The Consequences of Real Earnings Management on Future Firm Performance: The Case of Thai Listed Companies

Dr.Rotcharin Kunsrison

Lecturer of Accounting Department, Mahasarakham Business School, Mahasarakham University Received: October 1, 2020 Revised: November 12, 2020 Accepted: November 16, 2020

ABSTRACT

The ongoing debate regarding whether Real Earnings Management (REM) is beneficial or detrimental to the firm, motivates this research. Specifically, the effect of real earnings management, one of earnings management choices, on firm's future performance is examined in this research. The agency and signaling perspectives underpin competing arguments. The analysis of data drawn from Thai listed companies depicts that individual techniques of real earnings management significantly damage future performance. The findings hold constant over the robustness tests for sales manipulation and production manipulation. Overall, the findings support the agency perspective where earnings management is deemed as an opportunistic behavior and managers may take advantage of such a practice instead of the firm. Additionally, the findings provoke the awareness of how real earnings management should be governed by regulators or governance mechanisms since there are no accounting regulations to govern this choice of earnings management, unlike accruals-based earnings management. This evidence is also helpful to potential investors to make better decisions for their investment.

Keywords: Real Earnings Management, Future Performance, Agency Theory, Signaling Theory

บทความวิจัย

ผลกระทบของการจัดการกำไรผ่านรายการค้าจริง ต่อผลการดำเนินงานในอนาคตของกิจการ : การศึกษา บริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย

ดร.รสจรินทร์ กุลศรีสอน

อาจารย์ประจำภาควิชาการบัญชี คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม วันที่ได้รับต้นฉบับบทความ : 1 ตุลาคม 2563 วันที่แก้ไขปรับปรุงบทความ : 12 พฤศจิกายน 2563 วันที่ตอบรับตีพิมพ์บทความ : 16 พฤศจิกายน 2563

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์ เพื่อศึกษาผลกระทบจากการจัดการกำไรผ่านรายการค้าจริง ต่อผลการดำเนินงาน ในอนาคตของกิจการ โดยมีแรงจูงใจมาจากข้อสมมติฐานทางทฤษฏีที่เสนอว่า การจัดการกำไรอาจก่อผลดีหรือผลเสีย ต่อกิจการ งานวิจัยนี้ประยุกต์ใช้แนวคิดตามมุมมองของทฤษฏีการเป็นตัวแทนและทฤษฏีการส่งสัญญาณ เพื่ออธิบาย ความสัมพันธ์ระทว่างการตกแต่งกำไรผ่านรายการค้าจริงและผลการดำเนินงานในอนาคต โดยใช้ข้อมูลจากบริษัท จดทะเบียนในตลาดหลักทรัพย์แท่งประเทศไทย ผลการวิจัยพบว่า การจัดการกำไรผ่านรายการค้าจริงส่งผลกระทบ เชิงลบ ต่อผลการดำเนินงานในอนาคตของกิจการและผลกระทบเชิงลบนี้ยังคงปรากฏ แม้ว่าจะมีการเปลี่ยนตัวแปร ที่ใช้ในการวัดผลการดำเนินงานในอนาคตของกิจการและผลกระทบเชิงลบนี้ยังคงปรากฏ แม้ว่าจะมีการเปลี่ยนตัวแปร ที่ใช้ในการวัดผลการดำเนินงานและตัวแบบในการวิเคราะท์ความถดถอยเชิงพทุ ดังนั้นจึงสามารถสรุปได้ว่า ผลการวิจัย สนับสนุนช้อสมมติฐานภายใต้ทฤษฏีตัวแทนที่เสนอว่า ผู้บริหารหรือตัวแทนนั้นมีแรงจูงใจที่จะแสวงทาผลประโยชน์ ส่วนตัว ถึงแม้การกระทำนั้นจะก่อให้เกิดผลกระทบเชิงลบต่อกิจการ จากผลการวิจัยดังกล่าว ซี้ให้เห็นถึงความสำคัญ ในการออกมาตรการ เพื่อควบคุมและกำกับดูแลการตกแต่งกำไรผ่านรายการค้าจริง ซึ่งเป็นวิธีการตกแต่งกำไรที่มี แนวโน้มเพิ่มขึ้น เนื่องจากไม่มีกฎเกณฑ์ทางการบัญชีหรือกฎทมายที่เกี่ยวช้องอื่นควบคุมโดยตรง นอกจากนี้ผลการวิจัย ยังเป็นประโยชน์ต่อนักลงทุนในการหลีกเลี่ยงการลงทุนในกิจการ ที่มีการตกแต่งกำไรผ่านรายการค้าจริง เนื่องจาก การตกแต่งกำไรในรูปแบบดังกล่าว ส่งผลกระทบเชิงลบต่อผลการดำเนินงานในอนาคต

คำสำคัญ: การตกแต่งกำไรผ่านรายการค้าจริง ผลการดำเนินงานในอนาคต ทฤษฎีตัวแทน ทฤษฎีการส่งสัญญาณ

1. Introduction

Reported earnings that illustrate the economic performance of the firm have been a crucial item where investors pay more attention to (Walker, 2013). Accordingly, reported earnings are likely to be distorted in order to mislead financial users. Earnings management, therefore, has been a significant topic in accounting research for many decades. The negative consequences of earnings management provoke the concerns for primary groups of financial users such as regulators, auditors, investors, creditors. Theoretically, competing arguments; efficiency and opportunism have been proposed in the literature to explain the consequences of earnings management (Bushman & Piotroski, 2006; Jin, Kanagaretnam, & Lobo, 2018). This leads to the empirical research question in which whether earnings management is beneficial or harmful to the firm. Earnings management has its costs although it may contribute some benefits to managers. Thus, the understanding of how earnings management affects the firm would raise the awareness of managers to trade off its costs against benefits.

In response to the concern of real earnings management (REM), this research aims to broaden evidence by investigating the effect of REM on future firm performance in Thailand where existing empirical evidence of REM is limited. REM is defined as the manipulation of reported earnings by distorting operating policies to gain desired economic transactions and in turn desired amount of earnings (Roychowdhury, 2006). Consequently, the deviation from normal practices increases the volatility of operational performance (Vorst, 2016). In this regard, REM is costly and more harmful to firm performance in comparison to Accruals-based Earnings Management (AEM) where operating activities are not influenced. However, there are several reasons that may motivate managers to engage in REM. For example, REM is difficult to detect from financial reports' scrutinizing due to no accounting regulations governing this choice of earnings management unlike AEM (Kothari, Mizik, & Roychowdhury, 2016). Besides, REM can be performed during the accounting period (Zang, 2012). Therefore, it may allow managers to consider REM first instead of AEM because AEM is normally performed at the end of the accounting period.

