



# **THE IMPACT OF CHANGES IN MALAYSIAN REGULATORY FRAMEWORK ON THE DISCLOSURES OF EXECUTIVE DIRECTORS' REMUNERATION**

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*“I can no other answer make, but, thanks, and thanks.”*

*William Shakespeare, Twelfth Night*

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## ABSTRACT

The first objective of this study is to analyse the level of disclosure of executive directors' remuneration before and after introduction of the Malaysian Code on Corporate Governance in 2001, the changes in accounting standards FRS 2 '*Share based payments*' in 2005 and FRS 124 '*Related party disclosure*' in 2006 and the changes to the Bursa Malaysia Listing Rule. The study seeks to examine the effectiveness of these reforms in improving the level of disclosure of executive directors' remuneration. The second objective is to fill the gaps in prior study by empirically testing the determinants of the level of disclosure of executive directors' remuneration based on agency theory, legitimacy theory, signaling theory and proprietary costs. These theories are represented by several ownership variables, corporate governance variables and firm characteristics.

Using an un-weighted disclosure index, this study scored the level of disclosure of executive directors' remuneration of 200 publicly listed Malaysian companies over the period of 2000 to 2008. The period captured the revolving nature of the Malaysian regulatory framework on disclosure of executive directors' remuneration. The disclosure index is based on prior studies and the regulatory framework. The dataset is in the form of a panel data and consisted of 1788 company-years. The study employed non-parametric tests and multivariate analysis to examine any significant changes in the level of disclosure of executive directors' remuneration and the determinants of the level of disclosure.

The results showed that there were significant improvements in the level of disclosure of executive directors' remuneration after the reforms. However, Malaysian companies

appeared to take advantage of weaknesses in the reforms to fall back on the practice of disclosing minimum of the mandatory requirements. A significant number of Malaysian companies continued not to disclose on their individual executive directors' remuneration. The inconsistencies between the mandatory Listing Rule and the voluntary MCG made it easier for companies not to do so. These implied that the 'hybrid' approach adopted by the regulators in implementing in the reforms was not sufficient in ensuring comprehensive disclosure of executive directors' remuneration.

Hypothesis tests on the determinants of the level of disclosure of executive directors' remuneration found that traditional dominance by family shareholders was significant and limit the extent of disclosure of executive directors' remuneration. Other agency players (regulators, foreign investors and creditors) roles appeared to be dwarfed by the presence of controlling family shareholders. However, government shareholdings alleviated to a certain extent, this dominance by significantly pushing for compliance with the reforms. Corporate governance mechanisms of independent directors and level of audit quality were shown to work differently in different disclosure environments in improving the level of disclosure of executive directors' remuneration. The findings also supported the notions of legitimacy theory and signaling theory that company size, industry differences and profitability were significantly associated with the level of disclosure. This study also showed that contrary to expectations of proprietary costs, companies with higher growth were more likely to disclose the remuneration of individual executive directors.

## **Thesis Declaration**

I, SITI SERI DELIMA ABDUL MALAK certify that this works contains no material which has been accepted for award of any other degree or diploma in any university or other tertiary institutions and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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## Chapter 1 Introduction

### 1.0. Preamble

*“It is shameful” President Barrack Obama of USA (January 2009),*

*When commenting on the \$18billion bonus that Wall Street executives received*

The remuneration of executive directors is an issue where there is a high possibility of conflict and divergence of interests between the outside shareholders and managers (Coulton, James & Taylor 2001). It is not surprising that there have been various debates on excessive senior executive remuneration and how performance based remuneration have encouraged executives to manipulate earnings and engage in misleading corporate reporting practices. The significant disparity between an executive director’s remuneration and an average worker’s pay has fuelled debate on the ‘seemingly excessive’ level of remuneration especially under current economic climate.

Traditional executive directors’ remuneration consisted of a fixed salary and perquisites that did not have a direct link to the company’s or the executive’s performance. This form of remuneration did not create incentives for executives to exert additional effort or penalize them for poor performance. These weaknesses led to incentive based remuneration packages that included cash bonuses and share based payments. The introduction of share based payments the remuneration scheme was associated with inflating the total remuneration received by senior executives.

In Malaysia, the annual average income per capita for the year 2011 was RM 28 725 (Economic Planning Unit, 2011). On the other hand, an average remuneration of Malaysian

executive director's in 2011 was RM 824 000 (Minority Shareholders Watchdog Group, 2011). The highest paid executive in 2010 was from Genting Berhad with a remuneration of RM 106 million (Chieh 2011). Although the level of Malaysian executive directors' remuneration was not as exorbitant as their American counterparts, there was serious concern about the minimal disclosure on remuneration policies and practices in the annual reports (Minority Shareholders Watchdog Group, 2011). It was difficult for shareholders to gauge the performance of the executive directors' in working for them and whether their remuneration was fair or excessive.

The aftermath of the East Asian financial crisis of 1997 and 1998 lead to the introduction of the Malaysian Code on Corporate Governance (MCCG) in 2001. It was recommended that companies disclose individual director's remuneration and a statement of the principles behind remuneration policies. The Bursa Malaysia Listing Rules were also amended to include mandatory disclosure of directors' remuneration by bands. This was followed by the harmonization of Malaysian accounting standards with the International Accounting Standards. The Financial Reporting Standard (FRS) 2 '*Share based payments*' was introduced in 2005. It required reporting entities to disclose details of executives' share based payments. The FRS 124 '*Related party disclosure*' was introduced in 1999 and was amended in 2005 to include disclosure of 'key management personnel' remuneration. These reforms were introduced to improve the level of transparency into the market and to restore investors' confidence the Malaysian capital market. The issue is whether these reforms are effective in improving the transparency of remuneration practices and policies in Malaysia and the factors that may influence the level of adoption to the reforms.

## **1.1. Research questions**

This study seeks to answer the following questions:

- What is the level of total and voluntary disclosure of Malaysian executive directors' remuneration before and after the reforms to the Malaysian regulatory framework?
- Are the reforms to the Malaysian regulatory framework on the disclosure of executive directors' remuneration effective in improving the level of disclosure of Malaysian executive directors' remuneration? Was there any resistance to the evolving regulatory changes on the disclosure framework?
- What are the determinants of the level of disclosure of Malaysian executive directors' remuneration? Can agency theory, legitimacy theory, signaling theory and proprietary costs explain the level of disclosure of executive directors' remuneration?

## **1.2. Objectives and motivations**

The first objective of this study is to examine the level of disclosure of Malaysian executive directors' remuneration before and after the introduction of the reforms of the disclosure framework. Luo, Courtenay and Hossain (2006) argued that a disclosure rich environment like the US may not capture the influence of the theoretical determinants on the extent of disclosure. The adoption of an Anglo-American based corporate governance code in a developing Asian market with distinctive ownership and cultural characteristics, provides an interesting avenue in to study the extent and effectiveness of disclosure reforms. Chizema (2008) argued that the introduction of an Anglo-American corporate governance code that had been designed to maximise shareholders value may be resisted by institutional actors such as family owners and banks who had largely enjoyed controlling power over company policies. Prior studies have shown that corporations were resistant to the introduction of requirements to disclose details of executive remuneration especially individual remuneration and the valuation of executive options plans (Andjelkovic, Boyle & McNoe 2002; Chizema

2008). This study will investigate whether there was similar resistance to the implementation of the reforms in Malaysian capital market and whether the reforms were effective in improving the level of disclosure of executive directors' remuneration.

The second objective is to fill the gaps in existing study of disclosure on directors' remuneration. Prior studies concentrated on the question of whether remuneration policies were effective in solving agency problems (Bizjak, Lemmon & Naveen 2008; Clarkson, P, Van Bueren & Walker 2005; Core, Holthausen & Larcker 1999; Jensen & Murphy 1990; Murphy 1985; Yermack 1995). However, to examine this issue there must be adequate disclosure of remuneration data by companies. It is not surprising that a significant number of the pay and performance studies were done in the US where disclosure requirements had been extensive for some time. Andjelkovic et al. (2002) argued that the lack of disclosure meant that shareholders would not be able to scrutinize remuneration and to demand the board of directors place more emphasis on an association between pay and performance. The lack of scrutiny may mean that the board of directors would be lax in setting remuneration policies and disciplining executives. They may instead align their interests with those of the executives. For example, Core, Holthausen and Larcker (1999) showed that a weak board of directors may result in excessive CEO remuneration. Consequently, Andjelkovic argued that there may be a link between the level of disclosure of executive directors' remuneration and the pay and performance association. The pay and performance association may be weaker where there was no public disclosure of executive remuneration than in a country with extensive disclosure requirement. He showed that the association between pay and performance was weaker in New Zealand where there was less disclosure requirements on remuneration than in the US where there were extensive requirements. Coulton et al. (2001) argued that prior disclosure studies had focused on disclosure policies where the alignment of



interests may be likely, such as in external capital raising. There were limited studies on the disclosure of executives' remuneration and the factors that may determine their level of disclosure (Chizema 2008; Clarkson, P, Van Bueren & Walker 2006; Coulton, James & Taylor 2001; Liu, Jinghui. & Taylor 2008; Nelson, J & Majella 2005).

The final objective of this study is to consider agency theory, legitimacy theory, signaling theory and proprietary costs influences on the level of disclosure of executive directors' remuneration during the period of the evolving reforms in the Malaysian capital market. This study integrates the different theoretical variables to build a comprehensive empirical framework to test the hypotheses about potential associations between ownership variables, corporate governance variables and company's characteristics in shaping the disclosure policies on executive directors' remuneration. Prior studies had not integrated these different theoretical perspectives into a comprehensive empirical framework.

This study offers a unique opportunity of examining the disclosure of directors' remuneration from the perspective of the Malaysian capital market where there is high ownership concentration, dominance by family and state shareholders and regulatory intervention. Prior studies on these issues had been in Western capital markets that had different capital market characteristics and more established corporate governance structures. In more widely dispersed ownership, there is less incentive for outside stockholders to monitor firm operations. Conversely, a more concentrated ownership could result in greater vigilance by shareholders and, therefore, increased pressure on directors to discipline executives through remuneration policies. Disclosure plays an important role in ensuring sufficient information flow so that outside shareholders may monitor the performance of the executive directors. Earlier studies have suggested that Malaysian family owners continue to be a major obstacle

to the implementation of corporate reforms and in improving the level of public disclosure (Haniffa & Cooke 2002; Mohd Ghazali & Weetman 2006).

### **1.3. Contributions**

The result of this study will be of interest to Malaysian policy makers and shareholders. They will be able to assess the effectiveness of the reforms to the Malaysian regulatory framework in improving the level of disclosure of executive directors' remuneration. The results will be useful in assessing whether the '*hybrid method*' or the '*comply or justify*' method of corporate governance adopted by the regulators is sufficient to ensure compliance with the MCCG recommendations on the disclosure of executive directors' remuneration. The results may assist shareholders in examining the adequacy of the disclosure of remuneration information in assessing the performance of executive directors' as their agents. The results of the hypothesis testing will also show whether the traditional dominance exerted by the family and the state in the Malaysian capital market is present in the adoption of the reforms to the disclosure of executive directors' remuneration. If so, regulators may have to adopt a more prescriptive approach to the reforms.

This study fills gaps in existing studies on the disclosure of executives' remuneration. It extends prior studies by integrating the different theoretical perspectives offered by agency theory, legitimacy theory, signaling theory and proprietary costs in influencing the level of total, voluntary and individual disclosures of executives' remuneration. This study uses all the theories rather than employing a single theory as the explanatory theory and holding others as control variables. In addition, no prior Malaysian studies have examined the level and the determinants of the disclosure of executive directors' remuneration prior to and after the reforms to the Malaysian regulatory framework.

#### **1.4. Scope of research**

This study is grounded in agency theory, legitimacy theory, signaling theory and proprietary costs. A review of the literature provided a list of the explanatory variables that have been used to represent the different theoretical perspectives in testing the associations between the theories and the level of disclosure of Malaysian executive directors' remuneration. The variables include ownership variables, corporate governance variables and company characteristics.

The sample size used in the study is 200 companies listed in the Bursa Malaysia from 2000 to 2008. The nine year period captures the evolving regulatory framework, including the Malaysian Code of Corporate Governance, the Listing Rule, FRS 2 '*Share based payments*' and FRS 124 '*Related party disclosure*'. This study also measures the extent of disclosure of executive directors' remuneration in excess of the mandatory disclosure requirements. It then examines the differences between the characteristics of companies that disclose more and companies that disclose less on executive directors' remuneration.

This study focuses on the disclosure of executive directors' remuneration in the annual reports. Annual reports are probably the main communication between companies and stakeholders (Branco & Rodrigues 2006). The reforms that were undertaken by Malaysian regulators mainly dealt with the disclosure of information in the annual reports. Hence, it is appropriate that this study focused on the disclosure of executive directors' remuneration in company annual reports.

### **1.5. Organization of the remaining chapters**

The remainder of this thesis is organized as follows. Chapter 2 provides an overview of the Malaysian regulatory framework on disclosure of executive directors' remuneration. It examines the evolution of the framework. Chapter 3 provides a review of the current literature on the theories that may be linked to the disclosure of executive directors' remuneration. These theories are agency theory, legitimacy theory, signaling theory and proprietary costs. It also discusses prior studies on disclosure of remuneration. Chapter 4 develops the hypotheses that are employed in the study and provides an overview of the research empirical framework. In Chapter 5, the research methodology and variable measurement are outlined. Chapter 6 outlines and discusses the results of the hypotheses testing. The final chapter provides an overview of the results, their limitations and the potential for future study.

## **Chapter 2 Background on Malaysian capital market and regulatory framework**

### **2.0 Introduction**

This chapter provides an overview of the Malaysian capital market and the regulatory framework for executive directors' remuneration. The section on the regulatory reforms provides a discussion on the process embarked upon by Malaysian regulators to enhance the corporate governance code and the accounting standards. The final section discusses Malaysian executive directors' remuneration policies and disclosure practices.

### **2.1 Overview of the Malaysian capital market**

The Malayan Stock Exchange was established in 1960. After the separation of Singapore from Malaysia in 1964, the Exchange was named the Stock Exchange of Kuala Lumpur and Singapore. In 1973, the Exchange was split and the Kuala Lumpur Stock Exchange (the KLSE) was established. The KLSE consisted of the Main Board, the Second Board and the MESDAQ Market. After a demutualisation exercise in April 2004, the KLSE was renamed Bursa Malaysia. Subsequently, the Main Board and the Second Board were merged in August 2009 and named the Main Market. The MESDAQ Market was revamped as the ACE Market. As of November 2011, the total market capitalization of the Main Market and the ACE Market was RM 27614.95 billion and RM 1063.20 billion respectively<sup>1</sup>.

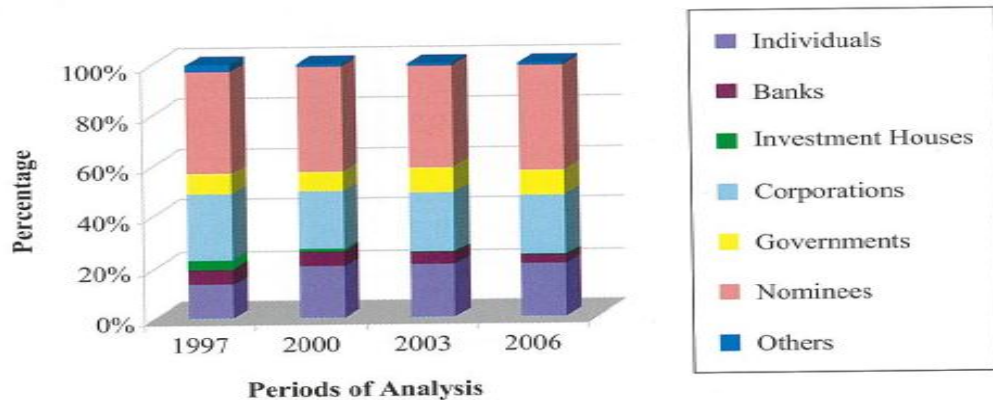
Figure 1 gives the distribution of the paid up capital according to the categories of investors in the Malaysian market. It shows that nominees, corporations and individuals were the majority of the investors in Malaysian market. Governments (including Malaysian and foreign) also

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<sup>1</sup> The shareholdings information was obtained from the Minority Shareholder Watchdog Group (MSWG) shareholdings analysis report for the period of 1997 to 2006.

had significant shareholdings in the capital market. Banks and investment houses had the lowest investment in the market.

Figure 1 Distribution of paid up capital according to types of investors



	1997	2000	2003	2006
Individuals	15,486,198,332	29,064,063,357	38,884,731,508	44,173,144,317
Banks	7,218,109,626	8,978,444,749	8,848,045,054	7,254,818,642
Investment Houses	4,210,641,302	1,717,276,812	1,391,560,647	1,201,811,095
Corporations	30,292,677,330	32,509,001,196	43,710,951,678	48,613,061,601
Governments	9,031,131,174	11,214,190,765	18,035,649,722	21,617,794,961
Nominees	47,819,002,936	60,528,529,130	75,933,317,574	88,442,893,984
Others	3,005,601,800	1,095,231,089	1,517,869,919	1,557,596,050
<b>All</b>	<b>117,063,362,500</b>	<b>145,106,737,098</b>	<b>188,322,126,102</b>	<b>212,861,120,650</b>

Source: Shareholdings Analysis Report 1997 – 2006 (Minority Shareholders Watchdog Group, 2007)

The distribution of paid up capital shows the percentage of shares according to the types of investors in Malaysian market. Further studies on the distribution of capital showed that the Malaysian market is highly concentrated in terms of real ownership. For example, Claessens, Djankov and Lang (2000) found that 85 percent of Malaysian shares was held by executives

related to the controlling family. In addition, they found that 67.2 percent of the shares was controlled by single family and 13.4 percent was controlled by state or government linked companies. Mohd Ghazali and Weetman (2006) also noted that significant numbers of shareholders in Malaysia is 'insiders' holding direct and indirect stakes in companies. Fan and Wong (2002) showed that the average voting right concentration in Malaysian companies was 30.73 percent. This indicates the presence of dominant shareholders in Malaysian companies.

Another characteristic of the Malaysian market is the dominant market presence of government and state entities. There are a significant number of publicly listed companies that are controlled or owned by the government or state entities. They are called government linked companies or GLCs. An entity is a GLC if "the government could control (the) entity (rather than have a percentage of ownership) with a primary commercial objective, either directly or through GLICs (government linked investment companies). Control is defined as "the ability to appoint members of the board of directors and senior management and to make major decisions"(The Putrajaya The Putrajaya Committee 2005, p. 200).

Government linked companies (GLCs) in Malaysia can be divided into three types. There are firstly companies that are controlled directly through Khazanah Nasional (the investment arm of government of Malaysia), the National Pension Fund or the Bank Negara (the central bank of Malaysia). The next type is companies that are controlled indirectly through other federal government agencies such as the Employee Provident Fund, Permodalan Nasional Berhad and Tabong Haji (an Islamic investment fund). The last type is companies that are controlled by state agencies.

In 2004, the GLCs were valued at RM 232 billion, which was 32 percent of the value of the market capitalization of Bursa Malaysia (World Bank 2005, p. 20). The total paid up capital contributed by Malaysian government entities increased by 141 percent from 1997 to 2006 (The Minority Shareholders Watchdog Group & The University of Nottingham (Malaysia) 2007, p. 18). The Minority Shareholder Watchdog Group (MSWG) noted that the increase in the government shareholdings seemed to contradict the government ‘transformation plan’ of reducing stakes in the GLCs. However, the significant improvement in the level of shareholdings may reflect the Malaysian government efforts to boost the Malaysian capital market as it recovered from the East Asian financial crisis.

Figure 2 Distributions of paid up capital according to nationalities

Period	Variables	Total (RM)	Mean (RM)	Median (RM)
Dec 1997	Total Paid-up Capital	117,063,362,500	165,343,732	65,000,000
	Total Malaysian Paid-up Capital	93,714,001,572	132,364,409	51,994,343
	Total Foreign Paid-up Capital	23,349,360,928	32,979,323	6,391,249
Dec 2000	Total Paid-up Capital	145,106,737,098	182,524,198	70,000,000
	Total Malaysian Paid-up Capital	120,188,246,659	151,180,184	60,640,468
	Total Foreign Paid-up Capital	24,918,490,439	31,344,013	4,353,099
Dec 2003	Total Paid-up Capital	188,322,126,102	217,713,441	90,000,002
	Total Malaysian Paid-up Capital	159,239,910,322	184,092,382	78,100,355
	Total Foreign Paid-up Capital	29,082,215,780	33,621,059	4,805,700
Dec 2006	Total Paid-up Capital	212,861,120,649	209,302,970	84,950,000
	Total Malaysian Paid-up Capital	176,044,007,557	173,101,286	73,523,309
	Total Foreign Paid-up Capital	36,817,113,092	36,201,684	4,819,736

Source: Shareholdings Analysis Report 1997 – 2006 (Minority Shareholders Watchdog Group, 2007)

Figure 2 provides the breakdown of the total paid up capital of Malaysian and foreign investors. It shows that the percentage of foreign paid up capital over total paid up capital was relatively constant over the period of 1997 to 2006. As of December 2006, the total paid up capital by foreign investors was RM 36.817 billion. The MSWG noted that the level of



foreign investors was still not at the level prior to the East Asian financial crisis. This may indicate that foreign investors' confidence had not fully recovered from the crisis.

## 2.2 Malaysian regulatory framework

Figure 3 Overview of Malaysian disclosure of executive directors' remuneration from 2000 to 2008

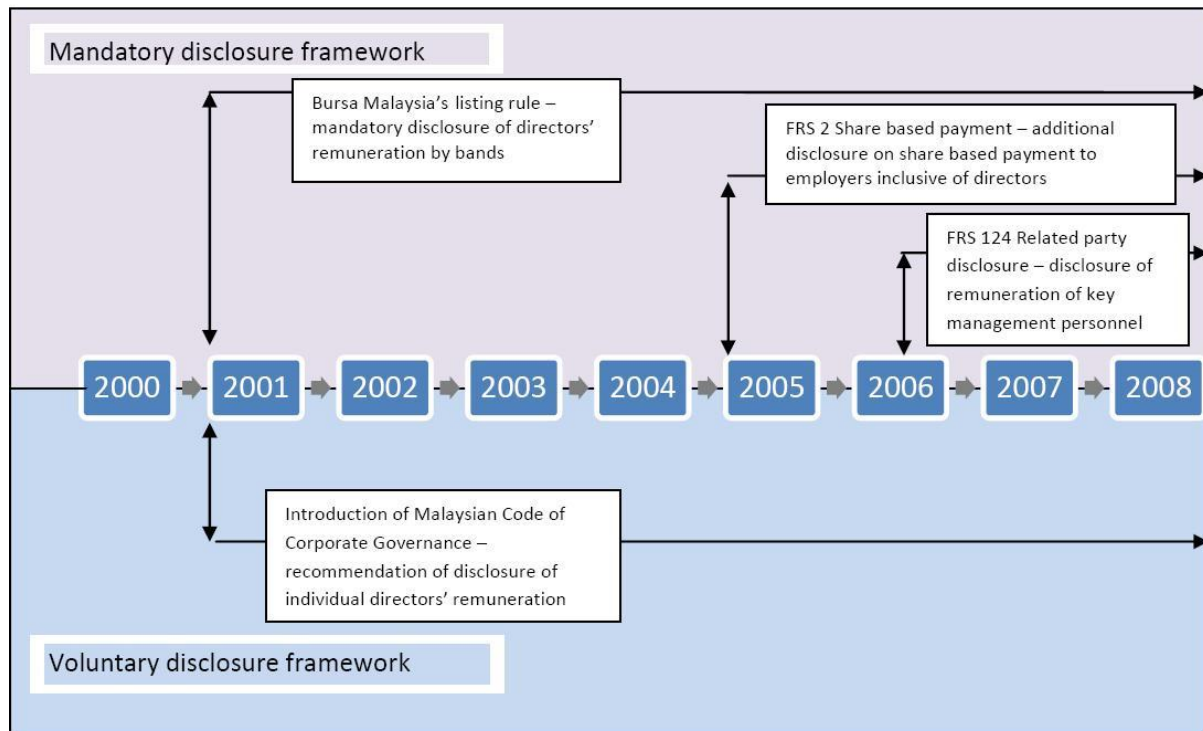


Figure 3 provides an overview of the Malaysian regulatory framework for the disclosure of executive directors' remuneration from 2000 to 2008. Before 2001, there were no specific provisions or regulations in Malaysia that focused on executive remuneration disclosure. There were broad guidelines in the existing legal framework that consisted of the Corporation Acts, Companies Regulation 1999, the KLSE Listing rules, the Malaysian Code on Takeovers and Mergers 1987 and supplementary regulatory directives from regulatory bodies. The then Companies Act required companies only to disclose total fees and other emoluments of the board of directors in the income statement. Disclosures of share based payments were limited to the names of directors granted options or shares and the class of the shares. Share based payments were not treated as part of remuneration and no valuation was

required (Pascoe 1999). There was a high degree of dependency on self-regulation by companies and an emphasis on company constitutions to determine corporate governance procedures. Thus, the disclosure of executive remuneration was voluntary.

The East Asian financial crisis of 1997-1998 affected most East Asian countries including Malaysia. The crisis that started in Thailand led to the loss of investor confidence for the whole region's financial markets. From the end of June 1997 to end of August 1998, the Bursa Malaysia (the then Kuala Lumpur Stock Exchange) composite index dropped by 72% (Zulkafli, Abdul Samad & Ismail 2004). The total market capitalization of the Bursa Malaysia declined from RM 717 billion in 1997 to RM 519 billion in 2003. The Malaysian market has started a slow recovery and now has a market capitalization of RM 28 678 billion.

Weak corporate governance policies and enforcement in East Asian countries were held to be largely responsible for the crisis (Aik Leng & Abu Mansor 2005; Tam & Tan 2007). Prior to the crisis, the rapid growth of East Asian economies was not accomplished by a substantive and functioning corporate governance structure making them susceptible to moral hazards and financial externalities (Ngui, Voon & Lim 2008). These moral hazards and financial externalities led to an erosion of investor confidence in the market and investment values. There emerged a need to protect stakeholders in the financial market and especially shareholders with efficient corporate governance policies (Zulkafli, Abdul Samad & Ismail 2004).

Prior to the reforms, there were no specific provisions or regulatory rules in Malaysia that focused solely on corporate governance. Broad guidelines on corporate governance were

offered by the existing legal framework consisting of the Corporations Act, Companies Regulation 1999, the Malaysian Code on Takeovers and Mergers 1987, the KLSE Listing Requirements and supplementary regulatory directives from regulatory bodies. There was a high degree of dependency on Malaysian companies to regulate themselves and emphasis was placed on the constitution of a company to provide a corporate governance mechanism.

Another factor that influenced these reforms was the progressive shift by the Malaysian Securities Commission (SC) from merit-based regulation to disclosure-based regulation. Merit based regulation meant that information was disclosed as needed by the regulators, such as in assessing the price of financial products offered by companies, the value of assets for acquisition and the use of proceeds from public offerings (Securities Commission of Malaysia 2001). This would not encourage the public disclosure of information as regulators obtained the information directly from the companies rather than from annual reports, to which non-affiliated or minority shareholders would not have access. This may have contributed to weaknesses in the corporate governance policies that contributed for the economic crisis.

### **2.2.1 The reforms of Malaysian corporate governance framework**

Starting in 1995, the SC started to shift from merit-based regulation to disclosure-based regulation. In 1996, the shift began in earnest with the SC establishing a time frame for full disclosure-based regulation (see Figure 4). The aim was for regulators to evaluate corporate proposals from the information disclosed in the publicly available annual reports. Reforms in Malaysian corporate governance framework would complement this important shift.

#### Figure 4 Timeframe for shift to disclosure based regulation

NOTE:  
This figure is included on page 28  
of the print copy of the thesis held in  
the University of Adelaide Library.

*Source: The Capital Market Master Plan, Securities Commission, 2001, Page 73(Appendix)*

#### A. The Establishment of High Level Finance Committee on Corporate Governance

Recognising the economic fallout from the loss of investor confidence as a result of the lack of corporate governance structures, on 24<sup>th</sup> March 1998, the government of Malaysia established a High Level Finance Committee that consisted of government regulatory bodies and private sector representatives. The mission of *the Committee* was to set up a corporate governance framework and best practice guidelines.

*The Committee* was divided into two working groups. The first working group (JPK 1) focused on the establishment of best practices in corporate governance and training and

education. The group consisted mainly of industry participants and was chaired by the Chairman of the Federation of Public-Listed companies. This was to allow for the standards to be developed around companies' needs, making it easier for them to adopt the practices.

However, regulatory bodies were also represented to ensure neutrality and the quality of the standards. The second working group (JPK 2) was tasked with identifying and providing recommendations to reform existing corporate regulations and enforcement mechanisms. This group was chaired by the Securities Commission and consisted of representatives from regulatory bodies, professional bodies and the corporate sector.

*The Committee* considered the following approaches in developing the corporate governance code:

a) Prescriptive approach

This approach involved regulators prescribing a corporate governance code that specified the expected standards in corporate governance. Companies were expected to comply with these best standards and to disclose their level of compliance in annual reports. This would remove the flexibility which companies had in building their corporate governance policies around their individual needs.

The main concern of *the Committee* was that companies would resort to 'box ticking' of the standards that had been complied with without considering and actively pursuing the substance of each standard. This could mislead shareholders and other users into believing that the companies that ticked most boxes had their corporate governance policies sanctioned by the regulators. *The Committee* considered their experience with Malaysian cases of audit

committees that were established merely to the requirement to have them, with non-qualified persons sitting on the committees.

b) Non-prescriptive (self-regulatory) approach

This approach relied on companies voluntarily disclosing their actual corporate governance practices. It allowed companies to develop their own corporate governance framework to suit their specific needs. However, *the Committee* argued that the current level of corporate governance practices and disclosures in Malaysia were very weak. This was evidenced by the East Asian economic crisis. There was a need to ‘*start from scratch*’, to develop best governance standards to improve the corporate governance practices of Malaysian companies.

It is interesting to note that *the Committee* in their report considered the case of Australian self-regulatory practices<sup>2</sup> in coming to their conclusions. They argued that the level of corporate governance practices in Australia would have been fairly advanced for the Australian regulators to allow the companies flexibility in their corporate governance policies (Finance Committee on Corporate Governance 2000, p. 83). Australia has since moved from self-regulation to a prescriptive approach.

c) Hybrid approach

*The Committee* relied upon the evidence and recommendations of the UK’s Hampel report in assessing the hybrid approach. The Hampel report was a review of UK existing corporate governance codes (the Cadbury and Greenbury Codes) and was published on January 1998<sup>3</sup>.

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<sup>2</sup> Prior to the reform, Australian corporate governance requirement was self-regulatory albeit having best standards

<sup>3</sup> The result from this review had since been accepted by the London Stock Exchange.

The Hampel report found that the current codes had been applied against in a way that was contrary to their original intentions, which were to provide benchmarks for good practice in corporate governance. However, they allowed companies to adopt another alternative, if it better represents the circumstance. The detailed guidelines provided by the Cadbury and Greenbury codes were treated by UK companies as prescriptive rules instead of adapting the best practices that would suit their specific needs (Finance Committee on Corporate Governance 2000, p. 10). This resulted in ‘*box-ticking*’ of the established guidelines.

The Hampel report argued that there is no universal corporate governance guideline that applies to all different companies at all times. Hence, there was a need to put the emphasis on principles rather than detailed rules of corporate governance. It tried to differentiate between principles and guidelines on corporate governance. It stated that, “*With guidelines, one asks ‘How far are they complied with?’; with principles, the right question is ‘How are they applied in practice?’*” (Finance Committee on Corporate Governance 2000, p. 16).”

One of the major recommendation by the Hampel report was that, “*the current requirement for companies to confirm otherwise compliance with Cadbury will be superseded by a requirement to make a statement to show how they (i) apply the principles and (ii) comply with the combined code and in the latter case to justify any significance variances* (Finance Committee on Corporate Governance 2000, p. 14).” The narrative disclosure requirement is, was argued would mitigate the problem of ‘*box-ticking*’ as companies would now have to provide arguments to explain why each relevant principle was or was not applied.

Although the Malaysian Committee drew considerably from the Hampel report, it argued that the Malaysian code was more regulatory driven than the UK’s code. Ow-Yong and Guan

(2000) in their comparative review of both countries' corporate governance codes highlighted the fact that the implementation of the MCCG was reinforced by major revamps in Malaysian regulations. This was unlike the reform in the UK's code, which was not preceded by major reforms in their legal framework.

Ownership and control are not separated for many Malaysian companies as they are held tightly by substantial and non-independent shareholders, such as family and states. This is unlike UK where ownership is dispersed and control is separate from ownership. There are fewer incentives for Malaysian companies to disclose information as their substantial shareholders would be privy to insider information. The complementary regulatory reforms would ensure that companies adapted to the new corporate governance framework and consequently protected the interest of minority stakeholders (Ow Yong & Guan 2000).

The Malaysian High Level Finance Committee adopted the hybrid approach in their proposed corporate governance code for Malaysia. Given that there was no existing or qualified framework for corporate governance there was a need to prescribe a code for corporate governance in Malaysia. However, the Malaysian committee took into account the recommendation by UK's Hampel Report by putting an emphasis on 'substance over form' by incorporating the requirement for a narrative statement on the extent of compliance and a justification for any departure from the prescribed best standards.

The findings and recommendations by *the Committee* were published in February 1999. This was partly incorporated in Malaysian Code on Corporate Governance (MCCG) which was



issued in March 2000 and revised in 2007<sup>4</sup>. Part 1(B) and Part 4(B) of MCCG deal with directors' remuneration. It was recommended that companies link executive directors' remuneration to company and individual performance. In addition, they were required to disclose details of remuneration for each director. These recommendations are enforced by paragraph 15.26 of the Listing Rules of Bursa Malaysia. However, companies have the flexibility in applying them, provided that they justify the reasons for any departure. It is also important to note that the MCCG does not fix the form or content of the disclosure requirements. It is up to companies to determine the extent and form of disclosures of executive remuneration. Part 2(AA) of the MCCG recommends that companies establish remuneration committees that should consist of a majority of non-executive directors who can seek outside advice if necessary. The committee will make recommendations to the board about executive remuneration. Executive whose remuneration is discussed should abstain from voting.

The MCCG and other recommendations from the High Level Finance Committee have been continuously implemented through revisions of the regulations (changes in the Listing Rules and securities laws), reforms to institutions (the introduction of Minority Shareholders Working Group) and the issue of best standard guides (the issue of Best Practices in Corporate Disclosure by a task force consisting of industry and regulatory representatives). The Securities Commission reported that as of 31<sup>st</sup> December 2004, 42.5 percent of the recommendations by the Committee were completely applied and 47.9% were in progress.

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<sup>4</sup> The 2007 revision covered the appointments and operations of board of directors and audit committee. There is also requirement for internal audit and clarification of its role.

Figure 5 The status of implementation of the Malaysian corporate governance reforms

NOTE:  
This figure is included on page 34  
of the print copy of the thesis held in  
the University of Adelaide Library.

Source: <http://www.sc.com.my/eng/html/cg/implementation.html>

The MCCG is enforced under paragraph 15.26 of the Listing Requirements of Bursa Malaysia. The penalties for non-disclosure will be enforced by Bursa Malaysia under the Listing Requirements. These can involve requesting the person to comply with the requirement, issuing a fine proportionate to the seriousness of the offence or by cautioning the person. Section 11(2) (b) of the Securities Industry (1998) was amended in 2003 to increase the amount of fines, to a maximum of one million ringgits for a breach of Bursa Malaysia Listing Requirements. Under Section 11 (2) (e) of the Securities Industry Act 1983, the penalty for a breach of the listing rules could also be enforced upon directors of the companies. This personal accountability imposed upon directors is to ensure that they strive to achieve a high quality of corporate governance.

The Securities Commission (SC) also has the power to act against false or misleading disclosures by companies. From 1996 to 2004, 29 cases of corporate governance enforcement actions were taken by the SC (World Bank 2005, p. 32).

Table 1 Number of cases prosecuted by the Securities Commission by years

Type of prosecution cases	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Corporate Governance	2	0	0	6	4	5	6	3	3	29

Source: Report on the Observance of Standards and Codes (ROCS) Corporate Governance: Malaysia, the World Bank, June 2005, page 32

#### B. The establishment of Capital Market Advisory Committee

The High Level Finance Committee recommended that a successor committee be established to observe and review the implementation of MCCG. The Capital Market Advisory Committee was established in September 1999 as a successor of the High Level Finance Committee. This new Committee released the Capital Market Master Plan (CMP) in 2001 that built on and improved the recommendations of its predecessor.

#### C. The establishment of Corporate Law Reform Committee (CLRC)

The CLRC was established on 17<sup>th</sup> December 2003 with the objective of reviewing the Companies Act 1965. The CLRC noted that the recommendations by the High Level Finance Committee on Corporate Governance should be complemented by statutory provision, including amendments to the Companies Act. Although there had been prior amendments<sup>5</sup> since the Act inception in 1965, they did not involve comprehensive reviews, and only addressed specific sections of the Act. The CLRC released its final report in November 2008, with 188 recommendations.

<sup>5</sup> 35 amendments since 1965 to 2007 (Companies Commission of Malaysia, DATE)

Directors' remuneration is covered in the Recommendations 2.29 of the final report. The CLRC recommended the introduction of a statutory provision giving a right to shareholders to vote on directors' remuneration in annual general meeting. It also recommended that substantial shareholders (5% or more shares) or by a block of 100 members with a right to vote, be given the right to inspect the contracts of directors. These could lead to more transparency and accountability.

### **2.2.2 The reforms on Malaysian accounting standards**

Malaysian accounting standards have also undergone major changes especially in the light of harmonisation with International Accounting Standards (IAS) and a response to the economic crisis. The Financial Reporting Act 1997 was introduced as part of the reform process. Under the Act, the Malaysian Accounting Standards Board (MASB) was established to function as the sole regulatory body in setting accounting standards for Malaysia. The MASB will take over the roles of Malaysian Association of Certified Public Accountants (MACPA) and Malaysian Institute of Accountants (MIA) in preparing accounting standards and GAAPs.

Although acknowledging the existence of prior a financial reporting framework under these bodies, the MASB argued that there was a need to extensively review all existing accounting standards given that the extant GAAPs were inferior to IAS recommendations and to move towards harmonisation (Koh, 1999). At its inception, the MASB adopted 24 of the extant standards which would be revised in accordance with its review and IAS recommendation. Eight of the extant standards were not adopted and would be replaced by new standards.

To date, MASB has adopted all the IAS into the Malaysian financial reporting framework. Total convergence to the IAS is expected by early 2012. However, the transitional period has

been slow, with most of the revisions done by 2005 and applied for fiscal periods after January 2006. Two specific standards are relevant for this study. They are FRS 124 'Related Party Disclosure' and FRS 2 'Share Based Payments'. FRS 124 was first issued in Malaysian in 1999, and revised in 2004 to incorporate the recommendations of the IAS. However, the revised FRS 124<sub>2004</sub> did not incorporate the recommendations of IAS 24 (the equivalent international accounting standard for related party disclosure) for disclosure of key management personnel compensation<sup>6</sup>. In 2005, another revision was made to Malaysian FRS 124, with all of the recommendations by IAS incorporated into the FRS, including the disclosure of key management personnel compensation. The only exception was the exclusion of disclosure of transactions between state-controlled entities and other state-controlled entities. The effect of this exemption could be significant as state controlled entities make up 32 percent the value of market capitalization of Bursa Malaysia as of 2004 (World Bank 2005). The revised FRS 124<sub>2005</sub> would take effect for fiscal period after 1<sup>st</sup> October 2006.

The other applicable accounting standard for this study is FRS 2 'Share-based Payment'. The Malaysian standard was first issued in 2005 and is consistent with IFRS 2 (the equivalent of the IAS standard). Specific to this study, companies now have to disclose and expense the value of option grants to executives over their maturity period. FRS 2 would apply for equity based payment transactions that were granted after 31<sup>st</sup> December 2004 and had not been vested at the date. This transitional provision could mean that there would be limited data on equity based remuneration before the effective date.

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<sup>6</sup> IAS 24.16 The IAS 24 paragraph 16 required disclosure of remuneration of key management personnel.

The Security Commission (SC) is responsible for ensuring compliance with the Malaysian accounting standards under Section 26(D) with the Financial Reporting Act 1997. It is interesting to note that under the Act<sup>7</sup>, foreign companies listed in Bursa Malaysia are allowed the option of using the MASB standards or other internationally recognised accounting standards (on par with IAS). The acceptable international accounting standards are from US, UK or Australia.

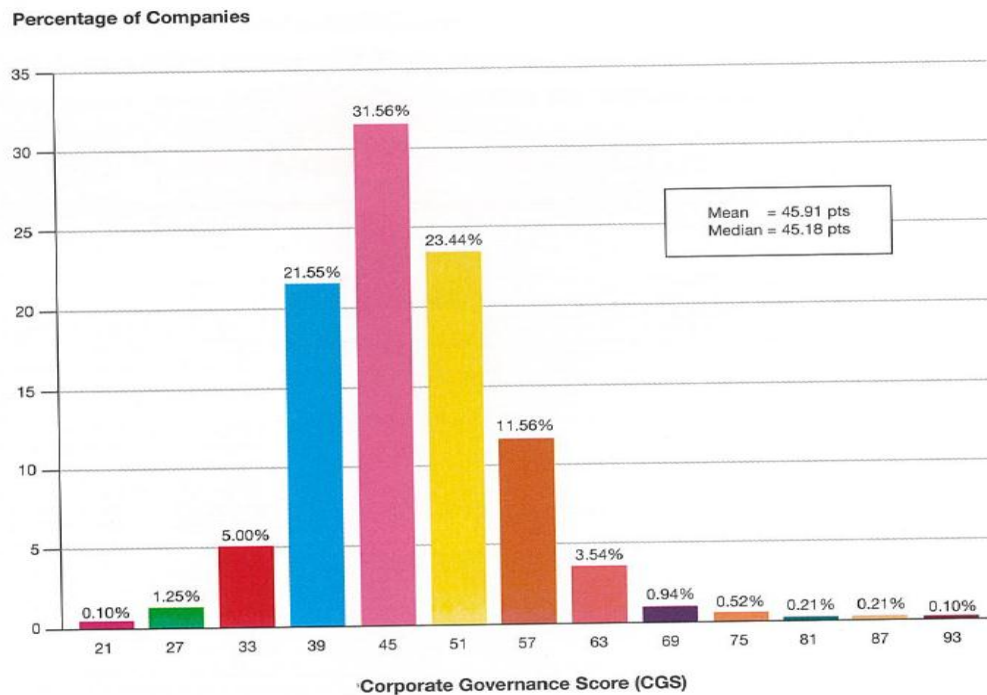
### **2.3 An overview of Malaysian directors' remuneration practices and disclosure**

A survey entitled the *Corporate Governance Survey Report 2008* conducted by the Minority Shareholder Watchdog Group (MSWG) and the University of Nottingham provide the most current information on Malaysian directors' remuneration practices and disclosure. The report scored and ranked all publicly listed companies (N = 960 companies) for the fiscal year 2007 based on their compliance with the MCCG and international best practices. Figure 6 shows the average corporate governance score obtained by the sample in the survey.

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<sup>7</sup> Section 26(A) of the Financial Reporting Act 1997

Figure 6 Average corporate governance score in 2008



The report found that most Malaysian companies (89.58 percent, n = 860) complied with the MCCG recommendation to establish a remuneration committee that will set up and monitor remuneration schemes. 45.90 percent (n = 395) of the committees consisted of independent and non-executive directors and 88.40 percent (n = 761) of the committees were formed to assess and make recommendations on executive directors' remuneration.

The report found that there was a lack of transparency and consistency on the disclosure of remuneration in the annual reports. For example, only 1.39 percent (n = 12) of the companies provided the details of the members of the remuneration committee in the directors' report. 59.27 (n = 569) percent of the companies stated industry practice as a remuneration benchmark and 45.10 percent (n = 433) of the companies specified the link between executive director's remuneration and performance. The report also showed that none of the companies provided adequate information about the policies behind senior executives' and board of directors' remuneration. Only seven companies clearly stated the use of performance

based remuneration but no further details were given. The report noted that others may have done so but failed to disclose it. 39.39 percent of the companies (n = 378) claimed to have used long term incentives pay such as share-based payment. Finally, only four companies provided individual director remuneration and 146 companies (15.21 percent) disclosed additional fees (committee fees and attendance fees) paid to non-executive directors. The report concluded that there was a serious lack of emphasis on providing adequate information to shareholders about the policies and practices of remuneration by Malaysian companies. It argued that the information is important to assuage shareholders' concerns and to remove unwarranted speculation.

The study did not use the scores obtained by the report as a basis for its dependent variable of disclosure. The report provided a good overview of the state of disclosure of directors' remuneration but was only for one year. The scoring was limited to a few aspects of the disclosure of remuneration. The scoring was not done on the comprehensiveness of the information but was limited to either 'yes' or 'no'. It also did not attempt to provide an explanation of the factors that may determine the level of disclosure. This study will go beyond describing the state of disclosure of executive directors' remuneration. Various theoretical lenses and prior empirical studies of disclosure will be applied to obtain greater understanding of the level of disclosure of remuneration by Malaysian companies.

## **2.4 Conclusion**

This chapter provided an overview of the Malaysian capital market. It also touched on the process and progress of the reforms undertaken by Malaysian regulators in improving the regulatory framework and corporate governance code. It also described the voluntary and mandatory disclosure framework of executive directors' remuneration. The final section



provided an overview of existing practice on the level and disclosure of executive directors' remuneration based on the most recent survey available.

The next chapter will provide a theoretical background to the theories that may contribute to the level of disclosure of executive directors' remuneration. It will also look at prior empirical studies that have adopted various theoretical perspectives. The chapter will also address prior studies on disclosure of executive directors' remuneration.

## **Chapter 3 Literature Review**

### **3.0 Introduction**

This chapter provides a review of the different theoretical lenses that can be used to explain the motives and incentives behind the disclosure of corporate information. The first section briefly discusses the nature of voluntary and mandatory disclosure and some of the motivations behind their disclosure. The following sections cover four main theories that may be associated with the level of disclosure; agency theory, legitimacy theory, signaling theory and proprietary costs. The basic anatomy of these theories will be discussed and explained by a review of prior studies. In addition, prior empirical studies on disclosure that have used the theories in testing their hypotheses will also be reviewed. The final section of the chapter will look at the findings and the gaps of prior studies on the disclosure of directors' remuneration.

### **3.1 Disclosure of corporate information**

Grossman (1981) and Milgrom (1981) posited that companies have incentives to disclose all information. Brammer and Pavelin (2008) argued that corporate disclosure provides an avenue for companies to influence the perceptions of external stakeholders of the future performance of companies and consequently of their the value. However, various studies have shown that companies use discretion any disclosure policies. For example, Dye (2001) and Verrecchia (1983) showed that, in a voluntary environment, companies will withhold unfavorable news. Deegan (2002) argued that leaving disclosure policies to managers leads to the disclosure of biased information that gives a positive impression of the company. Furthermore, managers may only disclose some information when going concern is threatened. When there is no public policy on disclosure, access to information may be restricted to powerful stakeholders in a company (Ramanathan 1976). This creates

information asymmetry in the market. The abuse of discretionary choices often leads to the introduction of mandatory disclosure requirements to require more disclosures (Suijs 2005). Mandatory disclosure reduces management's ability to disclose only positive and symbolic information (Mobus, 2005). Francis, Khurana and Pereira (2005) argued that disclosures that do not offer strong investor protection may not be credible. Mandatory disclosure requirements should improve the welfare of investors by addressing potential information asymmetry in the market. They should provide all investors with equal access to the same information in making decisions (La Porta, R. et al. 2000).

Burkart and Panunzi (2006) showed that regulations can be beneficial if they strengthen the existing monitoring mechanisms. Complementary rules lower the marginal cost of monitoring for shareholders, as companies have to provide more disclosure under the law. This should make the market more attractive to small shareholders who would otherwise shun the market because of exorbitant monitoring costs and the risks of exploitation by substantial shareholders. Burkart and Panunzi argued that disclosure requirements and accounting standards will complement existing monitoring mechanisms. However, if the law acts as a substitute for monitoring mechanisms, it could aggravate agency conflicts between minority and substantial shareholders. A substitutive law could reduce the ownership held by substantial shareholders and decrease the original shareholders' investment returns. The substantial shareholders may try to recoup their capital losses by diverting more company resources to themselves.

Although there is value in mandatory disclosure, the regulations may not be adequate or efficient. Mobus (2005) contended that as the regulations are politically inspired, they can be limited or captured by those with power to influence them. As a result, regulations can be biased or inadequate. This may be especially true in Malaysia where regulatory standard setting is dominated by the same parties that have significant shareholdings. Guedhami and Pittman (2006) studied 190 privatised companies from 31 countries from 1980 to 2001. They showed that disclosure standards and the choice of a '*prominent*' auditor did not reduce ownership concentration. However, countries with a legal framework that penalised auditors for reporting failures had a more dispersed share ownership. They argued that enforcement mechanisms are more effective in ensuring good corporate governance than comprehensive investor protection laws. Hope (2003) studied the level of enforcement of accounting standards in 22 countries. He showed that the extent of enforcement significantly influenced the level of compliance with prescribed accounting standards. The level of enforcement was also significantly and positively associated with the extent of forecast accuracy.

Kothari (2000) contended that companies should be allowed to set their own disclosure policies with no regulatory intervention. Stocken (2000) showed that in multiple period settings with no legal provisions for disclosure, managers will reveal all private information to the market to protect their reporting credibility. This means that the market may still efficiently allocate resources over time without disclosure regulations. However, Ahmad and Sulaiman (2004) did not find evidence to support this proposition. They studied the disclosure of environmental content in Malaysian annual reports where there was no mandatory disclosure requirement. They interviewed 48 executives and examined 138 annual reports and found that legal compliance was rated the highest and stakeholders' related influences scored lowest by the correspondents on what influence them in reporting on

environmental issues. In addition, only 38 of the sample companies disclosed on environmental content. They concluded that companies were not affected by stakeholders' concern for environmental issues and there was a need to impose mandatory disclosure requirements.

The failure to disclose negative news may lead to executives incurring reputational costs (1994). Stocken (2000) showed that managers disclose all information truthfully in the long run to protect their reporting credibility. The market may punish them if they provide misleading or withhold information. For example, it may affect their standing in the managerial labour market and reduce the future value of their remuneration contracts. Wolfson (1985) studied the relationship of general partners and limited partners in oil and gas tax shelter programs. He assumed that limited partners were the principals and that general partners were agents. He contended that the general partners have more incentives to take of advantage of limited partners given their short term investment horizon. However, he found that general partners' opportunism will be constrained by the possible effect on their long term reputation in the market. This concern aligns the interests of the general partners with those of the limited partners.

Information asymmetry may create inefficiency as the market cannot effectively assess private information that may lead to mispricing a company's value. Botosan (1997) found that a reduction in information asymmetry lead to a reduction in the cost of capital. Similar findings were reported by Botosan and Plumlee (2002), Welker (1995), Bartov and Bodnar (1996), Sengupta (1998), Leuz and Verrecchia (2000) and Khurana, Pereira and Martin (2006). Schadewitz and Blevins (1998) argued that rational investors avoid companies that

fail to disclose adequate information because they cannot thoroughly assess the risks and returns involved in their investment. The market may be less inclined to invest in a company that withheld bad news and this may affect the company's value and liquidity (Skinner, 1994). Improvements in information asymmetry may increase liquidity as investors efficiently and correctly assess the value of companies (Makhija & Patton 2004).

The contents of annual reports are reasonably stable as companies are not likely to make substantial changes to them on a regular basis (Lang & Lundholm 1993). Consequently, a comprehensive annual report may be associated with a company's commitment to informative disclosure policies (Gelb 2000). A comprehensive disclosure policy reduces information asymmetry (Debreceeny & Rahman 2005). Gelb and Zarowin (2002) studied the association between the level of disclosure and its influence on share prices. Their findings supported the notion that better disclosure provided more benefits to investors by helping them to better predict the future. Francis, Khurana and Pereira (2005), in a sample of companies across 34 countries, found that companies that required external financing disclosed more information<sup>8</sup>. They also found that these companies obtained equity capital and debt at lower costs than companies with limited disclosure. They argued that this finding implied that the incentive to voluntarily disclose information operates globally regardless of any country's mandatory regulatory environment. Khurana et al. (2006)'s study of US companies for the period of 1984 to 1994 showed that having access to a lower cost of capital from an expanded disclosure policy improved company growth.

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<sup>8</sup> The sample year used was either 1993 or 1995 depending on the availability of the data. The sample consisted of 672 company-year observation spanning over 34 countries.

## 3.2 Theoretical Review

This section provides a review of the theories that could frame the study on disclosure of executive directors' remuneration. Four theories are explored; they are agency theory, legitimacy theory, signaling theory and proprietary costs. The sections also discussed prior empirical studies that have applied the theories in explaining the level of disclosure.

### 3.2.1 Agency Theory

#### 3.2.1.1 Definition of agency theory

From a traditional economic perspective, a firm is a 'black box' with the sole objective of maximising profit (Jensen 1983). It is assumed that the market is perfect. There is no information asymmetry and no transaction costs incurred during the contracting process. This theoretical framework failed to explain how conflicts of interests between various contracting parties are resolved to achieve a costless equilibrium (Jensen & Meckling 1976). The criticisms leveled at the 'black box' theory of the firm meant that there was a need to redefine what constitutes a firm. Jensen and Meckling(1976, p. 8) in their seminal work formally redefined a firm as *“one form of a legal fiction which serves as a nexus of a set of contracting relationships among individuals.”* Their definition seeks to explain the nature of the contractual relationships, the reasons for contracting among different parties, the consequences of contracting and the effects of external factors on the contracts.

Jensen and Meckling (1976, p. 5) formally defined an agency relationship as *“a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform on their behalf which involves delegating some decision making authority to the agent.”* An important assumption of agency theory is that an individual is a rational and self interested utility maximiser who will seek to maximize his or her wealth first and foremost.

This assumption leads to a potential divergence of interests between the agent and the principal. The agent as a rational wealth maximiser may seek to improve his or her wealth first and foremost and possibly at the expense of the principals. The divergence of interests between the contracting parties leads to agency problems and consequently agency costs.

### **3.2.1.2 Agency problems**

The wealth of managers is usually tied to their income from employment in a company. They have less capital than can be diversified to limit their exposure to risks (Easterbrook 1984). Consequently, they are more risk averse than the shareholders. They may avoid riskier investments with higher possible returns to protect themselves from losing their employment if the project fails (Shavell 1979). On the contrary, shareholders have more ability to diversify their portfolio and would want managers to undertake riskier investment that may result in higher returns (Cohen, Hall & Viceira 2000). Managers who fully bear the risks of failure will not undertake such investments. This creates the agency problem of underinvestment (James 1999).

Another agency problem is the difference in time horizons of managers and shareholders (Jensen & Meckling 1976). Managers are assumed have a shorter time horizon than shareholders. This means that they will be more interested in the short term performance of a company. They are much less interested in the risks that are beyond their employment terms and basic remuneration incentives (Vitaliano 1983). Under this assumption, managers may only consider investments that give higher short term returns compared to stable and safe long term investments. Shareholders with longer investment horizons may prefer otherwise. Managers also have the incentives to overindulge in personal perquisites using the companies' resources. These are resources that should have been used to maximise the wealth



of the principals. Jensen and Meckling (1976) argued that managers that have less claim on ownership will compensate for the lack of returns from shareholdings with the consumption of pecuniary and non-pecuniary perquisites. They could spend excessive and gratuitous amounts on business trips, exclusive club memberships and luxury items.

Managers may spend less time in seeking new investments opportunities and ‘*shirk*’ during working hours. Managers who want to boost their own self-esteem and reputations might engage in value destroying empire building. The company may be expanded beyond its optimal point and not increase its market value (Baker, Jensen & Murphy 1988). These behaviors are inconsistent with the expectations of the shareholders as the principals and may eventually lead to a reduction in the value of the company. These problems mean that contracting between two parties is not costless (Fama & Jensen 1983). These costs are called agency costs.

### **3.2.1.3 Agency costs**

Agency costs are defined by Jensen and Meckling (1976) as the sum of the monitoring expenses incurred by principals, bonding expenses incurred by agents and residual losses. Monitoring costs are incurred by principals to limit opportunistic behavior by agents. Monitoring costs are not limited to measuring and observing agent behaviors. They may include control mechanisms that are introduced into remuneration policies, budgets and operating procedures (Jensen & Meckling 1976). However, it has been argued that, in an efficient market the monitoring costs will be borne by agents as the principals are price protected. Price protection is where the principals are assumed to have foreseen that there will be a divergence of interests between them and the agent (Watts, R & Zimmerman 1986). This expectation will be incorporated in the contracting process. It may include a reduction in

the agent's future remuneration to compensate for monitoring costs. In this case, the agent will bear the monitoring cost.

Consequently, it is in the agent's interest to incur bonding costs to ensure that they will act to maximise the interests of the principals. Bonding costs may require the agent to prepare audited annual reports and covenants attached to decision making. In a perfect and efficient contracting process, a Pareto optimal contract can be constructed that will give the principals full price protection. The contract will consider all possible opportunistic behaviors and incorporate mechanisms that will penalize such behaviors (Holmstrom 1979).

Nonetheless, it is impossible have perfect monitoring and bonding mechanisms that will totally eliminate an agent's opportunistic behaviours and that will perfectly align the interests of the agent to those of the principals. There exists a residual loss from the inability to eliminate agency problems in total. Jensen and Meckling (1976, p. 5) defined this residual loss as *"the dollar equivalent of the reduction in welfare experienced by the principals."* However, the existence of agency costs does not imply that agency relationship should not be created in the first place. The principals will have been in the position to assess the marginal costs and benefits of entering into an agency relationship. Eisenhardt (1989) argued that the principals will have to weigh in the costs of assessing agents' actions and the costs of evaluating performance and transferring risks.

Agency costs are not limited to relationships between managers and the shareholders. The agency concept can be extended to include relationships between managers and creditors. For example, managers may use debt financing to invest in risky investments to satisfy

shareholders but this increases the risk of debt default. They may also use free cash flows to give themselves additional bonuses instead of repaying debt. Creditors may use debt covenants to monitor the actions of managers (Jensen & Meckling 1976). Given that creditors are also price protected, the cost of the covenants will be borne by managers. There is an incentive for agents to demonstrate that they are not working against creditors' interests. For example, Jensen and Meckling argued that managers are better off voluntarily disclosing audited information that otherwise would have been collated by creditors and charged to managers. Given that managers are privy to insider information it will be cheaper for them to disclose than to incur a bonding cost. Agency costs can also occur in the relationship between creditors and shareholders. For example, shareholders may seek to improve their wealth at the expense of the creditors by investing in riskier projects that give higher returns. However, it will increase the risk of default on the debts. Managers as the middlemen in this relationship have discretion in this transfer of wealth from one party to another. They could choose a financial policy mix with the least cost that could maximise their own wealth (Crutchley & Hansen 1989).

The extent of agency costs is also dependent on the supply and competition in the managerial labor market. If the managers are not unique and replaceable, they will work for the interests of the principals in order to maintain their employment (Jensen & Meckling 1976). Managers also have incentives to maintain their reputation in the managerial labor market (Fama 1980). Furthermore, shareholders always have the right to sell their ownership of a company. There could be investors in the market who have the capacity to better monitor the agents or become owner managers. If existing shareholders believe that they will get the full value of the company from selling the shares compare to losing value due to agency problems and

incurring the costs of replacing managers from holding to the shares, they have an incentive to sell (Jensen & Meckling 1976).

#### ***3.2.1.4 Agency costs and ownership structure***

An important assumption of agency theory is that market forces determine the contract between an agent and principal. If either party is not satisfied with the contractual terms, he or she has the freedom to renegotiate or exit from the contracting process and seek a better alternative (Hill & Jones 1992). The definitive contract is the most efficient and optimal contract. However, the market is not necessarily efficient. For example, a better contracting alternative may not exist due to a limited supply of agents. The agent would then have an upper hand in the contracting process. There may also be an oversupply of agents in the market. If the market forces cannot adjust efficiently to these conditions, the power differentials may influence the contractual terms including the governance mechanisms build into them (Hill & Jones 1992). Managers who are the decision makers in a manager controlled company have more ability to exploit and gain from power differentials.

