

## Do Audit Oversight Boards Matter for Governance? Evidence from Malaysia

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The purpose of this study is to examine the impact of Audit Oversight Boards (AOB) monitoring on real earnings management (REM) activities in Malaysia. This study uses three proxies to measure real earnings management; abnormal cash flow from operations (RCFO), abnormal production costs (RPC) and abnormal discretionary expenses (RDE). Using a final sample of 656 firm-year observations of Malaysian Top 100 companies listed on Bursa Malaysia from 2007 to 2014, this study finds that AOB has a significant and negative relation with RCFO. The findings suggest that AOB-inspection firms are less likely to manage their reported earnings using abnormal cash flows from operations. Further, this study segregates sample firms into three categories based on their blockholdings: government-owned companies (GLC), family-owned companies (FAMOWN) and foreign-owned companies (FORGOWN). The results however show that AOB only has a significant and negative relation to the RCFO of GLCs. Overall, the findings suggest that AOB may not be enough to limit REM activities in a Malaysian setting.

**Key words:** *Audit oversight board, real earnings management, audit quality, Malaysia.*

### Introduction

Over the years, there has been an increasing number of corporate scandals and frauds involving globally recognised firms and this has raised concerns as to the quality of auditing and the credibility of audited financial statements. In Malaysia, the perception of local auditors was negatively affected following the cases of Transmile, Energro, Wellie Multi,

Megan Media and GP Ocean. Where, due to the auditors' failure to detect and report aggressive accounting practices, investors were misled. In response, many countries have invested considerable effort in providing necessary assurances on the rigour of the audit process by establishing independent audit oversight boards. Examples of audit oversight boards are the Public Company Accounting Oversight Board (PCAOB) in the United States, Australian Securities and Investments Commission (ASIC) in Australia, and the Accounting and Corporate Regulatory Authority (ACRA) in Singapore.

Prior studies highlight that AOB plays an important role in controlling managerial moral hazard, including earnings management (Sanusi et al., 2014; Ismail and Theng, 2015; Krishnan, Krishnan & Song, 2014; Carcello, & Nagy, 2011; Gunny & Zhang, 2012; Markos & Mekonen, 2017). Indeed, AOB provides independent oversight of audit functions through the licensing of auditors, monitoring audit quality, administering disciplinary mechanisms to deal with infractions of auditing, and ethical standards and statutory requirements governing audits of corporate entities.

This study examines the Malaysian market. Malaysia introduced AOB on 1 April 2010 through the Securities Commission Amendment Act 2010. AOB is an independent oversight mechanism which regulates and oversees the performance of audit delivery processes and procedures taken by the auditors of public interest entities, such as Malaysian listed firms. The establishment of AOB in Malaysia is seen to be an effective monitoring mechanism and promotes confidence in the quality and reliability of audited financial statements. Thus, this study predicts that there is a negative relation between AOB and one type of managerial misconduct, real earning management activities.

This study is an extension of that of Ismail and Theng (2015), who examined the impact of AOB on earnings management via discretionary accounting accruals. This study examines earnings management via real activities because such practices have recently been significantly higher in Malaysia (Zamri et al., 2013; Suffian et al., 2015; Sulong et al., 2014; Haji-Abdullah & Wan-Hussin, 2015; Abdul Rahman, 2012) and in most other countries (Roychowdhury, 2006; Cohen & Zarowin, 2010). According to Graham, Harvey and Rajgopal (2005), managers prefer real activities manipulation to accrual earnings management, as such practices are less likely to draw auditor or regulatory scrutiny. They reported that 80% of survey participants in their study, took economic actions such as reducing discretionary expenses on research and development (R&D), advertising and maintenance, in order to meet an earnings target. In a Malaysian context, Salleh (2009) also provides similar findings. One of the participants in Salleh's study said: "We sit down in our third quarter meeting, look into the figures then try to reduce expenses like advertising, travelling and R&D. These actions are within our control" (p.166). Thus, the first main objectives of this paper is to examine the impact of AOB on REM practices.

