway and Sweden firms share the same result on the relationship between board size and CEO compensation.

Based on the above discussion, most of the empirical studies support the positive relationship between board size and directors' remuneration, thus the following hypothesis is drawn:

H1: There is a positive relationship between directors' remuneration packages and board size.

Board Independence

Principle 3-Reinforce Independence, Malaysian Code on Corporate Governance 2012 set the standard that the board should have policies and procedures to ensure effectiveness of independent directors which include the chairman of the board to be a non-executive director. In addition, Principle 2-Strengthen Composition, Malaysian Code of Corporate Governance requires remuneration committee to be established by the board to formalise transparent remuneration policies and procedures to attract and retain directors.

Studies show mix results on the relationship between board independence as measured by proportion of independent and non-executive directors in board and remuneration committee with directors' remuneration. Conyon and

Peck (1998) find that there is no evidence of relationship between proportion of non-executive directors with directors' remuneration as measured by salary and bonus. While study by Firth et. al (1999), find weak association between board independence with directors' remuneration.

Studies using the key variable of independence of remuneration committee to draw link with directors' remuneration also show mix results. Study by Conyon (1997) finds that there exist negative relationship between directors' remuneration and the independence of remuneration committee. While study by Daily et.al (1998) show no evidence to support the motion.

Thus, the relationship between directors' remuneration with board and remuneration committee independence is not clear and the non-directional hypothesis is drawn as follows:

H2a: There is a relationship between directors' remuneration packages and the proportion of independent and non-executive directors in board.

H2b: There is a relationship between directors' remuneration packages and the proportion of independent and non-executive directors in remuneration committee.

Board Diversity (Gender)

Principle 2-Strengthen Composition, Malaysian Code on Corporate Governance 2012 requires the board to establish a policy to boardroom diversity to ensure women candidates are required to be part of board member. The correct mix of board diversity in terms of gender could empower a board as women directors exhibit different behavior as they are meticulous and actively involved in board discussion which significantly change the board performance (Virtanen, 2012). Studies in U.S. on the composition of female and male directors in board with directors' remuneration show mix results. Bell (2005) finds positive relationship between the existences of female directors in boards to the executive directors' compensation. However, study by Kerkhoven (2011) shows no significant association between board diversity and directors' remuneration. Another study by Shin (2012) in U.S. firm finds that board diversity reduces the gender gap in executive directors' pays as more female directors participate in the compensation committee of the board.

Study by Adams and Ferreira (2004) on gender diversity in boardroom on Fortune 500 firms reveals positive relationship between gender diversity and pay-performance incentives as measured by the value of shares, options and salary. Firms with female directors domination show significant positive relationship with restricted shares in total compensation as compared to salary and options with the latter components is equally important in firms with male directors domination.

To the author's knowledge, there are no studies conducted in Malaysia on examining the relationship between directors' remuneration and board diversity. Thus the link cannot be ascertained and the non-directional hypothesis is drawn as follows:

H3: There is a relationship between directors' remuneration packages and the board diversity (gender).

Board Diversity (Nationality)

Increasing number of foreign nationality directors in the composition of board of directors of public listed companies in Malaysia stem from the influx of foreign direct investment by overseas multinational companies setting their base in Malaysia.

Study by Nielsen and Nielsen (2008) on board nationality diversity and executive directors' compensation systems in Swiss listed firms shows positive relationship. The study finds that foreign directors possess specific human capital which is valuable to company and thus resulting in higher compensation offered accordingly. Finding by Randøy and Nielsen (2002) on company performance, corporate governance, and CEO compensation in Norway and Sweden firms supports the positive relationship between foreign board memberships with CEO compensation.

To the author's knowledge, there are no studies conducted in Malaysia on examining the relationship between directors' remuneration and board

diversity (nationality). Thus the link cannot be ascertained and the non-directional hypothesis is drawn as follows:

H4: There is a relationship between directors' remuneration packages and the board diversity (nationality).

Corporate Performance

Studies show mix results on the relationship between directors' remuneration and corporate performance but are consistent with agency-based theoretical framework which denote that separation of power between owner (shareholders) and management lead manager to pursue their own goals (agency problem) and require higher compensation (agency cost) in taking more risk to obtain more return for firms. Study in Asia Pacific region, for example in Malaysia shows significant positive link between directors' remuneration and corporate performance measured by sales turnover (Dogan and Smyth , 2002) . The result is consistent in Hong Kong when corporate performance is measured by profitability but no relationship found when corporate performance is measured by shares returns (Firth et. al, 1999).

Studies conducted in developed nation especially in UK and US show positive relationship with different magnitude of strength in the relationship. For example, studies by Ewers (2002) in UK and Mehran (1995) in US show strong positive relationship between directors' remuneration and corporate performance but studies by Buck et al. (2003) in UK and Jensen

and Murphy (1990) in US find only weak relationship exist between the two elements.

Study by Randøy and Nielsen (2002) on Norway and Sweden firms finds no significant relationship between company accounting performance or stock performance with CEO compensation. This may be due to the strong Democratic influence and cultural norms in both countries that value equality and put a threshold in CEO compensation which results in the loss of relationship between CEO pay and firm performance. However, a significant but weak relationship is found when combination of accounting-based measure and market based financial performance is used.

Based on the above discussions, most of the empirical studies support agency theory, thus the following hypothesis is drawn:

H5: There is a positive relationship between directors' remuneration and corporate performance.

Pay Performance Alignment

Principle 2-Strengthen Composition, Malaysian Code of Corporate Governance 2012 requires the board to establish a formal and transparent remuneration policies and procedures to attract and retain directors. Typically in Malaysia, executive directors are entitled to remuneration packages such as salary, bonus, allowances and other customary benefits as accorded by the companies. The remuneration packages are structured in

such a way to be aligned with the relevant policy as established by the remuneration committee and disclosed in the company's annual report. Some companies link the remuneration packages to the group and individual performance while others may benchmark the best practices with companies in the same industries.

Study by Salim and Wan-Hussin (2009) on the remuneration committee, ownership structure and pay-for-performance among public listed companies in Malaysia shows that there is a strong alignment between directors' remuneration and company performance when the pay performance alignment policy is spelled out in the company. The authors also find that pay-for-performance relationship is stronger when the managerial ownerships is below 10% relative to higher proportion of managerial which is consistent with agency theory prediction.

In addition to the principal-agent theory which the pay setting process of agents (executive directors and management) is set by the principal (shareholder) to align their mutual interest for the benefit of shareholder, the discussion on managerial power theory also has embarked in view of the CEO having too much power in pay setting process leading to the weaker pay-for-performance relationship. Study by Marc et al. (2012) in assessing the managerial power theory in US landscape reveals that there is no conclusive evidence for predicting the alignment of pay to performance but is able to predict the core compensation determinants for executive directors.

Based on the above discussion, there exist findings that support agency theory, thus the following hypothesis is drawn:

H6: There is a positive relationship between directors' remuneration packages and the pay performance alignment.

Remuneration Consultants

Remuneration consultants advise management, remuneration committee and the board on the design of remuneration packages focusing on executive directors' compensation (Finkelstein and Hambrick, 1996 and Baker et al., 1988). There are only limited studies conducted in this area especially centered in developed nation. Studies by Conyon et al. (2006) and Conyon (2007) in UK on the relationship between compensation consultants and CEO pay find that CEO pay is greater in firms using large remuneration consultants who also provide additional services to the client firm. Their studies also reveal that remuneration consultants have significant link in shaping executive directors' remuneration packages.

To the author's knowledge, there are no studies conducted in Malaysia on examining the relationship between directors' remuneration and remuneration consultants. Thus the link cannot be ascertained and the non-directional hypothesis is drawn as follows:

H7: There is a relationship between directors' remuneration packages and the remuneration consultants.

Summary of Hypotheses

Based on the past studies conducted by many scholars in various countries, it shows that the studies of individual components of directors' remuneration packages with key variables are still lacking and require further research. In addition, several non-directional hypotheses drawn for this study also reflect the scarce secondary resources to support the hypotheses which provide motivation for the author to pursue this study. Thus, the following table summarise the dependent and independent variables from the hypotheses developed based on past studies and their predicted relationship.

Table 2.1
Summary of Hypotheses

Hypothesis No.	Dependent Variable	Independent Variable	Predicted Relationship
H1	Directors' remuneration packages	Board size	+
H2a		Proportion of independent and non-executive directors in the board	?
H2b		Proportion of independent directors in remuneration committee	?
H3		Board diversity (gender)	?
H4		Board diversity (nationality)	?
H5		Corporate performance	+
H6		Pay performance alignment	+
H7		Remuneration consultants	?

