Corporate governance and earnings management in Malaysian government linked companies

The impact of GLCs' transformation policy

Muslim Har Sani Mohamad, Hafiz Majdi Abdul Rashid and
Fekri Ali Mohammed Shawtari

*Department of Accounting, Kulliyyah of Economics and Management Sciences,
The International Islamic University Malaysia (IIUM), Gombak, Malaysia*

Abstract

Purpose – As the major shareholder, in 2004, the Malaysian Government embarked on the transformation initiative of the Government Linked Companies (GLCs). One of the main initiatives was to enhance board effectiveness through its Green Book. Soon after, the progress performance review revealed that the GLCs reported improved earnings. Such drastic performance turnarounds triggered the question as to whether earnings quality is at stake. The purpose of this paper is to examine the impact of the tightening of corporate governance mechanisms on earnings management (EM) activities of the GLCs.

Design/methodology/approach – The earnings data for two periods (pre- and post-transformation) were collected and tested to determine whether the GLCs experienced any improvement of board monitoring role in curbing EM activities in the post-transformation period.

Findings – The main findings show that there is an increase of EM activities in the post-transformation policy. Furthermore, the study also reveals that none of the corporate governance mechanisms has much impact on curbing activities, except for board meetings and leadership structure in the post-transformation period. The board meetings and separation of chairman and chief executive officers in the companies were shown to only have a negative impact on EM activities in the post-transformation period. Although the study has shown a positive preliminary impact from tightening the corporate governance of the GLCs, weak earnings quality might undermine the efforts to sustain such a transformation.

Originality/value – The paper contributes to the limited body of literature concerning the impact of corporate governance on earnings management by examining such impact using Government Linked Companies in Malaysia after introducing the transformation programme.

Keywords Malaysia, Corporate governance, Earnings management, Government linked companies, Transformation programme

Paper type Research paper

1. Introduction

Corporate governance has attracted considerable attention from regulators, academicians and practitioners due to the widely held belief that corporate governance enhances investor goodwill and confidence and boosts the economic health of listed corporations (Coleman and Biekpe, 2006; Garg, 2007). Moreover, the corporate governance mechanisms have been argued to affect corporate performance (Chuanrommanee and Swierczek, 2007) and contribute to the integrity of the financial reporting process in different organizational

contexts (Petra, 2007). This is equally important for listed private and state-owned corporations. Thus, as the main mechanism in corporate governance, the board has the fiduciary responsibility to monitor management against opportunistic behavior. However, the extent to which corporate governance, in general, and board of directors, in particular, helps to safeguard shareholders depends on the effectiveness of the mechanisms. In this respect, many corporate governance recommendations have been issued and considerable guidance has been provided to ensure that the board of directors performs its duty effectively.

Malaysia as an emerging market issued its own code on corporate governance in 2000, which was revised in 2007, and is to be followed by all listed companies. Nonetheless, Malaysian-listed government linked companies (GLCs) have been subject to criticism concerning their role and performance in the Malaysian economy and have recently come under government scrutiny (Abdul Aziz *et al.*, 2007). The reason is that GLCs have suffered recurring poor financial performance. Thus, the Malaysian government, as the major shareholder of listed GLCs, has introduced a new transformation policy to strengthen the governance system concerning the listed firms it owns. The underlying principles of the policy are national development, performance focus and good governance, as emphasized by the Putrajaya Governance Committee (PGC). One of the important thrusts of the policy is to upgrade the effectiveness of the corporate governance of the GLCs through the improvement in certain board mechanisms, which are suggested to have an impact on GLCs' performance. In *The Green Book* of transformation policy, the PGC has reinforced certain board characteristics, such as board size, board meetings and multiple directorships, as influential tools to make the board more effective in performing its oversight duties.

The progress report of the transformation policy has shown that GLCs' performance is on track, which suggests that the GLCs are performing better in the post-transformation policy period. However, there is also a question of whether the GLCs are actually performing better or whether the improvement in performance is affected by the limitations of existing performance measurement (i.e. earnings management (EM)). With enhanced corporate governance mechanisms in place, as clearly stated in *The Green Book*, it is expected that the GLC's improved performance should be commensurate with the lower activity of EM. Thus, it would reflect the improved quality of reported earnings with strengthening of the oversight functions of the boards. This is the essence of corporate governance initiatives undertaken worldwide. Therefore, this study aims to investigate the impact of the transformation policy on the association between the board characteristics and the EM of the listed GLCs in Malaysia. In particular, the study will test whether enhancing corporate governance mechanisms is associated with lowering EM in the GLCs.

The main finding of the study shows that there is a moderate increase of EM activities in the post-transformation policy year. Thus, this raises a question concerning the quality of reported earnings of the GLCs. Interestingly, the enhanced function of the audit committee with the inclusion of financial expert seems to promote greater EM than otherwise. Nevertheless, we also found that board meetings and non-duality are related to lowering EM and that the relationship is stronger post-transformation program.

Thus, the paper proceeds as follows. The following section provides a detailed discussion concerning the literature review and hypotheses development. Following a discussion on the research methodology, the results of the study are reported. The final section concludes the paper.

2. Literature review and hypotheses development

2.1 EM

Healy and Wahlen (1999) propose that "EM occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers." It is suggested that EM occurs for various reasons, including influencing the capital market (Healy and Wahlen, 1999; Cormier and Magman, 1998); contracts written in terms of accounting number "lending contracts" (Othman and Zeghal, 2006; Bagnoli and Watts, 2000; Healy and Wahlen, 1999); management compensation contracts (Holthausen *et al.*, 1995); anti-trust or other government regulation and political costs (Wilson and Shailer, 2007; Key, 1997; Watts and Zimmerman, 1986); effective tax rate and issuing equity; the existence of relative performance evaluation specifically when firms expect their competitor firms to manage earnings (Burgstahler and Dichev, 1997); avoidance of earnings decreases and losses (Daniel *et al.*, 2008) and meeting dividend thresholds (Goncharoy and Zimmermann, 2006).

As such, there is a widely held belief that firms are motivated to engage in manipulation of their earnings and to become involved in opportunistic behavior (e.g. Peasnell *et al.*, 2005; Klein, 2002; Chen *et al.*, 2006; Abdul Rahman and Ali, 2006). Park and Shin (2004) view that manipulation ranges from fraud, which violates the generally accepted principles to EM, which can be approached within the GAAP. For example, Daniel *et al.* (2008) illustrate that manipulating earnings through GAAP can be exercised by accelerating the recognition of revenue, deferring the recognition of expenses, altering inventory accounting methods, changing estimates of bad debt and revising assumptions related to pension assets.

