

## Internal and External Audit Attributes, Audit Committee Characteristics, Ownership Concentration and Earnings Quality: Evidence from Malaysia

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Doi:10.5901/mjss.2015.v6n3p458

### Abstract

The objective of the study is to examine the association between internal and external audit attributes, audit committee characteristics, ownership concentration and discretionary accruals (as a proxy of earnings quality) based on the agency and resource dependence theories. The final sample of the study is 508 firms listed on the Malaysia Main Market from 2009 to 2012. Two measures of discretionary accruals are used, Modified Jones model by Dechow et al. (1995); and extended Modified Jones Model by Yoon et al. (2006). Results of the study suggest that outsourcing internal audit function, investment in internal audit function and external audit fees are related to higher earnings quality. However, large audit committee size, more frequent audit committee meetings, having a senior or former audit partner as audit committee chairman and ownership concentration are associated with lower earnings quality. This study extends the prior related literature by apply extended modified Jones model by Yoon, et al.'s (2006) of discretionary accruals to measure earnings quality in Malaysia Main Market listed companies and introduce new variables, namely audit committee chairman who is a senior or former audit partner in the audit firm.

**Keywords:** Audit committee, audit fees, internal audit function, ownership concentration, discretionary accruals, earnings quality, Malaysia.

### 1. Introduction

With the recent high-profile scandals in accounting, investors have become concerned with earnings management and have begun to demand for earnings quality for the purpose of enhancing financial statement quality (Bedard & Johnstone, 2004). Certain aspects, such as discretionary accruals, have received much attention as an important indicator of earnings quality. High earnings quality, financial reporting transparency and auditing are important to gain investors' and other stakeholders' confidence.

Earnings management is reflected in earnings quality, whereby greater earnings management results in lower earnings quality and vice versa. Management engages in earnings management for many reasons, among them being to reduce political costs (Warfield, Wild & Wild, 1995), to avoid default in debt covenant (Klein, 2002; Davidson, Goodwin-Stewart & Kent, 2005) and to increase manager's wealth (Radzi, Islam & Ibrahim, 2011).

The purpose of the study is to examine the influence of internal and external audit as governance monitoring mechanisms because they are responsible for evaluating the quality of financial reporting. The audit committee is considered as one of the pillars of accountability because it supports the boards' role to monitor the process of financial reporting while the function of internal and external audit supports the function of the audit committee through auditors' reports. Simunic (1984) argues that the provision of external non-audit services leads to high audit quality. Thus, companies that engage external auditors to carry out non-audit services will have less accounting risks than companies that do not engage such services.

This study extends the prior related literature by several ways. First, this study is the first study to apply Yoon, Miller and Jiraporn's (2006) model of discretionary accruals to measure earnings quality of companies listed on the Malaysian Main Market. Second, we introduce new variables, namely audit committee chairman who is a senior or former audit partner in the audit firm. Third, following the previous studies (Porta, Lopez-De-Silanes & Shleifer, 1999; Fan &

Wong, 2002; Yunos, Smith & Ismail, 2010; Kamardin & Haron, 2011; Abdullah & Nasir (2004); Abdul Rahman & Ali 2006) suggestions of the effect of ownership concentration on monitoring mechanisms, information asymmetry and its impact on earnings quality, we also examine ownership concentration (five largest shareholders) on earnings quality of companies listed on the Malaysian Main Market.

## 2. Literature Review and Hypotheses Development

The Malaysian government took certain measures as proposed by the regulatory bodies and accountancy professions to alleviate the occurrence of fraud and fraudulent financial reporting. This resulted in the implementation of the Malaysian Code on Corporate Governance in March 2000. This code covers four areas, i.e., board of directors, accountability, shareholders and remuneration of directors. The revision of the Code was done in 2007 (known as the MCCG 2007), to allow for greater internal monitoring control. The function of an internal auditor, who directly reports to the audit committee, is to recognise and manage risks (Hassan, Moyes, Mohd-Sanusi & Iskandar, 2010). In addition, the Malaysian Code on Corporate Governance (revised again in 2012 and known as MCCG 2012) pays greater attention to the composition and structure of the board, where the directors' role is recognized as active and responsible fiduciaries. Directors should ensure that the governance structure is effective in order to enable risk and internal control management.

### 2.1 Audit Committee Size

According to the resource dependence theory, a larger audit committee means the members can bring more resources to the firm, such as experience and expertise, which contribute to the audit committee's effectiveness in monitoring management, hence leading to high earnings quality. The Cadbury Report (1992) and the Smith Report (2003) stipulate the number of audit committee members must be at least three; the Sarbanes–Oxley Act (2002) also mandates a minimum of three members in the audit committee. Buchalter and Yokomoto (2003) recommend that audit committees should be composed of three to five members although it is generally based on the firm's size. The Malaysian Code on Corporate Governance recommends there should be at least three non-executive directors in the audit committee, a majority of whom should be independent.

Empirical studies provide evidence that audit committee size is related to high earnings quality (Garcia, Barbadillo & Perez, 2010; Lin, Li & Yang, 2006). Additional evidence from Malaysia by Ahmad-Zaluki and Wan-Hussin (2010); and Ismail, Adibah, Dunstan and Zijl (2009) find a significantly positive relationship between audit committee size and earnings quality. However, Abbott, Parker, Peters and Raghunandan (2003); Abbott, Parker and Peters (2004); Xie, Davidson and DaDalt (2003); Baxter and Cotter (2009); and Adiguzel (2013) find an insignificant association between audit committee size and earnings quality.