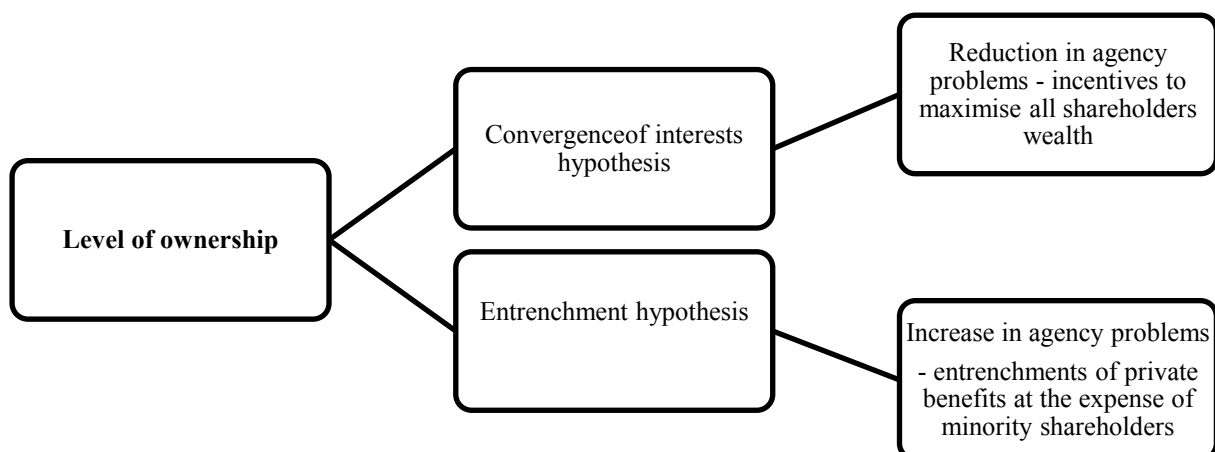
Power differentials may continue after the agency relationship has commenced. This may limit the effectiveness of the corporate governance structure in mitigating agency problems. In addition, the disadvantaged party may not have the ability or desire to efficiently alter corporate governance mechanisms. Hills and Jones (1992) argued that pressure in the form of sunk costs, political connections, the propensity to maintain precedents as a rule and a lack of innovation may constrain responses in corporate governance structures to changes in the relationship. The power differential may result in entrenchment of the board of directors. The managers or controlling shareholders could control the board to further their own interests over that of other shareholders (Weisbach 1988). Ownership concentration can determine the

existence and continuity of power differential in companies and influence the extent of agency problems.

In a wholly owned company, the owner will not suffer from a conflict of interests given that he or she can make the most optimal wealth maximization decision. However, a conflict is likely in a public company, with an agency relationship between shareholders and managers. The divergence is further intensified when there is a separation of ownership and control of the company. Adam Smith (1937) alluded to this problem by highlighting the problem of the profusion by directors of joint stock companies in managing the companies given that it is not their wealth that is being managed. Berle and Means (1932) studied ownership dispersion of the top 200 US companies' shareholdings. They concluded that ownership and control had become separate entities, where control was no longer embedded in ownership. In an owner managed company, the principals would retain control of the decision making process even with the employment of agents. In contrast, in a manager controlled company there may not be a substantial stockholder with significant influence over managers' decisions (Amihud & Lev 1981). A majority of the '*diffused*' shareholders also may not be qualified to lead the company (Fama & Jensen 1983). Consequently, control of the company becomes the prerogative of a select few, which is often the senior management team. With the separation of decision and risk-bearing functions, managers became important decision makers without sharing the effect of their choices on wealth (Fama & Jensen 1983). Equity based remuneration was introduced to resolve this dilemma by making managers part-owners of companies. Managers now have to share the risks arising from their decisions and would have incentives to maximise the value of the companies. Managerial shareholdings are an alignment mechanism that leads to a convergence of the interests of managers to that of shareholders (Jensen & Meckling 1976).

However, La Porta, Lopez-de-Silanes and Shleifer (1999) showed that owner managed companies suffer from another dimension of agency problems. La Porta et al (1999) in their study of ownership concentration in twenty seven countries showed that most of the large corporations were owned and managed by families and states. The external shareholders may themselves own larger shareholdings than managers and that could mean that they dominate managerial decisions (Makhija & Patton 2004). In this circumstance, the argument that the substantial shareholders can force managers to behave consistently with shareholders' interests may not be valid. The managers would often be appointed by the controlling family or state. The substantial shareholders can pursue their own interests through 'insider' managers at the expense of minority shareholders. They could wield control beyond their cash flow rights for their own private benefits (Guedhami & Pittman 2006). As shown in Figure 7, high ownership concentration may lead to an entrenchment of private benefits rather than convergence or alignment of interests between different contracting parties (Fan & Wong 2002; Ho, Simon S. M. & Shun Wong 2001).

Figure 7 Ownership and the extent of agency problems



Burkart and Panunzi (2006) argued that in countries with poor legal protection, ownership became more concentrated. La Porta et al (1999) and Fan and Wong (2002) showed that in these countries exploitation of minority shareholders by controlling shareholders was prevalent. For example, Wymeersch (2002) argued that compliance with a corporate governance code will be difficult in European countries compared to the UK because European companies were more tightly held. The substantial shareholders are more likely to reject recommendations that would diminish their power and influence.

#### ***3.2.1.5 Ownership structure and disclosure***

Fama and Jensen (1983) contended that agency relationships exist in spite of agency costs because contracting is an effective approach to controlling agency problems. They argued that contracts include ratification and monitoring mechanisms that may include corporate governance structures. The mechanisms are separate from management's initiation and implementation decisions. The principals can develop a corporate governance structure that will supervise the explicit and implicit contractual terms between agents and principals (Hill & Jones 1992). Information systems play an important role in the corporate governance structure as it can oversee and verify managers' actions. Information about agents becomes a tradable commodity in the market. The more information that principals have about agents' actions, the less likely it is that agents will indulge in opportunism (Eisenhardt 1989).

Ownership structure can influence the extent of information disclosed to the market. Various studies have looked at this association. These studies can be divided into studies of common and civil law countries. Guedhami and Pittman (2006) showed that 7 out of 10 of countries with ownership concentration of more than 50 percent were civil law countries. The average

shareholdings of the top three largest shareholders were at 42.8% of total shareholdings in civil law countries compared to 27.6% in common law countries. In common law countries, there were agency problems, as alluded to by Berle and Means (1932), with a high dispersion of ownership concentration and manager controlled companies. The laws in a common law country are designed to protect the rights of external investors to information (Babío Arcay & Muiño Vázquez 2005). There would be greater demand for information by shareholders to assess performance of managers as their agents (Gelb 2000).

In civil law countries, companies are tightly held by a few parties that are usually families or states. The capital market is less developed and relatively illiquid. These countries reflect the other dimension of agency problems as shown by La Porta et.al (1999). The regulatory framework is built around protecting the interests of substantial shareholders rather than minority shareholders (La Porta, Rafael et al. 2000). There would be less demand for information because substantial shareholders have insider access to the companies. They also may have incentives to restrict the flow of information to external parties to protect the interests of majority shareholders (Babío Arcay & Muiño Vázquez 2005). Gray (1988) hypothesised that family controlled companies are highly secretive and prefer confidentiality and disclose information only to insiders. Extensive disclosure could expose the consumption of private benefits by substantial shareholders (Makhija & Patton 2004). Information asymmetry would be more prevalent in a dispersed ownership environment and in a situation with substantial and minority shareholders (Brammer & Pavelin 2008).

Fan and Wong (2002) examined the association between the level of earnings disclosure quality and the corporate ownership structure of a sample of 977 companies from seven East



Asian countries from 1991 to 1995<sup>9</sup>. They showed that the average voting rights in East Asian companies was 30.33%. The concentration of voting rights of Thailand companies was the highest with an average of 36.32%, followed by Indonesian companies at 34.51%, Malaysian companies at 30.73%, Hong Kong companies at 29.68%, Singaporean companies at 28.95%, South Korean companies at 26.11% and Taiwanese companies at 24.70%. In a quarter of these countries, approximately 40% of the voting rights were controlled by the largest shareholders. They showed that a concentrated, pyramidal and cross holding of ownership led to extensive exploitation of minority shareholders by the controlling shareholders. The disclosure of accounting information was perceived by external investors as a tool of self interested controlling owners making it less credible. In addition, they showed that ownership concentration was significantly and inversely related to earnings informativeness. As ownership became more concentrated, the controlling shareholders would try to conceal information to avoid attention or competition to their rent seeking operations. Their results supported the hypothesis that there was a negative association between earnings disclosure informativeness and the level of controlling shareholders' ownership.

Babío Arcay and Muiño Vázquez (2005) examined the extent of voluntary disclosure by Spanish companies<sup>10</sup>. Spain had high shareholding concentration, low investor safeguards and a less developed capital market that are hallmarks of a civil law country. They used structural equations of path analysis to simultaneously control interactions between the independent variables and found negative associations between ownership concentration and the adoption of corporate governance mechanisms. The association consequently influenced the extent of voluntary disclosure. They also showed that managerial ownership significantly

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<sup>9</sup> The earning informativeness is proxied by the cumulative net-of-market 12 month stock returns for firm *i* at year *t*

<sup>10</sup> The disclosure index used are obtained from *Actualidad Economica*, a prominent business magazine in Spain

improved the level of voluntary disclosure. Schadewitz and Blevins (1998) in their study of Finnish listed companies found an inverse and significant association between ownership concentration and the extent of disclosure<sup>11</sup>. They argued that substantial shareholders may rely on other information channels, for example by having a proxy on the board of directors.

Makhija and Patton (2004) studied the influence of ownership structure on the disclosure of Czech non-financial companies<sup>12</sup>. The Czech capital market had undergone changes after major privatisation in the 1990s. Given limited investment by individuals and restricted foreign capital, investment funds became large block holders of the privatised companies. Disclosure of information during the period was mostly driven by economic incentives and not by regulations. Makhija and Patton argued that the Czech regulatory bodies had failed to keep up with the transition to a free market. Consistent with agency theory, they found that low levels of ownership (internal and external owners) positively influenced the level of disclosure. Ownership at a lower level would push for the disclosure of more information to improve share prices and maximise shareholders' wealth. However, the association became negative at higher levels of ownership. They argued that Czech investment funds that owned more than 16% of shares would pursue their own private interests. They suggested that regulators limit the maximum percentage of ownership held by investment funds to avoid the exploitation of minority shareholders.

From a Kenyan market perspective, Barako, Hancock and Izan (2006) examined a sample of 47 companies from 1992 to 2001. Their sample consisted of nearly all of the companies listed in the Nairobi Stock Exchange. The Kenyan government had introduced various reforms to attract more capital that included privatisation, allowing foreign investments and corporate

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<sup>11</sup> The study involved 256 sample interim reports from sample years of 1990 to 1992.

<sup>12</sup> The study involved 43 companies for the sample year of 1993.

governance reforms. The study showed that foreign and institutional ownership significantly and positively influenced the level of voluntary disclosure. However, contrary to their hypothesis, they found that ownership diffusion significantly and negatively influenced the level of voluntary disclosure. They suggested that higher ownership diffusion led to diffusion of power that meant no individual shareholder could exert power to significantly pressure companies to disclose more information.

Leung and Horwitz (2004) examined the association between director ownership and voluntary segment reporting using a sample of 376 Hong Kong listed companies using 1996 as the sample year. The sample year is the year prior to the East Asian financial crisis and the disclosure of segment reporting by Hong Kong companies was relatively voluntary. The ownership structure in the Hong Kong market indicated that executive directors controlled both managerial and voting rights of the companies. The analysis showed that segment disclosure was not linearly related to director ownership. The level of disclosure significantly increased as executive director shareholding increased from 1% to 25%. However, when executive director ownership became more concentrated, the level of voluntary disclosure significantly declined. They also showed that non-performing companies that had over 25 percent executive director shareholding disclosed less information than other companies with similar ownership concentration. The findings supported the notion that higher ownership leads to greater entrenchment effects.

Chau and Gray (2002) studied the voluntary disclosure practices of 60 Hong Kong companies and 62 Singaporean companies for the year 1997. Hong Kong and Singaporean companies had similar ownership structures with high family ownership and a large number of family controlled companies. The study hypothesised that wider ownership structure would

significantly and positively influence the level of voluntary disclosure. The dispersal of ownership may mean that there would be more demand for information by shareholders. Chau and Gray found evidence to support the hypothesis. They showed that high family ownership significantly limited the level of voluntary disclosure. They also considered the non-linearity of the association between ownership structure and level of disclosure. High ownership dispersion may actually limit the level of disclosure if there was no significant block holder. There may be no shareholder who could wield sufficient pressure to demand more information from the companies. Chau and Gray retested their hypotheses using ranked and quartile regression that would allow for any non-linear association between the variables. The results were significantly consistent with the original analysis.

Huanfang and Jianguo (2007) examined the association between ownership structure and the level of voluntary disclosure by 559 Chinese listed companies for the year 2002. They argued that the cultural aspects of Chinese society of high levels of collectivism and power distance<sup>13</sup> made the country a unique case study. These traits suggested that companies would have high compliance regulations and would be less likely to disclose information voluntarily. The ownership of Chinese companies is dominated by state owned enterprises that may have easier access to capital at a cheaper cost than other companies. Consequently, they would have less incentive to publicly disclose information to compete for external financing. The study found that block ownership and foreign ownership significantly and positively influenced the level of voluntary disclosure by Chinese companies. Contrary to their hypothesis, they did not find a significant and negative association between state ownership

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<sup>13</sup> Hofstede defined collectivism as “a situation in which people belong to in groups or collectivities which are supposed to look after them in exchange for loyalty”. Power distance is defined as “the extent to which the less powerful members of institutions and organizations accept the power is distributed unequally” (Hofstede & Bond 1984, p. 419)

and the level of voluntary disclosure. They argued that the attempts by Chinese government to improve transparency may have encouraged state owned companies to be more open.

Shan (2009) also studied the Chinese market and showed that ownership concentration and foreign ownership significantly influenced the level of disclosure of related party transactions. He examined a sample of 120 Chinese Shanghai SSE180 and Shenzhen SSE100 listed companies during the period of 2001 to 2005. He argued that the opening of the Chinese market meant that companies would have to disclose more information to compete and retain foreign capital. Contrary to Huanfang and Jianguo (2007), Shan hypothesised that state owned companies would be more transparent and hence would significantly disclose more information than other companies. However, the study found an insignificant association between state ownership and the level of disclosure. He argued that state ownership would make these companies safe from any penalty or scrutiny from regulatory bodies even if they did not comply with disclosure requirements.

Abrahamson and Park (1994) studied the concealment of negative news in president's letters of 1118 United States companies for the year of 1989. They found that the concealment of negative information in the letters was constrained by the presence of substantial shareholders. Substantial shareholders have an incentive to pressure managers for full disclosure of information. However, the dominance of small institutional shareholders could increase the concealment. They argued that small institutional shareholders have a short term focus and can easily sell their small block of shares. Managers might be wary about disclosing bad news so as not to spook small institutional shareholders into selling their shares. They also found that large shareholdings by outside directors increased concealment as they were not independent of changes in the value of the company.

Birt et al. (2006) argued that substantial shareholders have power to exert on executives in mitigating agency problems. They studied the top 500 Australian companies segment reporting practices from 2000 to 2003. Their study period covered changes in accounting standards on segment reporting. They found a significant positive association between the level of the ownership of the top 20 shareholders and the level of disclosure. Brammer and Pavelin studied the top 470 UK companies' environmental disclosure for the year 2000 (Brammer & Pavelin 2008). They found that companies with higher ownership concentrations were less likely to disclose their environmental policies but that ownership concentration had no impact on the quality of disclosure.

Gelb (2000) found that companies with lower managerial ownership were rated highly in terms of disclosure by analysts<sup>14</sup>. The study examined analyst ratings of 3219 US companies from 1981 to 1993. It showed that an increase of one percent in executives' shareholdings on average led to approximately an eight percentile reduction in analyst disclosure ratings. Lower managerial ownership means that shareholders in these companies demand more information as they need to assess potential agency problems. However, managerial ownership did not limit the level of disclosure of investor relations. Gelb suggested that investor relations may be a less sensitive aspect of a company operation and would be less likely to be influenced by managerial ownership. Gelb also considered non-linearity in testing the hypotheses and the additional analysis supported the hypotheses.

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<sup>14</sup> Gelb (2000) used analyst ratings as proxy for disclosure quality. He argued that it is a better proxy of quality compared to using management disclosure forecasts. Control variables that were used are firm size, performance, volatility of past stock returns, frequency of offerings and concentration ratio.

Eng and Mak (2003) examined the influence of ownership structure on the level of voluntary disclosure by Singaporean companies. Using a sample of 158 companies for the year of 1995, they showed that the level of managerial ownership significantly and negatively influenced the level of disclosure. This is consistent with the prediction of agency theory that lower managerial ownership would lead to more monitoring by shareholders. Higher ownership can be a substitute for direct monitoring. However, the negative association may also mean that higher ownership by managers led them to withhold information from the shareholders and exploit the information for their private benefit. Government linked companies (GLCs) were found to significantly disclose more information than other companies. Unlike other corporations, the GLCs would not only pursue profit maximisation goals but would have to consider national interests. Given the potential conflict of interests, the GLCs may have disclosed the additional information to reassure other shareholders that their interests were also protected. The study did not find any association between block holdings and institutional ownership on the level of disclosure.

Haniffa and Cooke (2002) studied 167 KLSE listed companies for the year of 1995. The study examined the determinants of voluntary disclosure using the data prior to the East Asian financial crisis modified by a consideration to the cultural differences in the Malaysian market. The sample showed that the average shareholding by institutional investors and foreigners were 15% and 21% respectively. The average shareholding of the top ten shareholders that was used as a proxy for ownership diffusion was 68%. After controlling for cultural differences such as ethnicity of directors, it showed that ownership diffusion and foreign ownership significantly and positively influenced the level of voluntary disclosure. The other ownership variables examined were the percentage of shareholdings by

institutional shareholders and Malay directors. However, these variables were not shown to be significant.

Mohd Ghazali and Weetman (2006) extended Haniffa and Cooke (2002) by looking at the data after the financial crisis. Similar to other East Asian countries, the financial crisis created more awareness of the need for transparency and the protection of minority shareholders and led to the introduction of various regulatory measures. The study assessed the effectiveness of the regulatory measures in promoting greater disclosure and reducing the influence of insiders on disclosure policies. It examined the level of voluntary disclosure of financial, strategic and corporate social responsibility information. Consistent with the entrenchment hypothesis, the study found that higher director ownership significantly restrained the level of voluntary disclosure. They suggested that this could indicate that the reforms by Malaysian regulators may not be effective in overcoming the traditional dominance of disclosure policies exerted by insiders. Ownership concentration and government ownership were not found to significantly influence the level of disclosure by Malaysian companies.



Table 2 Summary of empirical research on ownership structure and voluntary disclosure

<b>Author(s)</b>	<b>Sample and Data</b>	<b>Ownership variable(s)</b>	<b>Main findings</b>
Shan (2009)	Sample consisted of 120 Chinese Shanghai SSE180 and Shenzhen SSE100 listed companies for the sample period of 2001 to 2005	<ol style="list-style-type: none"> <li>1. ownership concentration: proportion of shares held by top ten shareholders (-)</li> <li>2. foreign ownership: proportion of shares held by foreigners from those in the top ten shareholders list (+)</li> <li>3. state ownership: proportion of shares held by state from those in the top ten shareholders list (+)</li> </ol>	The findings supported the hypotheses that these ownership variables significantly influenced the level of related party disclosure in Chinese listed companies. The state ownership variable was found to be insignificant.
Brammer and Pavelin (2008)	Sample year of 2000 consisting of 470 large UK industrial companies	<ol style="list-style-type: none"> <li>1. aggregate share ownership of significant shareholdings (in excess of 3%) (-)</li> </ol>	They did not find a significant association between the quality of environmental disclosure and dispersion of ownership. High ownership concentration appeared to promote minimal disclosure.
Huanfang and Jianguo (2007)	Sample year of 2002 consisting of 559 Chinese listed companies	<ol style="list-style-type: none"> <li>1. block holder ownership: proportion of ordinary shares held by substantial shareholders with more than 5% ownership (+)</li> <li>2. managerial ownership : proportion of shares held by senior executives and directors</li> <li>3. legal person ownership:</li> </ol>	The findings showed that higher block holdings and foreign ownership improved the level of voluntary disclosure. Managerial, legal person and state ownership were found not to be significant in influencing the level of disclosure.

		<p>proportion of shares held by the legal person (+)</p> <p>4. foreign listing/share ownership: 1= issuance of H-share or B-share 0 = if none (+)</p> <p>5. state ownership: proportion of ordinary shares held by state (-)</p>	
Luo, Courtney and Hossain (2006)	Sample period from 1994 to 2000 involving 172 companies listed on the Singapore Stock Exchange	<p>1. managerial ownership: percentage of managers' shareholdings (-)</p> <p>2. outside block ownership: five largest shareholdings listed in the annual report (-)</p> <p>3. government ownership: percentage of government shareholdings (+)</p>	They concluded that ownership concentration led to higher agency costs. There was less voluntary disclosure in the companies with higher ownership concentration. They also found that companies with high voluntary score stock returns provided more information on future performance.
Barako, Hancock and Izan (2006)	Sample consisted of 43 companies listed in Nairobi Stock Exchange for the sample period of 1992 to 2001	<p>4. shareholders concentration: proportion of shares held by top twenty shareholders (+)</p> <p>5. foreign ownership: proportion of shares owned by foreign shareholders (+)</p> <p>6. institutional ownership: proportion of shares owned by institutional</p>	They study showed that foreign and institutional ownership significantly and positively influenced the level of voluntary disclosure. However, contrary to their hypothesis, they found that ownership diffusion to significantly and negatively influence the level of voluntary disclosure. They suggested that higher ownership diffusion led to diffusion of power that meant no individual shareholder can exert power to significantly pressure

		investors to total outstanding shares (+)	companies to disclose more information.
Mohd Ghazali and Weetman (2006)	Sample consisted of 87 Malaysian companies for the sample year of 2001	<ol style="list-style-type: none"> <li>1. ownership concentration: proportion of shares owned by top ten shareholders to total number of shares (-)</li> <li>2. number of shareholders (+)</li> <li>3. proportion of direct and indirect shares held by executive and non-independent directors over total shares(-)</li> <li>4. proportion of shares held by government (-)</li> </ol>	The study found only director ownership to significantly influence the level of voluntary disclosure.
Babio Arcay and Muino Vazquez (2005)	Sample year of 1999 and involved 91 Spanish companies listed in Madrid Stock Exchange	<ol style="list-style-type: none"> <li>1. ownership dispersion: Herfindahl Index <math display="block">OWNERSHIP = \frac{1}{n} \sum_{i=1}^n (P_i/0.51)^2</math>  <math>P_i</math> = percentage held by the largest stockholder  The index ranges from 0 to 1 indicating level ownership dispersion</li> <li>2. ownership by directors: value of one (1) if the directors' participation in the equity exists but is lower than 3%, and zero (0) otherwise (-)</li> </ol>	They found negative associations between ownership concentration and adoption of corporate governance mechanisms. The associations consequently influenced the extent of voluntary disclosure. Managers' shareholdings positively influence the level of disclosure.

		)	
Leung and Horwitz (2004)	Sample year of 1996 consisting of 376 listed Hong Kong companies	<ol style="list-style-type: none"> <li>1. dummy for ownership according to percentile (?): <ol style="list-style-type: none"> <li>a) D01: <math>OWN = 0.01 &lt; OWN &lt; 0.1</math></li> <li>b) D0125: <math>OWN - 0.01 = 0.01 &lt; OWN &lt; 0.25</math> <math>0 = OWN &lt; 0.01</math> <math>0.24 = OWN &gt; 0.25</math></li> <li>c) D0025: <math>OWN - 0.25 = OWN &gt; 0.25</math></li> </ol> </li> </ol>	They found that voluntary segment disclosure is not linearly related to director ownership. The level of voluntary disclosure significantly increased as executive director shareholding increased from 1% to 25%. However, when executive director ownership became more concentrated the level of voluntary disclosure significantly declined. They also showed that non-performing company that had over 25 percent executive director shareholding disclosed less information than other companies with similar ownership concentration.
Makhija and Patton (2004)	Sample year of 1993 consisting of 43 non-financial Czech companies listed in the PSE-50 index	<ol style="list-style-type: none"> <li>1. internal owners: percentage of shares owned by insiders and foreigners (-)</li> <li>2. external owners: percentage of shares owned by investment funds with the largest shares and shares held by 'restituents' (+)</li> <li>3. government: percentage of shares owned by Czech government (+)</li> <li>4. ownership concentration: <math>IIF * DEXT</math> IIF = the sum of squares of ownership owned by</li> </ol>	They found that ownership at low levels (internal and external owners) positively influenced the level of disclosure. Ownership at a lower level would push for disclosure of more information to improve share prices. However, the association became negative at a higher level of ownership. They argued that Czech investment funds that owned more than 16% of shares would pursue their own private benefits. Government ownership did not influence the level of disclosure. They suggested that regulators limit the maximum percentage of ownership held by investment fund to avoid the exploitation of minority

		all owners assuming that individual shares are negligible DEXT = 1: external ownership more than internal ownership; 0 = otherwise (?)	shareholders.
Eng and Mak (2003)	Sample year of 1995 consisting of 158 Singaporean companies	<ol style="list-style-type: none"> <li>1. managerial ownership: percentage of shares held by the CEO and executive directors (-)</li> <li>2. block holder ownership: percentage of shares held by substantial owners (&gt;5%) (-)</li> <li>3. government ownership: if government ownership &gt; 20% = 1; otherwise = 0 (+)</li> </ol>	They found positive association between government ownership and the level of voluntary disclosure. Lower managerial was found to significantly improve the level of voluntary disclosure.
Haniffa and Cooke (2002)	Sample consisted of 167 Malaysian companies for the sample year ended 31 <sup>st</sup> December 1995	<ol style="list-style-type: none"> <li>1. ownership diffusion: proportion of shares owned by top ten shareholders to total number of shares (+)</li> <li>2. foreign ownership: proportion of shares owned by foreign shareholders (+)</li> <li>3. institutional shareholders: proportion of shares owned by institutional shareholders (+)</li> </ol>	The findings showed that ownership diffusion and foreign ownership significantly and positively influenced the level of voluntary disclosure in Malaysian listed companies.
Chau and Gray (2002)	Sample year of 1997 consisting	1. ownership dispersion:	The result showed that there was a positive and significant

	of 60 Hong Kong companies and 62 Singaporean companies.	<p>proportion of equity owned by outsiders to total equity (+)</p> <p>2. family ownership: proportion of equity held by family members (-)</p>	association between ownership dispersion and the level of voluntary disclosure. However, the association was much weaker in companies with high family shareholdings.
Depoers (2000)	Sample year of 1995 consisting of 102 industrial and commercial French companies	1. ownership diffusion: percentage of shares held by the three largest shareholders (-)	The study did not find significant association between ownership concentration and the level of disclosure. She argued that the high correlation between size and ownership variables may have influence the association.
Gelb (2000)	Sample period from 1981 to 1993 and 3219 firm-years. Non-bank and US companies.	<p>1. insider ownership: percentage of outstanding ordinary shares held by insiders (-)</p> <p>insiders = officers directors and any shareholder owning at least 10% of shares</p>	The result showed a negative association between insider ownership and the level of voluntary disclosure.
Raffournier (1995)	Sample year of 1991 consisting of 161 industrial and commercial companies in Switzerland.	1. ownership diffusion: percentage of shares not held by known shareholders (-)	They did not find a significant association between the level of disclosure and ownership diffusion. They argued that size captured the effects of ownership on the extent of disclosure.
Abrahamson and Park (1994)	Sample year of 1989 and involved 1118 US companies' president letters	<p>1. percentage of shares held by outsiders (+)</p> <p>2. percentage of shares held by executives (-)</p> <p>3. percentage of shares held by institutional shareholders (+)</p> <p>4. dummy for owner control (-)</p>	They found that concealment of negative information in the president letters are limited by the presence of substantial shareholders. However, small institutional shareholders will support the concealment.

		5. dummy for non institutional control (+) 6. dummy for institutional investor control (+) 7. percentage held by non-dominant institutional shareholders (+)	
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### 3.2.1.6 *Corporate governance and disclosure*

In a diffused ownership structure where no shareholder is dominant, the costs of collecting and analyzing information for an individual shareholder can be expensive and impractical. There would be a high level of information asymmetry. This limitation leads to a reliance on third party governance such as the board of directors to ensure an adequate supply of information at an economical level (Babio Arcay & Muiño Vázquez 2005; Hill & Jones 1992). Other corporate governance measures that can address information asymmetries may include the creation of audit and remuneration committees, the employment of reputable external auditors and the separation of the CEO and the Chairman roles. The stock market can be an external monitoring mechanism for shareholders. The share price would be reflection of the impact of the managers' decisions on current and future net cash flows (Fama & Jensen 1983). Managers would have the incentive to make decisions that do not reduce share price.

The board of directors is the apex of a decision control system (Fama & Jensen 1983). It is in a position to provide valuable information and to protect shareholders' interests by monitoring management actions and behaviors. It retains the crucial control of over managers

by having the power to ratify and monitor their decisions, to hire and replace them and to set remuneration policies (Fama & Jensen 1983). An efficient board of directors can limit managers' opportunistic behavior. Eisenhardt (1989) argued that the depth of the information offered by a board is assessed by considering the frequency of meetings, the proportion of board members with experience (tenure, managerial and industrial) and the representation of various shareholdings groups in board.

Weisbach (1988) classified board members as insiders, outsiders or grey directors. The insider directors are senior management and outside directors are independent and non-executive directors. Grey directors are non-independent and non-executive who have family or business connections with the company or managers. Fama and Jensen (1983) argued that insider directors can be more dominant since they have inside information on the company's operations. However, their presence on the board is still needed to ensure that there is a consistent flow of inside information that would be used to assess the performance of the company and the agents.

Outside directors play the independent role of resolving agency problems between the shareholders and the inside directors. Fama and Jensen (1983, p. 315) argued that outside directors have an incentive to show that *“(1) they are decision experts, (2) they understand the importance of diffuse and separate decision control, and (3) they can work with such decision control systems.”* Outside directors should have the balance the power over the non-independent directors and prevent board entrenchment. They have to protect their human capital value in the market for directors by showing that they are not colluding with the managers. For example, Ferris, Jagannathan and Pritchard (2003) found that there was a



positive association between the past performance of companies in which an individual held a directorship and his or her subsequent employment as a director<sup>15</sup>. They termed this as a reputational effect of directorship.

In their model of board effectiveness, Hermalin and Weisbach (1988) showed that after a crisis, companies seek more independent directors. Weisbach (1988) found that there was a positive and significant association between the resignation of CEOs of poorly performing companies and the proportion of independent directors<sup>16</sup>. Kosnik (1990) studied the 110 top US companies that were subjected to greenmail<sup>17</sup> takeover during the period of 1979 to 1983. The practice reduces shareholders' wealth as they have to repurchase the hostile party's shares at a higher price. He found that companies that were able to resist greenmail attempts had a higher proportion of independent outside directors. Brickley and James (1987) found that there was an inverse association between the proportion of independent directors and management consumptions of perquisites<sup>18</sup>.

Li (1994) examined the effect of the ownership structure on the composition of the board of directors of 390 large manufacturing companies from Japan, Western Europe and the US. He showed that ownership was more dispersed in the US than in Japan and Western European countries. He found that the pattern of ownership in the different countries influenced the composition of the board. Ownership concentration had a negative and significant association with the proportion of independent directors. He also showed that state controlled companies had significantly more independent directors.

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<sup>15</sup> They studied 3190 of US companies and 23673 directors using the sample year of 1995.

<sup>16</sup> The study involved 495 companies listed in the New York Stock Exchange between 1977 and 1980.

<sup>17</sup> Greenmail is the practice of buying a company's shares to a level that represents a takeover attempt by the hostile party. This will force the company to repurchase the shares at higher price to avert the takeover threat.

<sup>18</sup> The study involved 891 US banks using the sample year of 1980.

Raffournier (1995) studied the determinants of disclosure by Swiss companies before the reform of its company law in 1992. Prior to 1992, there were minimal accounting regulations. Swiss companies are secretive in nature. For example, the list of substantial shareholders and creditors were not widely available and other corporate disclosures were voluntary. The study found that having a 'Big Six' audit firm as an external auditor and international business diversification positively influenced the level of voluntary disclosure. Larger audit firms may push for more disclosure of information to protect their own reputations. International diversification meant that Swiss companies would have to comply with other countries' regulatory frameworks that could be more comprehensive. Raffournier showed that the Swiss companies' major foreign trade involved the European Union and North America that have more developed disclosure structures.

Babio Arcay and Muino Vazquez (2005) examined the adoption of corporate governance best practices by Spanish companies. They found positive associations between the proportion of independent directors, the presence of audit committee and the establishment of stock option plans and the level of voluntary disclosure. They argued that controlling shareholders pushed for the same individual to hold both the CEO and Chairman positions. The size of the board of directors did not significantly influence the level of voluntary disclosure. This may imply that the appointment of additional outside directors may only serve to boost the size of the board without actually reducing the power of existing and dominant directors.

In the aftermath of significant and persistent corporate failures and the opening of the Kenyan market, there was a greater emphasis placed upon good corporate governance. Barako et al (2006) showed that the presence of an audit committee significantly and positively influenced the level of voluntary disclosure by Kenyan companies. Consistent with their hypothesis, the

presence of more family members on the board and the dominant personality of a CEO who undertook dual roles were shown to significantly limit the extent of disclosure. External auditor reputation was not shown to significantly influence the level of disclosure. Contrary to the predicted association, companies with a higher proportion of independent directors were found to disclose less information instead of more information. This suggested either a substitutive effect between good board composition and disclosure policies or that the board had been captured by substantial or controlling shareholders.

Ho and Wong (2001) examined the association between corporate governance mechanisms and the level of voluntary disclosure in Hong Kong listed companies using a sample of 90 companies for the year 1998. The study was in response to the legislative reactions to the East Asian financial economic crisis that attempted to improve transparency and to protect the rights of minority shareholders. The corporate governance measures that were considered were the proportion of independent directors on the board, the formation of a voluntary audit committee, the presence of CEO holding dual positions and the proportion of family members on the board. They found that there was a negative association between the proportion of family members on the board and the level of voluntary disclosure. The existence of audit committee significantly improved the level of disclosure. The proportion of independent directors did not significantly influence the level of disclosure. It was consistent with the argument that in a concentrated market such as Hong Kong, the independent directors were nominated and voted by the controlling shareholders. This was consistent with the belief that Hong Kong's board of directors is often held captive by the controlling shareholders and would act according to their wishes.

Leung and Horwitz (2004) studied the effectiveness of independent directors in limiting the influence of executive directors on the level of voluntary segment reporting by Hong Kong companies. They found that the proportion of independent directors positively and significantly influenced the level of voluntary disclosure for companies with lower ownership concentrations. However the association was not significant for companies with high ownership concentrations. This may mean that independent directors were less influential than executive directors in influencing company disclosure policies. In addition, companies that were audited by Big-Six audit firms were found to disclose significantly more information than other companies.

Chen and Jaggi (2000) examined the influence of independent directors on the comprehensiveness of mandatory disclosure of financial information in 87 Hong Kong listed companies from 1993 to 1994. It is a requirement of the Stock Exchange of Hong Kong's Listing Rules for companies to have at least 2 independent directors to improve the transparency and fairness of the board. They found that a higher presence of independent directors on the board improved the comprehensiveness of financial disclosure. As expected the association was weaker in family controlled companies. Chen and Jaggi suggested that independent directors in family controlled companies may be impaired by personal relationships with the family owner for them to be effective. This may mean that the requirement of the Listing Rule was not effective in ensuring the independence of the directors in family controlled companies. However, it could also be that there was less demand for extensive information at the first place. The family shareholders being the controlling owners would not rely on annual reports because they would have inside access to information.

Huafang and Jianguo (2007) studied the associations between the corporate governance variables of independent directors, CEO duality role and auditor reputation and the level of voluntary disclosure by Chinese companies. The Chinese regulators introduced reforms when the country joined the World Trade Organization. For example, the proportion of independent directors was required to be at least a third of the board. Huafang and Jianguo examined the determinants of disclosure in light of the reforms to the Chinese market. They found significant and positive associations between the proportion of independent directors, audit reputation and the level of disclosure. CEOs who held the role of chairman at the same time were shown to significantly and negatively influence the level of disclosure as they exerted too much control over the company.

Similar associations between corporate governance mechanisms and the extent of voluntary disclosure were also examined from a Malaysian market perspective. Using data prior to the East Asian financial crisis, Haniffa and Cooke (2002) found that there was a significant and positive association between the proportion of family members on the board of directors and the level of voluntary disclosure. Contrary to their hypothesis, they found that having an independent and non-executive chairman significantly and negatively influenced the level of voluntary disclosure. They suggested that an independent and non-executive chairman may derive more private utility by keeping information private. The other corporate governance variables (proportion of independent directors on board, CEO duality and chairman cross-directorship) were shown not to be significant in influencing the level of disclosure. The insignificant association between the proportion of independent directors and the level of disclosure may also suggest that Malaysian boards are captured by the controlling

shareholders. These findings were significant given that their study sought to contribute to the discussion on the formulation of the Malaysian corporate governance code.

Mohd Ghazali and Weetman (2006) examined the influence of corporate governance variables on the level of voluntary disclosure by Malaysian companies using 2001 as the sample year. During that year, the Malaysian Code on Corporate Governance was implemented as a response to the East Asian financial crisis. They showed that requiring a minimum requirement proportion of independent directors on the board and an independent Chairman were not significant in improving the level of disclosure. The corporate governance code did not appear have reduced the control exerted by controlling shareholders such as family-owners. The presence of family directors was also shown to significantly limit the extent of voluntary disclosure. The results suggested that family controlled companies continued to be secretive. They would try to limit the involvement of outsiders by disclosing minimum information and appointing minimum numbers of independent directors.

Bathala and Rao (1995) showed that there was an inverse association between the proportion of outside directors on the board of directors and executive shareholdings. Similar results were found by Li (1994) who studied Japanese, Western Europe and the US markets. The Japanese and Western Europe markets are similar to the Malaysian market with a high ownership concentration. The Eng and Mak (2003) study of the Singapore market also showed that a higher proportion of independent directors significantly limited the level of voluntary disclosure. Brammer and Pavelin (2008) studied the determinants of environmental disclosure by UK companies<sup>19</sup>. They found a negative association between the proportion of non-executive directors and the level of environmental initiatives disclosures. Barako et al.

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<sup>19</sup> The study involved 470 large UK industrial companies using the sample year of 2000.

(2006) also found similar associations in their study of Kenyan companies. This suggests that there could be substitutive effect between various governance variables (Brickley & James 1987; Eng & Mak 2003). Companies may choose to adopt one mechanism another as the preferred monitoring tools in mitigating agency conflicts. Bathala and Rao argued that a company will choose the best mechanism that suits the characteristics of the company and its industry. For example, voluntary disclosure could be limited if the company is satisfied with the governance offered by their board composition (Barako, Hancock & Izaan 2006). However, Babío Arcay and Muiño Vázquez (2005) argued that compliance with a corporate governance recommendation may lead to a strengthening of resolve to act on other recommendations. This may lead to the introduction of other corporate governance measures that will further restrict managers from withholding information and indulging in opportunistic behaviors. Additional and sometimes overlapping corporate governance mechanisms are put in place to complement each other and to provide checks and balances.

Table 3 Summary of corporate governance and disclosure studies

Author(s)	Sample and Data	Corporate governance variable(s)	Main findings
Abrahamson and Park (1994)	Sample year of 1989 and involved 1118 companies' president letters	<ol style="list-style-type: none"> <li>1. Proportion of independent directors (+)</li> <li>2. Auditor's report: 0= not qualified; 1 = qualified (-)</li> </ol>	They found that concealment of negative information in the president letters are limited by the presence of independent directors and qualified reports. However, outside directors with shareholdings support concealments. They argued that the shareholdings made the directors bias to releasing bad information for the fear of reducing the value of their equity.
Babio Arcay and Muino Vazquez (2005)	Sample year of 1999 and involved 91 Spanish companies listed in Madrid Stock Exchange	<ol style="list-style-type: none"> <li>1. Proportion of independent directors (+)</li> <li>2. Audit committee: 0 = none; 1= exist (+)</li> <li>3. CEO/Chairman duality: 0 = yes, 1 = no (-)</li> <li>4. Board size: 0 = do not follow recommendations, 1 = consistent with code (+)</li> <li>5. Stock options scheme: 0 = none, 1 = exist (+)</li> </ol>	They found positive associations between proportion of independent directors, audit committee and establishment of stock option plans and the level of voluntary disclosure. They argued that high family shareholdings pushed for the same individual to hold the CEO and Chairman positions. Larger board size appeared not to affect level of voluntary disclosure. The presence of outside directors may only serve to boost the size but not replace current directors.
Chen and Jaggi (2000)	Sample period of 1993 to 1994 involving a sample of 87 Hong Kong listed companies	<ol style="list-style-type: none"> <li>1. Proportion of independent directors (+)</li> <li>2. Family controlled companies: 1 = controlled by family, 0 = otherwise</li> </ol>	They found positive association between proportion of independent directors and level of mandatory disclosure. Consistent with their hypothesis, they showed that family controlled companies disclosed



		(-) 3. Auditor reputation: 0=non Big Six audit firm; 1= Big Six audit firm (+)	less information
Barako, Hancock and Izan (2006)	Sample consisted of 43 companies listed in Nairobi Stock Exchange for the sample period of 1992 to 2001	1. Proportion of non-executive directors (+) 2. CEO duality: 1 = yes, 0= no 3. Board size: number of directors on the board 4. Audit committee: 1= exist, 0 = none (+) 5. Auditor reputation: 0=non Big Four audit firm; 1= Big Four audit firm (+)	The study found that the presence of audit committee significantly improved the level of voluntary disclosure. However, the higher the proportion of non-executive directors the lower the level of disclosure. This may indicate a substitutive effect between various corporate governance mechanisms. Other variables were found not to be significant.
Brammer and Pavelin (2008)	Sample year of 2000 consisting of 450 large UK industrial companies	1. Proportion of non-executive directors (+)	They found a significant and negative association between the level of disclosure and the proportion of non-executive directors.
Raffournier (1995)	Sample year of 1991 consisting of 161 industrial and commercial companies in Switzerland.	1. Auditor's size: 0=non Big Six audit firm; 1= Big Six audit firm (+)	The study found a positive association between auditor's size and level of voluntary disclosure of Swiss companies.
Makhija and Patton (2004)	Sample year of 1993 consisting of 43 non-financial Czech companies	1. Auditor's size: 0=non Big Six audit firm; 1= Big Six audit firm (+)	The study did not find an association between auditor's size and level of voluntary disclosure of Czech companies.

	listed in the PSE-50 index		
Leung and Horwitz (2004)	Sample year of 1996 consisting of 376 Hong Kong listed companies	<ol style="list-style-type: none"> <li>1. Proportion of non-executive directors (+)</li> <li>2. Auditor's size: 0=non Big Six audit firm; 1= Big Six audit firm (+)</li> </ol>	They study found that the proportion of independent directors positively and significantly influenced the level of voluntary disclosure for companies with lower director ownership concentration. However the association was not significant for companies with high ownership concentration. This may show that the independent directors were less influential compared to entrenched executive directors. Companies that were audited by big-6 audit firms were found to significantly disclose more information than other companies.
Huafang and Jianguo (2007)	Sample year of 2002 consisting of 559 Chinese listed companies	<ol style="list-style-type: none"> <li>1. Proportion of independent and experienced directors (+)</li> <li>2. Proportion of non-executive directors (+)</li> <li>3. CEO duality: 1= dual role, 0 = otherwise (-)</li> </ol>	They found that proportion of independent directors was significantly and positively associated with the level of voluntary disclosure in Chinese firms. CEO who held dual positions were shown to significantly limit the level of disclosure.
Gul and Leung (2004)	Sample year of 1996 consisting of 385 Hong Kong listed companies	<ol style="list-style-type: none"> <li>1. Proportion of independent directors (+)</li> <li>2. CEO duality: 1= dual role, 0 = otherwise (-)</li> <li>3. Auditor reputation: 0 = non Big</li> </ol>	They found that proportion of independent directors positively and significantly influenced the level of voluntary disclosure. CEO who held dual positions were shown to significantly limit the level of disclosure.

		<p>Five audit firm; 1= Big Five audit firm (+)</p> <p>4. Audit committee: 1= exist, 0 = none (+)</p>	
Shan (2009)	Sample consisted of 120 Chinese Shanghai SSE180 and Shenzhen SSE100 listed companies for the sample period of 2001 to 2005	<p>1. Proportion of professional supervisors (+)</p> <p>2. Auditor reputation: 0 = non Big Four audit firm; 1= Big Four audit firm (+)</p> <p>3. CEO duality: 1= dual role, 0 = otherwise (-)</p>	The study found that there was a significant and positive association between the proportion of independent directors and level of related party disclosure. CEO who held dual positions were shown to significantly limit the level of disclosure. However, contrary to the hypothesis, the study found that proportion of professional supervisors significantly and negatively influenced the level of disclosure.
Ho and Wong (2001)	Sample consisted 98 Hong Kong listed companies for sample year of 1998	<p>1. Proportion of independent directors (+)</p> <p>2. Proportion of family member on the board of directors (-)</p> <p>3. Audit committee: 1= exist, 0 = none (+)</p>	The study found that there was a negative association between proportion of family members on the board and the level of voluntary disclosure. The existence of audit committee significantly improved the level of disclosure.
Eng and Mak (2003)	Sample year of 1995 consisting of 158 Singaporean companies	<p>1. Proportion of independent directors (+)</p> <p>2. Auditor's size: 0=non Big Six audit firm; 1= Big Six audit firm (+)</p>	Contrary to their hypothesis, they found a significant and inverse association between the proportion of independent directors and the level of voluntary disclosure. Auditor reputation was not found to be significant in influencing the level of voluntary disclosure.

<p>Haniffa and Cooke (2002)</p>	<p>Sample consisted of 167 Malaysian companies for the sample year ended 31<sup>st</sup> December 1995</p>	<ol style="list-style-type: none"> <li>1. Proportion of independent directors on the board of directors (+)</li> <li>2. Proportion of family member on the board of directors (-)</li> <li>3. Cross directorship: proportion of directors with directorship on the board of directors (-)</li> <li>4. CEO duality: 1= dual role, 0 = otherwise (-)</li> <li>5. Finance director on board: 1 = yes, 0 = no (+)</li> <li>6. Chairman is independent and non-executive: 1 = yes, 0 = no (+)</li> <li>7. Chairman with cross directorship: 1 = yes, 0 = no (+)</li> <li>8. Auditor's size: 0=non Big Six audit firm; 1= Big Six audit firm (+)</li> </ol>	<p>The study found that there was a significant and positive association between the proportion of family members on the board of directors and the level of voluntary disclosure. Contrary to the hypothesis, the study found that having an independent and non executive chairman significantly and negatively influenced the level of voluntary disclosure. They suggested that an independent and non-executive chairman may derive more private utility by keeping information private. The other corporate governance variables were shown not to be significant.</p>
<p>Mohd Ghazali and Weetman (2006)</p>	<p>Sample consisted of 87 Malaysian companies for the sample year of 2001</p>	<ol style="list-style-type: none"> <li>1. Proportion of family member on the board of directors (-)</li> <li>2. Proportion of independent directors on the board of directors (+)</li> <li>3. Chairman is independent and non-executive: 1 = yes, 0 = no (+)</li> </ol>	<p>The study only found the proportion of family members to have a significant association with the level of disclosure. The results suggested that family controlled companies continued to be secretive. They would try to limit the involvement of outsiders by disclosing minimum information and appointing minimum numbers of independent directors.</p>

### 3.2.2 Legitimacy Theory

Legitimacy theory is the result of a social contract between an organization and the society in which it operates (Deegan, C. 2002; Patten, D.M. 1991). Shocker and Sethi (1974, p. 67) described the relationship as, “*any social institution [including business] that operates in society via a social contract, expressed or implied.*” They further elaborated the concept by arguing that “*an institution must constantly meet the twin tests of legitimacy and relevance by demonstrating that the society requires its services and that the groups benefitting from its rewards have society’s approval.*” Lindblom (1983, p. 2) formally defined legitimacy as “*a condition or status when an entity’s value system is congruent with the value of the larger social system of which entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to an entity’s legitimacy.*” When there is a breach of the social contract, a legitimacy gap may occur that may threaten the survival of an entity in society (Branco & Rodrigues 2006). A legitimacy gap can be defined as “*the difference between the relevant public’s’ expectations relating to how an organization should act and the perception of how they do act* (Newson & Deegan 2002, p. 186)”.

The larger social system is composed of different constituents or participants who may have conflicting or differing expectations of the prevailing social values or norms (Ashforth & Gibbs 1990). The threats to legitimacy can be legal, economic or social sanctions (Dowling & Pfeffer 1975). An entity will seek to avoid threats to its existence by ensuring its legitimacy in the society in which it operates. Suchman (1995) argued that legitimacy is obtained by constraining, constructing and empowering the various actors within an organization. However, he further argued that legitimacy is “*dependent on a collective audience, yet independent of particular observers* (Suchman 1995, p. 574).” An individual’s disapproval of an entity’s value system does not necessitate a legitimacy gap. There needs to be a collective

agreement between the social constituents. In addition, an entity may diverge from society's aspirations and yet still maintain its legitimacy if the constituents are not privy to the gap (Mobus 2005).

Lindblom (1983) argued that organizational legitimacy can be motivated by changes in the society's values or norms . Dowling and Pfeffer (1975) extended this by including competition between organizations for resources as another motivation for legitimacy. Legitimacy itself is a valuable resource for which entities compete. Society values or norms can be congruent with or in conflict with market forces in defining and constraining an entity's domains in a society. The privatization of public services is an example where the expectations of society and market mechanisms may conflict.

Traditional legitimacy theory assumes that legitimacy is limited to an entity utilizing resources to maximise wealth (Friedman 1962). Legitimacy is then accorded to organizations that perform well and consistently produce profits (Patten, D.M. 1991). However, the concept has evolved and is now not constrained by market based expectations. For example, Dowling and Pfeffer (1975) argued that legitimacy is not only represented by economic exchanges or resource allocations between an entity and the constituents in the social system. They cited the case of drug cartels in the US that had adequate access to resources and conducted efficient economic transactions even though they were illegal. This was compared to inadequate access of basic healthcare in poor and rural areas.

Legitimacy cannot be assessed by mere conformity to the legal rules of a society. It can be argued that there is an association between regulatory compliance and the values or norms of society (Mobus 2005). However, the association is not perfect for it to be definitive (Dowling

& Pfeffer 1975). Dowling and Pfeffer (1975) gave three reasons why there is an imperfect association between legality and society's values or norms. Firstly, they contended that society values or norms evolved over time compared to black letter rules that are tied to formalities. Rules are harder to change and by the time new rules are introduced to meet society's demands, society's values may have changed. Secondly, there can be conflicts between constituents of the society about what are the right values or norms. One person's values may not be the same as another person's. Regulations, on the other hand, can be coherent. Lastly, there can be contradictions between the views of society and the law on certain behaviour. For example, gambling may be tolerated by society but punished heavily under certain laws. However, it does not mean that legal compliance is not essential in assessing legitimacy. Mobus (2005) studied the association between mandatory environmental performance disclosure and the ensuing environmental regulatory performance<sup>20</sup>. He showed that mandatory disclosure requirements for environmental performance meant that companies had to report on violations of the standards. This meant that compliance to the rule became an essential part of legitimacy to some constituents.

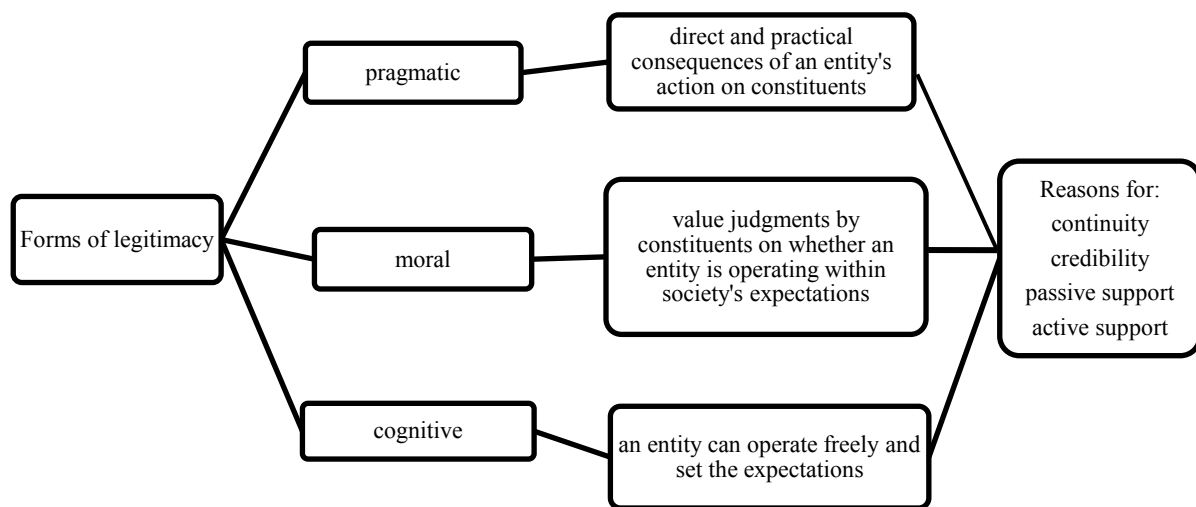
Suchman (1995) identified three major forms of legitimacy (Figure 8). They are pragmatic, moral and cognitive legitimacy. The distinction was based on their varying behavioral dynamics. Pragmatic legitimacy may involve scrutiny by constituents of the direct and practical consequences of an entity's practices on them. However, pragmatic legitimacy is not limited to interdependencies or exchanges between the entity and constituents. It can also be obtained by responding to society's concerns and making the constituents a part of the policy making process (Meyer & Scott 1983; Suchman 1995). Moral legitimacy depends on value judgments by constituents about whether an entity's practices uphold societal welfare. The

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<sup>20</sup> The study involved 44 US petroleum refinery companies from 1992 to 1994.

evaluation on an entity's moral legitimacy may include assessments of its products and consequences, methods and dealings, structures and key personnel (Suchman 1995). Cognitive legitimacy does not involve evaluations of the interests of constituents but is based on comprehension and 'taken-for-grantedness' (Suchman 1995). Comprehension allows society in a chaotic cognitive environment to view the importance of an organization without any interference. 'Taken-for-grantedness' legitimacy assumes a calmer cognitive process, in which an organization gains superiority over others by managing disorders and consequently, taking control over the construction of new expectations (Suchman 1995). This is the highest and most rewarding, but the hardest form of legitimacy that an organization can achieve.

Figure 8 Forms of legitimacy and reasons for legitimacy



Suchman (1995) contended that organizations seek legitimacy for four main reasons. They are continuity, credibility, passive support and active support. To survive in a society, organizations need to sustain the supply of resources obtained from society's constituents. It is, thus, important for them to stay congruent with society's expectations. Credibility relates to maintaining legitimate records of organizational practices so that society can reliably believe in the legitimacy of the entity. Meyer and Rowan (1977) argued that companies that



failed to provide adequate and credible information will be more susceptible to negligent or unfounded claims against them. An entity that is only seeking passive support from the constituents will have a lower legitimacy threshold than an entity aiming for active support (Suchman 1995). This entity will address society's common expectations and assume that it is enough to avoid any further scrutiny. An entity that seeks active support will have to go beyond this. It has to address society's more complicated demands and compete with other entities that are also trying to win society's active endorsement.

There are several theories about how entities attempt to ensure their legitimacy. Ashford and Gibbs (1990) categorised these methods as substantive management and symbolic management. Substantive management entails real and substantial changes in the entity or in the larger society value systems. In an ideal system, an entity will adapt output, objectives and operating systems to correspond with society's prevalent notion of legitimacy (Dowling & Pfeffer 1975). This is a form of '*coercive isomorphism*' (DiMaggio & Powell 1983). Coercive isomorphism means that an entity is pressured to conform to society's expectations and often the expectations are automatically built into an organization (Ashforth & Gibbs 1990). However, an entity may only seek to meet the expectations of powerful or key constituents that are critical for its survival (Deegan, C. 2002). Ashford and Gibbs (1990) termed this as '*role performance*' and may include maximizing shareholders' return, ensuring reasonable priced goods and services for customers and maintaining employees' job security. For example, Neu et al (1998) found that companies were significantly more responsive to demands by government and substantial shareholders than to demands by conservationists. An entity may also change the mix and degree of their dependence on constituents for resources (Ashforth & Gibbs 1990). This may alter the legitimacy expectations placed upon the entity. Another substantive management method is to alter society's view of legitimacy to

that of the organization (Dowling & Pfeffer 1975). As an example Miles and Cameron (1982) suggested the response of the tobacco industry to the anti smoking movements that threaten its survival. Tobacco companies tried to negate the backlash through intense lobbying against anti smoking legislations, sponsoring large events, embarking on extensive marketing and awarding grants to the scientific community to provide empirical evidence to support the industry.

Symbolic management is another category of legitimacy management as defined by Ashford and Gibbs (1990). This involves superficial changes or portrayals of an entity as being consistent with society's perception of legitimacy. Ashford and Gibbs (1990) provided several symbolic management strategies. They include promotion of an entity's conformity to society's values while at the same time doing otherwise, withholding information that may create legitimacy gaps and reframing and redefining any legitimacy issue through other symbols, values or actors that are socially acceptable themselves. Furthermore, an entity can justify or provide excuses to negate or limit presumptions of a lack of legitimacy and by offering apologies and showing remorse to limit or delay potential losses from legitimacy gaps. Finally, a company may ceremoniously observe highly visible and prominent practices that conform to society's value or norms without changing the entity's essential operating systems.

Legitimacy theory is consistent with the political costs hypothesis. Watts and Zimmerman (1978) posited that there is a negative association between the disclosure of favorable information and the probability of incurring political costs from the disclosure. They argued that the degree of the political cost is dependent on the size of the company. For example, they showed that Exxon (a bigger company) incurred significantly higher anti-trust claims

than a smaller competitor. These political costs come from constituents in a society who try to impose their own notion of legitimacy upon an entity. Political costs can also arise from decreases in profits from regulatory interventions, union claims and negative media attentions (Wagenhofer 1990). Wagenhofer (1990) tested the hypothesis in his model of a duopolistic market. He found that regulatory, union and media attentions led to significantly higher political costs. When the risks of political costs are higher, the result showed that there was a positive association between the level of favorable news withheld and the probability that companies are also holding onto unfavourable information. This may mean that companies are trying to avoid attention from either being too successful or worse off. Consistent with the hypothesis, when political costs were low this association was not observed. However, Milne (2002) argued that researchers have been using the political costs hypothesis rather loosely in disclosure studies. He noted that Watts and Zimmerman did not refer to annual report disclosure but focused on reported accounting numbers.

Deegan (2002) argued that from a legitimacy perspective the incentive to disclose information should be distinguished from the obligatory disclosure of information to those who are entitled to it. Companies need to indicate that they are congruent with society's value and norms for their efforts to be noticed by society (Ashforth & Gibbs 1990). To employ any legitimacy management method without communicating it to society would be futile (Cormier & Gordon 2001). The information is vital in changing society's perceptions of the company (Deegan, C. 2002). Gray et al. (1996) argued that annual reports play a significant role in creating an impression of a company. Disclosure of information in the annual reports may be effective in managing legitimacy given that annual reports are highly accessible (Branco & Rodrigues 2006). In addition, the information may be deemed more credible given that it will be reported within audited financial statements (Ahmad & Sulaiman 2004; Neu,

Warsame & Pedwell 1998; Tilt 1994). However, Mobus (2005) argued that voluntary disclosure of information can be a diversion to appease society's concern without having to substantively address the issue. It is a symbolic management of the issue (Ashforth & Gibbs 1990).