2.2 EM and corporate governance

EM is viewed as detrimental to a firm's value (Jiraporn *et al.*, 2008) due to its impact on financial reporting quality. This is mainly because information asymmetry between insiders and outsiders will be higher, and, hence, it has the potential to decrease shareholders' wealth (Park and Shin, 2004), as the information will be less informative to shareholders (Teoh *et al.*, 1998). Thus, effective corporate governance mechanisms could mitigate the information asymmetry and reduce the divergence between shareholders and managers. In this respect, a large body of academic literature has examined the impact of corporate governance variables such as board's characteristics and ownership structure on EM (e.g. Park and Shin, 2004; Xie *et al.*, 2003; Dechow *et al.*, 1996; Sarkar *et al.*, 2008; Cornett *et al.*, 2008; Iqbal and Strong, 2010).

This study specifically focusses on board of directors' effectiveness as corporate governance mechanisms. Certainly, the board of directors' effectiveness can be linked to financial reporting quality in a way that the effective and active board can minimize the opportunistic behavior of unscrupulous managers, hence, protecting the interest of shareholders. The Malaysian Companies Act 1965 and MASB statements emphasize the role and responsibility of the board of directors in ensuring that the financial statements are prepared in accordance with applicable accounting standards.

Moreover, the board of directors should also perform its function effectively since compliance with accounting standards is not enough to ensure the absence of manipulation in financial statements (Saleh *et al.*, 2005). Therefore, in order to handle its monitoring responsibilities effectively, it might depend on the so-called form of corporate governance, such as structure and composition (Peasnell *et al.*, 2005), or it

might rely on the substance of corporate governance, such as the diligence and busyness of directors (Sarkar *et al.*, 2008; Chtourou *et al.*, 2001). This study also looks into the effectiveness of an audit committee, as it would also help to improve the financial reporting process (PGC, 2006).

The following sub-sections provide discussions on the development of the hypotheses concerning the relationship between the board of directors' characteristics and EM. With the issuance of the GLCs transformation policy (PGC, 2006), this study expects that boards in the GLCs will become more effective, and, therefore, could curb EM activities better.

2.2.1 Board composition. The board of directors at the top of the monitoring system has the role of monitoring the top management (Fama and Jensen, 1983). However, to be an effective monitor, the board needs to include outside director members who are expected to behave independently of managers and to bring greater breadth of experience to the firm (Cornett *et al.*, 2008), as they are more willing to develop a reputation in the labor market, which basically depends on their performance in monitoring (Fama and Jensen, 1983). Klein (2002), Peasnell *et al.* (2005) and Marra *et al.* (2011) found that board independence provides an essential tool to reduce the magnitude of EM. Although the vast majority of the research found a negative relationship between board independence and EM, suggesting that as more non-executive directors are appointed as board members, the EM activities would be reduced, the literature tends to suggest mixed results. For instance, Abdul Rahman and Ali (2006), Abdullah and Nasir (2004), Saleh *et al.* (2005) found that board independence has no impact on constraining EM, while, Osma and Noguer (2007) found a positive relationship.

Despite some mixed results on the relationship between EM and board independence, the theoretical argument, i.e. agency theory, assumes that inclusion of independent and non-executive directors will make board become more effective in terms of its monitoring function. In addition, the issuance of the GLCs transformation policy will help the board to become more effective in curbing EM activities. Hence, the following hypotheses were developed to test the relationship between EM and board independence:

H1a. The negative relationship between EM and the number of independent directors on the board is stronger in the post-transformation policy period than before.

H1b. The negative relationship between EM and the number of non-executive directors on the board is stronger in the post-transformation policy period than before.

2.2.2 Board size. Despite the oversight role of independent directors, it is also debated whether the board size has an impact on curbing EM activities. Jensen (1993) argues that a larger board is easier for the CEO to control and that it is difficult for it to perform its role effectively due to communication and coordination problems. In such a weak board, managers can make opportunistic choices to advance their self-interests at the expense of shareholders (Vafeas, 2000). He further discusses the possible effect of each board size on financial reporting quality. He proposes that a smaller board size can enhance the quality of financial reporting and, hence, information quality will be higher for those firms with a smaller board size. This may be due to the possibility of better discussion of financial reporting numbers among the members of a small board compared to a large board. Inversely, a larger board is expected to be less effective, as

the monitoring responsibility will be diffused among many directors (Vafeas, 2000), which would suggest lesser coordination among board members. While several authors found that smaller board size could enhance the quality of earnings (Beasley, 1996; Vafeas, 2000; Ahmed *et al.*, 2006), others found no relationship or a negative relationship between board size and EM (Chtourou *et al.*, 2001; Xie *et al.*, 2003; Peasnell *et al.*, 2005). Therefore, from the discussion above, the following hypothesis is proposed:

H2. The positive relationship between EM and the board size is stronger in the post-transformation policy period than before.

2.2.3 Board leadership. Agency theory dictates that having different people at the top of the decision management function and control function helps in reducing the power of the CEO on the board (Fama and Jensen, 1983). Furthermore, the separation of the CEO and chairman strengthens the checks and balances in the top management of firms (Chen *et al.*, 2006). Thus, it is argued that having two different persons on the top control function (board) and execution function (management) could mitigate the agency problems, and, hence, safeguard the interests of shareholders by reducing the EM activities. Supporting the agency theory perspective, Dechow *et al.* (1996) found that firms with a duality role (i.e. a combination of the roles of CEO and chairman) are more subject to investigation by the SEC. Sarkar *et al.* (2008) also found a positive relationship between duality and EM. The expectation is that the EM will be higher by combining the role of the two top positions of the firm. Therefore, we formulate the following hypothesis:

H3. The negative relationship between EM and the non-duality (i.e. a separation of the roles of CEO and chairman) role is stronger in the post-transformation policy period than before.

2.2.4 Board meetings. Vafeas (1999), Conger *et al.* (1998) and Lipton and Lorsch (1992) suggested that the board of directors' effectiveness is a function of time where board meetings reflect the board activity. From the agency perspective, it is contended that when the board demonstrates more diligence in discharging its responsibility, this will enhance the overall oversight of the financial reporting process (Carcello *et al.*, 2002). Xie *et al.* (2003) opined that the more board meetings, the more time is devoted to issues such as EM and vice versa. It is also argued that board activity is a function of firm size, where the larger the firm, the more complex the firm, which, in turn, needs more time in the decision-making process due to the information complexity in such organizations (Vafeas, 1999). Sarkar *et al.* (2008) and Xie *et al.* (2003) found a negative relationship between board meetings and discretionary accruals (DA). The expectation is that DA will be less with an increase in the number of board meetings as agency theory suggests. Therefore, the following hypothesis is developed:

H4. The negative relationship between EM and the board meetings is stronger in the post-transformation policy period than before.