CHAPTER THREE
METHODOLOGY

3.1 Sample and Data

The research method applies in this study is secondary data analysis. It uses pooled cross-sectional and time-series data taken from the annual reports of the selected public listed companies in Bursa Malaysia for the years 2009 to 2011. The selection of the public listed companies is based on the Malaysian Corporate Governance (MCG) report published by the Minority Shareholder Watchdog Group (MSWG) which identifies companies that disclose individual directors' remuneration in the companies' annual report. The rationale for the years selected is because the MCG report was first launched in 2009 and the latest report has been released in 2011. However, for a number of variables like return on asset and return on equity, the relevant data are collected for year 2008 in order to calculate the lag effect of these variables.

The 2011 report identifies 54 listed companies that disclose individual directors' remuneration which is important to enable data extraction of the individual components of directors' remuneration packages for further analysis. Out of the 54 listed companies, 6 companies are rejected due to the changes in financial year end and incomplete annual report for 3 consecutive years 2009 to 2011. In addition, all companies in the financial sector are also excluded from the sample as these companies are subjected to other specific regulations. The final number of companies to be assessed is 41 companies with 123 total observations.

3.2 Modelling

The analysis is done using ordinary least square regression on the cross-sectional and time-series pooled data. Testing is done on different models with each component of directors' remuneration as dependent variables to determine their relationship. These models are improved by taking into consideration other aspects namely normality, multicollinearity and heteroscedasticity.

In order to test the hypotheses 1, 2a, 2b, 3, 4, 5, 6 and 7, the following model is used:

$$\mathbf{Lndirrem}_{it} = \beta_0 + \beta_1 \mathbf{BOARD\_SIZE}_{it} + \beta_2 \mathbf{BOARD\_INE}_{it} + \beta_3 \mathbf{REM\_INE}_{it} + \beta_4 \mathbf{BOARD\_GENDER}_{it} + \beta_5 \mathbf{BOARD\_NAT}_{it} + \beta_6 \mathbf{PERFORMANCE}_{it} + \beta_7 \mathbf{POLICY}_{it} + \beta_8 \mathbf{REM\_CON}_{it} + \beta_9 \mathbf{Control}_{it} + \varepsilon_{it}$$

where:

(i) i = 1,2,3…N (1 to 41 companies);

(ii) t = year 2009, 2010 and 2011.

(iii) Lndirrem_{it} refers to the log of individual components of directors' remuneration packages for company *i* in the year *t*. Separate models are used to determine the relationship of each components of directors' remuneration and the total directors' remuneration to the changes in the independent variables.

(iv) $\mathbf{BOARD\_SIZE}_{it}$ refers to the size of board of directors for company *i* in the year *t*.

(v) **BOARD_INE**$_{it}$ refers to the proportion of independent and non-executive directors in board for company *i* in the year *t*.

(vi) **REM_INE**$_{it}$ refers to the proportion of independent and non-executive directors in remuneration committee for company *i* in the year *t*.

(vii) **BOARD_GENDER**$_{it}$ refers to the existence of gender diversity in board for company *i* in the year *t*.

(viii) **BOARD_NAT**$_{it}$ refers to the existence of nationality diversity in board for company *i* in the year *t*.

(ix) **PERFORMANCE**$_{it}$ refers to corporate performance for company *i* in the year *t*.

(x) **POLICY**$_{it}$ refers to the pay performance alignment policy for company *i* in the year *t*.

(xi) **REM_CON**$_{it}$ refers to the use of remuneration consultants for company *i* in the year *t*.

(xii) Control$_{it}$ refers to the control variable for company *i* in the year *t*.

(xiii) β refers to the coefficients for independent variables.

(xiv) ε_{it} refers to the error term for company *i* in the year *t*.

3.3 Variables and Measurements

3.3.1 Dependent Variable

Directors' Remuneration

Directors' remuneration packages are designed to correctly compensate, sustain and reward directors in the company. In the Malaysian context, prior

studies of the directors' remuneration packages use total remuneration which includes the sum of salary, bonus, fees, benefits and others (Mustapha, 2012) with very limited studies on each component of directors' remuneration separately. In UK for instance, Ewers (2002) uses separate directors' remuneration namely, salary, short-term bonus, long-term incentive and ownership income to determine the relationship with corporate performance. In Australia, study by Clarkson et al. (2005) uses salary, bonus, options and total remuneration separately to determine the linkages with other independent variables.

Thus, in this study, the dependent variables used are the individual components of directors' remuneration packages which include salary (SALARY), fees (FEES), bonus (BONUS), benefit-in-kind (BIK), Employee Stock Option Scheme (ESOS) and other emoluments (OTHER_EMOL). Directors' remuneration packages include all directors namely independent directors, executive directors and non-independent non-executive directors. Separate models are used to determine the relationship of each dependent variable to the key variables. In addition, the study also uses total directors' remuneration (TOTAL_DIR_REM) as a robustness test to check if there is any significant difference in the regression results.

The data on the components of directors' remuneration are readily accessible through annual reports which are limited to companies that disclose the individual directors' remuneration packages which correspond to the good corporate governance practice. The determination of companies

that disclose this information is based on the survey conducted by Minority Shareholder Watchdog Group (MSWG) via the Malaysian Corporate Governance (MCG) report.

3.3.2 Independent Variable

Board Size

Board size (BOARD_SIZE) refers to the total number of directors in the board of the company. It encompasses independent non-executive, non-independent executive and non-independent non-executive directors for the financial year end.

Board Independence

Board independence is measured using 2 proxies namely:

(i) proportion of independent and non-executive directors in board (BOARD_INE); and

(ii) proportion of independent and non-executive directors in remuneration committee (REM_INE).

Board Diversity (Gender)

Board diversity in terms of gender (BOARD_GENDER) refers to whether board of director consists of male and female directors. This variable is measured by 1 = female director appointed in board, and 0 = female director is not appointed in board.

Board Diversity (Nationality)

Board diversity in terms of nationality (BOARD_NAT) refers to whether board of director consists of local and international directors. This variable is measured by 1 = international director appointed in board, and 0 = international director is not appointed in board.

Corporate Performance

Corporate performance is measured using 4 proxies namely:

(i) Return on asset (ROA);

(ii) One year lag ROA (ROA_LAG);

(iii) Return on equity (ROE); and

(iv) One year lag ROE (ROE_LAG).

The use of lagged performance measure in this study is to reduce the possibility of undetermined time factors in the interaction between variables namely directors' remuneration and corporate performance due the endogeneity among variables (Chen, 2006; Jensen and Murphy, 1990). This is due to the fact that some components of directors' remuneration are determined in different lapse of time when the actual performance of the company is known. Thus, lagged performance measurement allow for actual timing of the impact of corporate performance to be assessed on directors' remuneration (Chen, 2006).

However, further analysis found that all proxies are highly positively correlated as presented in Table 3.1. In order to overcome this problem, a

data reduction technique known as the principal component analysis extraction method is used (Mustapha, 2012). The determination of number of factor to be used as proxy for corporate performance is based on the index established from the factor analysis that takes into account different measurement of corporate performance. The result is presented in Table 3.2. Based on the initial Eigenvalue, the first component is sufficiently explain 95.3% of the result of the model and only one final variable is used in the analysis known as PERFORMANCE.

Table 3.1
Correlation Matrix for Corporate Performance

		ROA	ROA_LAG	ROE	ROE_LAG
Correlation	ROA	1.000	.958	.931	.931
	ROA_LAG	.958	1.000	.898	.932
	ROE	.931	.898	1.000	.973
	ROE_LAG	.931	.932	.973	1.000

Table 3.2
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.812	95.298	95.298	3.812	95.298	95.298
2	.123	3.069	98.367			
3	.050	1.240	99.607			
4	.016	.393	100.000			

Extraction Method: Principal Component Analysis.

Pay Performance Alignment Policy

Pay performance alignment policy (POLICY) refers to whether companies disclose the statement of linking directors' remuneration to individual and group performance in their pay performance alignment policy in the annual report. This variable is measured by 1 = disclose, and 0 = not disclose.

Remuneration Consultants

Remuneration consultants (REM_CON) refer to whether companies use outside expertise to determine the directors' remuneration packages as disclosed in the annual report. This variable is measured by 1 = employ, and 0 = does not employ.

3.3.3 Control Variable

Firm Size

Studies show that firm size can be measured by market capitalisation, number of employees and sales (O'Reilly et al., 1996). In this study, firm size is measured by market capitalisation (MKT_CAP) which is calculated by closing share price at period *t* times number of shares outstanding for the company. Many studies also reveal that there are positive relationship between firm size and the level of directors' remuneration (Tosi et al., 2000).

Sector

Bursa Malaysia categorises companies in Main Market into 14 industries namely close-end funds, construction, consumer products, finance, hotels, industrial products, IPC, mining, plantations, properties, REITs, SPAC, technology and trading/services. Sample companies are grouped into 7 related industries namely construction, consumer, industrial products, plantations, properties, technology and trading/services.

