

NON-AUDIT SERVICES, AUDIT FIRM TENURE AND EARNINGS MANAGEMENT IN MALAYSIA

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ABSTRACT

The main objective of this study is to investigate the association of auditor-provided non-audit services and audit firm tenure with earnings management in Malaysian public listed firms. Two measurements, namely, discretionary current accruals based on the performance-adjusted model developed by Ashbaugh, LaFond and Mayhew (2003) and discretionary total accruals based on the modified Jones model (1991), are employed to estimate the level of earnings management. Our sample consists of 525 companies for financial year 2009. The results suggest that longer audit firm tenure reduces earnings management. However, the magnitude of non-audit fees exacerbates earnings management. Based on the empirical evidence, any attempt to legislate audit firm rotation in Malaysia is unwarranted. Further research is required to move toward a policy resolution on the restriction of non-audit services in Malaysia.

Keywords: earnings management, non-audit fees, audit firm tenure, auditor rotation, Malaysia

INTRODUCTION

The opportunistic accruals-based earnings management practice, i.e., the deliberate use of aggressive accounting aided by the flexibilities allowed under the generally accepted accounting principles (GAAP), to report accounting numbers that reflect the desires of management rather than the economic reality is a research area that is receiving critical attention around the world (Dechow, Ge, & Schrand, 2010). Managers use their discretion to manage the accounting accruals to adjust corporate earnings to a desired outcome for their personal gain, such as to enjoy performance-based compensation, avoid penalties for poor performance, avoid violating restrictive debt covenants, obtain higher prices from

the issuance of new shares or meet financial analysts' expectations (Giroux, 2004). Although earnings management is regarded as being within the law, Hasnan, Abdul Rahman and Mahenthiran (2013) demonstrate that accruals-based earnings management by Malaysian firms grew over time to become fraudulent financial reporting. Wardani and Kusuma (2012) also demonstrate that accruals-based earnings management in Malaysia during 2008 was opportunistic and thus impairs the quality of financial reporting.

A key player in deterring earnings management in the financial reporting process is the firm's independent external auditor. The primary role of the external auditor is to form an independent opinion on the management's assertions contained in the annual financial statements of the group and the company. Shareholders expect auditors to have the competency to discover significant discrepancies from the GAAP and the willingness to report these discrepancies. There is an enduring debate whether the provision of non-audit services (NAS), such as tax planning and other tax advisory services, design or implementation of financial IT systems and corporate finance services by the incumbent external auditor and long tenured audit firm compromise the auditor's independence (Bell, Causholli, & Knechel, 2015; Tepalagul & Lin, 2015; Abdul Wahab, Gist, & Nik Abdul Majid, 2014; Kwon, Lim, & Simnett, 2014; Casterella & Johnston, 2013; Jenkins & Vermeer, 2013; Koh, Rajgopal, & Srinivasan, 2013; Habib, 2012). Proponents of auditors providing NAS to the companies they audit believe that providing such services helps auditors build a deeper understanding of the audited company, which furthers the auditor's insight, thus leading to higher audit quality. However, the argument against auditors providing NAS stems from the belief that auditors will not want to risk the lucrative fees they receive from NAS and hence may not raise the questions or challenges that are warranted (Ernst & Young, 2013a). In other words, auditor independence, objectivity and professional scepticism may be compromised when audit firms conduct non-audit work for the same client.

Another long-standing debate is whether audit firm rotation should be mandatory (Kwon et al., 2014). Ernst & Young (2013b) opposes mandatory audit firm rotation as it is not an effective way to maintain or enhance auditor independence, and it has not been proven to enhance audit quality. Ernst & Young (2013b) believes other initiatives, such as mandatory audit partner rotation, is more effective in strengthening auditor independence without compromising audit quality. PricewaterhouseCoopers (2012) concurs with the view that the costs of mandatory audit firm rotation would outweigh the perceived benefits of a required "fresh look" at the financial statements by a new audit firm.

From the regulators' perspective, the latest Malaysian Code on Corporate Governance (2012) emphasises that the independence of external auditors can be impaired by the provision of NAS to the company; the audit committee should therefore establish policies governing the circumstances under which contracts for the provision of NAS can be entered into and procedures that must be followed by the external auditors (Recommendation 5.2). The Bursa Malaysia Corporate Governance Guide (2013) reiterates that the audit committee's policies in evaluating the independence of external auditors may entail providing a list of NAS by external auditors, which are prohibited and a limit on the fee size on NAS provided by external auditors, in absolute terms and/or as a percentage of audit fee. The Guide states that:

Ideally, non-audit services should not be performed by the external auditors of the company unless the fee for those services are negligible compared with the audit fees and are not specifically prohibited by professional/regulatory bodies.

(Bursa Malaysia, 2013, p. 65)

Similar to the US, Malaysia does not have mandatory audit firm rotation requirement. Instead, the Malaysian Institute of Accountants (MIA) has regulated that all public listed companies' lead audit partner should be rotated every five years. According to Section 290.151 Part I of the MIA By-Laws:

An individual shall not be a key audit partner for more than five years. After such time, the individual shall not be a member of the engagement team or be a key audit partner for the client for two years. During that period, the individual shall not participate in the audit of the entity, provide quality control for the engagement, consult with the engagement team or the client regarding technical or industry specific issues, transactions or events or otherwise directly influence the outcome of the engagement.

(Malaysian Institute of Accountants, 2011, pp. 82–83)

However, in Indonesia, the Ministry of Finance Decree No:17/PMK.01/2008 mandates a three-year rotation for audit partners and a six-year rotation for firms (The World Bank, 2010). The Indian Companies Act, which became law on 30 August 2013, also requires mandatory audit firm rotation every 10 years. Argentina recently introduced a three-year mandatory firm rotation (Ernst & Young, 2014). Other countries that have implemented mandatory audit firm rotation on listed companies include Brazil, Italy, Saudi Arabia, Turkey (Chartered Accountants of Canada, 2012), South Korea and Spain (Kwon et al., 2014). Given the conflicting views on the efficacy of

restricting the provision of NAS and mandatory audit firm rotation, it remains an empirical issue whether the provision of NAS and audit firm tenure have any effects on financial reporting quality.