The second main objective of this study is an attempt to contribute to the corporate governance literature by examining the relationship between AOB and REM within a developing capital market setting, i.e. Malaysia. While, prior studies have provided evidence from a developed capital market environment (Carcello & Nagy, 2011; Krishnan, Krishnan & Song, 2016; Fung, Raman & Zhu, 2014; Lamoreaux, 2016), very little research has been conducted in countries where capital markets are less developed. Claessens et al. (2000) argues that institutional differences exist between these two capital markets, such as developing markets are characterised as having more concentrated ownership shares including significant family and government ownership. These characteristics might influence how managers, boards of directors and external governance mechanisms govern listed firms in Malaysia. Thus, the second objective of this study is to examine the impact of AOB on REM in three company types in Malaysia; government-owned companies (GLC), family-owned companies (FAMOWN) and foreign-owned companies (FORGOWN).

The results of 656 firm-year observations from 2007 to 2014, show that AOB has a significant and negative relation to abnormal cash flow from operations. This finding suggests that AOB only limits earnings management activities by abnormal cash flow from operations. Further, the results also report that AOB only has a significant and negative relation to the RCFO of GLCs. The results for others type of companies are insignificant.

This paper provides multifaceted contributions. Firstly, this study expands on the existing body of knowledge on the relationship between AOB and the level of earnings management. This is an extension of prior studies on AOB influence on corporate financial reporting (Abdullah, Halim & Nelson, 2014; Ismail & Mustapha, 2015; Ismail & Theng, 2015) which defined AOB as another determinant of earnings management. Secondly, the study expands the research work of Ismail and Theng (2015) and Abdullah, Halim and Nelson (2014) by examining the impact of AOB on another perspective of earnings management activities, real earnings management. Thirdly, and from a regulatory perspective, this paper provides evidence on the effectiveness of AOB as a monitoring mechanism in promoting confidence in the quality and reliability of audited financial statements in a Malaysian setting.

The remainder of the paper is organized as follows. Section two provides an examination of the evolution of Malaysian AOB and its' implication on business and financial reporting practices. Section three draws a connection between earnings management and AOB, and develops the research hypothesis. Section four elaborates on the research design. Section five presents and discusses the findings. The final section provides the summary and conclusion.

### ***Institutional Background: Malaysian Audit Oversight Board (AOB)***

In Malaysia, the AOB is an independent oversight body over auditors and is utilised in order to restore and strengthen investors' confidence in the audit profession. The mission of the AOB is to foster high quality independent auditing, which in turn increases the quality and reliability of audited financial statements of public interest entities in Malaysia. Specifically, the AOB highlighted five major desired outcomes following its' establishment (Audit Oversight Board, 2014): (i) high quality financial reporting practices by Public Interest Entities, including Malaysian public listed firms, (ii) resourceful and high quality audit practices (iii) independent and high quality audits, (iv) high quality and reliable audited financial statements (v) enhanced confidence in audited financial statements. In order to achieve its mission, Part IIIA of the Securities Commission Act (SCA) states the responsibilities of the AOB in ensuring an effective audit oversight system in Malaysia;

- Register or recognise auditors of public interest entities (PIEs);
- Direct the Malaysian Institute of Accountants (MIA) to establish or adopt, or by way of both, the auditing and ethical standards to be applied by registered auditors;
- Conduct inspections and monitoring programmes on auditors to assess the degree of compliance of auditing and ethical standards;
- Conduct inquiries and impose appropriate sanctions against auditors who fail to comply with auditing and ethical standards;
- Cooperate with relevant authorities in formulating and implementing strategies for enhancing standards of financial disclosures in PIEs;
- Liaise and cooperate with oversight bodies outside Malaysia to enhance the standing of the auditing profession in Malaysia and internationally; and
- Perform such other duties or functions as the Audit Oversight Board determines necessary or appropriate to promote high professional standards of auditors and to improve the quality of audit services provided by auditors ([www.sc.com.my](http://www.sc.com.my)).

