

# Does Audit Oversight Board matter for Governance? Evidence from Malaysia

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The purpose of this study is to examine the impact of Audit Oversight Board (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 block holdings: government-owned companies (GLC), family-owned companies (FAMOWN) and foreign-owned companies (FORGOWN). The results, however, show that AOB only has significant and negative relation to RCFO of GLCs. Overall, the findings suggest that AOB may not be enough to limit REM activities in Malaysia setting.

**Key words:** *Audit Oversight Board, real earnings management, audit quality, Malaysia.*

## Introduction

An increase in corporate scandals and frauds involving globally recognised firms over the years has raised concerns on the quality of auditing and the credibility of audited financial statements. In Malaysia, for example, the image of local auditors were negatively affected through the case of Transmile, Energro, Wellie Multi, Megan Media and GP Ocean. This was due to auditors' failure to detect and report aggressive accounting practices that mislead investors. In response, many countries have invested considerable effort in providing necessary assurance on the rigour of the audit process by establishing independent audit oversight board. Examples of audit oversight boards are Public Company Accounting Oversight Board (PCAOB) in the United States, Australian Securities and Investments Commission (ASIC) in Australia, and Accounting and Corporate Regulatory Authority (ACRA) in Singapore.

Prior studies highlight that the 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). Indeed, the AOB provides independent oversight of audit functions. This can occur through licensing of auditors, monitoring audit quality and administering a disciplinary mechanism to deal with infractions of auditing and ethical standards, and statutory requirements governing audits of corporate entities.

This study examines the Malaysian market as the country has introduced AOB on 1 April 2010 under the Securities Commission Amendment Act 2010. The AOB is an independent overseeing mechanism that regulates and supervises the performance of the audit delivery process and procedure taken by the auditors of public interest entities such as Malaysian listed firms. Taking this into consideration, the establishment of AOB in Malaysia is seen as an effective monitoring mechanism in promoting confidence in the quality and reliability of audited financial statements. This study predicts that there is a negative relationship between AOB and one of the managerial misconducts; real earnings management activities.

This study is an extension of the research of Ismail and Theng (2015), who examined the impact of the 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; Joshua, 2016, Kabir and Aftab, 2017, Kandhro and Pathrannarakul, 2013, Kobylinski, 2018, Kobylinski and Prasad, 2018, Subair and Oriogu, 2016, Zafarullah, 2018). 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 percent 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 the 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 main objectives of this paper are primarily to examine the impact of AOB on REM practices.

This study also attempts to contribute to the corporate governance literature by examining the relationship between AOB and REM within a developing capital market setting of Malaysia. While prior studies provide 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) argue that institutional differences exist between these two capital markets. Developing markets are characterised as more concentrated share ownerships and significant family as well as government ownerships. These characteristics might influence how the managers, the board 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 types of companies in Malaysia; government-owned companies (GLC), family-owned companies (FAMOWN) and foreign-owned companies (FORGOWN).

Using 656 firm-year observations from 2007 to 2014, the results show that AOB has a significant and negative relation to abnormal cash flow from operations. The findings suggest that AOBs only limit earnings management activities by abnormal cash flow from operations. Further, the results also report that an AOB only has a significant and negative relation to RCFO of GLCs. The results for other types of companies are insignificant.

This paper has multifaceted contributions. Firstly, the study expands on the existing body of knowledge on the relation 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, this study expands research work by Ismail and Theng (2015) and Abdullah, Halim and Nelson (2014) by examining the impact of AOB on another perspective of earnings management activities known as real earnings management. Thirdly, from a regulatory perspective, the paper will provide evidence on the effectiveness of AOB as a monitoring mechanism in promoting confidence in the quality and reliability of audited financial statements in Malaysia setting.

The remainder of the paper is organized as follows. Section two provides an analysis of the evolution of Malaysian AOB and its implication on business as well as financial reporting

practices. Section three draws a connection between earnings management and AOB and develops the research hypothesis. Section four elaborates the research design. Section five presents and discusses the findings. The final section provides the summary and conclusions.