2.2.5 Board multiple directorships. There is a growing debate in the corporate governance literature concerning the membership of directors on multiple boards and its impact on the effectiveness of the monitoring function of the board of directors (Schnake and Williams, 2008). Ferris *et al.* (2003) advanced the busyness hypothesis,

which proposes that serving on multiple boards overcommitted individuals in such a way that the directors with multiple directorships might serve less on board committees, and, hence, the role of the board in monitoring management will be reduced according to the busyness hypothesis. Sarkar *et al.* (2008) found results consistent with the busyness hypothesis. However, Saleh *et al.* (2005) and Chtourou *et al.* (2001) found that EM is negatively related to multiple directorship, although the evidence is only limited to specific situations (e.g. Saleh *et al.*, 2005 found evidence of negative relationship between EM and multiple directorship only in firms that recorded negative unmanaged earnings). In line with the busyness hypothesis and the recommendation of the GLCs transformation policy which limits the number of directorship, firms whose directors have many directorships on other firms' boards are expected to perform less effectively, and, hence, their ability to curb EM will be less likely, the following relationship is hypothesized:

H5. The positive relationship between EM and the number of board directorships is stronger in the post-transformation policy period than before.

2.2.6 Audit committee. The audit committee has long been seen as a vital institution in assisting the board of directors in overseeing the transparency and integrity of the financial reporting process (Klein, 2002). According to Wild (1996), the primary assumption of the establishment of an audit committee is to enhance earnings and financial reporting quality. Thus, the Blue Ribbon Committee report (1999) and Securities and Exchange Commission report of the Sarbanes Oxley Act of 2002, as well as the PGC (2006) have emphasized the essential role of the audit committee in improving the financial reporting process and that the effectiveness of audit committee members can be increased through certain mechanisms, including their independence, financial literacy and expertise, and allocating sufficient time to meet regularly and discuss with the related parties. Empirically, Abbott *et al.* (2002) and Klein (2002) found that audit committee independence has a negative relationship with misstatement and EM. Marra *et al.* (2011) found that financial expertise of the audit committee has a negative relationship with EM. Dhaliwal *et al.* (2006) provided further evidence where they found a positive relationship between accounting expertise on the audit committee and accruals quality. Meanwhile, Lin *et al.* (2006) found no evidence concerning the relationship between financial expertise and meetings of the audit committee members and restatements. From the above discussion, the following hypothesis is proposed:

H6. The negative relationship between EM and the audit committee's independence, financial expertise and frequency of committee meeting, is stronger in the post-transformation policy period than before.

3. Research design and variable measurement
The sample examined in this study consists of all the GLCs listed on Bursa Malaysia. The sample period covers two periods; the first period being the year 2003 while the second period covers 2006. The first period represents the period before the Malaysian government restructured the companies under its control. The second period reflects the period following the transformation program of the GLCs that the government launched in order to restructure the GLCs into high performing companies. In 2006, there were 53 listed GLC firms. Of the 53 firms, firms in the financial sector were

excluded from the sample since the finance industry is a highly regulated industry and the behavior of earnings in the finance sector is different from other sectors, which require other methods to calculate the DA that cannot be captured by the modified Jones model (Abdul Rahman and Ali, 2006; Peasnell *et al.*, 2005; Saleh *et al.*, 2005; Abdullah and Nasir, 2004; Park and Shin, 2004; Klein, 2002). After excluding the finance sector companies, 43 observations were available, of which, eight either had missing data concerning the explanatory corporate governance variables or had insufficient data on the Bloomberg database to enable an estimation of DA, thus, leaving a final sample of 35 firms which could be considered as a very small sample size. This might present as one of the limitations of the study.

3.1 Measuring EM

While there are different models to estimate the DA portion, Dechow *et al.* (1995) assessed the performance of five models of calculating EM developed in the literature and concluded that a modified version of the Jones (1991) model by Dechow *et al.* (1995) provides the most powerful test of EM. Therefore, the modified Jones (Dechow *et al.*, 1995) in its cross-sectional version is adopted in this study. According to Peasnell *et al.* (2000), Bartov *et al.* (2001), Peasnell *et al.* (2005) and Subramanyam (1996), using a cross-sectional model, provides several advantages over the counterpart time series model. While the time series Jones model assumes that coefficient estimates on changes in revenues and plant, property and equipment are stationary over time, the cross-sectional model assumes that the changes cannot be stationary over time. Using the cross-sectional model will help to avoid the survivorship. The self-reversing property of accruals may introduce specification problems in the form of serially correlated residuals (Peasnell *et al.*, 2000). Bartov *et al.* (2001) evaluated the power of various models of DA and reported that the cross-sectional Jones and cross-sectional modified Jones models perform better than their counterpart time series models.

Using ordinary least squares regression, the coefficient parameters for all other non-sample firms in each industry are estimated separately using the original version of the Jones model, not from the modified model, as shown in Equation (1) (Bartov *et al.*, 2001; Jaggi and Leung, 2007; Ashbaugh *et al.*, 2003). Furthermore, in order to ensure unbiased estimation, each industry includes at least ten observations, which is consistent with prior research (DeFond and Jiambalvo, 1994; Subramanyam, 1996; Klein, 2002). Based on the availability of data and industries in which the GLCs operate, the number of firm observations included to compute the coefficient parameters is highlighted in Appendix:

$$\frac{TA_{itk}}{A_{itk-1}} = \alpha_1 \left(\frac{1}{A_{itk-1}}\right) + \alpha_2 \left(\frac{\Delta REV_{itk}}{A_{itk-1}}\right) + \alpha_3 \left(\frac{PPE_{itk}}{A_{itk-1}}\right) + \varepsilon_{itk} \qquad (1)$$

Following Daniel *et al.* (2008), TA_{itk} is total accruals for firm i in industry k in year t, computed as the difference between net income before extraordinary items and cash flow from operations; PPE_{itk} is gross property, plant and equipment for firm i in industry k in year t; ΔREV_{itk} is the change in revenue for firm i in industry k between year $t-1$ and year t; ε_{itk} is the error term for firm i in year t for industry, and, finally, α_1, α_2, α_3 are industry-specific parameters coefficient. All variables are deflated by lagged assets, A_{itk-1} to reduce heteroscedasticity.