This study employs 525 observations for the year 2009. We provide some evidence that the magnitude of NAS fees exacerbates earnings management, and longer audit firm tenure mitigates earnings management. Our study contributes to the literature in the following ways: We contribute to the debate surrounding NAS and mandatory audit firm rotation and advance the literature on earnings management in Malaysia by showing that the provision of NAS by the external auditor and short audit firm tenure erode the financial reporting quality. We believe our study can help inform regulators, top management and board members, audit practitioners and investors on ways to improve audit quality and constrain earnings management.

The rest of this paper is organised as follows. The next section describes the literature review and development of hypotheses, followed by the research method and discussion on the results. In the last two sections, we explain the additional tests we conduct to ensure the robustness of the findings and highlight the policy implications and avenues for future research.

PRIOR RESEARCH AND HYPOTHESES

Given the wide incidence of earnings management in Malaysia (Bhattacharya, Daouk, & Welker, 2003; Leuz, Nanda, & Wysocki, 2003; Gaio, 2010), there exists a number of empirical studies on the determinants of earnings management, such as Abdullah and Nasir (2004), Abdul Rahman and Ali (2006), Aziz, Iskandar and Saleh (2006), Saleh, Iskandar and Rahmat (2005; 2007), Bradbury, Mak and Tan (2006), Salleh, Hashim and Mohamad (2012), and Johl, Johl, Subramanian and Cooper (2013). The variables they test are related to corporate governance mechanisms, which include boards of directors, audit committees, internal auditor and external auditor. In the Malaysian context, the literature on external auditor and earnings management is largely focused on the perceived audit quality differences between the brand name audit firms and other audit firms. As mentioned earlier, we extend these studies by investigating the association of two potential determinants of auditor's independence, i.e., (1) NAS and (2) audit firm tenure, with earnings management.

We focus on the two auditor characteristics as predictors of audit quality for several reasons. In Malaysia, external auditors are not prohibited from providing NAS, such as management consultancy, tax advice, international business advice, professional advice on transactions, for example, mergers,

acquisitions or restructuring and human resources consultancy to their auditees (Che-Ahmad, Shafie, & Yusof, 2006). This contrasts with the situation in the US, where the Sarbanes Oxley Act (SOX) 2002 bans most NAS and requires the audit committee to pre-approve the permissible non-audit purchases from the auditor (Koh et al., 2013). Although the situation in Malaysia is similar to the UK, Australia and New Zealand as far as NAS are concerned (Sharma, Sharma, & Ananthanarayanan, 2011), it is interesting to study the effect of non-audit fees on earnings management in Malaysia because unlike the countries mentioned above, auditor litigation in Malaysia is an extremely rare phenomenon. Consequently, the willingness of auditors in Malaysia to take risks may be greater compared with more litigious jurisdictions, such as the UK, Australia and New Zealand. The rationale for examining audit firm tenure, defined as the number of years an audit firm is retained by the client (Myers, Myers, & Omer, 2003), is to inform regulators whether the current practice of non-rotation of audit firm in Malaysia is detrimental to financial reporting quality.

Non-audit Services and Earnings Management

There is an on-going debate whether joint provision of audit and NAS impairs independence or generates knowledge spillover. Unlike audit fees that signal the expected audit effort, fees for NAS may deliberately include excessive rents to increase the financial reliance of the audit firm on the client. The managers then opportunistically exploit this economic dependency that succumbs the auditor to acquiesce to the client's wishes in financial reporting (Koh et al., 2013). An alternative view is that by providing NAS, it endows the auditor with a richer set of information about the client, and the auditor exploits this knowledge spillover to produce a more effective and efficient audit (Simunic, 1984; Causholli, Chambers, & Payne, 2014).

Frankel, Johnson and Nelson (2002) demonstrate that firms purchasing more NAS from their auditors report larger absolute discretionary accruals. The results of Frankel et al. (2002) are confirmed in subsequent studies by Ferguson, Seow and Young (2004), Srinidhi and Gul (2007), and Sharma et al. (2011). There are studies that present no relationship between NAS and earnings management (Chung & Kallapur, 2003; Ashbaugh, LaFond, & Mayhew, 2003). However, Antle et al. (2006) and Koh et al. (2013) report a significant negative relationship. To the best of our knowledge, Abdul Wahab et al. (2014) are the only study that examines NAS and financial reporting quality in Malaysia. They employ financial restatement as a proxy of financial reporting quality and limit their sample to companies that purchase NAS. They find that the level of NAS reduces the likelihood of restatements. They conclude that certain types of NAS and their recurrence provide knowledge spillover, which enhances audit and financial reporting quality. However, whether their result is robust to alternative

measurement of financial reporting quality, such as level of abnormal accruals, is an open question. Furthermore, their sample is limited to purchasers of NAS. Based on the competing theoretical explanations and mixed empirical evidence, we make a non-directional hypothesis on the association of NAS with earnings management:

H1: There is a relationship between level of discretionary accruals and non-audit fees.