Scott and Meyer (1991) showed that the notion of legitimacy differs between environments. They argued that it is a fluid concept that is constrained by technical and institutional dynamics. Furthermore, Deegan (2002) argued that legitimacy theory studies cannot be examined without reflecting on political, social and institutional backgrounds. Thus, the characteristics of entities may determine society's expectations of them. One consistent finding is an association between a company's visibility and the extent of society's expectations. Company size has been used extensively as a proxy for visibility to show a positive association between visibility and legitimacy issues (Brammer & Pavelin 2008; Cormier & Gordon 2001; Cowen, S, Linda & Scott 1987; Hamid 2004; Huafang & Jianguo 2007; Leung & Horwitz 2004; Mobus 2005; Patten, D.M. 1991; Trotman & Ken 1981). It is argued that larger companies are more likely to attract public attention and consequently face a greater threat to their legitimacy. These companies also may have a larger number of shareholders who may demand compliance with society's values and norms (Cowen, S, Linda & Scott 1987). Thus, it is argued that larger companies are more likely to disclose information to indicate that they are legitimate.

The nature of the industry may also influence the extent of public pressure and the consequent threat to legitimacy. Certain industries may be more scrutinised than others and this may influence the level of legitimacy management (Brammer & Pavelin 2008; Branco & Rodrigues 2006; Craswell & Taylor 1992; Patten, D.M. 1991; Raffournier 1995). For

example, the debate about excessive executive remunerations has been significant in the financial sector. The scrutiny of financial institutions may force them to disclose more information to justify salaries and limit potential losses from public dissatisfaction. In addition, Cowen, Ferreri and Parker (1987) argued that regulatory pressure may differ across industries. Given the ongoing debate on executive remuneration, it may be expected that regulators will focus more on the finance companies compared than the rest of the market.

Patten (1991) studied the association between public pressure, profitability and the level of voluntary disclosure of social information in annual reports. Social information disclosure covered eight categories. They were environment, energy, fair business practices, human resources, community involvement, products and others. His study of 128 US companies for the year of 1985 showed a positive association between public pressure as proxied by size and the level of disclosure. Politically sensitive industries such as petroleum, chemical and paper mills were also hypothesised to have higher public scrutiny and more social disclosure. The study also proposed that public pressure would have a greater influence on the level of social disclosure than profitability. It was argued that profitability was important for the share market that may have less demand for social disclosure. The study found significant support for these arguments. The proxies for public pressure were found to significantly influence social disclosure. Using the same set of categories of disclosure, Cowen et al. (1987) in their study<sup>21</sup> showed that industry classifications played a role in the disclosure of the categorical information.

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<sup>21</sup> The study involved 134 US companies for sample year of 1978

However, Babío Arcay and Muiño Vázquez (2005) did not find a significant association between Spanish companies operating in regulated industries and the extent of voluntary disclosure. They showed that regulated companies were also among the largest companies in the Spanish market. This meant that there was a high correlation between industry classification and company size for the association to be independently tested. These companies may have already disclosed more information than the rest of the industries because of their size. A similar finding was observed by Conyon, Malin and Sadler (2002) in their study of the disclosure of executive stock options in the UK. Owusu-Ansah (1998) also found an insignificant association between industry classifications and the level of mandatory disclosure in Zimbabwe companies.

O'Dwyer (2002) found that managers sometimes choose not to voluntarily disclose information that relates to legitimacy gaps. He interviewed 29 senior managers of 27 Irish companies on their social disclosure policies. Although the managers agreed that there was a need to respond to legitimacy gaps, they would rather choose to let any public outcry go away 'on its own'. They perceived that by providing extensive disclosure on an issue, it would legitimize the importance of the issue. The public was already skeptical and providing further information may be counterproductive. On the other hand, with mandatory disclosure requirements, managers might be better off to disclose all information, positive or negative. Mobus (2005) studied the association of the disclosure of environmental performance and the subsequent environmental performance of US petroleum refineries under a mandatory disclosure framework. Mandatory disclosure leads to an exposure of non-compliance that may not happen if it was left to managers' discretion. He found that companies complied with the regulations to protect them from further legitimacy threats. The level of non-compliance for the subsequent years was also reduced.

When a crisis or unexpected event occurs, a company has to be reactive to maintain its legitimacy (O'Donovan 2002). Prior studies have shown that companies responded to negative media attention and public scrutiny and consequently to threats on their legitimacy by disclosing additional information (Deegan, C. 2002; Hutchings & Taylor 2000; Patten, Dennis M. 1992). For example, Patten and Dennis (1992) found that in the aftermath of the Exxon Valdez oil spill there was significant disclosure of social responsibility by petroleum companies to manage the negative publicity that the spill generated. There was a similar response after the OK Tedi River pollution with a significant increase in environmental disclosure by mining companies (Hutchings & Taylor 2000). Brammer and Pavelin (2008) did not find a significant association between the extent of media attention and the level of environmental disclosure of UK companies. However, as expected they found that the extent of media attention was highly correlated with the sensitivities of the nature of the business.

The ongoing debate about executive remuneration may motivate a similar response from Malaysian companies. There is an additional incentive to justify executive remuneration to avoid negative reactions from society's constituents. For example, Wade, Porac and Pollock (1997) identified three types of justification for remuneration. They were external corroborations, shareholders' alignment narrations and discussions of company performance. They studied the salary justifications of 266 listed companies in S & P for the year 1992 in light of the debate on excessive CEO pay in US. They found that companies with high ownership concentration, high salaries and high shareholder activism were more likely to justify their executive remuneration policies by disclosing the appointment of external remuneration consultants as advisors. These companies were also more likely to argue that, in general, the remuneration policies aligned the interests of managers and shareholders.

However, the companies stopped short at disclosing whether the remuneration policies were actually working in aligning the interests. They also found that companies with higher accounting profits downplayed market performance and market volatility. They concluded that these were symbolic attempts by management to legitimize their pay practices. However, they noted that the analysis only covered one year and that they could not conclude definitely that they were mere symbolic gestures or whether they involved more substantive efforts. To quote Wade et al. (1997, p. 662), “*substance may indeed induce symbolic acts, but symbolic acts reinforce and shape substance.*”

### **3.2.3 Signaling Theory and Proprietary Costs**

Grossman (1981) and Milgrom (1981) argued that managers are likely to reveal all information that they possess. The managers are apprehensive that the market would react negatively by assuming the worst if it became known that they were holding back some information. Investors may over-discount the value of a firm by assuming that managers are reluctant to release bad news (Milgrom 1981). However, various studies have shown that managers apply discretion on what and when to disclose to the market. Disclosure of information is not costless. The costs are not limited to the money and time spent to prepare and provide the information to the public but may include proprietary costs. Proprietary costs are the costs of publicly disclosing proprietary information. It is an indirect cost of the disclosure of information (Suijs 2005). Proprietary information is defined as “information whose disclosure reduces the present value of the company endowed with the information”(Dye 1985, p. 331). The disclosure of non-proprietary information may inadvertently reveal some proprietary information (Dye 1985).



The existence of proprietary costs may limit the extent of disclosure. Verrecchia (1983) argued that there is an inverse association between proprietary costs and the disclosure of information. In his disclosure model, proprietary cost is the constant. The level of disclosure is the dependent variable and the price of a risky asset is the independent variable. The disclosure of proprietary information will reduce the value of the risky asset by a constant. The model shows that when the proprietary cost is nil, managers will adopt total disclosure. There is equilibrium when the managers' expectation of the effect of withholding information reconciles with the investors' rational interpretation of the managers' action. Verrecchia argued that proprietary cost created noise in the model. When managers withhold news, it opens the door to different interpretations by investors. They might infer that the withheld news is bad news or non-dramatic good news that does not justify losing any proprietary information (Suijs 2005). Non-disclosure is, thus, not necessarily interpreted as bad news by the market. This may explain why managers are able to hold back information. However, Wagenhofer (1990) argued that companies can still incur proprietary costs from withholding of information. Competitors may take adverse actions from inferring to the information content behind the withheld information. For example, if competitors believed that a company is withholding information about a new technology, they might undertake aggressive sales tactics to gain more market share. It may reduce the company's current earnings and its capability to exploit the new technology. This may buy the competitors some time to catch up on the technology. Companies may reduce the probability of adverse reactions by adopting a partial disclosure of information to negate the proprietary costs from non-disclosure.

Verrecchia (1990) extended his 1983 model by considering the quality of the information and its effect on the extent of disclosure. He showed that as the quality of the information

increased, managers are more likely to disclose more to the market. Managers are more inclined to disclose credible information to avoid over discounting of company value by investors if the information is withheld. Managers have been shown to ‘time’ the disclosure of good and bad news. Disclosure of bad news tends to be delayed compared to favourable news (Jung & Kwon 1988).Pastena and Ronen (1979) showed that managers delayed the announcement of bad news until the end of fiscal year when it was no longer feasible to do so because it had to be disclosed to independent auditors. In addition, Jung and Kwon (1988) contended that managers will be forced to release withheld information if investors can acquire the information independently.

In their model of voluntary disclosure built around adverse selection objectives, Lang and Lundholm (1993) found that there is a performance threshold that influences the level of disclosure. Companies that performed beyond the benchmark will disclose more information, after considering disclosure costs. Newman and Sansing (1993) also showed that companies that have good news, disclose them more informatively than companies with bad news. Verrecchia (1983) argued that managers delay the disclosure of bad news in the hope that some miracle or turnaround will occur without any consideration of rational expectations. They did not consider that a rational market may infer that any non-disclosure means that companies are holding back bad news. Mercer (2005) examined the effect of disclosure on managers’ reporting credibility by looking at investors’ short and long term perceptions. He found that in the short term, investors measure managers’ credibility by the forthcomingness of the disclosure of especially bad news<sup>22</sup>. Investors associate the disclosure of negative news as indicating more credible managers. However, in the long term, investors will associate

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<sup>22</sup> The study involved 244 MBA students that were given different sets of information over a period of two weeks. Their pre and post information disclosure of assessment of management credibility were measured to test the study hypotheses.

managers' credibility with performance. Managers who now disclose good news are presumed to be more credible than managers who report otherwise. The effects of full disclosure of information on managers' credibility are only temporary (Mercer 2005). This may mean that performing or profitable companies are more likely to disclose more information in the long run given that investors will relate more positively to good news than otherwise.

Various studies have supported the view that good news is relayed faster and more extensively than bad news (Leung & Horwitz 2004; Lev & Penman 1990; Pastena & Ronen 1979; Patell 1976; Patell & Wolfson 1982; Penman 1980; Scott 1994; Waymire 1984). For example, Scott (1994) found that Canadian companies are more likely to disclose news of reductions in pension costs than increases. Patell and Wolfson (1982) showed that companies listed in the Chicago Board Options Exchange during the year 1976 to 1977, significantly delayed the disclosure of bad news until after the close of a trading day. This news was eventually published in the next's day *Wall Street Journal*. They argued that companies tried to provide a natural non trading period so as to systematically limit public exposure to the negative announcements. The natural non trading period may act as a cooling off period so the market can absorb the negative news and reduce the shock to the stock price when markets are opened.

Studies have also found that better performing companies disclose more information than poorer performing companies. Profitable companies disclose more information to distinguish themselves from other companies. Without a signal, the market may price performing and

non-performing companies at the same price creating the ‘*lemons*’<sup>23</sup> problem (Grossman 1981). Lang and Lundholm (1993) found that companies with higher stock returns disclosed significantly more information than other companies<sup>24</sup>. Debreceny and Rahman (2005) studied eight stock exchange online announcements of eight countries for 334 sample companies. They found that companies with higher returns on equity provided significantly more continuous disclosure. Similar results were also obtained by Patell (1976), Penman (1980), Lev and Penman (1990), Skinner (1994), Schadewitz and Blevins (1998), Owusu-Ansah (1998), Miller (2002), Gelb and Zarowin (2002), Hossain et al. (2005), Leung and Horwitz (2004) and Raffournier (1995). However, several studies have found contrary evidence where non-performing companies disclose more information. Skinner (1994) argued that non-performing companies disclosed more information as a pre-emptive measure to reduce potential litigation costs. Skinner (1997) extended this by showing that companies that were already involved in lawsuits and that provided timely disclosure incurred significantly lower settlement costs than companies that did not do so<sup>25</sup>.

### 3.2.4 Proprietary costs and disclosure

Clinch and Verrecchia (1997) in their model of companies in a duopolistic market, showed that the probability and range of disclosure were reduced with increases in the level of competitiveness. However, Darrough and Stoughton (1990) suggested that competition in the form of new entrants would improve voluntary disclosure. They assumed that low entry costs will increase the probability of new entrants into the market. The existing companies are

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<sup>23</sup> Akerlof (1970) provided a scenario where the owner of a good used car ‘*cherry*’ will not sell his car in a used car market. This is because the average price of all used cars in the market would be lowered by clunkers or worse off used cars ‘*lemons*’ by uninformed buyers. The similar scenario can be applied to the capital market when there is information asymmetry when investors do not have enough information to distinguish between performing and non-performing companies.

<sup>24</sup> Lang and Lundholm (1993) studied 2319 company years of Financial Analysts Federation Corporation Information Committee Reports between sample years of 1985 to 1989.

<sup>25</sup> The study involved a sample of 221 US companies that were involved in litigations during sample period of 1989 to 1994.

forced to reveal more proprietary information to distinguish themselves from the new entrants. Contrary to this, they argued that Verrechia's model assumed that new entrants will increase the pool of rivals. As the pool of competitors increases, the proprietary costs became higher and the company will be more reluctant to disclose information. Although their perspectives on the effect of new entrants differ, the conclusion of both these models is similar. An increase in proprietary costs will limit disclosure (Darrrough & Stoughton 1990).

Prior studies have used various proxies for proprietary costs including industry competitiveness such as the industry sales concentration ratio of the four largest companies within a specific industry (Berger & Hann 2002; Gelb 2000; Harris 1998; Leung & Horwitz 2004; Luo, Courtenay & Hossain 2006) and company total sales over the total sales of its specific industry classification (Clarkson, PM, Kao & Richardson 1994; Debreceeny & Rahman 2005; Hagerman & Zmijewski 1979; Mohd Ghazali & Weetman 2006; Press & Weintrop 1990). The industry competitiveness ratio seeks to measure directly the extent of competition within a specific industry.

Another proxy for proprietary costs is a company's investment growth opportunities. High growth companies have more to lose from disclosing vital proprietary information that may reduce future returns if it is revealed to competitors (Shan 2009). The competitors can exploit the proprietary information and take away the disclosing company's competitive edge for potential future growth (Bamber & Cheon 1998). High growth companies are thus expected to disclose less information to limit any proprietary costs. However, Schadewitz and Blevins (1998) provided an alternative argument for the inverse association between disclosure and growth potential. They argued that companies rely on positive performance measure to signal

future return from growth opportunities rather than providing additional disclosure. If the performance signal is adequate in informing investors of the companies' future, companies do not have to incur potential proprietary costs from additional disclosure. Investment growth opportunities can be represented by the ratio of market value to the book value of equity (*MKBVE*) (Adam & Goyal 2008; Bamber & Cheon 1998; Berger & Hann 2002; Clarkson, P, Van Bueren & Walker 2006; Debreceeny & Rahman 2005; Frankel, Kothari & Weber 2006; Garcia-Meca & Martinez 2007; Gelb & Zarowin 2002; Gul & Leung 2004; Hossain, Ahmed & Godfrey 2005; Lang & Lundholm 1993; Ryan 2001; Schadewitz & Blevins 1998). *MKBVE* represents the value of a company represented by the cash flow from assets in place and future growth potential (Adam & Goyal 2008). High growth companies have high market capitalizations relative to the value of their in-use assets. Their market values are derived from future assets that depend on future discretionary decisions by executives (Ryan 2001).

Prior empirical studies have investigated the association between proprietary costs and the extent of disclosure. They have looked at the influence of proprietary costs on different segments and types of disclosure using various proxies for proprietary costs. Scott (1994) examined the determinants of voluntary disclosure of details of defined benefit pension plans by Canadian firms<sup>26</sup>. He found that proprietary costs proxied by the frequency of strikes, pay rate and company profitability relative to industry, have significant negative associations with the level of disclosure by defined benefit plans. Lou et al. (2006) found that higher proprietary costs; proxied by a competition index, constrained the voluntary disclosure of future earnings<sup>27</sup>. Talha et al. (2008) found that Malaysian companies that provided more segment reporting information had higher competitive disadvantages. They measured

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<sup>26</sup> The study examined 288 Canadian companies excluding companies that were wholly-owned, government listed or privately held for the years 1997 and 1998.

<sup>27</sup> The study analysed 172 Singaporean companies between sample years 1994 to 2000.

proprietary costs using a total performance index that consisted of the aggregated total z-scores of operating margin, return on total assets and value added ratios<sup>28</sup>.

Bamber and Cheon (1998) in their study of voluntary disclosure of earning forecasts of 151 New York Stock Exchange listed companies from 1981 to 1991 accepted the hypothesis that high growth companies disclose significantly less information. Managers of high growth companies were also found to disclose information to limited audiences, such as in private meetings with reporters and analysts, rather than in a general statement. Huafang and Jianguo (2007) also found a negative association between growth opportunities and the level of disclosure in Chinese companies. They argued that companies with greater growth would delay disclosure of information to protect their core competitiveness.

Contrary to the studies that had found that growth opportunities limit the level of disclosure, Riahi-Belkaoui (2001) found that the quality of disclosure significantly improved with higher investment opportunities<sup>29</sup>. The study used analyst's ratings of disclosure comprehensiveness as a proxy for disclosure quality. Similar results are also found by Garcia-Meca and Martinez (2007). They found that analyst's reports of listed Spanish companies with high market to book ratios disclosed more information on intellectual capital<sup>30</sup>. They argued that there was an incentive for analysts to disclose more information to substantiate their positive recommendations. This can also be a signal to distinguish themselves from low growth firms by disclosing positive earnings prospects from the growth opportunities. Gul and Leung

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<sup>28</sup> The study covered a sample of 116 listed Malaysian companies for the year 2002.

<sup>29</sup> The sample set included 313 US companies for the sample period of 1986 to 1990.

<sup>30</sup> The sample consisted of 260 analyst reports of Spanish listed companies during the years of 2000 to 2003 using a self constructed disclosure index.

(2004) also found a significant and positive association between growth opportunities and the level of disclosure in Hong Kong companies.

In addition, there have been several studies that have failed to find significant associations between proprietary costs and the level of disclosure. Cahan and Hossain (1996) studied the association between investment opportunities and the disclosure of forecasts by Malaysian listed companies. They hypothesised that high growth companies would disclose more information on their future to show a commitment to growth strategies and to constrain potential managerial discretion. However, the hypothesis was rejected. They argued that the captive nature of the Malaysian market means that disclosures on a company's future are a mere public relations facade while 'real' information is disseminated informally to insiders and substantial shareholders. This result is consistent with Mohd Ghazali and Weetman (2006) who also failed to find a significant association between the level of competition and voluntary disclosure in Malaysian companies' annual reports<sup>31</sup>. They argued that in Malaysia, the dominance by families and insiders is stronger than market forces.

### **3.3 Review of prior empirical studies on the disclosure of executive remuneration**

Andjelkovic, Boyle and McNoe (2002) studied the reactions to and importance of public disclosure requirements for CEO remuneration. Prior to 1997, New Zealand companies were not required to disclose the level of executive remuneration. After July 1997, Section 211(1)g of the revised Companies Act required companies to disclose by bands and individually the remuneration of executives. The new requirement had been met with great resistance by influential groups such as the NZ Employers Federation, the NZ Business Roundtable and the

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<sup>31</sup> The study involved 812 Malaysian companies that are listed in Bursa Malaysia using sample year of 2001.



NZ Privacy Commissioner. Andjelkovic et al. suggested that the resistance was because companies did not want to disclose existing remuneration policies that may have been lax and not in the interests of shareholders. The long term nature of remuneration contracts may mean that companies would not have time to restructure the contracts and avoid being exposed when the new requirements took place. Andjelkovic et al. tested this argument by examining 49 New Zealand companies for the year 1997 when the disclosure requirement was not mandatory. They compared companies that adopted the requirement earlier and those that did not. They found that the early adopters had a significant CEO pay and performance association. The non-adopters did not show a significant association. They argued that this supported their hypothesis that companies that were more likely to resist the requirement were those who did not ensure the efficiency of their remuneration structure and would have more to lose out if they were to comply with it. The result also showed that only after the introduction of the disclosure requirement that a significant number of companies started to engage in proactive measures to improve their remuneration policies for example by creating remuneration committees and introducing option plans. Andjelkovic et al. concluded that without the disclosure requirements, executive remuneration would not be effective in mitigating agency problems because it could not be independently and publicly assessed. They argued that it could lead to a dissociation of pay and performance that should have been the primary objective of remuneration. They concluded that there was a need to further examine the association between pay and performance and the level of disclosure after the mandatory disclosure came into effect.

Forker (1992) examined the quality of disclosure of executive share options of 182 UK companies for the accounting year ending between October 1987 and September 1988. The study categorised the companies into six ranks, Class A being the highest and Class F being

the lowest. 46% of the companies were ranked in Class A and 6% in Class F. The study then tested the associations between the quality of disclosure and the threat of takeover, administrative costs of disclosure, audit quality, managerial ownership, the existence of an audit committee, independent directors, dominant personality and opportunistic benefits from non-disclosure. However, the study only found that the administrative costs of disclosure and the presence of a dominant personality significantly limited the quality of the disclosure of executive stock options. The corporate governance measures of audit committees and independent directors were only found to weakly influence the quality of disclosure. Forker suggested there should be an adequate guideline before the independent directors and audit committee could effectively discharge their responsibilities as governance mechanisms.

Canyon, Malin and Sadler (2002) extended Forker (1992) by studying 350 FTSE listed companies for 1994 and 1995. Contrary to Forker, they found a positive association between the quality of the disclosure of options and the proportion of non-executive directors. The regulatory landscape during the sample period had changed since Forker's study with the release of the Greenbury report in 1995 that set up comprehensive corporate governance guidelines and recommended more disclosure on remuneration. This may have guided the independent directors in exercising their duties. The result also showed significant and negative associations between company size, performance measures and the quality of disclosure. They attributed this association to higher proprietary and political costs incurred by bigger and more profitable companies if they were to disclose more information. However, they cautioned that the association between size and the quality of disclosure may be non-linear. They tested this by including the square of company size into the models. The result showed a concave association between size and disclosure. This may imply that there

was a trade-off between the benefits and costs of disclosing more information, for example credibility versus proprietary costs.

Coulton, James & Taylor (2001) studied the level of disclosure of CEO remuneration by 513 Australian listed companies from 1998 to 2000. During the period, the Australian government ammended Section 300A and Section300(1)(d) of the Corporations Law that required companies to disclose the nature and details of the emoluments of company's directors and top five highest paid officers. The requirements were heavily criticised for being inconsistent and ambiguous since some of the terms of the laws, for example "*emoluments*" and "*officers*" were not properly defined. However, the regulators stated that companies should follow the spirit of the laws that advocated transparency rather than on the '*black letter*' words. Given the perceived ambiguities, the study expected that there would be significant variations in the level of compliance with the disclosure requirement. These variations were also hypothesised to be influenced by economic, corporate governance and ownership variables. The study showed that Australian companies were mostly reluctant to disclose the association between pay and performance (average score = 8.8%) and the valuation method used in executive options schemes (average score = 15.24%). The absolute disclosure score distribution for the sample period showed a significant variation ranging from a minimum of 2.0 to a maximum of 8.5. The level of CEO remuneration disclosure was significantly and positively influenced by company size and performance. The level of remuneration and outsider blockholdings significantly limited the level of transparency. The CEO may disclose less information when the level of remuneration is high to avoid public scutiny. Outsider blockholders would have the power to obtain information from other channels given their large shareholdings. Corporate governance variables, insider ownership and the composition of remuneration did not significantly influence the level of disclosure of CEO remuneration. Coulton et al. (2001)

argued that corporate governance measures had a minimal impact on the disclosure of CEO remuneration as remuneration is an issue where there may be a divergence of interests between the CEO and external shareholders.

Nelson and Majella (2005) studied the disclosure of executive stock options for 197 Australian companies for the years of 2000 and 2002. The disclosure level was measured using AASB 1028 '*Accounting for Employee Entitlements* 1994' and AASB 1017 '*Related Party Disclosure* 1997'. They found that the level of compliance with the accounting standards was poor. No company fully complied with the standards. The average mandatory disclosure score was 45.16%. Companies were mostly reluctant to disclose the price information of the executive option plans (mean = 29.44%). This may indicate that companies perceived price information as so sensitive that it had to be withheld. The study also considered whether companies voluntarily disclosed information beyond the accounting standards. The voluntary score was also poor with an average of 10.21%. Nelson and Majella concluded that Australian companies treated mandatory accounting standards as voluntary and perceived that there was lack of enforcement for non-compliance. Further analysis showed that the presence of remuneration committees and company size significantly improved the level of compliance with the accounting standards and improved the level of options disclosure.

Bassett, Koh and Tutticci (2007) examined the role of corporate governance on the mandatory and voluntary disclosure of executive stock options after the introduction of a revised version of Australian AASB 1028 'Employee Benefits' in 2001. They studied 283 Australian listed companies using 2003 as the sample year. The revised AASB 1028 set down more stringent disclosure requirements for executive stock options compared to the preceding

regulations such as the s300A of the Corporations Law and the existing AASB 1028. The results showed that a significant number of Australian companies did not comply fully with the mandatory accounting standard. The mean and median mandatory disclosure was 76.1% and 80% respectively. Companies were shown to be reluctant to disclose the voting and dividend rights and the expiry dates of the options. Bassett et al. (2007) argued that this reflected differing assessments by Australian companies of the cost of non-compliance with the mandatory disclosure requirements. The mean and median values of disclosure in excess of the mandatory accounting standards were 19.5% and 16.7% respectively. Companies that had external audits by the 'Big Four' were significantly associated with higher mandatory and voluntary disclosure of executive stock options. Consistent with the expectation, companies whose CEOs held dual roles as Chairman had significantly lower levels of compliance with the disclosure requirements. The presence of audit committees, board size and the proportion of executive directors were not significant in influencing mandatory and voluntary disclosures of executive options. Bassett et al. argued that these variables played a less significant and more indirect role in setting company disclosure policies. Companies that were also listed in the US significantly disclosed more information. This is expected given that the equivalent of AASB 1028 in US is the SFAS 123 that required a more comprehensive disclosure of executive options. In addition, Australian companies that only granted options to senior management voluntarily disclosed more information. These companies were under more public scrutiny as the exclusivity of the options scheme could be negatively construed as being unequal profit sharing.

Jinghui and Taylor (2008) examined the level and determinants of the disclosure of executive remuneration prior to the application of AASB1046 *Director and Executive Disclosures by Disclosing Entities*. The new accounting standard introduced more prescriptive and extensive

requirements for executive remuneration disclosure. The objective of the study was to observe the level and determinants of disclosure in a relatively voluntary disclosure environment. Using legitimacy theory as their theoretical framework, Jinghui and Taylor examined 191 Australian listed companies for the years 2003 and 2004. There was a significant improvement in the level of equity based remuneration disclosure from 2003 to 2004. However, the disclosure of the post employment benefits of executives remained minimal. The new accounting standards did not apply to the disclosure of post-employment benefits. This suggested that companies would not disclose additional information without prescription of the law. Jinghui and Taylor also showed that the level of media attention significantly and positively influenced the level of disclosure of remuneration in 2004 but that it was not significant in 2003. They argued that the anticipated introduction of the reforms on disclosure in 2004 led to greater media attention and hence more disclosure by companies as they sought to legitimize the level of remuneration. The level of shareholder activism and the disclosure of remuneration were also found to be significant and positive. Companies disclose more information as a legitimising tactic to counter potential shareholder activism from a proposal to increase remuneration. Consistent with their hypothesis, larger companies disclosed significantly more information. They argued that larger companies faced more attention and greater political costs from concealing publicly sensitive information such as executive remuneration. The proportion of independent directors positively and significantly influenced the level of remuneration disclosure. The independent directors would push for more disclosure of information to protect their own reputation or impartiality. However, the presence of a remuneration committee was not significant factor in improving the level of disclosure.

Clarkson, Van Bueren and Walker (2006) extended these Australian studies by looking at a longer time period that included the years leading to and the year of the introduction of AASB 1046. They examined 124 companies from 1998 to 2004. The study did not distinguish between mandatory and voluntary disclosure of CEO remuneration. They argued that it was the intention of the regulators to make all the reforms mandatory from the start. They found that there was significant improvement in the level of disclosure of CEO remuneration after the introduction of the AASB 1046. The earlier introduction of CLRA98 showed a significant increase in disclosure from 1998 to 1999. However, the level of improvement was not sustained in the years before 2004. The results showed that companies waited for the disclosure recommendations under CLRA98 to be mandatory before providing more comprehensive disclosure of CEO remuneration. They argued that companies only provided extensive and high quality disclosure of CEO remuneration under a prescriptive and detailed regulatory framework and not under principle based recommendations. They also showed that the size of companies, corporate governance, quality of audit and cross listing status positively and significantly influenced the level of CEO remuneration disclosure. However, the level of significance changed over the study period. The level of significance was higher for the earlier years of the study when there was more scrutiny of remuneration. However, after the introduction of the CLERP 9 and AASB1024, the roles played by companies' internal governance were replaced by the regulations.

Chizema (2008) examined the disclosure of individual executive remuneration in the German market using 100 largest Germany companies for the years 2002 to 2005. The German market was constrained by long term ownership by banks and families with a culture of high

collectivism and uncertainty avoidance<sup>32</sup>. Like Australia, the German market is also undergoing reforms of its regulatory framework with the introduction of the German Code of Corporate Governance (KODEX) in 2005. Section 4.2.4 of the KODEX recommended the disclosure of individual director's remuneration in annual reports. This recommendation was opposed by companies during the discussion process. Chizema examined the characteristics of the companies that complied with the code over the sample period and the differences in the characteristics of early and late adopters of the code. The study adopted an institutional theoretical lens that looked at the influence of various owners (banks, family, state and foreign) on the level of compliance. The results showed that at the end of 2004, 25% of the sample companies had not complied with the recommendations of the code. Consistent with the hypotheses, the study found that institutional ownership, dispersion of ownership, state ownership, prior adoption of international accounting standards and firm size were significantly and positively associated with the disclosure of individual executive remuneration. Chizema also found that the size of the supervisory board and firm age were significantly and negatively associated with the disclosure of individual executive remuneration. The comparison between early and late adopters of the individual remuneration requirement showed that early adopters were larger and more profitable companies with higher institutional investors that had previously adopted certain IAS or US GAAP. The opening up of the Germany market increased the presence of foreign shareholders that positively and significantly influenced the level of compliance of later adopters. The association was not observed in the early adopter model. The comparison also showed that Germany companies with higher state ownership led the way in conforming to the code, arguably setting an example to others in the market. Chizema (2008) concluded that a bandwagon effect would follow as other companies look to the early adopters and mimic

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<sup>32</sup> Hofstede defined uncertainty avoidance as "the extent to which people feel threatened by ambiguous situations, and have created beliefs and institutions that try to avoid these (Hofstede & Bond 1984, p. 419)".



their actions. However, he suggested that compliance may need to be coerced in the first place before the effect would take place given the institutional characteristics of German companies.

There are several gaps in these prior studies on disclosure of remuneration that this study has identified and attempts to improve upon. Firstly, most of them did not adopt an inclusive theoretical framework that considers agency theory, legitimacy theory, signaling theory and proprietary costs. The exclusion of these theories may lead to omitted variables bias that may severely restrict the validity of their empirical findings. Even if they did include the proxies for the all theories, they may have included them as control variables and did not elaborate on the theoretical assumptions behind the inclusions of the variables. Secondly, these prior studies had not been done in developing and East Asian countries where family and state dominance are very significant. In addition, the culture of disclosure in Asian countries like Malaysia may be different and play significant part in the level of disclosure of remuneration. Finally, these studies focused on just individual CEO pay or a specific component of remuneration such as options or just on individual disclosure.

In the context of Malaysia, no empirical studies had examined the disclosure of executive directors' remuneration in any depth. The most recent work on this subject was the descriptive survey discussed conducted by the MSWG and the University of Nottingham. Earlier Malaysian studies focused on overall corporate governance measures (Zulkafli, Abdul Samad & Ismail 2004); on factors that affect their implementation (Haniffa & Cooke 2002; Mohd Ghazali & Weetman 2006; Ngui, Voon & Lim 2008); on the actual compliance of Malaysian firms with the corporate reforms (Christopher & Hassan 2005); and on the impact

of adopting corporate governance measures on firms or on Malaysian market indices (Abdul Wahab, How & Verhoeven 2007; Aik Leng & Abu Mansor 2005; Nowland 2008). These studies did not focus on the disclosure of Malaysian executive directors' remuneration. Most of these studies examined the level of compliance after the introduction of the MCCG but did not consider the changes that followed the introduction of new accounting standards.

### **3.4 Summary**

This chapter has presented the theoretical perspectives of that this study will be grounded upon. The chapter reviewed agency theory, legitimacy theory, signaling theory and proprietary costs. Agency theory revealed the conflicts between the managers and other stakeholders (i.e. shareholders, creditors, government and family owners) in companies. The conflicts extended to managing the agency problems themselves of where shareholdings may mitigate or create further agency problems. The review of agency theory was then linked to disclosure as a mechanism to mitigate agency problems and reduce agency costs. The role of corporate governance structures such as board of directors and external audits in pushing for more disclosure were also explored.

Legitimacy theory posited that companies as organizations have incentives to meet society's expectation to maintain their existence in the market. Company size, profitability and the type of industry were some of the variables that prior studies have identified that may drive the extent of social expectations that a company will have to meet. The review showed that remuneration policies and practices can be a significant legitimacy issue that may need to be managed through adequate disclosure.

Signaling theory suggested that companies use disclosure of information to signal their real value and to distinguish themselves to the market. Prior studies discussed in this chapter showed that profitable companies disclosed more information compared to the others. The level of competition in the market may also drive companies to protect their proprietary information. Studies have linked the level of investment growth opportunities to potential proprietary costs that companies may incur.

The next chapter will construct a research empirical framework that will be based on the literature reviewed and the gaps identified in this chapter. This study will attempt to reconcile the different theoretical perspectives into a single empirical framework. The framework will then be used to develop several hypotheses that will be empirically tested.

Table 4 Summary of disclosure of executive remuneration studies

Author(s)	Sample and Data	Disclosure variable	Independent variable(s)	Methodology	Main findings
Chizema (2008)	Sample of 100 biggest companies listed in the German DAX from 2002 to 2005	Disclosure of individual executive compensation: 1 = disclosed 0 = not disclosed	<ol style="list-style-type: none"> <li>1. Institutional ownership: percentage of shares held by institutional investors (+)</li> <li>2. Foreign ownership: percentage of shares held by non-German investors (+)</li> <li>3. Dispersion of ownership: total percentage of shares not held by block holders (+)</li> <li>4. Bank ownership: percentage of shares held by German banks (-)</li> <li>5. Family ownership: percentage of shares held by family members (-)</li> <li>6. State ownership: percentage of shares held by state and federal government (+)</li> <li>7. Size of the supervisory board: number of directors</li> </ol>	<p>Logistic regression</p> <ol style="list-style-type: none"> <li>1. Early disclosure versus non-disclosure</li> <li>2. Late disclosure versus non-disclosure</li> </ol>	<p>The study found that institutional ownership, dispersion of ownership, state ownership, prior adoption to international accounting standards and firm size were significantly and positively associated with the disclosure of individual executive remuneration. Consistent with their hypotheses, they also found that size of the supervisory board and firm age were significantly and negatively associated with individual disclosure of executive remuneration.</p>

			<p>on supervisory board (-)</p> <p>8. Prior adoption: 1 = adoption of US GAAP or IAS before 2002; 0 = otherwise (+)</p> <p>9. Firm experience: natural logarithm of age(-)</p> <p>10. Firm size: natural logarithm of total asset (+)</p> <p>11. Firm performance: ROA (+)</p> <p>12. Industry classification</p>		
Jinghui & Taylor (2008)	Sample of 191 Australian listed companies for the years 2003 and 2004	Un-weighted disclosure index of equity based remuneration and post employment benefits (share rights, share options and termination benefits): Number of word devoted to remuneration/Number of executives	<p>1. Media attention: frequency of news (+)</p> <p>2. Shareholder activism: number of AGM resolutions on remuneration (+)</p> <p>3. Size of companies: (+)</p> <p>4. Proportion of independent directors (+)</p> <p>5. Remuneration committee: 1 = if exist; 0 = otherwise</p>	Yearly OLS regression  R <sup>2</sup> =0.248 (2004); 0.228 (2003)	They showed that the level of media attention significantly and positively influenced the level of disclosure of remuneration in 2004 but was not significant in 2003. They argued that the anticipated introduction of reforms on disclosure in 2004 led to greater media attention. The level of shareholder activism and disclosure were also found significant and positive. Companies will disclose more information as a legitimising tactic to counter potential shareholder

					<p>activism from a proposed resolution to increase remuneration. Consistent with their hypothesis larger companies were found to disclose significantly more information. They argued that larger companies faced more attention and greater political costs from concealing publicly sensitive information such as executive remuneration. The proportion of independent directors positively and significantly influenced the level of remuneration disclosure. The independent directors would push for more disclosure of information to protect their own reputation of impartiality. However, the presence of remuneration committee was not significant in improving the level of disclosure.</p>
Bassett, Koh & Tutticci (2007)	Sample of 283 ASX listed companies for the year 2003	<p>Disclosure of executive stock options:</p> <p>40 mandatory items (based on AASB 1028 and AASB 2)</p>	<ol style="list-style-type: none"> <li>1. Audit quality: 1 = big four audit; 0 = otherwise (+)</li> <li>2. Proportion of independent and non-executive directors (+)</li> <li>3. Board size: number of directors on the board (?)</li> </ol>	Tobit regression	<p>The study found that audit quality was associated with higher voluntary and mandatory disclosure. CEO duality was shown to limit the level of mandatory disclosure. Australian companies that were also listed in the US stock exchange significantly</p>

		<p>39 voluntary items</p> <p><i>0 = not disclosed</i></p> <p><i>0.5 = some missing information</i></p> <p><i>1 = complete information</i></p>	<p>4. CEO duality: 1 = yes and 0 = no (-)</p> <p>5. Size: natural log of total assets at the end of the financial year (+)</p> <p>6. Cross listed in US: 1 = yes and 0 = no (+)</p> <p>7. The proportion of number of executive stock options outstanding over number of shares outstanding (?)</p> <p>8. Limited ESOS: 1 = available only to executives and directors and 0 = otherwise (+)</p> <p>9. Discontinued ESOS; 1 = discontinued and 0 = otherwise (-)</p>		<p>disclosed more information. Companies that only granted stock options to senior management were shown to voluntarily disclose more information compared to other companies.</p>
Clarkson, Van Bueren & Walker (2006)	Sample of 124 Australian listed companies from 1998 to 2004	<p>Un-weighted disclosure index based on AASB1046 (10 items)</p> <p><i>Dichotomous score based from the scale of 0 to 3.</i></p>	<p>1. Total asset: the book value of assets (+)</p> <p>2. Profitability: return on equity (+)</p> <p>3. Growth: the market to book ratio of equity (+)</p> <p>4. Leverage: total debt to equity (-)</p>	<p>1. Time period model: pooled generalize least squares</p> <p>2. Yearly</p>	<p>They found that there was significant improvement in the level of disclosure of CEO remuneration only after the introduction of the AASB 1046. The earlier introduction of CLRA98 in 1998 that was voluntary in nature failed to improve the level of disclosure. The result showed that</p>

			<ol style="list-style-type: none"> <li>5. Governance: corporate governance factor for fiscal year (+)</li> <li>6. Foreign listing: 1 = foreign listed; 0 = otherwise (+)</li> <li>7. CEO turnover: 1 = new CEO; 0 = otherwise (+)</li> <li>8. Takeover or merger: 1 = subject to takeover or merger; 0 = otherwise (+)</li> <li>9. Audit quality: 1 = big four audit; 0 = otherwise (+)</li> <li>10. Auditor turnover: 1 = new auditor; 0 = otherwise (+)</li> </ol>	OLS regression	<p>companies waited for the disclosure recommendations under CLRA98 to be mandatory under the AASB1046 before providing comprehensive disclosure on CEO remuneration. They argued that companies would only provided extensive and high quality disclosure of CEO remuneration under a prescriptive and detailed regulatory framework and not under principle based recommendations. They also showed that size of companies, corporate governance, auditor quality and cross listing status positively and significantly influenced the level of CEO remuneration disclosure. However, their level of significance changes over the sample period. The level of significance was high at the earlier years of the study when there was more scrutiny of remuneration. However, after the introduction of the CLERP 9 and AASB1024, their roles were replaced by the regulations.</p>
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Nelson and Majella (2005)	Sample of 197 Australian companies for the years of 2000 and 2002	Un-weighted disclosure index based on the AASB 1028 and AASB 1017	<ol style="list-style-type: none"> <li>1. Remuneration committee: 1 = exist, 0 = none (+)</li> <li>2. Ownership concentration: 1 - % wholly owned subsidiary (-)</li> <li>3. Dual listing: 1 = US listed, 0 = otherwise (+)</li> <li>4. Audit quality: 1 = big five audit; 0 = otherwise (?)</li> <li>5. Performance: operating profit after tax scaled by sales (?)</li> <li>6. Leverage: long term debt over total assets (?)</li> <li>7. Size: log of total assets (+)</li> </ol>	Pooled logistic regression	Remuneration committee, size and audit quality were shown to significantly and positively improve the level of disclosure of executive stock option plans. Ownership concentration and dual listing status were significantly and negatively associated with the level of disclosure.
Canyon, Malin and Sadler (2002)	Sample of 350 FTSE listed companies for the sample years of 1994 and 1995	Quality of disclosure - Seven dependent variables	<ol style="list-style-type: none"> <li>1. Size: log market value of company (+)</li> <li>2. Proportion of non-executive directors (+)</li> <li>3. Debt structure: debt to equity ratio (+)</li> <li>4. Performance: return on capital (-)</li> <li>5. Risk: beta (systematic risk)</li> </ol>	Probit regression	They found a positive association between the quality of disclosure of options and proportion of non-executive directors. The result also showed significant and negative associations between company size, performance measure and the quality of disclosure. They attributed the association to higher proprietary and

			of the ordinary shares) (-) 6. Industry classifications		political costs incurred by bigger and more profitable companies if they were to disclose more information. However, they cautioned that the association between size and the quality of disclosure may be non-linear. They tested this by including the square of company size into the models. The result showed a concave association between size and disclosure. This may imply that there was a trade-off between the benefits and costs of disclosing more information, for example credibility versus proprietary costs. The other variables were found to be insignificant or inconsistent in the different models for conclusions to be made.
Coulton, James & Taylor (2001)	Sample of 513 Australian listed companies for the sample period of 1998 to 2000	Un-weighted disclosure index based on the requirements of s300A and s300(1)(d) <i>0 = not disclosed</i> <i>0.5 = some missing</i>	1. Proportion of independence directors (+) 2. Number of directors (-) 3. CEO duality: 1 = yes and 0 = no (-) 4. Remuneration committee: 1 = if exist; 0 = otherwise (+)	Tobit regression	Consistent with other studies, the result showed a positive association between company size and the level of disclosure of CEO remuneration. However, the study did find any significant influences between all the corporate governance variables and the level of disclosure of CEO

		<p><i>information</i></p> <p><i>1 = complete information</i></p>	<p>5. Audit committee: 1 = if exist, 0 = otherwise (+)</p> <p>6. Audit quality: 1 = big four audit; 0 = otherwise (+)</p> <p>7. Total remuneration (less options) deflated by total sales (+)</p> <p>8. The ratio of option compensation to total CEO remuneration (+)</p> <p>9. Outsider block holdings: percentage of shareholdings by outsiders who held more than 5% of total shares (+)</p> <p>10. Insider block holdings (-)</p> <p>11. Firm size: natural logarithm of book value of assets (+)</p> <p>12. Performance: unadjusted annual stock return (+)</p> <p>13. Growth opportunities: book value of equity divided by the market value of equity (+)</p> <p>14. Analyst following: the average monthly analysts following measured</p>		<p>remuneration Contrary to the hypothesis, the presence of substantial outsider block holdings appeared to limit the level of disclosure rather than improve it. Coulton et al. (2001) argued that the substantial shareholders may rely on other form of information channel such as private contracting to secure information on CEO remuneration.</p>
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			<p>15. Foreign listing: 1 = foreign listed; 0 = otherwise (+)</p> <p>16. Industry classifications</p>		
Forker (1992)	Sample of 182 UK companies for fiscal year ending between October 1987 and September 1988	<p>Companies were categorised in six different and dichotomous classes based on the quality of the disclosure on options.</p> <p>A: Highest</p> <p>F: Lowest</p> <p>The ranking was based on the requirement of the Companies Act.</p>	<p>1. Takeover threat: market value of equity shares (-)</p> <p>2. Administrative costs of disclosure: proportion of options held by directors (-)</p> <p>3. Audit quality: 1 = big six audit; 0 = otherwise (+)</p> <p>4. Managerial ownership (?)</p> <p>5. Audit committee: 1 = exist, 0 = otherwise (+)</p> <p>6. Proportion of independent directors (+)</p> <p>7. CEO duality: 1 = yes and 0 = no (-)</p> <p>8. Opportunistic benefits: proportion of options outstanding over total equity capital (-) or value of options held by directors (-)</p>	Probit regression	<p>The study found that the administrative costs of disclosure and the presence of dominant personality to significantly limit the quality of disclosure of executive stock options. The corporate governance measures of audit committee and independent directors were only found to weakly influence the quality of disclosure. Forker suggested there should be an adequate guideline so that the independent directors and audit committee could effectively discharge their responsibilities as governance mechanisms. Other associations were shown not to be significant.</p>

## **Chapter 4 Hypotheses Development**

### **4.0 Introduction**

This chapter develops the hypotheses for this study based on the literature review explored in the preceding chapter. The first section addresses the effectiveness of the reforms of the Malaysian regulatory framework to the disclosure of executive directors' remuneration. The second section develops the hypotheses for the determinants of the disclosure of executive directors' remuneration. The final section provides a summary of the hypotheses.

### **4.1 Disclosure of Executive Directors' Remuneration Pre and Post Reforms**

The reforms to the disclosure of Malaysian executive remuneration parallel ongoing reforms in other countries. These are, in part, a response to intense public scrutiny on seemingly excessive remuneration and corporate collapses that were linked to executives seeking to achieve bonus targets. Several studies have examined the effectiveness of the reforms to the level of remuneration disclosure, the extent of compliance and the factors that drive the level of disclosure (Bassett, Koh & Tutticci 2007; Chizema 2008; Clarkson, Van Bueren & Walker 2006; Coulton, James & Taylor 2001; Finch 2006; Jinghui & Dennis 2008).

Bassett, Koh and Tutticci (2007) examined the role of corporate governance on the mandatory and voluntary disclosure of executive stock options after the introduction of Australian AASB 1028 'Employee benefits' in 2001. They found that a significant number of Australian companies voluntarily reported more than the mandatory requirements of the accounting standard. Clarkson, Van Bueren and Walker (2006) extended this by examining the disclosure of Australian CEO remuneration between 1998 to 2004. They found an

increase in overall disclosure after the reforms. They argued that the improvements in disclosure in the later years of the study were a result of the more prescriptive and detailed nature of the regulations. These findings are interesting, given that the Malaysian executive remuneration disclosure requirements under the MCCG and the Malaysian accounting standards are very broad.

Earlier Malaysian studies focused on overall corporate governance measures (Zulkafli, Abdul Samad & Ismail 2004); on factors that affect their implementation (Haniffa & Cooke 2002; Mohd Ghazali & Weetman 2006; Ngui, Voon & Lim 2008); on the actual compliance of Malaysian firms with the corporate reforms (Christopher & Hassan 2005); and on the impact of adopting corporate governance measures on firms or on Malaysian market indices (Abdul Wahab, How & Verhoeven 2007; Aik Leng & Abu Mansor 2005; Nowland 2008). These studies did not focus on the disclosure of Malaysian executive directors' remuneration. Most of the studies examined the level of compliance after the introduction of the MCCG but did not consider the changes that followed the introduction of new accounting standards. This leads to the following hypothesis:

*Hypothesis 1: That there was an improvement in the level of disclosures of executive directors' remuneration by Malaysian companies after the introduction of the Malaysian Code on Corporate Governance and changes in accounting standards.*

## **4.2 Determinants of Disclosure of Executive Directors' Remuneration**

### **4.2.3 Agency Theory**

In Malaysia, family and government ownership of companies is very significant and may influence the extent of disclosure of executive remuneration. Claessens, Djankov and Lang

(2000) found that 85 percent of Malaysian shares are held by executives related to the controlling family. In addition, 67.2 percent were controlled by a single family and 13.4 percent were controlled by state or government linked companies. Given the concentration of ownership in Malaysia, it is argued that the disclosure of remuneration is a sensitive issue. The owners and connected family directors may not be willing to disclose benefits as a result of being in managerial positions.

This possibility can be viewed from the perspective of agency theory. Agency theory posits that agents are self interested and rational and will seek to maximize their personal wealth first and foremost at the expense of principals (Jensen & Meckling 1976) . Disclosure of information can be an indirect form of monitoring agency costs between the various stakeholders. However, in a concentrated market, disclosure of information may be limited given that the influential and substantial shareholders are privy to insider information (Ramaswamy, Veliyath & Gomes 2000). Li (1994) argued that financial institutions which were the majority shareholders of most Germany listed companies relied more on insider information than on other corporate governance measures. For example, they can assess the managerial performance of executives directly from the companies instead of relying on public disclosure.

Bin, Petroni and Safieddine (1999) in their comparative study of publicly and privately held US insurance companies found that privately held insurers relied on direct monitoring rather than on annual reports in assessing the performance of executives. A similar finding was found by Bushee and Noe (2000) in their US study of 4314 company years from 1982 to 1996. They found no association between companies with large and stable institutional

ownership and changes in disclosure. This was attributed to direct channels of communication between the companies and significant institutional owners. However, an improvement in disclosure resulted in an increase in transient institutional ownership that the study attributed to short-term investment strategies.

A study by Mohd Ghazali and Weetman (2006) examined the influence of dominant family and directors' shareholdings on the level of voluntary disclosure by Malaysian companies after the introduction of the MCCG<sup>33</sup>. They found that these variables significantly influenced the level of voluntary disclosure despite the changes in disclosure regulations. They attributed this to the highly captive and regulated Malaysian capital market that may not encourage transparency. This leads to the following hypotheses:

*Hypothesis 2: That for Malaysian companies, there is an inverse association between the level of executive director's remuneration disclosures and the level of family ownership.*

*Hypothesis 3: That for Malaysian companies, there is an inverse association between the level of executive director's remuneration disclosures and the level of ownership concentration.*

There are conflicting views about the effect of government ownership on disclosure. Eng and Mak (2003) argued that state controlled companies disclose more information to manage their agency relationships with minority and other external shareholders. They need to assure these shareholders that the government is not diverting the companies' wealth to national interests instead of to shareholders' return (Shan 2009). These companies would have easier access to

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<sup>33</sup> The study involved a sample of 87 Malaysian companies listed in the Bursa Malaysia in 2001. Several control variables are included in the analysis.



public funds. The public as implicit shareholders want to know how their funds had been used by these companies (Li, 1994). Chizema (2008) also argued that state controlled companies need to set examples of high compliance with the regulatory framework given that it is the state that initiated it.

However, government linked companies might disclose less information as they can access government funds and may not need to compete for external capital (Naser & Nuseibeh 2003). Another factor is political connection that is associated with government ownership of Malaysian companies. Mohd Ghazali and Weetman (2006) argued that government linked companies will disclose less information to protect the interests of political figures or to conceal gains from political connection. Given that executive remuneration is a sensitive issue, these companies might have an incentive not to disclose information so as not to draw attention to the benefits from the political connection of the executive directors. This study adopts the view that government ownership in Malaysian companies will positively influence the extent of disclosure of executive directors' remuneration. The Malaysian government has been actively promoting the '*GLC Transformation Plans*' that include greater emphasis on transparency. This may promote more disclosure of executive directors' remuneration in companies where government is also shareholder. Therefore, the next hypothesis is:

*Hypothesis 4: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and the level of government shareholdings.*

Another variable that can be viewed from an agency perspective is foreign ownership. Shan (2009) suggested that there are more demands for transparency and accountability by foreign

investors. Companies have the incentive to disclose more information to gain and retain that investment (Babío Arcay & Muiño Vázquez 2005) Foreign owners may also be more accustomed to comprehensive disclosure of executive directors' remuneration in their own countries (Chizema 2008). The fifth hypothesis is:

*Hypothesis 5: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and foreign ownership.*

An agent's remuneration is part of the contracting process that seeks to limit agency costs. It provides incentives for the agents to align their interests to that of the principals (Lambert 1983). The principals will seek to construct an efficient contract that can enforce interest alignment. A remuneration package typically consists of fixed and incentive driven components (Fama & Jensen 1983). Simply paying executives fixed salaries will not entice them to work harder for the shareholders. This is because any additional returns made from the extra efforts by the executives will not trickle down to them as their salaries are constant (Holmstrom 1979). The executives may also make bad decisions that will result in a reduction in company value but they will not be penalised through a reduction in their salaries (Fama & Jensen 1983).

The need to tie executives' decisions and performances to the movement in share price led to introduction of equity based pay into remuneration contracts. Paying executives in a form of equity makes them part-owners of the company. This may effectively solve any divergence of interests between the executives and the shareholders. Now the executives may share a similar perspective to that of the shareholders that is to maximise company value (Cohen, Hall & Viceira 2000). By improving the shareholders' wealth, the executives are also

simultaneously maximising their own wealth (Hill & Jones 1992). Equity based pay may consist of ordinary shares, restricted shares and options.

Executive directors who hold significant ownership interests may not need to protect their position or remuneration (Jensen, Murphy & Wruck 2004). They can use their influence to limit the extent of disclosure of their remuneration. Therefore the sixth hypothesis is:

*Hypothesis 6: That for Malaysian companies, there is an inverse association between the level of executive director's remuneration disclosures and the level of executive directors' shareholdings.*

The agency relationship between companies and creditors may also influence the extent of the disclosure of executive directors' remuneration. Creditors may expect that executives to pay themselves excessively rather than paying debts. This rational expectation may mean that creditors may limit the extent of financing, charge higher interest or impose restrictive debt covenants. Given that creditors are price protected, companies have an incentive to disclose more information to limit the costs of the price protection (Chalmers & Godfrey 2004). The creditors themselves can demand more information to assess the extent of compliance with debt covenants (Wallace & Naser 1995). Thus the seventh hypothesis is:

*Hypothesis 7: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and leverage.*

Independent directors may want to protect their credibility and impartiality and thus push for greater disclosure of executives' remuneration in the annual reports (Liu, Jinghui. & Taylor

2008). However, Eng and Mak (2003) argued that the presence of independent directors can actually limit the extent of disclosure when there is a substitution effect between these variables. Independent directors may ensure that the executive remuneration is reasonable and based on performance. This may reduce the demand of disclosure of executive directors' remuneration by stakeholders given that independent directors can provide a direct monitoring role on executive directors. The eighth hypothesis is:

*Hypothesis 8: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosure and proportion of independent directors on the board.*

Employing prominent external auditors may lend more credibility to companies' financial reporting. It can show that companies are limiting the opportunities for expropriation of private benefits by controlling shareholders. Prominent auditors are expected to ensure that managers choose appropriate accounting and disclosure policies that would restrict or reveal siphoning of company value by controlling shareholders (Guedhami & Pittman 2006). Fan and Wong (2005) found that Asian companies with greater agency problems appoint a prominent external auditor (then the Big 5) as part of their monitoring mechanisms. It has been suggested that bigger audit firms are less sensitive to client demands as that they do not depend on just a few companies for profit. This is unlike smaller audit firms that may have stronger bonding relationships with clients (Wallace and Naser, 1995). The bigger audit firms could demand more comprehensive disclosure in annual reports. In addition, bigger audit firms may want to protect their reputation or 'brand name' by ensuring that their audits are of the highest standards (DeAngelo, 1981 and Bassett et. al., 2007). However, the case of Enron has shown that it was not the size or prestige of the audit firm that mattered but the level of

independence. The prestige of Arthur Andersen had not reduced bonding relationships between the external auditors and Enron executives.

Bassett, Koh and Tuccitti (2007) found a positive and significant association between Australian companies that were audited by the Big Four audit firms and the extent of mandatory and voluntary disclosure of executive stock options. This finding is similar to that of Nelson and Percy (2004) who examined mandatory disclosure of executive stock options in Australia. This finding is also supported if Clarkson et al (2006). Thus, the ninth hypothesis states that:

*Hypothesis 9: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and the quality of external audit.*

#### **4.2.4 Legitimacy Theory**

Social contract theory predicts that companies will seek to ensure their legitimacy<sup>34</sup> by meeting society's expectations (Lindblom 1983). Executive directors' remuneration is a legitimate issue that society will consider in assessing the existence of a company. Consistent with Mobus (2005), this study considers that pragmatic and moral legitimacy is relevant in examining executive directors' remuneration. Pragmatic legitimacy is often perceived by constituents that are directly connected to the company, but may also include those who are connected socially or politically. In this case, constituents that may assess a company through a pragmatic legitimacy lens can be shareholders and regulators. Moral legitimacy involves assessing the entity against the expectations of a social contract (Mobus 2005). For example,

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<sup>34</sup> Lindblom (1983, p. 2) defined legitimacy as "a condition or status when an entity's value system is congruent with the value of the larger social system of which entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to entity's legitimacy."

Ramanathan (1976) argued that they are two objectives of a company. Firstly, it is to deliver socially acceptable and useful goods and services. Secondly, it is to ensure equal and fair distribution of economic, social or political benefits to constituents. Excessive remuneration relative to an average personal salary appears to be contrary to the second objective of equal and fair economic distribution. This can constitute a breach of the social contract between the entity and the prevalent society and consequently may threaten the entity's survival. Following Suchman (1995), society can evaluate moral legitimacy from a procedural perspective. The company will need to disclose that they have "sound practice" behind its executive remuneration structure to maintain its legitimacy.

The threat to their legitimacy may be greater in larger companies since they are more visible and may depend more on social and political supports for their going concerns (Dowling & Pfeffer 1975; Hagerman & Zmijewski 1979). This is also consistent with the political cost hypothesis that states that these companies will attract more public or political scrutiny than others (Watts, RL & Zimmerman 1978). Larger companies also have substantial resources at their disposal to protect their legitimacy. Fry and Hock (1976) found that larger companies and companies in highly sensitive industries significantly report more on their socially acceptable practices. Similar findings are found by Bowman and Haire (1975), Preston (1978), Raffournier (1995) and Brammer and Pavelin (2008).

Most studies of executive remuneration have found that executives in larger companies are paid more compared to their counterparts in smaller companies (Core & Guay 2002; Gomez-Mejia, Tosi & Hinkin 1987; Hall & Liebman 1998; Jensen & Murphy 1990; Lewellen et al. 1992; Murphy 1985; Smith Jr & Watts 1992). They attributed this to the fact that larger companies are able to attract and employ highly skilled executives with higher pay. Given

that executive remuneration is a sensitive issue, larger companies can use disclosure to manage the perceptions of society that their remuneration schemes are justified and to limit any government interventions (Liu, Jinghui. & Taylor 2008)<sup>35</sup>. Companies might also want to avoid bad publicity if stakeholders discover for themselves that the executives have been paid seemingly excessive remuneration. Therefore:

*Hypothesis 10: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company size.*

#### **4.2.5 Signaling theory and proprietary costs**

Under signaling theory, executive directors have an incentive to address information asymmetry by voluntarily releasing information to the market. Lang and Lundholm (1993) and Verrecchia (1983) showed that companies were better off by releasing both bad and good news to the market to avoid being penalised through over discounting or undervaluation of shares by misinformed investors. Companies tend to disclose good news more comprehensively and quicker than bad news (Wallace & Naser 1995). Hossain et al. (2005) argued that profitability is a measure of managerial performance. Executives of better performing companies have higher incentives to convey more information to indicate their superior performance. Executive directors have more incentive to disclose information on improvements in the association between their pay and performance than a decrease. This may signal to the market that the executives are working hard for shareholders and deserve future increases in remuneration. Therefore:

*Hypothesis 11: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company profitability.*

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<sup>35</sup> For example, Patten (1992) found that in the aftermath of the Exxon Valdez oil spill there was significant disclosure of social responsibility by petroleum companies to manage the negative publicity that the spill generated. Similar response was found after the OK Tedi River pollution with significant increase in environmental disclosure of mining companies (Hutchings & Taylor 2000).