### ***Literature Review: Earnings Management and Auditor Quality***

Healy and Wahlen (1999) defined earnings management as opportunistic behaviour, which occurs when managers use judgment in financial reporting to alter accounting numbers to either, mislead stakeholders about the underlying economic performance of the company, or, to influence contractual outcomes. According to Fields, Lys and Vincent (2001), managers can influence reported accounting numbers by managing accounting choices via accruals (hereafter referred to as accrual earnings management (AEM)), or real-based transactions (hereafter referred to as real earnings management (REM)). The former refers to the earnings management activities that have no direct cash flow implications. For example, decisions to write down assets, recognize or defer revenues, capitalize or expense certain costs such as

repair expenditures, and the timing of adoption of new standards. REM occurs when managers use real economic actions that affect cash flows to produce desired earnings (Dechow & Schrand, 2004, Fields, Lys & Vincent, 2001). Examples of REM include: reductions in discretionary spending such as research and development (R&D), advertising and maintenance expenditures, aggressive price discounts to increase sales volumes, overproduction to report lower cost of goods sold (COGS) and repurchasing common shares.

Prior studies (see for example Becker, DeFond, Jiambalvo & Subramanyam, 1998; Francis, Maydew & Sparks, 1999; Chen, Lin & Zhou, 2005; Tendeloo & Vanstraelen, 2008; Myers, Myers & Omer, 2003 and Davis, Soo & Trompeter, 2009) highlight that high quality audits limit opportunistic earnings management activities. Becker, DeFond, Jiambalvo and Subramanyam (1998) for example, examine whether audit quality reduces earnings management. Their study hypothesized that the clients of non-Big Six auditors are more likely to be involved in income increasing via discretionary accruals than the clients of Big Six auditors. This difference arises because Big Six auditors are more likely to constrain management accounting choices that may overstate earnings in order to protect their reputation. Using 12,558 firm-year observations, they found that companies that hired non-Big Six auditors, report higher discretionary accruals than their counterparts. The results indicate that firms that have a high quality of audit have lower discretionary accruals and higher quality of earnings.

In a related study, but using Taiwanese data, the work carried out by Chen, Lin and Zhou (2005), investigated the pattern of discretionary accruals of 367 IPO firms. They used auditor type (size) as a proxy for audit quality. They hypothesize that Taiwanese firms with high quality auditors are less likely to engage in earnings management during the IPO process. Consistent with their argument, the results show that firms audited by the Big Five have lower abnormal accruals. The findings suggest that Big Five auditors are related with higher quality, as they are able to limit the earnings management activities of Taiwanese IPO firms. Myers, Myers and Omer (2003) studied the association between audit tenure (a proxy for audit quality) and earnings management through a 42,302 firm year observation from 1988-2000. The results show that longer auditor tenure is associated with less extreme income increasing and income decreasing accruals. This suggests that longer auditor tenure constrains earnings management.

Carcello and Nagy (2011) examined the relation between PCAOB and discretionary accruals using a sample of 4,719 PCAOB- inspection firms from 2004 to 2006. The results indicate a significant reduction in abnormal accruals in both the first and following year of PCAOB inspection. They conclude that PCAOB improves audit quality which in turn reduce earnings management. Similar to Carcello and Nagy (2011), Krishnan, Krishnan and Song (2014) examined the impact of PCAOB's inspections of foreign audit firms on the financial

reporting quality of their clients. They argue that PCOAB's inspections will increase the quality of auditing, which in turn reduces the level of earnings management and earnings smoothing. Using 6,599 firm-year observations from 2000 to 2011, the results show that PCAOB-inspected firms have higher audit quality, lower abnormal accruals, higher value relevance of accounting number and lower earnings smoothing.