Audit Firm Tenure and Earnings Management

There is no consensus on the association between the duration of the audit firm-client relationship and financial reporting quality. One view states that the audit firm's long-run connection with the auditee poses a risk to auditor "independence in fact". In other words, long auditor tenure might lead to excessive familiarity between the auditor and auditee, which can threaten auditor objectivity, resulting in less rigorous audit procedures (European Commission, 2011). Furthermore, Carcello and Nagy (2004) argue that there may be atrophy and complacency among the long tenured audit teams, such that the audit is undertaken with reduced vigour and scepticism. This could lead to poor audit quality and high level of earnings management as the auditors are more lenient towards the financial reporting of accruals. However, Casterella and Johnston (2013) reiterate that over time, recurring audit firms gain valuable knowledge about their clients. As the audit firm tenure increases, the auditors are better at evaluating the risk of material misstatements as they gain more experience and better insights into the client's operations and business strategies as well as internal controls over financial reporting. Thus, a long tenured auditor can minimise manipulations of discretionary accruals. In addition, Arrunada and Paz-Ares (1997) posit that short-term audit engagement increases audit costs and reduces the auditor's technical competence and detailed client knowledge because of a lesser degree of specialisation. Thus, under mandatory audit firm rotation, audit costs would increase because of the learning curve involved with new clients.

Most prior empirical studies have examined the accounting and auditing outcomes of audit firm tenure in a voluntary setting, except for Kwon et al. (2014) who examine this issue during the period of mandatory audit firm rotation in South Korea from 2006–2010. Johnson, Khurana and Reynolds (2002) and Carcello and Nagy (2004) find that relative to medium audit firm tenures of four to eight years, short audit firm tenures of two to three years are associated with lower-quality financial reports. In contrast to the results for short audit firm tenures, there is no evidence to suggest that long audit firm-client relationships (nine years or longer) are associated with reduced financial-reporting quality relative to medium audit firm-client relationships. Similarly, Piot and Janin

(2007) and Jackson, Moldrich and Roebuck (2008) fail to provide any evidence that long audit firm tenure would lead to an increase in earnings management. Chen, Lin and Lin (2008) find that audit tenure is negatively linked to the level of discretionary accruals in a sample of Taiwanese companies, consistent with Myers et al. (2003). In a unique study that employs a mandatory audit firm rotation setting instead of voluntary auditor switching, Kwon et al. (2014) provide evidence that the audit quality in South Korea remained unchanged in the first year of utilising the new auditor or in subsequent years, which runs counter to the intended purpose of the policy.

There are very few studies on audit firm tenure in Malaysia. Shafie et al. (2009) demonstrate that a long auditor-client relationship is associated with greater likelihood for a financially distressed firm to receive the modified going concern audit opinion. Furthermore, Wan-Hussin and Bamahros (2013) indicate that long audit firm tenure is associated with shorter audit delay. Echoing Stefaniak, Robertson and Houston (2009) and Casterella and Johnston (2013), a majority of extant research does not provide evidence to support the mandatory audit firm rotation. Thus, we formulate the following hypothesis:

H2: There is a negative relationship between the level of discretionary accruals and audit firm tenure.

RESEARCH DESIGN

Estimating Levels of Earnings Management

There are various methods that have been developed by researchers to measure discretionary accruals as a proxy of earnings management. The popular ones in the literature are the Jones (1991) and the modified Jones (Dechow, Sloan, & Sweeney, 1995) models. However, Ashbaugh et al. (2003) and Kothari, Leone and Wasley (2005) argue that measuring discretionary accruals without controlling for firm performance will produce misspecification in the earnings management model. In this study, we employ two alternative measures of abnormal or discretionary accruals models, namely, discretionary current accruals (DCA) based on the performance-adjusted model developed by Ashbaugh et al. (2003) and discretionary total accruals (DTA) based on the modified Jones model, without controlling for performance.

The remaining paragraphs in this section describe the estimation of discretionary accruals under the two methods. Following the Ashbaugh et al. (2003) DCA model, the first step is to calculate total current accruals (TCA).

Consistent with recommendations by Kothari et al. (2005) and Ashbaugh et al. (2003), TCA is measured as follows:

$$TCA = EBXI + Depn/Amort - CFO \quad (1)$$

where TCA is net income before extraordinary items (EBXI) plus depreciation and amortisation (Depn/Amort) minus operating cash flow (CFO); all scaled by beginning of year total assets. The second step is to estimate the normal current accruals (NCA), based on the industry parameter estimates α_1 , α_2 and α_3 , as follows:

$$\frac{TCA_{ijt}}{A_{ijt-1}} = \alpha_1 \left(\frac{1}{A_{ijt-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{ijt}}{A_{ijt-1}} \right) + \alpha_3 ROA_{ijt-1} + \varepsilon_{ijt} \quad (2)$$

where ΔREV_{ijt} = revenues in year t less revenues in year $t-1$ for firm i in industry j ; ROA_{ijt-1} = return on average assets in year $t-1$ for firm i in industry j ; A_{ijt-1} = total assets at year $t-1$ for firm i in industry j . NCA is obtained as follows:

$$NCA_{ijt} = est(\alpha_1) \left(\frac{1}{A_{ijt-1}} \right) + est(\alpha_2) \left(\frac{\Delta REV_{ijt} - \Delta REC_{ijt}}{A_{ijt-1}} \right) + est(\alpha_3) (ROA_{ijt-1}) \quad (3)$$

where ΔREC_{ijt} = net receivables in year t less net receivables in year $t-1$ for firm i in industry j ; and other variables are as previously defined. Finally, DCA is computed as follows:

$$\frac{DCA_{ijt}}{A_{ijt-1}} = \frac{TCA_{ijt}}{A_{ijt-1}} - NCA_{ijt} \quad (4)$$

The second DTA model that we employ in this paper is the modified Jones model as developed by Dechow et al. (1995), which is based on total accruals (TAC), measured as follows:

$$TAC = EBXI - CFO \quad (5)$$

Equation (6) derives the industry coefficients to estimate normal total accruals (NTA) as follows:

$$\frac{TAC_{ijt}}{A_{ijt-1}} = \alpha_1 \left(\frac{1}{A_{ijt-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{ijt}}{A_{ijt-1}} \right) + \alpha_3 \left(\frac{PPE_{ijt}}{A_{ijt-1}} \right) + \varepsilon_{ijt} \quad (6)$$

where PPE_{ijt} is property, plant and equipment at end of year t for firm i in industry j and other variables are as previously defined. DTA is obtained by:

$$\frac{DTA_{ijt}}{A_{ijt-1}} = \frac{TAC_{ijt}}{A_{ijt-1}} - \left[est(\alpha_1) \left(\frac{1}{A_{ijt-1}} \right) + est(\alpha_2) \left(\frac{\Delta REV_{ijt} - \Delta REC_{ijt}}{A_{ijt-1}} \right) + est(\alpha_3) \left(\frac{PPE_{ijt}}{A_{ijt-1}} \right) \right] \quad (7)$$

