Accrual-Based Earnings Management in the Pre- and Post-Accounting Regulation Adoption Periods in Vietnamese Stock Market: The Moderating Role of Firm Size

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Abstract

The purpose of this paper is to investigate the effect of changes in accounting regulation adoption, which is the Circular 200/2014/TT-BTC (hereafter Circular 200), on the accrual-based earnings management (AEM) with and without the moderating role of firm size in Vietnamese listed companies from 2010 to 2023. Circular 200 provides accounting guidance, including bookkeeping, preparation, and presentation of financial statements, which applies to enterprises in all fields and all economic sectors. Circular 200 was built in the spirit of approaching the International Accounting Standards by the International Accounting Standard Board. The date that Circular 200 became effective is Jan 1, 2015. The study used the financial data of 175 Vietnamese non-financial listed companies over 14 years from 2010 to 2023, making up the total observation of 2,450 firm-years. The results indicated that Circular 200 adoption would reduce AEM measured by the absolute value of discretionary accruals estimated by the Kothari et al. (2005) model. Furthermore, when examining the moderating effect of firm size on AE of Circular 2000 adopters, the result indicated that the effect of Circular 200 adoption on AEM is not significantly different between large and small firms. The authors offered suggestions that could help regulators draft and amend accounting regulations to raise the quality of financial reports of Vietnamese listed enterprises.

Keywords: accrual-based earnings management (AEM), accounting regulation, firm size, Circular 200

1. INTRODUCTION

Since Jan 1, 2015, Vietnamese companies must apply Circular 200 in bookkeeping and preparing financial statements. Circular 200 supports the business investment climate and satisfies economic management standards. The implementation of Circular 200 aids in the refinement of Vietnam's accounting laws in compliance with the demands of the country's economic growth. Circular 200 seeks to ensure financial disclosures are transparent and comparable. In addition to transparency and comparability, better reporting quality is expected. This represents a significant advancement in assimilating Vietnamese accounting procedures with global standards (Ministry of Finance, 2014).

Financial information regarding the company's reliable financial position and operational performance is kept secret from stakeholders by earnings management (EM). Earnings management conveys inaccurate information about how well a company is performing. Because the latitude of accounting standards governs these practices, it is not a fraudulent action by management. However, financial reports are becoming lower quality (Dechow and Skinner, 2000).

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The contribution of this paper is to fill the literature gap by providing an investigation of AEM in the Pre- and Post-Circular 200 periods in the Vietnamese stock market, which takes into account the moderating role of firm size. No comparable research has been conducted on the Vietnamese stock market until now.

There are six sections in the paper. The study is introduced in section one, the theoretical background is addressed in section two, a literature review and hypothesis development are covered in section three, the methodology is provided in section four, findings and discussion are included in section five, and the conclusion is presented in section six.

2.   THEORETICAL BACKGROUND

For a long time, there has been concern about managers acting opportunistically when reporting financial information. When ownership and management are split, the agency problem affects the accounting function (Jensen and Meckling, 1976). In the case of asymmetric information, managers could be motivated to provide financial information against the interests of the company's owners to serve their interests (Fama and Jensen, 1983). Underlying theories that explain for EM behavior of management including agency theory and asymmetric information theory.

Although researchers do not define EM directly, it is defined in academic literature. Schipper (1989, p92) defined "*Earnings management means disclosure management in the sense of a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain*". Healy and Wahlen (1999, p368) discussed that "*Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.*" Academics generally state that EM refers to managers' data distortion practices that are nonetheless permitted by accounting standards (Dechow and Skinner, 2000).

EM is the manager's choice of accounting policies or other activities to manipulate earnings intentionally. EM is an important research area because it can reduce the reliability of financial reporting, which provides useless information to stakeholders in the capital markets. Most research on EM focuses on two types of EM: accrual-based earnings management (AEM) and real earnings management (REM). AEM takes place when managers select accounting procedures, rules, and estimates that adhere to accounting standards (Healy, 1985). Conversely, REM occurs when managers choose the timing and scope of operational company decisions to affect profits (Roychowdhury, 1986).