In Malaysia, Ismail and Theng (2015) examined the impact of AOB on earnings management via discretionary accounting accruals. The sample of the study consisted of 50 companies from Bursa Malaysia for 4 years (2008, 2009, 2011 and 2012). They found that the level of discretionary accruals reduces following the establishment and inspections of the AOB in Malaysia. However, the results on the association between the AOB and discretionary accruals was insignificant.

Despite mixed results on the relationship between AOB and earnings management via discretionary accounting accruals, this study attempts to extend this line of research by examining the impact of AOB and another type of earnings management, real earnings management. This study choose to examine real earnings management instead of accruals earnings management due to recent studies identifying that companies all over the world are tending to switch from accruals to real earnings management, as such practices are likely to be harder to detect (Cohen et al., 2008). Thus, this study hypothesises that:

H<sub>1</sub>: AOB has a significant and negative relationship with real earnings management measures.

Previous studies have been undertaken to examine the degree of earnings management of companies controlled by the government (GLCs) (Ding, Zhang & Zhang, 2007; Har, Majdi & Mohammed, 2012; Jamaludin, Mohd-Sanusi & Kamaluddin, 2015; Jow, Loo, Zainal-Abidin, Noordin & Ariffin, 2007), family (FAMOWN) (Achleitner, Günther, Kaserer, & Siciliano, 2014; Chi, Hung, Cheng, & Lieu, 2015; Martin, Campbell, & Gomez-Mejia, 2016; Saleh, Jaffar, & Yatim, 2013; Lin & Shen, 2015), and foreign bodies (FAMOWN) (Guo, Huang, Zhang & Zhou, 2014; Ben-Nasr, Boubakri, & Cosset, 2015). Most of these studies document that on average, these companies manage their reported earnings opportunistically. Thus, this study attempts to examine whether AOB monitoring limits REM in such firms. This study hypothesises that:

H<sub>2a</sub>: AOB has a significant and negative relationship with real earnings management measures of GLCs.

H<sub>2b</sub>: AOB has a significant and negative relationship with real earnings management measures of FAMOWN.

H<sub>2c</sub>: AOB has a significant and negative relationship with real earnings management measures of FORGOWN.

## Research Design and Methodology

### *Sample Selection and Data Collection*

The sample for this study consists of the Top 100 Public Listed Companies (PLCs) in Malaysia for 2007 to 2014. Selection was based on market capitalization in the year 2014. The initial sample consists of 800 firm-year observations. Data on external auditors, and various governance variables were collected from the companies' annual reports. Meanwhile, the data required for computing real earnings management and firms specific characteristics control variables were collected from Thompson Reuters' Datastream. We excluded firms in the banking and finance sector because they have different guidelines and governance systems (Abdul Rahman and Mohamed Ali, 2006). We also excluded firm-year observations with missing real earnings management measures data or, whose annual reports are unavailable. This procedure yields 656 firm-year observations.

**TABLE 4.1: SAMPLE SELECTION PROCESS**

<b>Sample Selection Process</b>	<b>Firm-year observations</b>
Total firm-year observations from Datastream 2007-2014	800
Excluding financial institution	121
Excluding firm-year observation with missing real earnings management measures data	23
Full sample	656

### *Operationalisation of the Dependent, Independent and Control Variables*

#### *Dependent Variables: Real Earnings Management*

The central variable of this study is real earnings management. This study uses three proxies to measure real earnings management, namely the abnormal levels of cash flow from operations (RCFO), abnormal production costs (RPC) and abnormal discretionary expenses (RDE). The measurement of real earnings management used here, is taken from the study by Roychowdhury (2006), who estimated RCFO, RPC and RDE as the residual from the following model.

$$CFO_{it}/A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2 [Sales_{it} / A_{it-1}] + \beta_3 [\Delta Sales_{it} / A_{it-1}] + \varepsilon_{it}$$