Dye (1985) argued that competition put constraints on the disclosure of specific information. Companies with high growth opportunities have higher proprietary costs given that disclosure of information may reduce the present value of the returns from the growth opportunities (Bamber & Cheon 1998). These companies may have employed executives who are valuable in creating and exploiting the opportunities. Disclosure of information on the executives' remuneration may attract rival bids from competitors who seek the managerial talents that can bring similar growth to their companies. The loss of executives to rivals may mean that there would be reduction in the future growth return. High growth companies may be less inclined to disclose extensive information on their executives' remuneration to avoid these potential losses.

Although prior Malaysian studies (Cahan & Hossain 1996; Mohd Ghazali & Weetman 2006) have failed to find significant associations between proprietary costs and the extent of disclosure, it is still worthwhile to re-examine the association in light of the corporate governance reforms in Malaysia. The study by Mohd Ghazali and Weetman (2006) attempted to review the association under the new reforms with the selection of 2001 as their sample year. The year 2001 was the first year that the MCCG was introduced. The reforms may not have been fully implemented by companies or their effects yet to take place. Shan (2009) found a weak association between disclosures of related party transaction in China listed companies and proprietary costs. The Chinese market is similar to the Malaysian market where family and state controlled companies are prevalent. He argued that the weak association is a positive signal that reforms on China's disclosure framework are slowly



working to mitigate the traditional forces and making room for market forces. Similar results may be observed in the Malaysian market.

However, there is potential trade off in proprietary costs of the disclosure and mitigating agency costs. For example, Newman and Sansing (1993) show that companies have to balance between maximizing shareholders' wealth and the threat of new entrants with disclosure of information. Their model shows that companies may disclose imprecise or 'noisy' and not necessarily truthful messages to discourage new competitors from entering the market, often at the expense of shareholders who would prefer full disclosure of information. Nonetheless, Harris (1998) argued that non-disclosure of proprietary information may mean protection of shareholders' value given that competitors cannot exploit future earnings potential.

Executives with undiversified capital are posited to have higher degree of risk aversion compared than shareholders. High growth companies are more likely to pay higher remuneration especially in the form of options (Bryan, Hwang & Lilien 2000; Gaver & Gaver 1993; Ho, S.S.M., Lam & Sami 2004; Ryan 2001; Smith Jr & Watts 1992). Equity based remuneration may induce executives to undertake more risk, extend their investment horizon and thus maximize shareholders' return.

There is more information asymmetry in high growth companies. Executives have greater discretion in the strategies that can be used to exploit growth opportunities (Bryan, Hwang & Lilien 2000). The shareholders may allow more discretion so that an above normal return

may be achieved (Hossain, Ahmed & Godfrey 2005). However, this additional discretionary power may create an information gap between the executives and the shareholders. In setting company disclosure policies managers may view the incentive of reducing information asymmetry as outweighing the potential proprietary costs.

When there is higher information asymmetry, principals will have to put more monitoring in place to guard their interests. In a price protected environment, executives will have to bear the costs of monitoring by their principals. Executives have the incentive to voluntarily disclose more information to protect their remuneration (Nelson, J & Percy 2008). In addition, shareholders and other stakeholders may demand additional information on remuneration to review the performance of executives in exploiting the growth opportunities. Executives may also want to disclose remuneration information to ensure they will be rewarded appropriately from undertaking additional risks.

*Hypothesis 12: That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company growth.*

### **4.3 Summary of Hypotheses**

Table 5 below provides a summary of the study hypotheses, the expected signs of the associations and the supporting literature. The next chapter will provide a discussion on the research empirical framework and methodology including the definition and measurement of variables and models.

Table 5 Summary of hypotheses and supporting literature

Statement of hypothesis		Exp. sign	Supportive Literature
H <sub>1</sub>	<i>That there was an improvement in the level of disclosure of executive directors' remuneration by Malaysian companies after the introduction of the Malaysian Code on Corporate Governance and changes in accounting standards.</i>	+	Bassett, Koh & Tutticci 2007; Chizema 2008; Clarkson, Van Bueren & Walker 2006; Coulton, James & Taylor 2001; Finch 2006; Jinghui & Dennis 2008
H <sub>2</sub>	<i>That for Malaysian companies, there is an inverse association between the level of executive director's remuneration disclosures and the level of family ownership.</i>	-	Shan 2009; Chizema 2008; Mohd Ghazali & Weetman 2006; Chau & Gray 2002; Chen & Jaggi 2000
H <sub>3</sub>	<i>That for Malaysian companies, there is an inverse association between the level of executive director's remuneration disclosures and the level of ownership concentration</i>	-	Shan 2009; Bushee & Noe 2000; Ramaswamy et al 2000; Li 1994; Bin et al. 1999
H <sub>4</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and the level of government shareholdings.</i>	+	Shan 2009; Chizema 2008; Huafang & Jianguo 2007; Lou et al. 2006; Mohd Ghazali & Weetman 2006; Makhija & Patton 2004
H <sub>5</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and foreign ownership.</i>	+	Shan 2009; Chizema 2008; Barako et al. 2006; Haniffa & Cooke 2002
H <sub>6</sub>	<i>That for Malaysian companies, there is an association between the level of executive director's remuneration disclosures and the level of executive directors' shareholdings</i>	?	Shan 2009; Huafang & Jianguo 2007; Lou et al. 2006; Leung & Horwitz 2004; Eng & Mak 2003
H <sub>7</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and leverage.</i>	+	Mohd Ghazali & Weetman 2006; Clarkson et al. 2006; Nelson & Majella 2005; Conyon et al. 2002;
H <sub>8</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and proportion of independent directors on the board.</i>	+	Liu & Taylor 2008; Bassett et al 2007; Clarkson et al. 2006; Babio Arcay & Muino Vazquez 2005; Nelson & Majella 2005; Gul & Leong 2004; Conyon et al. 2002; Chen & Jaggi 2000
H <sub>9</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and of external audit</i>	+	Liu & Taylor 2008; Bassett et al 2007; Barako et al. 2006; Clarkson et al. 2006; Nelson & Majella 2005; Chen & Jaggi 2000
H <sub>10</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company size.</i>	+	Chizema 2008; Liu & Taylor 2008; Bassett et al 2007; Clarkson et al. 2006; Nelson & Majella 2005; Conyon et al. 2002;
H <sub>11</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company profitability.</i>	+	Chizema 2008; Clarkson et al. 2006; Wallace & Nasser 1995; Owusu-Ansah 1998; Miller 2002; Gelb and Zarowin 2002; Hossain et al. 2005; Leung and Horwitz 2004
H <sub>12</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company growth.</i>	+	Shan 2009; Clarkson et al. 2006; Bryan et al. 2000; Cahan & Hossain 1996

## **Chapter 5 Research Methodology and Variables Measurement**

### **5.0 Introduction**

The preceding chapter developed several hypotheses that will be tested in this study. It also provided an empirical framework that will contribute to the development of the research methodology and variables measurement. This chapter provides a discussion of the research methodology and measurement of variables employed in this study. The first section describes the sampling process, followed by the data collection and then proceeds to a discussion of the content analysis technique. Section 5.5 summarizes the research empirical scheme that contributes to the construction of the research models in the following section. The final section discusses the definition and measurement of the dependent variables, independent variables and control variables.

### **5.1 Sampling**

The study adopts a panel dataset that consists of observations of the same set of sample companies over the sample period. A panel data allows for analysis of both the cross-sectional and the period effects of the hypotheses. The companies were selected from the Main and Second Boards of the Bursa Malaysia stock exchange. The two Boards were merged into a single market called the Main market on the 3<sup>rd</sup> August 2009. The companies were narrowed from the list of companies that were publicly listed at the start of the fiscal year 2000 and that continued to exist until the end of the fiscal year 2008. This would allow for observations and availability of data for the same set of sample companies over the study period. The final sample consisted of 200 selected Malaysian companies listed in the Bursa Malaysia stock exchange..

The 200 companies consisted were all the companies listed in the Bursa Malaysia that satisfied the selection criteria. No other company was listed continuously or had annual reports over the sample period of 2000 to 2008<sup>36</sup>. This precluded the application of random sampling to the data. The sample of 200 companies should be sufficiently large to test the study hypotheses. It satisfied the rule of thumb of a good sample size in a multiple regression as proposed by Green (1991) that  $N \geq 50 + 8m$ , where  $m$  is the number of the explanatory variables. In this case, as  $m = 13$ ,  $N$  should be equal to or more than 154.

The sample period is from 2000 to 2008. This period covers the changes in the regulatory framework for directors' remuneration disclosure. The year 2000 is a barometer for the effects of the regulatory reforms on the extent of disclosure as there was no regulation prior to and during that year. The MCCG and KLSE listing rules on disclosure of remuneration by bands first applied in 2001. The FRS 2 'Share based payments' and FRS 124 'Related party transactions' were introduced in 2005 and 2006 respectively. The nine year period allows for a learning period so that companies can adapt to the reforms. After allowing for changes in fiscal years, a total of 1788 annual reports were collected for the 200 sample companies over the study period.

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<sup>36</sup> Companies that were not selected may have been listed later than 2000, delisted during the sample period, merged or taken over by other companies or did not provide annual reports.

Table 6 Breakdown of companies for the pooled sample from 2000 to 2008 by sectors

GICS <sup>37</sup> Code	Number of company-years	Percentage
Consumer discretionary	248	13.87
Consumer staples	378	21.14
Energy	9	0.50
Finance	399	22.32
Healthcare	27	1.51
Industrials	412	23.04
Information and technology	99	5.54
Materials	162	9.06
Telecommunications	9	0.50
Utilities	45	2.52
	1788	100.00

Table 6 provides a breakdown of the company – years according to their industry classifications over the sample period. The study did not exclude any sector from the sample as it is focused on executive remuneration disclosure. There should be no significant noise from additional or different regulatory requirements for each sector. However, it is hypothesised that the level of disclosure of executive remuneration is different across different sectors. Due to changes in fiscal years, there was a few missing annual reports that led to an unbalanced panel data. A balanced panel data would consist of 1800 company-years (200 companies x 9 years). Table 7 provides the distribution of the company years according to years. A list of the sample companies is included in Appendix 1.

Table 7 Distribution of company – years from 2000 to 2008 (N = 1788)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Annual reports	200	200	200	199	197	198	196	198	200	1788

<sup>37</sup> The GICS stands for Global Industry Classification Standard developed by the MSCI and Standard & Poor's rating agencies. It represents ten main sectors.

## 5.2 Data collection

The study employs the content analysis technique in collecting the data for this study. Krippendorff (1980, page 21) defined content analysis as *“method of codifying the text (or content) of a piece of writing into various groups or categories depending on selected criteria.”* Mathews (1997, page 504) posited that *“continuing with the tradition of empirical research aim at documenting and analysing what is disclosed in the areas of social and environmental accounting...is valuable as a record of the current state of organizational disclosure and, therefore of the distance that remains to be travelled along the path of full accountability by economic actors.”*

The application of content analysis is especially important in obtaining the disclosure score. The study relies on manually scoring the disclosure of executive directors' remuneration in the annual reports based on a disclosure index. The disclosure index consists of items that pertained to the disclosure of executive directors' remuneration drawn from the regulatory framework and prior studies. This scoring system is similar to Schadewitz and Blevins (1998), Inchausti (1997), Clarkson et al. (2006) and Branco and Rodrigues (2006).

The study did not rely on a proxy for the disclosure score. Lang and Lundholm (1993), Gelb and Zarowin (2002), Gelb (2000) and Khurana, Pereira and Martin (2006) used analysts' ratings as a proxy for disclosure score rather than directly scoring the disclosure. The analysts' ratings measure the informativeness of companies' disclosure and companies are ranked accordingly. They argued that higher analyst ratings should translate to a higher disclosure score. A major limitation of this proxy is that the analysts' ratings may be biased or not representative of

disclosure quality. Mercer (2005) pointed out this limitation by arguing that the timeframe between the disclosure of information and the time that analysts rated a company might introduce bias. The analysts may have been influenced by other information or prior ratings.

The primary source of data was companies' annual reports. Annual reports can be argued to be the main form of communication between companies and stakeholders (Branco & Rodrigues 2006). The reforms that were undertaken by Malaysian regulators mainly dealt with the disclosure of information in the annual reports. Hence, it is appropriate that this study focused on the disclosure of executive directors' remuneration in companies' annual reports.

Malaysian companies are required to lodge annual reports to the Bursa Malaysia. The annual reports are then published in the Bursa Malaysia website. When annual reports were not available on the Bursa Malaysia's website, they were sourced from companies' individual websites. The scoring of the disclosure index was done by reading the annual report in its entirety to obtain information on executive director's remuneration. Remuneration information is usually found in the:

- Corporate governance statement;
- Remuneration report;
- Financial statements; and
- Notes to annual report.

Other information collected from the annual reports is:



- Corporate governance information (board composition, name of directors, family relationships, name of external auditors);
- Ownership structure (executive director direct and indirect shareholdings, family direct and indirect shareholdings, substantial shareholdings, government shareholdings and foreign shareholdings); and
- Financial information (total assets, total liabilities, total debt, total shareholders' equity, net profit).

Market data was obtained from *Osiris*, *Mint Global* and *Thomson One Banker*. These electronic databases were also searched to find information that was missing from the annual reports. *Osiris* and *Mint Global* are electronic databases compiled by Bureau van Dijk Electronic Publishing. *Thomson One Banker* is an electronic database compiled by Thomson Publications. The market data obtained was:

- Industry classifications;
- Financial ratios (Profitability, leverage and growth ratios); and
- Market values of total equity and total assets.

### **5.3 Empirical scheme**

Deegan (2002) argued that managerial actions can be explained by building a conceptual framework that consisted of several theories. He did not agree with purists who believed that research should only adopt one theoretical lens. There are great benefits from using multiple theories in explaining managerial actions. For example, Eisenhardt (1989) recommended that researchers used agency theory along with other complementary theories. She contended that although agency theory is valid, it offers an incomplete view of the world and organisations.

Using it together with complementary theories may capture and explain more of the problem studied. The theories may share similar insights yet offer additional understandings of the motivations behind management disclosure of executive directors' remuneration. Lemon and Cahan (1997, p 79) wrote that, "*one reason for the persistence of multiple views of why firms make social disclosure is that researchers have not been very successful in developing tests that allow them to assess the validity of different theories.*" Chizema (2008) concurred by stating that a study of disclosure should not just take into account the economic concerns but also the social dynamics of compliance with a recommendation or code on disclosure.

Figure 9 illustrates the research empirical framework for studying the disclosure of executive directors' remuneration. The figure includes the theories and the variables that act as their proxies. Prior disclosure studies that have used similar framework are Eisenhardt and Bourgeois (1988), Conlon and Parks (1990), Gelb (2000), Depoers (2000), Leung and Horwitz (2004), Birt (2006), Clarkson et al. (2006), Mohd Ghazali and Weetman (2006), Chizema (2008) and Shan (2009).

Figure 9 Research empirical scheme for disclosure of executive directors' remuneration

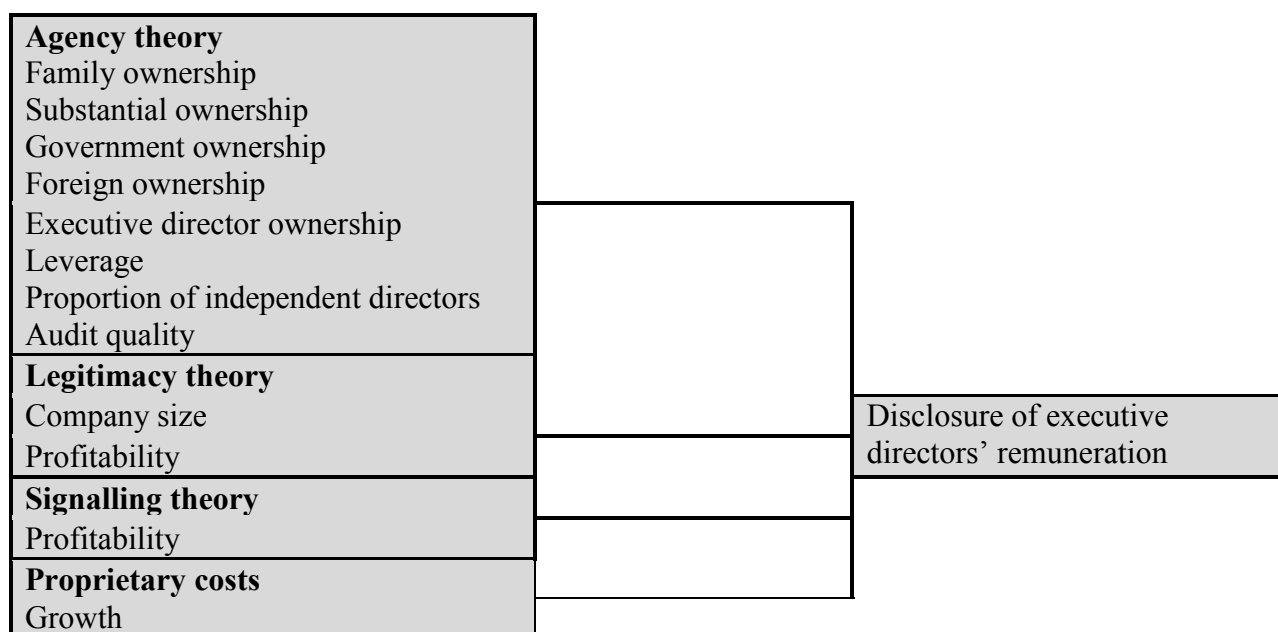


Table 8 provides a summary of the prior disclosure studies that applied a similar research empirical framework in testing their hypotheses.

Table 8 Summary of prior studies with similar empirical research framework

Author(s)	Sample and Data	Disclosure variable	Theoretical variable(s)	Methodology	Main findings
Shan (2009)	Sample consisted of 120 Chinese Shanghai SSE180 and Shenzhen SSE100 listed companies for the sample period of 2001 to 2005	Unweighted disclosure index-counting of words	9. Proportion of independent directors (+) 10. Proportion of professional supervisors (+) 11. Auditor reputation: 0=non Big Four audit firm; 1= Big Four audit firm (+) 12. CEO duality: 1= dual role, 0 = otherwise (-) 13. Firm size: natural logarithm of total asset (+) 14. Media attention: frequency of name appearance in print media (+) 15. Growth: market to book value of total asset ratio (-) 16. Ownership concentration: proportion of shares held by top ten shareholders (-) 17. Foreign ownership: proportion of shares held by foreigners from those in the top ten shareholders list (+) 18. State ownership: proportion of shares held by state from those	Panel GLS fixed effect regression	The study showed that ownership concentration, proportion of professional supervisors and CEO duality to significantly and negatively influence the level of related part disclosure. Foreign shareholding, proportion of independent directors, firm size and media attention significantly and positively influenced the level of related party disclosure.

			in the top ten shareholders list (+)		
Huafang and Jianguo (2007)	Sample year of 2002 consisting of 559 Chinese listed companies	Unweighted voluntary disclosure score: 30 items  Dichotomous measure: 0 and 1	4. Block ownership: proportion of ordinary shares held by substantial owners (>5%) (+) 5. Managerial ownership: proportion of ordinary shares held by top executives (+) 6. State ownership: proportion of shares owned by government (-) 7. Legal person ownership: proportion of shares held by the legal person (+) 8. Foreign listing/share ownership: 1= issuance of H-share or B-share 0 = if none (+) 9. Proportion of independent directors (+) 10. CEO duality: 1= dual role, 0 = otherwise (-) 11. Firm size: total asset at the end of the year (+) 12. Leverage: total liabilities/total assets (+) 13. Growth opportunities: total intangible asset/total asset (+) 14. Auditor reputation: 0=non Big	OLS regression	The study found that block ownership, foreign ownership, proportion of independent directors and size of company to have significant and positively influence on the level of voluntary disclosure by Chinese companies. CEO duality and growth opportunities significantly and negatively influenced the level of disclosure.

			Four audit firm; 1= Big Four audit firm (+)		
Clarkson, Van Bueren & Walker (2006)	Sample of 124 Australian listed companies from 1998 to 2004	Unweighted disclosure index based on AASB1046 (10 items)  Dichotomous score based from the scale of 0 to 3.	10. Total asset: the book value of assets (+) 11. Profitability: return on equity (+) 12. Growth: the market to book ratio of equity (+) 13. Leverage: total debt to equity (-) 14. Governance: corporate governance factor for fiscal year (+) 15. Foreign listing: 1 = foreign listed; 0 = otherwise (+) 16. CEO turnover: 1 = new CEO; 0 = otherwise (+) 17. Takeover or merger: 1 = subject to takeover or merger; 0 = otherwise (+) 18. Audit quality: 1 = big four audit; 0 = otherwise (+) 19. Auditor turnover: 1 = new auditor; 0 = otherwise (+)	3. Time period model: pooled generalize least squares  4. Yearly OLS regression	They showed that size of companies, corporate governance, quality of audit and cross listing status positively and significantly influenced the level of CEO remuneration disclosure. However, their level of significance changes over the sample period. The level of significance was high at the earlier years of the study when there was more scrutiny of remuneration. However, after the introduction of the CLERP 9 and AASB1024, their roles were replaced by the regulations.
Barako, Hancock and Izan (2006)	Sample consisted of 43 companies listed in Nairobi	Weighted and unweighted disclosure index: 47 items	7. Shareholders concentration: proportion of shares held by top twenty shareholders (+) 8. Foreign ownership: proportion of shares owned by foreign shareholders (+)	Panel regression (pooled cross section and time series data)	The study found significant and negative associations between proportion of non-executive directors and shareholder concentration and the level of voluntary disclosure in Kenyan listed companies. The

	Stock Exchange for the sample period of 1992 to 2001	Dichotomous measure: 0 and 1	<p>9. Institutional ownership: proportion of shares owned by institutional investors to total outstanding shares (+)</p> <p>10. Proportion of non-executive directors (+)</p> <p>11. Dual board structure: 1 = yes, 0 = no (+)</p> <p>12. Board size: number of directors on the board (+)</p> <p>13. Audit committee: 1 = exist, 0 = none (+)</p> <p>14. Firm size: total assets (+)</p> <p>15. Leverage: the ratio of total debt to total assets</p> <p>16. Auditor reputation: 0 = non Big Four audit firm; 1 = Big Four audit firm (+)</p> <p>17. Profitability: net profit to total shareholders' equity</p> <p>18. Liquidity: current asset to current liabilities</p> <p>19. Industry classifications</p>		presence of audit committee, foreign ownership, institutional ownership, firm size and leverage to positively and significantly influence the level of disclosure.
Mohd Ghazali and Weetman (2006)	Sample consisted of 87 Malaysian companies	Unweighted disclosure index: 53 items Dichotomous	<p>5. Ownership concentration: proportion of shares owned by top ten shareholders to total number of shares (-)</p> <p>6. Number of shareholders (+)</p>	Stepwise regression	The study showed significant and negative associations between the proportion of family members, percentage of director ownership and the level of voluntary disclosure.

	for the sample year of 2001	measure: 0 and 1	<p>7. Proportion of direct and indirect shares held by executive and non-independent directors over total shares(-)</p> <p>8. Proportion of shares held by government (-)</p> <p>9. Proportion of family member on the board of directors (-)</p> <p>10. Proportion of independent directors on the board of directors (+)</p> <p>11. Chairman is independent and non-executive: 1 = yes, 0 = no (+)</p> <p>12. Competitiveness: ratio of total sales over industry sales (market share) (-)</p> <p>13. Competitiveness: ratio of total sales made by the two largest companies in the industry to the total sales (concentration) (-)</p> <p>14. Firm size: number of employees (+)</p> <p>15. Profitability: ratio of profit before tax to shareholders' equity (+)</p> <p>16. Gearing: ratio of long term debt to shareholders' equity (+)</p>		Profitability and size were shown to significantly and positively influence the level of disclosure.
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Gul and Leung (2004)	Sample year of 1996 consisting of 385 Hong Kong listed companies	Unweighted voluntary disclosure score: 44 items Dichotomous measure: 0 and 1	<ol style="list-style-type: none"> <li>5. Proportion of independent directors(+)</li> <li>6. CEO duality: 1= dual role, 0 = otherwise (-)</li> <li>7. Auditor reputation: 0=non Big Five audit firm; 1= Big Five audit firm (+)</li> <li>8. Audit committee: 1= exist, 0 = none (+)</li> <li>9. Size: natural logarithm of total assets at the end of the year</li> <li>10. Director ownership: percentage of ordinary shares held by directors</li> <li>11. Substantial director share ownership: if percentage of ownership &gt; 5%</li> <li>12. Debt: long term debt/book value of equity</li> <li>13. Current ratio: total current asset/ total current liabilities</li> <li>14. Profitability: profit before tax/ total equity</li> <li>15. Growth: market value to book value of equity</li> <li>16. Equity market liquidity: average of monthly share turnover</li> <li>17. Share listing: 1=foreign listed, 0 = if not</li> </ol>	Two staged least squares (2SLS) regression	They found that proportion of independent directors, firm size, profitability, dummy for losing company and growth to positively and significantly influence the level of voluntary disclosure. CEO who held dual positions was shown to significantly limit the level of disclosure.
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			<p>18. Consolidation: 1= consolidate, 0 = otherwise</p> <p>19. Share issue: 1 = new issue, 0 = otherwise</p> <p>20. Loss: 1 = negative income, 0 = otherwise</p>		
Eng and Mak (2003)	Sample year of 1995 consisting of 158 Singaporean companies	Unweighted disclosure index  Scale of 1 to 5	<p>2. Proportion of independent directors (+)</p> <p>3. Auditor's size: 0=non Big Six audit firm; 1= Big Six audit firm (+)</p> <p>4. Managerial ownership: percentage of shares held by the CEO and executive directors (-)</p> <p>5. Block holder ownership: percentage of shares held by substantial owners (&gt;5%) (-)</p> <p>6. Government ownership: if government ownership &gt; 20% = 1; otherwise = 0 (+)</p> <p>7. Growth: market to book value of equity (+) and price-earnings ratio (+)</p> <p>8. Firm size: market value of shares</p> <p>9. Leverage: total liabilities by total assets (-)</p> <p>10. Industry: regulated industry = 1, otherwise = 0 (+)</p>	OLS regression	They found that proportion of independent directors, debt and managerial ownership to significantly and negatively influence the level of voluntary disclosure. Government ownership and firm size was shown to significantly and positively influence the level of disclosure. Other variables were found not to be significant.

			<p>11. Analyst's following: number of analyst following the companies (+)</p> <p>12. Profitability: ROE, ROA (+)</p>		
Depoers (2000)	Sample year of 1995 consisting of 102 industrial and commercial French companies	<p>Unweighted voluntary disclosure score: 65 items</p> <p>Dichotomous measure: 0 and 1</p>	<ol style="list-style-type: none"> <li>1. Firm size: natural logarithm of sales (+)</li> <li>2. Foreign activity: exports on sales ratio (+)</li> <li>3. Ownership structure: percentage of shares held by the three largest shareholders (-)</li> <li>4. Leverage: debt on total assets ratio (+)</li> <li>5. Auditor size: 0=non Big Six audit firm; 1= Big Six audit firm (+)</li> <li>6. Labour pressure: labour charges/turnover (-)</li> <li>7. Barriers to entry: gross fixed asset (+)</li> </ol>	Stepwise multiple regression	The study only found size and foreign activity to significantly influence the level of disclosure of French companies. Depoers argued that the external factors such as competitors played more important roles in shaping French companies disclosure policies rather than traditional agency variables.

## 5.4 Model development

A basic panel data regression equation can be represented in the following form:

$$Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 X_{it} + \dots + \delta_c \text{Control}_{it} + u_{it}; i = 1, 2, 3, \dots, N; t = 1, 2, 3, \dots, T$$

Where,

$Y$  is the dependent variable;

$\alpha$  is the constant term;

$\beta$  is the value of the coefficient for the explanatory variable;

$X$  is the explanatory variable;

$\delta_c \text{Control}_{it}$  is the control variable;

$u$  is the normal distribution error term;

$i$  is a sample company; and

$t$  is a year.

From the research empirical scheme, the following base model was formed. The base model integrates all the theoretical perspectives explored in the literature review and hypotheses development chapters. It consists of the factors that represent agency theory, legitimacy theory, signaling theory and proprietary costs. The base model also includes control variables. The base model is shown below:

$$\text{Disclosure Index Score} = \beta_0 + \sum \beta_O \text{Agency theory}_{it} + \sum \beta_P \text{Legitimacy theory}_{it} + \sum \beta_Q \text{Signalling theory}_{it} + \sum \beta_R \text{Proprietary costs}_{it} + \sum \delta_c \text{Control}_{it} + \epsilon_{it}$$

The first model is used to test the determinants of total disclosure of executive directors' remuneration. The equation incorporates the variables that represent the different theoretical perspectives of agency theory, legitimacy theory, signaling theory and proprietary costs. It also includes control variables of dummies for years and industry classifications.

### Model 1

$$\text{TOTSCORE}_{it} (y) = \beta_0 + \beta_1 \text{FAM\_OWN}_{it} + \beta_2 \text{SUBT\_OWN}_{it} + \beta_3 \text{GOV}_{it} + \beta_4 \text{FORGN\_OWN}_{it} + \beta_5 \text{DDIROWN01}_{it} + \beta_6 \text{DDIROWN0125}_{it} + \beta_7 \text{DDIROWN0025}_{it} + \beta_8 \text{DEBT\_TO\_EQUITY}_{it} + \beta_9 \text{PROP\_INDDIR}_{it} + \beta_{10} \text{AQ}_{it} + \beta_{11} \text{LN\_ASSET}_{it} + \beta_{12} \text{ROE}_{it} + \beta_{13} \text{MARKETOBOK}_{it} + \sum \delta_c \text{Control}_{it} + \varepsilon_{it}$$

Where,

TOTSCORE is the proportion of the individual company total score over the maximum possible total score for the year;

$B_0$  is the value of the constant;

FAM\_OWN is the proportion of shares held by family owners to total shares;

SUBT\_OWN is the percentage of shares held by shareholders with shareholding of more than 2% as listed in the top 20 shareholders;

GOV is the proportion of shares held by government institutions to total shares;

FORGN\_OWN is the proportion of shares held by foreign owners to total shares;

DDIROWN01 is the dummy for executive director shareholdings of less than 10%;

DDIROWN0125 is the dummy for executive director shareholding of between 10% and 25%;

DDIROWN0025 is the dummy for executive director shareholding of more than 25%;

DEBT\_TO\_EQUITY is the total long-term debt divided by total equity;

PROP\_INDDIR is the percentage of the board that is independent. The definition of an independent director is adopted from Bursa Malaysia Listing Rule;

AQ is the dummy variable where companies that have their annual reports audited by the Big Four audit firms are given value of one (=1) or otherwise zero (=0);

LN\_ASSET is the natural logarithm of total assets at the end of fiscal year;

ROE is the company's net profit to the average total equity; and

MARKETOBOOK is the ratio of the market value of equity to the book value of equity.

The second model is used to test the determinants of voluntary disclosure of executive directors' remuneration. The dependent variable for the second model is the voluntary score.

### Model 2

$$\text{VOLSCORE}_{it} (y) = \beta_0 + \beta_1 \text{FAM\_OWN}_{it} + \beta_2 \text{SUBT\_OWN}_{it} + \beta_3 \text{GOV}_{it} + \beta_4 \text{FORGN\_OWN}_{it} + \beta_5 \text{DDIROWN01}_{it} + \beta_6 \text{DDIROWN0125}_{it} + \beta_7 \text{DDIROWN0025}_{it} + \beta_8 \text{DEBT\_TO\_EQUITY}_{it} + \beta_9 \text{PROP\_INDDIR}_{it} + \beta_{10} \text{AQ}_{it} + \beta_{11} \text{LN\_ASSET}_{it} + \beta_{12} \text{ROE}_{it} + \beta_{13} \text{MARKETOBOOK}_{it} + \sum \delta c \text{Control}_{it} + \varepsilon_{it}$$

Where,

VOLSCORE is the proportion of the individual company score in excess of the total score over the maximum possible total voluntary score for the year

The third model is used to test the determinants of the probability of the disclosure of individual executive director's remuneration. The third model is a logit regression and not a panel least-square regression. The dependent variable for the third model is a dichotomous variable of 1 and 0. The application of a panel least square regression to a model with dichotomous variable as the dependent will violate the assumptions behind OLS hypotheses testing. The standard errors will be heteroscedastic and render the estimates inefficient and the level of significance unreliable (Noreen 1988). Thus, the study applied a logit regression that gives efficient and reliable estimates for a model with a categorical dependent variable.

### Model 3

$$\text{INDREMUNERATION}_{it} (y) = \beta_0 + \beta_1 \text{FAM\_OWN}_{it} + \beta_2 \text{SUBT\_OWN}_{it} + \beta_3 \text{GOV}_{it} + \beta_4 \text{FORGN\_OWN}_{it} + \beta_5 \text{DDIROWN01}_{it} + \beta_6 \text{DDIROWN0125}_{it} + \beta_7 \text{DDIROWN0025}_{it} + \beta_8 \text{DEBT\_TO\_EQUITY}_{it} + \beta_9 \text{PROP\_INDDIR}_{it} + \beta_{10} \text{AQ}_{it} + \beta_{11} \text{LN\_ASSET}_{it} + \beta_{12} \text{ROE}_{it} + \beta_{13} \text{MARKETOBOOK}_{it} + \sum \delta c \text{Control}_{it} + \varepsilon_{it}$$

Where,

INDREMUNERATION is the disclosure of an individual executive director's remuneration. It is represented by one for disclosure of an individual executive director's remuneration and zero for non-disclosure of an individual executive director's remuneration.

## 5.5 Variable measurement

### 5.5.1 Dependent variables

The dependent variables that measure the disclosure of executive directors' remuneration are represented by:

1. Total score: the proportion of an individual company's total score of the disclosure of executive directors' remuneration over the maximum possible total score of the disclosure of executive directors' remuneration for the year. The total score consists of the voluntary and mandatory disclosure of executive directors' remuneration. The scoring is based on a scoring index derived from regulations and prior studies.

$$TOT\ SCORE_{it} = \frac{TOTAL\ SCORE_{it}}{TOTAL\ SCORE_t}$$

2. Voluntary score: the proportion of an individual company's voluntary score of the disclosure of executive directors' remuneration over the maximum possible voluntary score of the disclosure of executive directors' remuneration for the year. Voluntary score is measured as the disclosure in excess of mandatory disclosure for a particular year.

$$VOLSCORE_{it} = \frac{VOLUNTARY\ SCORE_{it}}{VOLUNTARY\ SCORE_t}$$

3. Disclosure of individual remuneration ( $INDREMUNERATION_{ii}$ ): the value of one is given to a company that disclosed of an individual executive director's remuneration and the value of zero for otherwise.

### 5.5.2 The disclosure scoring index

This study focuses on the total disclosure of executive directors' remuneration inclusive of mandatory and voluntary disclosure. One might infer that a study that examined disclosure in a regulated market is futile given that companies are obliged to disclose information and may choose not to disclose beyond that requirement. However, Dye (1986) contended that the introduction of mandatory disclosure requirements can improve the extent of voluntary disclosure. For example, Naser and Nuseibeh (2003) studied the level of compliance of Saudi Arabian listed companies with mandatory disclosure requirements and the extent of voluntary disclosure in these companies. They found a positive and significant correlation ( $r=0.53$ ,  $p<0.000$ ) between the level of mandatory and voluntary disclosure for the total sample.

The disclosure scoring index incorporates mandatory items of executive directors' remuneration as required by the FRS 2 and the Bursa Malaysia Listing rule. It also contains additional and voluntary disclosure items derived from Malaysian FRS 124, Australian AASB 124 'Related party disclosure' and prior studies (Bassett, Koh & Tutticci 2007; Clarkson, P, Van Bueren & Walker 2006; Laksmna 2008). AASB 124 required more stringent and detailed disclosure than FRS 124 and thus acts as a template for comprehensive disclosure of executive directors' remuneration. A total of thirteen items is included in the index (Table 9).



**Table 9 Summary of disclosure scoring index items and scoring values**

Disclosure item	Scoring value			
	0	1	2	3
Disaggregated remuneration	0	1	NA	NA
Disclosure of short term benefits	0	1	NA	NA
Disclosure of post-employment benefits	0	1	NA	NA
Disclosure of other long term benefits	0	1	NA	NA
Disclosure of termination benefits	0	1	NA	NA
Disclosure of share based payment	0	1	NA	NA
Specific section for remuneration	0	1	NA	NA
Disclosure of individual remuneration	0	1	NA	NA
Comparative period information	0	1	NA	NA
Discussion on principles of remuneration	0	1	2	NA
Discussion on pay and performance association	0	1	2	NA
Options valuation and right details	0	1	2	3
Disclosure by bands	0	1	NA	NA

Score 0 is for non-compliance or undisclosed information. Score 1 is for compliance or disclosure of information. The additional score of 2 and 3 applies to items that are scored based on the extensiveness of the disclosure not on mere compliance. NA – The score is not applicable for the particular item. Figure 10 provides details of the disclosure items and examples.

Consistent with previous studies (Bassett, Koh & Tutticci 2007; Clarkson, P, Van Bueren & Walker 2006; Laksmana 2008), this study scores the disclosure items on a range of values instead of counting the words. Simply counting words may include repetitive sentences or lengthy but not meaningful sentences, and may exclude details provided by graphic representations and links to the number of directors in the board. Scoring based on values allows for the identification of minimum, maximum and excess values to distinguish between the mandatory and voluntary disclosure of executive directors' remuneration. The maximum total score inclusive of mandatory and voluntary items is seventeen for companies that issued executive options and fourteen for other companies. Both the maximum mandatory and voluntary scores evolved throughout the study period depending on the regulatory framework that was introduced progressively over the nine years.

Table 10 Annual mandatory, voluntary and total score scoring values over 2000 to 2008

	2000		2001		2002		2003		2004		2005		2006		2007		2008	
	NO	WO	NO	WO	NO	WO	NO	WO	NO	WO	NO	WO	NO	WO	NO	WO	NO	WO
Max. Man. score	0	0	13	16	13	16	13	16	13	16	1	4	1	4	1	4	1	4
Max. Vol. score	14	17	1	1	1	1	1	1	1	1	13	13	13	13	13	13	13	13
Total score	14	17	14	17	14	17	14	17	14	17	14	17	14	17	14	17	14	17

NO: No options – companies that did not have option based remuneration schemes

WO: With options – companies that had option based remuneration schemes

The index is an un-weighted relative disclosure index. Information is therefore assumed to be assessed equally by all users in making decisions (Chau & Gray 2002). Weight is a measurement of the pooled opinion of some, but not all users, and is not related to a ‘real’ decision making process and therefore it may not reflect reality (Cooke 1989; Wallace & Naser 1995). The weight may not be constant over time (Dhaliwal 1980). The assignment of the weights is subjective since most users’ preferences are unknown (Chang, Most & Brain 1983; Firth 1979). Nonetheless, Chow and Wong-Boren (1987) found no significant differences between the results of their weighted and un-weighted indices. The main underlying principle of the index is whether most users of annual reports would find the disclosed information sufficiently comprehensive. Prior studies that have used an un-weighted disclosure index includes (Chang, Most & Brain 1983; Chau & Gray 2002; Chow & Wong-Boren 1987; Clarkson, P, Van Bueren & Walker 2006; Cooke 1989; Liu, J., Taylor & Harris 2006; Meek, Roberts & Gray 1995; Mohd Ghazali & Weetman 2006; Owusu-Ansah 1998; Shan 2009; Wallace & Naser 1995).

The annual reports were read in their entirety before they were scored because remuneration information can be disclosed in various sections of the annual report. Companies were not penalised for non-disclosure of items that were not relevant to them. To limit the researcher's bias and to ensure consistency, independent and random verification was done by an independent research assistant.

### **5.5.3 Independent variables**

The study does not analyse changes in the independent variables from one period to another. There is likely to be little variation in the independent variables especially the structural variables; ownership variables, board of directors' compositions and firm size, over the eight year study period. However, the performance variables; return on equity, can significantly change from one year to the next. Lang and Lundholm (1993) argued that company disclosure can be 'sticky' in that auditors are reluctant to enforce substantial changes in the general content of annual reports on a yearly basis. This may incur additional costs. It can be expected that as companies settle into a new reporting regime, annual reports will stay unchanged until new regulations come into force.

#### **5.5.3.1 Agency theory variables**

The variables that are considered for agency theory are ownership and corporate governance mechanisms variables.

##### **5.5.3.1.1 Ownership variables**

Ownership structure plays a significant role in agent and principals relationships. The level of ownership concentration and the shareholder composition are the variables that may influence the level of disclosure of executive directors' remuneration in Malaysian companies. The level of

ownership concentration may introduce power differentials into the relationships that may either mitigate or compound agency problems. Various studies have looked at the effects of ownership concentration on the level of disclosure in companies. Two terms have been used to test the hypothesis of an association between ownership concentration and the level of disclosure. The terms are ‘*ownership diffusion*’ (Babio Arcay and Muino Vazquez (2005), Haniffa and Cooke (2002), Chau and Gray (2002), Depoers (2000) and Raffournier (1995)) and ‘*ownership concentration*’ (Shan (2009), Brammer and Pavelin (2008), Barako et al. (2006), Mohd Ghazali and Weetman (2006) and Makhija and Patton (2004)). These terms may be used interchangeably as measures of the ownership concentration of various shareholders.

The notion of ownership concentration is more applicable to the Malaysian market because of the significant concentration of the shareholdings of Malaysian companies among families and government linked entities (Claessens, Djankov & Lang 2000). Malaysian companies are required under the Bursa Malaysia Listing Rule to disclose the top 20 shareholdings in the annual reports. The requirement includes direct and indirect share ownership in the companies.

Ownership concentration (*SUBT\_OWN*) is then measured as:

$$SUBT\_OWN_{it} = \frac{\text{Number of shares held by shareholders with shareholding of more than 2\%}_{it}}{\text{Total number of shares outstanding}_{it}}$$

Family ownership has been shown to be associated with the level of disclosure (Chen and Jaggi (2000), Chau and Gray (2002), Mohd Ghazali and Weetman (2006) and Chizema (2008)). The presence of family shareholders may limit the disclosure of executive directors’ remuneration. The Bursa Malaysia Listing Rule and the FRS 124 ‘*Related Party Transactions*’ require

companies to disclose family relationships between key management personnel and other shareholders in the annual reports. They are also required to disclose direct and indirect shareholdings by key management personnel and their family members. Section 122A of the Malaysian Companies Act (1965) includes spouse, parent, child, brother, sister and the spouse of such child, brother or sister as family members.

Family ownership is thus measured as:

$$FAM\_OWN_{it} = \frac{\text{Number of shares held by family shareholders}_{it}}{\text{Total number of shares outstanding}_{it}}$$

The Malaysian market is also dominated by government linked companies and state ownership. Prior studies offered alternative views of whether government shareholdings improve or restrict the level of the public disclosure of information (Li (1994), Eng and Mak (2003), Chizema (2008) and Shan (2009)). Government shareholders may either behave like insiders by using informal channels for information or push for more disclosure in line with the government corporate reforms initiatives. Government ownership data included shareholdings by Government Linked Investment Companies (GLICs)<sup>38</sup> and state investment companies. The data for government shareholdings is obtained from the list of the top 20 shareholders for the fiscal year.

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<sup>38</sup> The GLICs consisted of Employee Provident Fund (EPF), Khazanah Nasional, Kumpulan Wang Persaraan (KWAP), Lembaga Tabung Angkatan Tentera (LTAT), Lembaga Tabung Haji (LTH), Menteri Kewangan Diperbadankan (MKD) and Perbadanan Nasional Berhad (PNB).

Government ownership is measured as:

$$GOV_{it} = \frac{\text{Number of shares held by government shareholders}_{it}}{\text{Total number of shares outstanding}_{it}}$$

Another ownership variable is foreign shareholdings. Foreign shareholders may have been exposed to more transparency and accountability in disclosure of executive directors' remuneration. They may also have greater demand for more information to overcome their language or geographical barriers. The data for foreign shareholdings is obtained from the list of the top 20 shareholders for the fiscal year.

Foreign ownership is measured as:

$$FORGN\_OWN_{it} = \frac{\text{Number of shares held by foreign shareholders}_{it}}{\text{Total number of shares outstanding}_{it}}$$

The final ownership factor that is considered in this study is executive directors' shareholdings. Prior studies used an absolute measurement of the percentage of executive director ownership (Huanfang and Jianguo (2007), Luo et al (2006), Eng and Mak (2003) and Abrahamson and Park (1994)).

They measured executive director ownership as:

$$DIR\_OWN_{it} = \frac{\text{Number of shares held by executive directors}_{it}}{\text{Total number of shares outstanding}_{it}}$$

However, this measurement assumed a linear association between the level of disclosure and executive directors' ownership. Leung and Horwitz (2004) argued that there is a convex

association between the level of directors' ownership and agency costs. At a lower level of director ownership, executive directors may disclose more about director remuneration to prove that they are working for the interests of the shareholders. However, at a higher level of ownership, the executive directors may use their influence to limit the level of disclosure and conceal potential expropriation. An absolute measurement of executive directors' ownership will not represent this convex association. Thus, creating dummy variables for executive director ownership at different percentiles will be more appropriate than using an absolute percentage variable.

Consistent with Leung and Horwitz (2004), the dummies for executive directors' remuneration at three different percentiles are measured as:

- *Dummy for executive director shareholdings of less than 10%*  $(DDIROWN01_{it}) \text{ } OWN = 0.01 < OWN < 0.1$
- *Dummy for executive director shareholding of between 10% and 25%*  $(DDIROWN0125_{it}) \text{ } OWN - 0.01 = 0.01 < OWN < 0.25$   
 $0 = OWN < 0.01$   
 $0.24 = OWN > 0.25$
- *Dummy for executive director shareholding of more than 25%*  $(DDIROWN0025_{it}) \text{ } OWN - 0.25 = OWN > 0.25$

Finally, another agency variable that is considered in the study is the power exerted by debt holders or creditors in influencing the level of disclosure in Malaysian companies. The debt structure of a company may influence their disclosure policy through imposition of debt covenants on the level of disclosure of information or competition for new and cheaper debt that

requires disclosure of information. The hypothesised association between debt structure and the level of disclosure is usually represented by the leverage ratio (Barako et al. (2006), Clarkson et al. (2006), Mohd Ghazali and Weetman (2006), Nelson and Majella (2005) Gul and Leung (2004), Eng and Mak (2003) and Conyon et al. (2002)).

It is measured as:

$$DEBT\_TO\_EQUITY_{it} = \frac{\text{Total long-term debt}_{it}}{\text{Total equity}_{it}}$$

#### 5.5.3.1.2 Corporate governance mechanisms

Corporate governance mechanisms are primarily to protect the interests of shareholders especially minority shareholders from exploitation by agents and substantial shareholders. This study considers only two corporate governance mechanisms. They are the proportion of independent and non - executive directors on the board of the directors and the level of audit quality. These two mechanisms are arguably the most significant corporate governance variables that may influence the level of disclosure of executive directors' remuneration.

The first corporate governance mechanism that is considered is the percentage of the board that is independent. Independent directors have incentives to push for more transparency and greater accountability by key management personnel through greater disclosure of information (Liu and Taylor (2008), Shan (2008), Barako et al. (2006), Conyon et al. (2002), Coulton et al. (2001) and Chen and Jaggi (2000)). The definition of an independent director is adopted from Bursa



Malaysia Listing Rule. The Listing Rule and the MCCG require companies to have at least one third of the members of the board of directors to be independent and non-executive. The number of independent directors on the board and the size of the board are given in the annual reports. The definition of independent director is obtained from paragraph 1.01 of the Bursa Malaysia Listing Rule (Appendix 9).

The variable is measured as:

$$PROP\_INDDIR_{it} = \frac{\text{Number of independent directors on board}_{it}}{\text{Total number of directors on the board}_{it}}$$

The second corporate governance mechanism included in this study is the quality of the external audit. The quality of the external audit has been represented in prior studies by the choice of external auditors (Raffournier (1995), Chen and Jaggi (2000), Makhija and Patton (2004), Leung and Horwitz (2004), Gul and Leung (2004), Barako et al. (2006) and Shan (2009). External audits completed by bigger and highly reputable audit firms are associated with higher quality of audit and subsequently greater disclosure of information. A dummy variable is created to represent the annual quality of audit, where:

$$AQ_{it} = 1 \text{ (Big four external audito during the fiscal year) and } 0 \text{ (Non big-four external audito during the fiscal year)}$$

### 5.5.3.2 Legitimacy theory variables

The association between legitimacy and the level of disclosure of executive directors' remuneration is tested using company size and profitability as proxies for legitimacy. Company size may be measured by:

- Total assets: Chizema (1998); Coulton et al. (2001); Nelson and Majella (2005); Barako et al. (2006); Clarkson et al. (2006); Huafang and Jianguo (2007) and Shan (2009);
- Market capitalization: Conyon et al. (2002); Eng and Mak (2003) and Gelb and Greenstein (2004);
- Total revenues or net revenue: Lim and McKinnon (1993); Patten (1991) and Belkaoui and Karpik (1989); and
- Total number of employees: Mohd Ghazali and Weetman (2006).

Given that market capitalization of the Malaysian market is relatively small compared to other developed markets; total assets are used in this study as a proxy for company size. Total revenue or net revenue is not chosen as a proxy because the value may fluctuate or be volatile over the sample period. The total number of employees may not be an adequate representation of company size. The size of a company labour force may not be a reliable estimate of size because a small startup company may have a high labour force as it attempts to enter the market. A big company may have consolidated its labour force and not have as many employees.

Thus, total assets make a better proxy for size. It is measured as:

$$LN\_ASSET_{it} = \ln (Total\ assets\ at\ the\ end\ of\ fiscal\ year)_{it}$$

Another variable that may represent company's legitimacy is profitability (Breton & Côté 2006; Patten, D.M. 1991; Zimmerman & Zeitz 2002). Profitability is measured in this study as:

$$ROE_{it} = \frac{Net\ profit_{it}}{Average\ shareholders'\ equity_{it}}$$

### **5.5.3.3 Signalling theory variable**

Signalling theory posited that profitable companies will disclose information faster and more extensively to distinguish themselves from other companies (Lang and Lundholm 1993). A significant number of prior studies have used the return on the equity ratio as a proxy for profitability in testing the association between profitability and the level of disclosure of information. They include Patell (1976), Penman (1980), Lev and Penman (1990), Skinner (1994), Schadewitz and Blevins (1998), Owusu-Ansah (1998), Miller (2002), Gelb and Zarowin (2002), Hossain et al. (2005), Leung and Horwitz (2004) and Raffournier (1995).

Profitability is thus measured in this study as:

$$ROE_{it} = \frac{Net\ profit_{it}}{Average\ shareholders'\ equity_{it}}$$

### **5.5.3.4 Proprietary costs variable**

The final dependent variable considered is the proxy for proprietary costs. Prior studies have used various proxies to represent proprietary costs in testing the association between proprietary costs and the level of disclosure. The two most significant proxies adopted are:

- Industry competitiveness: the industry sales concentration ratio of the four largest companies within industries (Berger & Hann 2002; Gelb 2000; Harris 1998; Leung & Horwitz 2004;

Luo, Courtenay & Hossain 2006); company total sales over the total sales of its specific industry classification (Clarkson, PM, Kao & Richardson 1994; Debreceeny & Rahman 2005; Hagerman & Zmijewski 1979; Mohd Ghazali & Weetman 2006; Press & Weintrop 1990).

- Investment growth opportunities: the ratio of market value to the book value of equity (*MKBVE*) (Adam & Goyal 2008; Bamber & Cheon 1998; Berger & Hann 2002; Clarkson, P, Van Bueren & Walker 2006; Debreceeny & Rahman 2005; Frankel, Kothari & Weber 2006; Garcia-Meca & Martinez 2007; Gelb & Zarowin 2002; Gul & Leung 2004; Hossain, Ahmed & Godfrey 2005; Lang & Lundholm 1993; Ryan 2001; Schadewitz & Blevins 1998).

This study intended to use both measurements as proxies for proprietary costs. However, the data for industry sales in Malaysia was only available for the period of 2003 to 2008. This will severely limit the depth of the analysis since the missing years include the years 2000 and 2001 that are important for testing the first hypothesis. Consequently, the study adopts only investment growth opportunities as a proxy for proprietary costs. Companies with higher growth opportunities have more proprietary information about the unexploited and future investment opportunities (Shan 2009). These companies may have more to lose from disclosing too much information.

Consistent with prior studies, this study represents investment growth opportunities using the ratio of market value to the book value of equity. It measures the value of a company represented by the cash flow from assets in place and future growth potential (Adam & Goyal 2008). The ratio data is obtained from the *Thomson OneBanker* electronic database. It is measured as:

$$\text{MARKETBOOK} = \frac{\text{Total outstanding share}_{it} \times \text{Shares closing price}_{it}}{\text{Total book value of outstanding shares}_{it}}$$

Table 11 provides the definition and the measurement of the independent variables that are applied in the research empirical scheme.

Table 11 Definition and measurement of independent variables

Variable		Measurement
Family ownership	<i>FAM_OWN</i>	Proportion of shares held by family owners to total shares
Ownership concentration	<i>SUBT_OWN</i>	Percentage of shares held by shareholders with shareholding of more than 2% as listed in the top 20 shareholders
Government ownership	<i>GOV</i>	Proportion of shares held by government institutions to total shares
Foreign ownership	<i>FORGN_OWN</i>	Proportion of shares held by foreign owners to total shares
Executive directors' share ownership	<i>DDIROWN01</i>	Dummy for executive director shareholdings of less than 10%
	$OWN = 0.01 < OWN < 0.1$	
	<i>DDIROWN0125</i>	Dummy for executive director shareholding of between 10% and 25%
	$OWN - 0.01 = 0.01 < OWN < 0.25$	
	$0 = OWN < 0.01$	
	$0.24 = OWN > 0.25$	
	<i>DDIROWN0025</i>	Dummy for executive director shareholding of more than 25%
	$OWN - 0.25 = OWN > 0.25$	
Leverage	<i>DEBT_TO_EQUITY</i>	Total long-term debt divided by total equity
Independent board composition	<i>PROP_INDDIR</i>	The percentage of the board that is independent. The definition of an independent director is adopted from Bursa Malaysia Listing Rule
Audit quality	<i>AQ</i>	Dummy variable where companies that have their annual reports audited by the Big Four audit firms are given value of one (=1) or otherwise zero (=0)
Company size	<i>LN_ASSET</i>	Natural logarithm of total assets at the end of fiscal year
Profitability	<i>ROE</i>	The company's net profit to the average total equity
Growth	<i>MARKETBOOK</i>	The ratio of the market value of equity to the book value of equity

#### 5.5.4 Control variables

The control variables include dummies for years and dummies for industry classifications. The dummies for years are to control for any uniqueness or differences in the years that may significantly influence the level of disclosure of executive directors' remuneration. The other control variable is industry classification. The dummies for industry classifications may control for any industry specific differences.

Table 12 Definition and measurement of control variables

Variable		Measurement
Year dummy	$\delta_{2000}$	Dummy for 2000 is included as part of the constant to avoid the problem of perfect multicollinearity
	$\delta_{2001}$	Year 2001 is given the value of one and otherwise is zero
	$\delta_{2002}$	Year 2002 is given the value of one and otherwise is zero
	$\delta_{2003}$	Year 2003 is given the value of one and otherwise is zero
	$\delta_{2004}$	Year 2004 is given the value of one and otherwise is zero
	$\delta_{2005}$	Year 2005 is given the value of one and otherwise is zero
	$\delta_{2006}$	Year 2006 is given the value of one and otherwise is zero
	$\delta_{2007}$	Year 2007 is given the value of one and otherwise is zero
	$\delta_{2008}$	Year 2008 is given the value of one and otherwise is zero
Industry dummy	Consumer discretionary	Value of one for company in consumer discretionary sector and zero otherwise
	Consumer staples	Value of one for company in consumer discretionary sector and zero otherwise
	Energy	Value of one for company in energy sector and zero otherwise
	Finance	Value of one for company in finance sector and zero otherwise
	Healthcare	Value of one for company in healthcare sector and zero otherwise
	Industrials	Value of one for company in industrial sector and zero otherwise
	Information and technology	Value of one for company in information and technology sector and zero otherwise
	Materials	Value of one for company in materials sector and zero otherwise
	Utilities	Value of one for company in utilities sector and zero otherwise
	Telecommunications	Dummy for telecommunications is included as part of the constant to avoid the problem of perfect multicollinearity

## 5.6 Summary

This chapter has discussed the research methodology and variable measurements employed in this study. The sample consisted of 200 Malaysian companies listed in the Bursa Malaysia continuously from 2000 to 2008. The final unbalanced panel dataset consisted of 1788 company – years. The main source of data is the annual reports obtained from the websites of Bursa Malaysia and individual companies. Supplementary or missing data is sourced from electronic databases (*Osiris, Mint Global and Thomson OneBanker*).

The chapter also expanded on the research empirical framework by specifying the models that will be used to test the hypotheses. The discussion also included the definitions and measurement of the proxies used to represent the theoretical constructs. Table 11 and Table 12 provide a summary of the independent and control variables that are included in the models.

The following chapter will elaborate on the statistical methods applied to test the hypotheses. It will also discuss the results of the hypotheses testing and their significance.