The empirical evidence regarding the consequences of REM is essential to enhance the understanding of the firm's stakeholders, especially regulators and managers, in the sense that whether there should be regulations in place to control this earnings management strategy and whether managers trade off their private benefits against the firm volatility. The empirical evidence would also verify whether REM is beneficial or detrimental to the firm in general. Previous literature is insufficient to investigate the impact of REM on firm performance and further empirical evidence is needed (Al-Shattarat, Hussainey, & Al-Shattarat, 2018; Taylor & Xu, 2010). Following these arguments, the main research question in this research is whether REM is beneficial or detrimental to future firm performance. The main

research question induces three specific research questions regarding individual techniques of REM: (1) How sales manipulation influences future firm performance, (2) How overproduction of inventories influences future firm performance, and (3) How reduction of discretionary expenses influences future firm performance. This study aims to investigate the effects of individual's techniques of REM rather than the aggregate measure of REM by following the argument that individual techniques of REM are implemented in different ways and may cause different consequences to the firm (Cohen & Zarowin, 2010). The following sections are organized into five primary sections. First, the extant literature will be reviewed to underpin the conceptual framework used in this research. Second, the research method is discussed and designed to operationalize research questions. Third, the analysis and findings are reported. Fourth, the discussion and conclusion are presented. Finally, the contributions and future research are discussed for guiding how to implement the findings from this research and how future research can be developed from this research.

2. Literature Review and Conceptual Framework

Stolowy & Breton (2004) mention that managers manage earnings either for or against the firm. Therefore, competing arguments have been proposed in the literature to explain the consequences of earnings management on the firm. In particular, the first stream of research contends that managers implement their discretion over accounting and operating policies to structure financial information reported in financial reports for their private benefits such as maximizing their bonus and compensation or reputation (Healy & Wahlen, 1999; Schipper, 1989).

The expropriation argument under agency theory is usually applied to explain the negative consequences of earnings management on the firm's performance (Al-Shattarat et al., 2018). The principal concept of agency theory was first introduced by Berle and Means (1932) where the separation between ownership and control in modern corporations was emphasized alongside the ownership dispersion. In this sense, Jensen and Meckling (1976) argued that such a separation may induce the conflict of interest between managers (agents) and owners (principals) when their interests are not aligned. Management myopia may occur when managers intend to manipulate financial reports for their interest. Therefore, they would prefer short-term gain over long-term performance and thus, REM is likely to be performed. The consequences of REM may erode operating activities and firm performance. The expropriation argument supports the conflict of interest between the firm and its managers. This argument suggests a negative link between REM and future firm performance. In addition, earnings management has been deemed as an opportunistic behavior, in this respect and managers take advantage of such a practice, not the firm.

Empirical evidence documented in the previous literature has confirmed that earnings management practices significantly damage firm performance. Among others, Vorst (2016) reported the empirical findings supporting an opportunistic perspective. Specifically, Vorst (2016) reveals that the reverse of abnormal cut in discretionary investment, which indicates REM, induces lower future performance. Similarly, Tabassum, Kaleem, & Nazir (2015) document the negative relationship between REM through sales manipulation and ROA, ROE, EPS, and PE Ratio. REM not only erodes future performance, but it also negatively impacts firm value (Mellado-Cid, Jory, & Ngo, 2018).

On the other hand, there is another stream of research proposing that earnings management is used by managers to signal private information of the firm (Ronen & Yaari, 2008). Consequently, it makes financial reports more informative for users. Therefore, earnings management is efficient in this perspective. The signaling argument supports this view. Generally, signaling theory assumes that one party obtains superior information than the other (Connelly, Certo, Ireland, & Reutzel, 2011). The information asymmetry is a primary concern of the firm's external stakeholders such as external investors, shareholders, or regulators (Tsang & Blevins, 2015). Those stakeholders may not be able to access private information obtained by managers. Financial information reported in financial reports can be used as management tool to inform private information. According to this view, managers can access and gain better information about the firm than external users. Thus, they may implement REM to signal private information about future performance of the firm to the external users. REM is perceived as an efficient tool to increase the usefulness of financial reports according to the signaling assumption (Ronen and Yaari, 2008).

There is empirical evidence showing that earnings management has a positive effect on the firm. For example, Gunny (2010) documented that firms just meet or beat accounting benchmarks have better performance in a subsequent year when engaging in REM. The positive relationship between REM and firm performance is reported by Zhao, Chen, Zhang, & Davis (2012) where firms with implementing REM for beating earnings target experience higher performance. Their findings are consistent with Taylor & Xu (2010) who documented a positive effect of REM on the following year's performance. REM is not opportunistic according to those findings.

Base on theoretical perspectives and extant empirical evidence, the effect of REM on future firm performance is mixed. However, REM can be measured by sale manipulation, production manipulation, and discretionary expenses manipulation according to Roychowdhury (2006). Hence, this research proposes the links between three individual techniques of REM and future firm performance. Two perspectives can be applied to explain the link between REM and future firm performance: Agency

theory and Signaling theory as mentioned before. Thus, competing hypotheses are proposed in this research as follows:

H1: Future firm performance is associated with sales manipulation.

H2: Future firm performance is associated with production manipulation.

H3: Future firm performance is associated with discretionary expenses manipulation.

There are three proposed hypotheses in response to individual techniques of REM. Following the argument that each technique may be implemented differently and may have a different effect on future firm performance. Figure 1 illustrates the conceptual framework of this research.



Figure 1: Conceptual framework

3. Research Method

3.1 Sample and Data Collection¹

Thai listed companies were studied in this research and the period of study was between 2013-2017. Thailand provides an interesting setting for studying REM and its consequences. After the significant phenomenon of the financial crisis in 1997, institutional settings and governance mechanisms in Asian countries, including Thailand, have dramatically improved (Carney & Child, 2013). Accordingly, the strictness of governance mechanisms and regulations, such as the requirements of audit committee and internal control system in listed companies, the improvement in investor protection, accounting and auditing standards, and securities regulation (Persons, 2006), may motivate managers to use REM instead of AEM in this region. Additionally, the studies of REM and its consequences are limited in Thailand.

¹ This dataset is part of dataset used in the author's PhD thesis.