Data and Methods

Sample selection

Our study examines earnings management in the period following the implementation of the International Financial Reporting Standards (IFRS) in 2006. We believe discretionary accruals might be different in the period of pre- and post-IFRS due to lesser accounting choices allowed post-IFRS. To estimate the industry coefficients for the discretionary current accruals model, we employ financial data for the years 2008 and 2009. However, for the discretionary total accruals model, we estimate the industry coefficients employing financial data for the prior years 2007 and 2008, in line with the original Jones model (1991). Our tests on whether the hypotheses variables influence earnings management are based on the year 2009, i.e., the earliest period post-IFRS. This study utilises the sample of non-financial public listed companies on Bursa Malaysia in 2009. The number of firms listed on Bursa Malaysia at the end of June 2010 was 985 firms. However, after eliminating companies listed on ACE Market and with missing data, only 525 Main Market companies are usable in this paper, as presented in Table 1.

Table 1
Sample selection criteria

	Description	Number
1	Total companies listed on the Bursa Malaysia at June 2010	985
2	Less companies in the ACE Market	133
3	Less financial, insurance and investment companies	49
4	Less companies where there are fewer than ten observations in any industry	30
5	Less companies with missing Datastream information	153
6	Less companies with missing audit firm tenure and auditor fee data	80
7	Less companies with missing annual reports and changes of financial year end	15
8	Final sample	525

Regression model

To examine the effect of auditor characteristics on the absolute discretionary accruals, we fit ordinary least square (OLS) models as depicted below:

$$\begin{aligned} \text{DCA or DTA} = & \alpha + \beta_1\text{LNNAS} + \beta_2\text{TENURE} + \beta_3\text{BIG4} + \beta_4\text{LNFEE} + \\ & \beta_5\text{ACAUDP} + \beta_6\text{ACSIZE} + \beta_7\text{ACINDP} + \beta_8\text{ACMEET} + \beta_9\text{LNASSET} + \beta_{10}\text{CFO} \\ & + \beta_{11}\text{SEGMENT}_P + \beta_{12}\text{SEGMENT}_G + \beta_{13}\text{FINANCE} + \beta_{14}\text{LOSS} + \beta_{15}\text{MTB} + \\ & \beta_{16}\text{LEVERAGE} + \beta_{17}\text{ACC} + \beta_{18}\text{SECTOR} + \varepsilon \end{aligned} \quad (8)$$

The appendix describes each of the variables. The auditor and audit committee data are hand-collected from annual reports, whereas financial and product and geographical segments data are collected from DataStream. The annual reports are obtained from the Bursa Malaysia website (<http://announcements.bursamalaysia.com>). The Bursa sector is obtained from The Star newspaper.

Our variables of interest are the two external audit characteristics, namely, magnitude of non-audit fees (LNNAS) and length of audit firm-client relationship (TENURE). Consistent with previous research, we also control for other auditor characteristics. Researchers have presented extensive evidence that clients of Big Four audit firms have significantly lower discretionary accruals. Previous studies imply that the audit fees reflect the audit effort. Frankel et al. (2002) and Gul, Jaggi and Krishnan (2007) present a negative relationship between audit fees and earnings management. We also include several audit committee characteristics, namely, audit committee expertise, audit committee size, audit committee independence and audit committee meetings. Audit committee members with prior experience in external auditing (ACAUDP) act as proxies for audit committee expertise. We expect a negative association between ACAUDP and discretionary accruals. Prior research also finds firms with poor corporate governance mechanisms, as reflected by fewer independent audit committee members (ACINDP), smaller audit committee size (ACSIZE) and less frequent audit committee meetings (ACMEET), have higher discretionary accruals.

The remaining control variables are firm size, cash flow from operations, firm complexity, financing requirement, loss incidence, market-to-book ratio, leverage, absolute accruals and the Bursa sector that have been found by prior studies to be associated with the level of discretionary accruals. The natural logarithm of total assets (LNASSET), which acts a proxy for firm size, is expected to have systematically lower discretionary accruals. Dechow et al. (1995) and Becker et al. (1998) report a negative relationship between discretionary accruals and cash flow from operations (CFO). Previous research

has suggested that firm complexity (SEGMENT_P and SEGMENT_G) has a positive association with discretionary accruals.

Previous studies have also documented that firms that raise equity or need additional financing (FINANCE) are more likely to engage in discretionary accruals than others. Earlier studies have suggested that loss making firms and firms with high market-to-book (MTB) ratio are more likely to use discretionary accruals. Given the conceptually and empirically ambiguous relationship between leverage and earnings management, we do not make any predictions on the expected sign for the leverage coefficient. One view is that firms that are constrained by interest-coverage debt covenants may resort to earnings management. Alternatively, rigorous monitoring by debt holders may discourage earnings management. The lagged absolute value of current or total accruals is employed to capture the effect of last year's accruals on discretionary accruals. Past studies have found lagged accruals to be associated with the level of discretionary accruals. As shown in the next section, firms operating in the properties sector have the lowest levels of DCA and DTA. Therefore, in this study, SECTOR is a dummy variable that takes the value of 1 if the firm is classified under the properties sector, and 0 otherwise.