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

In Malaysia, the AOB is an independent body that oversees auditors 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 highlights 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) has stated the responsibilities of the AOB in ensuring an effective audit oversight system in Malaysia include the following:

- 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) define earnings management as an opportunistic behaviour. It occurs when Managers use judgment in financial reporting to alter accounting numbers to either mislead stakeholders about the underlying economic performance of a company or to influence contractual outcomes. According to Fields, Lys and Vincent (2001), Managers can influence reported accounting numbers by managing accounting choices either 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 record assets, to recognize or defer revenues, to capitalize or expense certain costs such as repair expenditures, and timing of adoption of new standards. REM occurs when Managers use real economic actions that affect cash flows to produce a 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 repurchase common share.

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 of audits limit opportunistic earnings management activities. Becker, DeFond, Jiambalvo and Subramanyam (1998) for example, examine whether audit quality reduce earnings management. The study hypothesizes that non-Big Six auditors' clients are more likely to be involved in income increasing via discretionary accruals than Big Six auditors' clients. This is because Big Six auditors are more likely to constrain management's accounting choices that will overstate earnings in order to protect their reputation and to be sued. Using 12,558 firm-year observations, they find that companies that hired non-Big Six auditors report higher discretionary accruals than its counterparts. The results indicate that firms that have high quality of audits have lower discretionary accruals and higher quality of earnings.

In a related study that uses Taiwanese data, the work carried out by Chen, Lin and Zhou (2005) investigates the pattern of discretionary accruals of 367 IPO firms. They use auditor type (size) as a proxy for audit quality. Chen, Lin and Zhou (2005) hypothesize that Taiwanese firms with high quality auditors are less likely to engage in earnings management during IPO process. Consistent with their argument, the results show that firms audited by Big Five have lower abnormal accruals. The findings suggest that Big Five auditors are related with higher quality, as they are able to limit earnings management activities of Taiwanese IPO firms. Myers, Myers and Omer (2003) have further studied the association between audit tenure (proxy for audit quality) and earnings management of 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.

Further, Carcello and Nagy (2011) examine the relation between PCAOB and discretionary accruals using a sample of 4,719 PCAOB- inspection firms in the years 2004 to 2006. The results indicate a significant reduction in abnormal accruals both in the first and following year of PCAOB inspection. They conclude that PCAOB improve audit quality which in turn reduce earnings management. Similar to Carcello and Nagy (2011), Krishnan, Krishnan and Song (2014) examine the impact of PCOAB'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 over period of 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 study consisted of 50 companies from Bursa Malaysia for 4 years of 2008, 2009, 2011 and 2012. They found that the level of discretionary accruals reduced following the establishment and inspection of AOB in Malaysia. The results on the association between AOB and discretionary accruals, however, is 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 other types of earnings management including real earnings management. This study chose to examine the degree of real earnings management instead of accruals earnings management due to recent studies. These studies highlight that companies all over the world tend to switch from accruals to real earnings management. As a result, 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.

A number of previous studies were 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 companies (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 limit 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 consisted of Top 100 Public Listed Companies (PLCs) in Malaysia for the period 2007 to 2014. The selection was based on market capitalization in the year 2014. The initial sample consisted of 800 firm-year observations. Data on external auditors, and various governance variables were collected from the companies' annual reports. Meanwhile, data required for computing real earnings management and firms' specific characteristics control variables was 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 yielded 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

### *Operationalization 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 estimates RCFO, RPC and RDE as the residual from the following model respectively.