Figure 10 Disclosure Index of Executive Directors' Remuneration

Item	Coding Index	REFERENCE	
		FRS 124	
----- DISCLOSURE UNDER FRS 124 RELATED PARTY TRANSACTIONS-----			
1 Disaggregated remuneration	0 = No	<p>Para 16. An entity <u>shall disclose key management personnel compensation in total and for each of the following categories:</u></p> <ul style="list-style-type: none"> <li>(a) Short-term employee benefits</li> <li>(b) Post-employment benefits</li> <li>(c) Other long-term benefits</li> <li>(d) Termination benefits; and</li> <li>(e) Share based payment</li> </ul> <p>Para 9. Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity</p>	
	1 = Yes		
2 Disclosure of short-term benefits	0 = No	<p>Para 9. Short-term benefits include wages, salaries and social security contributions, paid annual leave and paid sick leave, short term profit-sharing and bonuses and non-</p>	
	1 = Yes		

		monetary benefits (medical care, housing, cars and free or subsidized goods or services) for current employees	
3 Disclosure of post-employment benefits	0 = No	Para 9. Post-employment benefits include pensions, other retirement benefits, post-employment life insurance and post-employment medical care	
	1 = Yes		
4 Disclosure of other long-term benefits	0 = No	Para 9. Other long-term benefits include long-service leave or sabbatical leave, jubilee or other long-service benefits, long-term disability benefits, long-term profit sharing, bonuses and deferred compensation	
	1 = Yes		
5 Disclosure of termination benefits	0 = No		
	1 = Yes		
6 Share based payment	0 = No		
	1 = Yes		

-----DISCLOSURE IN EXCESS OF FRS 124 -----

		MCCG	
7	Specific section for remuneration in directors' report	0 = No	
		1 = Yes	
8	Separate disclosure for individual executive directors	0 = No	
		1 = Yes	
9	Comparative period information	0 = No	
		1 = Yes	
10	Discussion on principles of remuneration	0 = No discussion	Para Aus.25.5 (a) Discussion of <b>board policy</b> for determining the <b>nature and amount of compensation</b> of key management
		1 = General discussion of process	

	<p><b>DIRECTORS' REMUNERATION</b></p> <p><b>Remuneration Policy</b></p> <p>The remuneration of Directors is determined at levels that enable the Company to attract and retain Directors with the relevant experience and expertise needed to assist in managing the Group effectively. The level of remuneration of Non-Executive Directors reflects the experience and level of responsibility undertaken by them.</p> <p><b>Remuneration Procedure</b></p> <p>The Remuneration Committee reviews and recommends to the Board the terms of employment of and all elements of the remuneration of the Managing Director, Executive Director and Senior Management personnel of the Company and its major subsidiaries. The Remuneration Committee also recommends the annual bonus and salary increment of the Executive Directors and Senior Management personnel. The Board, as a whole is responsible for the determination of the remuneration of the Managing Director and Executive Director. The Managing Director and Executive Director do not participate in decisions regarding their remuneration.</p>	<p>personnel of the entity</p> <p>Para Aus.25.5 (d) For each grant of a cash bonus, performance-related bonus or share-based payment compensation benefit, whether part of a specific contract for services or not, <b>the terms and conditions of each grant</b> affecting compensation in this or future reporting periods</p> <p>Para Aus.25.5 (e) For each contract, such further explanations as are necessary... to provide an understanding of <b>how the amount</b> of compensation in the current reporting period <b>was determined</b> and how the terms of the contract <b>affect</b> compensation in <b>future periods</b></p>	
	<p><b>2 = Detailed discussion of process</b></p> <ul style="list-style-type: none"> <li>To recommend a framework of remuneration for directors, CEO and key senior management officers from the full Board's approval;</li> <li>The remuneration framework shall support the Company's culture, objectives and strategy and shall reflect the responsibility and commitment which goes with the Board membership and responsibilities of the CEO and senior management officers;</li> <li>There shall be a balance in determining the remuneration package, which shall be sufficient to attract and retain directors of calibre, and yet not excessive to the extent the Company's funds are used to subsidise the excessive remuneration packages; and</li> </ul> <p>The framework shall cover all aspects of remuneration including director's fees, salaries, allowance, bonuses, options, benefits-in-kind and termination benefits.</p> <p>Remuneration Packages</p> <ul style="list-style-type: none"> <li>To recommend specific remuneration packages for executive directors and the Chief Executive Officer;</li> <li>The remuneration package shall be structured such that it is competitive and consistent with the Company's culture, objectives and strategy;</li> <li>Salary scales drawn up shall be within the scope of the general business policy and not be dependent on short-term performance to avoid incentives for excessive risk-taking;</li> <li>The remuneration of each Board member may differ based on their level of expertise, knowledge and experience. As for non-executive directors and independent directors, the level of remuneration shall be linked to their level of responsibilities undertaken and contribution to the effective functioning of the Board;</li> </ul>		

11 Discussion on pay and performance association	0 = No discussion	Para Aus.25.5 (b) Discussion of the relationship between such policy and the entity's performance	Part 1B: Levels of remuneration should be sufficient to attract and retain the directors (executive and non-executive) needed to run the company successfully. Whilst remuneration of executive directors should reflect corporate and individual performance, remuneration packages of non-executive directors should commensurate with their experience and level of responsibilities.
	1 = Broad discussion of pay and performance association (summary of performance benchmark) <p>and approval by the Board of Directors. In determining the level and make-up of the Director's remuneration, the Remuneration Committee would consider amongst others, the following:-</p> <ul style="list-style-type: none"> <li>• the remuneration supports the Group's objectives, culture and strategies;</li> <li>• the Group's performance for the year;</li> <li>• the individual's performance against established criteria and performance related elements, responsibility and accountability;</li> <li>• Non-Executive Directors' remuneration is in line with the level of contribution and taking into account, factors such as efforts and time spent and the responsibilities entrusted to them;</li> <li>• level of expertise, knowledge and experience; and</li> <li>• the Group's policy with regard to directors' fee, salaries, allowances, bonuses, options and benefits-in-kind and termination/retirement benefits.</li> </ul>	Para Aus.25.5 (c) If an element of the compensation of a key management person is dependent on the satisfaction of a performance condition: <p>(i) a detailed <b>summary of the performance condition</b>;</p> <p>(ii) an explanation of <b>why</b> the performance condition was <b>chosen</b>;</p> <p>(iii) a <b>summary of the methods</b> used in assessing whether the performance condition is satisfied and an explanation of <b>why those methods</b> were chosen</p> <p>(iv) if the <b>performance condition</b> involves a <b>comparison</b> with <b>factors external</b> to the entity:</p> <p>(A) a <b>summary of the factors</b> to be used in making the comparison; and</p> <p>(B) if any of the factors relates to the performance of another entity, of two or more other entities or an index in which the securities of an</p>	
	2 = Detailed discussion of pay and performance association		

		entity or entities are included – <b>the identity of that entity</b> , of each of those entities or of <b>the index</b> <b>[Further elaborated in para Aus.25.5 (f) to (h)]</b>	
-----DISCLOSURE UNDER FRS 2 SHARE BASED PAYMENT-----			
12 Options valuation and rights details	0 = No details disclosed	Para. Aus 25.7.1 The following details...shall be disclosed; (a) the number of options and rights over the reporting period [granted and vested] and (b) terms and conditions of each grant [fair value at grant date, exercise price, amount paid or payable, expiry date, exercise dates and performance hurdles that must be met before the equity is vested]	
	1 = Broad or partial details of options and rights granted		
	2 = Terms and condition of grants  <div style="border: 1px solid black; padding: 5px;"> <p>The salient features of the ESOS are as follows:</p> <p>(a) Eligible grantees are executives of the Group (including executive directors) who have been in the full time employment or under an employment contract of the Group for a period of at least twelve (12) full months of continuous service and whose employment have been confirmed in writing on or prior to the date of the offer. The eligibility for participation in the ESOS shall be based on the performance of the eligible grantees and shall be at the discretion of the ESOS Committee appointed by the Board of Directors;</p> <p>(b) The total number of shares to be offered shall not exceed in aggregate 10% of the issued and paid-up share capital of the Company at any point of time during the duration of the ESOS and out of which not more than 50% of the shares shall be allocated, in aggregate, to directors and senior management. In addition, not more than 10% of the shares available under the ESOS shall be allocated to any individual director or employee who, either singly or collectively through his/her associates, hold 20% or more in the issued and paid-up capital of the Company;</p> <p>(c) The extension of duration of the ESOS and the amendments to the existing ESOS By-Laws was approved by the Shareholders of the Company at the Extraordinary General Meeting held on 17 November 2006. On 4 January 2007, the duration of ESOS which was due to expire on 17 February 2008 had been extended for another 5 years to 17 February 2013.</p> <p>(d) The option price for each share, as determined by the ESOS Committee, shall be at a discount of not more than ten per cent (10%) from the weighted average of the market quotations of the Company's shares in the daily list issued by Bursa Securities for the five (5) market days preceding the date of offer, or at par value of the ordinary shares of the Company, whichever is higher;</p> <p>(e) The shares to be allotted upon any exercise of the option will upon allotment and issue rank pari passu in all respects with the existing ordinary shares of the Company provided always that the new shares so allotted will not be entitled to any dividends, rights, allotments and/or other distributions unless such new shares are specified as being credited to the Securities Account of the Grantee in the Record of Depositors maintained by the Company with Bursa Depository and requested by the Company from Bursa Depository for the purpose of determining persons entitled to such dividends, rights, allotments, and/or distributions in accordance with the Company's Articles of Association;</p> <p>(f) The employees' entitlements to the options are vested at the grant date; and</p> <p>(g) No option shall be granted for less than 1,000 shares and shall not be more than the maximum allowable allotment for each eligible grantee allowed under their respective categories.</p> </div>		
3 = Valuation method and options and rights			

	<p>value disclosed with valuation models input</p> <p><b>(iii) Fair value of share options granted during 2006</b></p> <p>The fair value of equity-settled share options granted is estimated as at the date of grant using a binomial model, taking into account the terms and conditions upon which the options were granted. The following table lists the inputs to the model used:</p> <table border="1"> <thead> <tr> <th></th> <th style="text-align: right;"><b>On 3 May 2006</b></th> </tr> </thead> <tbody> <tr> <td>Fair value of ESOS granted</td> <td style="text-align: right;">25 sen</td> </tr> <tr> <td>Weighted average share price (RM)</td> <td style="text-align: right;">1.36</td> </tr> <tr> <td>Weighted average exercise price (RM)</td> <td style="text-align: right;">1.36</td> </tr> <tr> <td>Expected volatility (%)</td> <td style="text-align: right;">40%</td> </tr> <tr> <td>90-day historical volatility (%)</td> <td style="text-align: right;">49.7%</td> </tr> <tr> <td>260-day historical volatility (%)</td> <td style="text-align: right;">36.8%</td> </tr> <tr> <td>Expiry date *</td> <td style="text-align: right;">17 February 2008</td> </tr> <tr> <td>Risk-free interest rate (%)</td> <td style="text-align: right;">3.65%</td> </tr> <tr> <td>Dividend yield (%)</td> <td style="text-align: right;">5.68%</td> </tr> </tbody> </table>		<b>On 3 May 2006</b>	Fair value of ESOS granted	25 sen	Weighted average share price (RM)	1.36	Weighted average exercise price (RM)	1.36	Expected volatility (%)	40%	90-day historical volatility (%)	49.7%	260-day historical volatility (%)	36.8%	Expiry date *	17 February 2008	Risk-free interest rate (%)	3.65%	Dividend yield (%)	5.68%		
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-----MANDATORY REQUIREMENT UNDER THE BURSA MALAYSIA LISTING RULE -----

<p>13 Disclosure by band as per Bursa Malaysia listing rule</p>	<p>0 = No bands provided</p> <p>1 = Provides disclosure by band</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2" style="text-align: center;">Number of directors</th> </tr> <tr> <th style="text-align: center;">2008</th> <th style="text-align: center;">2007</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Executive:</b></td> </tr> <tr> <td>RM800,001 up to RM850,000</td> <td style="text-align: center;">1</td> <td style="text-align: center;">-</td> </tr> <tr> <td>RM1,100,001 up to RM1,150,000</td> <td style="text-align: center;">-</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td style="text-align: center;"><b>1</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td colspan="3"><b>Non-Executive:</b></td> </tr> <tr> <td>RM50,000 and below</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> </tr> <tr> <td>RM100,000 up to RM150,000</td> <td style="text-align: center;">1</td> <td style="text-align: center;">-</td> </tr> <tr> <td>RM150,001 up to RM200,000</td> <td style="text-align: center;">-</td> <td style="text-align: center;">1</td> </tr> <tr> <td>RM1,500,000 up to RM1,550,000</td> <td style="text-align: center;">1</td> <td style="text-align: center;">-</td> </tr> <tr> <td>RM2,650,001 up to RM2,700,000</td> <td style="text-align: center;">-</td> <td style="text-align: center;">1</td> </tr> <tr> <td>RM4,750,001 up to RM4,800,000</td> <td style="text-align: center;">1</td> <td style="text-align: center;">-</td> </tr> <tr> <td>RM10,250,001 up to RM10,300,000</td> <td style="text-align: center;">-</td> <td style="text-align: center;">1</td> </tr> <tr> <td></td> <td style="text-align: center;"><b>5</b></td> <td style="text-align: center;"><b>6</b></td> </tr> </tbody> </table>		Number of directors		2008	2007	<b>Executive:</b>			RM800,001 up to RM850,000	1	-	RM1,100,001 up to RM1,150,000	-	1		<b>1</b>	<b>1</b>	<b>Non-Executive:</b>			RM50,000 and below	2	3	RM100,000 up to RM150,000	1	-	RM150,001 up to RM200,000	-	1	RM1,500,000 up to RM1,550,000	1	-	RM2,650,001 up to RM2,700,000	-	1	RM4,750,001 up to RM4,800,000	1	-	RM10,250,001 up to RM10,300,000	-	1		<b>5</b>	<b>6</b>		
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## **Chapter 6 Empirical results and analysis**

### **6.0 Introduction**

This chapter describes the results of the hypotheses testing. The study employed univariate, bivariate and multivariate analysis to test the hypotheses. The analysis was conducted using Eviews 7; a statistical software that allowed for an unbalanced panel dataset. The univariate analysis involved non-parametric testing because the skewness in the dataset ruled out a normal parametric t-test. The multivariate analysis was conducted mainly using panel GLS regression with fixed effects estimations and panel Logit regression.

### **6.1 Univariate analysis**

This section provides the descriptive statistics of the dataset and the results of the univariate analysis of the determinants of the disclosure of executive director remuneration.



### 6.1.1 Disclosure of executive directors' remuneration score

Table 13 Descriptive statistics for **total** executive directors' remuneration score from 2000 to 2008

Panel A					
	Mean	Median	Max	Min.	Std. Dev.
2000	0.1988	0.1429	0.6471	0.0000	0.0845
2001	0.4561	0.4286	0.8571	0.0714	0.1338
2002	0.5150	0.5000	1.0000	0.2857	0.1204
2003	0.5483	0.5000	1.0000	0.2143	0.1343
2004	0.5741	0.5714	1.0000	0.2143	0.1354
2005	0.5854	0.5714	1.0000	0.2857	0.1359
2006	0.6005	0.5882	1.0000	0.2857	0.1376
2007	0.6234	0.6429	1.0000	0.3571	0.1411
2008	0.6495	0.6471	1.0000	0.0714	0.1530
All	0.5275	0.5294	1.0000	0.0000	0.1842

Median  $\chi^2$  test = 330.3005 \*\*\*<sup>39</sup>  
Kruskal – Wallis (tie-adj.) = 698.1131\*\*\*<sup>40</sup>  
Jarque-Bera test = 19.0093 \*\*\*

Panel B Result of Mann Whitney Wilcoxon (tie-adj.) <sup>41</sup> tests				
		Mean Rank	Mean score	Value
YR 0001	2000	109.2050	-0.6919	
	2001	291.7950	0.7246	15.9376***
YR 0008	2000	103.2075	-0.7352	
	2008	297.7925	0.7671	16.9795***
YR 0108	2001	134.2300	-0.5428	
	2008	266.7700	0.54445	11.4858***

\*\*\* Significance at 1% level

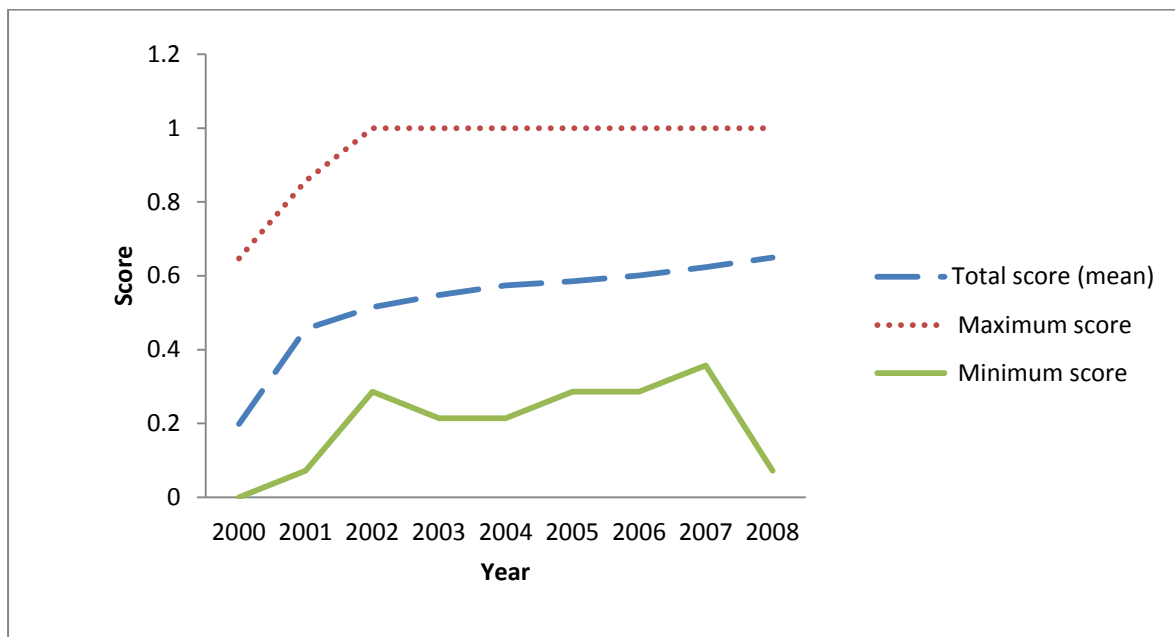
Panel A (Table 13) shows that the average total disclosure of executive director remuneration over the study period is 0.5275 ranging from the maximum of one to a minimum of zero. This indicates diversity in the extent of disclosure of executive directors' remuneration. The average total score shows a continuous improvement from 2000 to 2008 (Figure 11).

<sup>39</sup> The adjusted -median  $\chi^2$  test is a 'rank-based ANOVA test based on the comparison of the number of observations above and below the overall median in each sub-groups (Eviews Manual, page 318)'. The null hypothesis is that there are no differences in the medians of the groups.

<sup>40</sup> The Kruskal – Wallis (tie-adj.) is an application of the concept of the Mann Whitney test on more than two sub-groups.

<sup>41</sup> Mann Whitney Wilcoxon (tie-adj) is a non-parametric test. The test ranked the series from smallest to largest order. It then compares the mean rank from the two series. The null hypothesis of the test is that 'the two subgroups are independent samples from the same general distribution. The alternative hypothesis is that "the values of the first group are different from the values of the second group (EViews Manual)". The Jarque-Bera statistic rejects the hypothesis that the total score is normally distributed ( $p=0.0001$ ). It rules out the applicability of parametric test that depends on normality assumption. .

Figure 11 Total executive director remuneration disclosure score from 2000 to 2008



However, the trend of the average minimum score has not been consistent. There was a significant increase in the early part of the study, a decrease between 2002 and 2004, an improvement in 2005 and 2007 and a decline in 2008. The increasing periods are the years when new disclosure regulations were first introduced and the following years. This may reflect a learning period for companies when they react to the new regulations. The declining trends are in the years between new regulations. This may indicate that low disclosure companies first conform to new disclosure regulations by disclosing more but then fall back to previous patterns of disclosing less information.

The Mann Whitney Wilcoxon test (Table 13) shows a significant difference between the average total disclosure score of 2000 and 2001 ( $p = 0.0000$ ). This improvement can be explained by the introduction of MCCG and Bursa Malaysia listing rule for disclosures by bands in 2001. Tests between 2000 and 2008 also show a significant difference ( $p = 0.000$ ). 2008 encapsulates the regulatory requirement of the Listing Rule, FRS 2, FRS 124 and the MCCG. The final Mann Whitney Wilcoxon test in Panel B compares 2001 and 2008 and also

shows a significant difference between the scores. This indicates that the introduction of the FRS 2 and FRS 124 into the regulatory framework further improved the total disclosure of executive directors' remuneration. These results support hypothesis one that there was an improvement in the level of disclosure of executive directors' remuneration after the changes in Malaysian regulatory framework.

Table 14 Descriptive statistics for total voluntary score executive directors' remuneration score from the period 2000 to 2008

Panel A					
	Mean	Median	Max	Min.	Std. Dev.
2000	0.1988	0.1429	0.6471	0.0000	0.0845
2001	0.4203	0.3846	0.8462	0.0769	0.1411
2002	0.4817	0.4615	1.0000	0.2308	0.1291
2003	0.5174	0.4615	1.0000	0.2308	0.1437
2004	0.5449	0.5385	1.0000	0.2308	0.1446
2005	0.5462	0.5385	1.0000	0.2308	0.1585
2006	0.5577	0.5385	1.0000	0.2308	0.1584
2007	0.5800	0.6154	1.0000	0.3077	0.1614
2008	0.6104	0.6154	1.0000	0.0769	0.1667
All	0.4949	0.4615	1.0000	0.0000	0.1864

Median  $\chi^2$  test = 283.3632 \*\*\*

Kruskal – Wallis (tie-adj.) = 633.9115\*\*\*

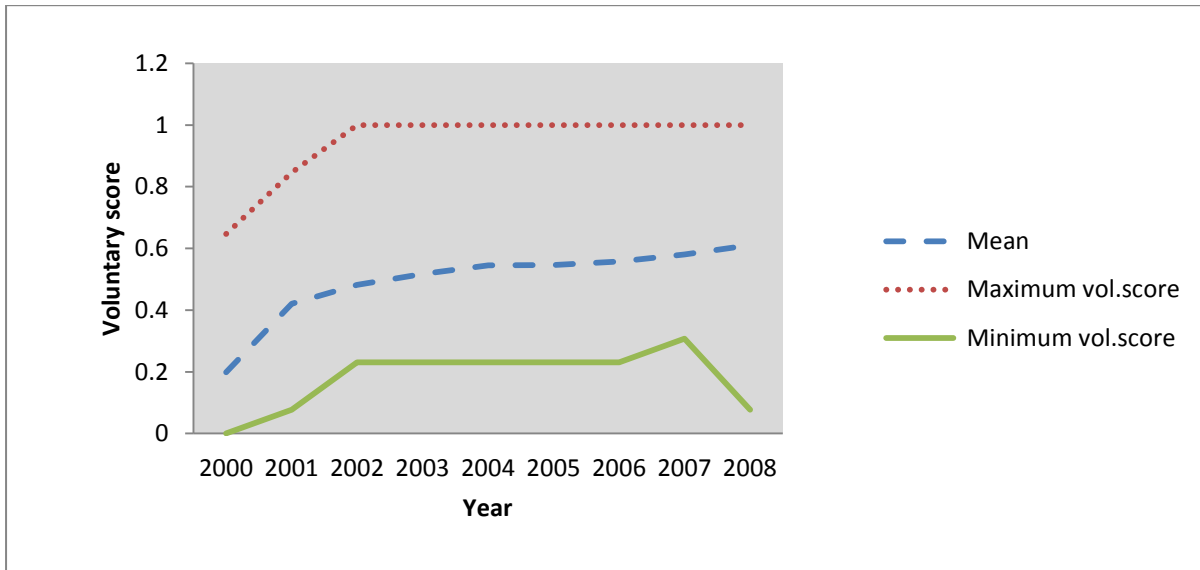
Jarque-bera test = 15.4351 \*\*\*

Panel B Result of Mann Whitney Wilcoxon(tie-adj) tests

		Mean Rank	Mean score	Value
YR 0001	2000	115.4650	-0.6509	
	2001	285.5350	0.6832	14.8433***
YR 0008	2000	104.0350	-0.7310	
	2008	296.9650	0.7589	16.8513***
YR 0108	2001	138.7225	-0.5060	
	2008	262.2475	0.5096	10.7199***

\*\* \*Significant at 1% level

Figure 12 Total executive directors remuneration voluntary disclosure score from 2000 to 2008



The voluntary score measure consists of items that are reported in excess of the mandatory requirements of the Listing Rule and FRS 2. In year 2000, there was no disclosure requirement. Therefore all disclosure of executive directors' remuneration was voluntary. Table 14 indicates that there are large variations in the level of voluntary disclosure from a maximum voluntary score of one to none at all. The introduction of the MCCG in 2001 significantly improved the level of voluntary disclosure from the previous year ( $p=0.0000$ ). The average voluntary score consistently improved over the years. This is supported by the Mann Whitney Wilcoxon tests on 2000 and 2008 and 2001 and 2008. However, there is a marked increase of minimum voluntary disclosure in 2007. This is consistent with the introduction of FRS 124 in 2006 that may have caused companies to voluntarily disclose more about executive directors' remuneration as they formed part of companies' 'key management personnel'. The results provide further support for hypothesis one that there was an improvement in the level of disclosure of executive directors' remuneration in Malaysia.

The minimum voluntary score trends appear to stabilize after 2001. However, there is a significant decline in the level of minimum disclosure in 2008. Low disclosure companies may initially disclose more information given the emphasis on remuneration in FRS 124 but eventually disclose less as it becomes clear that FRS 124 is very broad in its disclosure requirements. It only requires mandatory disclosure of ‘key management personnel’ remuneration but not for individual or total executive directors.

Table 15 Distribution of scoring by items for the pooled<sup>42</sup> sample from 2000 to 2008 (n = 1788)

Disclosure item	Score	Percentage of compliance			
		0	1	2	3
Disaggregated remuneration		67.62	32.38	NA	NA
Disclosure of short term benefits		16.22	83.78	NA	NA
Disclosure of post-employment benefits		67.90	32.10	NA	NA
Disclosure of other long term benefits		65.72	34.28	NA	NA
Disclosure of termination benefits		2.01	97.99	NA	NA
Disclosure of share based payment		0.22	99.78	NA	NA
Specific section for remuneration		20.36	79.64	NA	NA
Disclosure of individual remuneration		88.87	11.13	NA	NA
Comparative period information		45.53	54.47	NA	NA
Discussion on principles of remuneration		30.93	60.07	9.00	NA
Discussion on pay and performance association		73.99	24.89	1.12	NA
Options valuation and right details		0	1.18	88.31	10.51
Disclosure by bands		11.58	88.42	NA	NA

Score 0 is for non-compliance or undisclosed information. Score 1 is for compliance or disclosure of information. The additional score of 2 and 3 applies for items that are scored based on the extensiveness of the disclosure not on mere compliance. NA – The score is not applicable for the particular item.

Appendix 7 provides an overview of the distribution of individual item scores over the sample period. It shows that the introduction of the regulations and recommendations on disclosure of remuneration improved the level of disclosure for each item. The improvement was especially significant between the years 2000 and 2001. However, it shows that a

<sup>42</sup> The pooled sample combined all the observations from 2000 to 2008 of the 200 sample companies. The total observations consisted of 1788 annual reports or company years.

significant number of Malaysian companies did not reveal the remuneration of each individual executive director.

Based on the pooled sample over the nine year period, only 11.13 percent of the annual reports disclosed individual executive director's remuneration (Table 15). This is inconsistent with the recommendations of the MCCG. Prior to the introduction of MCCG in 2001, only one company provided disclosure of individual director's remuneration. In 2008, the number of companies that disclosed individual remuneration declined from 25 in 2007 to 19. Appendix 2 provides examples of narrative statements that some Malaysian companies used to justify a departure from the MCCG recommendation. For example, Kia Lim Berhad in their 2005 annual reports attempted to justify the departure by stating, "*Details of the remuneration of each Director are not disclosed due to security reasons*" (Kia Lim Berhad 2005).

There was similar resistance in Germany (Chizema 2008). He showed that, in 2005, three years after the German Code of Corporate Governance (KODEX) was introduced, a quarter of the sample companies (n=31/126) did not disclose individual executive remuneration as required by the KODEX. Chizema (2008) found that ownership structure, firm size, supervisory board and company age significantly influenced German companies' compliance with individual remuneration disclosure requirement.

Most Malaysian companies provided only a broad policy description of the principles behind their remuneration package over the sample years (n = 1074/1788 company-years). For

example, the remuneration policy of Advance Synergy Berhad was explained as follows, “*to ensure that the Company attracts and retains the right caliber of the Directors needed to run the Group successfully. The remuneration Committee reviews and recommends to the Board, the company remuneration policy for Executive Directors to ensure that they are appropriately rewarded for their contribution to the Group*” (Annual Reports Advance Synergy Berhad 2007). There is no disclosure on the actual policy, details of the principles or the terms of any remuneration policy. Over the period of 2000 to 2008, only 9 percent of the sample annual reports provided comprehensive details of the principles behind their remuneration packages. 73.99 percent of annual reports did not disclose the association between pay and performance. 24.89 percent of the sample annual reports did disclose some performance benchmark while 1.12 percent went further by providing a detailed summary of the performance threshold that executives had to achieve to earn their remuneration (Table 15).

Malaysian companies that issue share based payments are required to comply with the FRS 2 ‘Share based payments’. However, over the period of 2000 to 2008, only 10.51 percent of those companies’ annual reports adopted the mandatory disclosure requirements of FRS 2. The other companies failed to disclose their option valuation model, the input data and the assumptions associated with the model. The users of the annual reports thus could not make an independent assessment of the value of the executives’ options.

88.42 percent of the sample annual reports over the nine year period disclosed executive directors’ remuneration by bands. However, only ten companies disclosed this information before it was made mandatory by the Bursa Malaysian listing rule in 2001. After 2001, most

companies disclosed this information. Companies appeared to take advantage of the inconsistencies between the mandatory disclosure requirement to only disclosing by bands and the voluntary recommendation of the MCCG to disclose individual remuneration.

### 6.1.2 Descriptive statistics and univariate analysis of between score groups

Table 16 Summary statistics for independent variables of the pooled sample from 2000 to 2008 (n = 1788)

Variable	Definition	Mean	Median	Max	Min	Std. Dev
FAMOWN	Family members' share ownership	0.1952	0.0000	0.8490	0.0000	0.2346
SUBTOWN	Substantial share ownership in company (according to the Company's Act)	0.5434	0.5630	0.9654	0.0863	0.1654
GOV	Government share ownership (federal and state government shareholding)	0.1234	0.0513	0.8421	0.0000	0.1769
FORGN OWN	Foreign share ownership	0.1223	0.0392	0.9120	0.0000	0.1842
DIR OWN	Executive directors' share ownership	0.2633	0.2840	0.9384	0.0000	0.2263
LEV (DEBT TO EQUITY)	Leverage ratio (total liabilities to total equity)	1.7611	0.6981	128.527	-93.7633	6.1864
PROP INDP DIR	Percentage of independent directors on board	0.4052	0.3750	1.0000	0.0000	0.1212
AQ	Big-four audit firm =1 Non-big four audit firm = 0	0.6678	1.0000	1.0000	0.0000	0.4712
ASSET	Company size (RM 'million)	3685	499.5	269000	5.662	17881
ROE	Profitability (return on shareholders' equity)	0.0649	0.0613	27.6506	-3.8931	0.7622
MARKET TO BOOK	Market to book ratio (the market value of equity over the book value of equity )	1.2783	0.8000	91.8000	-42.6000	3.4207



The descriptive statistics (refer to Table 16) for the ownership structure of the sample Malaysian companies reflects the high degree of family and state ownership in publicly listed companies (Claessens, Djankov & Lang 2000). The largest government and family ownership in the sample was 84.21 percent and 84.9 percent respectively. Executive directors of the sample Malaysian companies on average held 26.33 percent of their companies' stocks. The average ownership by foreigners is 12.23 percent. The Board composition is on average had 40.52 percent of independent directors. As for the audit quality, 594 company years are audited by non-Big 4 audit firms and 1194 by Big 4 audit firms. There is also diversity in the companies' characteristics. The size of the sample companies proxied by total assets ranges from (RM) 5.662m to 269000m. More variance is observed in the ROE with a minimum of -3.8931 percent and maximum of 27.6506 percent while leverage is on average 1.7611. The market to book value of equity also differs ranging from -42.60 percent to 91.80 percent.

The next step in the research segregated the companies into low scoring and high scoring groups. The low scoring group consisted of companies with scores of less than 50 percent while the high scoring group is made up of companies with a score of 50 percent and more. The cut-off point is an arbitrary measure adopted by this study to distinguish between high and low scoring companies. 711 and 1077 of the sample annual reports were categorised as low score and high score respectively. The study used non-parametric tests to determine statistical differences between high total score and low total score groups for each of the specific independent variables. This test is used because the data set is not normally distributed and thus rules out the use of parametric tests. Non parametric tests are also not affected by outliers as it either ranks the means of the series or compares the medians (Aharony, Barniv & Falk 2010).

Table 17 Results of Mann Whitney Wilcoxon test on differences between high total score and low total score companies of the pooled sample from 2000 to 2008 (n = 1788)

Variable	Groups	Median	Mean rank	Mean score	Value	Probability
FAMOWN	Low score	0.0063	912.7669	0.0891	1.3399	0.1803
	High score	0.0000	881.6281	0.0443		
SUBTOWN	Low score	0.5646	898.3218	0.0198	0.2874	0.7738
	High score	0.5626	891.1509	-0.0130		
GOV	Low score	0.0465	872.1789	-0.085	1.4514	0.1467
	High score	0.0572	908.3853	0.0445		
FORGOWN	Low score	0.0218	824.1014	-0.1059	4.6602	0.0000***
	High score	0.0502	940.0799	0.1012		
DIROWN	Low score	0.2903	914.7338	0.0664	1.3840	0.1663
	High score	0.2674	880.3315	-0.0069		
LEV	Low score	0.6939	896.1338	0.0085	0.1419	0.8872
	High score	0.7012	892.5933	-0.0056		
P_INDD	Low score	0.3750	832.3028	-0.1378	4.1315	0.0000***
	High score	0.4000	934.6732	0.0919		
AQ	Low score	1.0000	867.5782	-0.0768	2.1539	0.0312**
	High score	1.0000	911.4183	-0.0082		
SIZE	Low score	418.747	844.8930	-0.0946	3.2664	0.0011***
	High score	552.097	926.3733	0.00623		
ROE	Low score	0.0515	822.6493	-0.1365	4.7459	0.0000***
	High score	0.0683	941.0371	0.0900		
MARKETOBOK	Low score	0.8000	875.2260	-0.0355	4.2850	0.2506
	High score	0.8000	903.8662	0.0234		

Number of low score sample = 711

Number of high score sample = 1077

\*\*\* Significant at the 1% level \*\* Significant at the 5% level

The tests results shown in Table 17 indicate that there are no statistical differences in the disclosure of executive directors' remuneration for the level of family ownership, substantial ownership, government ownership, executive director shareholdings, and leverage between low score and high score groups. This is contrary to agency theory arguments that suggest that the extent of ownership and debt level can influence the level of disclosure of executive directors' remuneration (Jensen & Meckling 1976). This leads to the rejection of hypotheses two, three, four, six and seven. However, high scoring companies are shown to have a higher level of foreign ownership. The median of foreign ownership for high scoring companies is 5.02 percent (mean score = -0.1059) compared to low scoring group median of 2.18 percent (mean score = 0.1012). Foreign shareholders may demand more transparency of executive remuneration given that the debates on pay performance sensitivities are more common in developed markets (Chizema 2008). This means that hypothesis five is accepted.

The rejection of hypotheses two (family ownership), three (substantial ownership), four (government ownership), six (executive director ownership) and seven (leverage) may be explained by an increasing presence of independent directors and foreign shareholders over the sample period. Appendix 5 shows that there had been consistent increases in the proportion of independent directors and foreign ownership. The average family ownership, substantial ownership, government ownership, executive director ownership and leverage appeared to fall. Independent directors and foreign shareholders may mitigate possible agency costs from insider owners by demanding more disclosure of executive directors' remuneration. Creditors may also depend on the higher presence of independent directors and foreign ownership to look after their interest instead of self-monitoring.

The two groups are also statistically different in terms of the independent directors on the board of directors. The high score group has a higher proportion of independent directors than the low score group. This result supports hypothesis eight of a positive association between the extent of the disclosure of executive directors' remuneration and the proportion of independent directors. This is consistent with the monitoring role that independent directors play in mitigating agency costs for minority and external shareholders (Chen & Jaggi 2000). The independent directors can demand more disclosure of remuneration to help shareholders assess the performance of the executives. The independent directors do not have the incentive to protect executives from public scrutiny by not disclosing details on remuneration. In addition, this result rejects the argument that independent directors are a substitute for disclosure.

Hypothesis nine states that there is positive association between audit quality and the level of disclosure. It is suggested that companies that are audited by big-4 audit firms are more likely to disclose more information. The Mann Whitney Wilcoxon result shows that there is a significant difference between the level of audit quality for low scoring and high scoring groups. The high scoring group has a significantly higher audit quality than the lower scoring group. This means that hypothesis nine is supported.

There is a statistically significant difference in the size (proxied by total asset) of low scoring and high scoring groups. The high scoring group has a larger median size than the low scoring group. This is consistent with legitimacy theory that suggests that bigger companies disclose more information to mitigate the political costs associated with non-disclosure (Patten, Dennis M. 1992). Another proxy for political cost is profitability when more profitable companies will have more visibility. These results mean that hypothesis ten is

accepted. There is a positive association between the extent of the disclosure of executive directors' remuneration and the size of the company.

In addition, from a signalling theory perspective, better performing companies disclose more information to distinguish themselves from poorly performing companies (Lang & Lundholm 1993). The result of the Mann Whitney Wilcoxon tests for return on equity (ROE) is consistent with the size proxy. High scoring companies have statistically higher profitability compared to the low scoring companies. This means that hypothesis eleven is accepted. There is a positive association between profitability and the level of disclosure of executive directors' remuneration.

The market to book ratio of equity represents the level of growth and the extent of proprietary costs. It is hypothesised that companies with higher growth are associated with higher proprietary costs and would disclose less information. However, the result of Mann Whitney Wilcoxon test shows that there is no significant difference between the market to book ratio of equity of low scoring and high scoring groups. Thus, the hypothesis twelve is rejected.

Table 18 Results of Mann Whitney Wilcoxon test on differences between high total voluntary score and low total voluntary score<sup>43</sup> companies of the pooled sample from 2000 to 2008 (n = 1788)

Variable	Groups	Median	Mean rank	Mean score	Value	Probability
FAMOWN	Low score	0.0000	900.1326	0.0771	0.5670	0.5867
	High score	0.0000	887.1481	0.0454		
SUBTOWN	Low score	0.5655	910.0180	0.0394	1.3870	0.1654
	High score	0.5608	876.1031	-0.0440		
GOV	Low score	0.0425	855.4406	-0.0394	3.3523	0.0008***
	High score	0.0677	937.0823	0.0937		
FORGNOWN	Low score	0.0242	848.6654	-0.0469	3.935	0.0001***
	High score	0.0523	944.6523	0.0924		
DIROWN	Low score	0.2827	898.3738	0.0361	0.3801	0.7039
	High score	0.2815	888.1132	0.0066		
LEV	Low score	0.6939	899.6023	0.0017	0.4851	0.6276
	High score	0.7015	887.7405	-0.0193		
P_INDD	Low score	0.3750	851.6092	-0.0920	3.6956	0.0002***
	High score	0.4000	941.3632	0.1041		
AQ	Low score	1.0000	850.8446	-0.1029	4.5810	0.0000***
	High score	1.0000	942.2174	0.0400		
SIZE	Low score	448.526	844.4496	-0.1001	4.2908	0.0000***
	High score	569.056	949.3626	0.1118		
ROE	Low score	0.0520	833.9353	-0.1140	5.2012	0.0000***
	High score	0.0737	961.1102	0.1274		
MARKETBOOK	Low score	0.7750	864.9952	-0.0508	2.3799	0.0173**
	High score	0.8300	923.1333	0.0566		

Low voluntary score = 943

High voluntary score = 845

\*\*\* Significant at the 1% level \*\* Significant at the 5% level

Table 18 shows the result of the Mann Whitney Wilcoxon test on differences between high voluntary score and low voluntary score. 943 and 845 of the annual reports were identified as low voluntary score and high voluntary score groups respectively. Consistent with the results of differences in the total score, there are statistical differences between size, return on equity, foreign ownership and the proportion of independent directors of low voluntary score and high voluntary score groups.

<sup>43</sup> The voluntary score measure is derived from the level of score in excess of the mandatory score.

However, government ownership appears to be statistically different between low voluntary score and high voluntary score groups. The high voluntary score group has a higher median and mean rank of government ownership than the low voluntary score group. This means that hypothesis four that there is a positive association between the extent of voluntary disclosure of executive directors' remuneration and government shareholding is accepted. This is consistent with Chizema (2008) who found that state controlled companies in Germany complied more with the requirement of disclosing individual executive's remuneration in order to set example to the market. This also may imply that external and minority shareholders in Malaysian state controlled companies demand more voluntarily disclosure to protect their interests (Eng & Mak 2003) .

The mean and median of the market to book ratio of equity is significantly higher in the high voluntary score group than in the low voluntary score group. The market to book ratio of equity represents the level of growth. Higher growth companies are hypothesised to incur more proprietary costs and hence disclose less information. However, the result has shown otherwise with high growth companies disclosing more information. This may imply that companies consider that the benefits of voluntarily disclosing information outweigh the proprietary costs of doing so. For example, studies have shown that companies with higher growth have higher information asymmetry because of the discretionary powers given to managers so that they can exploit growth opportunities (Bryan, Hwang & Lilien 2000). Consequently, shareholders of higher growth companies may demand more information to assess the performance of the managers.

The main limitation of a univariate analysis is that it does not consider the interaction between the explanatory variables. For example, larger companies may be associated with

higher profitability than smaller companies. A univariate analysis only provides a one way hypothesis testing between an explanatory variable and a specific dependent variable, holding other associations constant. The results cannot be generalised. Nonetheless, the results discussed in this section provide preliminary tests of the theoretical framework that is used in the study.

## 6.2 Bivariate analysis

### 6.2.1 The Pearson Coefficients of Correlation, $r$

The results of the Pearson Coefficient of Correlation ( $r$ ) provide indications of the validity of the explanatory variable in influencing the level of total and voluntary disclosure of executive director remuneration. The Pearson Coefficient of Correlation measures the linear association between an explanatory variable, holding other factors constant and the dependent variable, the disclosure of executive director remuneration. The covariance value gives the measure of how the two variables change or move mutually (Gujarati 1995). The correlation value provides a degree of the linear dependency between the variables. The results show that all the explanatory variables except for foreign ownership, low director ownership (director ownership < 10%) and growth (proxied by market to book ratio), have significant pair wise linear associations with total and voluntary scores of executive director remuneration. Although these variables are insignificant it does not mean that they should be dropped from the consequent models. The  $r$  only measures the strength of a pair wise linear association between the dependent and one explanatory variable. It does not consider interactions between multiple explanatory variables. Furthermore, the inclusion of the insignificant explanatory variables is based on the significant theoretical framework and dropping them may introduce omitted variable bias into the consequent analysis.



Table 19 Pearson correlation coefficients for total score (N = 1783)

	FAM OWN	SUBT OWN	GOV	FORGN OWN	DDIR OWN 01	DDIR OWN 0125	DDIR OWN 0025	DEBT TO EQUITY	PROP INDDIR	AQ	LN ASSET	ROE	MARKET TO BOOK
Covariance	-0.0020	-0.0014	0.0013	0.0009	0.0000	-0.0012	-0.0015	-0.0606	0.0040	0.0107	0.0299	0.0067	-0.0104
Correlation	-0.0466	-0.0462	0.0405	0.0274	0.0187	-0.0532	-0.0586	-0.0532	0.1804	0.1231	0.1086	0.0481	-0.0165
t-Statistic	-1.9685	-1.9509	1.7085	1.1580	0.7886	-2.2483	-2.4756	-2.2479	7.7391	5.2366	4.6099	2.0307	-0.6946
Probability	0.0492	0.0512	0.0877	0.2470	0.4305	0.0247	0.0134	0.0247	0.0000	0.0000	0.0000	0.0424	0.4874
	**	*	*			**	**	**	***	***	***	**	

Table 20 Pearson correlation coefficients for voluntary score (N = 1783)

	FAM OWN	SUBT OWN	GOV	FORGN OWN	DDIR OWN 01	DDIR OWN 0125	DDIR OWN 0025	DEBT TO EQUITY	PROP INDDIR	AQ	LN ASSET	ROE	MARKET TO BOOK
Covariance	-0.0023	-0.0014	0.0014	0.0011	0.0000	-0.0012	-0.0015	-0.0567	0.0037	0.0111	0.0308	0.0070	-0.0108
Correlation	-0.0530	-0.0459	0.0438	0.0318	0.0181	-0.0541	-0.0582	-0.0492	0.1663	0.1270	0.1107	0.0491	-0.0170
t-Statistic	-2.2387	-1.9409	1.8493	1.3423	0.7629	-2.2870	-2.4595	-2.0780	7.1169	5.4041	4.7004	2.0765	-0.7159
Probability	0.0253	0.0524	0.0646	0.1797	0.4456	0.0223	0.0140	0.0379	0.0000	0.0000	0.0000	0.0380	0.4741
	**	*	*			**	**	**	***	***	***	**	

## 6.3 Multivariate analysis

### 6.3.1 Classical Linear Regression Model (CLRM) Assumptions

There are a few classical assumptions that have to be made and satisfied before a valid statistical inference can be made from the models. If the first six assumptions are met, “*the OLS estimators are best linear unbiased estimators (BLUE)* (Gujarati 1995, p. 348).” According to the Gauss-Markov theorem, an OLS estimator with a BLUE property means that the OLS estimator has minimum variance and is the best estimate of the true population values. An efficient estimate has the lowest possible minimum variance. An unbiased estimate means that if the analysis is repeatedly made on different and larger samples, the average estimates converge on the true population values.

The first three assumptions are:

1. *The regression model is linear and correctly specified and has an additive error term*
2. *The error has a zero population mean*
3. *All explanatory variables are uncorrelated with the error term*

The first three assumptions are concerned with specification errors that may render the model inefficient. Specification errors may lead to higher and imprecise estimated standard errors and wider confidence intervals. The errors can be from redundant independent variables, omitted independent variables, measurement errors or incorrect functional forms. The models assume a linear association between the level of the score and the independent variables. Additional analysis also includes potential concave associations between different concentrations of director ownerships and the level of disclosure by applying dummy

variables based on ownership quartiles. The model also included error terms that may capture other explanatory variables that are not included or and unobserved but could influence the dependent variable.

Assumption II implies that, on average there is no association between Y and the error term and vice versa. Assumption III is not essential as this study involves a conditional regression analysis where the values of the dependent variables (Ys) are fixed numbers (Gujarati 1995). Conditional regression means that the multiple regression equation gives the conditional mean value of the score conditional upon the given values of the independent variables. The value of Y depends or is conditional on the values of Xs.

The Ramsey Reset Test can be used to formally test the first three assumptions. However, the test is currently not available for panel data analysis. Visual inspections of the residual plots may be used to assist in detecting specification errors. The inspection of the residual plots after correction for serial correlation and heteroscedasticity did not indicate distinct patterns that may reflect any specification errors. In addition, the models have been based on an extensive theoretical framework that would mitigate potential specification errors.

4. *Observations of the error term are uncorrelated with each other (there is no serial or auto correlation)*

Autocorrelation is defined as “*correlation between members of observations ordered in time (as in time series data) or space (as in cross sectional data)*” (Gujarati 1995, p. 378).<sup>44</sup> It means that any disturbance that affects one cross sectional unit or time unit would not affect another cross sectional unit or the subsequent time unit. For example, the effect of changes in board composition of a company on the level of disclosure would not affect another company’s disclosure policies. However, if it does, then there is autocorrelation. The former company may be viewed as a benchmark for corporate governance for the later company. The dependency reflects autocorrelation. Another example is where the presence of a learning curve before companies fully adapt to a new disclosure regulation may mean that an improvement in the level of the current year disclosure would impact the level of disclosure of the subsequent year. This means that autocorrelation is plausible in the study dataset. When there is autocorrelation, the ordinary least squares (OLS) estimators are no longer efficient and are biased. The variance and standard errors of the estimators would be understated and t-statistics overstated. It increases the chances of rejecting a null hypothesis and inferring a significant association between the dependent and independent variables. The adjusted  $R^2$  will also be an unreliable estimate (Gujarati 1995).

Autocorrelation can be formally tested by the Durbin-Watson  $d$  statistics (DWDS). The DWDS ranges between 0 and 4. As a general rule of thumb, a Durbin-Watson  $d$  statistic of approximately two indicates that there is no correlation, zero indicates a perfect positive

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<sup>44</sup> Consistent with Gujarati, the study uses the terms auto and serial correlation interchangeably. Alternatively, auto correlation can be defined as the lag of a series with itself and serial correlation is a correlation between two time series (Titner 1965).

correlation and four a perfect negative correlation. However, there is a DWDS table that can give specific critical values for the level of significance of 1% and 5%. The table gives a lower and upper  $d$  statistics based on the number of observations and dependent variables. A  $d$  statistic that lies between the critical values means that there is no inconclusive evidence of autocorrelation. The DWDS value for each equation estimated is shown in the appendices.

5. *The error term has a constant variance or homoscedastic (no heteroscedasticity)*

Homoscedastic is when “individual Y values are spread around their mean values with the same variance (Gujarati 1995, p. 154).” If the variance of the error term of the individual cross sectional unit is not constant, the assumption is violated and there is heteroscedasticity. The error term represents other independent variables that may potentially affect the level of disclosure of scores but are not accounted for in the model. For example, changes in the Malaysian political scene may influence government linked companies more than other companies. These changes may affect the GLCs disclosure policies on executive remuneration. Thus, there can be a higher variability in the level of disclosure of the GLCs compared to other companies. The variance of the error term is no longer constant between the different companies and this leads to heteroscedasticity. In addition, the study uses a sample of cross sectional data (companies) that represents different segments of the Malaysian market for example small, medium and large companies. This can lead to some scale effect that may lead to heteroscedasticity (Gujarati 1995). The presence of outliers may also lead to a non-constant variance of the error term. In the presence of heteroscedasticity, the estimates are still linear and unbiased but they do not have a minimum variance. The standard error of the co-efficient would be over (under)estimated and the t-statistic would be under (over)estimated. The statistical inferences made will no longer be valid as the

confidence intervals, the t-tests and the F-test of the level of significance are also incorrect. Any conclusions can be misleading.

Visual inspection of the residual plots reveals outliers and the pooling of various segments of the market leads to an assumption of a high probability of heteroscedasticity in the datasets. The Lagrange Multiplier (LM) Breusch–Pagan test was manually coded and run to test for the presence of heteroscedasticity. The null hypothesis of the test is that there is no heteroscedasticity. If the chi-square value of the LM statistic has a higher value than the critical chi-square value, the null hypothesis is rejected and there is a significant probability of heteroscedasticity. The study adopts a critical chi-square at the level of significance of 5% and the degree of freedom is based on the number of independent variables excluding the constant and error terms.

*6. No explanatory variable is a perfect linear function of any other explanatory variable  
(no perfect multicollinearity)*

Multicollinearity occurs when two explanatory variables significantly influence each other. If the association is perfectly linear, then there is perfect multicollinearity. When there is a perfect multicollinearity between two explanatory variables, the regression cannot find unique estimates of all factors since the standard errors are infinite (Gujarati 1995). No valid statistical conclusions can be made from the analysis. Although it will not violate the sixth assumption, an imperfect but high level of multicollinearity can influence the efficiency of OLS estimates. For example, an improvement in company profitability may also improve the assets of the company. If the correlation between these two variables is high, it may create

problems with the analysis. A high correlation may lead to higher variance and standard error of the estimates, larger confidence intervals and insignificant t-statistics. The adjusted  $R^2$  may be higher but with only a few significant t-statistics (Gujarati 1995).

The degree of multicollinearity can be measured by looking at a correlation matrix and variance inflation factor (VIF). A Pearson correlation matrix gives a pair wise correlation value that ranges between -1 to +1. Perfect multicollinearity is when the value is at either -1 or +1. A common threshold for a high degree of multicollinearity is at the absolute value of 0.80 (Gujarati 1995). A variance inflation factor of more than 5 is an accepted threshold of a multicollinearity problem. Unlike the Pearson correlation matrix that only gives a pair wise correlation value, the VIF considers the correlation coefficient of an explanatory variable against all other explanatory variables.

#### *7. The error term is normally distributed*

The error term is normally distributed when the mean is zero and the variance is constant. A normal distribution allows for a comparison of the estimators and the real values of a population. The Central Limit Theorem states that when there is a large sample size, with some exceptions, the distribution of the error term is more likely to be normal. The Jarque – Bera test can be applied to test for normality. The test is based on the model residual. The null hypothesis states that the error term is normally distributed. If the null hypothesis is rejected at the applied level of significance then the error term may be inferred to be not normally distributed. Although this assumption is operational, it is not required under the Gauss Markov Theorem. A model can still be BLUE (Best Linear Unbiased Estimators) even

if the error term is not normally distributed as long as Assumptions I to VI hold. The results of the Jarque-Bera tests are reported in the Appendix.

### **6.3.2 Model specifications**

This section described the results of the tests run to test the consistency of the models to the Gauss Markov Theorem. The tests are first conducted on the basic models or equations (Equation 1 and Equation 2). Further tests are then conducted on the advanced models or equations that included winsorised estimates, industry classifications, disclosure of individual remuneration, period analysis and comparative analysis of high and low scoring groups. In total, there are 26 equations that are tested.

#### **6.3.2.1 Serial correlation**

The (un-weighted) Durbin-Watson *d* statistics of the models show that there is problem of serial correlation in the dataset (see Appendix 10 to 23). Their values are less than 2 and are indications of serial correlation. Consistent with Clarkson et al. (2006), the study adopts panel Generalised Least Square (GLS) that corrects for serial or autocorrelation in panel regression. A panel GLS model incorporates the nature of autocorrelation and heteroscedasticity in the estimation by transforming the variables with each company weight. A panel OLS model does not allow for this. If there is no autocorrelation and heteroscedasticity, the estimates of OLS and GLS should be consistent with each other (Gujarati 1995).

#### **6.3.2.1 Heteroscedasticity**

The results of the Lagrange Multiplier (LM) Breusch–Pagan tests on the models show that there are problems with heteroscedasticity in the dataset. All the LM tests except for Equations 11 and 14 rejected the null hypothesis that there was no heteroscedasticity. The LM statistics are significantly higher than the critical Chi-square values at a level of



significance of 5%. The application of panel GLS corrects for the heteroscedasticity. In addition, the study also applies robust White's cross section standard errors that are consistent with heteroscedasticity.

Table 21 Result of the LM Breusch-Pagan tests

	Auxiliary regression $R^2$	LM-stat	d. f	Chi-sq. critical value	$H_0$
Equation 1	0.0657	116.8966	13	22.3620	rejected
Equation 2	0.0613	109.2256	13	22.3620	rejected
Equation 3	0.0754	114.0212	13	22.3620	rejected
Equation 4	0.0715	127.4873	13	22.3620	rejected
Equation 5	0.0499	89.0305	21	32.6706	rejected
Equation 6	0.0501	89.3411	21	32.6706	rejected
Equation 7	0.0576	102.7184	21	32.6706	rejected
Equation 8	0.0569	101.4405	21	32.6706	rejected
Equation 9	0.0465	82.8129	13	22.3620	rejected
Equation 10	0.0365	65.0722	13	22.3620	rejected
Equation 11	0.0053	13.0561	13	22.3620	not rejected
Equation 12	0.0361	64.3065	13	22.3620	rejected
Equation 13	0.0175	31.2160	13	22.3620	rejected
Equation 14	0.0068	14.3290	13	22.3620	not rejected
Equation 15	0.0486	86.6689	13	22.3620	rejected
Equation 16	0.0455	81.2014	13	22.3620	rejected
Equation 17	0.0502	22.4536	13	22.3620	rejected
Equation 18	0.0401	71.5808	13	22.3620	rejected
Equation 19	0.0190	33.7972	13	22.3620	rejected
Equation 20	0.0503	22.4584	13	22.3620	rejected
Equation 21	0.0393	69.9910	13	22.3620	rejected
Equation 22	0.0161	28.6444	13	22.3620	rejected
Equation 23	0.0201	35.8156	13	22.3620	rejected
Equation 24	0.0459	81.8997	13	22.3620	rejected
Equation 25	0.0433	77.2186	13	22.3620	rejected
Equation 26	0.0817	145.7416	13	22.3620	rejected

### 6.3.2.2 Multicollinearity tests

#### 6.3.2.2.1 Pearson Correlation Matrix

The pair wise correlation co-efficient of the explanatory variables did not show any co-efficient that has value higher than 0.80 (see Table 19 and Table 20). A value of more than

0.80 indicates high correlation between two of the explanatory variables. This result indicates that there is no serious problem of multicollinearity that can undermine the models.

#### 6.3.3.2.2 Variance Inflation Factors

The result of the VIF test also showed that no explanatory variable had a VIF value of more than 5 (Table 22 to

Table 23). The highest value is 4.0390 for director ownership of between 10% and 25%. This is consistent with the results of the correlation matrix (Table 24). There is no high multicollinearity observed in the models.

Table 22 Variance inflation factors for total score

Variable	Coefficient Variance	Centered VIF
FAM_OWN	0.0004	2.7565
SUBT_OWN	0.0005	1.4263
GOV	0.0006	1.7573
FORGN_OWN	0.0003	1.4722
DDIROWN01	57.1995	1.2964
DDIROWN0125	0.0028	4.0390
DDIROWN0025	0.0023	3.9475
DEBT_TO_EQUITY	0.0000	1.4684
PROP_INDDIR	0.0008	1.2923
AQ	0.0000	1.2362
LN_ASSET	0.0000	1.7714
ROE	0.0000	1.2842
MARKETBOOK	0.0000	1.6646

Table 23 Variance inflation factors voluntary score

Variable	Coefficient Variance	Centered VIF
FAM_OWN	0.0005	2.7758
SUBT_OWN	0.0006	1.3954
GOV	0.0007	1.6592
FORGN_OWN	0.0004	1.4800
DDIROWN01	68.6909	1.2933
DDIROWN0125	0.0034	3.9759
DDIROWN0025	0.0027	3.9006
DEBT_TO_EQUITY	0.0000	1.4286
PROP_INDDIR	0.0010	1.2853
AQ	0.0001	1.2087
LN_ASSET	0.0000	1.6843
ROE	0.0000	1.2630
MARKETBOOK	0.0000	1.6747

Table 24 Correlation matrix for independent variables - quartile director ownership

	FAM OWN	SUBT OWN	GOV	FORGN OWN	DDIR OWN01	DDIR OWN 0125	DDIR OWN0025	DEBT TO EQUITY	PROP INDDIR	AQ	LN ASSET	ROE	MARKET TO BOOK
FAM OWN	1.0000												
SUBT OWN	0.1837	1.0000											
GOV	-0.2170	0.2748	1.0000										
FORGN OWN	-0.1087	0.1845	-0.1381	1.0000									
DDIROWN01	-0.1592	0.0349	0.1021	0.0093	1.0000								
DDIROWN0125	0.6094	0.0580	-0.3433	-0.1340	-0.2185	1.0000							
DDIROWN0025	0.6649	0.2808	-0.2503	-0.1414	-0.1625	0.7402	1.0000						
DEBT_TO_EQUITY	-0.0285	-0.0123	0.0732	-0.0539	-0.0069	-0.0857	-0.0736	1.0000					
PROP_INDDIR	-0.1970	-0.1184	-0.0215	-0.0459	-0.0153	-0.1147	-0.0883	0.0632	1.0000				
AQ	-0.0909	0.1425	0.1192	0.1636	0.0655	-0.0903	-0.0693	0.0057	0.0666	1.0000			
LN_ASSET	-0.0892	0.0985	0.2584	0.1324	0.1614	-0.1367	-0.1184	0.2292	0.0097	0.1771	1.0000		
ROE	-0.0009	0.0369	0.0033	0.0528	-0.0012	-0.0255	-0.0035	-0.3034	0.0173	0.0166	0.0049	1.0000	
MARKETBOOK	0.9697	0.1195	0.8880	0.0256	0.9601	0.2819	0.8838	0.0000	0.4661	0.4833	0.8377	-----	1.0000
	0.0025	0.0082	0.1798	0.0000	0.8713	0.0000	0.0023	0.0000	0.4408	0.0007	0.0050	0.0000	-----

### **6.3.2.1** *Summary of the BLUEness of the models*

The tests show that there are violations of the Gauss-Markov Theorem. Assumptions IV and V are violated with the detection of possible serial correlation and heteroscedasticity. If there is no correction to the models, they will not give the best linear and unbiased estimators (BLUE). This will affect the validity of any statistical inference. The study adopts panel Generalised Least Square (GLS) that corrects for serial or autocorrelation and heteroscedasticity in panel regression. Clarkson et al. (2005) argued that a panel GLS would give a more efficient estimate as it takes into account the companies' individual correlation coefficients in estimating the autoregressive parameters of each company. A heteroscedasticity consistent standard error is also applied to ensure the robustness of the models. These procedures resolve the problems identified from the diagnostic tests and ensure that the models are consistent with the Gauss-Markov Theorem.

### **6.3.2.2** *Additional assumption for panel data: fixed effect estimator*

The study applies panel data multivariate regression that incorporates cross sectional (companies) and time (years) dimensions. Unlike pooled regressions that combine all cross sectional units and years into a collective sample, panel data allows for the individual companies to retain their identification and for the years to be distinct. Panel regression also takes into account the heterogeneity or the individuality of companies and years. The individual characteristics may not have been captured by the model's explanatory variables. For example, executive directors' management style, the enforcement of disclosure requirements, the public reputation of a company and other unobserved variables may influence the level of disclosure of executive directors' remuneration for a specific company. Furthermore, one specific year may have a unique effect on the level of disclosure more than the rest of the sample years. For example, the level of disclosure in 2001 may be unique compares to the other years since it was the first year that the MCCG was introduced.

These unobserved effects would be captured by the error term. The error term can be represented by:

$$u_{it} = \mu_{it} + v_{it}$$

The  $u_{it}$  is the error term that consists of  $\mu_{it}$  that is the individual unobserved effects and  $v_{it}$  is other disturbances that affect all sample units and times (Baltagi 2008). If there is any correlation between the unobserved effects and explanatory variables, the estimates may be inconsistent and biased. This would be a violation of assumption III of the Gauss Markov Theorem that there is no correlation between the explanatory variables and the error term. The unobserved effects can be either fixed or random across the cross sections and time periods. The Hausman's specification test is used to test whether to include fixed or random effects in the panel regressions. The Hausman's specification test null hypothesis is that individual effects are uncorrelated with the other explanatory variables when a random effect is applied. If the null hypothesis is rejected the fixed effects should be applied. A fixed effect model assumes that the coefficient and intercepts of the individual unit is constant across time.