The summary of variables, measurements/proxies and definitions for the dependent, independent and control variables are presented in the following table:

Table 3.3
Summary of Variables, Measurements/Proxies and Definitions

Variables	Measurement/Proxy	Definition
Dependent Variables		
Directors' Remuneration Packages (include all directors: independent director, non-executive director and non-independent non-executive director)	(i) Salary (SALARY) (ii) Fees (FEES) (iii) Bonus (BONUS) (iv) Benefit-in-kind (BIK) (v) ESOS (ESOS) (vi) Other emoluments (OTHER_EMOL) (vii) Total directors' Remuneration (TOTAL_DIR_REM)	Salary + EPF Fees Short-term Bonus Monetary value of Benefit-in-kind Shares Option Schemes Allowance + Other emoluments Salary + EPF + Fees + Bonus + Benefit-in-kind + Allowance + Other emoluments
Independent Variables		
Board Size	Board size (BOARD_SIZE)	Total number of directors in the board of the company.
Board and Remuneration Committee Independence	(i) Proportion of independent non-executive directors in board (BOARD_INE) (ii) Proportion of independent non-executive directors in remuneration committee (REM_INE).	No. of independent non-executive directors/ total no. of directors in board No. of independent directors in remuneration committee/ total no. of directors in remuneration committee
Board Diversity (Gender)	Male and female directors in board. (BOARD_GENDER)	Female director appointed in board = 1 Female director is not appointed in board = 0
Board Diversity (Nationality)	Local and international directors in board. (BOARD_NAT)	International director is appointed in board = 1 International director is not appointed in board = 0
Corporate Performance	(i) Return on Asset (ROA) (ii) One year lag ROA (ROA_LAG)	Earnings attributable to the owner of company/Total Assets Earnings attributable to the owner of company year

Variables	Measurement/Proxy	Definition
	(iii) Return on equity (ROE)	1/Total Assets year 0 Earnings attributable to the owner of company/ Shareholders' equity
	(iv) One year lag ROE (ROE_LAG)	Earnings attributable to the owner of company year 1/ Shareholders' equity year 0
Pay Performance Alignment Policy	Disclosure of statement linking directors' remuneration to individual and group performance in the company's annual report (POLICY).	Disclose = 1 Not disclose = 0
Remuneration Consultants	Statement indicating the use of remuneration consultants to advise on directors' pay setting disclosed in the annual report (REM_CON).	Employ = 1 Does not employ = 0
Control Variables		
Firm Size	Market capitalisation (MKT_CAP)	Closing share price at period *t* times number of shares outstanding for the company.
Sector	No. of sector/ industry (SECTOR)	1. Construction 2. Consumer 3. Industrial Products 4. Plantations 5. Properties 6. Technology 7. Trading/Services

Analyses are done subsequently using The Statistical Package for Social Sciences, known as SPSS (v.16for windows) to authenticate the data for reliability and validity.

CHAPTER FOUR
ANALYSIS

4.1 Preliminary Analysis

In the preliminary analysis, data collected for all variables are tested for normality and missing data. This is to ensure that the regression results are accurate and data do not violate the multiple regression assumption on normality. The result on descriptive analysis is used to scan for normality in the data based on the skewness and kurtosis result and the missing value from the number of data analysed. The missing value are identified and corrected. While the variables which have skewness of more than 2.1 and kurtosis more than 7.1 are transformed using the acceptable transformation tools (West et al., 1995). Table 4.1 summarise the variables that require transformation and the transformation tools used. The variables are tested for normality to ensure that it has been transformed correctly.

Table 4.1
Variables and Transformation Tools

Variable	Transformation Tools
DEPENDENT VARIABLES	
Salary Fees Bonus BIK ESOS Other Emoluments Total Directors' Remuneration	Van der Waerden normal scores data transformation technique
INDEPENDENT VARIABLES	
Firm size (MKT_CAP)	Natural log
ROA Lag_ROA ROE Lag_ROE	Van der Waerden normal scores data transformation technique

Subsequent to process of transformation, some variables which are not normally distributed are checked again for correlation and corrected using the appropriate tools which is discussed in depth in the descriptive analysis section. The scatter graph plot and correlation are used in this study for all variables to determine the relationship between dependent and independent variables.

4.2 Descriptive Analysis

4.2.1 Dependent Variable

Directors' Remuneration

This study tests each component of directors' remuneration separately to determine its relationship with other independent variables. The directors' remuneration components include salary, fees, bonus, benefit-in-kind, ESOS and other emoluments. Total directors' remuneration is also tested to investigate any differences in the regression result. Table 4.2 shows the summary statistics of each component of directors' remuneration for the years 2009 to 2011.

Table 4.2
Summary Statistics of Directors' Remuneration

Variable	Year	N	Min	Max	Mean	Sd	Skew	Kurtosis
Salary	2009	41	0	26,190,000	2,447,995	4,314,371.83	4.53	23.83
	2010	41	0	26,760,000	2,366,608	4,360,632.00	4.70	25.49
	2011	41	0	26,120,000	2,209,578	4,432,096.84	4.38	21.98
	POOLED	123	0	26,760,000	2,341,393	4,334,478.85	4.42	21.69
Fees	2009	41	0	1,866,667	568,765	426,115.47	1.00	0.72
	2010	41	0	1,319,000	480,334	355,037.00	0.71	(0.46)
	2011	41	0	2,454,080	461,514	436,771.92	2.60	9.94

Variable	Year	N	Min	Max	Mean	Sd	Skew	Kurtosis
	POOLED	123	0	2,454,080	503,537	406,955.18	1.55	3.86
Bonus	2009	41	0	12,411,000	766,542	2,308,168	4.16	18.20
	2010	41	0	12,411,000	719,819	2,258,544	4.22	19.13
	2011	41	0	6,960,800	559,031	1,577,005	3.26	9.86
	POOLED	123	0	12,411,000	683,827	2,066,783	4.12	18.20
BIK	2009	41	0	3,175,271	279,302	681,682.57	3.47	12.03
	2010	41	0	3,430,000	240,097	598,297.80	4.39	21.42
	2011	41	0	3,046,000	211,610	516,884.79	4.53	23.50
	POOLED	123	0	3,430,000	243,670	598,410	3.98	16.44
ESOS	2009	41	0	0	0	0	NA	NA
	2010	41	0	636,000	21,317	105,179.47	5.47	31.17
	2011	41	0	68,000	1,658	10,619.82	6.40	41.00
	POOLED	123	0	636,000	7,659	61,307.45	9.42	93.65
Other Emol.	2009	41	0	4,632,922	398,884	948,736.15	3.34	11.55
	2010	41	0	3,780,259	326,165	806,560.17	3.40	11.38
	2011	41	0	6,893,310	315,014	1,120,309.01	5.45	31.58
	POOLED	123	0	6,893,310	346,688	959,847.06	4.41	22.23
Total Dir. Rem.	2009	41	118,250	30,008,000	4,461,488	6,220,835.00	2.79	8.21
	2010	41	112,000	30,938,000	4,133,022	6,102,129.58	3.04	10.02
	2011	41	71,584	29,883,000	3,729,477	6,024,048.99	3.05	9.85
	POOLED	123	71,584	30,938,000	4,107,996	6,073,309.50	2.88	8.44
AFTER TRANSFORMATION ON NORMALITY – using Van der Waerden normal scores data transformation technique								
Salary	2009	41	-1.5446	2.0454	-0.1263	0.9125	0.2691	-0.4240
	2010	41	-1.6350	2.0454	-0.1175	0.9259	0.2383	-0.3855
	2011	41	-1.7413	2.0454	-0.1185	0.9260	0.1884	-0.3402
	POOLED	123	-1.7413	2.0454	-0.1208	0.9139	0.2258	-0.4497
Fees	2009	41	-1.8719	1.7413	-0.1654	0.8450	-0.0687	-0.2558
	2010	41	-1.8719	1.2700	-0.1885	0.8139	-0.2794	-0.6226
	2011	41	-2.0454	1.5446	-0.1771	0.8304	-0.2292	-0.4334
	POOLED	123	-2.0454	1.7413	-0.1770	0.8231	-0.1828	-0.4858
Bonus	2009	41	-0.4214	2.0454	-0.0186	0.6830	1.4820	1.1404
	2010	41	-0.5362	2.0454	0.0067	0.7547	1.0552	-0.0747
	2011	41	-0.5069	2.0454	-0.0109	0.7257	1.1906	0.3409
	POOLED	123	-0.5362	2.0454	-0.0076	0.7159	1.1967	0.2797
BIK	2009	41	-1.1139	2.0454	-0.0732	0.9114	0.4848	-0.7075
	2010	41	-1.1139	1.7413	-0.0725	0.8899	0.3282	-1.0669
	2011	41	-1.1139	1.7413	-0.0854	0.8851	0.3728	-1.0011
	POOLED	123	-1.1139	2.0454	-0.0770	0.8882	0.3880	-0.9396