Using the estimated coefficients α_1, α_2, α_3 from industry division regressions (Equation (1), the researchers evaluate the non-discretionary components of total

accruals, non-discretionary accruals (NDA), for each sample firm-year observation using the Jones modified cross-sectional model, as shown in Equation (2):

$$NDA_{itk} = \alpha_1 \left(\frac{1}{A_{itk-1}}\right) + \alpha_2 \left(\frac{\Delta REV_{itk} - \Delta REC_{itk}}{A_{itk-1}}\right) + \alpha_3 \left(\frac{PPE_{itk}}{A_{itk-1}}\right) \tag{2}$$

Finally, the DA proxy is obtained by calculating the difference between total accruals and estimated NDA, as shown in Equation (3):

$$DA_{itk} = TA_{itk} - NDA_{itk} \tag{3}$$

3.2 Data and empirical model

Data on corporate governance variables are taken from proxy statements. All listed firms are required to disclose the information regarding corporate governance compliance in their annual reports. Besides corporate governance variables, two control variables have been used in the model, namely, firm size and leverage, which are hypothesized by Watts and Zimmerman (1986) to influence the accounting choices. Firm size is included to control for differences in firm size, as the expectation is that firm size could explain, to some extent, the level of DA in order to reduce the political sensitivity of regulators. While financial leverage is expected to influence the EM due to debt covenant. Table I shows the definitions of the variables.

A linear regression model was used to measure the strength of association between the DA and the explanatory variables. The dependent variable is a measure of DA. The independent variables include the measures of board corporate governance, and control variables. The model is used to test the association between DA and explanatory

Variables	Definition	Operationalization	Expected sign
IND	A proxy of board independence	Independent directors to total number of directors	−
NEDs	A proxy of board independence	Non-executive directors to total numbers of directors	−
Nondual	CEO-chairman separation	Dummy variable equals to 1 if CEO and chairman roles are separated, and 0 otherwise	−
Bsize	Board of directors size	Total number of directors	+
Bmeet	Board meetings	Number of meetings divided by number of directors	−
Dship	Number of seats on other board held by each directors	Total number of outside directorship divided by number of directors	+
Comind	A proxy for independence	% of independent directors on audit committee to total number of directors	−
ComMeet	Audit committee meetings	Number of meetings divided by number of audit committee members	−
EXP	Financial expertise on audit committee	Dummy variable equal 1 if at least one member is expert, 0 otherwise	−
Fsize	Firm size	Total assets	+
LEV	Leverage	Total debt to total assets	−

Table I.
Variables definition

variables before the period prior to transformation and post-transformation program, as shown:

$$DA = \alpha + \beta_1 IND + \beta_2 NEDs + \beta_3 Nondual + \beta_4 Bsize + \beta_4 Bmeet$$
$$+ \beta_6 Dship + \beta_7 Comind + \beta_8 ComMeet + \beta_9 EXP + \beta_{10} Fsize$$
$$+ \beta_{11} LEV + \varepsilon$$

where *DA* is discretionary accruals obtained from the cross-sectional modified Jones model. *IND* is the percentage of independent directors, *NEDs* is the percentage of non-executive directors, *Bsize* is the board size, *Bmeet* is the number of board meetings, *Dship* is the number of directorships, *Nondual* is the non-duality role, *Comind* is the audit committee independence, *ComMeet* is the number of audit committee meetings, *EXP* is the financial expertise of the audit committee, *Fsize* is the firm size and *LEV* is the leverage.

Since multivariate regression is used to test the hypotheses, assumptions of normality, multicollinearity and homoscedasticity are also tested. The normality test is conducted using skewness, kurtosis and Kolmogorov-Smirnov *Z*. While the Pearson correlation matrix and variance inflator factor (VIF) are used to test the multicollinearity assumption, and Levene's test is adopted to test the homogeneity of variances.

4. Empirical results
Since the focus of the study is on the impact of the transformation program, the model above is employed to examine both periods. Table II panel A presents the Pearson correlation matrix for the dependent and explanatory variables for the year 2003 prior to the transformation program, while panel B presents the correlation matrix for 2006 post-transformation policy. In general, it indicates no serious concern of multicollinearity problem, as the correlations are relatively low. Further tests on the VIF also reveal very low VIF figures (refer to Table IV).

The analysis of homogeneity of variances revealed that homoscedasticity is not a problem. As a rule of thumb, if the Levene's test is significant ($p < 0.05$), the two variances are significantly different. If it is not ($p > 0.05$), the two variances are not significantly different; that is, the two variances are approximately equal. The results of the standard tests on skewness and kurtosis as well as the Kolmogorov-Smirnov *Z* indicate a problem with the normality assumption. Hence, all the variables are transformed into normal scores of van der Warden (Haniffa and Cooke, 2002; Leventis and Caramanis, 2005).

Table III presents descriptive statistics. The table shows a minimal increase of EM activities in the post-transformation policy year with an absolute discretionary accrual (ABSDA)/total assets ratio for 2006 of 8.14 percent, as compared to a lower ABSDA/total asset ratio of 6.86 percent in 2003. However, the paired sample *t*-test indicates DA have not experienced any statistically significant changes in the post-transformation program compared to the pre-transformation policy year. For explanatory variables relating to compliance to the transformation policy requirements, the findings on board size, number of meetings and directorships will be highlighted, as these are specific changes required by the policy. It can be seen in Table III that the size of the board (Bsize) across the sample in year 2003 ranges from six to 14 with a mean of eight directors, whereas the board size for year 2006 ranges from five to 12 directors with