EMPIRICAL RESULTS

Descriptive Statistics

Table 2 presents the descriptive statistics for the variables utilised in this paper. The mean of absolute abnormal accruals is 0.06, which is similar to Johl et al. (2013) and Salleh et al. (2012). The mean (median) of non-audit fees in this study is RM94,180 (RM11,750). The mean of audit firm tenure is slightly more than six years. The percentage of companies audited by Big Four auditors in our sample is 61%, which is lower than that reported by Yunos, Ismail and Smith (2012; 65.5%) and Johl, Mat Zain and Subramaniam (2012; 68.5%). The mean (median) of audit fees in this sample is RM348,000 (RM132,000) and ranges from RM7,000 to RM20,800,000. This mean (median) is higher than the RM240,956 (RM115,500) reported by Johl, Mat Zain and Subramaniam (2012).

In terms of audit committee composition, the mean (median) size of the audit committee is 3.25 (3). Approximately 87% of the audit committee members are independent directors, which is higher than the 76% reported by Johl et al. (2012). All the sample companies comply with the Malaysian Code on Corporate Governance (Security Commission Malaysia, 2007) recommendation where none of the audit committees has less than 50% independent members. Interestingly, 26% of the audit committee members in our sample have prior external auditing

experience. Nearly two-thirds of the audit committees conduct more than four meetings per year, which is similar to Yusof (2010), Johl et al. (2012), Yunos, Ismail and Smith (2012) and Salleh et al. (2012).

As for firm size, the mean (median) of total assets is RM1,664 million (RM355 million); this ranges from as small as RM30 million to as large as RM71 billion, and the average is higher than the RM1,410 million reported by Johl et al. (2012). Firm size is right skewed, and we perform natural logarithmic transformation to normalise it for multivariate analysis. The mean (median) cash flow from operations divided by total assets last year (CFO) is 7.5% (7.2%). The mean of CFO is larger than Abdul Rahman and Ali's (2006) study. The sample companies have, on average, three product segments and more than two geographical segments. During the sample period, 10.4% of the firms had significant new financing. Approximately 24% of the sample companies incurred losses in 2009, similar to that reported by Johl et al. (2012; 28%). The mean (median) of MTB ratio in this study is 0.982 (0.650), comparable to the figures of 1.055 (0.836) reported by Yunos et al. (2012).

Table 2
Descriptive Statistics

Variable	Mean	Median	Minimum	Maximum	Std. Dev.
DCA	0.06	0.04	0	1.02	0.09
DTA	0.06	0.04	0	1.04	0.09
NAS (RM'000)	94.18	11.75	0	6600	399
TENURE	6.43	8.00	1.00	8.00	2.37
BIG4	0.61	1.00	0	1.00	0.49
FEE (RM'000)	348	132	7.00	20800	1061
ACAUDP	0.26	0.33	0	1.00	0.21
ACSIZE	3.25	3.00	2.00	6.00	0.51
ACINDP	0.87	1.00	0.50	1.00	0.15
ACMEET	4.98	5.00	1.00	15.00	1.36
ASSET (RM million)	1664	355	30	71363	5489
CFO	0.08	0.07	-0.97	0.61	0.11
SEGMENT _G	2.25	1.00	1.00	10.00	1.92
FINANCE	0.10	0	0	1.00	0.31
LOSS	0.24	0	0	1.00	0.43
MTB	0.98	0.65	-5.76	27.82	1.68
LEVERAGE	0.21	0.20	0	0.85	0.17
ACC – DCA model	0.06	0.04	0	0.43	0.06
SEGMENT _P	2.92	3.00	1.00	8.00	1.54
ACC – DTA model	0.06	0.05	0	0.55	0.07
SECTOR	0.07	0	0	1.00	0.26

N= 525. NAS is non-audit fees paid to incumbent auditor, FEE is statutory audit fees paid to incumbent auditor, ASSET is total assets, and other variables are defined in Appendix.

Table 3
Pearson (Top) and Spearman (Bottom) correlations coefficients

	1	2	3	4	5	6	7	8	9	10	11
DCA (1)	1.000	.916**	0.043	-.14**	-.139**	-.085	-.124**	-0.008	0.074	0.055	-.112*
DTA (2)	.767**	1.000	0.031	-.144**	-.126**	-.091*	-.111*	-0.019	0.035	0.048	-.105*
LNNAS (3)	0.015	0.022	1.000	.197**	.310**	.432**	0.010	.168**	-0.003	.092*	.474**
TENURE (4)	-.115**	-.094*	.187**	1.000	.404**	0.085	0.010	0.068	-0.072	-0.050	.165**
BIG4 (5)	-.104*	-.074	.309**	.367**	1.000	.248**	0.085	.167**	-.120**	-.088*	.298**
LNFEES (6)	-.030	-.048	.336**	0.072	.245**	1.000	-0.033	.177**	0.058	.142**	.780**
ACAUDP (7)	-.067	-.060	-.022	-.032	0.062	-.040	1.000	-0.072	0.021	-0.024	-0.081
ACSIZE (8)	-.076	-.034	.143**	0.064	.160**	.157**	-.170**	1.000	-.126**	.126**	.277**
ACINDP (9)	.113**	0.047	-.004	-.070	-.115**	.087*	0.018	-.064	1.000	0.003	0.057
ACMEET (10)	0.003	0.012	0.075	-.036	-.088*	.128**	-.034	.130**	0.009	1.000	0.054
LNASSET (11)	-.083	-.091*	.414**	.145**	.301**	.741**	-.114**	.253**	0.081	0.039	1.000
CFO (12)	-.022	-.009	0.037	0.039	.133**	0.031	0.061	0.051	0.001	-.178**	0.079
SEGMENT _p (13)	0.000	-.002	.189**	0.036	-.071	.250**	-.121**	0.085	0.041	.126**	.204**
SEGMENT _G (14)	0.062	0.040	.175**	-.023	0.002	.287**	0.034	-.002	.156**	0.002	.234**
FINANCE (15)	-.056	-.011	.121**	0.021	0.030	.230**	0.010	0.082	0.050	0.025	.253**
LOSS (16)	.226**	.172**	-.030	-.053	-.060	-.073	0.011	-0.13	-0.18	0.058	-.060-
MTB (17)	0.019	0.050	.156**	-.019	.132**	.184**	0.032	.097*	0.010	-.041	.298**
LEVERAGE (18)	.121**	.088*	0.085	-.067	-.119**	.309**	-.057	-.073	0.073	.116**	.209**
ACC-DCA (19)	.181**	.189**	-.076	-.031	-.022	-.055	0.037	-.095*	-0.038-	0.018	-.045
ACC-DTA (20)	.103*	.135**	-.066	-.091*	0.001	-.052	-.005	-.064	-.087*	-.006-	-.055
SECTOR (21)	-.206**	-.160**	0.030	0.046	.086*	-.028	-.051	-.010	-.002-	-.030-	.174**