Variable	Year	N	Min	Max	Mean	Sd	Skew	Kurtosis
ESOS	2009	41	-0.0768	1.7413	-0.0325	0.2839	6.4031	41.0000
	2010	41	-0.0768	2.0454	0.0145	0.4120	4.4820	19.4334
	2011	41	-0.0256	-0.0256	-0.0256	0.0000	1.0384	-2.1053
	POOLED	123	-0.0768	2.0454	-0.0145	0.2873	6.2994	39.1710
Other Emol.	2009	41	-0.7571	1.7413	-0.1077	0.7289	0.6979	-0.5757
	2010	41	-0.7916	1.7413	-0.1022	0.7464	0.6528	-0.6232
	2011	41	-0.8271	1.7413	-0.1178	0.7689	0.6464	-0.6891
	POOLED	123	-0.8271	1.7413	-0.1092	0.7421	0.6473	-0.6767
Total Dir. Rem.	2009	41	-2.0454	2.0454	-0.1625	0.9060	0.2118	-0.0643
	2010	41	-2.0454	1.7413	-0.1493	0.9054	0.0783	-0.4580
	2011	41	-2.0454	1.7413	-0.1552	0.9030	0.1072	-0.3813
	POOLED	123	-2.0454	2.0454	-0.1556	0.8974	0.1292	-0.3761

Table 4.2 shows that over the years, all components of directors' remuneration packages reflect decrease pattern in average amount. This may be due to the worry on the unresolved Eurozone debt crisis leading the uncertain and volatile equity market around the world which is evidenced from the KLCI's 2011 worst performance plunging from all-time high of 1,595 points (8 July 2011) to a year-low of 1,332 points (26 September 2011) (Maybank Investment Bank, 2012). The worst performance in Malaysia equity markets which show losses at banking stocks and blue chips may lead to the less exercisable of ESOS among corporate sectors in 2011.

Table 4.2 also shows that salary accounts for the largest portion of directors' remuneration packages with 56.7% on average amount for the years followed by bonus (16.6%), fees (12.2%), other emoluments (8.4%), benefit-in-kind (5.9%) and ESOS (0.2%) (untabulated). The result is consistent with study by Mustapha (2012) in Malaysia listed companies

which shows salary weighted the highest component in total directors' remuneration followed by bonus.

Although most of the components show decrease in average amount over the years, it is also evidenced that the difference between maximum amount and the average amount for each component of directors' remuneration vary widely. It is reflected by the high standard deviation across all components with large number of skewness and kurtosis above the normal acceptable level of skewness of 2.1 and kurtosis of 7.1 (West et al., 1995). Thus, in order to resolve this problem, the independent variables are transformed to normal scores estimation using Van der Waerden normal scores data transformation technique (Mustapha, 2012). It is argued that this technique reduce the possibility of having to delete data due to negative or extreme value problems. The data that have been transformed are also presented in Table 4.2. The transformed data has skewness and kurtosis at the acceptable level except for ESOS which relatively has high skewness and kurtosis. Since there exist problem of normality for ESOS which entails potential problem and affecting the result of multiple regression analysis, thus this study eliminates ESOS from the list of dependent variables. Study in Japan by Kato and Kubo (2004) also face the same problem and they remove the share options from their analysis. The final lists of dependent variables to be tested in this study are salary, fees, bonus, benefit-in-kind, other emoluments and total directors' remuneration.

Table 4.3
Summary Statistics of Directors' Remuneration by Sector – Before Transformation

Sector	N	Mean						
		Salary	Fees	Bonus	BIK	ESOS	Other Emol.	Total Dir. Rem.
Construction	6	3,099,333	757,500	3,556,333	260,000	51,000	76,500	7,749,667
Consumer	12	7,933,627	460,625	108,545	1,163,538	0	1,339,291	10,996,581
Industrial Products	3	1,506,000	261,333	0	21,000	0	0	1,788,333
Plantations	18	685,946	489,698	181,613	47,680	0	527,004	1,931,940
Properties	33	2,583,571	425,724	1,498,834	237,901	0	200,837	4,946,867
Technology	9	1,868,710	192,700	0	0	0	9,333	2,070,744
Trading/ Services	42	1,315,490	630,497	178,107	135,166	15,143	236,057	2,495,317

Table 4.3 shows summary statistics of directors' remuneration by sector. In the aspect of individual directors' remuneration packages, consumer sector records highest average salary, benefit-in-kind and other emoluments. In addition, construction sector records highest average fees, bonus and ESOS. The highest average total directors' remuneration is recorded by consumer sector. No bonus is paid by the sample companies in industrial products and technology sector while lowest average salary is paid by the plantation sector. The descriptive statistic is consistent with the finding of Deck (1988) who reported that directors' remuneration is different among industries.

4.2.2 Independent Variables

Board Size

Table 4.4 shows that all sample companies have minimum of 5 directors in the board of directors including the Chairman with average amount of directors are 8 directors. The highest number of directors appointed in a company is 14. The result is consistent with study by Haniffa and Hudaib (2006) and Mustapha (2012) in Malaysia which report average of 7.9 and 7 for board size respectively. The Malaysian Code on Corporate Governance (MCCG) published by the Securities Commission Malaysia (SC) does not spell out clearly the number of directors a company should adapt but Principle 3: Reinforce Independence emphasise on the composition of majority of independence directors within the board of directors that must be sufficiently met to ensure the effectiveness of the boards to carry out its fiduciary duty. Other study proposes that 8 or 9 number of directors is ideal for a board with extra members will not create value added to the board as compared to the extra costs it needs to bear (Lipton and Lorsch, 1992). Thus, it suggests that Malaysian public listed companies have sufficient number of directors in the board.

Board Independence

Table 4.4 shows that on average, member of board of directors which consist of independent non-executive directors record only 49% proportion in contrast to the remuneration committee which record 66% proportion of independent non-executive directors. The result shows mild compliance with MCCG which proposes that majority members of board of directors

including remuneration committee should comprise of independent non-executive directors with only insignificant number of companies having at least 25% composition of independent non-executive directors in the board and none representative of independent non-executive directors in the remuneration committee.

Board Diversity

A. Gender

Table 4.4 shows that majority of the board of directors are dominated by male directors which account for 88%. The range of male directors domination can be as low as 50% and maximum of 100% of the total board size. While the participation from female directors is fewer with the maximum participation is 50% of the total board size. The MCCG highlights the need to establish a policy formalising approach to boardroom diversity with women candidates to be sought as part of the recruitment exercise. Although the involvement of female directors is minority in the selected sampled companies, it is interesting to know whether the existence of board diversity in terms of gender has any impact on the determination of directors' remuneration packages and their relationship.

B. Nationality

Table 4.4 shows that majority of the board of directors are dominated by local directors which account for 98%. The range of local directors domination can be as low as 71% and maximum of 100% of the total board size. While the participation from international directors is very limited with

the maximum participation is 29% and average of 2% from the total board size. The MCCG does not highlight specifically on board diversity in terms of nationality but it is also interesting to know whether board diversity in terms of nationality has any impact in the determination of directors' remuneration packages.

Corporate Performance

Table 4.4 shows that the performance of the sample companies using return on asset (ROA) and return on equity (ROE) portray decreasing pattern over the 3 years with an average of 8.26% and 25.73% respectively. The result of average ROA is slightly higher than the study by Mustapha (2012) which records average ROA of 5.28% and signify better performance than other developing countries namely China and Hong Kong.

However, it is noted that the dispersion in data are high which is evidenced by higher standard deviation and wide range of data. Thus, resulting in high level of skewness and kurtosis. In order to resolve this problem, the independent variables are transformed to normal scores estimation using Van der Waerden normal scores data transformation technique similar to the transformation technique used for dependent variables.

Other Independent Variables

A. Pay Performance Alignment Policy

Table 4.4 shows that majority of the sample companies i.e. around 85% disclose the pay performance alignment policy in their annual report which

link the directors' remuneration to the performance of individual directors and group performance. It is also interesting to know whether the existence of this policy influence the determination of components of directors' remuneration packages.

B. Remuneration Consultant

Table 4.4 shows that very few companies use remuneration consultants to design the directors' remuneration packages with circa 15% on average. Perhaps, the use of advisory services in the area of human resource is not developing widely as compared to the use of consulting advice in other area namely merger and acquisition, procurement, etc. It is also noted that many companies use best market practice in the selected industry in determining the directors' remuneration packages as disclosed in their annual report.