	1	2	3	4	5	6	7	8	9	10	11	12
Panel A: Pearson correlation matrix for 2003												
DA	1											
IND	0.054	1										
NEDs	0.124	0.179	1									
Nondual	−0.005	0.188	−0.026	1								
Bsize	−0.018	−0.180	0.010	−0.254	1							
Bmeet	−0.249	−0.170	0.115	−0.160	0.148	1						
Dship	−0.014	0.289	0.297	0.170	−0.116	0.021	1					
Comind	0.075	0.335	0.47*	0.070	−0.008	−0.161	0.65**	1				
ComMeet	0.080	−0.250	0.273	−0.045	0.020	0.251	0.030	−0.078	1			
EXP	−0.022	0.217	0.213	0.300	0.158	0.093	0.050	0.042	0.030	1		
Fsize	−0.060	0.100	0.050	−0.030	0.130	0.40*	−0.030	−0.300	−0.003	0.060	1	
LEV	0.114	0.62**	0.030	−0.015	−0.060	−0.004	0.51**	0.330	−0.015	0.040	0.230	1
Panel B: Pearson correlation matrix for 2006												
DA	1											
IND	−0.060	1										
NEDs	−0.010	0.183	1									
Nondual	−0.200	0.030	−0.240	1								
Bsize	−0.010	−0.06	−0.120	−0.130	1							
Bmeet	−0.52**	−0.001	0.120	−0.200	0.150	1						
Dship	−0.188	0.164	0.120	−0.260	−0.140	0.008	1					
Comind	−0.120	0.521**	0.070	0.020	0.060	0.20	0.150	1				
ComMeet	−0.54**	−0.155	0.170	−0.070	0.050	0.55**	0.070	−0.029	1			
EXP	0.270	0.210	0.150	0.030	0.110	−0.150	0.110	0.090	−0.010	1		
Fsize	−0.63**	0.231	0.020	0.002	0.120	0.115	0.010	0.180	0.40*	0.050	1	
LEV	−0.220	0.268	0.100	−0.020	0.020	−0.09	0.190	0.070	0.190	0.090	0.230	1

Table II.
Correlation matrix

Notes: The figures above are Pearson correlation coefficients. *,**Significant at 0.05, 0.01 levels, respectively

	Mean		SD		Maximum		Minimum	
Variables	2003	2006	2003	2006	2003	2006	2003	2006
DA	*6.86*	*8.14*	5.4	6.2	24	27	0.002	0.004
IND	40	41	0.091	0.075	75	63	29	33
NEDs	*85*	*87.5*	11.2	11	100	100	50	50
Bsize	8	8	1.84	1.47	14	12	6	5
Bmeet	*6.9*	*8.5*	3.47	3.87	14.9	17.6	3.5	3.25
Dship	*3.15*	*2.91*	1.37	1.32	7.11	5.5	0.14	0.75
Comind	*69*	*75*	0.126	0.13	100	100	33	60
ComMeet	*5.3*	*5*	2.21	2.21	13	17.6	2	3.25
Fsize	6,821	7,939	1,459	1,699	71,479	80,148	84.7	94.8
LEV	310	380	684	540	385	2,389	−857	102

Table III.
Descriptive statistics

a mean of eight directors, which meets the requirements made in the transformation program in 2004. The board requirement indicates that the board size should not exceed ten directors. On average, the board size for the overall sample is considered the same for years 2003 and 2006.

The board during the year 2003 on average met seven times. The minimum number of meetings held in year 2003 was approximately four meetings, while the maximum

Variables	DA 2003				DA 2006			
	β	t-value	t-significance	VIF	β	t-value	t-significance	VIF
IND	0.161	0.980	0.335	1.209	−0.138	−1.286	0.209	1.066
NEDs	0.034	0.221	0.826	1.002	0.106	0.956	0.347	1.127
Bsize	−0.020	−0.130	0.897	1.033	0.122	1.089	0.285	1.158
Nondual	0.040	−0.264	0.794	1.009	−3.787	−3.787	0.001**	1.060
Bmeet	−0.229	−1.516	0.140	1.071	−0.321	−2.919	0.007**	1.102
Dship	0.019	0.122	0.904	1.108	−0.152	−1.402	0.172	1.102
Comind	0.012	0.081	0.936	1.022	−0.095	−0.866	0.394	1.085
ComMeet	0.191	1.155	0.258	1.248	0.083	0.589	0.561	1.760
EXP	0.020	0.131	0.896	1.009	2.746	2.746	0.010**	1.027
Control variables								
Fsize	0.519	3.427	0.002**	1.031	6.642	6.642	0.000**	1.049
LEV	−0.361	−2.386	0.024*	1.031	−0.121	−1.145	0.262	1.030
Adjusted R^2		0.29				0.638		
F-value		7.51				15.524		
Significance level		0.002				0.000		

Notes: *,**Significant at 0.05, 0.01 levels, respectively

Table IV.
Multiple regression result between DA and corporate governance mechanism variables

was about 15 meetings. Referring to the year 2006, it is found that the mean number of meetings increased to nine meetings with two more meetings compared to 2003. It seems from the average that the sample firms are in compliance with the PGC requirements of at least six meetings held each year. The maximum number of meetings held for 2006 was about 18 meetings, which can be considered very high. However, the minimum meetings held per year indicate that at least one firm met only three times – something that is considered a violation of the requirements. The mean value of non-executive directors on the board is 85 percent for 2003 and 88 percent for 2006, which indicates that most of the companies' boards comprise a majority of non-executive directors. Meanwhile, the statistics concerning board independence in 2003 indicate that the mean value for board independence was 40 percent, which is considered quite similar to the mean of 41 percent for 2006. The minimum value of board independence is 29 and 33 percent for 2003 and 2006, respectively, and the maximum is about 75 and 63 percent, respectively. This suggests that there was a GLC in 2003, which did not follow the requirements of Bursa Malaysia, as one-third of directors should be independent. However, in 2006, the firms met the one-third regulatory requirement of Bursa Malaysia, as emphasized in the PGC requirements for transforming the GLCs into high performing firms.

Each director in the sample had, on average, three board seats on other listed companies in the year 2003. The maximum number of directorships held on other boards is seven seats. Similarly, in 2006 each director held an average of three seats on other listed companies with a maximum of about five directorships on other boards. This shows that the majority of the directors met the requirement made by the PGC on the maximum cap of directorships on other boards, which are five directorships on listed firms.

4.1 Regression results
Table IV reports the results from the regression equation linking corporate governance (i.e. board's and audit committee's characteristics) and DA. As shown on the left side

of the table, the adjusted R^2 for DA 2003 (pre-transformation policy) is about 29 percent, which is within an acceptable level. The F-value is 7.51, which is significant at 0.002. The findings indicate that none of the corporate governance variables were significant in affecting earnings manipulation in the year of 2003. However, both control variables, firm size and leverage, are significant at the 1 percent level. Firm size is found to be positively related to DA, which indicates that larger firms are more inclined to engage in EM activities. This finding is not consistent with the negative relationship documented in Abdul Rahman and Ali (2006). The positive sign reported in this study does support the political cost hypothesis of Watts and Zimmerman (1986) in which larger firms are subject to more scrutiny, and, hence, engage in earnings manipulation downwards to reduce the political and regulatory costs. Another possible explanation for positive relationship could be the threat of delisting (Ding *et al.*, 2007) since the GLCs are viewed to perform poorer than other companies (PGC, 2006). Besides, Park and Shin (2004) opine that when unmanaged earnings are below the target earnings, positive abnormal accruals are taken to increase the reported earnings and vice versa.