Where,

CFO<sub>it</sub> Cash flow from operation in period t  
A<sub>it-1</sub> Total assets of firm i in year t-1;  
Sales<sub>it</sub> Sales of firm i in year t  
ΔSales<sub>it</sub> Sales of firm i in year t less revenues of firm i in year t-1;  
ε<sub>it</sub> A residual term that captures the level of abnormal cash flow of firm i in year t.

$$\text{PROD}_{it}/A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2[\text{Sales}_{it} / A_{it-1}] + \beta_3[\Delta\text{Sales}_{it} / A_{it-1}] + \beta_4[\Delta\text{Sales}_{it-1} / A_{it-1}] + \varepsilon_{it}$$

Where,

PROD<sub>it</sub> The sum of cost of goods sold and change in inventory of firm i in year t;  
ε<sub>it</sub> A residual term that captures the level of abnormal production cost of firm i in year t.

$$\text{DISCEXP}_{it}/A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2 [\text{Sales}_{it-1} / A_{it-1}] + \varepsilon_{it}$$

Where,

DISCEXP<sub>it</sub> The sum of R&D expenses and SG&A of firm i in year t;  
ε<sub>it</sub> A residual term that captures the level of abnormal discretionary expenses of firm i in year t.

### ***Independent Variable: Audit Oversight Board***

The key independent variable of this study is the AOB. The measure of the AOB is a dummy variable indicating whether the firm has undergone AOB inspection or not. We use the AOB Annual Report to identify AOB-inspected firms.

### ***Control Variables***

Firstly, this study controls for firm size. Large firms often receive more media attention, have a higher analyst following and face regular political scrutiny (Ahmed & Duellman, 2007; Watt & Zimmerman, 1978). Therefore, they would tend to not manage their earnings upwards. Secondly, this study controls for leverage. Firms with higher levels of debt would have their earnings scrutinized by debt providers or their agents, e.g., trustees, so that they do not inflate earnings to benefit the shareholders or managers through dividends and earnings-

based compensations, at the expense of the debt providers (Ahmed et al., 2002). Thirdly, this study controls for growth. Growth firms are likely to have higher accruals because of increased revenue-generating activities, such as credit sales. Fourthly, this study controls for profit. Abdul Rahman and Ali (2006) note that firms with low performance (ROA) have more incentive to engage in earnings management. Year dummy and industry dummy are also included in the study to control for the year and industry effect.

### ***Multivariate Regression Models***

To test the research aims, this study runs the following regression models:

$$RCFO_{ft} = \alpha + \alpha_1 AOB_{ft} + f(\text{control variables}) + \xi \quad (1)$$

$$RPC_{ft} = \alpha + \alpha_1 AOB_{ft} + f(\text{control variables}) + \xi \quad (2)$$

$$RDE_{ft} = \alpha + \alpha_1 AOB_{ft} + f(\text{control variables}) + \xi \quad (3)$$

Where,

Dependent variables:

$RCFO_{ft}$  Abnormal cash flows of firm  $f$  in year  $t$ ,

$RPC_{ft}$  Abnormal production costs of firm  $f$  in year  $t$ ,

$RDE_{ft}$  Abnormal discretionary expenses of firm  $f$  in year  $t$ ,

Independent variables:

$AOB_{ft}$  1 if AOB inspection firms and 0 otherwise,

Control variables:

$SIZE_{ft}$  Natural log of total assets of firm  $f$  in year  $y$ ,

$LEVERAGE_{ft}$  Total liabilities to total assets of firm  $f$  in year,

$GROWTH_{ft}$  Market to book ratio of firm  $f$  in year  $y$ ,

$PROFIT_{ft}$  Earnings (EBIT) to total assets

$YEAR_{ft}$  Year,

$IND_{ft}$  Industry.