The Hausman's specification tests except for Equations 24 and 26 (Table 25) reject the null hypotheses of random effects. The study adopts fixed effects estimates in all of the models<sup>45</sup>. It is important to note that, the study assumes a one way cross sectional effect that creates a dummy variable for each company (n = 200). The time period effect is applied manually by creating dummy variables for the years. This allows for the application of panel GLS. A

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<sup>45</sup> The study decided to apply fixed effect estimates on Equation 24 and Equation 26 given that the result of the redundant fixed effect tests are more robust as it allows for the use of robust standard error that correct for heteroscedasticity.

panel GLS cannot be applied automatically with both cross-sectional and period fixed effects simultaneously selected in the Eviews software. However, creating dummy year variables allows for both effects to be manually applied at the same time.

Table 25 Hausman's specification tests

	Chi-Sq. Statistic	Probability
Equation 1	64.0267	0.0000
Equation 2	49.0961	0.0001
Equation 3 – 4*	Not available	
Equation 5	61.6247	0.0000
Equation 6	47.0047	0.0001
Equation 7 – 8*	Not available	
Equation 9 – 10**	Not applicable	
Equation 11***	Not applicable	
Equation 12	34.1507	0.0011
Equation 13	29.6021	0.0054
Equation 14***	Not applicable	
Equation 15	34.3761	0.0011
Equation 16	24.9547	0.0234
Equation 17***	Not applicable	
Equation 18	33.9662	0.0012
Equation 19	31.1607	0.0032
Equation 20***	Not applicable	
Equation 21	33.9233	0.0012
Equation 22	25.1132	0.0223
Equation 23	44.3312	0.0021
Equation 24	19.2969	0.5661
Equation 25	44.3324	0.0021
Equation 26	23.3685	0.3247

\* The models included dummies for industry classifications that will not allow for simultaneous random effect estimates because it will create duplicate dummy individual dummy variables for each company.

\*\* The models are logit regressions that do not allow for fixed or random effects.

\*\*\* The models are annual OLS regressions that do not allow for fixed or random effects.

As a robustness test, the Redundant Fixed Effect tests were also run to test the validity of the inclusion of the cross sectional individual fixed effects in the models. The null hypothesis of the Redundant Fixed Effect test is that the fixed effects are not necessary or redundant. All results reject the hypothesis that the cross - sectional fixed effects are redundant (Table 26).

Table 26 Redundant Fixed Effect Tests for cross section fixed effects

	Statistics	Degree of freedom	Probability
Equation 1	19.6646	(199, 1566)	0.0000
Equation 2	19.5622	(199, 1566)	0.0000
Equation 3 – 4*	Not available		
Equation 5	18.8717	(199, 1566)	0.0000
Equation 6	18.6773	(199, 1566)	0.0000
Equation 7 – 8*	Not available		
Equation 9 – 10**	Not applicable		
Equation 11***	Not applicable		
Equation 12	25.2649	(199, 579)	0.0000
Equation 13	14.1551	(199, 573)	0.0000
Equation 14***	Not applicable		
Equation 15	6.2261	(199, 582)	0.0000
Equation 16	12.9626	(199, 576)	0.0000
Equation 17***	Not applicable		
Equation 18	23.9281	(199, 579)	0.0000
Equation 19	103.1019	(199, 573)	0.0000
Equation 20***	Not applicable		
Equation 21	24.9740	(199, 579)	0.0000
Equation 22	132.0953	(199, 573)	0.0000
Equation 23	11.8200	(197, 489)	0.0000
Equation 24	3.0951	(197, 489)	0.0000
Equation 25	6.7566	(161, 660)	0.0000
Equation 26	4.0180	(197, 721)	0.0000

\*The models include dummies for industry classifications that will not allow for simultaneous fixed effect estimates because it will create duplicate dummy individual dummy variables for each company.

\*\* The models are logit regressions that do not allow for fixed or random effects.

\*\*\* The models are annual OLS regressions that do not allow for fixed or random effects.

## 6.3.2 Multiple regression result and discussion

This section provides the results of the multiple regression and hypotheses testing.

### 6.3.2.1 Panel data result

#### 6.3.2.1.1. Hypothesis testing on determinants of total disclosure score

The first equation (Equation 1) analyses the determinants of the total disclosure of executive directors' remuneration from 2000 to 2008. The adjusted R-squared value of the model is 84.93% which means that 84.93% of the variation in the total disclosure of executive



directors' remuneration is explained by the explanatory variables. The F-statistic is significant at the 1% level and means that there is at least one explanatory variable that is non-zero and significantly influences the level of disclosure. The dummy year variables are incorporated in the model to test for the evolving disclosure requirements throughout the sample period. The year 2000 is the base year and is part of the intercept (C). The dummy years are shown to be statistically significant. The coefficients for the dummy years significantly increased over time from 0.2622 in 2001 to 0.4193 in 2008. A Wald test of the equality of the coefficients was also conducted to confirm the statistical differences between the coefficients (Table 27). The null hypothesis for the Wald test is that the coefficients for a pair of the dummy years are equal. If the F-test value is significant then the null hypothesis is rejected and it can be assumed that the coefficient for the individual dummy year is different. The result of the Wald test rejects the null hypothesis that the coefficients are equal ( $p=0.0000$ ). The results are consistent with the findings of the non-parametric testing that found significant mean differences between the different years. The panel regression result supports the first hypothesis that there was an improvement in the level of disclosure of executive directors' remuneration after the changes in the Malaysian disclosure requirements.

From an agency theory perspective, a family controlled company may disclose less information to protect the family's interests (Chen & Jaggi 2000). The directors could be family members or family associates. The sample shows that on average 20.46% of the directors on the board are family connected. Extensive disclosure of executive directors' remuneration may draw attention to the dominance and influence of the family ownership on company policies. There may also be less demand of information because family shareholders could use their insider status to gain access of private information without relying on public disclosure. Consequently, Hypothesis 2 states that there is an inverse

association between the level of disclosure of executive directors' remuneration and the level of family ownership. The result supports the hypothesis and shows that an increase in 1% in family ownership significantly decreased the total disclosure of executive directors' remuneration by 4.88%. The result is consistent with Mohd Ghazali and Weetman (2006) who found that the influence of a dominant family on the disclosure policies of Malaysian companies continued even after the introduction of the MCCG. They argued that the Malaysian market is still held captive by traditional family dominance that exerts significant power over companies.

The tests reject Hypothesis 3 of an inverse association between ownership concentration (SUBT\_OWN) and the level of disclosure of executive directors' remuneration. The sign is as predicted but it is not statistically significant. This is inconsistent with Shan (2009), Luo et. al (2006), Barako et. al (2006) and Babio and Vazquez (2005). However, the result is consistent with Depoers (2000) and Raffournier (1995) who also found an insignificant association between ownership concentration by substantial shareholders and the level of disclosure. They attributed their insignificant findings to a significant correlation between company size and ownership concentration. They argued that company size may have captured the association of ownership on the level of disclosure. In this study, significant pair wise correlations (but not high) were shown between ownership concentration (SUBT\_OWN) and other ownership variables; family, government and foreign ownership. These mean that the main substantial shareholders include family, government and foreign shareholders. In addition, company size also has a significant correlation with shareholder concentration.

Hypothesis 4 states that there is a positive association between the level of government ownership and the level of disclosure of executive directors' remuneration. There is a potential exploitation of other shareholder interests by the government. Eng and Mak (2003) argued that government linked companies would disclose more information to satisfy the demand of other shareholders for assurance that their wealth is not being diverted to pursue pure national interests. The introduction of the MCCG may also have compelled government linked companies to set an example by complying with the disclosure requirements. Chizema (2008) found that Germany companies with high state ownership significantly complied with the KODEX requirements for disclosure of individual executive remuneration. However, the association was not statistically significant in this study and Hypothesis 4 is rejected. The insignificant result is consistent with Huafang and Jianguo (2007), Mohd Ghazali and Weetman (2006), Makhija and Patton (2004).

Foreign shareholders may be exposed to more corporate governance issues than local shareholders. Geographical and cultural barriers may also lead them to demand more information to protect their investment (Shan 2009). Consequently, hypothesis 5 states that there is a positive association between the level of executive directors' remuneration and the level of foreign ownership. However, the panel regression rejects this hypothesis. The result is not consistent with Shan (2009), Huafang and Jianguo (2007), Barako et al. (2006) and Haniffa and Cooke (2002). However, Chizema (2008) also did not find significant association between foreign ownership and the level of disclosure. The result may be attributed to the level of foreign shareholdings in Malaysian companies that is still in a recovery phase post the financial crisis. Their level of ownership may not be sufficient to exert pressure on companies' disclosure policies.

Hypothesis 6 is based on the argument that there is a convex association between director ownership and the level of disclosure. Share ownership is used to align the interests of the executive directors to that of the shareholders and to mitigate agency problems. Leung and Horwitz (2004) argued that there was a convex association between the level of directors ownership and agency costs. At a lower level of director ownership, executive directors may disclose more about director remuneration to prove that they are working for the interests of the shareholders. However, at a higher level of ownership, the executive directors may use their influence to limit the level of disclosure and conceal potential expropriation. Hypothesis 6 was tested using three dummy variables that reflect quartiles in director shareholding (DDIROWN01, DDIROWN0125 and DDIROWN0025). However, there were no statistically significant associations between executive directors' ownership at different quartiles and the level of disclosure of executive directors' remuneration. This leads to the rejection of Hypothesis 6. It is noted that the signs of the coefficients of director ownership below of 10% and between 10 % and 25% are negative and is positive for director ownership of more than 25%. The result is inconsistent with Leung and Horwitz (2004) and Gelb (2000).

Hypothesis 7 states that there is a positive association between leverage (DEBT\_TO\_EQUITY) and the level of disclosure of executive directors' remuneration. Creditors are involved in an agency relationship with the companies and have incentives to demand more information to ensure that executives are not neglecting debt commitments or covenants (Wallace & Naser 1995). The coefficient sign of the hypothesis testing is consistent with the prediction but is not statistically significant. Thus, the hypothesis is not accepted. This may mean that creditors put more emphasis on policies other than executive

remuneration in considering the credit worthiness of companies and the risk of default. Depoers (2000) and Ho and Wong (2001) also did not find significant a association between leverage and the level of disclosure by French and Hong Kong companies, respectively.

As a third party governance mechanism, independent directors have a role to protect the interests of shareholders from agency costs. They also have incentives to push for more disclosure of remuneration to protect their own reputation of impartiality (Liu, Jinghui. & Taylor 2008). The test result supports hypothesis 8 that a higher proportion of independent directors is associated with a significantly higher level of disclosure of executive directors' remuneration. The panel regression shows that an increase of 1% in the proportion of independent directors on a board improves the level of total disclosure by 7.66%. This result also invalidates the concerns of Haniffa and Cooke (2002) that Malaysian independent directors may lack impartiality and effectiveness because they were often nominated by the controlling parties. This result is consistent with Liu and Taylor (2008), Clarkson et al. (2006), Babío Arcay and Muiño Vázquez (2005), Leung and Horwitz (2004), Conyon et al. (2002) and Chen and Jaggi (2000).

The employment of an external auditor is another corporate governance mechanism to protect the interests of shareholders. It is argued that the employment of a reputable external auditor improves the level of compliance with disclosure requirements and thus improves the level of disclosure (Bassett, Koh & Tutticci 2007). Hence, hypothesis 9 states that companies that have a Big-4 auditor as their external auditor would have a significantly higher level of disclosure of executive directors' remuneration than other companies. However, the study rejects this hypothesis and does not find a significant association between the level of audit

quality and the level of disclosure. Other studies that also found insignificant associations between audit quality and the level of disclosure are Owusu-Ansah (1998), Wallace et al. (1994) and Cooke (1992).

Hypothesis 10 is based on the perspective of legitimacy theory that companies need to protect their existence in the market by ensuring that they meet society's expectations (Lindblom 1983). Company legitimacy may be threatened if the public perceives that they are paying excessive remuneration without justification. Companies have an incentive to manage the perceptions of society by disclosing sufficient information about their remuneration schemes (Liu, Jinghui. & Taylor 2008). The threat to legitimacy may be greater for larger companies because they are more visible and dependent on society's approval for their continuance (Hagerman & Zmijewski 1979). Furthermore, larger companies have been shown to pay their executives more and are more susceptible to public and political scrutiny. Thus, hypothesis 10 states that there is a positive association between the level of executive directors' remuneration disclosures and the company size (LN\_ASSET). The test supports the hypothesis. The result is consistent with Shan (2009), Liu and Taylor (2008), Chizema (2008), Huafang and Jianguo (2007), Clarkson et al. (2006), Hossain et al. (2005) and Haniffa and Cooke (2002).

According to signalling theory, companies are better off disclosing all information to the market so that all investors are well informed (Lang & Lundholm 1993). However, good news tends to be disclosed quicker and more extensively than bad news (Wallace & Naser 1995). Managers of profitable companies may have an incentive to signal their superior performance over other managers by disclosing more information about their pay and their

performance sensitivities. Consequently, hypothesis 11 states that there is a positive association between profitability (ROE) and the level of disclosure of executive directors' remuneration. However, the test result does not show a significant association between these variables and thus hypothesis 11 is rejected. Clarkson et al. (2006), Barako et al. (2006) and Nelson and Percy (2005) also found an insignificant association between profitability and the level of disclosure.

Finally, Hypothesis 12 is based on proprietary costs. Companies with higher growth need to protect their proprietary information. Revealing too much information may lead to significant proprietary costs. Disclosure of executive directors' remuneration of a high growth company may attract bids from rival companies that seek to lure the managerial talents to their companies. Hence, the hypothesis states that companies with high growth (MARKETBOOK) are associated with less disclosure of executive directors' remuneration. However, the test result is not significant and does not support the hypothesis. Clarkson et al. (2006), Mohd Ghazali and Weetman (2006), Eng and Mak (2003) and Cahan and Hossain (1996) also did not find a significant association between proprietary costs and the level of disclosure.

Equation 1 Panel GLS result of determinants of total score from 2000 to 2008 (N=1783)

Variable	Pred. sign	Coefficient	t-Statistic	Prob.	
C		-0.3246	-6.7791	0.0000	***
FAM_OWN	-	-0.0555	-3.4825	0.0005	***
SUBT_OWN	-	0.0265	1.2403	0.2151	
GOV	+	0.0314	1.5877	0.1125	
FORGN_OWN	+	-0.0093	-0.7037	0.4817	
DDIROWN01	?	-2.0507	-0.8417	0.4001	
DDIROWN0125	?	0.0281	1.1059	0.2689	
DDIROWN0025	?	-0.0085	-0.4697	0.6386	
DEBT_TO_EQUITY	+	0.0003	1.1795	0.2384	
PROP_INDDIR	+	0.0386	2.2807	0.0227	**
AQ	+	0.0078	0.9541	0.3402	
LN_ASSET	+	0.0382	13.0287	0.0000	***
ROE	+	0.0011	0.6757	0.4993	
MARKETBOOK	-	-0.0005	-0.7294	0.4659	
$\delta 2001$		0.2622	261.7847	0.0000	***
$\delta 2002$		0.3178	205.9616	0.0000	***
$\delta 2003$		0.3439	152.4062	0.0000	***
$\delta 2004$		0.3590	160.7391	0.0000	***
$\delta 2005$		0.3645	172.1245	0.0000	***
$\delta 2006$		0.3749	175.2868	0.0000	***
$\delta 2007$		0.3918	179.8875	0.0000	***
$\delta 2008$		0.4193	170.6199	0.0000	***
R-squared	0.8679		F-statistics	46.5882	
Adjusted R-squared	0.8493		F-significance	0.0000	
***level of significance at 1%					
**level of significance at 5%					
*level of significance at 10%					

Table 27 Result of Wald test of equality of coefficients

	Probability								
$\delta 2001$	0.0000								
$\delta 2002$	0.0000	0.0000							
$\delta 2003$	0.0000	0.0000	0.0000						
$\delta 2004$	0.0000	0.0000	0.0000	0.0000					
$\delta 2005$	0.0000	0.0000	0.0000	0.0000	0.0000				
$\delta 2006$	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
$\delta 2007$	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
$\delta 2008$	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	$\delta 2000$ (intercept)	$\delta 2001$	$\delta 2002$	$\delta 2003$	$\delta 2004$	$\delta 2005$	$\delta 2006$	$\delta 2007$	



#### 6.3.3.1.2 Hypothesis testing on determinants of voluntary disclosure score

The second equation (Equation 2) examines the determinants of voluntary disclosure of executive directors' remuneration from 2000 to 2008. The level of voluntary disclosure is measured as the percentage of disclosure score in excess of the Malaysian mandatory disclosure requirements. The adjusted R-square of the model is 83.72% that means that 81.43% of the variation in the voluntary disclosure of executive directors' remuneration is explained by the explanatory variables. The F-statistic is significant at 1% level and means that there is at least one explanatory variable that is non-zero and significantly influences the level voluntary of disclosure. The dummy coefficients for the years are statistically significant and increase over the years. The result supports hypothesis 1 that the reforms to the executive directors' remuneration disclosure framework improves the level of disclosure of executive directors' remuneration of Malaysian companies. The result of the Wald test on the equality of the coefficients (Table 27) also rejects the null hypothesis that the coefficients are equal.

Consistent with the first equation, Equation 2 accepts hypothesis 2 that family ownership is significantly and negatively associated with the level of voluntary disclosure of executive directors' remuneration. In addition, Hypothesis 8 is accepted. The hypothesis states that the proportion of independent directors and the level of voluntary disclosure are positively associated. The analysis also shows that company size is significantly and positively associated with the level of voluntary disclosure. This means that hypothesis 10 is also accepted. However, contrary to the first equation, the analysis finds that government ownership significantly and positively influences the level of voluntary disclosure of executive directors' remuneration. This supports the argument that government linked companies have incentives to set examples in the market. The result is consistent with Shan

(2009), Huafang and Jianguo (2007), Mohd Ghazali and Weetman (2006) and Makhija and Patton (2004) who also found a significant and positive association between government ownership and the level of voluntary disclosure. The tests found that all the other hypotheses were not significant and were therefore rejected.

Equation 2 Panel GLS result of determinants of voluntary score from 2000 to 2008 (N=1783)

Variable	Pred. sign	Coefficient	t-Statistic	Prob.	
C		-0.3131	-5.1446	0.0000	***
FAM_OWN	-	-0.0568	-3.8074	0.0001	***
SUBT_OWN	-	0.0256	1.1162	0.2645	
GOV	+	0.0572	2.6449	0.0083	***
FORGN_OWN	+	-0.0269	-1.5657	0.1176	
DDIROWN0025	?	-3.6957	-1.3839	0.1666	
DDIROWN01	?	0.0258	0.9417	0.3465	
DDIROWN0125	?	-0.0039	-0.1723	0.8633	
DEBT_TO_EQUITY	+	0.0003	1.3326	0.1829	
PROP_INDDIR	+	0.0494	2.7773	0.0055	***
AQ	+	0.0054	0.6009	0.5480	
LN_ASSET	+	0.0372	10.2120	0.0000	***
ROE	+	0.0016	0.7569	0.4492	
MARKETOBOK	-	-0.0006	-0.8475	0.3968	
$\delta$ 2001		0.2257	251.8193	0.0000	***
$\delta$ 2002		0.2842	181.2903	0.0000	***
$\delta$ 2003		0.3124	136.3586	0.0000	***
$\delta$ 2004		0.3295	143.8307	0.0000	***
$\delta$ 2005		0.3250	140.2951	0.0000	***
$\delta$ 2006		0.3308	143.6978	0.0000	***
$\delta$ 2007		0.3446	142.1033	0.0000	***
$\delta$ 2008		0.3753	134.5635	0.0000	***
R-squared	0.8372	F-statistics	36.5104		
Adjusted R-squared	0.8143	F-significance	0.0000		
***level of significance at 1%					
**level of significance at 5%					
*level of significance at 10%					

Table 28 Result of Wald test of equality of coefficients

	Probability								
$\delta$ 2001	0.0000								
$\delta$ 2002	0.0000	0.0000							
$\delta$ 2003	0.0000	0.0000	0.0000						
$\delta$ 2004	0.0000	0.0000	0.0000	0.0000					
$\delta$ 2005	0.0000	0.0000	0.0000	0.0000	0.0000				
$\delta$ 2006	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
$\delta$ 2007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
$\delta$ 2008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
$\delta$ 2000 (intercept)		$\delta$ 2001	$\delta$ 2002	$\delta$ 2003	$\delta$ 2004	$\delta$ 2005	$\delta$ 2006	$\delta$ 2007	

### 6.3.3 Sensitivity analysis

#### 6.3.3.1 Winsorised data

The descriptive statistics show that the dataset is significantly skewed and not normally distributed (Appendix 4). This suggests the presence of outliers in the variables. Although they do not affect the validity of the estimates, they can affect the accuracy of the estimates to the true population values and may lead to spurious regressions. As a robustness test, winsorisation is applied to a number of the independent variables that have extreme outliers. The independent variables are FAM\_OWN, SUBT\_OWN, GOV, FORGN\_OWN, DEBT\_TO\_EQUITY, ROE and MARKETBOOK. Prior studies that have used this method were Cassar and Holmes (2003) and Deegan and Hallam (1991). A winsorisation does not remove the outliers from the sample but limits the extreme values of the distribution by replacing them with the average values of the percentiles. In this study, a winsorisation of 99.5% is adopted where the values below the 0.25<sup>th</sup> percentile are set to the average value of the 0.25<sup>th</sup> percentile. On the other hand, the values above the 99.75<sup>th</sup> percentile are set to the average value of the 99.75<sup>th</sup> percentile. The results obtain from the winsorised estimators are mostly consistent with the first and second equations.

However, in equations 3 and 4, the winsorised estimates did not reject the hypothesis of positive association between government ownership and the level of total disclosure of executive directors' remuneration. However, the positive association is weak as it is only accepted at 10% level of significance. The positive association may have been partly due to the highly positive and significant association between government ownership and the level of voluntary disclosure as seen in Equations 2 and 4.

In addition, the winsorised estimate accepts hypothesis 11 that there is a positive association between profitability and the level of disclosure. The association is weakly accepted at a 10% level of significance. The profitability shows a significant variance from a maximum of 27.6506% to a minimum of -3.8931% and a mean of 0.0649. The winsorisation considered the outliers and would have provided a more precise estimate of the association between profitability and the level of disclosure. Although the association is weakly significant, it indicates that profitability may influence the level of disclosure to a certain extent.

Equation 3 Panel GLS regression for determinants of total score using winsorised estimators (N = 1783)

Variable	Coefficient	t-Statistic	Prob.	
C	-0.3290	-7.3205	0.0000	***
FAM_OWN	-0.0632	-4.6208	0.0000	***
SUBT_OWN	0.0345	1.5192	0.1289	
GOV	0.0331	1.8152	0.0697	*
FORGN_OWN	-0.0138	-0.8911	0.3730	
DDIROWN01	-0.0049	-0.2709	0.7865	
DDIROWN0125	-1.6813	-0.6637	0.5070	
DDIROWN0025	0.0243	0.8995	0.3685	
DEBT_TO_EQUITY	-0.0006	-0.9546	0.3399	
PROP_INDDIR	0.0447	2.7510	0.0060	***
AQ	0.0085	1.0435	0.2969	
LN_ASSET	0.0384	13.5664	0.0000	***
ROE	0.0059	1.6822	0.0927	*
MARKETBOOK	-0.0013	-0.8296	0.4069	
δ2001	0.2607	262.8457	0.0000	***
δ2002	0.3173	218.7111	0.0000	***
δ2003	0.3433	184.3337	0.0000	***
δ2004	0.3589	182.7359	0.0000	***
δ2005	0.3638	190.6225	0.0000	***
δ2006	0.3740	193.7219	0.0000	***
δ2007	0.3902	212.1479	0.0000	***
δ2008	0.4182	181.3461	0.0000	***
R-squared	0.8678	F-statistics	46.5862	
Adjusted R-squared	0.8491	F- significance	0.0000	

Equation 4 Panel GLS regression for determinants of voluntary score using winsorised estimators (N=1783)

Variable	Coefficient	t-Statistic	Prob.	
C	-0.3167	-5.2818	0.0000	***
FAM_OWN	-0.0658	-4.9664	0.0000	***
SUBT_OWN	0.0343	1.4122	0.1581	
GOV	0.0629	3.1349	0.0018	***
FORGN_OWN	-0.0297	-1.5547	0.1202	
DDIROWN01	0.0004	0.0173	0.9862	
DDIROWN0125	-3.2407	-1.1477	0.2513	
DDIROWN0025	0.0226	0.7926	0.4281	
DEBT_TO_EQUITY	-0.0006	-0.7349	0.4625	
PROP_INDDIR	0.0557	3.1996	0.0014	***
AQ	0.0062	0.6937	0.4880	
LN_ASSET	0.0373	10.0650	0.0000	***
ROE	0.0074	1.6804	0.0931	*
MARKETBOOK	-0.0021	-1.1460	0.2520	
δ2001	0.2243	207.1120	0.0000	***
δ2002	0.2836	172.3013	0.0000	***
δ2003	0.3115	163.1314	0.0000	***
δ2004	0.3293	160.3209	0.0000	***
δ2005	0.3236	146.0091	0.0000	***
δ2006	0.3296	151.9969	0.0000	***
δ2007	0.3429	176.1335	0.0000	***
δ2008	0.3740	132.9012	0.0000	***
R-squared	0.8367	F-statistics	36.3657	
Adjusted R-squared	0.8136	F- significance	0.0000	

### 6.3.3.2 *Industry classifications*

Another factor that may influence the level of disclosure is industry classifications. Prior studies that have included industry classifications in their empirical framework were Shan (2009), Chizema (2008), Coulton et al. (2001) and Conyon et al. (2002). However, the use of panel GLS with cross sectional fixed effects does not allow for the introduction of dummies for industry classifications. The application of cross sectional fixed effects that creates dummies for individual companies and a dummy for each industry classification simultaneously leads to perfect multicollinearity. Under perfect multicollinearity, the regression analysis cannot be computed. As a robustness test, the study removed the cross sectional fixed effects from the models and retested the equations by including dummies for industry classifications. Equation 5 and Equation 7 supports the hypothesis that industry classifications may be associated with the level of total and voluntary disclosure of executive directors' remuneration. In Equation 5 (y=total score), the Healthcare industry has the highest coefficient of 0.3150 and the lowest is the Energy sector at 0.1353. Similar results are seen in Equation 7 (y=voluntary score). The coefficient of the Healthcare industry is 0.3309 and for the Energy industry it is 0.1093. The analysis is repeated using the winsorised estimators (Equation 6 and Equation 8) and the results are consistent with the original equations.

However, it should be noted that the removal of the cross sectional fixed effects from the original equations affects the adjusted R-squared significantly. The original equation for the determinants of total score (Equation 1) is 84.93% and after removal of the cross sectional fixed effects (Equation 5) the adjusted R-squared is 58.04%. Similar observation can be made on the determinants of voluntary score. The adjusted R-squared of the original equation (Equation 2) is 81.43% and the adjusted R-squared of the cross sectional fixed effect free equation (Equation 6) is 66.73%. These imply that the cross sectional fixed effect models are

more sensitive to the variations in the sample. They represent the heterogeneity of the individual company and not just the specific industry. Due to this limitation, the other results in Equation 5 and 6 are not reported as they are not the best estimates of the determinants of the disclosure of executive directors' remuneration.



Equation 5 Panel GLS result of determinants of total\_score from 2000 to 2008 including industry classifications (N=1783)

Variable	Coefficient	t-Statistic	Prob.	
C	-0.1080	-2.8292	0.0047	
FAM_OWN	-0.0037	-0.6181	0.5366	
SUBT_OWN	-0.0575	-2.8114	0.0050	
GOV	0.0356	1.7794	0.0753	
FORGN_OWN	-0.0198	-1.5237	0.1278	
DDIROWN01	-2.8082	-0.9088	0.3636	
DDIROWN0125	-0.0357	-1.9233	0.0546	
DDIROWN0025	0.0381	1.5054	0.1324	
DEBT_TO_EQUITY	-0.0005	-1.2291	0.2192	
PROP_INDDIR	-0.0230	-1.2889	0.1976	
AQ	0.0337	5.8875	0.0000	
LN_ASSET	0.0063	3.8806	0.0001	
ROE	0.0048	1.5321	0.1257	
MARKETBOOK	0.0007	1.3575	0.1748	
δ2001	0.2624	319.1659	0.0000	***
δ2002	0.3178	386.4685	0.0000	***
δ2003	0.3457	482.0684	0.0000	***
δ2004	0.3679	418.5329	0.0000	***
δ2005	0.3759	379.3659	0.0000	***
δ2006	0.3905	341.4913	0.0000	***
δ2007	0.4137	319.7763	0.0000	***
δ2008	0.4456	404.3651	0.0000	***
CONSUMER_DISCRETIONARY	0.2538	7.6495	0.0000	***
CONSUMER_STAPLES	0.2397	7.1167	0.0000	***
FINANCIALS	0.2512	8.3400	0.0000	***
ENERGY	0.1353	2.6689	0.0077	***
HEALTHCARE	0.3150	6.6010	0.0000	***
MATERIALS	0.2081	7.2549	0.0000	***
UTILITIES	0.2176	7.4535	0.0000	***
INDUSTRIALS	0.2267	7.1445	0.0000	***
INFORMATION_TECHNOLOGY	0.2607	8.1428	0.0000	***
R-squared	0.5875	F-statistics	83.1585	
Adjusted R-squared	0.5804	F-significance	0.0000	
***level of significance at 1%				
**level of significance at 5%				
*level of significance at 10%				

Equation 6 Panel GLS result of determinants of total score from 2000 to 2008 including industry classifications using winsorised estimators (N=1783)

Variable	Coefficient	t-Statistic	Prob.	
C	-0.1279	-3.0076	0.0027	
FAM_OWN	-0.0075	-1.1653	0.2441	
SUBT_OWN	-0.0611	-3.0610	0.0022	
GOV	0.0361	1.8940	0.0584	
FORGN_OWN	-0.0284	-2.2291	0.0259	
DDIROWN01	0.0306	1.2911	0.1968	
DDIROWN0125	-3.3892	-1.0594	0.2896	
DDIROWN0025	-0.0342	-1.9535	0.0509	
DEBT_TO_EQUITY	-0.0032	-4.3951	0.0000	
PROP_INDDIR	-0.0064	-0.3829	0.7018	
AQ	0.0338	5.9823	0.0000	
LN_ASSET	0.0078	4.3090	0.0000	
ROE	0.0233	4.1214	0.0000	
MARKETBOOK	0.0014	1.3866	0.1657	
δ2001	0.2648	318.6597	0.0000	***
δ2002	0.3192	419.2080	0.0000	***
δ2003	0.3460	428.9222	0.0000	***
δ2004	0.3673	361.1801	0.0000	***
δ2005	0.3761	333.6064	0.0000	***
δ2006	0.3905	298.6285	0.0000	***
δ2007	0.4118	251.6285	0.0000	***
δ2008	0.4437	306.3447	0.0000	***
CONSUMER_DISCRETIONARY	0.2538	7.9423	0.0000	***
CONSUMER_STAPLES	0.2373	7.3742	0.0000	***
FINANCIALS	0.2527	8.7326	0.0000	***
ENERGY	0.1299	2.6555	0.0080	***
HEALTHCARE	0.3130	6.7246	0.0000	***
MATERIALS	0.2112	7.7050	0.0000	***
UTILITIES	0.2213	7.8836	0.0000	***
INDUSTRIALS	0.2283	7.3882	0.0000	***
INFORMATION_TECHNOLOGY	0.2587	8.3914	0.0000	***
R-squared	0.6784	F-statistics	123.1993	
Adjusted R-squared	0.6729	F- significance	0.0000	
***level of significance at 1%				
**level of significance at 5%				
*level of significance at 10%				

Equation 7 Panel GLS result of determinants of voluntary score from 2000 to 2008 including industry classifications (N=1783)

Variable	Coefficient	t-Statistic	Prob.	
C	-0.1270	-3.3830	0.0007	
FAM_OWN	-0.0122	-1.7144	0.0866	
SUBT_OWN	-0.0676	-2.9488	0.0032	
GOV	0.0383	1.4762	0.1401	
FORGN_OWN	-0.0233	-1.5296	0.1263	
DDIROWN01	-3.8278	-1.2659	0.2057	
DDIROWN0125	-0.0275	-1.2247	0.2208	
DDIROWN0025	0.0486	1.8811	0.0601	
DEBT_TO_EQUITY	-0.0005	-1.2186	0.2232	
PROP_INDDIR	-0.0295	-1.4469	0.1481	
AQ	0.0387	5.8779	0.0000	
LN_ASSET	0.0069	3.7982	0.0002	
ROE	0.0067	1.6330	0.1027	
MARKETBOOK	0.0008	1.4317	0.1524	
δ2001	0.2254	229.0986	0.0000	***
δ2002	0.2861	287.7582	0.0000	***
δ2003	0.3158	417.0204	0.0000	***
δ2004	0.3400	344.2151	0.0000	***
δ2005	0.3346	297.8511	0.0000	***
δ2006	0.3463	317.6215	0.0000	***
δ2007	0.3676	316.8503	0.0000	***
δ2008	0.4036	346.2428	0.0000	***
CONSUMER_DISCRETIONARY	0.2679	8.1941	0.0000	***
CONSUMER_STAPLES	0.2552	7.4870	0.0000	***
FINANCIALS	0.2696	8.7157	0.0000	***
ENERGY	0.1093	2.0329	0.0422	**
HEALTHCARE	0.3309	6.8236	0.0000	***
MATERIALS	0.2230	7.6655	0.0000	***
UTILITIES	0.2283	8.1288	0.0000	***
INDUSTRIALS	0.2422	7.4308	0.0000	***
INFORMATION_TECHNOLOGY	0.2663	8.6560	0.0000	***
R-squared	0.6729	F-statistics	120.1583	
Adjusted R-squared	0.6673	F- significance	0.0000	
***level of significance at 1%				
**level of significance at 5%				
*level of significance at 10%				

Equation 8 Panel GLS result of determinants of voluntary score from 2000 to 2008 including industry classifications using winsorised estimators (N=1783)

Variable	Coefficient	t-Statistic	Prob.	
C	-0.1498	-3.5897	0.0003	
FAM_OWN	-0.0157	-2.1213	0.0340	
SUBT_OWN	-0.0730	-3.2701	0.0011	
GOV	0.0408	1.6492	0.0993	
FORGN_OWN	-0.0306	-2.0181	0.0437	
DDIROWN01	0.0416	1.7904	0.0736	
DDIROWN0125	-4.5235	-1.4618	0.1440	
DDIROWN0025	-0.0262	-1.2605	0.2076	
DEBT_TO_EQUITY	-0.0034	-4.4157	0.0000	
PROP_INDDIR	-0.0118	-0.6299	0.5288	
AQ	0.0384	5.9804	0.0000	
LN_ASSET	0.0087	4.3733	0.0000	
ROE	0.0262	4.3846	0.0000	
MARKETBOOK	0.0017	1.4005	0.1616	
δ2001	0.2283	222.9881	0.0000	***
δ2002	0.2877	282.2360	0.0000	***
δ2003	0.3160	348.9383	0.0000	***
δ2004	0.3390	288.1872	0.0000	***
δ2005	0.3349	251.4033	0.0000	***
δ2006	0.3468	266.2724	0.0000	***
δ2007	0.3658	261.4783	0.0000	***
δ2008	0.4019	279.5858	0.0000	***
CONSUMER_DISCRETIONARY	0.2677	8.5385	0.0000	***
CONSUMER_STAPLES	0.2526	7.7884	0.0000	***
FINANCIALS	0.2710	9.1675	0.0000	***
ENERGY	0.1033	1.9765	0.0483	**
HEALTHCARE	0.3303	6.9677	0.0000	***
MATERIALS	0.2265	8.1794	0.0000	***
UTILITIES	0.2330	8.6235	0.0000	***
INDUSTRIALS	0.2445	7.7126	0.0000	***
INFORMATION_TECHNOLOGY	0.2641	8.8990	0.0000	***
R-squared	0.5956	F-statistics	85.9953	
Adjusted R-squared	0.5886	F- significance	0.0000	
***level of significance at 1%				
**level of significance at 5%				
*level of significance at 10%				

#### 6.3.4 Determinants of disclosure of individual executive director's remuneration

A significant number of Malaysian companies did not follow the MCCG recommendation to provide information on individual director's remuneration. The recommendation is not mandatory but companies must provide justifications for non-disclosure. The study finds that only 10.54% of the sample companies provided disclosure of individual executive director's remuneration over the period of 2000 to 2008. Given that there is a significant resistance from companies to this recommendation, the study looked at the determinants of the disclosure of individual executive director's remuneration. A Logit regression analysis was conducted to examine the association between the explanatory variables and the probability that companies will disclose individual executive director's remuneration. A Logit regression is the preferred method for multivariate analysis with a dependent variable that consist of binary values of 0 (*no individual disclosure*) and 1 (*provides individual disclosure*) and that has a skewed distribution (Walsh 1987). The same method was adopted by Chizema (2008) in examining the determinants of disclosure of individual director's remuneration in Germany.

Equation 9 shows the result of the Logit regression on the determinants of individual director's remuneration. 199 company years provided disclosure of individual director's remuneration and 1584 company years did not do so. The Likelihood Ratio (LR) statistics accepts the null hypothesis that Equation 9 is the best model ( $p = 0.0000$ ,  $\alpha = 1\%$ ). The McFadden R-squared suggests that the 10.58 percent of the variance in the probability of disclosure of individual executive director's remuneration is estimated by the explanatory variables<sup>46</sup>.

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<sup>46</sup> It is usual for the value of the R-squared of a logit regression to be lower than the R-squared of a least square regression.

Consistent with the study's earlier finding, the result accepts the hypothesis that family ownership (FAM\_OWN) significantly limits the level of disclosure of individual remuneration. Disclosure of individual executive director's remuneration may stimulate scrutiny of the private wealth derived by family-managers and family shareholdings. The additional attention may also expose exploitation of minority shareholders. Thus, family owners seek to protect their control over the company by limiting the public disclosure of individual executive remuneration.

Contrary to hypothesis 3 in the empirical framework, the study finds that ownership concentration (SUBT\_OWN) is significantly and negatively associated with the probability that companies will disclose individual executive director's remuneration. This supports the notion that substantial shareholders may behave like insiders. They may use their substantial block holdings to demand insider information from companies rather than relying on public disclosure of information. Nelson and Majella (2005) found a similar negative association between disclosure of executive stock options and ownership concentration in Australian companies.

There is a significant and positive association between the level of government ownership and the probability that companies will disclose on individual's remuneration. The result is consistent with the analysis in Equation 2 Panel GLS result of determinants of voluntary score from 2000 to 2008 (N=1783) that found a significant and positive association between government ownership (GOV) and the level of voluntary disclosure. This further indicates

that Malaysian GLCs are at the forefront of promoting good corporate governance practices. The result is consistent with Chizema (2008) that also found that government ownership in Germany companies significantly improve the probability of disclosure of individual director's remuneration.

Executive directors' shareholdings at a level of below 10 percent (DDIROWN01) and of more than 25 percent (DDIROWN0025) were found to significantly and positively improve the probability of the disclosure of individual director's remuneration. This is consistent with the expectations of agency theory that equity shareholdings may mitigate agency problems. Executive directors have the incentive to disclose information on remuneration to protect their managerial positions and allow shareholders to assess their performance. Hence, they would not resist the disclosure of their individual remuneration.

Contrary to the expectation, leverage (DEBT\_TO\_EQUITY) is significantly and negatively associated with the probability of disclosure of individual director's remuneration. From an agency theory perspective, creditors may demand more information in order to assess the risk of default and whether free cash flows are being used to service debt or pay excessive remuneration. This finding suggests that companies with higher leverage seek to protect information on individual director's remuneration. Disclosure of individual remuneration may allow creditors to impose a more restrictive debt covenant that may include a high individual pay and performance sensitivity threshold. Executives of a high levered company may not disclose their own remuneration to avoid such restrictive term.

There is a weak significant and positive association between audit quality (AQ) and the likelihood of disclosure on individual executive director's remuneration ( $\alpha = 10\%$ ). Nonetheless, the result is consistent with hypothesis 9 that states that companies with higher audit quality are positively associated with the extent of disclosure of executive directors' remuneration. Clarkson et al. (2006) and Bassett et al. (2007) found a similar association between audit quality and the level of voluntary and mandatory disclosure of remuneration in Australian companies.

All the dummies for years are found to be positive and significant. The results are consistent with the study's earlier findings. These imply that the reforms to Malaysian disclosure framework significantly improved the extent of disclosure of executive directors' remuneration including disclosure of individual remuneration. Foreign ownership, director ownership between 10 and 25 percent (DDIROWN0125), proportion of independent directors (PROP\_INDDIR), company size (LN\_ASSET), profitability (ROE) and growth (MARKETOBOOK) were not significantly associated with the disclosure of individual director's remuneration.

Equation 10 retests the model using the using winsorised estimators. The winsorisation technique substitutes the outliers or the values below and above the chosen percentiles with the average value of the minimum and maximum percentiles. The presence of extreme values may lead to imprecise estimates from wider confidence intervals and standard errors. The value of the McFadden R-squared has improved from 10.58 percent to 12.57 percent in the winsorised equation. The results are generally consistent with Equation 9 except for the associations between the probability of individual director's remuneration and director



ownership of more than 25 percent (DDIROWN0025) and audit quality (AQ) that are no longer statistically significant.

There is a significant and positive association between executive directors' shareholding between 10 and 25 percent (DDIROWN0125) and the probability of disclosure of individual executive director's remuneration. Although the results of hypothesis testing of associations between the two level of executive directors' shareholdings (DDIROWN0125 and DDIROWN0025) and probability of individual disclosure of executive director's remuneration vary in both of the equations, the sign of the coefficients are consistently positive.

Growth (MARKETOBOK) is now significantly and positively associated with the probability of disclosure of individual director's remuneration. This result is inconsistent with the result of the main analysis of Equation 1 to 4 that finds significant and negative associations between the level of growth and in total and voluntary disclosure of disclosure of executive directors' remuneration. These suggest that the influence of growth on disclosure of individual remuneration may be more distinct than on the other components of remuneration disclosure. Companies may perceive that the marginal benefits of disclosure of individual remuneration outweigh its marginal costs. Executives of high growth companies may have the incentive to provide more disclosure especially on their personal performance. This may ensure that they are appropriately rewarded for undertaking additional risks in exploiting the growth opportunities.

In addition, there is now positive but weak significant association ( $\alpha = 10\%$ ) proportion of independent directors (PROP\_INDDIR) and the probability of disclosure of individual director's remuneration. This may indicate that the corporate governance mechanism put in place by shareholders is working to a certain extent in protecting their interests. However, the independent directors may not be powerful enough in mitigating the traditional dominance of family owners in pushing for disclosure of individual remuneration.

Profitability (ROE) is also shown to have a weak but positive and significant association ( $\alpha = 10\%$ ) with the probability of disclosure of individual director's remuneration. Profitable companies are argued would disclose all information to distinguish themselves from other companies. Executives of profitable companies may have the incentives to disclose their individual remuneration and performance to protect their value in the managerial labour market.

All the dummies for the years stay positive and significant in the winsorised estimates. This is consistent with the earlier test results.

Equation 9 Logit regression result of determinants of individual director's remuneration disclosure from 2000 to 2008 (N=1783)

Variable	Coefficient	Std. Error	z-Statistic	Prob.	
C	-6.0650	1.3549	-4.4762	0.0000	***
FAM_OWN	-1.8423	0.4496	-4.0980	0.0000	***
SUBT_OWN	-1.1746	0.5863	-2.0033	0.0451	**
GOV	2.0292	0.4958	4.0932	0.0000	***
FORGN_OWN	0.3386	0.4463	0.7586	0.4481	
DDIROWN01	169.4682	60.5060	2.8009	0.0051	***
DDIROWN0125	0.7427	1.0961	0.6775	0.4981	
DDIROWN0025	2.0353	0.9273	2.1950	0.0282	**
DEBT_TO_EQUITY	-0.0555	0.0307	-1.8066	0.0708	*
PROP_INDDIR	1.1287	0.7626	1.4799	0.1389	
AQ	0.3252	0.1967	1.6531	0.0983	*
LN_ASSET	0.0191	0.0577	0.3308	0.7408	
ROE	0.3433	0.2870	1.1963	0.2316	
MARKETBOOK	0.0876	0.0804	1.0892	0.2761	
D2001	3.5675	1.0607	3.3632	0.0008	***
D2002	3.6808	1.0609	3.4696	0.0005	***
D2003	3.3391	1.0580	3.1561	0.0016	***
D2004	3.2203	1.0663	3.0200	0.0025	***
D2005	3.3301	1.0649	3.1271	0.0018	***
D2006	3.2677	1.0660	3.0653	0.0022	***
D2007	3.2854	1.0736	3.0601	0.0022	***
D2008	3.0458	1.0724	2.8402	0.0045	***
McFadden R-squared	0.1058	Mean dependent var.		0.1116	
S.D. dependent var.	0.3150	S.E. of regression		0.3023	
Akaike info criterion	0.6504	Sum squared resid.		160.9377	
Schwarz criterion	0.7181	Log likelihood		-557.7962	
Hannan-Quinn criter.	0.6754	Deviance		1115.5920	
Restr. deviance	1247.6280	Restr. log likelihood		-623.8138	
LR statistic	132.0352	Avg. log likelihood		-0.3128	
Prob. (LR statistic)	0				
Obs. with Dep=0	1584	Total obs.		1783	
Obs. with Dep=1	199				
***level of significance at 1%					
**level of significance at 5%					
*level of significance at 10%					

Equation 10 Logit regression result of determinants of individual directors' remuneration disclosure from 2000 to 2008 using winsorised estimators (N=1783)

Variable	Coefficient	Std. Error	z-Statistic	Prob.	
C	-6.7522	1.4876	-4.5391	0.0000	***
FAM_OWN	-1.8491	0.4589	-4.0299	0.0001	***
SUBT_OWN	-1.4535	0.5990	-2.4263	0.0153	**
GOV	2.1717	0.5123	4.2388	0.0000	***
FORGN_OWN	0.0930	0.4689	0.1985	0.8427	
DDIROWN01	2.1002	0.9573	2.1939	0.0282	**
DDIROWN0125	170.5500	61.9283	2.7540	0.0059	***
DDIROWN0025	0.9818	1.0999	0.8927	0.3720	
DEBT_TO_EQUITY	-0.1231	0.0546	-2.2552	0.0241	**
PROP_INDDIR	1.4263	0.7767	1.8364	0.0663	*
AQ	0.2724	0.1920	1.4185	0.1560	
LN_ASSET	0.0474	0.0635	0.7461	0.4556	
ROE	0.5102	0.2859	1.7843	0.0744	*
MARKETOBOK	0.1999	0.0457	4.3722	0.0000	***
D2001	3.8602	1.1866	3.2531	0.0011	***
D2002	3.9753	1.1815	3.3645	0.0008	***
D2003	3.6055	1.1785	3.0595	0.0022	***
D2004	3.4764	1.1876	2.9273	0.0034	***
D2005	3.6108	1.1862	3.0441	0.0023	***
D2006	3.5978	1.1861	3.0332	0.0024	***
D2007	3.5391	1.1860	2.9841	0.0028	***
D2008	3.3285	1.1956	2.7840	0.0054	***
McFadden R-squared	0.1257	Mean dependent var.		0.1116	
S.D. dependent var.	0.3150	S.E. of regression		0.2988	
Akaike info criterion	0.6364	Sum squared resid		157.2558	
Schwarz criterion	0.7041	Log likelihood		-545.3806	
Hannan-Quinn criter.	0.6614	Deviance		1090.7610	
Restr. deviance	1247.6280	Restr. log likelihood		-623.8138	
LR statistic	156.8663	Avg. log likelihood		-0.3059	
Prob. (LR statistic)	0				
Obs. with Dep=0	1584	Total obs.		1783	
Obs. with Dep=1	199				
***level of significance at 1%					
**level of significance at 5%					
*level of significance at 10%					

### 6.3.5 Period analysis

Figure 13 show the test results of panel regression by periods for the determinants of total and voluntary disclosure of executive directors' remuneration. Period 1 is the year 2000 when there was no regulations on the disclosure of executive directors' remuneration. Period 2 covers 2001 to 2004, during which the MCCG and the Bursa Malaysia Listing Rule were introduced. Period 3 is from 2005 to 2008, during which the mandatory accounting standards of FRS 2 and FRS 124 were implemented and worked concurrently with the MCCG and the Listing Rule. The test results provided a comparative analysis of the determinants of the disclosure of executive directors' remuneration under different regulatory environments.

The test results in Figure 13 show that the adjusted R-squared values improved from period 1 to period 3. In period 1, only 9.95 percent of the variation in the total disclosure score was explained by the explanatory variables. The adjusted R-squared improved in period 2 and 3 to 88.45 percent and 96.68 percent respectively. This can be explained by the acceptance of more explanatory variables that were significantly associated with the total disclosure of executive directors' remuneration in period 2 and period 3 compared to period 1. The East Asian financial crisis stimulated greater attention on corporate governance and transparency. Period 1 represents the period where there was less demand for information from key stakeholders. Period 2 and period 3 represent a shift to greater shareholders' and other stakeholders' activism. The introduction of the various disclosure requirements may have also created more awareness among the various players in the market of the need to focus on disclosure policies and practices.

Figure 13 shows that the association between family ownership (FAM\_OWN) and the level of total disclosure of executive directors' remuneration was significant and positive in period 1. The winsorised estimates in Figure 15 show that the association was not significant and that the coefficient was also positive. This is inconsistent with hypothesis 2 that states that there is a negative association between family ownership and the level of disclosure of executive directors' remuneration. The disclosure of executive directors' remuneration in period 1 was very minimal. There was no requirement that might draw attention to wealth that may have been derived from family connections or shareholdings. In this relatively unregulated period, family shareholders may not feel threatened by disclosure of information on executive directors' remuneration and would not block disclosure of information. Consequently, in period 2 and period 3 when the regulations were in place, the level of total disclosure was significantly limited by family shareholdings. This test result is consistent with the hypothesis. The level of significance of the negative association between the level of disclosure and family shareholdings further improved in period 3 ( $p = 0.000$ ) compared to in period 2 ( $p = 0.0209$ ). The winsorised estimates in Figure 4 support these findings. The regulations require companies to disclose more information that may expose unjustified or private consumption of wealth by family directors. Hence, family shareholders have the incentive to use their power to block attempts to disclose more information on executive directors' remuneration that may erode their control and private wealth.

The results of the hypothesis testing on the association between ownership concentration (SUBT\_OWN) and total disclosure of executive directors' remuneration were not consistent. The association was not significant in period 1. However, the result of the winsorised estimates in Figure 14 showed a negative and significant association between the variables in period 1. There was a significant and positive association between ownership concentration

and the disclosure of executive directors' remuneration in period 2. However, the association shifted to be a significant and negative association in period 3. The result in period 3 is consistent with hypothesis 3 that there is a significant and negative association between ownership concentration and the level of disclosure of executive directors' remuneration. A company with high ownership concentration is more likely to have substantial shareholders that behave like insiders. They could use their power to demand information on remuneration without relying on the public disclosure of such information. The inconsistency between the periods may be explained by the trend in the average ownership concentration over the sample period of 2000 to 2008 (Appendix 5). The average ownership concentration decreased from 2000 to 2005, before it improved in 2006.

The association between government shareholding (GOV) and the level of total disclosure was only significant in period 3. This is consistent with the expectation of hypothesis 4 that there is a positive association between government shareholding and the level of disclosure of executive directors' remuneration. Although the test results in period 1 and period 2 were not significant, the level of the coefficient of the association between government shareholding and the level of total disclosure of executive directors' remuneration was positive and continuously improved over the three periods as more reforms were introduced, culminating in the mandatory accounting standards in 2005. Companies with government shareholdings improved their level of disclosure of information on executive directors' remuneration. The test result of the winsorised estimates in Figure 14 also supports this finding.

The association between foreign ownership (FORGN\_OWN) and the level of total score of executive directors' remuneration was only significant in period 1. However, contrary to the

expectation in hypothesis 5, the association was negative instead of positive. The result of the winsorised estimates did not support this finding. There was no significant association between foreign ownership and the disclosure of executive directors' remuneration in any of the periods. This suggests that foreign ownership has a limited influence on the disclosure of executive directors' remuneration of Malaysian companies.

Hypothesis 8 states that there is a significant association between executive director ownership and the disclosure of executive directors' remuneration. There were significant inconsistencies in the test results of the standard analysis in Figure 15 and in the test results of the winsorised estimates in Figure 16. The trend in the average director ownership declined over the sample period with a significant drop in 2001. The focus on corporate governance may have led to a dilution of executive director ownership. This may have contributed to the inconsistencies in the result. Nonetheless, in period 3, the level of director ownership in the different percentiles was significantly associated with the level of total disclosure of executive directors' remuneration. The winsorised estimates in Equation 19 show that there was a significant and positive association between director ownership below 10 percent (DDIROWN01) and director ownership between 10 and 25 percent (DDIROWN0125) and the level of total disclosure of executive directors' remuneration. The test results also indicate a significant and negative association between director ownership of more than 25 percent (DDIROWN025) and the level of total disclosure of executive directors' remuneration. This supports the argument that executive director ownership at lower levels may encourage disclosure of remuneration to mitigate agency costs. However, executive director ownership at a higher level limits disclosure as executive directors have the power to capture board decisions.



The test results in Figure 13 show that there was a significant and positive association between leverage (DEBT\_TO\_EQUITY) and the level of total disclosure of executive directors' remuneration in period 1 and period 2. This means that hypothesis 7 is accepted. However, there was no significant association between the variables in period 3. This may be explained by a decreasing trend in the average leverage over the sample period. When the level of debt is low, creditors may not have sufficient power to demand more information about executive directors' remuneration. The winsorised estimates in Figure 14 provide similar results.

The average proportion of independent directors increased from 2000 to 2008. This reflects a greater emphasis on the protection of minority shareholders through a third party corporate governance mechanism. The test results in Figure 13 show that there was a positive and significant association between the proportion of independent directors (PROP\_INDDIR) and the level of total disclosure of executive directors' remuneration in period 2. The result is consistent with hypothesis 8. However, the hypothesis was rejected in period 1 and period 3. There were similar findings in the winsorised estimates (Figure 14). This may indicate that there is a lower limit and an upper limit in the proportion of independent directors' ability to effectively improve the level of transparency. An alternative explanation is that there was a substitutive effect between the effectiveness of independent directors and the intensiveness of the regulatory framework on disclosure. During period 3, the regulatory framework on the disclosure of executive directors' remuneration was more extensive with the presence of the mandatory accounting standards, the MCCG and the Bursa Malaysia Listing Rule. This may

have substituted the role of independent directors to a certain extent in ensuring adequate disclosure of information.

The ninth hypothesis states that there is a positive association between audit quality (AQ) and the level of disclosure of executive directors' remuneration. A company that retained an established external auditor was expected to disclose more information because the auditor would have its reputation to maintain. The hypothesis was accepted for period 2 and period 3. There was no significant association between audit quality and the level of total disclosure of executive directors' remuneration in period 1 although the coefficient was positive. Similar findings were observed in the winsorised estimates in Figure 14. The data showed that Malaysian companies began retaining established external auditors (Big-4) only after the year 2001 (Appendix 5). This may have influenced the level of significance of the association between audit quality and the level of total disclosure of executive directors' remuneration in period 1.

The test results in Figure 13 found that there was a significant and positive association between company size (LN\_ASSET) and the level of total disclosure of executive directors' remuneration in period 1 and period 3. This is consistent with hypothesis 10 that states that there is a positive and significant association between company size and the level of disclosure of executive directors' remuneration. However, the association was found to be significant and negative in period 2. This may have been due to the presence of outliers in the sample of company size. The winsorised estimates in Equation 18 (Figure 14) show that the coefficient of the association between the company size and the level of total disclosure of executive directors' remuneration was now positive for all periods.

The eleventh hypothesis states that there is a positive association between profitability (ROE) and the level of disclosure of executive directors' remuneration. The test results in Figure 13 show that there was a positive and significant association between profitability and the level of disclosure of executive directors' remuneration in period 1 and period 2. The winsorised estimate in Figure 14 also shows that the association between the variables was positive and significant in period 3. This supports hypothesis 11 and indicates that profitable companies are more likely to disclose information to the market than other companies.

The final hypothesis is that there is a negative and significant association between growth (MARKETBOOK) and the level of disclosure of executive directors' remuneration. The hypothesis was only accepted in period 3. In period 2, there was a positive and significant association between growth and the level of disclosure of executive directors' remuneration. The association between the variables was not significant in period 1 although the coefficient was negative. The winsorised estimates in Figure 14 also show similar findings. The variation in the hypothesis testing results is consistent with variation in the average growth over the three periods.

Figure 15 and Figure 16 show the results of the determinants of voluntary disclosure of executive directors' remuneration for the three periods. The results were consistent with the periodic analysis of the total disclosure of executive directors' remuneration. The dummies for the years were significant in all of the results discussed in this section.