In contrast to firm size, leverage is also found to have a significant (at 5 percent level) negative relationship with earnings manipulation. In other words, higher leverage leads to a lower level of earnings manipulation. The results do not confirm the debt covenants hypothesis of Watts and Zimmerman (1986) concerning the findings of DeFond and Jiambalvo (1994), which indicate that higher leveraged firms are more motivated to engage in earnings manipulation in order to avoid debt covenant violation. However, this study documented a negative association between leverage and EM. Park and Shin (2004) stated that when the firm is highly indebted, it might become less able to practice EM because they are under the close scrutiny of lenders. In the case of GLCs where the funding comes from the government, there should be scrutiny from the government instead of lenders leading to inhibition of EM.

Table IV also shows the results of regression for 2006 (post-transformation policy) in the right panel. It can be seen that the results show an improvement in corporate governance effectiveness in 2006 compared to 2003. The adjusted R^2 is about 0.638, which is very high compared to other EM studies. The F-value is 15.52 and the significance level is 0.000. The results of the effects of each independent variable indicates that separation of leadership structure, number of board meetings and the presence of financial expert in the audit committee are significant in explaining DA post-transformation period. However, with regard to the control variables, only firm size is significant.

Non-duality has been shown to have a negative significant (1 percent) impact on EM, indicating that separating the role of CEO and chairman of the board has an effective role in curbing EM. The result is similar to Klein (2002) and does have support in the agency theory. The agency theory suggests that the separation of the role of decision making from the control process leads to a reduction in the power of the CEO and enables better monitoring by the board (Jensen, 1993). Therefore, this result provides support for *H3*.

Another explanatory variable that was found to have a significant (1 percent) negative relationship with DA is board meetings. The result confirms the findings of Xie *et al.* (2003) who found that an active board is negatively related to the level of EM. This implies that a more active board is associated with a reduced level of DA (Xie *et al.*, 2003). A board that meets more often should be able to devote more time to issues such as EM. A board that seldom meets may not focus on these issues and may

perhaps only "rubber-stamp management plan" (Xie *et al.*, 2003). The results are consistent with the expectation, and, hence, support *H4*.

The presence of financial experts is found to have a significant (1 percent) positive relationship with EM. The result is in contrast with the wisdom that outside directors may have the intention to curb EM and only those with financial expertise may be able to do so (Park and Shin, 2004). The results of the study are not consistent with Park and Shin (2004), Choi *et al.* (2007) and Chtourou *et al.* (2001). The plausible explanation for the positive relationship between the presence of expertise on audit committee and EM is that the establishment of an audit committee in listed companies in Malaysia has yet to achieve success in its monitoring role (Abdul Rahman and Ali, 2006). However, the clear reason for this relationship is the lack of independence (Defond *et al.*, 2005). Among the control variables, firm size is reported to have a positive significant (1 percent) relationship with EM, which is consistent to the results in 2003.

It is noteworthy to report that the relationship between board meetings and DA is negative, which suggests a number of meetings results in less DA. At the same time, the relationship between firm size and DA is positively related showing that the larger firms have higher DA. Taking these two results together indicates a contradiction since the correlation between board meetings and firm size is positive. Therefore, the researchers partitioned the firms into two groups. The results of the test revealed that board meetings are only negatively significant with DA within the group of smaller companies.

5. Conclusion

The objective of the study was to examine the relationship between EM and corporate governance characteristics in Malaysian GLCs. Along with PGC recommendations on CG, the greatest concern has been directed and attached to the board of directors' effectiveness as the main mechanism in corporate governance. The underlying reasoning for such concern is that following the best practices of corporate governance and board effectiveness, in particular, would result in reduced EM activities. Many studies conducted in the field of corporate governance practices have shown results that contradicted the assumption behind the corporate governance, as many studies showed that following best practices did not provide an absolute assurance for reduced EM. Similarly, the case can be applied to GLCs, which means that following the transformation program does not ensure better performance and less EM. Thus, the main objective of this study is to explore the impact of current practices of corporate governance, reflected in the transformation program on corporate performance and EM activities in GLCs to show whether the new government policy has had an impact on EM activities for the year 2006 compared to the year 2003 before the issuance of the transformation policy.

The study revealed that corporate governance variables and EM have no relationship with the exception of the non-duality role and board meetings. The non-duality role has documented a negative relationship with EM, which indicates that separating the role of the CEO and chairman leads to curtailing the EM activities. Consistently, board meetings have been revealed to affect EM negatively and the relationship is stronger post-transformation policy. However, further tests reveal that such a relationship only holds for small companies. Therefore, the expectation that the transformation program is essential to enhance the governance of GLCs, and, hence, to curb the opportunistic behavior of EM seems to be inaccurate.

This study has recognized some limitations. First, the data of the study were collected through publicly available data sources, such as annual reports and other databases. Other data could be helpful to gain more of an insight. Second, the number of sample size (i.e. 35 GLCs) is quite small. This is due to a small population of GLCs (i.e. 53 companies) and further exclusion of finance companies and companies with unavailable data to estimate EM. However, the initial population of 53 GLCs identified in this study is quite consistent with some previous studies on GLCs in Malaysia (e.g. Hasan and Ab. Rashid, 2006 who have identified 50 GLCs in Malaysia).

This study opens avenues for future research by considering the impact of corporate governance using different variables, such as competence of the directors, CEO tenure, directors' qualifications and the interaction between corporate governance variables. The main implication for this study is that the government, which is involved in regulating corporate governance for GLCs, can use the results of the study as empirical support for the development of new regulations, recommendations and take the necessary corrective decisions regarding the effectiveness of the transformation policy.

References

Abbott, L., Parker, S. and Peter, G. (2002), "Audit committee characteristics and financial misstatement: a study of the efficacy of certain Blue Ribbon Committee recommendations", available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=319125 (accessed November 6, 2008).

Abdul Aziz, A., Jaafar, M. and Hussin, A. (2007), "Are government-linked construction companies in Malaysia still valid?", *The Indigenous Contractor Perspective Construction Management and Economic*, Vol. 25 No. 10, pp. 1009-19.