The information of Thai listed companies such as International Securities Identification Number (ISIN) and ownership data was collected from the OSIRIS database. There were 3,281 firm-year observations after dropping the observations from banking, insurance, and financial service industries. Those companies were excluded because the specific regulations required in such companies would have complicated the analysis. Excluding such companies was found to be a normal practice in the previous literature (Francis et al., 2016a; Houqe, Van Zijl, Dunstan, & Karim, 2012; Kim, Kim, & Zhou, 2017; Oz & Yelkenci, 2018). On the other hand, financial data was collected from Datastream, a global macroeconomic and financial data platform. In this stage, the observations that do not have key financial data for computing real earnings management models were dropped out of the sample. As a result, the initial number of firm-year observations available for analysis is 2,068 observations². Financial data is winsorized for 1% at the top and bottom as suggested by prior studies (Choi, Choi, & Sohn, 2018; Duru, Hasan, Song, & Zhao, 2018; Zhong, Chourou, & Ni, 2017) in order to minimize the effect of outliers. Consequently, statistical analysis was less biased in this methodology.

3.2 Variable Measures

3.2.1 Future Firm Performance

The dependent variable, future firm performance, will be captured by Return on Assets (ROA hereafter) following (Al-Shattarat, et al., 2018; Ding, Li, & Wu, 2018; Tang & Chang, 2015; Taylor & Xu, 2010; Wiwattanakantang, 2001). ROA is applied because it captures the real performance of the firm which is the result of operating policies and operating activities. Thus, ROA should be influenced by real activities management. On the other hand, a market-based index such as Tobin's Q might be influenced by many factors not only how efficient managers utilize the firm's assets to generate profit.

3.2.2 Real Earnings Management

To empirically capture REM, this research follows the empirical model introduced by Roychowdhury (2006) where REM was proxied by sales manipulation, production manipulation, and discretionary expenses manipulation. Consequently, there are three empirical models as shown below.

$$CFO / A_{t-1} = \alpha_0 + \alpha_1 (1/A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \varepsilon_t \qquad \dots \dots (1)$$

$$PROD_{t}/A_{t-1} = \alpha_{0} + \alpha_{1}(1/A_{t-1}) + \beta_{1}(S_{t}/A_{t-1}) + \beta_{2}(\Delta S_{t}/A_{t-1}) + \beta_{3}(\Delta S_{t-1}/A_{t-1}) + \varepsilon_{t} \qquad \dots \dots (2)$$

DISEXP_t/A_{t-1} =
$$\alpha_0 + \alpha_1 (1/A_{t-1}) + \beta_1 (S_{t-1}/A_{t-1}) + \epsilon_t$$
(3)

² The number of observations may vary depending on model specifications.

Where:

CFO	= Cash flow from operations
S	= Sales/Revenues
ΔS	= Change in Sales/Revenues
PROD	= Cost of Goods Sold + change in inventories
DISEXP	= Discretionary expenses
А	= Total Assets

Sales manipulation is measured by the abnormally lower cash flow from operations (REM1) as depicted in equation 1. The reason is the abnormal discount that provides to increase current sales would lower cash flow from operations. Also, managers may increase earnings by manipulating production costs. The overproduction (REM2) would result in a lower cost per unit of inventory and thus, abnormally higher production cost captures production manipulation as demonstrated in equation 2. Finally, discretionary expenses manipulation (REM3) is expressed in equation 3 where managers may postpone some discretionary expenses such as research and development expenses (R&D) to increase current earnings. In this research, selling, general, and administrative expenses (SG&A) retrieved from Datastream are used to represent discretionary expenses. This item should be similar to advertising and R&D which were used in the study by Roychowdhury (2006) where data was collected from COMPUSTAT. SG&A has also been applied in the previous literature to capture discretionary expenses (Francis, Hasan, & Li, 2016a; Vorst, 2016). These 3 models capture individual techniques of REM and it will be implemented on an industry-year basis. However, the implementation of aggregate proxies which are calculated by summing individual proxies of REM together will not be applied here. Aggregate proxies may be problematic for interpretation because individual techniques of REM may be applied differently (Cohen & Zarowin, 2010; Zang, 2012). The residuals from equation 1, equation 2, and equation 3 will capture individual techniques of REM. The residuals from equation 1 and equation 3, which capture REM1 and REM3, will be multiplied by -1 to make the interpretation easier³ (Zang, 2012). Hence, the higher values of those variables indicate a higher amount of REM.

³ Generally, the lower amounts of abnormally lower cash flow from operations and abnormally lower discretionary expenses represent the higher real earnings management.

3.2.3 Control Variable

Finally, the primary control variables such as ownership characteristics, leverage, firm size, lagged cash flow from operations, lagged performance, capital expenditure, and growth rate are added into the empirical model following prior research (Al-Shattarat et al., 2018; Gunny, 2010; Nguyen, Locke, & Reddy, 2015; Wiwattanakantang, 2001). All of the variables are summarized in Table 1.

Dependent Variable		
Variable	Measure	Acronym
Future Firm Performance	Return on Assets Ratio	ROA
Independent Variables		
Variable	Measurement	Acronym
Lagged Real Earnings Management	The lagged values of individual technique of real earnings management as shown below.	Lag_REM
	The lagged value of abnormal cash flows from operations (Multiplied by –1), following Roychowdhury (2006)	Lag_REM1
	The lagged value of abnormal production costs, following Roychowdhury (2006)	Lag_REM2
	The lagged value of abnormal discretionary expenses (Multiplied by -1), following Roychowdhury (2006)	Lag_REM3
Control Variables		
Variable	Measurement	Acronym
Ownership Concentration	The percentage of shares held by the largest shareholder	LARGEST
Managerial Ownership	The percentage of shares held by current managers	MA
Domestic Institutional Ownership	The percentage of shares held by domestic institutional shareholders ⁴	IS_DOM

Table 1 Variable Measures

⁴ Bank, financial service, hedge funds, insurance companies, mutual and pension funds, and venture capital are classified as institutional shareholders following Bao & Lewellyn (2017).

Table 1 Variable Measures (Cont.)