Following the resource dependence theory, it is predicted that the appointment of many audit committee members contributes to efficient internal monitoring and better earnings quality. Thus, we hypothesize that:

*H<sub>1</sub>: Audit committee size is negatively associated with discretionary accruals*

### 2.2 Audit Committee Independence

From the agency theory perspective, the effectiveness of audit committee is based on its characteristics (Ika & Ghazali, 2012; Klein, 2002; Garcia, Barbadillo & Perez, 2012; Vafeas, 2005). For the audit committee to achieve its functions, its members should be independent from the management (Ismail *et al.*, 2009; Krishnamoorthy, 2002). Lin, Li and Yang (2006) argue that an audit committee with majority of independent members can effectively monitor the management and reduce the opportunity for fraudulent reporting because there is less interference from the management.

Mustafa and Yusof (2010) argue that the independence of directors results in high financial reporting quality. Several empirical studies have shed light on the effectiveness of audit committee independence. Klein (2002) shows that audit committee independence is related to decreased abnormal accruals (proxy of earnings quality). Yang and Krishnan (2005); and Yunos (2011) find that audit committee independence is related to less discretionary accruals. Audit committee independence is also related to higher earnings quality (Bradbury, Mak & Tan, 2006; Garcia *et al.*, 2012) and quality financial reporting (Agrawal & Chadha, 2005; Bedard & Johnstone, 2004; Klein, 2002; Siagian & Tresnaningsih, 2011). Some studies report an insignificant association between audit committee independence and earnings informativeness (Petra, 2007); discretionary accruals (Xie *et al.*, 2003; Garcia *et al.*, 2010; Adiguzel, 2013); and accrual

quality (Baxter & Cotter, 2009).

In relation to Malaysian studies, Saleh, Iskandar & Rahmat (2007); and Mansor, Ch-Ahmad, Ahmad-Zaluki and Osman (2013) report a negative relationship between audit committee independence and earnings management; while Ahmad Zaluki and Wan Hussin (2010) show a positive association. On the other hand, some studies find no significant association between the independence of audit committee and earnings quality (Abdul Rahman & Ali, 2006; Abdullah & Nasir, 2004; Ismail *et al.*, 2009). Based on the agency theory, we predict that an independent audit committee will be able to monitor management behaviour to manage earnings. Thus we hypothesize that:

*H<sub>2</sub>: Audit committee independence is negatively associated with discretionary accruals*

### 2.3 Audit Committee Meeting

Bursa Malaysia emphasizes that the audit committee should meet at least four times annually. The frequency of audit committee meetings is a reflection of its effectiveness; the directors' experience and expertise can enhance internal monitoring functions (Zaman, Hudaib & Haniffa, 2011). In relation to earnings quality, Garcia *et al.* (2010) find evidence that frequency of audit committee meetings is related to high earnings quality. Xie *et al.* (2003); and Garcia, *et al.* (2010) find frequency of audit committee meetings decreases the level of discretionary accruals. Saleh *et al.* (2007); and Yusof (2010) reveal a negative association between earnings management and meeting frequency of audit committees in Malaysia. Another study in the U.S. by Goh (2009) reveals that audit committee meeting frequency relates positively to timelier remediation of material weaknesses. However, some studies find no relationship between frequency of audit committee meetings and earnings quality (Baxter & Cotter, 2009; Abdul Rahman & Ali, 2006; Mohamad, Rashid & Shawtari, 2012). Thus, we hypothesize that:

*H<sub>3</sub>: The frequent meeting of audit committee is negatively associated with discretionary accruals*

### 2.4 Audit Committee Financial Expertise

Financial expertise is very important for audit committee effectiveness to enhance the integrity of financial reporting quality. The Malaysian Code on Corporate Governance recommends that at least one of the audit committee members must have financial expertise. Xie *et al.* (2003); Baxter and Cotter (2009); and Chen and Zhou (2007) find evidence that financial expertise in audit committees decreases discretionary accruals. With regards to Malaysian companies, Saleh *et al.* (2007); and Yusof (2010) find audit committee financial expertise leads to high earnings quality. On the other hand, Mohamad *et al.* (2012) find no relationship between audit committee financial expertise and earnings quality. Based on the agency and resource dependence theories, we argue that audit committee financial expertise reduces discretionary accruals and enhances earnings quality. Thus, we hypothesize that:

*H<sub>4</sub>: Audit committee financial expertise is negatively associated with discretionary accruals*

### 2.5 Audit Committee's Chairman Being Former Audit Partner

The resource dependence theory proposes that a firm's directors who have knowledge and expertise bring important resources to the company which lead to increasing the firm's internal monitoring and enhancing financial reporting quality (Hillman & Dalziel, 2003). Likewise, a former audit partner in the audit committee can be an expert who can help to increase the audit committee's internal monitoring effectiveness because he or she has experience in auditing, internal control and financial statements (Naiker & Sharma, 2009). Naiker and Sharma (2009) examined the relationship between former audit partners on the audit committee and internal control deficiencies and find a negative relationship. However, another study by Menon and Williams (2004) finds that firms having a former audit partner as officers or directors are associated with larger accruals, thus suggesting a potential threat to audit independence. A study in Malaysia by Yusof (2010) finds former senior audit managers/partners are associated with larger discretionary accruals. Therefore, the chairman position could be the most influence factor. Accordingly, this study aims to provide empirical evidence about audit committees' chairman former audit partner which unexplored issue. Thus we hypothesize that:

*H<sub>5</sub>: Audit committee's chairman being former audit partner is negatively associated with discretionary accruals*

## 2.6 Investment in Internal Audit Function

According to the agency theory, an increase in the internal control system could lead to an increase in the monitoring process of the company to reinforce and increase the financial information outcomes (Jensen & Meckling, 1976). Internal audit function has become a crucial internal monitoring mechanism in corporate governance (Al-Shetwi, Ramadili, Chowdury & Sori, 2011). Prawitt, Smith and Wood (2009) argue that internal audit function that is relatively well funded has a greater monitoring ability to detect and deter material misstatements. Increased resources enable the internal audit department to hire and retain more competent personnel.