Table 4.4
Summary Statistics of Independent Variables

Variable	Year	N	Min	Max	Mean	Sd	Skew	Kurtosis
Board Size (BOARD_SIZE)	2009	41	5.00	14.00	8.24	2.35	0.43	-0.36
	2010	41	5.00	13.00	8.22	2.15	0.38	-0.38
	2011	41	5.00	13.00	8.17	2.06	0.55	0.07
	POOLED	123	5.00	14.00	8.21	2.17	0.44	-0.29
Board and Remuneration Committee Independence								
Independent Non-Executive Directors- Board (BOARD_INE)	2009	41	0.30	0.80	0.50	0.13	0.86	0.24
	2010	41	0.25	0.80	0.49	0.13	0.74	-0.01
	2011	41	0.27	0.78	0.48	0.13	0.59	-0.48
	POOLED	123	0.25	0.80	0.49	0.13	0.70	-0.17
Independent Non-Executive Directors- Rem. Comm. (REM_INE)	2009	41	0.00	1.00	0.66	0.22	-0.66	1.10
	2010	41	0.00	1.00	0.66	0.22	-0.66	1.10
	2011	41	0.00	1.00	0.66	0.23	-0.68	1.01
	POOLED	123	0.00	1.00	0.66	0.22	-0.65	0.89
Board Diversity								
Male	2009	41	0.50	1.00	0.88	0.12	-1.10	1.53

Variable	Year	N	Min	Max	Mean	Sd	Skew	Kurtosis
	2010	41	0.50	1.00	0.88	0.12	-0.89	1.19
	2011	41	0.50	1.00	0.88	0.11	-0.81	1.50
	POOLED	123	0.50	1.00	0.88	0.12	-0.91	1.19
Female	2009	41	0.00	0.50	0.12	0.12	1.10	1.53
	2010	41	0.00	0.50	0.12	0.12	0.89	1.19
	2011	41	0.00	0.50	0.12	0.11	0.90	1.62
	POOLED	123	0.00	0.50	0.12	0.12	0.94	1.23
Gender (BOARD_ GENDER)	2009	41	0.00	1.00	0.63	0.49	-0.58	-1.75
	2010	41	0.00	1.00	0.61	0.49	-0.47	-1.88
	2011	41	0.00	1.00	0.61	0.49	-0.47	-1.88
	POOLED	123	0.00	1.00	0.62	0.49	-0.49	-1.79
Local	2009	41	0.71	1.00	0.98	0.06	-3.14	10.62
	2010	41	0.71	1.00	0.98	0.06	-3.14	10.62
	2011	41	0.71	1.00	0.98	0.06	-3.48	12.91
	POOLED	123	0.71	1.00	0.98	0.06	-3.17	10.31
International	2009	41	0.00	0.29	0.02	0.06	3.14	10.62
	2010	41	0.00	0.29	0.02	0.06	3.14	10.62
	2011	41	0.00	0.29	0.02	0.06	3.48	12.91
	POOLED	123	0.00	0.29	0.02	0.06	3.17	10.31
Nationality (BOARD_NAT)	2009	41	0.00	1.00	0.12	0.33	2.40	3.95
	2010	41	0.00	1.00	0.15	0.36	2.08	2.43
	2011	41	0.00	1.00	0.15	0.36	2.08	2.43
	POOLED	123	0.00	1.00	0.14	0.35	2.12	2.55
Corporate Performance								
ROA	2009	41	-3.00	45.91	7.11	8.59	2.88	11.27
	2010	41	0.00	46.59	6.37	7.92	3.74	18.19
	2011	41	0.00	51.78	5.75	8.43	4.36	23.47
	POOLED	123	-3.00	51.78	6.39	8.26	3.55	15.79
ROE	2009	41	0.00	166.89	15.21	27.26	5.04	28.24
	2010	41	0.00	148.90	13.75	24.00	5.06	28.75
	2011	41	0.00	169.81	11.26	26.37	5.84	35.85
	POOLED	123	0.00	169.81	13.35	25.73	5.19	28.42
Other Independence Variables								
Pay Performance Alignment Policy (POLICY)	2009	41	0.00	1.00	0.85	0.36	-2.08	2.43
	2010	41	0.00	1.00	0.85	0.36	-2.08	2.43
	2011	41	0.00	1.00	0.85	0.36	-2.08	2.43
	POOLED	123	0.00	1.00	0.85	0.35	-2.03	2.14
Remuneration	2009	41	0.00	1.00	0.15	0.36	2.08	2.43

Variable	Year	N	Min	Max	Mean	Sd	Skew	Kurtosis
Consultants (REM_CON)	2010	41	0.00	1.00	0.15	0.36	2.08	2.43
	2011	41	0.00	1.00	0.15	0.36	2.08	2.43
	POOLED	123	0.00	1.00	0.15	0.35	2.03	2.14

4.2.3 Control Variables

Firm Size

Table 4.5 shows that the firm size of the sample companies portrays decreasing pattern over the years. It records an average market capitalisation of RM3.17 billion over the 3 years. The result of average market capitalisation is 4.88 times higher than the study by Mustapha (2012) which reports average market capitalisation of RM650.01 million in 2006. This signifies the rapid development in terms of firm size of public listed companies in Malaysia over the half decade.

However, it is noted that the dispersion in data are high which is evidenced from higher standard deviation and wide range of data from RM92,400 to RM38.57 billion. Thus, resulting in high level of skewness and kurtosis. In order to resolve this problem, the independent variables are transformed to normal scores estimation using natural log.

Table 4.5
Summary Statistics of Control Variable

Variable	Year	N	Min	Max	Mean	Sd	Skew	Kurtosis
Firm Size (MKT_CAP)	2009	41	92,400	28,647,449,980	3,528,077,546	5,739,590,923	2.75	8.99
	2010	41	138,600	38,565,097,384	3,312,600,775	6,610,460,523	4.13	20.57
	2011	41	158,400	34,783,179,456	2,673,598,203	5,903,459,341	4.38	22.53
	POOLED	123	92,400	38,565,097,384	3,171,425,508	6,057,017,654	3.73	16.68

4.3 Multivariate Analysis

The main analysis conducted in this study is multiple regression analysis in order to test the hypotheses that are constructed earlier in chapter two. Six models are developed to test each component of directors' remuneration packages in determining the relationship with independent variables. To recall, there are 8 hypotheses to be tested in this study i.e. 5 hypotheses related to corporate governance structure, one hypothesis each relate to corporate performance, pay performance alignment policy and the use of remuneration consultants. These hypotheses are summarised in Table 2.1 in chapter two.

The entire 6 models used to test the hypotheses show that sig. F change are significant at 5% level as reflected in Table 4.8. These models also have taken into consideration the potential issues on regression namely normality of data, multicollinearity and heteroskedasticity. The issue on normality has been addressed in section 4.1. While the issue on multicollinearity has been addressed in chapter three based on the discussion of relevant independent variables and is tested in multiple regression analysis using the variance inflation factor (VIF). Lastly, the issue on heteroskedasticity is discussed in the next section.

Table 4.6 shows the summary of the regression analysis result for the 6 models representing the individual component of directors' remuneration packages and total directors' remuneration. Table 4.7 shows the correlation matrix between all independent variables and dependent variables. While

Table 4.8 shows the model summary and ANOVA for the respective 6 models in order to analyse the significance of the model and the respective R square and F ratio analysis. For the sake of discussion and easier comparison, Table 4.9 present the summary results of hypotheses tested using the multiple regression model.

Table 4.6

Determinants of Directors' Remuneration Packages

Dependent Variables	LN_SALARY				LN_FEES				LN_BONUS			
Variables	Coef.	t	Sig.	VIF	Coef.	t	Sig.	VIF	Coef.	t	Sig.	VIF
(Constant)	-2.371	-1.565	0.025**	-	-4.896	-1.855	0.070#	-	-3.927	-3.650	0.001*	-
BOARD_SIZE	0.123	1.763	0.567	1.833	0.236	3.472	0.001*	1.314	0.011	0.217	0.830	3.367
BOARD_INE	-1.666	-1.023	0.098#	2.823	-1.788	-1.447	0.155	1.746	0.098	0.143	0.887	2.722
REM_INE	0.402	0.348	0.730	3.317	-0.408	-0.597	0.554	1.594	1.961	3.313	0.002*	2.448
BOARD_ GENDER	0.288	1.072	0.290	1.433	0.374	1.169	0.249	1.695	-0.029	-0.173	0.864	1.467
BOARD_NAT	-0.625	-1.683	0.100	1.285	0.200	0.342	0.734	1.747	-0.351	-1.547	0.132	1.407
PERFORMANCE	0.125	0.848	0.401	1.995	-0.088	-0.508	0.614	1.388	0.136	1.221	0.231	1.721
POLICY	0.970	2.142	0.038**	1.424	0.783	1.822	0.075#	1.549	-0.181	-0.464	0.645	1.528
REM_CON	0.237	0.709	0.482	1.579	0.148	0.394	0.695	1.315	0.183	0.819	0.419	1.882
LN_MKT_CAP	0.008	0.115	0.909	2.518	0.147	1.322	0.193	1.453	0.114	2.130	0.041**	4.657

Note:

(*) – significant at 1% level (**) – significant at 5% level (#) – significant at 10% level