Figure 13 Results of regression for determinants of total score according to periods

	Period I (2000)			Period II (2001 to 2004)			Period III (2005 to 2008)		
	Equation 11			Equation 12			Equation 13		
Variable	Coefficient	Prob.		Coefficient	Prob.		Coefficient	Prob.	
C	0.0313	0.5206		0.5402	0.0000	***	0.2205	0.0000	***
FAM_OWN	0.0471	0.0570	*	-0.0450	0.0209	**	-0.0597	0.0000	***
SUBT_OWN	-0.0407	0.2852		0.0548	0.0059	***	-0.0723	0.0000	***
GOV	0.0081	0.8723		0.0138	0.6410		0.0439	0.0002	***
FORGN_OWN	-0.0761	0.0119	**	-0.0451	0.2333		-0.0075	0.1632	
DDIROWN01	16.8694	0.3850		1.6347	0.5844		2.9788	0.0046	***
DDIROWN0125	0.1240	0.2864		0.0834	0.0000	***	-0.0239	0.0110	**
DDIROWN0025	-0.2024	0.0099	***	-0.0693	0.0471	**	0.1652	0.0000	***
DEBT_TO_EQUITY	-0.0004	0.0838	*	0.0014	0.0047	***	0.0001	0.2359	
PROP_INDDIR	0.0039	0.9264		0.0933	0.0000	***	0.0000	0.3327	
AQ	0.0093	0.4405		0.0209	0.0000	***	0.0191	0.0100	***
LN_ASSET	0.0142	0.0001	***	-0.0097	0.0485	**	0.0268	0.0000	***
ROE	0.0249	0.0346	**	0.0112	0.0017	***	-0.0005	0.8529	
MARKETBOOK	-0.0014	0.6235		-0.0134	0.0000	***	0.0004	0.0242	**
D2002				0.0512	0.0000	***			
D2003				0.0773	0.0000	***			
D2004				0.0886	0.0000	***			
D2005									
D2006							0.0016	0.0000	***
D2007							0.0084	0.0000	***
D2008							0.0311	0.0000	***
R-squared	0.1583			0.9158			0.9759		
Adjusted R-squared	0.0995			0.8845			0.9668		

Figure 14 Results of regression for determinants of total score according to periods using winsorised estimators

	Period I (2000)		Period II (2001 to 2004)			Period III (2005 to 2008)			
	Equation 17		Equation 18			Equation 19			
Variable	Coefficient	Prob.	Coefficient	Prob.		Coefficient	Prob.		
C	0.1019	0.1127	0.3777	0.0000	***	0.26986	0.0000	***	
FAM_OWN	0.0336	0.2720	-0.0462	0.0369	**	-0.0645	0.0000	***	
SUBT_OWN	-0.1059	0.0388	**	0.0637	0.0005	***	-0.0582	0.0002	***
GOV	0.0347	0.5392	0.0103	0.7354		0.03316	0.0000	***	
FORGN_OWN	-0.0444	0.2309	-0.0552	0.1667		0.03141	0.1110		
DDIROWN01	-0.1447	0.0667	*	-0.0905	0.0137	**	0.14353	0.0000	***
DDIROWN0125	21.0993	0.2710		1.1574	0.7082		3.12482	0.0023	***
DDIROWN0025	0.1338	0.2073		0.0829	0.0001	***	-0.0388	0.0516	**
DEBT_TO_EQUITY	0.0048	0.2989		0.0017	0.0346	**	0.00067	0.1789	
PROP_INDDIR	-0.0187	0.6442		0.1000	0.0000	***	0.00949	0.4150	
AQ	0.0080	0.5069		0.0217	0.0000	***	0.02266	0.0269	**
LN_ASSET	0.0104	0.0402	**	0.0019	0.7341		0.02455	0.0000	***
ROE	0.0038	0.9339		0.0135	0.0296	**	0.01127	0.0000	***
MARKETBOOK	-0.0008	0.8312		-0.0102	0.0629	**	0.00291	0.0000	***
D2002				0.0512	0.0000	***			
D2003				0.0755	0.0000	***			
D2004				0.0874	0.0000	***			
D2005									
D2006							0.00474	0.0000	***
D2007							0.01705	0.0000	***
D2008							0.03765	0.0000	***
R-squared	0.1877		0.9123			0.9759			
Adjusted R-squared	0.1310		0.8801			0.9668			

Figure 15 Results of regression for determinants of voluntary score according to periods

Variable	Period I (2000)		Period II (2001 to 2004)			Period III (2005 to 2008)		
	Equation 14		Equation 15			Equation 16		
C	Coefficient	Prob.	Coefficient	Prob.		Coefficient	Prob.	
FAM_OWN	0.0313	0.5206	0.5026	0.0000 ***		0.2454	0.0012 ***	
SUBT_OWN	0.0471	0.0570 *	-0.0513	0.0116 **		-0.0587	0.0000 ***	
GOV	-0.0407	0.2852	0.0610	0.0045 ***		-0.0603	0.0120 **	
FORGN_OWN	0.0081	0.8723	0.0197	0.4872		0.0250	0.0000 ***	
DDIROWN01	-0.0761	0.0119 **	-0.0632	0.1057		0.0245	0.2845	
DDIROWN0125	16.8694	0.3850	1.5890	0.5684		2.9270	0.0878 *	
DDIROWN0025	0.1240	0.2864	0.0988	0.0000 ***		-0.0313	0.0000 ***	
DEBT_TO_EQUITY	-0.2024	0.0099 ***	-0.0690	0.0572 *		0.1279	0.0000 ***	
PROP_INDDIR	-0.0004	0.0838 *	0.0016	0.0041 ***		0.0002	0.7770	
AQ	0.0039	0.9264	0.0975	0.0000 ***		0.0107	0.9990	
LN_ASSET	0.0093	0.4405	0.0195	0.0001 ***		0.0247	0.0467 **	
ROE	0.0142	0.0001 ***	-0.0098	0.0600 *		0.0268	0.0000 ***	
MARKETOBOK	0.0249	0.0346 **	0.0110	0.0015 ***		-0.0004	0.8575	
D2002	-0.0014	0.6235	-0.0144	0.0000 ***		0.0004	0.0547 *	
D2003			0.0538	0.0000 ***				
D2004			0.0823	0.0000 ***				
D2005			0.0944	0.0000 ***				
D2006								
D2007						0.0055	0.0000 ***	
D2008						0.0173	0.0000 ***	
R-squared						0.0366	0.0000 ***	
Adjusted R-squared	0.1583		0.9189			0.9827		
	0.0995		0.8887			0.9763		

Figure 16 Results of regression for determinants of voluntary score according to periods using winsorised estimators

	Period I (2000)			Period II (2001 to 2004)			Period III (2005 to 2008)		
	Equation 20			Equation 21			Equation 22		
Variable	Coefficient	Prob.		Coefficient	Prob.		Coefficient	Prob.	
C	0.1019	0.1127		0.3298	0.0001	***	0.242752	0.0025	***
FAM_OWN	0.0336	0.2720		-0.0528	0.0240	**	-0.067243	0.0000	***
SUBT_OWN	-0.1059	0.0388	**	0.0716	0.0003	***	-0.074838	0.0112	**
GOV	0.0347	0.5392		0.0147	0.6156		0.049476	0.0000	***
FORGN_OWN	-0.0444	0.2309		-0.0765	0.0681	*	-0.005956	0.4582	
DDIROWN01	-0.1447	0.0667	*	-0.0939	0.0177	**	0.182043	0.0000	***
DDIROWN0125	21.0993	0.2710		1.1840	0.6877		3.181917	0.0707	*
DDIROWN0025	0.1338	0.2073		0.0985	0.0000	***	-0.036789	0.0058	***
DEBT_TO_EQUITY	0.0048	0.2989		0.0020	0.0269	**	0.0002	0.7076	
PROP_INDDIR	-0.0187	0.6442		0.0982	0.0000	***	-0.005125	0.7762	
AQ	0.0080	0.5069		0.0198	0.0000	***	0.01956	0.0768	*
LN_ASSET	0.0104	0.0402	**	0.0029	0.6203		0.025213	0.0001	***
ROE	0.0038	0.9339		0.0133	0.0360	**	0.01281	0.0002	***
MARKETBOOK	-0.0008	0.8312		-0.0115	0.0489	**	0.002101	0.0202	**
D2002				0.0543	0.0000	***			
D2003				0.0807	0.0000	***			
D2004				0.0934	0.0000	***			
D2005									
D2006							0.001333	0.0000	***
D2007							0.008211	0.0000	***
D2008							0.031869	0.0000	***
R-squared	0.1877			0.9155			0.9820		
Adjusted R-squared	0.1310			0.8841			0.9752		

### 6.3.6 Comparison between high and low disclosure score groups

Panel regression analysis was also conducted to compare the differences in the disclosure of executive directors' remuneration between high and low scoring groups. Individual regressions were conducted on the high and low scoring groups. The results (Equations 23 to 26) indicate that there are significant differences in the factors that may explain the level of disclosure by high and low scoring groups. Equation 23 shows that the level of disclosure of the high total score group was significantly and negatively associated with family ownership (FAM\_OWN). Audit quality (AQ), company size (LN\_ASSET), profitability (ROE) and growth (MARKETTOBOOK) were significantly and positively associated with the level of total disclosure in high scoring group. The results are consistent with the prediction of the hypotheses. Consistent with earlier analysis, the coefficients of the dummies for the years were increasing. However, the dummy years for 2001 and 2002 were not significant. This may reflect a learning period before companies that already disclosed more information started to significantly disclose additional information as required by the requirements of the new MCGG.

Equation 24 shows that ownership concentration (SUBT\_OWN), director ownership at less than 10% (DDIROWN01) and proportion of independent directors (PROP\_INDDIR) were positively and significantly associated with the level of total disclosure in low scoring group. All the dummy years were significant. However, the level of the coefficient of the dummies improved from 2001 to 2003 before declining in 2005 and improving again in 2006 with further declines in 2007 and 2008. This is consistent with the observations in Figure 11 that showed that companies with minimum disclosure first conformed to the new regulations by disclosing more information but then fell back to previous patterns of disclosing less information.



Equations 25 and 26 examined the determinants of the voluntary disclosure of executive directors' remuneration for high and low scoring groups respectively. Equation 25 shows that family ownership (FAM\_OWN) significantly and negatively influenced the level of voluntary disclosure of the high scoring group. There was also a significant and positive association between audit quality (AQ) and the level of voluntary disclosure for high scoring group. There were significant and positive associations between ownership concentration (SUBT\_OWN), leverage (DEBT\_TO\_EQUITY) and company size (LN\_ASSET) and the level of voluntary disclosure of the high scoring group. The results are consistent with the expectations of the empirical framework of the study. The coefficients of the dummies for 2001 and 2001 are negative before turning to positive in the following years. This may reflect some resistance to the introduction of the reforms to the disclosure requirements before companies slowly adapted to the changes and voluntarily disclosed more information.

Equation 26 found a significant and positive association between government ownership (GOV), executive directors' shareholdings of more than 25% (DDIROWN0025) and the proportion of independent directors (PROP\_INDDIR) and the level of voluntary disclosure by the low scoring group. The coefficients for the dummies for the years are significant and positive and follow the trends observed in Figure 1. Although more information was now voluntarily disclosed, low disclosure companies conformed to the minimum disclosure requirements.

The results from Equations 23 to 26 show that regulations play a more important role than the other explanatory variables for the low scoring companies than the high scoring companies. The coefficients of the dummies for the years that serve as proxies for changes in the disclosure requirements in the low scoring group are larger and more statistically significant

than for the high scoring group. More explanatory variables appear to drive the level of total and voluntary disclosure in the high scoring group than in the low scoring group. It can be inferred that companies with low disclosure practices only disclose more information under regulatory pressure. In addition, other external factors may not be influential in shaping disclosure policies of these companies than for companies with high levels of disclosure practices. It may be argued that the stakeholders of companies with high disclosure practices are more likely to demand more information as there is an expectation that companies would maintain their high quality of disclosure.

The results also showed that different corporate governance mechanisms may substitute each other depending on the disclosure environment. The results showed that the level of audit quality played a positive and significant role in the level of total and voluntary disclosure of executive directors' remuneration in high scoring companies. There was no significant association observed between proportion of independent directors and the level of total and voluntary disclosure of high scoring group. The opposite results were found in the low scoring group where independent directors were shown to positively influence the level of total and voluntary disclosure of executive directors' remuneration and no significant association was noted for the level of audit quality.

Equation 23 Panel regression for determinants of total score for HIGH SCORE GROUP (N= 1075)

Variable	Coefficient	t-Statistic	Prob.	
C	0.2464	2.2905	0.0222	**
FAM_OWN	-0.1175	-3.6280	0.0003	***
SUBT_OWN	0.0520	1.6083	0.1081	
GOV	0.0214	1.1663	0.2438	
FORGN_OWN	-0.0398	-0.9824	0.3262	
DDIROWN01	-3.6553	-1.4224	0.1553	
DDIROWN0125	-0.0090	-0.2824	0.7777	
DDIROWN0025	-0.0320	-0.6198	0.5356	
DEBT_TO_EQUITY	0.0012	1.5565	0.1200	
PROP_INDDIR	0.0200	0.5093	0.6107	
AQ	0.0231	1.9007	0.0577	*
LN_ASSET	0.0239	3.2402	0.0012	***
ROE	0.0079	3.6914	0.0002	***
MARKETOBOK	0.0044	2.1550	0.0314	**
δ2001	-0.0001	-0.0046	0.9963	
δ2002	0.0074	0.6570	0.5114	
δ2003	0.0202	1.9282	0.0541	*
δ2004	0.0366	3.2249	0.0013	***
δ2005	0.0459	3.9508	0.0001	***
δ2006	0.0550	4.7154	0.0000	***
δ2007	0.0666	5.6324	0.0000	***
δ2008	0.0999	7.7658	0.0000	***
R-squared	0.7483	F-statistics	12.9112	
Adjusted R-squared	0.6903	F- significance	0.0000	

Equation 24 Panel regression for determinants of total score for LOW SCORE GROUP (N=708)

Variable	Coefficient	t-Statistic	Prob.	
C	-0.0900	-0.5907	0.5550	
FAM_OWN	-0.0139	-0.9249	0.3555	
SUBT_OWN	0.0326	0.7468	0.4555	
GOV	0.0071	0.1382	0.8901	
FORGN_OWN	-0.0135	-0.3337	0.7387	
DDIROWN01	0.5816	0.3172	0.7513	
DDIROWN0125	0.0015	0.0366	0.9708	
DDIROWN0025	0.1006	1.8190	0.0695	*
DEBT_TO_EQUITY	-0.0002	-1.3562	0.1757	
PROP_INDDIR	0.0396	2.4093	0.0164	**
AQ	-0.0138	-0.9848	0.3252	
LN_ASSET	0.0186	1.6071	0.1087	
ROE	-0.0030	-1.2556	0.2099	
MARKETOBOK	0.0004	1.6535	0.0989	*
δ2001	0.1851	265.9376	0.0000	***
δ2002	0.2307	101.8496	0.0000	***
δ2003	0.2324	70.9998	0.0000	***
δ2004	0.2382	100.4604	0.0000	***
δ2005	0.2406	102.8388	0.0000	***
δ2006	0.2462	103.0097	0.0000	***
δ2007	0.2411	90.0097	0.0000	***
δ2008	0.2270	48.4399	0.0000	***
R-squared	0.8831	F-statistics	16.9513	
Adjusted R-squared	0.8310	F- significance	0.0000	

Equation 25 Panel regression for determinants of voluntary score for HIGH SCORE GROUP (N= 843)

Variable	Coefficient	t-Statistic	Prob.	
C	0.3113	2.3183	0.0207	**
FAM_OWN	-0.0760	-6.2273	0.0000	***
SUBT_OWN	0.0745	1.6940	0.0907	*
GOV	0.0049	0.1931	0.8469	
FORGN_OWN	-0.0506	-0.6197	0.5357	
DDIROWN01	-2.9121	-0.8104	0.4180	
DDIROWN0125	0.0280	0.3962	0.6921	
DDIROWN0025	-0.0882	-1.3519	0.1769	
DEBT_TO_EQUITY	0.0015	1.6992	0.0897	*
PROP_INDDIR	0.0083	0.1446	0.8851	
AQ	0.0262	1.9250	0.0547	*
LN_ASSET	0.0203	1.8995	0.0579	*
ROE	0.0049	1.3464	0.1786	
MARKETOBOK	0.0021	0.7315	0.4647	
δ2001	-0.0362	-2.1835	0.0293	**
δ2002	-0.0229	-1.6056	0.1088	
δ2003	0.0055	0.4026	0.6874	
δ2004	0.0213	1.4308	0.1529	
δ2005	0.0372	2.1986	0.0283	**
δ2006	0.0406	2.4574	0.0143	**
δ2007	0.0550	3.2514	0.0012	***
δ2008	0.0745	4.5028	0.0000	***
R-squared	0.6899	F-statistics	8.0672	
Adjusted R-squared	0.6044	F- significance	0.0000	

Equation 26 Panel regression for determinants of voluntary score for LOW SCORE GROUP (N= 940)

Variable	Coefficient	t-Statistic	Prob.	
C	0.0854	0.5788	0.5629	
FAM_OWN	-0.0237	-1.4626	0.1440	
SUBT_OWN	0.0320	0.9359	0.3496	
GOV	0.0752	2.1162	0.0347	**
FORGN_OWN	0.0051	0.1610	0.8721	
DDIROWN01	1.2547	1.0401	0.2986	
DDIROWN0125	-0.0258	-0.9163	0.3598	
DDIROWN0025	0.0874	2.8194	0.0049	***
DEBT_TO_EQUITY	0.0001	0.5134	0.6078	
PROP_INDDIR	0.0249	3.0940	0.0021	***
AQ	-0.0104	-0.6831	0.4948	
LN_ASSET	0.0053	0.4410	0.6593	
ROE	0.0002	0.0707	0.9437	
MARKETOBOK	0.0002	1.1279	0.2597	
δ2001	0.1594	581.7369	0.0000	***
δ2002	0.2080	240.7950	0.0000	***
δ2003	0.2201	324.2485	0.0000	***
δ2004	0.2256	100.2638	0.0000	***
δ2005	0.2116	83.4192	0.0000	***
δ2006	0.2140	62.0605	0.0000	***
δ2007	0.2228	52.9856	0.0000	***
δ2008	0.2073	89.5483	0.0000	***
R-squared	0.8248	F-statistics	15.5675	
Adjusted R-squared	0.7718	F- significance	0.0000	

### 6.3.7 Redundant variables tests

The models have incorporated the different theoretical perspective discussed earlier, namely agency theory, legitimacy theory, signalling theory and proprietary costs. As a robustness test, the redundant variables tests were applied to test the significance of incorporating the various proxies for the different theoretical constructs into a single model or equation. The null hypothesis of a redundant variable test is that the coefficients of the variables that are dropped from the equation are jointly zero or they are redundant. Table 29 shows the result of the redundant variables tests on Equation 1 Panel GLS result of determinants of total score from 2000 to 2008 (N=1783)). For each test, variables that acted as proxy for other theories were excluded from the test equation and only variables associated with a specified theory were included in the model. All the results of the redundant variable tests shown in Table 29 reject the null hypothesis that the variables excluded from the model are redundant. The tests were repeated on Equation 2 Panel GLS result of determinants of voluntary\_score from 2000 to 2008 (N=1783)). Table 30 reports the results of the redundant variable test on voluntary disclosure of executive directors' remuneration as the dependent variable. The test results reject the null hypothesis that the excluded variables are redundant. The results provide evidence to support the incorporation of the various theoretical constructs into the research empirical framework.

Table 29 Result of redundant variable tests on research empirical framework (Y = Total score)

Variables excluded	Results of redundant variable tests (F-statistics)			
	Variables included in equation			
	Agency Theory FAM_OWN, SUBT_OWN, GOV FORGN_OWN, DDIROWN01, DDIROWN0125, DDIROWN0025, DEBT_TO_EQUITY, PROP_INDDIR, AQ	Legitimacy Theory LN_ASSET, ROE	Signalling ROE	Proprietary Costs MARKETBOOK
LN_ASSET ROE MARKETBOOK	18.8574 p = 0.0000***			
FAM_OWN SUBT_OWN GOV FORGN_OWN DDIROWN01 DDIROWN0125 DDIROWN0025 DEBT_TO_EQUITY PROP_INDDIR AQ MARKETBOOK		1.7200 p = 0.0636*		
FAM_OWN SUBT_OWN GOV FORGN_OWN DDIROWN01 DDIROWN0125 DDIROWN0025 DEBT_TO_EQUITY PROP_INDDIR AQ LN_ASSET MARKETBOOK			6.3229 p = 0.0000***	
FAM_OWN SUBT_OWN GOV FORGN_OWN DDIROWN01 DDIROWN0125 DDIROWN0025 DEBT_TO_EQUITY PROP_INDDIR AQ LN_ASSET ROE				6.3129 p = 0.0000***

\*\*\*level of significance at 1%

\*\*level of significance at 5%

\*level of significance at 10%

Table 30 Result of redundant variable tests on research empirical framework (Y = Voluntary score)

Variables excluded	Results of redundant variable tests (F-statistics)			
	Variables included in equation			
	Agency Theory FAM_OWN, SUBT_OWN, GOV FORGN_OWN, DDIROWN01, DDIROWN0125, DDIROWN0025, DEBT_TO_EQUITY, PROP_INDDIR, AQ	Legitimacy Theory LN_ASSET, ROE	Signalling ROE	Proprietary Costs MARKETBOOK
LN_ASSET ROE MARKETBOOK	2.1152 p = 0.0207**			
FAM_OWN SUBT_OWN GOV FORGN_OWN DDIROWN01 DDIROWN0125 DDIROWN0025 DEBT_TO_EQUITY PROP_INDDIR AQ MARKETBOOK		1.9356 p = 0.0313**		
FAM_OWN SUBT_OWN GOV FORGN_OWN DDIROWN01 DDIROWN0125 DDIROWN0025 DEBT_TO_EQUITY PROP_INDDIR AQ LN_ASSET MARKETBOOK			5.6513 p = 0.0000***	
FAM_OWN SUBT_OWN GOV FORGN_OWN DDIROWN01 DDIROWN0125 DDIROWN0025 DEBT_TO_EQUITY PROP_INDDIR AQ LN_ASSET ROE				6.6535 p = 0.0000***

\*\*\*level of significance at 1%

\*\*level of significance at 5%

\*level of significance at 10%

## 6.4 Summary

Table 31 provides a summary of the results of the multivariate analysis. Consistent with the study hypothesis, there was an overall improvement in the level of disclosure of executive directors' remuneration after the reforms in Malaysian disclosure framework. The results of the univariate and multivariate analysis supported the first hypothesis that there were improvements in the level of disclosure of executive directors' remuneration after the reforms. The average total and voluntary disclosure showed continuous improvements throughout the sample period. The level of disclosure of executive directors' remuneration in the years after the reforms was significantly higher compared to the year 2000, when no regulations existed.

However, there appeared to be weaknesses in the reforms introduced to the Malaysian disclosure framework. The result showed that companies took advantage of the mandatory nature of the Listing Rules that prescribe the disclosure of remuneration by bands to override the recommendation of the MCCG to disclose remuneration individually. Only 10.54 percent of the Malaysian companies that were examined disclosed on individual executive director's remuneration.

There was also poor conformity with the recommendation of the MCCG for companies to disclose the principles behind remuneration and its association with performance. Most of the companies appeared to be reluctant to disclose the details behind their remuneration policies and practices in depth. The narrative statements offered by these companies in explaining their remuneration policies were often very broad at best and did not disclose the link between executive directors' remuneration and companies' performance.



Although there was improvement in the extent of disclosure after the introduction of the FRS 124 '*Related Party Transactions*', companies quickly realized that the requirements are very broad. The term '*key management personnel*' in the standards means that companies are not mandatorily required to disclose separately the remuneration of executive directors. Given these weaknesses, some Malaysian companies reverted to the old patterns of disclosing less information and at the minimum of the mandatory requirements.

There was also poor compliance with the requirements of FRS 2 '*Share Based Payments*' even though the standard was mandatory. A significant number of Malaysian companies that had share based remuneration schemes failed to disclose the details (valuation models, benchmarks and assumptions) behind the schemes. It was interesting to note that these companies did not received qualified audit reports even though they did not meet the full requirements of the mandatory accounting standards.

Traditional family dominance continued to exert their influence on the Malaysian capital market and disclosure policies. This study found that the level of family shareholdings significantly limited the level of disclosure of executive directors' remuneration. This is consistent with the expectation of agency theory. The result is consistent with Mohd Ghazali and Weetman (2006). They also found that the dominance of family shareholders on the level of voluntary disclosure continued after the reforms. Government shareholdings on the other hand exerted a positive influence on the disclosure of executive directors' remuneration at

each level (total, voluntary and individual)<sup>47</sup>. This is not surprising given that the reforms were introduced by the government.

In terms of ownership concentration, the results of the hypothesis tests did not find significant associations between ownership concentration and total and voluntary disclosure of executive directors' remuneration. However, significant associations between ownership concentration and the level of disclosure of executive directors' remuneration were shown in the periodical analysis and tests on determinants of individual disclosure of remuneration. The inconsistent results may be attributed to weaknesses in the variable of *SUBT\_OWN* as a proxy for ownership concentration. The effect that ownership concentration had on the level of disclosure of executive directors' remuneration may have been captured by other ownership variables and company size.

Contrary to the hypothesis, this study did not find significant and consistent associations between foreign shareholders and the disclosure of executive directors' remuneration at total, voluntary and individual levels. Although there was an increasing trend in foreign ownership over the sample period, the level of foreign ownership had not been at the level seen prior to the East Asian economic crisis. Their presence in the Malaysian capital market may be not strong enough to significantly influence companies' disclosure policies.

Executive directors' shareholdings at various percentiles did not significantly influence the level of total and voluntary disclosure of executive directors' remuneration. However, executive directors' shareholdings at the lower percentiles of below 10 percent and between

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<sup>47</sup> Summary of the findings are based on the results of the winsorised estimates. The winsorised estimates should provide better conclusions. They had considered the presence of outliers that would have influence the accuracy of the original estimates.

10 and 25 percent were found to significantly improve the probability of disclosure of individual executive director's remuneration. This is consistent with the argument that executive directors' with low ownership would do more to satisfy shareholders' concern and protect their own wealth. In terms of the periodic analysis, during 2005 to 2008, the level of executive directors' shareholdings at the three percentiles levels were significantly associated with total and voluntary disclosure of executive directors' remuneration. The results were consistent with the convex association between executive directors' ownership and the level of disclosure predicted by prior literature.

Another agency variable considered is the level of leverage. The hypothesis tests did not find significant associations between total and voluntary disclosure of executive directors' remuneration. The results of the periodic analysis were inconsistent except for the year 2001 to 2004 where the hypothesis was accepted. Contrary to the hypothesis, the result found that leverage significantly limited the probability of disclosure of individual executive director's remuneration. Executive directors of a high leveraged company may have more incentive not to disclose their own remuneration to avoid restrictive debt covenant.

In terms of corporate governance mechanism, there appeared to be no substitutive effects between the roles of independent directors in mitigating agency problems and the introduction of the disclosure requirements. It appeared that independent directors had significantly pushed for greater compliance to the requirements and demanded more disclosure of executive directors' remuneration. The results also invalidated some prior studies concern that Malaysian independent directors were controlled by '*insiders*'. The level of audit quality did not significantly influence the companies' disclosure policies (total, voluntary and individual) on executive directors' remuneration except for the period analysis

from 2001 to 2008 and high disclosure companies. This may indicate that there was an improving emphasis by Big-4 auditors on ensuring compliance to the evolving disclosure requirements on executive directors' remuneration.

The results of this study showed consistently, that company size was positively and significantly associated with the disclosure policies on executive directors' remuneration. This supports the view of legitimacy theory that larger companies are subjected to higher social expectations and could manage the expectations through public disclosure of information. In addition, there was a plausible link between larger companies paying higher executive directors' remuneration and thus, incurring greater public scrutiny. The additional analysis on industrial differences also showed that the level of disclosure of executive directors' remuneration may be determined by industry specific differences.

From a signalling theory perspective, more profitable companies have more incentives to disclose more information. The results of this study found evidence to support this hypothesis. However, for the periodic analysis, the positive association was not significant in the sample year of 2000. This may be attributed to a recovery phase in the capital market after the financial crisis.

The final paradigm considered is proprietary costs that were proxied by companies' future growth. The results showed that the level of growth to positively and significantly improved the probability of disclosure of individual executive director's remuneration. Companies with higher growth potential may weigh the marginal benefits of disclosing proprietary information on individual remuneration to be more than the marginal costs of not disclosing them. Competition for external finance may have driven them to risk incurring proprietary

costs. The results of the other hypothesis tests (total, voluntary and periodic) were inconsistent and this may be because of the large variation in the level of growth over the sample period.

The multivariate analysis of comparison between high and low scoring companies showed that corporate governance mechanisms of independent directors and audit quality worked differently in different disclosure environment. Only the dummies for the years were significant across the two groups, the other variables varied. In addition, the results showed that regulations played a greater role than the theoretical variables in influencing the disclosure policies of low disclosure companies. This is consistent with the findings of this study that low disclosure companies conformed to the minimum of the disclosure requirements. This implied that there was a need to have better and comprehensive disclosure requirements that will ensure high disclosure across all companies.

The last chapter of this thesis will provide a final overview of this study, its findings and implications, limitations of this research and directions for future studies.

Table 31 Summary of the results of the hypothesis testing<sup>48</sup>

	Statement of hypothesis	Exp. sign	Results						
			Total score	Vol. score	Individual. disclosure	High tot. score	Low tot. score	High vol. score	Low vol. score
H <sub>1</sub>	<i>That there was an improvement in the level of disclosure of executive directors' remuneration by Malaysian companies after the introduction of the Malaysian Code on Corporate Governance and changes in accounting standards.</i>	+	Supported p < 0.01	Supported p < 0.01	Supported p < 0.01	Supported p < 0.01	Supported p < 0.01	Supported p < 0.01	Supported p < 0.01
H <sub>2</sub>	<i>That for Malaysian companies, there is an inverse association between the level of executive director's remuneration disclosures and the level of family ownership.</i>	-	Supported p < 0.01	Supported p < 0.01	Supported p < 0.01	Supported p < 0.01	Not Supported	Supported p < 0.01	Not Supported
H <sub>3</sub>	<i>That for Malaysian companies, there is an inverse association between the level of executive director's remuneration disclosures and the level</i>	-	Not Supported	Not Supported	Supported p < 0.05	Not Supported	Not Supported <sup>49</sup> p < 0.10 t = + 1.7734	Not Supported p < 0.10 t = + 1.6913	Not Supported

<sup>48</sup> The results summarized here were a summary of the winsorised results.

<sup>49</sup> The hypotheses were not supported because the signs of the coefficients were not as predicted.

	<i>of ownership concentration</i>								
H <sub>4</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and the level of government shareholdings.</i>	+	Supported p < 0.05	Supported p < 0.01	Supported p < 0.01	Not Supported	Not Supported	Not Supported	Supported p < 0.05
H <sub>5</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and foreign ownership.</i>	+	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported
H <sub>6</sub>	<i>That for Malaysian companies, there is an association between the level of executive director's remuneration disclosures and the level of executive directors' shareholdings</i>	?	Not Supported	Not Supported	Supported DDIROWN01 p < 0.05 DDIROWN012 5 p < 0.01	Not Supported	Not Supported DDIROWN01 p < 0.05 t = -0.0258	Not Supported	Not Supported DDIROWN00 25 p < 0.01 t = 0.0844
H <sub>7</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's</i>	+	Not Supported	Not Supported	Not supported p < 0.05 t = - 0.1231	Not Supported	Not Supported	Not Supported	Not Supported

	<i>remuneration disclosures and leverage.</i>								
H <sub>8</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and proportion of independent directors on the board.</i>	+	Supported p < 0.01	Supported p < 0.01	Supported p < 0.10	Not Supported	Supported p < 0.05	Not Supported	Supported p < 0.01
H <sub>9</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and of external audit</i>	+	Not Supported	Not Supported	Not Supported	Supported p < 0.10	Not supported	Supported p < 0.10	Not Supported
H <sub>10</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company size.</i>	+	Supported p < 0.01	Supported p < 0.01	Not Supported	Supported p < 0.01	Not Supported	Supported p < 0.10	Not Supported
H <sub>11</sub>	<i>That for Malaysian companies, there is a positive association</i>	+	Supported p < 0.10	Supported p < 0.10	Supported p < 0.10	Supported p < 0.01	Not Supported	Not Supported	Not Supported



	<i>between the level of executive director's remuneration disclosures and company profitability.</i>								
H <sub>12</sub>	<i>That for Malaysian companies, there is a positive association between the level of executive director's remuneration disclosures and company growth.</i>	+	Not Supported	Not Supported	Supported p < 0.01	Supported p < 0.05	Not Supported	Not Supported	Not Supported

## Chapter 7 Conclusions

### 7.0 Introduction

This chapter provides an overview of the study with a summary of the research. It is followed by a discussion of the implications of the empirical results on policy settings and corporate governance mechanisms. It also addresses the limitations of the study and the directions for future research on the disclosure of Malaysian directors' remuneration.

### 7.1 Summary of research

The first objective of this study was to examine the effectiveness of the reforms to the Malaysian regulations on the disclosure of executive directors' remuneration. The reforms included the Malaysian Code of Corporate Governance 'the *MCCG*', the Bursa Malaysia Listing Rule, the FRS 2 '*Share Based Payments*' and the FRS 124 '*Related Party Transactions*'. The study considered the level of disclosure of executive directors' remuneration before and after the implementations of the reforms. The second objective was to fill in the gaps in existing studies of the disclosure of executives' remuneration. The final objective was to employ different theoretical models to explain the disclosure policies on executive directors' remuneration. These objectives led to the following research questions:

- *What was the level of total and voluntary disclosure of Malaysian executive directors' remuneration before and after the reforms to the Malaysian regulatory framework?*
- *Were the reforms to the Malaysian regulatory framework on the disclosure of executive directors' remuneration effective in improving the level of disclosure of Malaysian executive directors' remuneration? Was there any resistance to the evolving regulatory changes on the disclosure framework?*

- *What were the determinants of the level of disclosure of Malaysian executive directors' remuneration? Can agency theory, legitimacy theory, signaling theory and proprietary costs explain the level of disclosure of executive directors' remuneration?*

This study examined a sample of 200 publicly listed companies from 2001 to 2008. The companies were manually scored based on a disclosure index constructed on the Malaysian regulatory framework on disclosure and prior studies. The analysis was based on an unbalanced panel dataset.

The key findings of the study were:

- **Univariate analysis**

The results of the univariate analysis (non-parametric tests) found significant improvements in the level of disclosure of executive directors' remuneration throughout the evolving reforms to the Malaysian disclosure framework. This suggested that the reforms were successful in improving the level of disclosure of executive directors' remuneration. However, the descriptive analysis also found some significant weaknesses in the regulations. Some of the issues identified were inconsistencies between the various regulations, ineffectiveness of the 'opt out clause', lack of comprehensive disclosure of remuneration policies, partial compliance to accounting standards and a significant reluctance to disclose individual remuneration. A significant number of Malaysian companies also resorted to a pattern of disclosing only the minimum requirements of the regulatory framework.

The results of the univariate analysis also showed significant differences in the characteristics of companies with high and low disclosures of executive directors' remuneration. The results found that government ownership<sup>50</sup>, independent directors, company size, profitability and foreign ownership influenced the differences in high and low scoring companies.

- **Bivariate analysis**

The results of the bivariate analysis confirmed the validity of integrating the different theoretical perspectives (agency theory, legitimacy theory, signaling theory and proprietary costs) into a single research empirical framework. The analysis showed interactions between the proxies for the different theories in determining the level of disclosure of executive directors' remuneration.

- **Multivariate analysis**

The multivariate analysis provided further evidence that there was improvement in the level of disclosure of executive directors' remuneration after the reforms. The reforms were effective in improving the overall level of disclosure of executive directors' remuneration but failed to significantly improve the level of disclosure of individual executive director's remuneration. This disclosure is arguably the most significant information in the assessment of executive director's performance. The result also showed that the regulations' weaknesses were exploited by low disclosing companies who reverted to the disclosure of minimum information.

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<sup>50</sup> Only for voluntary disclosure

The introduction of the MCCG and reforms to the accounting standards did not weaken the traditional influence of family shareholdings over Malaysian companies' disclosure policies. All the analysis showed that the association between family shareholdings and the disclosure of executive directors' remuneration is consistently significant and negative. The result suggests that family owners view disclosure of executive directors' remuneration as sensitive information that may threaten their control over the companies. Extensive disclosure on executive remuneration, especially on individual director's remuneration may expose exploitation of minority shareholders and the consumption of private benefits by family managers.

The results of the hypothesis tests of the effects of the other ownership variables on ownership concentration were mixed. The inconsistencies may be attributed to correlation between ownership concentration and other ownership variables (family, foreign and government). A lower proportion of executive directors' shareholdings were shown to improve the level of disclosure of executive directors' remuneration. The level of debt was only shown to significantly limit the probability of disclosure of individual executive director's remuneration.

An increase in the proportion of independent directors was shown to be effective in improving the level of disclosure of executive directors' remuneration especially in low disclosure companies. These were inconsistent with some preconceived notions that these directors were not truly independent and were controlled by 'insiders'. The periodic analysis also showed that there was a plausible size threshold where the board would be more effective in influencing disclosure policy. The influence of audit quality on the disclosure of executive directors'

remuneration was shown to improve after the introduction of the reforms and was stronger in high disclosure companies.

The result of this study provided evidence for legitimacy theory. It found that company size as a proxy for the theory was significantly associated with the level of disclosure of executive directors' remuneration. The results also supported the notion of signaling theory that better performed companies will disclose more information. Finally, contrary to expectations, companies with higher risks of incurring proprietary costs were more likely to disclose the remuneration of individual executive directors.

## **7.2 Implications of the findings**

Although the study found a significant improvement in the level of disclosure of executive directors' remuneration after the reforms, the results also suggested that Malaysian regulators may have to strengthen the disclosure requirements. The 'opt out' clause in the MCCG and the broad nature of FRS 124 *'Related Party Transactions'* may need to be replaced by more detailed and prescriptive requirements to ensure adequate disclosure of executive directors' remuneration. The term *'key management personnel'* in the FRS 124 should be replaced by a term that is more clearly defined and specifies the requirements for the disclosure of individual remuneration. The Australian regulators had a similar experience with companies taking advantage of broad disclosure requirements and ambiguous terms. They have since now given way to a more black letter approach to disclosure requirements. The Australian disclosure requirements are now very comprehensive and spell out clearly the 'required' disclosures of executives' remuneration.

There is also a need to remove the inconsistencies between the MCCG and the Bursa Malaysia Listing Rules. The mandatory requirements of the Listing Rule to disclose remuneration according to bands provided an *'escape route'* for companies not wanting to disclose individual executive director's remuneration as it was only voluntary under the MCCG. The disclosure of individual remuneration would provide more information to investors than disclosure by bands. This is especially important in assessing the performance of the executive directors as agents for the shareholders.

If the MCCG was maintained at a voluntary level, greater enforcement would be needed to ensure that companies provided valid and comprehensive statements to justify departures from the recommendations of the MCCG. The level of compliance to the mandatory accounting standards also indicated that there was a need for better enforcement of the standards. Companies were lax in their application of the full requirements of the standards and only applied part of the requirements. External auditors also appeared not to push for disclosure of executive directors' remuneration in accordance with the full requirements of the mandatory accounting standards.

The dominance exerted on disclosure policies by family shareholder in protecting their own self-interest provides another strong reason to change the approach in the Malaysian regulatory framework on disclosure. A voluntary approach and broad based standards were shown in this study not to be sufficient to mitigate the dominant family influence on Malaysian companies. The presence of other players such as regulators, foreign investors and creditors in the market, has also been shown as not strong enough to offset the power exerted by families. The Malaysian

government's current goal of divesting its shareholdings in listed companies may also remove the positive influence that government ownership had on disclosure policies.

Regulators may also need to embark on a greater campaign to educate investors especially minority shareholders of their rights to information and the existing regulations on the disclosure framework. This may increase the demands for higher quality and comprehensive information on executive directors' remuneration. The efforts of independent groups such as the *Minority Shareholders' Watchdog Group* in compiling annual corporate governance index that included assessment directors' remuneration needs to be supported and sustained.

### **7.3 Limitations of the study**

Firstly, the study may be constrained by omitted variables that may influence the level of disclosure of executive directors' remuneration. For example, the study did not directly consider the unique cultural characteristics of Malaysian companies such as multi-ethnicity, religions and education that could influence the level of disclosure. Using the Hofstede-Gray societal values, Haniffa and Cooke (2002) identified the differences in the ethnics of the Malays and Chinese who made off majority of the Malaysian population. The Malays are relatively more secretive than the Chinese. The Chinese are less risk averse than the Malays. These different cultural traits may influence the level of disclosure in Malaysia. Haniffa and Cooke (2002) suggested that Malaysian regulators may have faced a backlash from threatened parties if regulatory measures are focused around cultural or ethnic differences. A corporate governance code that was seen to protect one ethnic interest over the other may result in secrecy by the threatened or disadvantaged ethnic. However, an examination of the ownership variables may indirectly reflect



these cultural differences as they should reflect the ownership composition in Malaysian market. The study also did not include all corporate governance measures that a company can implement. It focused on the measures that had key roles in disclosure policies. However, other corporate governance mechanisms such as audit and remuneration committees and policies on CEO duality may have an indirect association with the level of disclosure of executive directors' remuneration.

The second limitation is the disclosure of remuneration information in channels other than annual reports. Jinghui and Taylor (2008) showed that the debate on remuneration may affect the personal legitimacy of the executives rather than their companies. The executives may react by personally addressing the issue through personal mail and verbal statements at the Annual General Meetings rather than through disclosure of information in the annual reports. This study only considered the disclosure of remuneration information in the annual reports. The disclosure of remuneration information in alternative channels may affect the comprehensiveness of the disclosure index.

Another limitation that is linked to the disclosure index is the manual scoring of the annual reports. This method is susceptible to subjectivity and bias on the part of the researcher. However, steps were undertaken to limit the potential for researcher bias and errors. The annual reports were read in their entirety before being scored in the second read. The scoring index had clear instructions and was supported by examples. In addition, a random and independent verification was done by another researcher on the ongoing data scoring and final data scores.

Another potential limitation is the use of proxies for the various theoretical constructs. For example, the use of size as an independent variable may be a proxy for various theoretical assumptions and be subjected to various theoretical interpretations (Depoers 2000). Watts and Zimmerman (1986) argued size can be 'noisy' proxy for political costs. It can also have high correlation with other independent variables rendering simultaneous analysis or multiple regression results ineffective. Jinghui and Taylor (2008) argued that size can be a proxy for extraneous variables such as disclosure capability in terms of expertise and finance. Another example was the use of the profitability ratio (ROE) as a proxy for legitimacy. This may be contrary to the argument that legitimacy is not only defined by economic measures. However, Patten (1991) argued that a social measure is harder to obtain. Thus, profitability might be the best proxy.

The final potential limitation of this study is the popularity of nominee accounts in the Malaysian capital market. For example, there has been an increase of 85 percent in capital investments by nominees account holders from 1997 to 2006. The use of nominees as an investment medium may provide investors with a certain anonymity. This may limit the accuracy of the ownership variables that were applied in this study. For example, foreign shareholders may use domestic nominee companies to act on their behalf. The list of shareholdings will only list the names of nominee companies and not the individual shareholder's identity or nationality. Mohd Ghazali and Weetman (2006) argued that Malaysian government policies on equity redistribution according to race have also increased the popularity of nominee accounts. However, there should be minimal impact on the measurement of family and executive directors' shareholdings because

the Listing Rule and accounting standards required disclosure of direct and indirect shareholdings of related parties.

#### **7.4 Directions for future research**

Future studies may consider including cultural, ethnicity and religious elements into the overall empirical framework. Unlike the Western market, culture and religion are integral parts of doing business in Asian countries including Malaysia. The modified Hofstede-Gray societal values index constructed by Haniffa and Cooke (2002) provides a good framework for examining the influence that these different social traits may have on the level of disclosure of Malaysian executive directors' remuneration. The modified index included unique Malaysian social values that may be determined by racial profiles (*Malay and non-Malays, Chinese and non-Chinese*) and religious beliefs (*Muslims and non-Muslims*).

The scope of the disclosure may be expanded to include disclosure of executive directors' remuneration via other formal and informal channels, such as interim reports, letters to shareholders, external remuneration surveys and press releases. The inclusion of the disclosure of remuneration in alternative channels may improve the empirical findings. In addition, external remuneration surveys, if accessible, may prove to be valuable in providing inputs into whether benchmarks are used efficiently by companies in setting their remuneration policies and on whether extensive remuneration information is more readily available privately rather than in the public domain. Future studies may also consider the association between executive directors' remuneration and companies' performance. This is another area that has been extensively researched in American and European capital markets but not in a Malaysian context.

## 7.5 Concluding remarks

This study has filled the gaps in existing studies on disclosure of executives' remuneration by integrating different theoretical paradigms. It also provided a comprehensive overview of the disclosure of Malaysian executive directors' remuneration during the evolving Malaysian regulatory framework on disclosure. This study showed that the reforms are effective in improving the level of disclosure of executive directors' remuneration. However, there were significant weaknesses in the reforms that were exploited by Malaysian companies and need to be improved by the regulators. The improvement in the level of disclosure of executive directors' remuneration after the reforms provided a positive indicator of the move to greater corporate transparency and good governance after the East Asian financial crisis. However, there is still a need to consider or curtail the traditional dominance exerted by family shareholders in the implementations and enforcement of existing and future regulations. Under such an environment, a *'hybrid'* approach to regulations may need to give way to a stronger mandatory and prescriptive regulatory framework.

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## **APPENDICES**

## Appendix 1 List of sample companies

NO	NAME OF COMPANY
1	HOCK SENG LEE BERHAD
2	BINA PURI HOLDINGS BHD
3	LOH & LOH BHD
4	IJM CORPORATION BERHAD
5	DKLS INDUSTRIES BHD
6	BREM HOLDING BERHAD
7	GOLD BRIDGE ENGINEERING & CONSTRUCTION BERHAD
8	PINTARAS JAYA BERHAD
9	PJ DEVELOPMENT HOLDINGS
10	PLB ENGINEERING
11	GAMUDA BERHAD
12	YTL CORPORATION BERHAD
13	EKOVEST BERHAD
14	LATITUDE TREE
15	PUTERA CAPITAL
16	HONG LEONG INDUSTRIES BERHAD
17	KHEE SAN
18	FRASER & NEAVE
19	BRITISH AMERICAN TOBACCO (MALAYSIA) BERHAD
20	NESTLE (MALAYSIA) BERHAD
21	CARLSBERG
22	PPB GROUP BERHAD
23	CYCLE & CARRIAGE BINTANG BERHAD
24	DUTCH LADY MILK INDUSTRIES BERHAD
25	HUP SENG INDUSTRIES BERHAD
26	NEW HOONG FATT HOLDINGS BERHAD
27	YEO HIAP SENG
28	DNP HOLDINGS BERHAD
29	TAN CHONG MOTOR HOLDINGS BERHAD
30	KENMARK INDUSTRIAL CO
31	MWE HOLDINGS
32	GOLDEN PHAROS BERHAD
33	NIKKO ELECTRONICS
34	MAMEE-DOUBLE DECKER (M) BERHAD
35	GENERAL CORPORATION BERHAD
36	GUINNESS ANCHOR BERHAD

37	LINEAR CORPORATION BERHAD
38	ADVANCE SYNERGY BERHAD
39	KIA LIM
40	LEADER UNIVERSAL
41	MIECO CHIPBOARD BERHAD
42	SOUTHERN STEEL
43	PAN MALAYSIA CORPORATION BERHAD
44	KECK SENG
45	PRESS METAL
46	LANDMARKS BERHAD
47	GRAND CENTRAL ENTERPRISES BHD
48	SHANG RI LA
49	FABER GROUP BERHAD
50	GULA PERAK
51	PUNCAK NIAGA HOLDINGS BERHAD
52	YTL POWER INTERNATIONAL BERHAD
53	DIGI
54	KIAN JOO CAN
55	BOX PAX (MALAYSIA) BERHAD
56	SINORA INDUSTRIES BERHAD
57	THONG GUAN
58	ANN JOO RESOURCES BERHAD
59	GOH BAN HUAT BERHAD
60	PETALING TIN BERHAD
61	AMANAH HARTA TANAH PNB
62	LITYAN
63	HEITECH
64	MAA HOLDINGS BERHAD
65	MHC PLANTATIONS BHD
66	TDM BERHAD
67	THE AYER MOLEK RUBBER COMPANY BERHAD
68	MALAYSIAN PACIFIC INDUSTRIES BERHAD
69	UNISEM (M) BERHAD
70	ENG TEKNOLOGI HOLDINGS BERHAD
71	MESINIAGA BERHAD
72	AIC CORPORATION BERHAD
73	PATIMAS COMPUTERS BERHAD
74	GLOBETRONICS TECHNOLOGY BHD
75	SUNGEI BAGAN RUBBER COMPANY (MALAYA) BERHAD

76	CHIN TECK PLANTATIONS BERHAD
77	ASIATIC DEVELOPMENT BERHAD
78	KURNIA SETIA BERHAD
79	UNITED PLANTATIONS BERHAD
80	NEGERI SEMBILAN OIL PALMS BERHAD
81	INCH KENNETH KAJANG RUBBER PUBLIC LIMITED COMPANY
82	KUALA LUMPUR KEPONG BERHAD
83	BATU KAWAN BERHAD
84	A&M REALTY BERHAD
85	BINA DARULAMAN BERHAD
86	COUNTRY HEIGHTS HOLDINGS BERHAD
87	PK RESOURCES BERHAD
88	FARLIM GROUP (MALAYSIA) BERHAD
89	MUI PROPERTIES BERHAD
90	SUNWAY CITY BERHAD
91	BANDAR RAYA DEVELOPMENT BERHAD
92	UNITED MALAYAN LAND BERHAD
93	SOUTH MALAYSIA INDUSTRIES BERHAD
94	BOLTON BERHAD
95	LIEN HOE CORPORATION BERHAD
96	ASIA PACIFIC LAND BERHAD
97	TANCO HOLDINGS BERHAD
98	LAND & GENERAL BERHAD
99	DAMANSARA REALTY BERHAD
100	PASDEC HOLDINGS BERHAD
101	SPK SENTOSA CORPORATION BERHAD
102	UNICO DESA PLANTATIONS BERHAD
103	IOI CORPORATION BERHAD
104	MULTI VEST RESOURCES BERHAD
105	KLUANG RUBBER COMPANY (MALAYA) BERHAD
106	KWANTAS CORPORATION BERHAD
107	GLENEALY PLANTATIONS (MALAYSIA) BERHAD
108	SARAWAK OIL PALMS BERHAD
109	KULIM (MALAYSIA) BERHAD
110	NV MULTI CORPORATION BERHAD
111	HARRISON HOLDINGS (MALAYSIA) BERHAD
112	GENTING BERHAD
113	KONSORTIUM LOGISTIC BERHAD
114	IPMUDA BERHAD



115	PADIBERAS NASIONAL BERHAD
116	MULPHA INTERNATIONAL BERHAD
117	KUB MALAYSIA BERHAD
118	MECHMAR CORPORATION (MALAYSIA) BERHAD
119	MALAYAN UNITED INDUSTRIES BERHAD
120	KFC HOLDINGS MALAYSIA BERHAD
121	JOHORLAND BERHAD
122	IGB CORPORATION BERHAD
123	PARAMOUNT CORPORATION BERHAD
124	SELANGOR PROPERTIES BERHAD
125	PHARMANIAGA BERHAD
126	SP SETIA BHD GROUP
127	INTEGRATED LOGISTIC GROUP
128	KNUSFORD BERHAD
129	METACORP BERHAD
130	TALICORPS CORPORATION BERHAD
131	FAR EAST HOLDINGS BERHAD
132	LKT INDUSTRIAL BERHAD
133	HO HUP CONSTRUCTION COMPANY BERHAD
134	MALAYAN FLOUR MILLS BERHAD
135	UMW HOLDINGS BERHAD
136	YEE LEE CORPORATION BERHAD
137	ORIENTAL HOLDINGS BERHAD
138	PACIFICMAS BERHAD
139	RHB CAPITAL BERHAD
140	APEX EQUITY HOLDINGS BERHAD
141	PAN MALAYSIA CAPITAL BERHAD
142	MALPAC HOLDINGS BERHAD
143	EASTERN PACIFIC INDUSTRIAL CORPORATION BERHAD
144	BOUSTEAD HOLDINGS BERHAD
145	TIME ENGINEERING BERHAD
146	MULTI PURPOSE HOLDINGS BERHAD
147	RIVERVIEW RUBBER ESTATES BERHAD
148	JT INTERNATIONAL BERHAD
149	ASAS DUNIA BERHAD
150	TSH RESOURCES BERHAD
151	NAM FATT CORPORATION BERHAD
152	BONIA CORPORATION BERHAD
153	PADINI HOLDINGS BERHAD

154	PROLEXUS BERHAD
155	TAKASO RESOURCES BERHAD
156	POH HUAT RESOURCES HOLDINGS BERHAD
157	HUNZA CONSOLIDATION BERHAD
158	REX INDUSTRIES BERHAD
159	UPA CORPORATION BERHAD
160	HWA TAI INDUSTRIES BERHAD
161	LII HEN INDUSTRIES BERHAD
162	JERASIA CAPITAL BERHAD
163	FOREMOST HOLDINGS BERHAD
164	LEN CHEONG HOLDINGS BERHAD
165	PARAGON UNION BERHAD
166	APEX HEALTHCARE BERHAD
167	KHIND HOLDINGS BERHAD
168	ASTRAL ASIA BERHAD
169	KUMPULAN JETSON BERHAD
170	AHMAD ZAKI RESOURCES BERHAD
171	PWE INDUSTRIES BERHAD
172	SELOGA HOLDINGS BERHAD
173	BINA GOODYEAR BERHAD
174	GADANG HOLDINGS BERHAD
175	PACIFIC & ORIENT BERHAD
176	LPI CAPITAL BHD
177	MALAYAN BANKING BERHAD
178	HONG LEONG BANK BERHAD
179	HLG CAPITAL BERHAD
180	SYARIKAT TAKAFUL
181	INSAS BERHAD
182	HWANG DBS (MALAYSIA) BERHAD
183	K&N KENANGA
184	MALAYSIA BUILDING SOCIETY BERHAD
185	PUBLIC BANK BERHAD
186	JERNEH ASIA BERHAD
187	OSK HOLDINGS BERHAD
188	CAHYA MATA SARAWAK
189	SURIA CAPITAL
190	AFFIN HOLDINGS BERHAD
191	DELLOYD VENTURES BERHAD
192	HO WAH GENTING BERHAD

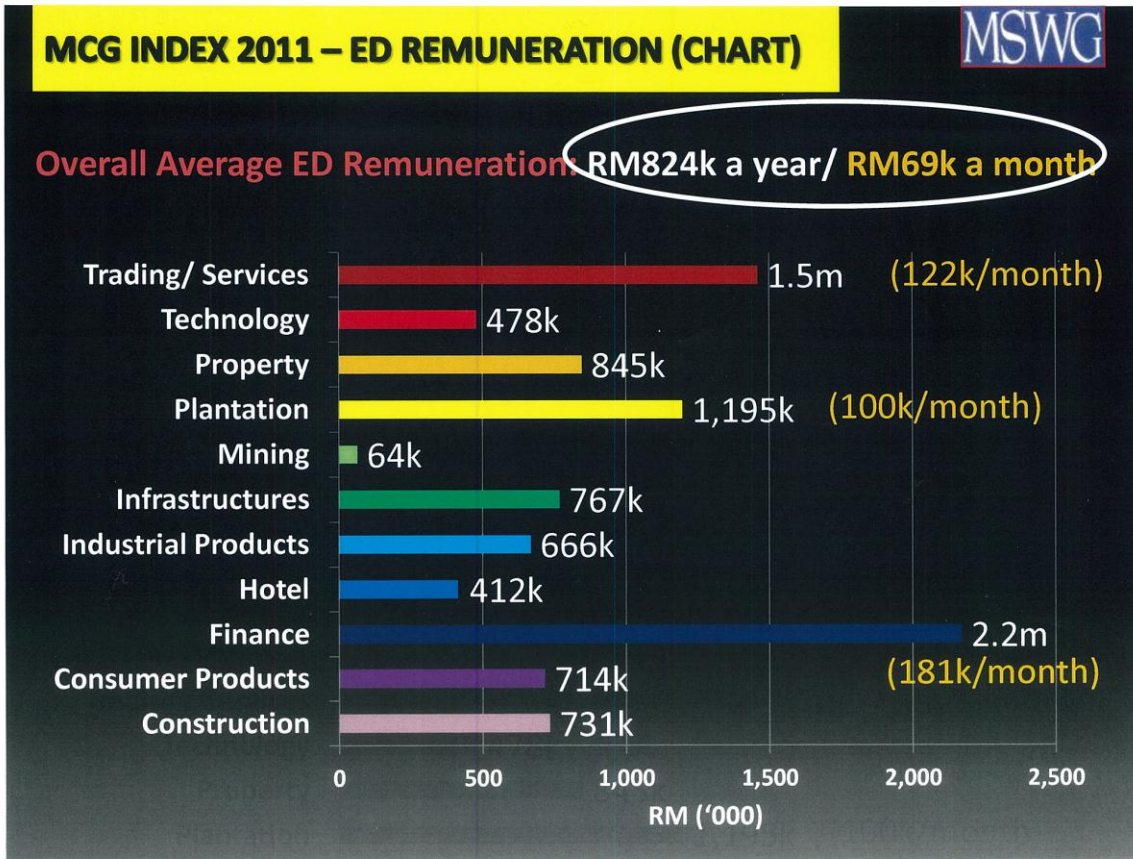
193	P.I.E INDUSTRIAL BERHAD
194	TA ANN HOLDINGS BERHAD
195	MINHO (M) BERHAD
196	CHOO BEE METAL
197	WTK HOLDINGS BERHAD
198	WIJAYA BARU
199	MUDA HOLDINGS BERHAD
200	KUCHAI DEVELOPMENT

Appendix 2 Sample of companies' justifications for departure from the MCCG requirements

No	Name of company	Fiscal year	Statement of departure
1	Hwang DBS Malaysia Berhad	2007	The Code recommends disclosure of details of the remuneration of each Director. However, the Board is of the view that the disclosure of the remuneration of the Directors by bands of RM50000 is sufficient to meet the objective of the Code.
2	IGB Corporation Berhad	2006	For security and confidentiality reasons, the details of Directors' remuneration are not shown with reference to Directors individually. The Board is of the view that the transparency and accountability aspects of the corporate governance on Directors' remuneration are appropriately served by the band disclosure made.
3	INSAS Berhad	2007	The remuneration of the Directors are further analysed by applicable bands of RM50000 which comply with the disclosure requirements under the Listing Requirements of the Bursa Malaysia Securities Berhad. The Board is of the view that the transparency and accountability aspect of corporate governance which is applicable to Directors' Remuneration are appropriately served by the band disclosure.
4	KHIND Holdings Berhad	2006	On the recommended disclosure of detail of the remuneration of each Director, the Board is of the view that the transparency and accountability aspects of corporate governance as applicable to Directors' remuneration are appropriately served by the "Band Disclosure" made.
5	KiaLim Berhad	2005	Details of the remuneration of each Director are

			not disclosed due to security reasons.
6	Kian Joo Can Factory Berhad	2007	<p>The Board is of the view that the transparency and accountability aspects applicable to Directors’</p> <p>Remuneration are appropriately served by the ‘band disclosure of RM50000 as set out under Note 30 of the Notes to the Financial Statements, which complies with the disclosure requirements under the Bursa Malaysia Securities Berhad’s Listing Requirements.</p>
7	Lii Hen Industries Berhad	2006	<p>While the Board is aware that best practice under the Malaysian Code is to provide disclosure of individual remuneration, however the Board is of the view it is consider appropriate to disclose the remuneration of the directors in aggregate and bands.</p>
8	Tanco Holdings Berhad	2007	<p>The above disclosures format meets the requirements of the Listing Requirements</p>

Appendix 3 Remuneration survey by the MSWG



**MCG INDEX 2011 – DIRECTORS' REMUNERATION** **MSWG**

DIRECTORS' REMUNERATION			
	2011	2010	2009
Disclosure by individual directors	72 PLCs (8.3%)	50 PLCs (5.6%)	47 PLCs (5.2%)

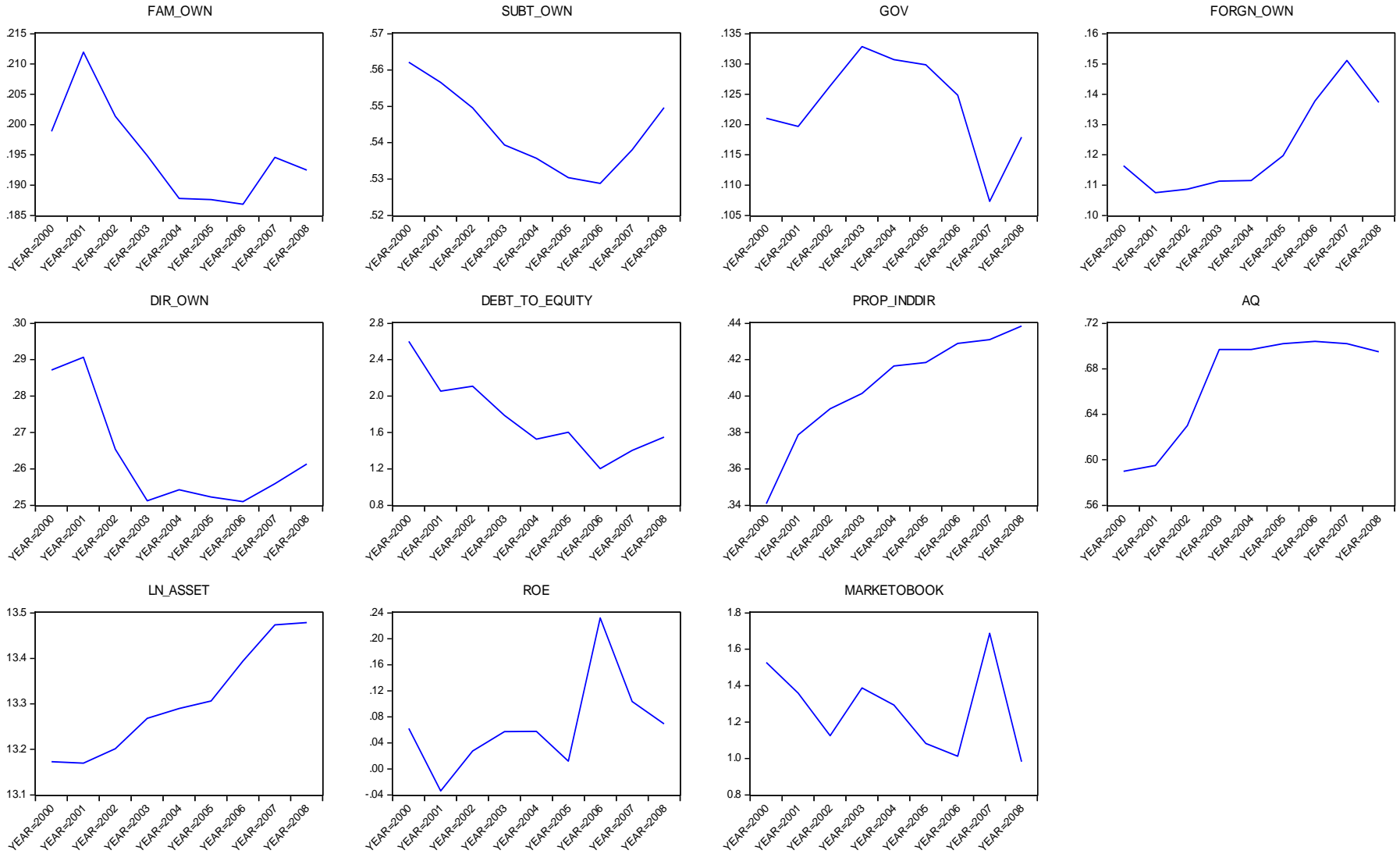
#### Appendix 4 Descriptive statistics for independent variables