The MCCG 2007 supports the roles and responsibilities of the internal audit function. The board should set up an internal audit function, which is directly accountable to the audit committee, to recognise and manage risks. Investment in the internal audit function implies more competent internal audit function personnel can help management to establish stronger controls over financial reporting, thus reducing the existence of control problems (Lin, Pizzini, Vargus & Bardhan, 2011). Yasin and Nelson (2012) find a positive relationship between external audit quality and cost of internal audit function. Further, Prawitt *et al.* (2009) find a significant association between internal audit function and absolute abnormal accruals. Thus, we hypothesize that:

*H<sub>5</sub>: Investment in internal audit function is negatively associated with discretionary accruals*

## 2.7 Sourcing Arrangement of Internal Audit Function

Internal audit function can be undertaken in-house by the internal audit department in the company or outsourced to other professional companies. Outsourced internal audit refers to internal audit services that are undertaken by independent accounting firms (Carcello, Hermanson & Raghunandan, 2005; Desai, Gerard & Tripathy, 2011). According to Bursa Malaysia, listed companies are required to disclose whether their internal audit function is performed in-house or is outsourced. Some studies have found the in-house internal audit function leads to greater internal monitoring and control over audit operations, thereby protecting proprietary information, providing better understanding of business processes and associated risks from outsiders and nonemployees as well as learning opportunities for the company's own employees compared to an outsourced internal audit function (Vecchio & Clinton, 2003; Rittenberg, 1999). The benefits of in-house audit function are due to in-depth knowledge, loyalty and role in handling crisis situations, such as those involving fraud (Spekle, Elten & Kruis, 2007).

On the other hand, advocates of outsourced internal audit function argue that in-house internal auditors are less independent than outsourced internal auditors as it is difficult for an employee to be truly independent from the management (James, 2003; Ahlawat & Lowe, 2004). There are external auditors who consider internal auditors to be more objective and independent when the internal auditors are not employees of the company (Gramling & Hermanson, 2006). Johl, Johl, Subramaniam & Cooper (2013) find the internal audit function increases discretionary accruals when this function is outsourced, but the in-house internal audit function decreases the level of discretionary accruals. The above discussion leads to the hypothesis that:

*H<sub>6</sub>: Sourcing arrangement of internal audit function is associated with discretionary accruals*

## 2.8 Big4 Audit Firm

Big 4 audit firms are commonly used as proxy of audit quality which is considered as an external monitoring mechanism (Fan & Wong, 2005). Davidson *et al.* (2005) argue that Big4 audit firms affect earnings quality positively with respect to earnings management activity detection due to higher expertise and resources that Big4 audit firms have relative to their smaller counterparts. Thus, we hypothesize that:

*H<sub>7</sub>: Companies which are audited by Big4 audit firms are negatively associated with discretionary accruals*

## 2.9 Audit Fees

An audit fees, as a proxy of audit quality, is an important external monitoring mechanism to mitigate earnings management (high earnings quality). Frank, Johnson and Nelson (2002) find that an audit fees is associated with smaller discretionary accruals. Also, Larcker and Richardson (2004) find that strong governance mitigates the negative relationship between audit fees and accruals. Gul, Chen & Tsui (2003) find positive relationship between audit fees and

discretionary accruals. Antle, Gordon, Narayanamoorthy & Zhou (2006) find audit fees leads to high abnormal accruals. Additionally, Hasnan, Rahman & Mahenthiran (2012) show evidence that audit fees is positively related to fraudulent financial reporting in Malaysia. Thus, we hypothesize that:

*H<sub>8</sub>: Audit fees for external audit are negatively associated with discretionary accruals*

### 2.10 Non-Audit Services Fees

More investment in non-audit services could increase audit quality by increasing an auditor's ability to detect earnings management (Dechow & Schrand, 2010). Antle *et al.* (2006) find non-audit services fees decreases the level of abnormal accruals. While, Frankel *et al.* (2002) find that non-audit services fees is associated with higher discretionary accruals. Thus, we hypothesizes that:

*H<sub>9</sub>: Non-audit services fees for external audit are negatively associated with discretionary accruals*

### 2.11 Ownership Concentration

Ownership concentration is said to be a source of agency problems because higher ownership concentration provides more power to a limited number of shareholders, who in turn might expropriate minority shareholders' interests (Porta, *et al.*, 1999). Fan and Wong (2002) report that ownership concentration is related to low earnings quality. Yunos, *et al.* (2010) find ownership concentration is associated with lower accounting conservatism. Another study by Kamardin and Haron (2011) suggests effective monitoring mechanisms through concentrated ownership in Malaysian companies whereby there is interest alignment between the majority and minority shareholders. However, Abdullah and Nasir (2004); and Abdul Rahman and Ali (2006) provide evidence on the possible influence of concentrated ownership on board independence in relation to earnings management. Following the agency theory, this study hypothesizes that:

*H<sub>10</sub>: Ownership concentration is positively associated with discretionary accruals*

## 3. Research Method

The population of the study is 822 firms in year 2012 listed on the Main Market of Bursa Malaysia. The period of study covers four years (from 2009 to 2012). The study includes the year 2009 because it is the first year full disclosure for the cost of investment in internal audit function is made as required by the Bursa Malaysia. We follow previous studies by excluding finance-related companies and unit trusts (Yatim, Kent & Clarkson, 2006; Yunos, *et al.*, 2010); firms with incomplete online annual reports for the period between 2009 and 2012; and firms which have missing data of study variables. The final sample of the study is 508 firms. Data were collected from Data Stream and annual reports available on the Bursa Malaysia website. Table 1 provides a breakdown of the sample by industries.

**Table 1.** Sample of Study by Industries

Industries	Firms	Observations	Percentage
Construction	30	120	6
Consumer	83	332	16
Industrial products	163	652	32
Plantation	33	132	6
Property	49	196	10
Technology	23	92	5
Trading and Services	127	508	25
<b>Total</b>	<b>508</b>	<b>2,032</b>	<b>100</b>

### 3.1 Measurement of Discretionary Accruals

Discretionary accruals are used as proxy for earnings quality. Two measurements of discretionary accruals are used in this study to see whether the results are consistent for all the models. The first measurement (DA1) follows the modified Jones model by Dechow, Sloan and Sweeney (1995) which has been widely used in previous studies. Ordinary-Least

Squares (OLS) cross-sectional regression for all study years and industries are used to estimate the fitted values (coefficients of  $a_1$ ,  $a_2$ , and  $a_3$ ). The equation to calculate total accruals is as follows:

$$ACC_t / TA_{t-1} = a_0 + a_1(1 / TA_{t-1}) + a_2(\Delta REV - \Delta REC / TA_{t-1}) + a_3 (PPE / TA_{t-1}) + \epsilon_t \quad (1)$$

Where:

$ACC_t$  = total accruals measured by net income – cash flows from operations

$TA_{t-1}$  = prior total assets

$\Delta REV$  = change in sales/revenue

$\Delta REC$  = change in trade receivables

PPE = property, plant and equipment

$\epsilon_t$  = error term.

Following Dechow *et al.* (1995), the change in accounts receivable is deducted from the change in revenues before estimation. Then, the industry- and year-specific is used to estimate the parameter estimates (coefficients  $a_0$ ;  $a_1$ ;  $a_2$ ; and  $a_3$ ) to infer non-discretionary accruals (NDA) as in equation (2):

$$NDA_t = a_0 + a_1(1 / TA_{t-1}) + a_2(\Delta REV - \Delta REC / TA_{t-1}) + a_3 (PPE / TA_{t-1}) \quad (2)$$

The difference between estimation (standardized residuals) in equation (2) and actual accruals represents the total discretionary accruals in the following equation:

$$DA_t = ACC_t - NDA_t \quad (3)$$

Where:

NDA = non-discretionary accruals

DA = discretionary accruals from the residual estimated from model 1

The second measurement of discretionary accruals (DA2) follows the modified Jones model by Yoon *et al.* (2006). Studies in Korea by Yoon *et al.* (2006); and in Bangladesh by Islam, Ali and Ahmed (2014) find that the modified Jones model by Dechow *et al.* (1995) does not robust for Asian companies. The model (DA2) is described in equation (4):

$$TA_t / REV_t = \beta_0 + \beta_1(\Delta REV_t - \Delta REC_t) / REV_t + \beta_2 (\Delta EXP_t - \Delta PAY_t) / REV_t + \beta_3(\Delta DEP_t + \Delta RET_t) / REV_t + \epsilon_t \quad (4)$$

Where:

$\Delta EXP$  = change in sum of cost of goods sold and selling and general administrative expenses excluding non-cash expenses.

$\Delta PAY$  = change in accounts payable

DEP = depreciation expenses

RET = retirement benefits expenses

Yoon *et al.*'s (2006) model proposes that the total accruals are related to changes in the cash revenue/sales, change of cash expenses and non-cash expenses of depreciation expenses and the expenses of retirement benefits. Discretionary accruals are accruals minus non-discretionary accruals for each observation as follows:

$$DA_t = TA_t / REV_t - [\beta_0 + \beta_1(\Delta REV_t - \Delta REC_t) / REV_t + \beta_2 (\Delta EXP_t - \Delta PAY_t) / REV_t + \beta_3(\Delta DEP_t + \Delta RET_t) / REV_t] \quad (5)$$

The absolute value of discretionary accruals  $|DA|$  represents earnings management because earnings management can be income-increasing or income-decreasing accruals. Bedard and Johnstone (2004); Klein (2002); and Abdul Rahman and Ali (2006) suggest that the absolute value of abnormal accruals is a good proxy for the combined effect of income-increasing and income-decreasing earnings management. Thus, the high absolute value of discretionary accruals indicates low earnings quality and vice versa.

Table 2 shows that the extended model of Yoon *et al.* (2006) is significant at the 1% level and it has an explanatory power of 47.54% which is more than Dechow *et al.*'s (1995) model of 0.81%. The  $R^2$  shows that the model by Yoon *et al.* (2006) has more explanatory power to capture the discretionary accruals of Malaysian Main Market listed companies.