Abdul Rahman, R. and Ali, F.H. (2006), "Board, audit committee and culture and earnings management: Malaysian evidence", *Managerial Auditing Journal*, Vol. 21 No. 7, pp. 783-804.

Abdullah, S.N. and Nasir, N.M. (2004), "Accruals management and the independence of the boards of directors and audit committees", *IIUM Journal of Economics and Management*, Vol. 12 No. 1, pp. 1-31.

Ahmed, K., Hossain, M. and Adams, M.B. (2006), "The effects of board composition and board size on the informativeness of annual accounting earnings", *Corporate Governance*, Vol. 14 No. 5, pp. 418-31.

Ashbaugh, H., LaFond, R. and Mayhew, B. (2003), "Do nonaudit services compromise auditor independence? Further evidence", *The Accounting Review*, Vol. 78 No. 3, pp. 611-39.

Bagnoli, M. and Watts, S.G. (2000), "The effect of relative performance evaluation on earnings management: a game-theoretic approach", *Journal of Accounting and Public Policy*, Vol. 19 No. 4-5, pp. 377-97.

Bartov, E., Gul, F. and Tsui, J. (2001), "Discretionary accruals and audit qualifications", *Journal of Accounting and Economics*, Vol. 30 No. 3, pp. 421-52.

Beasley, M.S. (1996), "An empirical analysis of the relationship between the board of director composition and financial statement fraud", *The Accounting Review*, Vol. 71 No. 4, pp. 443-65.

Burgstahler, D. and Dichev, I. (1997), "Earnings management to avoid earnings decreases and losses", *Journal of Accounting and Economics*, Vol. 24 No. 1, pp. 99-126.

Carcello, P.J., Hermanson, D., Neal, T. and Riley, R. (2002), "Board characteristics and audit fees", *Contemporary Accounting Research*, Vol. 19 No. 3, pp. 365-84.

Chen, G., Firth, M., Gao, D. and Rui, O.M. (2006), "Ownership structure, corporate governance, and fraud: evidence from China", *Journal of Corporate Finance*, Vol. 12 No. 3, pp. 424-48.

Choi, J., Park, S.W. and Yoo, S.S. (2007), "The value of outside directors: evidence from corporate governance reform in Korea", *Journal of Financial and Quantitative Analysis*, Vol. 42 No. 4, pp. 941-62.

Chtourou, S.M., Bedard, J. and Courteau, L. (2001), "Corporate governance and earnings management", available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=275053 (accessed July 12, 2008).

Chuanrommanee, W. and Swierczek, F.W. (2007), "Corporate governance in ASEAN financial corporations: reality or illusion?", *Corporate Governance*, Vol. 15 No. 2, pp. 272-83.

Coleman, A. and Biekpe, N. (2006), "The relationship between board composition CEO duality and firm performance", *Corporate Ownership & Control*, Vol. 4 No. 2, pp. 114-22.

Conger, J.A., Finegold, D. and Lawler, E.E. III (1998), "Appraising boardroom performance", *Harvard Business Review*, Vol. 75 No. 1, pp. 136-48.

Cormier, D. and Magman, M. (1998), "Earnings management: is the Anglo-Saxon model relevant to the Swiss context", *Compatibilite-Controle – Audit*, Vol. 4 No. 1, pp. 25-48.

Cornett, M.M., Marcus, A.J. and Tehranian, H. (2008), "Corporate governance and pay-for-performance: the impact of earnings management", *Journal of Financial Economics*, Vol. 87, pp. 357-73.

Daniel, N., Denis, D. and Naveen, L. (2008), "Do firms manage earnings to meet dividend thresholds", *Journal of Accounting and Economics*, Vol. 45 No. 1, pp. 2-26.

Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1995), "Detecting earnings management", *The Accounting Review*, Vol. 70 No. 2, pp. 193-225.

Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1996), "Causes and consequences of earnings manipulation: an analysis of firms subject to enforcement actions by the SEC", *Contemporary Accounting Research*, Vol. 13 No. l, pp. 1-36.

Defond, M.L. and Jiambalvo, J. (1994), "Debt covenant violations and manipulation of accruals", *Journal of Accounting and Economics*, Vol. 17 Nos 1-2, pp. 154-76.

Defond, M.L., Hann, R.N. and Hu, X. (2005), "Does the market value financial expertise on audit committees of boards of directors?", *Journal of Accounting Research*, Vol. 43 No. 2, pp. 153-93.

Dhaliwal, D., Naiker, V. and Navissi, F. (2006), "Audit committee financial expertise, corporate governance and accruals quality: an empirical analysis", available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=906690 (accessed July 21, 2008).

Ding, Y., Zang, H. and Zhang, J. (2007), "Private vs state ownership and earnings management: evidence from Chinese listed companies", *Corporate Governance: An International Review*, Vol. 15 No. 2, pp. 223-38.

Fama, E.E. and Jensen, M.C. (1983), "Separation of ownership and control", *Journal of Law and Economics*, Vol. 26 No. 2, pp. 301-25.

Ferris, S.P., Jagannathan, M. and Pritchard, A.C. (2003), "Too busy to mind the business? Monitoring by directors with multiple board appointments", *Journal of Finance*, Vol. 58 No. 3, pp. 1087-111.

Garg, A.G. (2007), "Influence of board size and independence on firm performance: a study of Indian companies", *ViKALPA*, Vol. 32 No. 3, pp. 39-60.

Goncharov, I. and Zimmermann, J. (2006), "Earnings when incentives compete: the role of tax accounting in Russia", *Journal of International Accounting Research*, Vol. 5 No. 1, pp. 41-65.

Haniffa, R.M. and Cooke, T.E. (2002), "Culture, corporate governance, and disclosure in Malaysian corporations", *Abacus*, Vol. 18 No. 3, pp. 317-49.

Hasan, S.J. and Ab. Rashid, H.M. (2006), "Governance mechanisms and corporate performance in Malaysian government-linked companies", paper presented at the 10th World Congress of Accounting Educators, November 9-11, Istanbul.

Healy, P.M. and Wahlen, J.M. (1999), "A review of the earnings management literature and its implications for standard settings", *Accounting Horizons*, Vol. 13 No. 4, pp. 365-83.

Holthausen, R.W., Larcker, D.F. and Sloan, R.G. (1995), "Annual bonus schemes and the manipulation of earnings", *Journal of Accounting and Economics*, Vol. 19 pp. 29-74.