## **Results and Findings**

### ***Descriptive Analysis***

Table 5.1 reports descriptive statistics for the variables in the REM's model. As reported in Table 5.1, the magnitude of the absolute value of RCFO, RPC, and RDE of the companies in the sample have mean values of 0.65, 0.64, and 0.66 respectively. These findings indicate that on average, the top 100 public listed companies (PLCs) in Malaysia are more likely to manage their reported earnings by using abnormal discretionary expenses.

**Table 5.1:** Descriptive statistics

	Min	Max	Mean	SD
<b><u>Panel A: Experimental variables</u></b>				
RCFO (residual)	-5.538	4.837	0E-7	.997
RPC (residual)	-4.210	5.621	0E-7	.996
RDE (residual)	-4.411	4.233	0E-7	.998
Absolute RCFO	.000	5.540	.6516	.754
Absolute RPC	.000	5.620	.6447	.759
Absolute RDE	.000	4.410	.6550	.753
<b><u>Panel B : Control variables</u></b>				
SIZE	12.180	18.52	15.1251	1.383
LEVERAGE	.020	.930	.4238	.187
GROWTH	.000	6.30	3.440	8.565
PROFIT	-.380	.980	.1262	.1230

Note: This table provides descriptive statistics of our sample firms.

**Table 5.2:** Comparison of Mean Values of Pre- and Post- AOB establishment

	Pre AOB (N=328)	Post AOB (N=328)	
	Mean	Mean	Differences (t-stats)
RCFO	.7024	.6026	-1.652**
RPC	.7042	.5875	-1.915**
RDE	.6961	.6156	-1.337*
SIZE	14.9380	15.3069	3.365***
PROFIT	.1228	.1295	.674
LEVERAGE	.4229	.4247	.121
GROWTH	2.67	4.16	2.176**

\*\*\*Significant at  $p < 0.01$       \*\*Significant at  $p < 0.05$       \*Significant at  $p < 0.10$

Table 5.2 compares the mean values of REM measures and other continuous variables of pre and post AOB periods. The pre-AOB period is from 2007 to 2009, while the post-AOB period is 2010 to 2014. As shown in Table 5.2, all REM measures, RCFO, RPC and RDE are

significantly lower after the introduction of the AOB. This is consistent with prior studies that confirm that the introduction of the AOB generally improves the quality of earnings. Among the control variables, it is worth noting that PROFIT and LEVERAGE have similar values in the pre- and post-AOB establishment periods, suggesting that our sample companies do not significantly change their level of profit and leverage after the AOB introduction. A significant change between pre- and post-AOB establishment periods is reported in relation to the variables of SIZE and GROWTH, which indicates the increasing of firms size and growth levels after the AOB introduction.

### *Correlation Analysis*

Table 5.3 reports the correlation matrix for all variables. The results show that AOB is negatively correlated to all REM proxies: RCFO, RPC and RDE. However, these relationships are not significant which necessitates further analysis. Regarding the control variables, some correlation signs confirm our predictions. Particularly, those correlations related to the variables of SIZE and GROWTH. As shown in Table 5.3, the results indicate a significant and negative correlation between SIZE and REM measures, as well as a significant and positive correlation between GROWTH and REM measures. However, contrary to our expectations, Table 5.3 also shows that there are significant and positive relationships between PROFIT, LEVERAGE and all REM proxies. These findings suggest that high leverage and more profitable companies are more likely to engage in REM activities.

**Table 5.3:** Correlation analysis of REM Proxies, AOB and control variables

Variables	RCFO	RPC	RDE	SIZE	LEVERA GE	PROFIT	GROWT H	AOB
RCFO	1	.290**	.222**	-.119**	.112**	.311**	.321**	-.057
RPC		1	.769**	-.330**	.167**	.315**	.255**	-.075
RDE			1	-.312**	.135**	.355**	.284**	-.027
SIZE				1	.297**	-.410**	-.191**	.137*
LEVERA GE					1	-.154**	.153**	.004
PROFIT						1	.566**	-.009
GROWTH							1	.118*
AOB								1

Note: This table provides correlation matrix for explanatory variables.