Table 4.6 (cont.)
Determinants of Directors' Remuneration Packages

Dependent Variables	LN_BIK				LN_OTHER_EMOL				LN_TOTAL_DIR_REM			
Variables	Coef.	t	Sig.	VIF	Coef.	t	Sig.	VIF	Coef.	t	Sig.	VIF
(Constant)	-9.582	-4.340	0.000*	-	-5.677	-3.823	0.000*	-	9.921	10.052	0.000*	-
BOARD_SIZE	0.007	0.113	0.911	1.684	0.058	0.863	0.393	2.169	0.141	3.060	0.003*	1.642
BOARD_INE	0.390	0.313	0.756	1.765	-0.169	-0.169	0.867	1.798	-1.462	-2.239	0.027**	1.202
REM_INE	1.615	2.261	0.029**	1.879	1.239	2.286	0.027**	1.262	2.121	5.722	0.000*	1.132
BOARD_ GENDER	0.770	2.866	0.007*	1.414	0.457	1.670	0.102	1.691	0.295	1.776	0.078#	1.140
BOARD_NAT	-0.683	-1.901	0.064#	1.346	-0.299	-0.650	0.519	1.644	-0.364	-1.301	0.196	1.057
PERFORMANCE	0.042	0.257	0.799	1.484	0.265	2.029	0.049**	1.732	0.275	3.241	0.002*	1.324
POLICY	1.105	2.441	0.019**	1.597	-0.447	-1.430	0.160	1.465	-0.053	-0.228	0.820	1.132
REM_CON	-0.282	-0.955	0.345	1.303	0.680	1.386	0.173	2.191	0.532	2.253	0.026**	1.152
LN_MKT_CAP	0.338	3.550	0.001*	1.561	0.175	2.607	0.012**	2.259	0.130	2.802	0.006*	2.030

Note:
(*) – significant at 1% level (**) – significant at 5% level (#) – significant at 10% level

Table 4.7
Correlations Matrix

	LN_SALARY	LN_FEES	LN_BONUS	LN_BIK	LN_OTHER_EMOL	LN_TOTAL_DIR_REM	BOARD_SIZE	BOARD_INE	REM_INE	BOARD_GENDER	BOARD_NAT	PERFOR-MANCE	POLICY	REM_CON	LN_MKT_CAP
LN_SALARY	1	-.170*	-.006	.154*	-.069	.024	.043	-.055	-.150*	.187*	-.189*	-.015	.120	.050	.077
LN_FEES	-.170*	1	.045	-.032	-.089	-.162*	.084	-.149*	.025	-.193*	.108	-.277**	.076	.029	.251**
LN_BONUS	-.006	.045	1	-.063	.024	.290**	.102	.124	.135	-.045	-.179*	.055	-.040	.150*	.136
LN_BIK	.154*	-.032	-.063	1	-.022	.079	-.018	.025	.093	.291**	-.097	-.069	.092	-.064	.079
LN_OTHER_EMOL	-.069	-.089	.024	-.022	1	.357**	.149*	-.207*	.024	.190*	.030	.189*	-.017	.190*	.209*
LN_TOTAL_DIR_REM	.024	-.162*	.290**	.079	.357**	1	.490**	-.240**	.197*	.232**	.061	.361**	.055	.278**	.524**
BOARD_SIZE	.043	.084	.102	-.018	.149*	.490**	1	-.235**	-.117	.264**	.088	.219**	.179*	.130	.582**
BOARD_INE	-.055	-.149*	.124	.025	-.207*	-.240**	-.235**	1	.173*	-.024	-.062	.039	.067	-.200*	-.268**
REM_INE	-.150*	.025	.135	.093	.024	.197*	-.117	.173*	1	-.142	.121	-.178*	-.100	-.093	-.217**
BOARD_GENDER	.187*	-.193*	-.045	.291**	.190*	.232**	.264**	-.024	-.142	1	.031	.117	.227**	.141	.196*
BOARD_NAT	-.189*	.108	-.179*	-.097	.030	.061	.088	-.062	.121	.031	1	.041	-.031	.112	.140
PERFORMANCE	-.015	-.277**	.055	-.069	.189*	.361**	.219**	.039	-.178*	.117	.041	1	.002	.084	.450**
POLICY	.120	.076	-.040	.092	-.017	.055	.179*	.067	-.100	.227**	-.031	.002	1	.171*	.068
REM_CON	.050	.029	.150*	-.064	.190*	.278**	.130	-.200*	-.093	.141	.112	.084	.171*	1	.263**
LN_MKT_CAP	.077	.251**	.136	.079	.209*	.524**	.582**	-.268**	-.217**	.196*	.140	.450**	.068	.263**	1

*. Correlation is significant at the 0.05 level (1-tailed).

**. Correlation is significant at the 0.01 level (1-tailed).

Table 4.8
Model Summary and Anova

	LN_SALARY	LN_FEES	LN_BONUS	LN_BIK	LN_OTHER_EMOL	LN_TOTAL_DIR_REM
R	0.604	0.654	0.731	0.710	0.746	0.726
R Square	0.365	0.428	0.534	0.504	0.557	0.528
Adjusted R Square	0.229	0.311	0.407	0.395	0.466	0.490
R Square Change	0.365	0.428	0.534	0.504	0.557	0.528
F	2.683	3.664	4.207	4.627	6.141	14.019
F Change	2.683	3.664	4.207	4.627	6.141	14.019
Sig. F Change	0.015**	0.002*	0.001*	0.000*	0.000*	0.000*

Note:
(*) – significant at 1% level (**) – significant at 5% level

Table 4.9
Summary Results of Hypotheses Tested

Dependent Variables / Variables	Hypothesis	Predicted Sign	LN_SALARY			LN_FEES			LN_BONUS		
			Result	Actual Sign	Decision	Result	Actual Sign	Decision	Result	Actual Sign	Decision
BOARD_SIZE	H1	+	Not sig.	+	Reject	Sig. at 1% Level	+	**Support**	Not sig.	+	Reject
BOARD_INE	H2a	?	Sig. at 10% Level	-	**Support**	Not sig.	-	Reject	Not sig.	+	Reject
REM_INE	H2b	?	Not sig.	+	Reject	Not sig.	-	Reject	Sig. at 1% Level	+	**Support**
BOARD_GENDER	H3	?	Not sig.	+	Reject	Not sig.	+	Reject	Not sig.	-	Reject
BOARD_NAT	H4	?	Not sig.	-	Reject	Not sig.	+	Reject	Not sig.	-	Reject
PERFORMANCE	H5	+	Not sig.	+	Reject	Not sig.	-	Reject	Not sig.	+	Reject
POLICY	H6	+	Sig. at 5% Level	+	**Support**	Sig. at 10% Level	+	**Support**	Not sig.	-	Reject
REM_CON	H7	?	Not sig.	+	Reject	Not sig.	+	Reject	Not sig.	+	Reject
LN_MKT_CAP (Control Variable)	NA	+	NA	+	NA	NA	+	NA	NA	+	NA

Table 4.9 (cont.)
Summary Results of Hypotheses Tested

Dependent Variables	Hypothesis	Predicted Sign	LN_BIK			LN_OTHER_EMOL			LN_TOTAL_DIR_REM		
Variables			Result	Actual Sign	Decision	Result	Actual Sign	Decision	Result	Actual Sign	Decision
BOARD_SIZE	H1	+	Not sig.	+	Reject	Not sig.	+	Reject	Sig. at 1% Level	+	**Support**
BOARD_INE	H2a	?	Not sig.	+	Reject	Not sig.	-	Reject	Sig. at 5% Level	-	**Support**
REM_INE	H2b	?	Sig. at 5% Level	+	**Support**	Sig. at 5% Level	+	**Support**	Sig. at 1% Level	+	**Support**
BOARD_GENDER	H3	?	Sig. at 1% Level	+	**Support**	Not sig.	+	Reject	Sig. at 10% Level	+	**Support**
BOARD_NAT	H4	?	Sig. at 10% Level	-	**Support**	Not sig.	-	Reject	Not sig.	-	Reject
PERFORMANCE	H5	+	Not sig.	+	Reject	Sig. at 5% Level	+	**Support**	Sig. at 1% Level	+	**Support**
POLICY	H6	+	Sig. at 5% Level	+	**Support**	Not sig.	-	Reject	Not sig.	-	Reject
REM_CON	H7	?	Not sig.	-	Reject	Not sig.	+	Reject	Sig. at 5% Level	+	**Support**
LN_MKT_CAP (Control Variable)	NA	+	NA	+	NA	NA	+	NA	NA	+	NA

4.3.1 Independent Variables

Board Size

Table 4.9 shows that the coefficient and t-statistic of board size is significant at 1% level for fees and total directors' remuneration. This suggests that the positive relationship between total directors' remuneration with board size derive from fees component, thus supporting hypothesis 1 (H1). The result is consistent with the studies of Abdullah (2006) and Jensen (1993). As the board size increases with the appointment of additional members who are typically non-executive directors, the directors who attend the board meetings are eligible for director fees to be paid monthly or by attendance thus resulting in higher payout of director fees. However, the board size does not explain the relationship with other component of directors' remuneration packages which signifies that the board of directors in the sample companies are highly independence in the determination process of directors' remuneration packages. Based on the Malaysian Code on Corporate Governance (MCCG), companies are encouraged to establish nominating and remuneration committee to strengthen the independence and efficient assessment on board members' appointment and determination of remuneration packages. The code also is silent on the mandatory number of directors to be met but majority of them must be of non-executive directors and independent directors. Thus, the result shows that the board size has no significant impact on the determination of overall remuneration packages except for director fees and total directors' remuneration.