**Table 2.** Multiple Regression Results of Discretionary Accruals

Variables	M-Jones by Dechow <i>et al.</i> (1995)		Extended M-Jones by Yoon <i>et al.</i> (2006)		
	Coef.	t-stat	Variables	Coef.	t-stat
_cons	-0.0110**	-2.31	_cons	0.0852	1.57
1 / TA	-485.35	-1.31	( $\Delta REV - \Delta REC$ ) / REV	-0.0924***	-19.91
( $\Delta REV - \Delta REC$ ) / TA	0.0112	1.06	( $\Delta EXP - \Delta PAY$ ) / REV	0.1321***	23.50
PPE / TA	-0.0346***	-3.78	(DEP + RET) / REV	-3.8545***	-29.95
F-value	5.25		613.74		
Sig	0		0		
R-squared	0.0081		0.4754		
N	2032		2032		

Hence, the model of Yoon *et al.* (2006) is used as (DA2) the second measurement of discretionary accruals (proxy of earnings quality) in this study.

### 3.2 Discretionary Accruals Model Specification

Specifically, this study attempts to examine the relationship between audit committee characteristics (size, independence, frequency of meetings, financial expertise and chairman being former audit partner), internal audit function, Big4 audit firm, audit and non-audit services fees, ownership concentration and earnings quality. In addition, following previous studies, we include firm size, return on assets, leverage, income loss and sales growth as control variables (Ismail *et al.*, 2009; Peasnell, Pope & Young, 2005; Abdul Rahman & Ali, 2006; Dechow, Richardson & Tuna, 2003). Additionally, we include years and industries as dummy variables to control business cycle effects and differences across industries (Datta, Iskandar-Datta & Singh, 2013). The model to achieve the objectives is listed below:

$$|DA| = \beta_1 ACSIZE + \beta_2 ACIND + \beta_3 ACMEET + \beta_4 ACEXPERT + \beta_5 ACPART + \beta_6 IAFINVE + \beta_7 IAFSOUR + \beta_8 BIG4 + \beta_9 AF + \beta_{10} NONAF + \beta_{11} OWCO + \beta_{12} ROA + \beta_{13} LEV + \beta_{14} FSIZE + \beta_{15} LOSS + \beta_{16} SGROWTH + e$$

Where:

- |DA| = absolute value of discretionary accruals
- ACSIZE = audit committee size
- ACIND = audit committee independence
- ACMEET = audit committee meeting
- ACEXPERT = audit committee financial expertise
- ACPART = audit committees' chairman former audit partner
- IAFINVE = cost of internal audit function
- IAFSOUR = internal audit function sourcing arrangement
- BIG4 = big 4 audit firm
- AF = external audit fees
- NONAF = external non-audit services fees
- OWCO5 = ownership concentration
- ROA = return on assets
- LEV = leverage
- FSIZE = firm size
- LOSS = net income loss
- SGROWTH = sales growth

Table 3 provides a summary of measurements of variables used in the study.

**Table 3.** Summary of Measurement of Study Variables

Variables	Measurement
ACIND	Percentage of total number of independent non-executive directors divided by the total number of AC members (Abdul Rahman & Ali, 2006; Mohamad <i>et al.</i> , 2012).
ACSIZE	Total number of audit committee members (Saleh <i>et al.</i> , 2007).
ACEXPERT	The ratio of audit committee members with accounting and financial knowledge to total members of AC (Saleh <i>et al.</i> , 2007; Goh 2009; Zaman <i>et al.</i> , 2011).
ACPART	The chairman of audit committee who was previously a senior auditor in audit firm (senior manager or partner) (Yusof, 2010).
ACMEET	Frequency of audit committee meetings (Saleh <i>et al.</i> , 2007; Xie, <i>et al.</i> , 2003; Zaman <i>et al.</i> , 2011).
IAFINVE	The natural log of internal audit cost (Johl, <i>et al.</i> , 2013).
IAFSOUR	Equals "1", if IAF is established in-house and "0" otherwise (Johl, <i>et al.</i> , 2013).
BIG4	Equals "1" if the firm is audited by Big4 Auditors; and "0" otherwise (Abdul Rahman & Ali, 2006; Davidson <i>et al.</i> , 2005).
AF	The natural log of external audit fees (Frankel <i>et al.</i> , 2002; Antle <i>et al.</i> , 2006).
NONAF	The natural log of external non-audit services fees (Frankel <i>et al.</i> , 2002; Antle <i>et al.</i> , 2006).
OWCO	Ownership by largest five shareholders (Gedajlovic & Shapiro, 2002).
FSIZE	Natural log of total assets (Ismail <i>et al.</i> , 2009; Peasnell <i>et al.</i> , 2005; Abdul Rahman & Ali, 2006).
LEV	The ratio of total liabilities to total assets (Klein, 2002; Davidson <i>et al.</i> , 2005).
ROA	The annual net profit of individual firm before tax divided by total assets (Abdul Rahman & Ali, 2006; Ismail <i>et al.</i> , 2009).
LOSS	Dummy variable equal to "1" if the net income is less than zero and "0" otherwise (Dechow <i>et al.</i> , 2003).
SGROWTH	Sales growth, annual sales growth (current year sales – prior year's sales)/prior year's sales (Ahmed, Billings Morton & Stanford-Harris, 2002).