\*\*Statistical significance at the 1% level.

\*Statistical significance at the 5% level.

### ***Multivariate Analysis***

Ordinary least squares procedures (OLS) are used to estimate the models stated in this section.

***The results of the above models are reported in the following subsections.***

#### ***REM Measures and AOB and Control Variables***

Table 5.4 reports the results of the regression of AOB on REM measures. The results show that AOB has a significant negative association with the REM proxy, RCFO. This suggests that the AOB limits Malaysian top 100 listed companies to manage reported earnings via abnormal cash flow from operations. Table 5.3 also shows the effect of the control variables on REM. The results indicate a significant and negative association between REM proxies and SIZE, which is consistent with the arguments presented by Ahmed and Duellman (2007) and Watt and Zimmerman (1978). They argued that large firms are less likely to manage reported earnings, as such firms often receive more media attention, have a higher analyst following and face regular political scrutiny. Contrary with our expectation, the result shows that LEVERAGE is significant and positively associated with all REM proxies. This finding suggests that REM is higher among high debt firms. This in line with the argument put forward by Sweeney (1994), that highly-leveraged firms have greater incentives to use aggressive accounting techniques in order to avoid covenant violations. Additionally, Table 5.3 indicates that PROFIT is positively significant with two REM proxies; RCFO and RDE. This finding suggests that profitable firms are more likely to manage their accounting numbers using abnormal cash flow from operation and abnormal discretionary expenses. In term of GROWTH, there is mixed results. In particular, GROWTH has a positive and significant relationship with RCFO but is negatively related to RDE and RPC. These findings indicate that high growth firms are more motivated to manage reported earnings via abnormal cash flow from operations.

**Table 5.4:** Regression Analysis for AOB

Variables	Model (1) RCFO	Model (2) RPC	Model (3) RDE
AOB	-.105** (-1.944)	-.018 (-.318)	.008 (.137)
<i>Control Variables: Firm's specific characteristics</i>			
SIZE	-.034* (-1.522)	-.232*** (-9.961)	-.222*** (-9.631)
LEVERAGE	.760*** (4.860)	1.193*** (7.294)	1.043*** (6.444)
GROWTH	.016*** (3.923)	-.008** (-1.973)	-.007* (-1.584)
PROFIT	1.559*** (5.466)	.331 (1.111)	.726*** (2.463)
Intercept	.636** (1.918)	3.644*** (10.498)	3.494*** (10.180)
Observations	656	656	656
Durbin-Watson	1.889	2.116	2.151
R-Square	22.80	19.20	19.90
Adjusted R-Square	22.10	18.60	19.20

Note:

- \*\*\*Statistical significance at the 1% level.
- \*\* Statistical significance at the 5% level.
- \* Statistical significance at the 10% level.

***Additional Analysis: AOB Supervision in Government-owned Companies (GLCs), Family-owned Companies and Foreign-owned Companies***

We further explore the effect of AOB supervision on REM by separating our sample into government-owned companies (GLCs), family-owned companies and foreign-owned companies and report the results in Table 5.5, Table 5.6 and Table 5.7 respectively. As shown in Table 5.5 AOB has a negative effect on the REM proxy, RCFO. The results provide some

support for the view that AOB inspection and supervision enhances the quality of audits and limits REM via abnormal cash flow from the operations of GLCs.