Board and Remuneration Committee Independence

The test on independence covers the proportion of independent non-executive directors at board level and remuneration committee level. The results are as follows:

- Proportion of independent directors at board level is statistically significant with salary and total directors' remuneration; and
- Proportion of independent directors at remuneration committee level is statistically significant with bonus, benefit-in-kind, other emoluments and total directors' remuneration.

At board level, the result suggests that there is negative relationship between total directors' remuneration and salary with proportion of independent directors in board, thus supporting hypothesis 2a (H2a). The negative relationship suggests that independent directors in board are effective in monitoring and controlling executive director by exercising their roles to protect the interest of shareholders. The result shows no significant relationship with other components of directors' remuneration packages reflecting that the independent directors in the board do not directly participate in the design of other components of directors' remuneration packages and maintain their independence role in this aspect.

At remuneration committee level, the result suggests that the positive relationship between total directors' remuneration with proportion of independent directors' in remuneration committee derive from bonus, benefit-in-kind and other emoluments component, thus supporting

hypothesis 2b (H2b). Bonus and benefit-in-kind are statistically significant at 1% level while other emoluments are statistically significant at 10% level. It implies the practice of high level of independence when the determination of salary and fees are not affected by the proportion of independent directors in remuneration committee although this committee is responsible in designing the remuneration packages for directors as outline in the MCCG. Thus, the result is consistent with the role of remuneration committee as suggested in MCCG in establishing formal and transparent remuneration policies and procedures to attract and retain directors. In view of the current dynamic operations of multinational companies that require board of directors deliberating the result on operations and management of companies that are complex and require profound knowledge, it is relevant to have increment in directors' remuneration packages components which is evidenced by the positive relationship with bonus, benefit-in-kind and other emoluments.

Board Diversity

A. Gender

Table 4.9 shows that the coefficient and t-statistic of board diversity in terms of gender is significant at 1% level for benefit-in-kind and significant at 10% level for total directors' remuneration. This suggests that the positive relationship between total directors' remuneration with the existence of diverse board in terms of gender derive from benefit-in-kind, thus supporting hypothesis 3 (H3). The result implies that diverse board which comprises of male and female directors influence the design of benefit-in-

kind in the total directors' remuneration packages. This may be due to the nature of the reward which is unique and unstandardise. For example, benefit-in-kind reflects the reward to directors in different forms other than cash which are attractive to the needs of diverse board members from different gender. However, it is interesting to note that the existence of diverse board members in terms of gender exert no significant influence on salary and fees which signal compliance to high level of independence by the board members.

B. Nationality

The result shows that the coefficient and t-statistic of board diversity in terms of nationality is significant at 10% level for benefit-in-kind. This suggests that negative relationship exist between the existence of diverse board in terms of nationality with benefit-in-kind, thus supporting hypothesis 4 (H4). It shows that international directors prefer reward packages in the form of cash rather than other perquisites that is remuneration in non-monetary form which may be subjectively determined and not fairly valued. However, it is interesting to note that total directors' remuneration shows no significant relationship with board diversity (nationality). Majority of the individual component of directors' remuneration also do not significantly relate to the existence of international directors in board which signify that diverse nationality board member have no power or exert less influence in the determination of the remuneration packages for the board of directors. This may be due to the minimal

participation of international directors in the board of Malaysian public listed companies as evidenced from descriptive statistics in Table 4.4.

Corporate Performance

The test on corporate performance is done using performance index generated by factor analysis due to the high correlation between proxies used in measuring the corporate performance as described in section 3.3.2. The result shows that the coefficient and t-statistic of corporate performance is significant at 1% level for total directors' remuneration and 5% level for other emoluments. This suggests that the positive relationship between total directors' remuneration with corporate performance derive from other emoluments, thus supporting hypothesis 5 (H5). The result is consistent with the agency theory which states that directors should be compensated based on the corporate performance. The positive relationship with other emoluments implies that directors are being objectively and independently assessed, resulting in total directors' remuneration for better performance of the Group. It is also interesting to note that salary of executive directors are not significantly correlated with corporate performance which signifies the existence of ambiguity in the independence of the board of directors in exerting its power to control the executive directors. The positive relationship with other emoluments signifies that the remuneration policies and procedures created are sufficient to attract, retain and motivate directors as proposed in the MCCG for best practice in corporate governance. The fact that benefit-in-kind is not correlated with performance may be due to

the inherent nature of the reward offered which is not standardise from one company to another that serve as additional compensation to the board of directors.

Pay Performance Alignment Policy

The test on pay performance alignment policy reflects the alignment between directors' remuneration packages and corporate performance when the pay performance alignment policy is disclosed in the annual report. The result shows that the coefficient and t-statistic of pay performance alignment policy is significant at 5% level for salary, 10% level for fees and 5% level for benefit-in-kind. This suggests a positive relationship between salary, director fees and benefit-in-kind to the pay performance alignment policy thus supporting hypothesis 6 (H6). It clearly shows that salary, fees and benefit-in-kind are independently and transparently aligns to the group and individual performance as disclose in the annual report of the companies. Thus, it supports the MCCG initiative to align the performance of directors to the corporate performance. However, it is interesting to note that total directors' remuneration shows no significant relationship with pay performance alignment.

Remuneration Consultants

The result shows that the coefficient and t-statistic of the use of remuneration consultants by companies is significant at 5% level for total director's' remuneration. This suggests a positive relationship between total directors' remuneration to the use of remuneration consultants thus

supporting hypothesis 6 (H6). However, it is interesting to note that there is no single component of directors' remuneration packages that significantly related to the remuneration consultants. It signifies that remuneration consultants do influence in the determination of the remuneration packages for the board of directors but the extent of their involvement and the determination of the design of each component of directors' remuneration packages lies with the companies. Although companies may engage the remuneration consultants to advise on the design of the pay packages for directors, but the final decision will be in the hand of remuneration committee to decide on the best reward system to be applied by companies. In addition, the minimal engagement of remuneration consultants by companies as evidenced from descriptive statistics in Table 4.4 also lead to the insignificant influence on the design of each component of directors' remuneration packages.

4.3.2 Control Variable

Firm Size

Table 4.9 shows that the coefficient and t-statistic of the use of remuneration consultant is significant at 1% level for benefit-in-kind and total directors' remuneration and significant at 5% level for bonus and other emoluments. This suggests a positive relationship between firm size and total directors' remuneration including the individual component namely fees, bonus, benefit-in-kind and other emoluments. Although salary and fees show no significant relationship but they reflects positive relationship with firm size. The result implies that bigger companies should reward their directors

higher than small companies which are consistent with previous study by Chen (2006) and Tosi et al. (2000).

4.4 Regression Diagnostics

Research diagnostics are carried out to support the validity of the result from regression analysis by identifying and correcting the model from regression related problems namely non-normality, heteroscedasticity and multicollinearity. The discussions are as follows:

4.4.1 Normality

The normality issue is tested using Shapiro-Wilk W test on the residual of the models and supplement with the descriptive analysis on skewness and kurtosis for each data used in the model. Table 4.10 shows the summary result on the normality of the residual of the model. The result shows that residual for LN_FEES and LN_BONUS are not significant at 5% level, thus accepting the null hypothesis that the residual is normally distributed. The remaining 4 models are significant at 5% level, thus rejecting the null hypothesis signifies that the residuals are not normally distributed. However, in practical, it is acceptable to have non normal residual when number of sample more than 100 (Chen 2006).

Table 4.10
Summary Results Of The Shapiro-Wilk W Test

MODEL	SHAPIRO-WILK W TEST	
	Statistic	Sig.
1. LN_SALARY	0.939	0.025*
2. LN_FEES	0.968	0.123
3. LN_BONUS	0.985	0.671

MODEL	SHAPIRO-WILK W TEST	
	Statistic	Sig.
4. LN_BIK	0.940	0.009*
5. LN_OTHER_EMOL	0.939	0.009*
6. LN_TOTAL_DIR	0.983	0.047*

Note: (*) Significant at 5% level

The study also conducts additional test to supplement the result on the Shapiro-Wilk W Test on the normality of the data used in each model. The descriptive statistics on skewness and kurtosis are used in the assessment. Table 4.11 shows the summary statistics on skewness and kurtosis for the related variables. Data with skewness of more than 2.1 and kurtosis more than 7.1 signifies the non-normality (West et al., 1995). The result shows that all variables are normally distributed. Thus, the descriptive statistics provide reliable data on normality and the result of the final model utilising these data are supported.