(continued on next page)

Table 3: (continued)

	12	13	14	15	16	17	18	19	20	21
DCA (1)	-.301**	0.072	.119**	0.009	.268**	0.056	0.080	.140**	0.080	-.149**
DIA (2)	-.331**	0.061	.117**	0.043	.259**	0.063	.086*	.101*	.089*	-.129**
LNNAS (3)	0.011	.194**	.233**	.143**	-.041	.113**	.094*	-.049	-.067	0.021
TENURE (4)	.096*	0.027	-.012	0.020	-.053	0.036	-.083	-.049	-.078	0.030
BIG4 (5)	.147**	-.071	-.003	0.030	-.060	.105*	-.123**	-.015	0.005	.086*
LNFFEE (6)	0.033	.268**	.327**	.292**	-.082	.133**	.263**	-.024	-.028	-.021
ACAUDP (7)	0.073	-.124**	0.007	0.025	0.018	0.022	-.070	-.035	-.064	-.057
ACSIZE (8)	0.037	0.059	-.020	0.066	-.012	.102*	-.056	-.104*	-.065	-.024
ACINDP (9)	-.019	0.030	.132**	0.044	-.015	-.006	0.077	-.032	-.059	0.000
ACMEET (10)	-.148**	.121**	-.006	0.025	0.058	-.026	.115**	0.039	0.012	-.030
LNASSET (11)	0.067	.219**	.247**	.298**	-.045	.197**	.201**	-.020	-.024	.135**
CFO (12)	1.000	-.112	0.028	0.026	-.107*	.317**	-.219**	0.019	0.017	-.075
SEGMENT _P (13)	-.099*	1.000	.156**	.090*	-.024	-.122**	.119**	-.016	-.090*	0.023
SEGMENT _G (14)	.112*	.117**	1.000	.104*	-.016	0.016	0.031	-.040	-.060	-.089*
FINANCE (15)	.105*	0.084	0.084	1.000	-.004	0.066	0.035	-.032	-.009	.117**
LOSS (16)	-.140**	-.020	0.007	-.004	1.000	0.052	.158**	.262**	.252**	-.061
MTB (17)	.281**	-.080	.094*	.249**	0.061	1.000	0.047	0.022	0.060	-.049
LEVERAGE (18)	-.261**	.148**	0.053	0.063	.122**	-.100*	1.000	.136**	.138**	-.142**
ACC - DCA (19)	0.029	-.024	0.008	0.002	.183**	0.040	0.072	1.000	.834**	-.072
ACC - DIA (20)	0.027	-.096*	-.079	0.003	.149**	0.028	.098*	.658**	1.000	-.109*
SECTOR (21)	-.114**	0.020	-.122**	.117**	-.061	-.048	-.138**	-.023	-.087*	1.000

**Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed). See Appendix for variable definitions.

Univariate

Table 3 demonstrates that the highest correlation coefficient is between LNASSET and LNFEE (0.78), which is expected as auditors charge higher fees for larger clients. Multicollinearity is not perceived as a serious threat as the correlations among other variables do not exceed 0.55, and Pedhazur (1997) argues that collinearity under 0.80 is acceptable. As for the Pearson correlations between the independent variables and discretionary accruals, the results demonstrate that there is a positive correlation (albeit insignificant) between NAS and both DCA and DTA. TENURE is significantly and negatively related to both DCA and DTA.

Multivariate

Table 4 presents the main results of the OLS regressions that examine the effects of auditor characteristics on discretionary accruals based on White's (1980) standard error corrected for heteroscedasticity. The discretionary accruals models that we employ in this study have a good fit with adjusted $R^2 = 25\%$, comparable to the Malaysian study by Saleh et al. (2005) and the US study by Ashbaugh et al. (2003), and considerably higher than Johl et al. (2013, adjusted $R^2 = 17\%$).

The variable, LNNAS, has a significant positive relationship with DCA and DTA. This implies that firms that purchase a higher NAS from the auditor report higher discretionary accruals. Our results support the stream of research that argues that non-audit fees can impair auditor independence, such as Ferguson et al. (2004) and Basioudis, Papanastasiou and Geiger (2008) in the UK, Frankel et al. (2002) and Larcker and Richardson (2004) in the US and Sharma et al. (2011) in New Zealand. Thus, our results are at odds with Abdul Wahab et al. (2014), who argue that NAS provide a knowledge spillover benefit that enhances audit and financial reporting quality in Malaysia. However, they limit their empirical test to the association between the magnitude of the NAS and financial reporting quality for companies that purchase NAS, whereas our sample includes both purchasers and non-purchasers of NAS. One of the implications of our research is that regulators should be concerned with the possibility that the provision of NAS by an incumbent auditor may impair the auditor's independence.

The audit firm tenure is negatively associated with DCA and DTA. This indicates that companies that engage with the auditor for a long time tend to have lower discretionary accruals. Our finding that firms with shorter tenures are more likely to report higher absolute discretionary accruals than those with longer tenures suggests that long audit firm tenure increases the quality of the financial statements. This is consistent with the notion that the long auditor-client

relationship enables the auditor to increase their client-specific knowledge. As the auditor becomes specialised with the client, the auditor's bargaining power increases, thus enabling it to resist management demands to present firm performance in a better light by manipulating discretionary accruals.