#### 4. Descriptive Statistics and Analysis

Table 4 provides descriptive statistics of the continuous variables while Table 5 provides descriptive statistics of the dichotomous variables. Table 4 shows the average size of audit committee of Malaysian Main Market companies is three members. A total of 88% of the audit committee members are independent directors. An average (Mean) of 47.47% of the audit committee members have financial expertise. There is an increase in audit committee independence and audit financial expertise compared to findings in Yunos *et al.* (2010) of 70% and 37%, respectively, using data from 2001 to 2007. This increase in audit committee independence follows the recommendation of the MCCG that independent directors should dominate the audit committee. Furthermore, the minimum value of 67% for audit committee independence indicates that the audit committee is dominated by independent directors.

**Table 4.** Descriptive Statistics of Continuous Variables

Variable Name	Minimum	Maximum	Mean	S.Dev.	Skewness	Kurtosis
DA1	0.002	0.195	0.056	0.050	1.266	4.028
DA2	0.007	1.452	0.256	0.338	2.258	7.801
ACSIZE	3.000	5.000	3.237	0.473	1.815	5.456
ACIND	0.667	1.000	0.885	0.150	-0.581	1.423
ACMEET	4.000	10.000	4.992	1.082	2.000	8.468
ACEXPERT	0.200	1.000	0.475	0.202	0.910	3.013
IAFINV (log)	8.923	15.607	11.408	1.350	0.808	3.433
AF (log)	10.731	13.724	11.927	0.799	0.602	2.663
NONAF (log)	-9.210	12.763	6.009	8.051	-1.298	2.827
OWCO	17.850	85.730	54.241	15.735	-0.161	2.318
ROA	-0.599	0.337	0.033	0.093	-0.892	6.647
LEV	0.004	1.652	0.391	0.220	0.997	5.710
FSIZE (log)	10.402	17.453	12.897	1.440	0.863	3.692
SGROWTH	-0.593	1.581	0.071	0.337	1.818	9.254

The average number of meetings for the audit committee in the majority of companies is about 4.99 which is more than what is recommended by the MCCG, i.e., to meet at least four times annually. The average investment on internal audit function is 11.41 (RM370,658) with the minimum value being 8.92 (RM3,000) and the maximum value being 15.61 (RM39,000,000). These results indicate that there is a concerted effort towards investment in internal audit function to increase earnings quality and to enhance the quality of financial reporting in Malaysian Main Market listed companies. The average external audit fees is 11.93 (RM284,136) and the average non-audit services fees is 6.01 (RM97,310). An average of 54.24% of the firms' shares is concentrated among the largest five shareholders in Malaysia Main Market companies which means that majority of the shares is in the hands of a few shareholders (high ownership concentration).

In terms of the controlled variables, the size of companies varies with a minimum of 10.4 and a maximum of 17.45. The sample has an average leverage level of 39% and ROA of 3.3%. Some of the companies have losses. The average of sales growth is 7% and some have negative value which indicates revenue in current year is less than previous year.

**Table 5.** Descriptive Statistics of Dichotomous Variables

Variable Name	Observations	Frequency		Percentage	
		1	0	1	0
IAFSOUR	2032	937	1,095	46.10%	53.90%
ACPART	2032	655	1,377	32.20%	67.80%
BIG4	2032	1135	897	55.90%	44.10%
LOSS	2032	438	1,594	21.60%	78.40%

Table 5 indicates that 46.2% of Main Market listed companies in Malaysia have in-house internal audit function and 53.8% of the companies outsource their internal audit function. The finding also indicates that 32.3% of Malaysian companies have audit committee chairman who was an audit partner. A total of 1,135 companies or 55.7% are audited by Big4 audit firms while another 44.3% (901 companies) are audited by non-Big 4 audit firms. The statistics also indicate that 21.5% of the companies have net income loss.

Following previous studies (e.g., Saleh *et al.*, 2007; Yoon *et al.*, 2006; Ball & Shivakumar, 2005; Kraft, Lee &

Lopatta, 2014; Bonetti, Parbonetti & Magnan, 2013; Gaio, 2010; Kothari, Leone & Wasley, 2005; Prawitt *et al.*, 2009), winsorized distributions were conducted to eliminate possible outliers in all continuous variables at the top and bottom one percent of the data distribution to maintain the characteristics of original data. Robust standard errors were conducted to estimate the regression models to solve heteroskedasticity problem. Skewness and kurtosis were used to test the normality assumption; for skewness, Hair, Tatham, Anderson and Black (2006) suggest a higher threshold of  $\pm 3$ ; for kurtosis, Kline (1998) suggests a higher threshold of  $\pm 10$ . The results from this approach (see Table 4 and Table 5) led to the conclusion that the data set has no serious violation of the normality assumption. The correlation matrix between variables using Pearson correlation was conducted to test for multicollinearity issue. As presented in Table 6, no correlation exists of more than 0.80 (Hair *et al.*, 2006); thus multicollinearity is not an issue in this study.