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

Where,

$CFO_{it}$  Cash flow from operation in period t

$A_{it-1}$  Total assets of firm i in year t-1;

$Sales_{it}$  Sales of firm i in year t

$\Delta Sales_{it}$  Sales of firm i in year t less revenues of firm i in year t-1;

$\varepsilon_{it}$  A residual term that captures the level of abnormal cash flow of firm i in year t.

$$PROD_{it}/A_{it-1} = \beta_1 [1/A_{it-1}] + \beta_2 [Sales_{it} / A_{it-1}] + \beta_3 [\Delta Sales_{it} / A_{it-1}] + \beta_4 [\Delta Sales_{it-1} / A_{it-1}] + \varepsilon_{it}$$

Where,

$PROD_{it}$  The sum of cost of goods sold and change in inventory of firm i in year t;

$\varepsilon_{it}$  A residual term that captures the level of abnormal production cost of firm i in year t.

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

Where,

$DISCEXP_{it}$  The sum of R&D expenses and SG&A of firm i in year t;

$\varepsilon_{it}$  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 AOB. The measure of AOB is a dummy variable indicating whether the firm underwent AOB inspection or not. We used the AOB Annual Report to identify AOB-inspection firms.

### ***Control Variables***

First, this study controls for firm size. Large firms often receive more media attention, have higher analyst following and face regular political scrutiny (Ahmed & Duellman, 2007; Watt & Zimmerman, 1978). Therefore, they would tend not to manage their earnings upwards. Second, the study controls for leverage. Firms with higher levels of debt would have their earnings scrutinized by debt providers or their agents, e.g., trustees. This ensures that they do not inflate earnings to benefit the shareholders or managers at the expense of the debt providers through dividends and earnings-based compensations (Ahmed et al., 2002). Third, the study controls for growth. Growth firms are likely to have higher accruals because of increased revenue-generating activities, such as credit sales. Fourth, the 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 is also included in the study to controls for the year and industry effect.

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

To test the research aims, this study run 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 a mean value of 0.65, 0.64, and 0.66 respectively. The findings indicate that on average Top 100 pPublic 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 period. Pre-AOB period is from 2007 to 2009. Meanwhile, post-AOB period is 2010 to 2014. As shown in Table 5.2, all REM measures including RCFO, RPC and RDE are significantly lower after the introduction of AOB. This is consistent with prior studies that confirm that the introduction of 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 AOB introduction. A significant change between pre- and post-AOB establishment periods is reported in relation to the variables SIZE and GROWTH which indicate increasing of firm's size and growth level after 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 including RCFO, RPC and RDE. These relationship, however, are not significant and requires further analysis. Regarding the control variables, some correlation signs confirm our predictions. Particularly the correlations related to the variables SIZE and GROWTH. As shown in Table 5.3, the results indicate significant and negative correlation between SIZE and REM measures as well as significant and positive correlation between GROWTH and REM measures. However, contradicting our expectations, Table 5.3 also shows that there are significant and positive relationship 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 Section 5.3. 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 the REM measures. The results show that AOB has a significant negative association with REM proxy including RCFO. This suggests that 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, consistent with argument by Ahmed and Duellman (2007) and Watt and Zimmerman (1978). They argue that large firms are less likely to manage reported earnings as such firms often receive more media attention, have higher analyst following, and face regular political scrutiny. In contrast with our expectations, the results show that LEVERAGE is significant and positively associated with all REM proxies. The finding suggests that REM is higher among high debt firms. This correlates 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. In addition, Table 5.3 indicates that PROFIT is positively significant with two REM proxies; RCFO and RDE. The findings 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 negatively related to RDE and RPC. The 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 explored 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 REM; RCFO. The result provides some support for the view that AOB inspection and supervision enhance the quality of audit and limit REM via abnormal cash flow from 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, the study uses three different measures: the abnormal cash flows, the abnormal production costs, and the abnormal discretionary expenses 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 reduce after the introduction of AOB. Further, the results indicate that AOB significantly impact RCFO practices. The findings suggest that AOB-inspection 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 limitation of this study is that only Malaysian Top 100 firms listed on Bursa Malaysia were examined. Second, this study only focuses on three types of REM. Another avenue for future research would be to include different proxies for measuring REM in order to test for 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 specified results.



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