Control Variables (Cont.)					
Variable	Measurement	Acronym			
Foreign Ownership	The percentage of shares held by foreign shareholders	FOR			
Financial Leverage	Debt to Asset Ratio	DA			
Firm Size	Natural log of total assets in US Dollars at the end of the fiscal year	ТА			
Lagged Cash Flow from Operations	Lagged Cash Flow from Operations	Lag_CFO			
Lagged Performance	Lagged return on Assets	Lag_ROA			
Capital Expenditure	Property Plant and Equipment	PPE			
Growth Rate	Delta Revenue divided by Lagged Revenue	Growth			

4. Analysis and Findings

In this research, the quantitative technique, namely regression, is the primary technique used to analyze the data by using STATA software. The baseline model is presented as follows:

$$\begin{split} \text{ROA}_{it} &= \beta_0 + \beta_1 \, \text{Lag}_\text{REM}_{it} + \beta_2 \, \text{LARGEST}_{it} + \beta_3 \, \text{MA}_{it} + \beta_4 \, \text{IS}_\text{DOM}_{it} + \beta_5 \, \text{FOR}_{it} + \beta_6 \, \text{DA}_{it} \\ &+ \beta_7 \, \text{TA}_{it} + \beta_8 \, \text{Lag}_\text{CFO}_{it} + \beta_9 \, \text{Lag}_\text{ROA}_{it} + \beta_{10} \, \text{PPE}_{it} + \beta_{11} \, \text{Growth}_{it} \\ &+ \text{Industry Dummies}_k + \text{Year Dummies}_t + \epsilon_{it} \\ \end{split}$$

Lagged real earnings management (Lag_REMit) in the Baseline Model will be captured by individual techniques of real earnings management: Lag_REM1, Lag_REM2, Lag_REM3. Industry and year dummies are included in the model to account for the unobserved-heterogeneity effects of industry and time as recommended in prior studies (Achleitner, Günther, Kaserer, & Siciliano, 2014; Jiang, Habib, & Wang, 2018; Lemma, Negash, Mlilo, & Lulseged, 2018; Nguyen et al., 2015). Related t-statistics are based on the cluster-robust standard errors to adjust for potential heteroscedasticity and autocorrelation. The findings by implementing OLS estimation with industry-year fixed effects are shown in Table 3. The following sections illustrate descriptive statistics and bivariate analysis, namely correlation respectively.

4.1 Descriptive statistics

As shown in Table 2, the mean of firm performance measured by ROA is 0.04, which means that on average firms in this dataset have positive performance. The study by Promsen (2020) also reported the positive mean of performance for Thai listed companies during 2015–2018. In addition, the lagged values of individual real earnings management range from 0.084% to 0.341% of lagged total assets (means Lag_REM1 0.089, Lag_REM2 0.084, Lag_REM3 0.341). Overall, the mean of lagged abnormal discretionary expenses (Lag_REM3) was higher than the others. It implied that managers in Thailand may prefer discretionary expenses manipulation. In addition, the lagged values of individual real earnings management are comparable with the study by Bumrungyat & Sutthachai (2016) where the value of abnormal discretionary expenses was also higher than the values of other techniques.

Descriptive statistics of control variables are also shown in Table 2. There are four control variables regarding ownership characteristics: LARGEST (mean 26.90%), MA (mean 3.05%), IS_DOM (mean 2.73%), FOR (mean 6.95%). The means of other controls variables are 0.43 (DA), 15.07 (TA), 0.08 (Lag_CFO), 0.08 (Lag_ROA), 0.76 (PPE), and 0.37 (Growth). In short, firms in this dataset seem to have concentrated ownership, which is a primary characteristic of Thai listed companies (Claessens, Djankov, Fan, & Lang, 2002; Claessens, Djankov, & Lang, 2000; Connelly, Limpaphayom, & Nagarajan, 2012). However, the percentages of share held by managers, domestic institutional shareholders, and foreign shareholders are relatively low.

4.2 Correlation Metrix

The Pearson correlation coefficients, which illustrate the correlation between two variables, are presented in Table 2 confirming that there is no multicollinearity issue⁵. In general, the correlation coefficient should be lower than 0.80, which indicates unacceptable collinearity between two explanatory variables (Evans, 1996; Hair, Black, Babin, & Anderson, 2006). However, it is strongly recommended that the variance inflation factor (VIF) should be checked to confirm no high collinearity problem (Wooldridge, 2016). Furthermore, ROA negatively correlates with Lag_REM1 and Lag_REM2 at a significant level of 5%. The negative correlation coefficients indicate that when Lag_REM1 or Lag_REM2 is higher, ROA will be lower. Those coefficients reported in Table 2, however, illustrate only the link between two variables. Thus, it has a limitation because other factors may influence the dependent variable and should be included in the empirical model (Lemma, Negash, Mlilo, & Lulseged, 2018).

⁵ Multicollinearity problem is presented when two or more explanatory variables are highly correlated and such a problem will bias regression analysis.

	Desc Stat	:riptive :istics						0	orrelatic	on Metri	×					
Variable	Mean	St.Dev	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)	(11)	(12)	(13)	(14)
ROA (1)	0.040	060.0	1.000													
Lag_REM1 (2)	0.089	0.120	-0.359*	1.000												
Lag_REM2 (3)	0.084	0.140	-0.344*	0.498*	1.000											
Lag_REM3 (4)	0.341	0.096	0.000	-0.130*	0.375*	1.000										
LARGEST (5)	26.900	21.310	0.029	-0.063*	-0.001	0.071*	1.000									
MA (6)	3.050	10.190	0.012	-0.016	-0.016	0.006	0.018	1.000								
IS_DOM (7)	2.730	8.650	0.020	-0.024	0.024	0.030	0.134*	-0.040*	1.000							
FOR (8)	6.950	15.330	0.100*	-0.045*	0.012	0.021	0.180*	-0.025	0.116*	1.000						
DA (9)	0.430	0.220	-0.256*	0.222*	0.154*	-0.080*	-0.046	0.003	-0.002	0.070*	1.000					
TA (10)	15.070	1.580	0.071*	-0.004	0.039*	-0.042*	-0.052*	-0.043*	0.196*	0.367*	0.274*	1.000				
Lag_CFO (11)	0.080	0.350	0.196*	-0.104*	-0.074*	0.008	0.075*	0.010	0.012	0.037	-0.037	0.011	1.000			
Lag_ROA (12)	0.080	1.100	0.042*	-0.038	-0.013	-0.066*	0.041	-0.007	-0.007	-0.006	-0.004	-0.020	0.025	1.000		
PPE (13)	0.760	0.810	0.004	-0.099*	-0.019	0.021	0.184*	-0.055*	0.006	-0.004	0.025	-0.024	0.152*	0.001	1.000	
Growth (14)	0.370	7.030	-0.009	0.031	0.002	0.003	-0.022	-0.011	-0.011	-0.011	0.047*	0.014	0.056*	-0.007	0.645*	1.000
* shows sigr	ificance	at the .05	level													

Table 2 Descriptive Statistics and Correlation Metrix

4.3 Findings

The findings of hypothesis testing by using regression analysis are reported in Table 3. Overall, the explanatory power of the Baseline Models, were represented by the values of Adjusted R-Squared, ranges from about 48% to 51%. Specifically, the Adjusted R-Squared obtained from Model 1, where REM was measured by sales manipulation, was 51% roughly. It means that the variation of the dependent variable can be explained by the variation in explanatory variables included in Model 1 about 51%. Moreover, the value of VIF for a single model is less than 4⁶, which indicates no high collinearity among explanatory variables in regression models.