**Table 6.** Correlations Matrix of Study Variables

		1	2	3	4	5	6	7	8	9	10	11	12
1	DA1	1											
2	DA2	0.25***	1										
3	ACSIZE	0.0145	0.0147	1									
4	ACIND	-0.0348	0.0310	-0.1431	1								
5	ACMEET	0.0037	0.0674	0.0981	0.0458	1							
6	ACEPERT	-0.0014	-0.0226	-0.14*	0.0508	0.0129	1						
7	ACPART	0.0289	0.0252	-0.0171	0.0054	0.0423	0.1244	1					
8	IAFSOU	-0.0711	-0.0440	0.17**	0.0716	0.0938	-0.0449	-0.0508	1				
9	IAFINV	-0.0948	-0.0887	0.27***	-0.0055	0.25***	-0.0572	-0.0406	0.64***	1			
10	BIG4	-0.1126	-0.0662	0.0948	-0.0390	0.0371	-0.0530	0.0406	0.17**	0.32***	1		
11	AF	-0.0940	-0.0699	0.23***	0.0412	0.24***	-0.0928	-0.0133	0.44***	0.71***	0.28***	1	
12	NAF	-0.0713	-0.0459	0.0775	-0.0059	0.0580	0.0235	0.0141	0.0596	0.23***	0.23***	0.19**	1
13	OWCO	0.0163	0.0316	0.1097	-0.1123	0.0248	0.0075	-0.0142	0.0687	0.1222	0.15*	-0.0010	0.0222
14	ROA	-0.18**	-0.19**	0.1047	0.0016	-0.0681	0.0095	0.0083	0.0868	0.16**	0.18**	0.1005	0.1294
15	LEV	0.1183	0.0114	0.0379	0.0230	0.1274	-0.0320	-0.0022	0.0362	0.1105	-0.1268	0.22***	-0.0779
16	FSIZE	-0.1254	-0.0485	0.25***	0.0338	0.23***	-0.1234	-0.0099	0.44***	0.76***	0.35***	0.79***	0.22***
17	LOSS	0.15*	0.16**	-0.0509	0.0412	0.0593	-0.0046	0.0072	-0.0936	-0.17**	-0.16**	-0.14*	-0.0814
18	SGROWTH	0.0398	-0.0825	0.0309	0.0449	0.0192	0.0105	-0.0235	0.0390	0.0320	0.0119	0.0606	0.0352
		13	14	15	16	17	18						
13	OWCO	1											
14	ROA	0.15*	1										
15	LEV	-0.14*	-0.32***	1									
16	FSIZE	0.1136	0.18**	0.18**	1								
17	LOSS	-0.1285	-0.66***	0.27***	-0.22***	1							
18	SGROWTH	-0.0009	0.19**	0.0375	0.0704	-0.17**	1						

Note: \*, \*\*, \*\*\*, significant level at 10%, 5% and 1%, respectively. DA1 = Discretionary accruals modified Jones model (Dechow *et al.*, 1995), DA2 = Extended of modified Jones model by (Yoon *et al.*, 2006), ACSIZE = AC size, ACIND = AC independence, ACMEET = AC meeting, ACEPERT = AC financial expertise, ACPART = AC chairman audit partner, IAFSOU = sourcing arrangements of internal audit function, IAFINV = investment in internal audit function, BIG4 = largest 4 audit firms, AF = external audit fees, NAF = external non-audit services fees, OWCO = Ownership Concentration, ROA = Return on assets, LEV = Leverage, FSIZE = Firm size, LOSS = Net Income Loss, SGROWTH = Sales Growth.

## 5. Results and Discussion

The OLS regression was used to analyse the data. For the first dependent variable (DA1), the model is fit and significant at 1% level (with F-value = 6.22,  $R^2 = 0.0792$ ); and for the second dependent variable (DA2), the model is also fit and significant at 1% level (with F-value = 18.13,  $R^2 = 0.2577$ ).

**Table 7.** Multiple Regression Results

$$|DA| = \beta_1 \text{ACSIZE} + \beta_2 \text{ACIND} + \beta_3 \text{ACMEET} + \beta_4 \text{ACEPERT} + \beta_5 \text{ACPART} + \beta_6 \text{IAFINVE} + \beta_7 \text{IAFSOUR} + \beta_8 \text{BIG4} + \beta_9 \text{AF} + \beta_{10} \text{NONAF} + \beta_{11} \text{FSIZE} + \beta_{12} \text{ROA} + \beta_{13} \text{LEV} + \beta_{14} \text{OWCO} + \beta_{15} \text{LOSS} + \beta_{16} \text{SGROWTH} + e$$

Variables	DA1			DA2	
	Predicted Sign	Coef.	t-stat.	Coef.	t-stat.
_cons	?	0.0838***	3.94	0.362***	2.82
ACSIZE	-	0.0046*	1.83	0.0186	1.22
ACIND	-	-0.0063	-0.86	0.0449	1.04
ACMEET	-	0.0002	0.21	0.0238***	3.64
ACEPERT	-	-0.0040	-0.73	-0.0374	-1.14
ACPART	-	0.00389*	1.66	0.0201	1.40
IAFSOUR	?	-0.0026	-0.90	0.0316*	1.73
IAFINVE	-	0.0010	0.64	-0.0294***	-2.88
BIG4	-	-0.0035	-1.44	-0.00758	-0.50
AF	-	-0.0021	-0.92	-0.0267*	-1.68
NONAF	-	-0.0001	-0.73	-0.00136	-1.50
OWCO	+	0.0002***	3.05	0.000123	0.28
ROA	-	-0.0696***	-2.71	-0.664***	-3.87
LEV	+	0.0176***	2.74	0.00675	0.17
FSIZE	-	-0.0030**	-2.02	0.0150	1.49
LOSS	+	0.0035	0.92	0.0451	1.64
SGROWTH	+	0.0108***	2.76	-0.0401	-1.58
Years Dummy	?	Include		Include	
Ind. Dummy	?	Include		Include	
F-value		6.22		18.13	
Sig		0.000		0.000	
R-squared		0.0792		0.2577	
N		2032		2032	

Note: \*, \*\*, \*\*\* significant at 10%, 5%, and 1% levels, respectively. DA1 = Discretionary accruals under modified Jones model by Dechow *et al.*, 1995, DA2 = Extended modified Jones model by Yoon *et al.*, 2006; ACSIZE = AC size, ACIND = AC independence, ACMEET = AC meeting, ACEPERT = AC financial expertise, ACPART = AC chairman former audit partner, IAFSOUR = sourcing arrangements of internal audit function, IAFINVE= investment in internal audit function, BIG4 = largest 4 audit firms, AF = external audit fees, NAF= external non-audit services fees, OWCO = Ownership Concentration, ROA = Return on assets, LEV = Leverage, FSIZE = Firm size, LOSS = Net Income Loss, SGROWTH = Sales Growth.