Table 4
Main regression results on non-audit fees, audit firm tenure and discretionary accruals

Variables	Expected Sign	DCA			DTA		
		Coeff.	t-statistics	Prob. (2-tailed)	Coeff.	t-statistics	Prob. (2-tailed)
LNNAS	?	0.005	2.61	0.009	0.004	2.17	0.030
TENURE	-	-0.003	-1.87	0.062	-0.004	-2.28	0.023
BIG4	-	-0.003	-0.37	0.709	0.002	0.23	0.815
LNFFEE	-	-0.007	-1.08	0.282	-0.011	-1.63	0.105
ACAUDP	-	-0.051	-3.04	0.003	-0.047	-2.71	0.007
ACSIZE	-	0.005	0.76	0.447	0.000	0.07	0.941
ACINDP	-	0.039	1.75	0.081	0.013	0.54	0.588
ACMEET	-	-0.002	-0.40	0.687	-0.002	-0.32	0.747
LNASSET	-	-0.008	-1.65	0.100	-0.006	-1.22	0.222
CFO	-	-0.262	-1.86	0.063	-0.296	-2.07	0.039
SEGMENT _P	+	0.003	1.50	0.134	0.003	1.45	0.148
SEGMENT _G	+	0.006	2.44	0.015	0.007	2.51	0.012
FINANCE	+	0.017	1.21	0.226	0.028	1.85	0.065
LOSS	+	0.049	2.88	0.004	0.050	2.82	0.005
MTB	+	0.009	2.64	0.009	0.010	2.73	0.007
LEVERAGE	?	-0.028	-1.01	0.315	-0.020	-0.71	0.480
ACC	+	0.131	1.82	0.069	0.037	0.58	0.561
SECTOR	-	-0.037	-4.19	0.000	-0.036	-3.87	0.000
Constant		0.160	3.31	0.001	0.194	4.02	0.000
R-Squared			0.27			0.27	
Adjusted R-squared			0.25			0.25	
F Value			4.67			2.98	
Sig F			0.000			0.000	

N = 525. See Appendix for variable definitions.

Our study fails to find a significant relationship between the Big Four auditors and discretionary accruals in all the models. This is in line with previous Malaysian studies by Abdul Jalil and Abdul Rahman (2010), Yusof (2010) and Abdul Rahman and Ali (2006). The multivariate analysis finds that audit committee auditing expertise mitigates discretionary accruals. Thus, having more audit committee members with external auditing experience is advantageous in terms of reducing accruals-based earnings management. Our study suggests that there is a higher tendency for accruals manipulation among highly complex firms with more geographical segments, loss-making firms and firms with higher MTB ratios.

SUPPLEMENTARY TESTS

Following Gul et al. (2007), Sharma et al. (2011) and Knechel, Sharma and Sharma (2012), this study repeats the regression analysis utilising non-audit fee ratios (non-audit fees divided by total auditor fees) in place of a natural logarithm of non-audit fees. The results of the alternative measurement of this variable are presented in Table 5. The non-audit fee ratio is positively significant in both the DCA and DTA models, and TENURE remains significant.

Table 5
Supplementary regression results using different proxy for non-audit fees

Variables	Expected Sign	DCA			DTA		
		Coeff.	t-statistics	Prob. (2-tailed)	Coeff.	t-statistics	Prob. (2-tailed)
PCTNAS	?	0.048	2.32	0.021	0.045	2.14	0.033
TENURE	-	-0.003	-1.91	0.056	-0.004	-2.35	0.019
BIG4	-	-0.003	-0.34	0.732	0.002	0.20	0.842
LNFEES	-	-0.005	-0.69	0.491	-0.009	-1.26	0.210
ACAUDP	-	-0.050	-2.98	0.003	-0.045	-2.67	0.008
ACSIZE	-	0.006	0.81	0.416	0.001	0.11	0.912
ACINDP	-	0.038	1.73	0.083	0.013	0.54	0.591
ACMEET	-	-0.002	-0.29	0.774	-0.002	-0.24	0.807
LNASSET	-	-0.008	-1.56	0.120	-0.006	-1.19	0.237
CFO	-	-0.259	-1.85	0.065	-0.293	-2.05	0.041
SEGMENT _P	+	0.003	1.51	0.132	0.003	1.43	0.152
SEGMENT _G	+	0.006	2.48	0.013	0.007	2.53	0.012
FINANCE	+	0.016	1.23	0.218	0.027	1.88	0.060
LOSS	+	0.049	2.89	0.004	0.050	2.84	0.005
MTB	+	0.009	2.65	0.008	0.010	2.74	0.006
LEVERAGE	?	-0.028	-1.03	0.303	-0.021	-0.74	0.463
ACC	+	0.136	1.90	0.057	0.042	0.66	0.507
SECTOR	-	-0.036	-4.14	0.000	-0.035	-3.82	0.000
Constant		0.137	3.06	0.002	0.176	3.91	0.000
R-Squared			0.28			0.28	
Adjusted R-squared			0.25			0.25	
F-Value			4.30			2.77	
Sig. F			0.000			0.000	

N = 525. PCTNAS is non-audit fees divided by total auditor fees, and other variables are defined in Appendix.

We also conduct further tests to allay the concern that there is a potential endogeneity threat in our model. For example, earnings management and NAS may be jointly determined, i.e., a Big Four accounting firm affects NAS, and it also affects earnings management. Similarly, audit firm tenure and earnings management may be jointly determined by the Big Four accounting firm. To

resolve this concern, we rerun the model by removing the BIG4 variable and find that the main results hold, as shown in Table 6.