The negative link between sales manipulation (Lag_REM1) and future performance reported in Model 1 Table 3 which is significant at 1% level (p-value < 0.01). This is sales manipulation by providing special discounts or relaxing the strictness of credit policies negatively links with future performance. Thus, the proposed hypothesis, H1, is accepted. The coefficient of Lag_REM1 is -0.122. Similarly, the lagged value of production manipulation by overproducing inventories (Lag_REM2) has a negative effect on future performance (Coefficient = -0.100 p-value < 0.01) as presented in Model 2 Table 3. Therefore, the proposed hypothesis, H2, is also accepted in this case. Finally, Model 3 Table 3 demonstrates the link between discretionary expenses manipulation (Lag_REM3) and future performance. The coefficient of Lag_REM3 is -0.043 and significant at the 10% level. This evidence suggests that a higher amount of discretionary expenses manipulation would negatively influence future performance. Hence, H3 is also accepted. Although individual techniques of REM may be implemented differently (Cohen & Zarowin, 2010; Zang, 2012), all techniques damage future performance in this setting.

Seven control variables significantly linked with firm performance in all models are presented in Table 3. Firstly, the higher level of managerial ownership (MA) leads to higher firm performance. This is in line with the convergence hypothesis which proposes that when managers become owners and their benefits align with the firm, management opportunism would be decreased (Jensen & Meckling, 1976; Morck, Shleifer, & Vishny, 1988; Oei, Ramsay, & Mather, 2008). Likewise, foreign ownership (FOR) also has a positive link with ROA. Specifically, firms with a higher level of foreign ownership are likely to have higher performance as suggested by the assumption of knowledge spillover and active monitoring of foreign investors who transfer the knowledge across countries (Batten & Vo, 2015; Fang, Maffett, & Zhang, 2015; Yohan, 2015). Performance is also positively associated with firm size (TA), lagged cash flow from operations (Lag CFO), lagged return on assets (Lag ROA), and

⁶ This value is suggested as a threshold for VIF by Bao & Lewellyn (2017).

growth rate (Growth). These findings are in line with prior research (See Farooqi, Harris, & Ngo, 2014; Mellado-Cid et al., 2018; Tabassum et al., 2015; Tang & Chang, 2015; Wiwattanakantang, 2001). On the other hand, high leverage (DA) has a negative effect on performance which is consistent with prior evidence as well (Nguyen et al., 2015).

Table 3 The Link between Real Earnings Management and Future Performance

This table reports the link between lagged real earnings management (REM) and firm performance measured by return on assets (ROA). There are three proxies; REM1, REM2, and REM3 to capture individual techniques of REM. Ten control variables, concentrated ownership (LARGEST), managerial ownership (MA), domestic institutional ownership (IS_DOM), foreign ownership (FOR), leverage (DA), firm size (TA), lagged cash flow from operations (Lag_CFO), lagged performance (ROA), capital expenditure (PPE), and growth rate (Growth) are also added to the model. The OLS estimation with industry-year fixed effects is employed in this stage. Related t-statistics are based on the cluster-robust standard errors to adjust for potential heteroscedasticity and autocorrelation.

	Dependent Variable		
VARIABLES	Model 1	Model 2	Model 3
	ROA	ROA	ROA
Lag_REM1 (H1)	-0.122*** (-5.112)		
Lag_REM2 (H2)		-0.100*** (-4.952)	
Lag_REM3 (H3)			-0.043* (-1.796)
LARGEST	-0.005	-0.006	-0.004
	(-0.437)	(-0.528)	(-0.390)
MA	0.053***	0.058***	0.059***
	(3.644)	(3.835)	(3.973)
IS_DOM	-0.009	-0.003	-0.006
	(-0.623)	(-0.230)	(-0.430)
FOR	0.036***	0.037***	0.037***
	(3.313)	(3.377)	(3.270)
DA	-0.050***	-0.057***	-0.061***
	(-3.138)	(-3.630)	(-3.717)

		Dependent Variable	
VARIABLES	Model 1 ROA	Model 2 ROA	Model 3 ROA
ТА	0.005***	0.006***	0.005***
	(2.670)	(3.433)	(3.020)
Lag_CFO	0.053***	0.052***	0.061***
	(2.819)	(2.630)	(2.908)
Lag_ROA	0.421***	0.429***	0.458***
	(6.074)	(6.270)	(6.652)
PPE	-0.006	-0.001	-0.001
	(-1.360)	(-0.318)	(-0.279)
Growth	0.007*	0.007*	0.006*
	(1.786)	(1.832)	(1.731)
Constant	-0.036	-0.058	-0.052
	(-0.927)	(-1.527)	(-1.292)
The highest VIF	1.71	1.70	1.69
Industry Dummies	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes
Observations	1,080	1,080	1,068
Adjusted R-squared	0.505	0.505	0.482

Table 3 The Link between Real Ear	ings Management and	d Future Performance (Cont.)
---	---------------------	------------------------------

Robust t-statistics in parentheses

*** p < 0.01, ** p < 0.05, * p < 0.1 (Two-tailed Significance levels)

4.4 Robustness Check

Robustness tests are performed in this section to ensure the robustness of the findings reported in the main analysis.

4.4.1 Alternative Proxy of Performance

Firstly, an alternative measure of firm performance, return on equities (ROE), is applied following prior practice (Tabassum et al., 2015). The findings reported in Table 4 are qualitatively similar⁷ to the findings presented in the main analysis except for Lag_REM3. Generally, the consequences of sales manipulation (Lag_REM1) and production manipulation (Lag_REM2) on future performance still hold constant when ROE is applied as an alternative proxy of performance. Therefore, the proposed hypotheses (H 1 and H 2) are still accepted. On the other hand, the coefficient of discretionary expenses manipulation (Lag_REM3) is still negative but not significant at any level. Thus, the effect of lagged_REM3 should be interpreted with caution. Although ROA and ROE are usually considered as accounting measures for representing performance, they have some dissimilar characters. ROA reflects the abilities of the management team for utilizing the assets that are funded by liabilities and equities are distorted throughout operating policies, the assets might be used ineffectively. Thus, ROA is likely to be determined by REM in comparison to ROE.