Table 4.11
Summary Statistics of Skewness and Kurtosis

Model	Descriptive Statistics	
	Skewness	Kurtosis
LN_SALARY	-1.033	1.422
LN_FEES	-1.117	0.906
LN_BONUS	-.058	-0.676
LN_BIK	-1.638	2.911
LN_OTHER_EMOL	-1.133	1.075
LN_TOTAL_DIR	-0.099	0.508
BOARD_SIZE	0.444	-0.294
BOARD_INE	0.698	-0.174
REM_INE	-0.651	0.887
BOARD_GENDER	0.016	-2.033
BOARD_NAT	2.913	3.593
PERFORMANCE	0.069	-0.602
POLICY	-2.026	2.139
REM_CON	2.026	2.139

Model	Descriptive Statistics	
	Skewness	Kurtosis
LN_MKT_CAP	-0.986	1.911

4.4.2 Heteroscedasticity

The problem of heteroscedasticity is tested using The Breusch-Pagan/Koenker test in addition to the information from the plot chart of regression standardised predicted value versus regression standardised residual. The result of significance level of Chi-square distribution (p) is presented for both tests. However, due to the small sample size, Konker test is more suitable to be used to rigorously test the existence of heteroscedasticity (Koenker, 1981). Table 4.12 shows the p-level for both tests on the 6 models. The result shows that the significant level of Chi-square distribution for Koenker test is not significant at 5% level, thus the null hypothesis on homoscedasticity is accepted. Thus, the result proves that the model is free from heteroscedasticity.

Table 4.12
Summary Results Of The Breusch-Pagan/Koenker Test

Model	Breusch-Pagan Test		Koenker Test	
	CHI-SQUARE df=P	Sig. p	CHI-SQUARE df=P	Sig. p
1. LN_SALARY	34.690	0.0001	7.824	0.5520
2. LN_FEES	42.530	0.0000	13.786	0.1301
3. LN_BONUS	35.573	0.0000	15.002	0.0909
4. LN_BIK	91.119	0.0000	18.003	0.0851
5. LN_OTHER_EMOL	58.504	0.0000	17.811	0.0874
6. LN_TOTAL_DIR_REM	25.007	0.0030	25.689	0.0623

4.4.3 Multicollinearity

The problem of multicollinearity is tested using variance inflation factor (VIF) for all variables used in the model constructed. Table 4.6 shows the VIF for each variable in each model. The results show that all VIF do not exceed 5. Amount of VIF that exceed 10 will address the problem of multicollinearity in the model (Mason and Pereault, 1991). Thus, the result proves that the model is free from multicollinearity.

CHAPTER FIVE
FINDINGS

The study examines the effect of key variables namely corporate governance structures, corporate performance, pay performance alignment policy and the use of remuneration consultants to the components of directors' remuneration packages. The study also uses total directors' remuneration as a robustness test to check if there is any significant difference in the regression results.

In the aspect of corporate governance structures, 5 variables are tested namely board size, board and remuneration committee independence and board diversity in terms of gender and nationality. First, the study reveals that board size is positively related to fees and total directors' remuneration. The result is consistent with past studies and agency theory. Second, the board independence variable shows negative relationship with salary and total directors' remuneration which reflect that the independent directors in the board adhere to the best conduct in corporate governance especially in monitoring executive directors' decisions and maintaining independence role in the design of directors' remuneration packages. Third, the proportion of independent directions in remuneration committee is positively related to bonus, benefit-in-kind, other emoluments and total directors' remuneration. It implies the practice of high level of independence when the determination of salary and fees are not affected by the proportion of independent directors in remuneration committee although this committee is responsible in designing the remuneration packages for directors as outline in the MCCG.

Fourth, the diversity of gender in board shows no sign of independence issue when it shows no significant relationship with salary and fees. The relationship that it posits with benefit-in-kind and total directors' remuneration reflects the different preference in light of the nature of the rewards which are unique and unstandardise. Finally, the diverse nationality in board does not significantly affect total directors' remuneration when it shows negative relationship with benefit-in-kind per se. This may be due to the minimal participation of international directors in the board of Malaysian public listed companies as evidenced from descriptive statistics presented in Table 4.4.

The result on corporate performance shows positive relationship with other emoluments and total directors' remuneration. Thus, supporting the past literature and agency theory which states that directors should be compensated based on the corporate performance. The positive relationship with other emoluments signifies that the remuneration policies and procedures created are sufficient to attract, retain and motivate directors as proposed in the MCCG for best practice in corporate governance. It is also interesting to note that salary of executive directors are not correlated with corporate performance which signifies the existence of ambiguity in the independence of the board of directors in exerting its power to control the executive directors. The fact that benefit-in-kind is not correlated with performance may be due to the inherent nature of the reward offered which is not standardise from one company to another that serve as additional compensation to the board of directors.

In the aspect of pay performance alignment policy, there exists evidence that pay to directors is align with the group and individual performance when it shows positive relationship with salary, fees and benefit-in-kind. However, it also shows inconclusive result when it does not significantly related to total directors' remuneration. This may be due to the different interpretation of individual performance alignment with the total directors' remuneration.

The study on the use of remuneration consultants shows significant relationship with total directors' remuneration but not significantly related to each components of directors' remuneration packages. It shows that remuneration consultants do influence in the determination of the remuneration packages for the board of directors but with limited power to exert full control in the design of directors' remuneration packages. Although companies may engage the remuneration consultants to advise on the design of the pay packages for directors, but the final decision rest in the hand of remuneration committee to decide on the best reward system to be applied by companies. It is also not typical for companies to use remuneration consultants as evidence by the minimal engagement of remuneration consultants with companies as evidenced from descriptive statistics presented in Table 4.4.

The finding for the control variable which is firm size shows positive relationship which is consistent with the study of previous scholars. In summary, the empirical results of the data analysis show mix results for the

hypotheses. Hypotheses 1, 2a, 2b, 3, 4, 5, 6 and 7 are supported for the components of directors' remuneration packages that show significant relationship with the independent variables.

CHAPTER SIX
CONCLUSION AND RECOMMENDATION

The important findings of this study can be summarised as follows. First, corporate governance structures – board size, board and remuneration committee independence and board diversity (gender and nationality) are significantly affect individual component of directors' remuneration packages. Subsequent test on total directors' remuneration reveal similar result with the exception of the existence of diverse nationality in board and pay performance alignment policy which do not significantly affect total directors' remuneration. Second, total directors' remuneration is aligned with the corporate performance in the aspect of other emoluments. Third, companies that disclose pay performance alignment policy in the annual report do reward their directors according to what they claimed with concentration on salary, fees and benefit-in-kind components without significantly affect the total directors' remuneration. Fourth, the use of remuneration consultants does influence the design of directors' remuneration packages.

This study contributes towards the literature on directors' remuneration in a number of ways. Firstly, the study explains the relationship between components of directors' remuneration packages and total directors' remuneration with corporate governance structures. The corporate governance structures include board size, board independence and board diversity. The study on board independence looks into the proportion of independent directors in board and remuneration committee. Board diversity

includes the dimension of gender and nationality of directors in board. The study also examines corporate performance by focusing on accounting performance measurement namely return on assets and return on equity taking into consideration the lagged effect on the performance with directors' remuneration. Pay performance alignment and the use of remuneration consultants also included as the independent variables in this study. Finally the firm size as measured by market capitalisation and sector are used as constant variables.

One of the limitations to the research is the exclusion of Employee Stock Option Scheme (ESOS) from the dependent variables. It is inevitable as the data shows serious problem of normality and will certainly impact the final result of regression. It may also be due to the inconsistent reporting and valuation of ESOS by companies in Malaysia in their annual report which leads to the insufficient data to be added to the analysis.

Second, the relatively small sample size of only 41 public listed companies as extracted from the Malaysian Corporate Governance (MCG) report produced by the Minority Shareholder Watchdog Group (MSWG) may lead to the inconclusive result on regression. It is hoped that many companies comply with the best practice in corporate governance to disclose individual directors' remuneration which may facilitate the data collection for the study. Out of 100 public listed companies which score highest mark in best corporate governance practice, only 32 companies disclose individual directors' remuneration. Future research may undertake bigger sample size

of public listed companies as the adoption of corporate governance best practice has become a typical corporate culture.

Finally, the number of independent variables used may be extended to include other relevant factors that may impact the determination of individual components of directors' remuneration packages. The use of more constant and dummy variables to control for variation in time or measuring other relevant aspect in the study should be done in future research.

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