Table 7 shows that ACSIZE is positively significant with DA1 (t = 1.83, p < 0.10) but not significant with DA2. This result does not support the agency theory and resource dependence theory which suggests that larger audit committees would effectively monitor and bring more external resources to enhance financial reporting quality.

Audit committee meetings (ACMEET) is found to be significant with positive relationship with discretionary accruals (DA2) (t = 3.64, p < 0.01), but not significant with DA1. This result contradicts H<sub>3</sub> which proposes an increase in ACMEET decreases the level of discretionary accruals. Also, this result is in contrast with the arguments of the agency and resource dependence theories that an increase in the frequency of audit committee meetings can enhance internal monitoring and increase the transparency of financial reporting by exploiting directors' expertise during the meetings. The possible explanation might be due to the fact that high ownership concentration affects directors' independence and leads to ineffective audit committee meetings.

ACPART is found to be in a significantly positive relationship with DA1 but not with DA2. The significant relationship indicates that the discretionary accruals (DA1) is increasing in the companies which have audit committee chairman who is a senior or former audit partner. This finding contradicts the hypothesis.

The results also show insignificant association between sourcing arrangements (IAFSOUR) and DA1, but a significant and positive association with DA2. The explanation of this result could be the in-house internal audit function (IAF) leads to increased discretionary accruals. This result suggests that outsourced IAF is more expertise compared to in-house IAF. In addition, outsourced IAF is considered as more independent and able to fulfil the monitoring role better than the in-house IAF (Johl, *et al.*, 2013).

The cost of internal audit function (IAFINVE) is insignificant with DA1 but significant and negatively related to DA2 at the 1% level. This finding somehow indicates that increasing the cost of IAFINVE would increase internal monitoring by reducing the earnings management and lead to higher earnings quality. This result supports increasing investment in

internal audit function as a source to enhance internal monitoring.

The association between external audit fees (AF) and DA1 is not significant but it is negatively significant with DA2 ( $t = 1.68$ ,  $p < 0.10$ ). This supports the hypothesis that high audit fees can be a proxy of audit quality and subsequently, enhanced earnings quality. However, no significant relationship appears between external non-audit services fees (NONAF) with DA1 and DA2. In terms of ownership concentration (OWCO), the coefficient is significantly positive with DA1 ( $t = 3.05$ ,  $p < 0.01$ ), but insignificant with DA2. This result suggests the influence of OWCO on earnings quality which supports the agency theory.

The insignificance of independent directors on the audit committee for both measurements (DA1 and DA2) implies that the independent directors on the audit committee are ineffective in overseeing the influence of the financial reporting process on earnings quality. Thus,  $H_2$  is not supported. The finding could be justified by the nature of the job undertaken by the independent directors in terms of the committees they serve. In addition, the result indicates that audit committee expertise (ACEXPRT) is not related to earnings quality. The possible explanation might be due to lack of independence (Defond, Hann & Hu, 2005). The Big4 audit firm also has no significance with DA1 and DA2.

For control variables, the ROA coefficient is significantly negative with both DA1 and DA2 at the 1% level. The current study finds that firm performance is positively related to earnings quality. This is consistent with Abdul Rahman and Ali (2006) who argue firms with low performance have the tendency to engage in earnings management. Meanwhile, Leverage (LEV) is found to have significantly positive relationship with DA1 at the 1% level, indicating that higher leveraged firms are more motivated to engage in earnings manipulation in order to avoid debt covenant violation. In other words, higher leverage leads to a higher level of earnings manipulation. Firm size (FSIZE) is negatively significant with DA1 at the 1% level, indicating that large firms report higher quality of earnings since they are closely monitored by the financial processes in the firms. Sales growth (SGROWTH) is in a positively significant relationship with DA1 at the 10% level, consistent with the finding in Warfield *et al.* (1995), indicating that increasing sales growth motivates the managers to engage in 'smoothing' earnings management. LOSS is found to be insignificant with discretionary accruals.

## 6. Conclusion

The study finds some evidence that the extended M-Jones model of Yoon *et al.* (2006) is robust in detecting discretionary accruals in the Malaysian Main Market listed companies. The results provide evidence that outsourcing internal audit function, more investment in internal audit function and external audit fees increase the level of earnings quality. However, the results also indicate that some audit committee characteristics (such as size, independence, meeting frequency, financial expertise and chairman being former audit partner) may not contribute to enhancing earnings quality. The study also finds ownership concentration leads to low earnings quality. External audit by Big4 audit firms and non-audit services fees are not associated with earnings quality. However, the scope of the study is limited to the Malaysian Main Market listed companies for a period of study of four years from 2009 to 2012. Therefore, it is suggested that future research should examine other variables, such as internal auditors' characteristics and use different measurements to capture audit committee characteristics.

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