**Table 5.5:** Regression Analysis for GLCs

Variables	Model (1) RCFO	Model (2) RPC	Model (3) RDE
AOB	-.223** (-2.199)	-.107 (-.822)	-.030 (-.323)
<i>Control Variables: Firm's specific characteristics</i>			
SIZE	.007 (.152)	-.115** (-2.023)	-.040 (-.985)
LEVERAGE	.691** (2.011)	1.105** (2.495)	.561** (1.785)
GROWTH	.155 *** (3.712)	-.051 (-.942)	.029 (.756)
PROFIT	-.528 (-.572)	.502 (.422)	1.677 ** (1.986)
Intercept	.162 (.237)	1.983** (2.244)	.990** (1.578)
Observations	256	256	256
Durbin-Watson	1.991	2.081	2.371
R-Square	14.80	5.50	5.10
Adjusted R-Square	12.40	2.90	2.40

Note:

- \*\*\*Statistical significance at the 1% level.
- \*\* Statistical significance at the 5% level.
- \* Statistical significance at the 10% level.

**Table 5.6:** Regression Analysis for FAMOWN

Variables		Model (1) RCFO	Model (2) RPC	Model (3) RDE
AOB		.023 (.249)	.043 (.464)	.043 (.466)
<i>Control Variables: Firm's specific characteristics</i>				
SIZE		-.158*** (-4.454)	-.257*** (-7.259)	-.272*** (-7.680)
LEVERAGE		.398** (1.614)	.948*** (3.847)	.822*** (3.338)
GROWTH		-.056** (-1.859)	-.127*** (-4.192)	-.123*** (-4.073)
PROFIT		2.954*** (3.624)	3.018*** (3.711)	3.319*** (4.083)
Intercept		2.643*** (4.789)	3.976*** (7.220)	4.182*** (7.597)
Observations		312	312	312
Durbin-Watson		2.303	2.446	2.435
R-Square		25.40	37.40	40.30
Adjusted R-Square		23.50	35.80	38.80

Note:

- \*\*\*Statistical significance at the 1% level.
- \*\* Statistical significance at the 5% level.
- \* Statistical significance at the 10% level.

**Table 5.7:** Regression Analysis for FORGOWN

Variables	Model (1) RCFO	Model (2) RPC	Model (3) RDE
AOB	-.119 (-1.001)	.043 (.357)	.066 (.592)
<i>Control Variables: Firm's specific characteristics</i>			
SIZE	.065 (.824)	-.123 * (-1.522)	.000 (-.004)
LEVERAGE	1.837*** (3.799)	2.561*** (5.180)	2.545*** (5.581)
GROWTH	.003 (.894)	-.013*** (-3.183)	-.014*** (-3.989)
PROFIT	-.667 (5.786)	-1.037** (-2.379)	-.958*** (-2.383)
Intercept	-.894 (-.836)	1.774* (1.623)	.074 (.073)
Observations	88	88	88
Durbin-Watson	1.757	1.750	1.859
R-Square	37.50	27.10	35.20
Adjusted R-Square	33.70	22.70	31.20

Note:

- \*\*\*Statistical significance at the 1% level.
- \*\* Statistical significance at the 5% level.
- \* Statistical significance at the 10% level.

### Summary and Conclusion

This paper examines the impact of AOB supervision on real earnings management. To capture real earnings management, this study uses three different measures: abnormal cash flows, abnormal production costs, and abnormal discretionary expenses, as developed by Rochowdhury (2006). Using a final sample of 656 firm-year observations of Malaysian Top 100 companies listed on Bursa Malaysia from 2007 to 2014, the results show that the degree of REM activities reduces after the introduction of the AOB. Furthermore, the results indicate that the AOB significantly impacts RCFO practices. The findings suggest that AOB-inspected firms are less likely to manage their reported earnings using abnormal cash flows



from operations. This study also provides evidence that AOB is more effective in limiting RCFO in government-owned companies.

One major limitations of this study is that it only examines Malaysian Top 100 firms listed on Bursa Malaysia. Second, this study only focuses on three types of REM. Another avenue for future research is to include different proxies for measuring REM in order to test the robustness of the results. Finally, this study does not control for corporate governance mechanisms that affect earnings management practice. Future studies should therefore examine the impact of AOB on other types of REM measures among all Malaysian listed firms to provide more meaningful and generalized results

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