 Table 4
 The Link between Real Earnings Management and Future Performance Using Alternative Proxy

This table reports the link between the lagged value of real earnings management and alternative proxy of firm performance, return on equities (ROE). Related t-statistics are based on the cluster-robust standard errors to adjust for potential heteroskedasticity and autocorrelation.

		Dependent Variable	
VARIABLES	Model 1 ROE	Model 2 ROE	Model 3 ROE
Lag_REM1 (H1)	-0.171***		
	(-3.870)		
Lag_REM2 (H2)		-0.127***	
		(-3.405)	
Lag_REM3 (H3)			-0.024
			(-0.528)
LARGEST	-0.006	-0.007	-0.005
	(-0.264)	(-0.321)	(-0.239)

⁷ The findings regarding the sign and the degree of significance do not materially change in robustness check when compared to the main analysis (Choi et al., 2018).

		Dependent Variable	
VARIABLES	Model 1	Model 2	Model 3
	ROA	ROA	ROA
MA	0.069***	0.076***	0.078***
	(2.662)	(2.839)	(2.984)
IS_DOM	-0.020	-0.012	-0.017
	(-0.890)	(-0.554)	(-0.733)
FOR	0.057***	0.059***	0.058***
	(3.047)	(3.116)	(2.990)
DA	-0.024	-0.034	-0.040
	(-0.755)	(-1.109)	(-1.260)
ТА	0.004	0.006*	0.006
	(1.248)	(1.716)	(1.550)
Lag_CFO	0.078***	0.077***	0.091***
	(2.716)	(2.644)	(3.023)
Lag_ROA	0.734***	0.750***	0.789***
	(5.426)	(5.613)	(6.017)
PPE	-0.011	-0.005	-0.004
	(-1.503)	(-0.673)	(-0.579)
Growth	0.010*	0.011*	0.010*
	(1.817)	(1.815)	(1.769)
Constant	-0.045	-0.076	-0.069
	(-0.587)	(-0.982)	(-0.866)
The highest VIF	1.71	1.70	1.69
Industry Dummies	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes
Observations	1,080	1,080	1,068
Adjusted R-squared	0.426	0.424	0.410

Table 4	The Link between Real Earnings Management and Future Performance Using Alternative Proxy
	(Cont.)

Robust t-statistics in parentheses

*** p < 0.01, ** p < 0.05, * p < 0.1 (Two-tailed Significance levels)

4.4.2 Alternative Estimation

The robustness of the findings is also tested by applying alternative estimation, namely, the Fixed effects⁸ (FE). This estimation technique is also known as a within-group estimator and is applied to analyze panel data (Bollen & Brand, 2010). Firm-Year Fixed effects estimation is implemented in this section as suggested by prior literature (Nguyen et al., 2015). Econometrically, this technique is mentioned to be less biased from omitted variables (Clark & Linzer, 2015) since it accounts for the unobserved heterogeneity at the firm level. The findings from using FE estimation are reported in Table 5. Generally, an alternative estimator does not materially alter the findings regarding the effects of sales manipulation (Lag_REM1) and production manipulation (Lag_REM2). Specifically, sales manipulation (Lag_REM1) and production manipulation (Lag_REM2) are found to have negative effects on future performance. However, the significance of discretionary expenses manipulation disappears in the FE model.

Table 5The Link between Real Earnings Management and Future Performance Using the Fixed-EffectsEstimation

This table reports the link between lagged real earnings management and firm performance. Firm-Year Fixed Effects estimation is employed in this stage. Related t-statistics are based on the cluster-robust standard errors to adjust for potential heteroskedasticity and autocorrelation.

	Dependent Variable			
Independent Variables	Model 1 ROA	Model 2 ROA	Model 3 ROA	
Lag_REM1 (H1)	-0.087*** (-2.912)			
Lag_REM2 (H2)		-0.111**** (-3.182)		
Lag_REM3 (H3)			0.019 (0.549)	
LARGEST	0.005 (0.236)	0.005 (0.226)	0.006 (0.305)	

⁸ The Hausman Test is performed as suggested by Wooldridge (2016) and the finding is in favor of the fixed effects (Prob > chi2 = 0.0000).

	Dependent Variable			
VARIABLES	Model 1	Model 2	Model 3	
	ROA	ROA	ROA	
MA	0.012	0.014	0.015	
	(0.552)	(0.666)	(0.659)	
IS_DOM	0.018	0.017	0.015	
	(0.524)	(0.496)	(0.446)	
FOR	0.031	0.032	0.027	
	(1.542)	(1.591)	(1.264)	
DA	-0.115**	-0.111**	-0.111**	
	(-2.245)	(-2.064)	(-2.122)	
ТА	0.015	0.014	0.012	
	(0.863)	(0.810)	(0.673)	
Lag_CFO	0.021	0.015	0.015	
	(1.238)	(0.955)	(0.887)	
Lag_ROA	-0.003	-0.004	0.004	
	(-0.047)	(-0.073)	(0.074)	
PPE	-0.005	0.004	-0.002	
	(-0.533)	(0.442)	(-0.215)	
Growth	0.003	0.003	0.003	
	(1.023)	(1.333)	(1.168)	
Constant	-0.125	-0.122	-0.079	
	(-0.478)	(-0.462)	(-0.297)	
Firm-Fixed Effect	Yes	Yes	Yes	
Year-Fixed Effect	Yes	Yes	Yes	
Number of firms	381	381	377	
Adjusted R-squared	0.0685	0.0784	0.0492	

Table 5	The Link between Real Earnings Management and Future Performance Using the Fixed-Effects
	Estimation (Cont.)

Robust t-statistics in parentheses

*** p < 0.01, ** p < 0.05, * p < 0.1 (Two-tailed Significance levels)

5. Discussion and Conclusion

Overall, this research's findings support the negative consequences of REM on future firm performance and these findings respond to the main research question in a sense that whether REM is beneficial or detrimental to the firm. In this case, empirical evidence significantly supports the negative view where REM is considered as opportunistic behavior (Ronen & Yaari, 2008; Stolowy & Breton, 2004). The findings are in line with prior literature (Tabassum et al., 2015; Vorst, 2016). The negative links between real earnings management and future performance hold constant over the robustness tests when real earnings management is proxied by sales manipulation and production manipulation. In addition, the findings implicitly support the argument in which individual techniques of real earnings management are implemented differently (Cohen & Zarowin, 2010; Zang, 2012). Likewise, those techniques may cause a different level of risk in the firm.