Table 6
Supplementary regression results by excluding BIG4 variable

Variables	Expected Sign	DCA			DTA		
		Coeff.	t-statistics	Prob. (2-tailed)	Coeff.	t-statistics	Prob. (2-tailed)
LNNAS	?	0.005	2.64	0.008	0.004	2.29	0.023
TENURE	-	-0.003	-2.28	0.023	-0.004	-2.43	0.015
LNFEED	-	-0.008	-1.15	0.250	-0.011	-1.65	0.100
ACAUDP	-	-0.052	-3.05	0.002	-0.046	-2.68	0.008
ACSIZE	-	0.005	0.74	0.459	0.001	0.10	0.924
ACINDP	-	0.039	1.80	0.073	0.012	0.53	0.596
ACMEET	-	-0.002	-0.36	0.720	-0.002	-0.35	0.726
LNASSET	-	-0.008	-1.65	0.100	-0.006	-1.20	0.231
CFO	-	-0.263	-1.88	0.061	-0.296	-2.07	0.039
SEGMENT _P	+	0.004	1.55	0.121	0.003	1.43	0.152
SEGMENT _G	+	0.006	2.48	0.013	0.006	2.51	0.013
FINANCE	+	0.017	1.23	0.218	0.027	1.83	0.068
LOSS	+	0.049	2.88	0.004	0.050	2.82	0.005
MTB	+	0.009	2.64	0.008	0.010	2.73	0.007
LEVERAGE	?	-0.027	-0.97	0.334	-0.020	-0.73	0.468
ACC	+	0.130	1.81	0.071	0.038	0.59	0.554
SECTOR	-	-0.037	-4.32	0.000	-0.036	-3.95	0.000
Constant		0.161	3.33	0.001	0.193	3.96	0.000
R-Squared			0.27			0.27	
Adjusted R-squared			0.26			0.26	
F-Value			4.62			2.92	
Sig. F			0.000			0.000	

N = 525. See Appendix for variable definitions.

CONCLUSION

Since the pioneering work on the effect of auditor-provided NAS on the quality of financial reporting by Frankel et al. (2002) and DeFond, Raghunandan and Subramanyam (2002), the debate on whether the provision of NAS by the incumbent external auditor compromises the auditor's independence persists until today. Similarly, the issue of whether the audit firm should be subjected to mandatory rotation continues to be an enduring topic of public debate. We examine the association of NAS and audit firm tenure with earnings management in 525 Malaysian listed firms for the year 2009. We find that audit firm tenure is

negatively related to the absolute value of discretionary accruals, and the magnitude of NAS fees is positively related to the absolute value of discretionary accruals.

The results in this study provide evidence that suggests that joint provision of NAS could impair the independence of the auditor, consistent with the economic bonding argument. It contradicts Abdul Wahab et al. (2014), who find the types and recurring nature of NAS do not impair auditor independence. Instead, they show that firms that purchase more NAS have a lower likelihood of financial restatements. To create more clarity and help Malaysian regulators and audit committees resolve the issue of whether to restrict the provision of NAS, in line with the current regulation in the US, further research on NAS employing more recent and detailed data is needed. In tandem with Shafie et al. (2009) and Wan-Hussin and Bamahros (2013), this study finds that extended audit firm tenure is not detrimental to the quality of financial reporting. Thus, based on the empirical evidence to date, an attempt to legislate audit firm rotation in Malaysia is unwarranted.

One of the limitations of this study is that it examines only one aspect of the duration of the auditor-client relationship, namely, the audit firm tenure. We do not assess the efficacy of the mandatory adoption of the five-year rotation cycle for the audit partner and leave this for future research. Future studies may also consider other potential determinants of earnings management, such as types and recurrence of NAS, client's promise of future NAS, and institutional investor ownership.

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APPENDIX
Variable Measurement

DCA	Absolute discretionary current accruals obtained from the performance-adjusted model developed by Ashbaugh et al. (2003). See equation (4)
DTA	Absolute discretionary total accruals obtained from the modified-Jones model (1995). See equation (7)
LNNAS	Natural logarithm of (1 + non-audit fees)
TENURE	Number of continuous years the incumbent auditor has been with the client since 2002 (or date of listing if later than 2002) until 2009. (Note: If the audit firms are involved in mergers and changed their names as a result, we treat it as no audit firm rotation. For example the auditors for Eng Kah Corporation were JB Lau & Associates (2002) and Grant Thornton (2009) and since JB Lau & Associates has merged with Grant Thornton since 1 January 2008, we measure the audit firm tenure for Eng Kah Corporation as eight years)
BIG4	Dummy variable equals 1 if the firm was audited by PwC, KPMG, Ernst & Young and Deloitte, and 0 otherwise
LNFEET	Natural logarithm of audit fees
ACAUDP	Proportion of audit committee members who have external auditing experience
ACINDP	Proportion of the independent directors on the audit committee
ACSIZE	Number of directors serving on the audit committee
ACMEET	Number of audit committee meetings held during the fiscal year
LNASSET	Natural logarithm of total assets
CFO	Cash flow from operation scaled by lagged total assets
SEGMENT _P	Number of product segments
SEGMENT _G	Number of geographical segments
FINANCE	Dummy variable equals 1 if the number of outstanding shares increased by at least 10% or long-term debt increased by at least 20% during the year, and 0 otherwise,
LOSS	Dummy variable equals 1 if ROA is negative, and 0 otherwise
MTB	Market-to-book ratio
LEVERAGE	Total debt divided by total assets
ACC	Last year's absolute <i>current</i> accruals equal to net income before extraordinary items plus depreciation and amortisation minus operating cash flows scaled by beginning of year total assets (for DCA model) or, last year's absolute <i>total</i> accruals equal to net income before extraordinary items minus operating cash flows scaled by beginning of year total assets (for DTA model)
SECTOR	Dummy variable equals 1 if firm is classified under properties sector, and 0 otherwise

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