	FAM OWN	SUBT OWN	GOV	FORGN OWN	DIR OWN	DEBT TO EQUITY
Mean	0.1956	0.5435	0.1235	0.1219	0.2639	1.7632
Median	0.0000	0.5631	0.0513	0.0388	0.2852	0.6986
Maximum	0.8490	0.9654	0.9680	0.9120	0.9384	128.5270
Minimum	0.0000	0.0863	0.0000	0.0000	0.0000	-93.7633
Std. Dev.	0.2346	0.1652	0.1770	0.1835	0.2262	6.1924
Skewness	0.6598	-0.3312	2.1437	1.9024	0.2107	5.1765
Kurtosis	1.9091	2.5814	7.3782	5.6856	1.7660	176.6564
Jarque-Bera	217.8922	45.6480	2791.2310	1612.2580	126.3917	2249604
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	348.9918	969.5977	220.3098	217.4710	470.8325	3145.4870
Sum Sq. Dev.	98.1629	48.6595	55.8752	60.0657	91.2186	68371.1600

	PROP INDDIR	AQ	LN ASSET	ROE	MARKET TO BOOK
Mean	0.4049	0.6682	13.3080	0.0651	1.2748
Median	0.3750	1.0000	13.1225	0.0613	0.8000
Maximum	1.0000	1.0000	19.4106	27.6506	91.8000
Minimum	0.0000	0.0000	8.6415	-3.8931	-42.6000
Std. Dev.	0.1210	0.4710	1.4947	0.7630	3.4262
Skewness	0.7714	-0.7143	0.9008	26.7593	11.5874
Kurtosis	5.0177	1.5102	4.8767	964.7990	317.2432
Jarque-Bera	479.5524	316.6794	503.0867	68975507	7380250
Probability	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	722.2867	1192.0000	23741.4800	116.1872	2274.2680
Sum Sq. Dev.	26.1169	395.5516	3983.5030	1037.9530	20930.6500

## Appendix 5 Distribution of independent variables from 2000 to 2008 (mean)

Means by YEAR

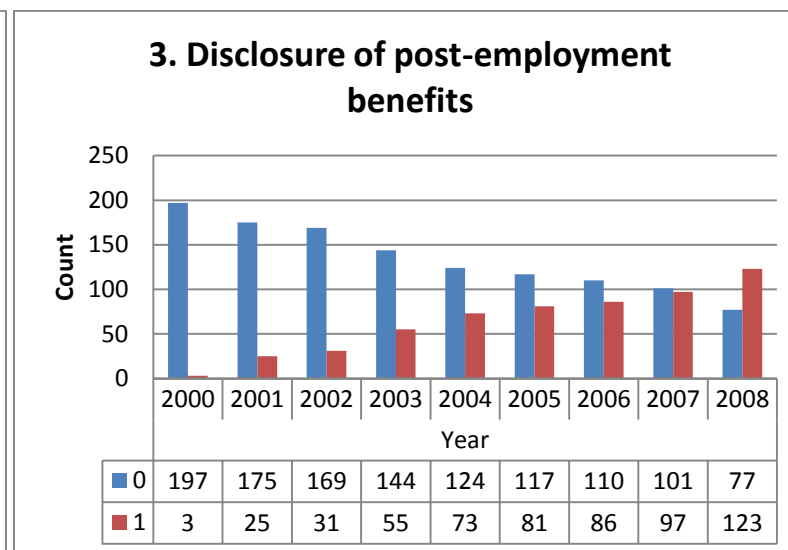
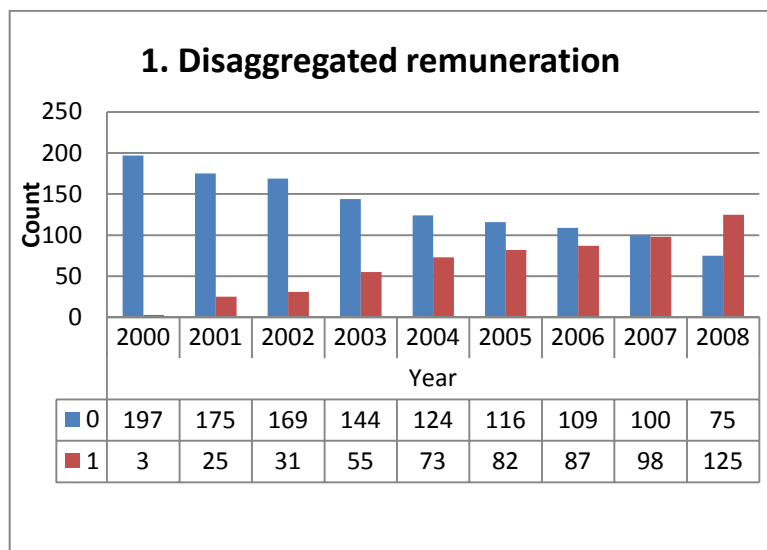




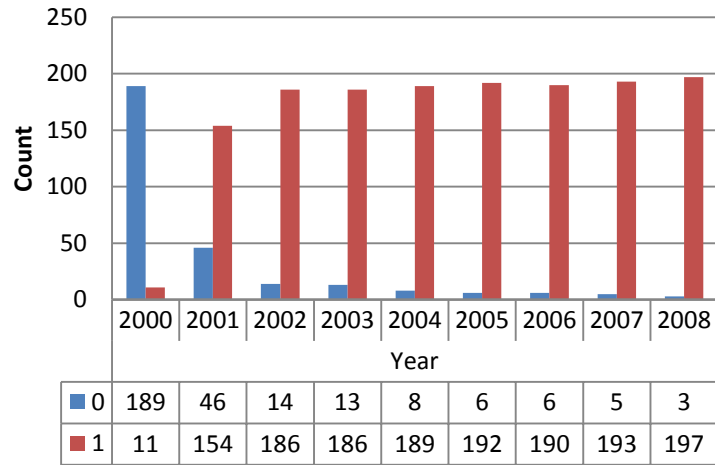
## Appendix 6 Summary of scoring guide

ITEM		MAXIMUM SCORE	DESCRIPTION	
	1	1	Disaggregated remuneration	V
	2	1	Disclosure of short-term benefits	V
	3	1	Disclosure of post-employment benefits	V
	4	1	Disclosure of other long-term benefits	V
	5	1	Disclosure of termination benefits	V
	6	1	Share based payment	V
	7	1	Specific section for remuneration in directors' report	V
	8	1	Separate disclosure for individual executive directors	V
	9	1	Comparative period information	V
	10	2	Discussion on principles of remuneration	V
	11	2	Discussion on pay and performance association	V
	12	3	Options valuation and right details	M
	13	1	Disclosure by band as per the listing rule	M
TOTAL SCORE WITH OPTION		17	VOLUNTARY SCORE	7
TOTAL SCORE NO OPTION		14	VOLUNTARY SCORE(EX FRS&LISTING RULE)	13
<b>VALID AFTER 2001</b>			<b>VOLUNTARY SCORE IN 2000</b>	
MANDATORY SCORE WITH OPTION		10	WITH OPTIONS	17
MANDATORY SCORE WITHOUT OPTION		7	WITHOUT OPTIONS	14
			<b>VOLUNTARY SCORE PRIOR TO FRS (VALID FROM 2001 TO 2004)</b>	
			WITH OPTIONS	16
			WITHOUT OPTIONS	13
			<b>VOLUNTARY SCORE AFTER FRS (VALID FROM 2005)</b>	
				13

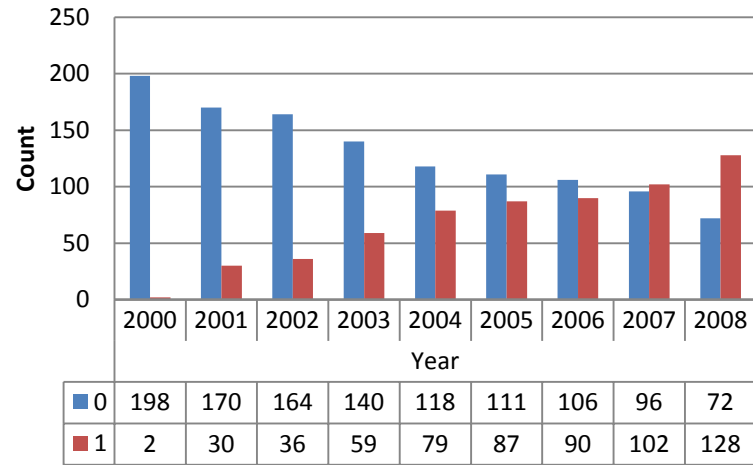
Appendix 7 Distribution of score per item



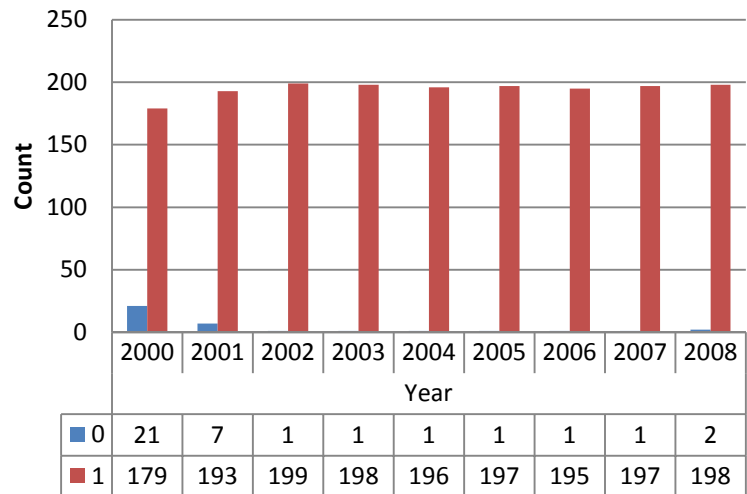
### 2. Disclosure of short term benefits



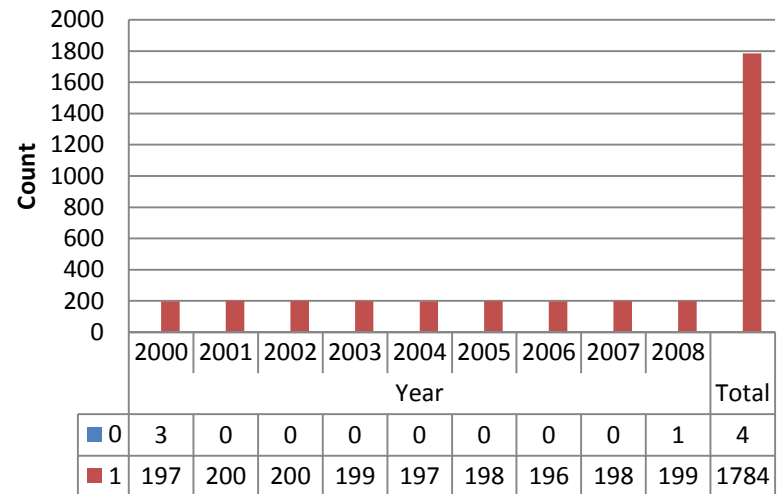
### 4. Disclosure of other long term benefits



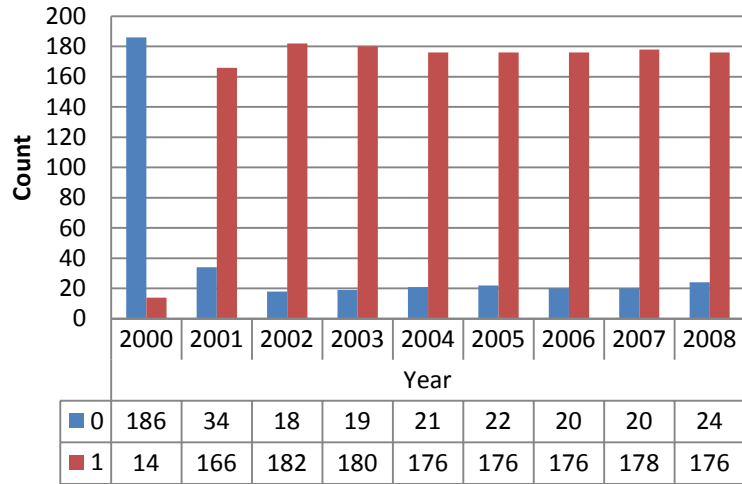
### 5. Disclosure of termination benefits



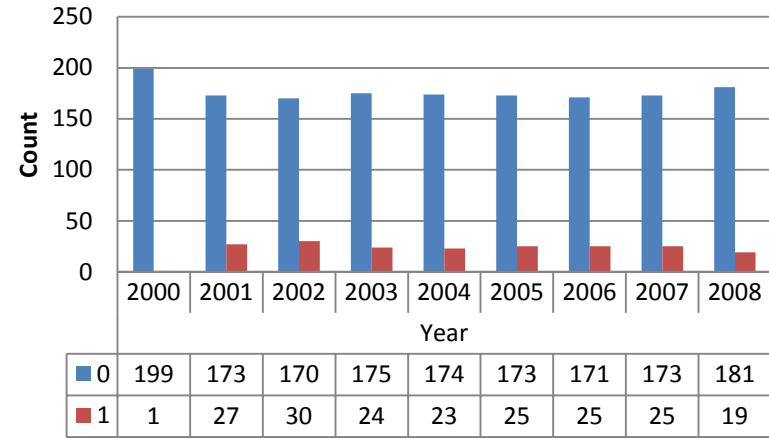
### 6. Disclosure of share based payments



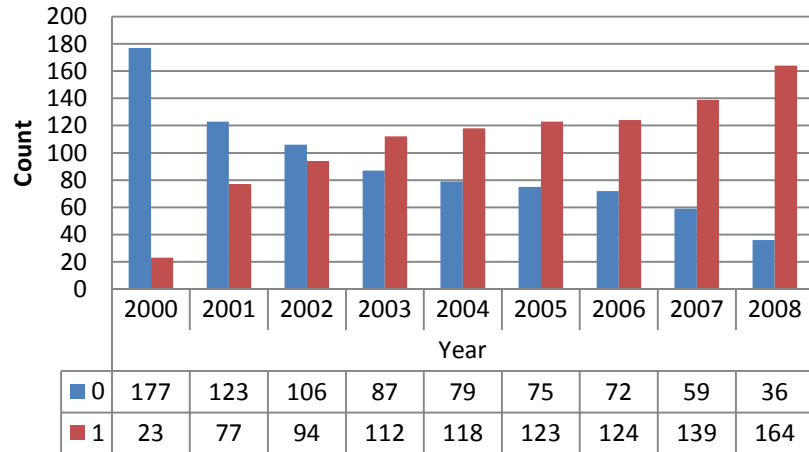
### 7. Specific section in director's report



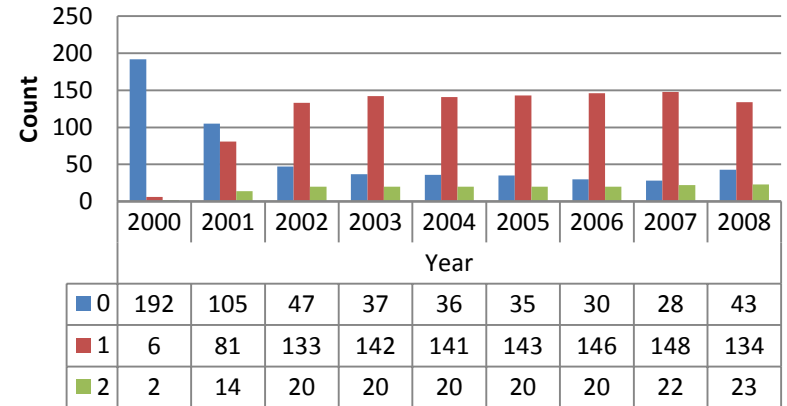
### 8. Individual executive director's remuneration



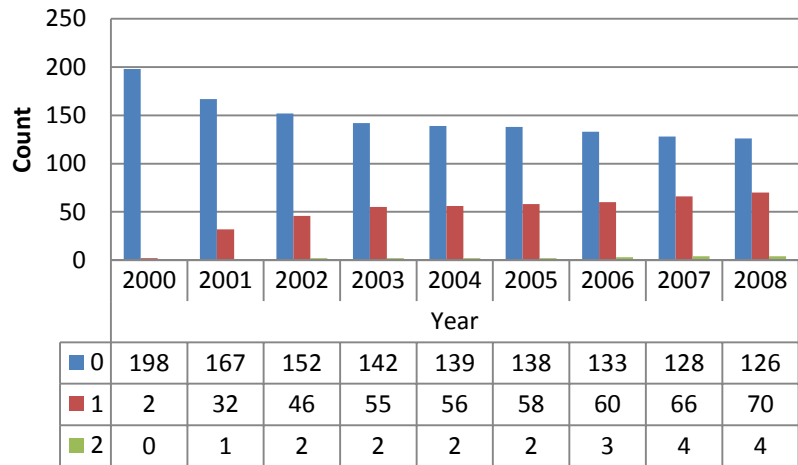
### 9. Comparative period information



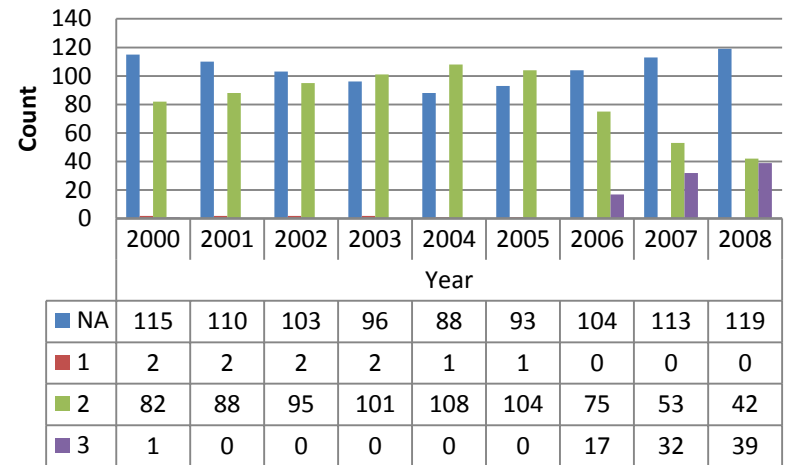
### 10. Discussion on principles of remuneration



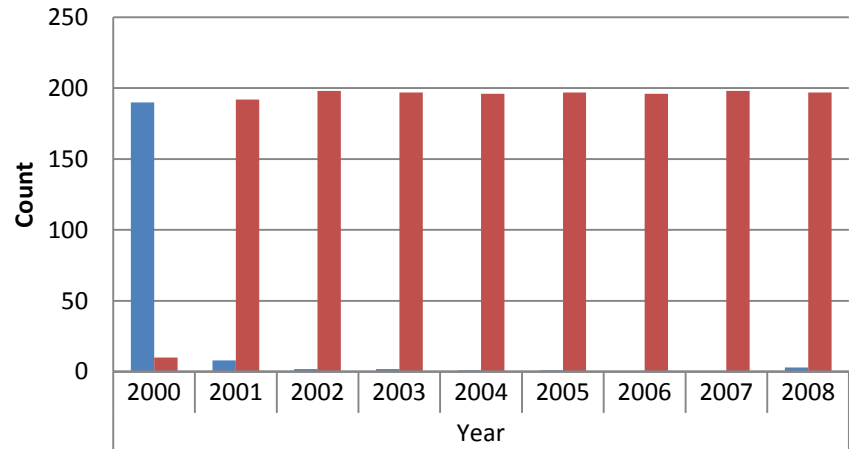
### 11. Discussion on pay and performance association



### 12. Disclosure on options valuations and rights

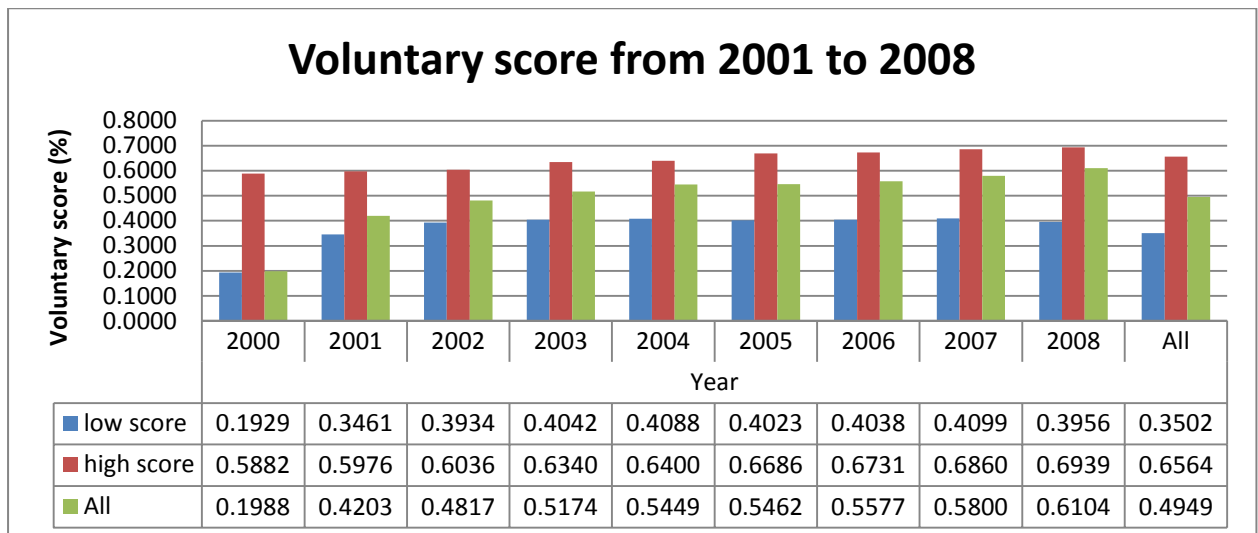
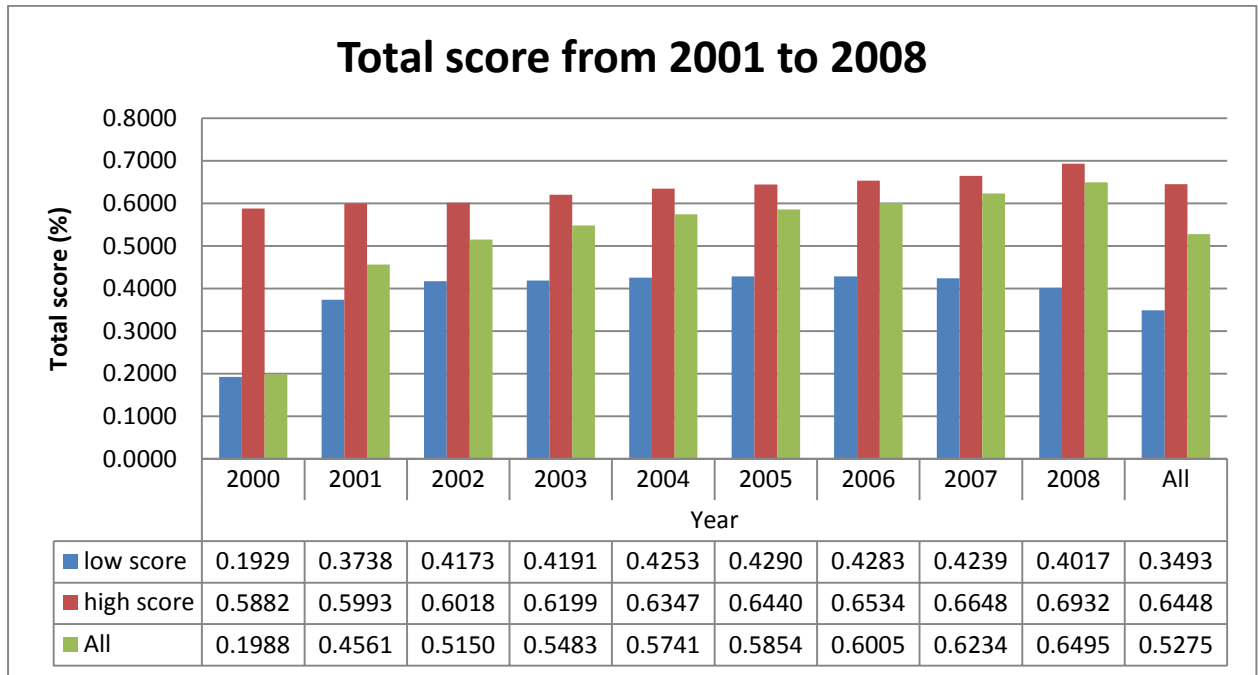


### 13. Disclosure of remuneration by bands



	2000	2001	2002	2003	2004	2005	2006	2007	2008
0	190	8	2	2	1	1	0	0	3
1	10	192	198	197	196	197	196	198	197

Appendix 8 Distribution of total and voluntary score from 2001 to 2008



## Appendix 9 Definition of an independent director

### Paragraph 1.01 of the Bursa Malaysia Listing Rule

An “independent director” means a director who is independent of management and free from any business or other relationship which could interfere with the exercise of independent judgement or the ability to act in the best interests of an applicant or a listed issuer. Without limiting the generality of the foregoing, an independent director is one who -

(a) is not an executive director of the applicant, listed issuer or any related corporation of such applicant or listed issuer (each corporation is referred to as “said Corporation”);

(b) has not been within the last 2 years and is not an officer (except as a non-executive director) of the said Corporation. For this purpose, “officer” has the meaning given in section 4 of the Companies Act 1965;

(c) is not a major shareholder the said Corporation;

(d) is not a family member of any executive director, officer or major shareholder of the said Corporation;

(e) is not acting as a nominee or representative of any executive director or major shareholder of the said Corporation (this paragraph is referred to as “paragraph (e)”);

(f) has not been engaged as an adviser by the said Corporation under such circumstances as prescribed by the Exchange or is not presently a partner, director (except as an independent director) or major shareholder, as the case may be, of a firm or corporation which provides professional advisory services to the said Corporation under such circumstances as prescribed by the Exchange (this paragraph is referred to as “paragraph (f)”); or

(g) has not engaged in any transaction with the said Corporation under such circumstances as prescribed by the Exchange or is not presently a partner, director or major shareholder, as the case may be, of a firm or corporation (other than subsidiaries of the applicant or listed issuer) which has engaged in any transaction with the said Corporation under such circumstances as prescribed by the Exchange (this paragraph is referred to as “paragraph (g)”).



## Appendix 10 Eviews output for Equation 1

Dependent Variable: TOTALSCORE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 11/27/11 Time: 23:29  
 Sample: 2000 2008  
 Periods included: 9  
 Cross-sections included: 200  
 Total panel (unbalanced) observations: 1783  
 Linear estimation after one-step weighting matrix  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.324594	0.047881	-6.779128	0.0000
FAM_OWN	-0.055482	0.015932	-3.482479	0.0005
SUBT_OWN	0.026477	0.021348	1.240288	0.2151
GOV	0.031422	0.019790	1.587743	0.1125
FORGN_OWN	-0.009282	0.013189	-0.703725	0.4817
DDIROWN01	-2.050712	2.436284	-0.841738	0.4001
DDIROWN0125	0.028130	0.025436	1.105928	0.2689
DDIROWN0025	-0.008454	0.017997	-0.469739	0.6386
DEBT_TO_EQUITY	0.000277	0.000235	1.179504	0.2384
PROP_INDDIR	0.038633	0.016939	2.280734	0.0227
AQ	0.007771	0.008145	0.954106	0.3402
LN_ASSET	0.038196	0.002932	13.02869	0.0000
ROE	0.001101	0.001629	0.675736	0.4993
MARKETBOOK	-0.000450	0.000617	-0.729400	0.4659
D2001	0.262179	0.001002	261.7847	0.0000
D2002	0.317846	0.001543	205.9616	0.0000
D2003	0.343947	0.002257	152.4062	0.0000
D2004	0.359013	0.002234	160.7391	0.0000
D2005	0.364528	0.002118	172.1245	0.0000
D2006	0.374902	0.002139	175.2868	0.0000
D2007	0.391778	0.002178	179.8875	0.0000
D2008	0.419343	0.002458	170.6199	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.867927	Mean dependent var	0.655043
Adjusted R-squared	0.849325	S.D. dependent var	0.330667
S.E. of regression	0.087464	Sum squared resid	11.94935
F-statistic	46.65823	Durbin-Watson stat	1.320696
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.794041	Mean dependent var	0.527539
Sum squared resid	12.43881	Durbin-Watson stat	1.186567

## Appendix 11 Eviews output for Equation 2

Dependent Variable: TOT\_VOLSCORE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 09/29/11 Time: 12:35  
 Sample: 2000 2008  
 Periods included: 9  
 Cross-sections included: 200  
 Total panel (unbalanced) observations: 1783  
 Linear estimation after one-step weighting matrix  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.313093	0.060858	-5.144622	0.0000
FAM_OWN	-0.056808	0.014921	-3.807391	0.0001
SUBT_OWN	0.025587	0.022923	1.116216	0.2645
GOV	0.057237	0.021640	2.644909	0.0083
FORGN_OWN	-0.026940	0.017206	-1.565744	0.1176
DDIROWN01	-3.695743	2.670438	-1.383947	0.1666
DDIROWN0125	0.025762	0.027358	0.941672	0.3465
DDIROWN0025	-0.003850	0.022350	-0.172252	0.8633
DEBT_TO_EQUITY	0.000338	0.000254	1.332584	0.1829
PROP_INDDIR	0.049418	0.017794	2.777263	0.0055
AQ	0.005444	0.009061	0.600890	0.5480
LN_ASSET	0.037216	0.003644	10.21201	0.0000
ROE	0.001590	0.002101	0.756882	0.4492
MARKETBOOK	-0.000615	0.000725	-0.847547	0.3968
D2001	0.225663	0.000896	251.8193	0.0000
D2002	0.284213	0.001568	181.2903	0.0000
D2003	0.312447	0.002291	136.3586	0.0000
D2004	0.329457	0.002291	143.8307	0.0000
D2005	0.324959	0.002316	140.2951	0.0000
D2006	0.330845	0.002302	143.6978	0.0000
D2007	0.344633	0.002425	142.1033	0.0000
D2008	0.375319	0.002789	134.5635	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.837195	Mean dependent var	0.606716
Adjusted R-squared	0.814265	S.D. dependent var	0.307647
S.E. of regression	0.095729	Sum squared resid	14.31433
F-statistic	36.51042	Durbin-Watson stat	1.286791
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.758573	Mean dependent var	0.494964
Sum squared resid	14.93056	Durbin-Watson stat	1.146478

## Appendix 12 Eviews output for Equation 3

Dependent Variable: TOTALSCORE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 01/26/12 Time: 15:10  
 Sample: 2000 2008  
 Periods included: 9  
 Cross-sections included: 200  
 Total panel (unbalanced) observations: 1783  
 Linear estimation after one-step weighting matrix  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.329002	0.044943	-7.320475	0.0000
FAMOWNWIN	-0.063157	0.013668	-4.620763	0.0000
SUBTOWNWIN	0.034463	0.022685	1.519151	0.1289
GOVWIN	0.033094	0.018232	1.815166	0.0697
FORGNOWNWIN	-0.013776	0.015460	-0.891094	0.3730
DDIROWN0025	-0.004906	0.018112	-0.270890	0.7865
DDIROWN01	-1.681334	2.533322	-0.663687	0.5070
DDIROWN0125	0.024264	0.026975	0.899516	0.3685
LEVERAGEWIN	-0.000636	0.000667	-0.954619	0.3399
PROPIND	0.044722	0.016256	2.751007	0.0060
AQ	0.008470	0.008117	1.043484	0.2969
LN_ASSETWIN	0.038362	0.002828	13.56641	0.0000
ROEWIN	0.005931	0.003526	1.682186	0.0927
MARKETBOOKWIN	-0.001329	0.001603	-0.829603	0.4069
D2001	0.260705	0.000992	262.8457	0.0000
D2002	0.317262	0.001451	218.7111	0.0000
D2003	0.343292	0.001862	184.3337	0.0000
D2004	0.358910	0.001964	182.7359	0.0000
D2005	0.363785	0.001908	190.6225	0.0000
D2006	0.374037	0.001931	193.7219	0.0000
D2007	0.390169	0.001839	212.1479	0.0000
D2008	0.418207	0.002306	181.3461	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.867750	Mean dependent var	0.653644
Adjusted R-squared	0.849123	S.D. dependent var	0.332298
S.E. of regression	0.087241	Sum squared resid	11.88832
F-statistic	46.58621	Durbin-Watson stat	1.325487
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.794451	Mean dependent var	0.527539
Sum squared resid	12.41405	Durbin-Watson stat	1.186307

## Appendix 13 Eviews output for Equation 3

Dependent Variable: TOT\_VOLSCORE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 09/29/11 Time: 15:06  
 Sample: 2000 2008  
 Periods included: 9  
 Cross-sections included: 200  
 Total panel (unbalanced) observations: 1783  
 Linear estimation after one-step weighting matrix  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.316748	0.059970	-5.281792	0.0000
FAMOWNWIN	-0.065753	0.013240	-4.966397	0.0000
SUBTOWNWIN	0.034320	0.024302	1.412238	0.1581
GOVWIN	0.062876	0.020057	3.134859	0.0018
FORGNOWNWIN	-0.029673	0.019085	-1.554737	0.1202
DDIROWN0025	0.000368	0.021237	0.017305	0.9862
DDIROWN01	-3.240666	2.823594	-1.147709	0.2513
DDIROWN0125	0.022607	0.028523	0.792602	0.4281
LEVERAGEWIN	-0.000574	0.000781	-0.734934	0.4625
PROPIND	0.055652	0.017393	3.199589	0.0014
AQ	0.006217	0.008962	0.693658	0.4880
LN_ASSETWIN	0.037303	0.003706	10.06499	0.0000
ROEWIN	0.007360	0.004380	1.680392	0.0931
MARKETBOOKWIN	-0.002059	0.001797	-1.146004	0.2520
D2001	0.224272	0.001083	207.1120	0.0000
D2002	0.283610	0.001646	172.3013	0.0000
D2003	0.311506	0.001910	163.1314	0.0000
D2004	0.329250	0.002054	160.3209	0.0000
D2005	0.323642	0.002217	146.0091	0.0000
D2006	0.329601	0.002168	151.9969	0.0000
D2007	0.342889	0.001947	176.1335	0.0000
D2008	0.373958	0.002814	132.9012	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

### Weighted Statistics

R-squared	0.836653	Mean dependent var	0.605105
Adjusted R-squared	0.813646	S.D. dependent var	0.307706
S.E. of regression	0.095450	Sum squared resid	14.23082
F-statistic	36.36571	Durbin-Watson stat	1.291330
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.759222	Mean dependent var	0.494964
Sum squared resid	14.89038	Durbin-Watson stat	1.146933

## Appendix 14 Eviews output for Equation 5

Dependent Variable: TOTALSCORE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 10/03/11 Time: 23:18  
 Sample: 2000 2008  
 Periods included: 9  
 Cross-sections included: 200  
 Total panel (unbalanced) observations: 1783  
 Linear estimation after one-step weighting matrix  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.108014	0.038179	-2.829150	0.0047
FAM_OWN	-0.003725	0.006028	-0.618065	0.5366
SUBT_OWN	-0.057543	0.020468	-2.811360	0.0050
GOV	0.035640	0.020029	1.779434	0.0753
FORGN_OWN	-0.019806	0.012999	-1.523681	0.1278
DDIROWN01	-2.808225	3.089874	-0.908848	0.3636
DDIROWN0125	-0.035672	0.018547	-1.923335	0.0546
DDIROWN0025	0.038062	0.025283	1.505418	0.1324
DEBT_TO_EQUITY	-0.000482	0.000392	-1.229059	0.2192
PROP_INDDIR	-0.022962	0.017816	-1.288851	0.1976
AQ	0.033665	0.005718	5.887513	0.0000
LN_ASSET	0.006254	0.001611	3.880602	0.0001
ROE	0.004808	0.003138	1.532143	0.1257
MARKETBOOK	0.000687	0.000506	1.357541	0.1748
D2001	0.262445	0.000822	319.1659	0.0000
D2002	0.317800	0.000822	386.4685	0.0000
D2003	0.345677	0.000717	482.0684	0.0000
D2004	0.367914	0.000879	418.5329	0.0000
D2005	0.375862	0.000991	379.3659	0.0000
D2006	0.390510	0.001144	341.4913	0.0000
D2007	0.413663	0.001294	319.7763	0.0000
D2008	0.445616	0.001102	404.3651	0.0000
CONSUMER_DISCRETIONARY	0.253785	0.033177	7.649481	0.0000
CONSUMER_STAPLES	0.239743	0.033687	7.116731	0.0000
FINANCIALS	0.251222	0.030123	8.339957	0.0000
ENERGY	0.135348	0.050713	2.668930	0.0077
HEALTHCARE	0.314962	0.047714	6.600999	0.0000
MATERIALS	0.208149	0.028691	7.254877	0.0000
UTILITIES	0.217637	0.029199	7.453494	0.0000
INDUSTRIALS	0.226716	0.031733	7.144457	0.0000
INFORMATION_TECHNOLOGY	0.260729	0.032020	8.142779	0.0000

### Weighted Statistics

R-squared	0.672936	Mean dependent var	0.663956
Adjusted R-squared	0.667336	S.D. dependent var	0.333810
S.E. of regression	0.127563	Sum squared resid	28.50888
F-statistic	120.1583	Durbin-Watson stat	0.711003
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.514518	Mean dependent var	0.527539
Sum squared resid	29.32048	Durbin-Watson stat	0.507411

## Appendix 15 Eviews output for equation 6

Dependent Variable: TOT\_VOLSCORE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 10/03/11 Time: 23:25  
 Sample: 2000 2008  
 Periods included: 9

Cross-sections included: 200  
 Total panel (unbalanced) observations: 1783  
 Linear estimation after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.126960	0.037529	-3.382981	0.0007
FAM_OWN	-0.012157	0.007091	-1.714393	0.0866
SUBT_OWN	-0.067614	0.022929	-2.948845	0.0032
GOV	0.038280	0.025932	1.476169	0.1401
FORGN_OWN	-0.023341	0.015259	-1.529622	0.1263
DDIROWN01	-3.827819	3.023724	-1.265929	0.2057
DDIROWN0125	-0.027475	0.022434	-1.224708	0.2208
DDIROWN0025	0.048607	0.025840	1.881064	0.0601
DEBT_TO_EQUITY	-0.000526	0.000432	-1.218555	0.2232
PROP_INDDIR	-0.029466	0.020365	-1.446918	0.1481
AQ	0.038672	0.006579	5.877912	0.0000
LN_ASSET	0.006870	0.001809	3.798191	0.0002
ROE	0.006732	0.004123	1.632964	0.1027
MARKETBOOK	0.000786	0.000549	1.431652	0.1524
D2001	0.225445	0.000984	229.0986	0.0000
D2002	0.286050	0.000994	287.7582	0.0000
D2003	0.315834	0.000757	417.0204	0.0000
D2004	0.339951	0.000988	344.2151	0.0000
D2005	0.334639	0.001124	297.8511	0.0000
D2006	0.346315	0.001090	317.6215	0.0000
D2007	0.367551	0.001160	316.8503	0.0000
D2008	0.403595	0.001166	346.2428	0.0000
CONSUMER_DISCRETIONARY	0.267901	0.032694	8.194100	0.0000
CONSUMER_STAPLES	0.255202	0.034086	7.486964	0.0000
FINANCIALS	0.269564	0.030929	8.715680	0.0000
ENERGY	0.109320	0.053777	2.032850	0.0422
HEALTHCARE	0.330871	0.048489	6.823618	0.0000
MATERIALS	0.223035	0.029096	7.665524	0.0000
UTILITIES	0.228316	0.028087	8.128826	0.0000
INDUSTRIALS	0.242194	0.032593	7.430753	0.0000
INFORMATION_TECHNOLOGY	0.266302	0.030765	8.655990	0.0000

### Weighted Statistics

R-squared	0.587450	Mean dependent var	0.616512
Adjusted R-squared	0.580385	S.D. dependent var	0.315045
S.E. of regression	0.140176	Sum squared resid	34.42542
F-statistic	83.15850	Durbin-Watson stat	0.693057
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.426990	Mean dependent var	0.494964
Sum squared resid	35.43658	Durbin-Watson stat	0.489906

## Appendix 16 Eviews output for Equation 7

Dependent Variable: TOTALSCORE  
 Method: Panel EGLS (Cross-section weights)  
 Date: 09/26/11 Time: 22:13  
 Sample: 2000 2008  
 Periods included: 9  
 Cross-sections included: 200  
 Total panel (unbalanced) observations: 1783  
 Linear estimation after one-step weighting matrix  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.127887	0.042522	-3.007560	0.0027
FAMOWNWIN	-0.007491	0.006428	-1.165313	0.2441
SUBTOWNWIN	-0.061103	0.019962	-3.060963	0.0022
GOVWIN	0.036069	0.019044	1.894005	0.0584
FORGNOWNWIN	-0.028351	0.012719	-2.229115	0.0259
DDIROWN025	0.030612	0.023710	1.291116	0.1968
DDIROWN01	-3.389242	3.199240	-1.059390	0.2896
DDIROWN0125	-0.034162	0.017488	-1.953450	0.0509
LEVERAGEWIN	-0.003154	0.000718	-4.395090	0.0000
PROPIND	-0.006406	0.016731	-0.382896	0.7018
AQ	0.033750	0.005642	5.982280	0.0000
LN_ASSETWIN	0.007802	0.001811	4.309041	0.0000
ROEWIN	0.023292	0.005651	4.121367	0.0000
MARKETBOOKWIN	0.001445	0.001042	1.386597	0.1657
D2001	0.264811	0.000831	318.6597	0.0000
D2002	0.319166	0.000761	419.2080	0.0000
D2003	0.345974	0.000807	428.9222	0.0000
D2004	0.367251	0.001017	361.1801	0.0000
D2005	0.376139	0.001127	333.6064	0.0000
D2006	0.390548	0.001308	298.6285	0.0000
D2007	0.411795	0.001637	251.6285	0.0000
D2008	0.443729	0.001448	306.3447	0.0000
CONSUMER_DISCRETIONARY	0.253803	0.031956	7.942322	0.0000
CONSUMER_STAPLES	0.237339	0.032185	7.374217	0.0000
FINANCIALS	0.252679	0.028935	8.732584	0.0000
ENERGY	0.129927	0.048927	2.655521	0.0080
HEALTHCARE	0.312967	0.046541	6.724605	0.0000
MATERIALS	0.211236	0.027415	7.705022	0.0000
UTILITIES	0.221333	0.028075	7.883629	0.0000
INDUSTRIALS	0.228264	0.030896	7.388190	0.0000
INFORMATION_TECHNOLOGY	0.258660	0.030825	8.391370	0.0000

### Weighted Statistics

R-squared	0.678413	Mean dependent var	0.664756
Adjusted R-squared	0.672906	S.D. dependent var	0.335947
S.E. of regression	0.126989	Sum squared resid	28.25316
F-statistic	123.1993	Durbin-Watson stat	0.720286
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.519527	Mean dependent var	0.527539
Sum squared resid	29.01793	Durbin-Watson stat	0.514592

## Appendix 17 Eviews output for Equation 8

Dependent Variable: TOT\_VOLSCOREMODIFIED

Method: Panel EGLS (Cross-section weights)

Date: 09/26/11 Time: 22:11

Sample: 2000 2008

Periods included: 9

Cross-sections included: 200

Total panel (unbalanced) observations: 1783

Linear estimation after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.149781	0.041725	-3.589700	0.0003
FAMOWNWIN	-0.015734	0.007417	-2.121261	0.0340
SUBTOWNWIN	-0.072964	0.022312	-3.270118	0.0011
GOVWIN	0.040764	0.024718	1.649177	0.0993
FORGNOWNWIN	-0.030609	0.015167	-2.018110	0.0437
DDIROWN025	0.041645	0.023260	1.790403	0.0736
DDIROWN01	-4.523477	3.094454	-1.461801	0.1440
DDIROWN0125	-0.026223	0.020803	-1.260526	0.2076
LEVERAGEWIN	-0.003411	0.000772	-4.415704	0.0000
PROPIND	-0.011826	0.018774	-0.629944	0.5288
AQ	0.038413	0.006423	5.980402	0.0000
LN_ASSETWIN	0.008663	0.001981	4.373272	0.0000
ROEWIN	0.026175	0.005970	4.384600	0.0000
MARKETBOOKWIN	0.001664	0.001188	1.400464	0.1616
D2001	0.228271	0.001024	222.9881	0.0000
D2002	0.287679	0.001019	282.2360	0.0000
D2003	0.316044	0.000906	348.9383	0.0000
D2004	0.338998	0.001176	288.1872	0.0000
D2005	0.334941	0.001332	251.4033	0.0000
D2006	0.346788	0.001302	266.2724	0.0000
D2007	0.365766	0.001399	261.4783	0.0000
D2008	0.401938	0.001438	279.5858	0.0000
CONSUMER_DISCRETIONARY	0.267741	0.031357	8.538470	0.0000
CONSUMER_STAPLES	0.252573	0.032429	7.788401	0.0000
FINANCIALS	0.271043	0.029566	9.167523	0.0000
ENERGY	0.103342	0.052285	1.976505	0.0483
HEALTHCARE	0.330290	0.047403	6.967723	0.0000
MATERIALS	0.226467	0.027687	8.179386	0.0000
UTILITIES	0.232994	0.027019	8.623463	0.0000
INDUSTRIALS	0.244458	0.031696	7.712620	0.0000
INFORMATION_TECHNOLOGY	0.264099	0.029677	8.898972	0.0000

### Weighted Statistics

R-squared	0.595555	Mean dependent var	0.617880
Adjusted R-squared	0.588629	S.D. dependent var	0.318823
S.E. of regression	0.139568	Sum squared resid	34.12769
F-statistic	85.99525	Durbin-Watson stat	0.701668
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.432410	Mean dependent var	0.494964
Sum squared resid	35.10137	Durbin-Watson stat	0.495517



## Appendix 18 Eviews output for Equation 9

Dependent Variable: INDIVIDUALDISCLOSURE  
 Method: ML - Binary Logit (Quadratic hill climbing)  
 Date: 11/18/11 Time: 21:55  
 Sample: 2000 2008  
 Included observations: 1783  
 Convergence achieved after 7 iterations  
 QML (Huber/White) standard errors & covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-6.065003	1.354935	-4.476232	0.0000
FAM_OWN	-1.842308	0.449565	-4.097981	0.0000
SUBT_OWN	-1.174597	0.586332	-2.003298	0.0451
GOV	2.029189	0.495750	4.093169	0.0000
FORGN_OWN	0.338595	0.446324	0.758629	0.4481
DDIROWN01	169.4682	60.50598	2.800850	0.0051
DDIROWN0125	0.742668	1.096121	0.677542	0.4981
DDIROWN0025	2.035331	0.927253	2.195011	0.0282
DEBT_TO_EQUITY	-0.055494	0.030718	-1.806583	0.0708
PROP_INDDIR	1.128650	0.762630	1.479945	0.1389
AQ	0.325190	0.196721	1.653052	0.0983
LN_ASSET	0.019072	0.057652	0.330818	0.7408
ROE	0.343293	0.286970	1.196265	0.2316
MARKETOBOOK	0.087616	0.080439	1.089228	0.2761
D2001	3.567495	1.060736	3.363226	0.0008
D2002	3.680776	1.060856	3.469627	0.0005
D2003	3.339070	1.057964	3.156130	0.0016
D2004	3.220322	1.066338	3.019984	0.0025
D2005	3.330057	1.064910	3.127079	0.0018
D2006	3.267747	1.066048	3.065290	0.0022
D2007	3.285401	1.073639	3.060060	0.0022
D2008	3.045757	1.072386	2.840170	0.0045
McFadden R-squared	0.105829	Mean dependent var		0.111610
S.D. dependent var	0.314974	S.E. of regression		0.302308
Akaike info criterion	0.650360	Sum squared resid		160.9377
Schwarz criterion	0.718051	Log likelihood		-557.7962
Hannan-Quinn criter.	0.675360	Deviance		1115.592
Restr. deviance	1247.628	Restr. log likelihood		-623.8138
LR statistic	132.0352	Avg. log likelihood		-0.312841
Prob(LR statistic)	0.000000			
Obs with Dep=0	1584	Total obs		1783
Obs with Dep=1	199			

## Appendix 19 Eviews output for Equation 10

Dependent Variable: INDIVIDUALDISCLOSURE  
 Method: ML - Binary Logit (Quadratic hill climbing)  
 Date: 01/26/12 Time: 17:52  
 Sample: 2000 2008  
 Included observations: 1783  
 Convergence achieved after 7 iterations  
 QML (Huber/White) standard errors & covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-6.752207	1.487576	-4.539066	0.0000
FAMOWNWIN	-1.849139	0.458854	-4.029905	0.0001
SUBTOWNWIN	-1.453476	0.599041	-2.426336	0.0153
GOVWIN	2.171682	0.512337	4.238777	0.0000
FORGNOWNWIN	0.093049	0.468871	0.198455	0.8427
DDIROWN0025	2.100151	0.957284	2.193863	0.0282
DDIROWN01	170.5500	61.92825	2.753994	0.0059
DDIROWN0125	0.981798	1.099867	0.892652	0.3720
LEVERAGEWIN	-0.123080	0.054576	-2.255210	0.0241
PROPIND	1.426265	0.776671	1.836383	0.0663
AQ	0.272387	0.192024	1.418502	0.1560
LN_ASSETWIN	0.047392	0.063520	0.746094	0.4556
ROEWIN	0.510182	0.285933	1.784271	0.0744
MARKETBOOKWIN	0.199901	0.045721	4.372177	0.0000
D2001	3.860246	1.186632	3.253111	0.0011
D2002	3.975275	1.181549	3.364462	0.0008
D2003	3.605472	1.178459	3.059481	0.0022
D2004	3.476394	1.187594	2.927259	0.0034
D2005	3.610809	1.186175	3.044078	0.0023
D2006	3.597838	1.186138	3.033237	0.0024
D2007	3.539094	1.185974	2.984125	0.0028
D2008	3.328451	1.195574	2.783976	0.0054
McFadden R-squared	0.125732	Mean dependent var		0.111610
S.D. dependent var	0.314974	S.E. of regression		0.298830
Akaike info criterion	0.636434	Sum squared resid		157.2558
Schwarz criterion	0.704125	Log likelihood		-545.3806
Hannan-Quinn criter.	0.661433	Deviance		1090.761
Restr. deviance	1247.628	Restr. log likelihood		-623.8138
LR statistic	156.8663	Avg. log likelihood		-0.305878
Prob(LR statistic)	0.000000			
Obs with Dep=0	1584	Total obs		1783
Obs with Dep=1	199			

## Appendix 20 Eviews output for Equation 23

Dependent Variable: TOTALSCORE  
 Method: Panel Least Squares  
 Date: 01/26/12 Time: 18:02  
 Sample: 2000 2008 IF TOTSCORERANK=1  
 Periods included: 9  
 Cross-sections included: 181  
 Total panel (unbalanced) observations: 1075  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.246399	0.107575	2.290484	0.0222
FAM_OWN	-0.117481	0.032382	-3.627967	0.0003
SUBT_OWN	0.052036	0.032354	1.608342	0.1081
GOV	0.021386	0.018336	1.166330	0.2438
FORGN_OWN	-0.039752	0.040466	-0.982356	0.3262
DDIROWN01	-3.655340	2.569767	-1.422440	0.1553
DDIROWN0125	-0.008971	0.031768	-0.282406	0.7777
DDIROWN0025	-0.031993	0.051622	-0.619763	0.5356
DEBT_TO_EQUITY	0.001154	0.000742	1.556481	0.1200
PROP_INDDIR	0.019996	0.039264	0.509283	0.6107
AQ	0.023055	0.012129	1.900743	0.0577
LN_ASSET	0.023934	0.007387	3.240156	0.0012
ROE	0.007878	0.002134	3.691405	0.0002
MARKETBOOK	0.004425	0.002053	2.155048	0.0314
D2001	-5.53E-05	0.011908	-0.004645	0.9963
D2002	0.007385	0.011241	0.656984	0.5114
D2003	0.020181	0.010466	1.928241	0.0541
D2004	0.036594	0.011347	3.224948	0.0013
D2005	0.045855	0.011607	3.950770	0.0001
D2006	0.054978	0.011659	4.715400	0.0000
D2007	0.066618	0.011828	5.632409	0.0000
D2008	0.099919	0.012867	7.765805	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.748281	Mean dependent var	0.644801
Adjusted R-squared	0.690325	S.D. dependent var	0.113051
S.E. of regression	0.062911	Akaike info criterion	-2.526507
Sum squared resid	3.455190	Schwarz criterion	-1.590716
Log likelihood	1559.998	Hannan-Quinn criter.	-2.172092
F-statistic	12.91123	Durbin-Watson stat	1.225424
Prob(F-statistic)	0.000000		

## Appendix 21 Eviews output for Equation 24

Dependent Variable: TOTALSCORE  
 Method: Panel Least Squares  
 Date: 01/26/12 Time: 18:11  
 Sample: 2000 2008 IF TOTSCORERANK=0  
 Periods included: 9  
 Cross-sections included: 198  
 Total panel (unbalanced) observations: 708  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.089992	0.152346	-0.590707	0.5550
FAM_OWN	-0.013861	0.014986	-0.924918	0.3555
SUBT_OWN	0.032630	0.043692	0.746822	0.4555
GOV	0.007097	0.051352	0.138210	0.8901
FORGN_OWN	-0.013518	0.040506	-0.333738	0.7387
DDIROWN01	0.581598	1.833822	0.317151	0.7513
DDIROWN0125	0.001461	0.039946	0.036571	0.9708
DDIROWN0025	0.100586	0.055297	1.819018	0.0695
DEBT_TO_EQUITY	-0.000195	0.000144	-1.356220	0.1757
PROP_INDDIR	0.039584	0.016429	2.409302	0.0164
AQ	-0.013794	0.014007	-0.984791	0.3252
LN_ASSET	0.018602	0.011574	1.607144	0.1087
ROE	-0.002982	0.002375	-1.255560	0.2099
MARKETBOOK	0.000361	0.000219	1.653455	0.0989
D2001	0.185111	0.000696	265.9376	0.0000
D2002	0.230664	0.002265	101.8496	0.0000
D2003	0.232356	0.003273	70.99979	0.0000
D2004	0.238187	0.002371	100.4604	0.0000
D2005	0.240627	0.002340	102.8388	0.0000
D2006	0.246179	0.002390	103.0097	0.0000
D2007	0.241147	0.002679	90.00969	0.0000
D2008	0.227023	0.004687	48.43989	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.883137	Mean dependent var	0.349493
Adjusted R-squared	0.831038	S.D. dependent var	0.115568
S.E. of regression	0.047504	Akaike info criterion	-3.007440
Sum squared resid	1.103496	Schwarz criterion	-1.596175
Log likelihood	1283.634	Hannan-Quinn criter.	-2.462190
F-statistic	16.95128	Durbin-Watson stat	2.024408
Prob(F-statistic)	0.000000		

## Appendix 22 Eviews output for Equation 25

Dependent Variable: TOT\_VOLSCORE  
 Method: Panel Least Squares  
 Date: 01/26/12 Time: 18:25  
 Sample: 2000 2008 IF VOLSCORERANK=1  
 Periods included: 9  
 Cross-sections included: 162  
 Total panel (unbalanced) observations: 843  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.311340	0.134298	2.318281	0.0207
FAM_OWN	-0.076037	0.012210	-6.227323	0.0000
SUBT_OWN	0.074455	0.043952	1.694005	0.0907
GOV	0.004869	0.025218	0.193097	0.8469
FORGN_OWN	-0.050632	0.081710	-0.619662	0.5357
DDIROWN01	-2.912147	3.593503	-0.810392	0.4180
DDIROWN0125	0.027995	0.070668	0.396150	0.6921
DDIROWN0025	-0.088181	0.065230	-1.351857	0.1769
DEBT_TO_EQUITY	0.001508	0.000887	1.699225	0.0897
PROP_INDDIR	0.008299	0.057401	0.144572	0.8851
AQ	0.026181	0.013600	1.925003	0.0547
LN_ASSET	0.020334	0.010705	1.899521	0.0579
ROE	0.004899	0.003638	1.346392	0.1786
MARKETBOOK	0.002144	0.002931	0.731480	0.4647
D2001	-0.036215	0.016585	-2.183543	0.0293
D2002	-0.022876	0.014247	-1.605603	0.1088
D2003	0.005467	0.013580	0.402597	0.6874
D2004	0.021279	0.014872	1.430848	0.1529
D2005	0.037152	0.016898	2.198614	0.0283
D2006	0.040611	0.016526	2.457410	0.0143
D2007	0.055018	0.016921	3.251425	0.0012
D2008	0.074496	0.016544	4.502792	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.689883	Mean dependent var	0.656362
Adjusted R-squared	0.604366	S.D. dependent var	0.107681
S.E. of regression	0.067731	Akaike info criterion	-2.357122
Sum squared resid	3.027703	Schwarz criterion	-1.328813
Log likelihood	1176.527	Hannan-Quinn criter.	-1.963071
F-statistic	8.067184	Durbin-Watson stat	1.214170
Prob(F-statistic)	0.000000		

## Appendix 23 Eviews output for Equation 26

Dependent Variable: TOT\_VOLSCORE  
 Method: Panel Least Squares  
 Date: 01/26/12 Time: 18:36  
 Sample: 2000 2008 IF VOLSCORERANK=0  
 Periods included: 9  
 Cross-sections included: 198  
 Total panel (unbalanced) observations: 940  
 White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.085402	0.147552	0.578794	0.5629
FAM_OWN	-0.023655	0.016173	-1.462566	0.1440
SUBT_OWN	0.032021	0.034215	0.935898	0.3496
GOV	0.075161	0.035517	2.116177	0.0347
FORGN_OWN	0.005078	0.031534	0.161025	0.8721
DDIROWN01	1.254698	1.206323	1.040102	0.2986
DDIROWN0125	-0.025848	0.028208	-0.916335	0.3598
DDIROWN0025	0.087370	0.030989	2.819370	0.0049
DEBT_TO_EQUITY	6.72E-05	0.000131	0.513427	0.6078
PROP_INDDIR	0.024919	0.008054	3.093965	0.0021
AQ	-0.010363	0.015171	-0.683071	0.4948
LN_ASSET	0.005335	0.012097	0.441003	0.6593
ROE	0.000150	0.002116	0.070670	0.9437
MARKETBOOK	0.000192	0.000170	1.127931	0.2597
D2001	0.159433	0.000274	581.7369	0.0000
D2002	0.208017	0.000864	240.7950	0.0000
D2003	0.220092	0.000679	324.2485	0.0000
D2004	0.225559	0.002250	100.2638	0.0000
D2005	0.211642	0.002537	83.41916	0.0000
D2006	0.213990	0.003448	62.06046	0.0000
D2007	0.222794	0.004205	52.98557	0.0000
D2008	0.207344	0.002315	89.54825	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.824866	Mean dependent var	0.350221
Adjusted R-squared	0.771913	S.D. dependent var	0.105375
S.E. of regression	0.050326	Akaike info criterion	-2.939892
Sum squared resid	1.826047	Schwarz criterion	-1.810905
Log likelihood	1600.749	Hannan-Quinn criter.	-2.509512
F-statistic	15.57733	Durbin-Watson stat	1.692246
Prob(F-statistic)	0.000000		