To conclude, the findings also reflected the expropriation argument under the agency theory, which is one of the agency problems (Jensen & Meckling, 1976; La Porta, Lopez-De-Silanes, & Shleifer, 1999). Managers may intentionally implement REM for boosting the current earnings when they would like to maximize their benefits instead of maximizing the firm's benefits. Consequently, REM erodes operational activities which in turn destroys future firm performance. Finally, the findings reinforce the argument proposing that REM is risky to the firm's operations and future performance (Cohen & Zarowin, 2010; Vorst, 2016). This issue is very important for regulators, investors, and managers.

6. Contributions and Future Research

6.1 Practical Implementation

The findings discussed in the previous section should be of benefit to regulators and investors. Accrual-based and real earnings management distort financial information reported in financial reports and mislead the decision making of financial users. However, real earnings management is costly to the firm's operations and performance respectively (Cohen & Zarowin, 2010; Kothari, Mizik, & Roychowdhury, 2016; Vorst, 2016). More importantly, real earnings management is not governed by accounting or other related regulations, unlike accrual-based earnings management. It is more difficult for auditors or regulators to detect this strategy of earnings management despite its costliness. The negative consequences of real earnings management on future performance reported in this research should provoke regulators to consider related regulations or governance mechanisms for governing real earnings management. Also, potential investors may consider the findings of this research as helpful information in their decision-making processes. Real earnings management erodes future performance;

thus, they should avoid investing in firms with abnormal operating policies such as firms with abnormal credit policies, abnormal sales discounts, higher stock on hand, or lower research and development expenses in comparison to industrial practices. These abnormal policies might be implemented as management strategies for manipulating reported earnings.

6.2 Future Research

Future research is discussed in this section. First, this research examines the effect of individual real earnings management on future performance of the firm, in which performance is measured by using proxies from an accounting perspective. However, there is another dimension to view firm performance which is known as the market-based perspective such as Tobin's Q (Boubraki, Bozec, Laurin, & Rousseau, 2011; Connelly et al., 2012; Mellado-Cid et al., 2018; Tang & Chang, 2015). The market-based perspective would reflect on how the firm is valued by investors. It implicitly illustrates whether investors recognize real earnings management and how they react to such practices throughout the stock price. These questions are also important to the firm and regulators. Market discipline might be one mechanism to constrain real earnings manipulation. Therefore, future research may apply market-based proxies to capture the consequences of real earnings management.

Additionally, the findings reported in this research entirely rely on archival data and the proxies are subject to some limitations. Accordingly, future research could consider implementing mixed methods as an alternative research design. In particular, interview with managers is likely to reveal their incentive to engage in real earnings management although this choice of earnings management is risky to the firm's operations. The analysis of primary data would substantively complement the findings from empirical studies and in turn contribute superior knowledge to the literature of real earnings management and its consequences.

REFERENCES

- Achleitner, A.-K., Günther, N., Kaserer, C., & Siciliano, G. (2014). Real Earnings Management and Accrual-based Earnings Management in Family Firms. *European Accounting Review, 23*(3), 1–31.
- Al-Shattarat, B., Hussainey, K., & Al-Shattarat, W. (2018). The impact of abnormal real earnings management to meet earnings benchmarks on future operating performance. *International Review of Financial Analysis*, doi:https://doi.org/10.1016/j.irfa.2018.10.001
- Bao, S. R., & Lewellyn, K. B. (2017). Ownership structure and earnings management in emerging markets—An institutionalized agency perspective. *International Business Review, 26*(5), 828–838.

Batten, J. A., & Vo, X. V. (2015). Foreign ownership in emerging stock markets. *Journal of Multinational Financial Management, 32–33,* 15–24.

Berle, A. A. and Means, G. C. (1932) The Modern Corporation and Private Property. New York: Macmillan.

- Bollen, K. A., & Brand, J. E. (2010). A General Panel Model with Random and Fixed Effects: A Structural Equations Approach. *Social Forces, 89*(1), 1–34.
- Boubraki, N., Bozec, Y., Laurin, C., & Rousseau, S. (2011). Incorporation law, ownership structure, and firm value: evidence from Canada. *Journal of Empirical Legal Studies, 8*(2), 358–383.
- Bumrungyat, N., & Sutthachai, S. (2016). A Relationship Between Real Activities Earnings Management and Debt Covenant Maintenance of Listed Companies in The Stock Exchange of Thailand. *NIDA Business Journal 19*, 94–114.
- Bushman, R. M., & Piotroski, J. D. (2006). Financial reporting incentives for conservative accounting: The influence of legal and political institutions. *Journal of Accounting and Economics*, *42*(1), 107–148.
- Carney, R. W., & Child, T. B. (2013). Changes to the ownership and control of East Asian corporations between 1996 and 2008: The primacy of politics.(Report). *Journal of Financial Economics, 107*(2), 494–513.
- Choi, A., Choi, J. H., & Sohn, B. C. (2018). The Joint Effect of Audit Quality and Legal Regimes on the Use of Real Earnings Management: International Evidence. *Contemporary Accounting Research*, *35*(4), 2225–2258.
- Claessens, S., Djankov, S., Fan, J. P. H., & Lang, L. H. P. (2002). Disentangling the Incentive and Entrenchment Effects of Large Shareholdings. *Journal of Finance*, *57*(6), 2741–2771.
- Claessens, S., Djankov, S., & Lang, L. H. P. (2000). The separation of ownership and control in East Asian Corporations. *Journal of Financial Economics*, *58*(1), 81–112.
- Clark, T., & Linzer, D. (2015). Should I Use Fixed or Random Effects? *Political Science Research and Methods,* 3(2), 399–408.
- Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and accrual- based earnings management in the pre- and post- sarbanes- oxley periods. *The Accounting Review, 83*(3), 757–787.
- Cohen, D. A., & Zarowin, P. (2010). Accrual- based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics*, *50*(1), 2–19.
- Connelly, B. L., Certo, S., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management, 37*(1), 39–67.
- Connelly, J. T., Limpaphayom, P., & Nagarajan, N. J. (2012). Form versus substance: The effect of ownership structure and corporate governance on firm value in Thailand. *Journal of Banking and Finance, 36*(6), 1722–1743.
- Ding, R., Li, J., & Wu, Z. (2018). Government affiliation, real earnings management, and firm performance: The case of privately held firms. *Journal of Business Research, 83*(2018), 138–150.