To investigate the effect of Circular 200 adoption on the AEM with and without the moderating role of firm size in Vietnamese listed companies, this study focuses on AEM. AEM has been investigated as a reliable measurement of EM throughout much empirical research such as Xie et al. (2003), Ebrahim (2007), Alves (2011), Mnif and Cherif (2020), Le Quynh Lien (2020), Bui Van Duong and Ngo Hoang Diep (2017)… The model to estimate AEM includes Jones's (1991) model, Dechow et al. (1995) model, Kasznik's (1999) model, and Kothari et al. (2005) model. Each model has its advantages and disadvantages, as well as conditional requirements. However, this study inherits the results of Nguyen Anh Hien and Pham Thanh Trung (2015), Hoang Thi Viet Ha and Dang Ngoc Hung (2018), and Dao Phuong Thao et al. (2022) when concluding that the Kothari et al. (2005) model is the most suitable to estimate AEM in Vietnam.

3.   LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The effects of adopting new accounting regulations on EM remain a matter of debate for businesses. Accounting rules could influence the likelihood of EM. Managerial opportunism is limited by rigid accounting rules that offer limited accounting options and narrow the scope for subjective judgments, so it would help reduce AEM (Callao and Jarne, 2010).

Barth et al. (2008) showed enterprises' diminishing levels of EM, focusing on 21 countries. According to their findings, companies that implement international accounting standards of a better quality will provide financial reports of a higher quality. Chen et al. (2010) revealed that following the 2005 required adoption of IFRS, companies in European Union are linked to lower level of EM. Based on a sample of 4,050 firm-year observations from 2002 to 2011, Ho et al. (2015) found that Chinese firms in the post-IFRS period (2007–2011) are less likely to engage in AEM.

On the other hand, Callao and Jarne (2010) investigated 11 EU nations, and the findings indicate that as discretionary accruals have increased in the post-implementation era, EM has become more intense following the introduction of international accounting standards. Ball (2006) examined IFRS's benefits and cons for investors and concluded that fair value accounting under IFRS gives managers more opportunities to manage earnings. According to research conducted by Van Tendeloo and Vanstraelen (2005), there is no correlation between lower EM and the use of IFRS by German companies. Based on the above literature, the paper stated the hypothesis:

H1: Circular 200 adoption has negative effect on accrual-based earnings management.

Numerous empirical research has looked at how firm size affects EM. Beasley et al. (2000) believed that larger firms have more sophisticated internal control systems to help produce higher-quality financial reports. According to Burgstahler and Dichev (1997), EM techniques are more common in large and medium-sized businesses than small firms. Large companies face more pressure to meet the analysts' demands to manage earnings more effectively and efficiently (Barton and Simko, 2002). Naz et al. (2011) used a sample of 74 Pakistani companies from 2006 to 2010 and concluded that firm size positively related to earning management. However, smaller businesses are believed to be more likely to manage earnings because they are subject to less government scrutiny, according to the research of Xie et al. (2003).

For the moderating effect of firm size, Xu et al. (2014), with a sample of UK private firms from 2003 to 2010 found that the effect of IFRS adoption on EM is not different between large and small firms. Based on the above literature, the paper stated the hypothesis:

H2: The firm size strengthens the effect of Circular 200 adoption on accrual-based earnings management.

4. RESEARCH METHODOLOGY

4.1 Research method and data collection

In this research, the quantitative method is used. We collect secondary data from the financial statements of listed companies in the Vietnamese stock exchange to analyze the data set and verify the hypothesis. The observation in this study contains data of 175 non-financial companies listed in Vietnamese stock exchanges (HOSE and HNX) from 2010 to 2023. The total number of firm-year observations in the sample data is 2,450.

4.2 Research model

Besides the variables discussed in the above literature, control variables will be added to the research model. They are financial leverage to control for a firm's capital structure (Vander et al., 2003), cash flows from operation to control for errors in the measurement of abnormal accruals (Jones, 1991), firm's asset to control for company size (Watts and Zimmerman, 1990), and sales growth to control for operational performance (Skinner and Sloan, 2002).