Iqbal, A. and Strong, N. (2010), "The effect of corporate governance on earnings management around UK rights issues", *International Journal of Managerial Finance*, Vol. 6 No. 3, pp. 168-89.

Jaggi, B. and Leung, S. (2007), "Impact of family dominance on monitoring of earnings management by audit committees: evidence from Hong Kong", *Journal of International Accounting, Auditing and Taxation*, Vol. 16 No. 1, pp. 27-50.

Jensen, M.C. (1993), "The modern industrial revolution, exit and the failure of international control system", *Journal of Finance*, Vol. 48 No. 3, pp. 831-80.

Jiraporn, P., Kim, Y. and Davidson, W. (2008), "Multiple directorships and corporate diversification", *Journal of Empirical Finance*, Vol. 15 No. 3, pp. 418-35.

Jones, J. (1991), "Earnings management during import relief investigations", *Journal of Accounting Research*, Vol. 29 No. 2, pp. 193-223.

Key, K.G. (1997), "Political cost incentives for earnings management in the cable television industry", *Journal of Accounting and Economics*, Vol. 23 No. 3, pp. 309-37.

Klein, A. (2002), "Audit committee, board of director characteristics, and earnings management", *Journal of Accounting and Economics*, Vol. 33 No. 3, pp. 375-400.

Leventis, S.W. and Caramanis, C. (2005), "Determinants of audit report lag: some evidence from the Athens stock exchange", *International Journal of Auditing*, Vol. 9 No. 1, pp. 45-58.

Lin, J.W., Li, J.F. and Yang, J.S. (2006), "The effect of audit committee performance on earnings quality", *Managerial Auditing Journal*, Vol. 21 No. 9, pp. 921-33.

Lipton, M. and Lorsch, J.W. (1992), "A modest proposal for improved corporate governance", *Business Lawyer*, Vol. 1 No. 1, pp. 59-77.

Marra, A., Mazzola, P. and Prencipe, A. (2011), "Board monitoring and earnings management pre- and post-IFRS", *The International Journal of Accounting*, Vol. 46 No. 2, pp. 205-30.

Osma, B.G. and Noguer, B.G. (2007), "The effect of the board composition and its monitoring committees on EM: evidence from Spain", *Corporate Governance*, Vol. 15, No. 6, pp. 1413-28.

Othman, H. and Zeghal, D. (2006), "A study of earnings-management motives in the Anglo-American and Euro-Continental accounting models: the Canadian and French cases", *The International Journal of Accounting*, Vol. 41 No. 4, pp. 406-35.

Park, Y.W. and Shin, H. (2004), "Board composition and earnings management in Canada", *Journal of Corporate Finance*, Vol. 10 No. 3, pp. 431-57.

Peasnell, K.V., Pope, P.F. and Young, S. (2005), "Board monitoring and earnings management: do outside directors' influence abnormal accruals?", *Journal of Business Finance & Accounting*, Vol. 32 Nos 7-8, pp. 1311-46.

Peasnell, P., Pope, P. and Young, S. (2000), "Detecting earnings using cross-sectional abnormal accruals models", *Accounting and Business Research*, Vol. 30 No. 4, pp. 313-26.

Petra, S.T. (2007), "The effects of corporate governance on the informativeness of earnings", *Economics of Governance*, Vol. 8 No. 2, pp. 129-52.

Putrajaya Governance Committee (PGC) (2006), *Transformation Programme Manual*, Putrajaya Governance Committee, Kuala Lumpur.

Saleh, N., Iskandar, T. and Rahmat, M. (2005), "Earnings management and board characteristics: evidence from Malaysia", *Jurnal Pengurusan*, Vol. 24, pp. 77-103.

Sarkar, J., Sarkar, S. and Sen, K. (2008), "Board of directors and opportunistic earnings management: evidence from India", *Journal of Accounting, Auditing & Finance*, Vol. 23 No. 4, pp. 517-51.

Schnake, M.E. and Williams, R.J. (2008), "Multiple directorships and corporate misconduct: the moderating influences of board size and outside directors", *Journal of Business Strategies*, Vol. 25 No. 1, pp. 1-14.

Subramanyam, K. (1996), "The pricing of discretionary accruals", *Journal of Accounting and Economics*, Vol. 22 Nos 1-3, pp. 249-81.

Teoh, S., Welch, I. and Wong, T.J. (1998), "Earnings management and undeperformance of seasoned equity offerings", *Journal of Financial Economics*, Vol. 50 No. 1, pp. 63-99.

Vafeas, N. (1999), "Board meeting frequency and firm performance", *Journal of Financial Economic*, Vol. 53 No. 1, pp. 113-42.

Vafeas, N. (2000), "Board structure and the informativeness of earnings", *Journal of Accounting and Public Policy*, Vol. 19 No. 2, pp. 139-60.

Watts, R. and Zimmerman, J. (1986), *Positive Accounting Theory*, Prentice Hall Inc, Englewood Cliffs, NJ.

Wild, J. (1996), "The audit committee and earnings quality", *Journal of Accounting, Auditing and Finance*, Vol. 11 No. 2, pp. 247-76.

Wilson, M. and Shailer, G. (2007), "Accounting manipulations and political costs: tooth & co ltd, 1910-1965", *Accounting and Business Research*, Vol. 17 No. 4, pp. 247-66.

Xie, B., Davidson, W. and DaDalt, P. (2003), "Earning management and corporate governance: the role of the board and the audit committee", *Journal of Corporate Finance*, Vol. 9 No. 3, pp. 295-316.

Further reading

Shannon, D.M. and Davenport, M.A. (2001), *Using SPSS to Solve Statistical Problems: A Self-Instruction Guide*, Prentice Hall Inc, Englewood Cliffs, NJ.

Appendix

No.	Industry	N
1	Construction	50
2	Customer service	50
3	Industrial	81
4	Plantation	18
5	Properties	60
6	Trade	24
	Total	283

Table AI.
No. of firm observations
by industrial sectors

About the authors
Muslim Har Sani Mohamad is an Assistant Professor at the Department of Accounting, Faculty of Economics and Management Sciences, IIUM. Muslim Har Sani Mohamad is the corresponding author and can be contacted at: muslimh@iium.edu.my

Hafiz Majdi Abdul Rashid is an Associate Professor at the Department of Accounting, Faculty of Economics and Management Sciences, IIUM.

Fekri Ali Mohammed Shawtari is a PhD candidate at the Department of Accounting, Faculty of Economics and Management Sciences, IIUM.

www.mana