- Duru, A., Hasan, I., Song, L., & Zhao, Y. (2018). Bank accounting regulations, enforcement mechanisms, and financial statement informativeness: cross-country evidence. *Accounting and Business Research, 50*(3), 1–35.
- Enomoto, M., Kimura, F., & Yamaguchi, T. (2015). Accrual- based and real earnings management: An international comparison for investor protection. *Journal of Contemporary Accounting & Economics, 11*(3), 183–198.
- Evans, D. J. (1996). *Straightforward statistics for the behavioral sciences*. Pacific Grove, CA: Brooks/Cole Publishing.
- Fang, V. W., Maffett, M., & Zhang, B. (2015). Foreign Institutional Ownership and the Global Convergence of Financial Reporting Practices. *Journal of Accounting Research*, *53*(3), 593–631.
- Farooqi, J., Harris, O., & Ngo, T. (2014). Corporate diversification, real activities manipulation, and firm value. Journal of Multinational Financial Management, 27(2014), 130–151.
- Francis, B., Hasan, I., & Li, L. (2016a). A cross- country study of legal- system strength and real earnings management. *Journal of Accounting and Public Policy*, *35*(5), 477–512.
- Francis, B., Hasan, I., & Li, L. (2016b). Evidence for the Existence of Downward Real-Activity Earnings Management. *Journal of Accounting, Auditing & Finance, 31*(2), 212–248.
- Gunny, K. A. (2010). The Relation Between Earnings Management Using Real Activities Manipulation and Future Performance: Evidence from Meeting Earnings Benchmarks. *Contemporary Accounting Research, 27*(3), 855–889.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, N.J. : Pearson Prentice Hall.
- Healy, P. M., & Wahlen, J. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons, 13*(4), 365–383.
- Houqe, M., van Zijl, T., Dunstan, K., & Karim, A. (2012). The Effect of IFRS Adoption and Investor Protection on Earnings Quality Around the World. *The International Journal of Accounting*, 47(3), 333–355.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, Agency costs and Ownership structure. *Journal of Financial Economics*, *3*(4), 305–360.
- Jiang, H., Habib, A., & Wang, S. (2018). Real Earnings Management, Institutional Environment, and Future Operating Performance: An International Study. *International Journal of Accounting*, *53*(1), 33–54.
- Jin, J., Kanagaretnam, K., & Lobo, G. J. (2018). Discretion in bank loan loss allowance, risk taking and earnings management. *Accounting & Finance, 58*(1), 171–193.
- Kim, J., Kim, Y., & Zhou, J. (2017). Languages and earnings management. *Journal of Accounting and Economics, 63*(2–3), 288–306.

- Kothari, S. P., Mizik, N., & Roychowdhury, S. (2016). Managing for the Moment: The Role of Earnings Management via Real Activities versus Accruals in SEO Valuation. *Accounting Review, 91*(2), 559–586.
- La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate Ownership Around the World. *Journal of Finance, 54*(2), 471–517.
- Lemma, T. T., Negash, M., Mlilo, M., & Lulseged, A. (2018). Institutional ownership, product market competition, and earnings management: Some evidence from international data. *Journal of Business Research, 90*(2018), 151–163.
- Mellado-Cid, C., Jory, S. R., & Ngo, T. N. (2018). Real activities manipulation and firm valuation. *Review of Quantitative Finance and Accounting*, *50*(4), 1201–1226.
- Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics, 20*(C), 293–315.
- Nguyen, T., Locke, S., & Reddy, K. (2015). Ownership concentration and corporate performance from a dynamic perspective: Does national governance quality matter? *International Review of Financial Analysis, 41*(2015), 148–161.
- Oei, R., Ramsay, A., & Mather, P. (2008). Earnings persistence, accruals and managerial share ownership. *Accounting & Finance, 48*(3), 475–502.
- Oz, I. O., & Yelkenci, T. (2018). Examination of real and accrual earnings management: A cross-country analysis of legal origin under IFRS. *International Review of Financial Analysis, 58*(2018), 24–37.
- Persons, O. (2006). Corporate governance in Thailand: What has been done since the 1997 financial crisis? *International Journal of Disclosure and Governance, 3*(4), 288–305.
- Promsen, W. (2020). The Relationship between Risk and Firm Performance of Listed Companies in Thailand. University of The Thai Chamber of Commerce Journal Humanities and Social Sciences, 40(2), 83–102.
- Ronen, J., & Yaari, V. (2008). Earnings Management : Eemerging Insights in Theory, Practice, and Research. New York : Springer.
- Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics, 42*(3), 335–370.
- Schipper, K. (1989). Earnings Management. Accounting Horizons, 3(4), 91–102.
- Stolowy, H., & Breton, G. (2004). Accounts Manipulation: A Literature Review and Proposed Conceptual Framework. *Review of Accounting and Finance, 3*(1), 5–92.
- Tabassum, N., Kaleem, A., & Nazir, M. S. (2015). Real Earnings Management and Future Performance. *Global Business Review*, *16*(1), 21–34.

- Tang, H. W., & Chang, C. C. (2015). Does corporate governance affect the relationship between earnings management and firm performance? An endogenous switching regression model. *Review of Quantitative Finance and Accounting*, *45*(1), 33–58.
- Taylor, G. K., & Xu, R. Z. (2010). Consequences of real earnings management on subsequent operating performance. *Research in Accounting Regulation, 22*(2), 128–132.
- Tsang, E. W. K., & Blevins, D. P. (2015). A critique of the information asymmetry argument in the management and entrepreneurship underpricing literature. *Strategic Organization*, *13*(3), 247–258.
- Vorst, P. (2016). Real earnings management and long-term operating performance: the role of reversals in discretionary investment cuts.(Report). *The Accounting Review, 91*(4), 1219–1256.
- Walker, M. (2013). How far can we trust earnings numbers? What research tells us about earnings management. Accounting and Business Research, 43(4), 445–481.
- Wiwattanakantang, Y. (2001). Controlling shareholders and corporate value: Evidence from Thailand. *Pacific-Basin Finance Journal, 9*(4), 323–362.
- Wooldridge, J. M. (2016). *Introductory Econometrics : A Modern Approach* (6th ed.): Boston, MA : Cengage Learning.
- Yohan, A. (2015). Does Foreing Ownership Increase Financial Reporting Quality? *Asian Academy of Management Journal, 20*(2), 81–101.
- Zang, A. Y. (2012). Evidence on the Trade-Off between Real Activities Manipulation and Accrual-Based Earnings Management. *The Accounting Review, 87*(2), 675–703.
- Zhao, Y., Chen, K. H., Zhang, Y., & Davis, M. (2012). Takeover protection and managerial myopia: Evidence from real earnings management. *Journal of Accounting and Public Policy*, *31*(1), 109–135.
- Zhong, L., Chourou, L., & Ni, Y. (2017). On the association between strategic institutional ownership and earnings quality: Does investor protection strength matter? *Journal of Accounting and Public Policy, 36*(6), 429–450.

JA P