The research model is:

Model 1 for Hypothesis 1:
$$EM_{it} = \alpha_0 + \beta_1 REGU_{it} + \beta_2 LEV_{it} + \beta_3 CFO_{it} + \beta_4 SIZE_{it} + \beta_5 GROWTH_{it} + \varepsilon_{it}$$

Model 2 for Hypothesis 2:
$$EM_{it} = \alpha_0 + \beta_1 REGU_{it} + \beta_2 LEV_{it} + \beta_3 CFO_{it} + \beta_4 SIZE_{it} + \beta_5 GROWTH_{it} + \beta_6 REGU_{it} \, x \, SIZE_{it} + \varepsilon_{it}$$

The measurement of each variable is explained in Table 1 below.

Table 1. The measurement of variables

	Description	Measurement
EM	Earnings management	Absolute value of discretionary accruals (lagged by total assets) measured using Kothari et al. (2005)
REGU	Circular 200 adoption	Dummy variable with a value of 1 if the observation is for the post-Circular 200 period (2015–2023) and 0 otherwise (2010–2014)
LEV	Financial leverage	Total liabilities/Total assets
CFO	Cash flows from operation	Cash flows from operation/Total assets
SIZE	Company size	Dummy variable that takes the value of 1 if total assets are more than 100 billion VND and 0 otherwise
GROWTH	Increase in sales revenue	Percentage of increase in sales revenue in year t compared to year t-1

The Kothari et al. (2005) model is modified from the Modified Jones model by Dechow et al. (1995). As per Nguyen and Pham (2015), the Kothari et al. (2005) model is the most suitable model for detecting EM in Vietnam. In the model of detecting EM, discretionary accruals (DA) and non-discretionary accruals (NDA) are included in total accruals (TA). Because of the flexibility of accounting, EM is only achieved through discretionary accruals.

$$TA = DA + NDA$$

The NDA is measured as follows:

$$NDA_{it} / A_{i(t-1)} = \alpha_0 / A_{i(t-1)} + \beta_1 (\Delta REV_{it} - \Delta REC_{it}) / A_{i(t-1)} + \beta_2 PPE_{it} / A_{i(t-1)} + \beta_3 ROA_{it-1}$$

In which:

A_{it-1}: total assets of company i for the year t

ΔREV_{it}: Change in net revenue of company i for the year t with respect to year t-1

ΔREC_{it}: Change in account receivable of company i for the year t with respect to year t-1

PPE_{it}: Gross property, plant, and equipment of company i for the year t

The coefficients α_0, β_1, β_2 from the regression are determined from the regression model below:

$$TA_{it} / A_{i(t-1)} = \alpha_0 / A_{i(t-1)} + \beta_1 (\Delta REV_{it} - \Delta REC_{it}) / A_{i(t-1)} + \beta_2 PPE_{it} / A_{i(t-1)} + \beta_3 ROA_{it-1} + \varepsilon_{it}$$

In which, total accruals TA_{it} is measured as follows:

$$TA_{it} = NI_{it} - CFO_{it}$$

In which:

NI_{it}: the net income before extraodinary items of company i for the year t

CFO_{it}: the cash flow from operating activities of company i for the year t

5. RESULTS AND DISCUSSION

The descriptive statistics of all variables are shown in Table 2. The results show that the mean of absolute DA is 0.0924091, with the maximum of 2.281635 and the minimum of 0.0000241. This indicates that all observed companies managed earnings to achieve their goals in financial reports.

Table 2. Descriptive statistic

Variable	Obs	Mean	Std. Dev.	Min	Max
EM(absDA)	2,450	0.0924091	0.115791	0.0000241	2.281635
REGU	2,450	0.6428571	0.4792552	0	1
REGUxSIZE	2,450	0.5832653	0.493118	0	1
LEV	2,450	0.5267421	0.2792522	0	3.991973
CFO	2,450	0.0547858	0.1335496	-0.6198858	0.9698281
SIZE	2,450	0.8934694	0.3085785	0	1
GROWTH	2,450	0.2079648	3.920163	-116.4356	127.4579

Two regressions are operated separately (Table 3) to test the hypotheses. For model 1: FEM's p-value of 0.000 makes it more appropriate than OLS. Given that the Hausman test's p-value is 0.3964, REM is the more reliable model. The REM model's R^2 value of 0.1261 suggests that the independent variables can explain 12.61% of the dependent variable. Testing for autocorrelation (P-value is 0.000) and heteroscedasticity (P-value is 0.000) show that both exist, so the model GLS is run to fix it.

At a 5% significance level, the GLS model's P-value of 0.000 is significant. The data suggests a strong relationship between the independent and dependent variables, hence indicating the suitability of the model and the reliability of the results.

The P-value for REGU is 0.087, which is significant at 10% level. The coefficient is -0.0055355, so hypothesis H1 is accepted. Therefore, the new accounting regulation – the Circular 200 adoption has a negative impact on AEM in Vietnam. The result is in line with previous studies such as Barth et al. (2008), Chen et al. (2010), Ho et al. (2015).

Table 3. GLS results for model 1 and model 2

Cross-sectional time-series FGLS regression			Obs = 2450	
Coefficient: GLS			Groups = 175	
Panels: heteroskedastic with cross-sectional correlation			Time period = 14	
Correlation: no auto correlation				

	Model 1		**Model 2**	
	Prob > chi2 = 0.0000		Prob > chi2 = 0.0000	
EM(absDA)	**Coef.**	**P>|z|**	**Coef.**	**P>|z|**
REGU	-0.0055355	0.087	-0.0223163	0.074
LEV	-0.0144204	0.029	-0.0142271	0.031
CFO	-0.1843151	0.000	-0.184728	0.000
SIZE	-0.0062915	0.356	-0.0166403	0.106
GROWTH	0.006532	0.000	0.0065355	0.000
REGUxSIZE			0.0180852	0.160
_cons	0.0973787	0.000	0.106794	0.000

For model 2: With a p-value of 0.000, FEM is a better fit than OLS. The Hausman test has a p-value of 0.2023, indicating that REM is more proper than FEM for the research data. With an R^2 of 0.1263 for the REM model, the independent variables can explain 12.63% of the dependent variable. After confirming that autocorrelation and heteroscedasticity are present, the GLS model is run to make the necessary corrections. At a 5% level of significance, the GLS model's P-value of 0.000 is significant. The model is appropriate because it shows a substantial connection between the independent and dependent variables.

The P-value for REGUxSIZE is 0.160, meaning it is insignificant, so hypothesis H2 is rejected. It can be concluded that the moderating effect of firm size is insignificant in Vietnam. It means that the effect of Circular 200 adoption on AEM are not different between large and small firms. The result is similar to Xu et al. (2014).

6.   CONCLUSION

This research looks at the effect of adopting new accounting regulations on EM in Vietnamese-listed companies from 2010 to 2023. The new accounting regulation, Circular 200, would reduce AEM measured by the absolute value of discretionary accruals estimated by the Kothari et al. (2005) model. Furthermore, when examining the moderating effect of firm size on AEM of Circular 200 adopters, the results indicated that the effects of Circular 200 adoption on EM are not significantly different between large and small firms.

The research contributes to the literature of empirical research on how accounting regulations enacted by the government affect EM in Vietnam. The authors advise the regulator to emphasize the importance of stricter accounting regulations to improve the transparency of financial reporting for both large and small firms since the firm size does not moderate the effect of new accounting regulation adoption on EM.

Some limitations may be considered when interpreting the results. First, the discretionary accruals estimated by Kothari et al. (2005) model as the proxy for EM is the authors' choice. Even though the model is widely accepted in EM research, its effectiveness is still controversial. Second, the sample data included 175 listed companies, which may not be enough to represent the Vietnamese stock market.

Thirdly, this research considered firm size as a moderator for the effect of Circular 200 adoption and EM, while other moderators, such as audit quality, can still occur. Future study attempts may examine diverse models for estimating EM, scrutinize the Vietnamese stock market, or consider other moderating factors.

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