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Cost of equity and disclosure of management's responsibility for financial reports of firms in Thailand

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ABSTRACT

Increased disclosures of firm-related information help decrease the cost of capital of firms. This study tests the disclosure proposition by investigating the relationship between the voluntary disclosure of the statement of management's responsibility for financial reports (MRF) and the cost of equity in firms listed on the Stock Exchange of Thailand during the years of 2013–2015. The results show that firms with MRF have lower cost of equity than firms without MRF because voluntary disclosures of MRF reduce information asymmetry and estimation risks. The empirical evidence serves as a guideline for the Securities and Exchange Commission in making decisions regarding the requirement of disclosing management responsibilities on the financial reports for listed companies, in compliance with the Sarbanes-Oxley Act.

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Introduction

In 1997, an economic crisis originated in Thailand and later expanded to other countries in East Asia. Not only did the crisis affect the trust of investors, it also resulted in various reforms in the areas of finance and corporate governance in the region. For instance, in 2006 the Securities and Exchange Commission (SEC) issued a set of corporate governance regulations that applies to firms listed on the Stock Exchange of Thailand (SET). The SEC has provided Thai-listed firms with the necessary guidelines in disclosing firm-related information to the public, one of which is the requirement that management state their responsibilities for the firm's financial reports together with the annual auditing reports. In practice, financial statements of listed firms in Thailand are certified by each firm's

management. This is called the “Statement of Management's Responsibility for Financial Reports” (MRF). This statement is in accordance with Section 302 of the Sarbanes-Oxley Act (SOX) 2002, which has both direct and indirect effects on the regulations of business operations in several countries, including Thailand. However, the presentation of MRFs is not a requirement enforced on listed firms by the SEC Thailand. Therefore, the disclosure of MRFs by firms is considered a voluntary act.

The majority of prior research has studied the impact of SOX on American firms. Warner (2003) explains that cultures in Asian countries differ from that of the United States. In addition, the business environment in Asia possess unique characteristics, such as concentrated ownership and the direct and indirect control of founding families. Existing literature shows that corporate governance in Asian countries, including Thailand, is weak compared to that in Europe and the United States (Connelly, Limpaphayom, & Nagarajan, 2012; Wiwattanakantang, 2001). Capital environmental factors in Thailand most likely still play an important role in the effectiveness of disclosing firm-related information. This is particularly relevant to the statement of

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management's responsibility for financial reports which serves as a mechanism for signaling the quality of the firm's financial information (Kiattikulwattana, 2014), and consequently increases investor confidence in the firm's financial reports. Therefore, this study proposes that if information related to a firm's voluntary disclosure of management's responsibility for financial statements is relevant to assessing its prospects, then enhanced disclosures of management's responsibility for financial statements would have a positive effect on the firm's capital market performance.

Studies in accounting literature reflect the interests given to research relevant to the usefulness of information regarding management's responsibility for financial reports. Whether and how these studies benefit investors makes this topic interesting, particularly in Thailand's context. Studies on this topic will help determine whether the disclosure of management's responsibility for financial reports would help decrease the amount of information asymmetry between businesses and investors, and if it would subsequently decrease cost of equity. In addition, results from this study would be of value to current research regarding information disclosure in the accounting field. Therefore, the main objective of this study is to test the effects of the voluntary disclosure of management's responsibility for financial reports on the cost of equity of listed companies in Thailand.

Literature Review

Statement of Management's Responsibility for Financial Reports in Thailand

The SEC of Thailand has provided Thai listed firms with the guidelines for disclosing firm-related information to the public, one of which is the "Statement of Management's Responsibility for Financial Reports" (MRF) in the annual report. This statement is in accordance with Section 302 of the Sarbanes-Oxley Act (SOX) 2002. However, the presentation of MRFs is not a requirement enforced on listed firms by the SEC Thailand. According to the guidelines, CEOs and CFOs are held accountable in ascertaining that released financial statements are accurate and complete with the purpose of being transparent and to avoid providing misleading information to the public. In addition, both CEOs and CFOs are to assure that the firm's relevant financial information is presented in an objective manner.

In the Thai listed firms' annual reports, the contents of the MRF include the executive's statement that certifies (1) the executive's responsibility for the consolidated financial statements of its subsidiaries and the separate financial statements of company; (2) the aforementioned financial statements are prepared in accordance with the Thai financial reporting standards; (3) the financial statements are prepared under the appropriate accounting policies and applied consistently by using careful judgment and the best estimation; (4) important information is adequately and transparently disclosed in the notes to financial statements; and (5) good corporate governance is priority and the risk management system and internal controls are maintained to ensure that accounting records are accurate, reliable, free from material misstatement, timely, and

adequate to protect the company's assets as well as to prevent fraud and significant irregular operations.

Hypothesis Development

There is existing research that has studied the effects of disclosure of management's responsibility for financial reports in equity markets. Several past studies have focused on the pre-SOX period in the United States, such as that of Lobo and Zhou (2005), which found that disclosures of management's responsibility for financial reports send a signal to investors regarding the firm's financial performance. This result is consistent with the financial disclosure viewpoint that increased disclosures of firm-related information helps decrease the cost of capital of firms due to its significant role in the assessment of a firm's value (Botosan, 1997; Diamond & Verrecchia, 1991; Easley & O'Hara, 2004). Furthermore, because information regarding management's responsibility for financial reports have value relevant to investors, it is expected that CEOs would show their commitment to reduce asymmetric and inaccurate information by disclosing this firm-related information (Kiattikulwattana, 2014).

According to the information disclosure literature, the effects of the disclosures of management's responsibility for financial reports (MRF) are expected to be similar to the usefulness of the voluntary disclosures of information to the extent that MRF disclosures inform stakeholders' expectations of the firm's financial performance (Healy & Palepu, 2001). A disclosure of the MRF is identified as a mechanism through which the company signals transparent financial reports and fair presentation of information in all materials to outside investors (Kiattikulwattana, 2014). These mechanisms can reduce cost of equity in three approaches.

First, increased voluntary disclosure can reduce the non-diversifiable risk of expropriation by corporate insiders (Botosan, 1997). The degree of expropriation by corporate insiders depends on the investment opportunity and the cost of expropriation. Investment opportunity is a systematic factor that depends on macroeconomic conditions. Corporate insiders tend to expropriate more when the market is in recession and less when the market is booming (Durnev & Kim, 2005; Johnson, Boone, Breach, & Friedman, 2000). Thus, the degree of expropriation is a negatively systematic factor with market conditions, and this systematic risk must be compensated by a higher required rate of return. However, the increased firm-specific information obtained from MRFs allows investors to more accurately evaluate the value of the firms which would lead to lower negative effects between the degree of expropriation and market conditions. As a result, lower estimation risks subsequently lead to a lower required rate of return by outside investors, and consequently lower cost of equity of firms.

Second, the disclosure of true MRFs content can reduce cost of equity by mitigating information asymmetry. Previous studies provide evidence that agency costs that result from information asymmetries can be mitigated by the disclosure of quality financial information and other firm-related information. Diamond and Verrecchia (1991) and Leuz and Verrecchia (2000) propose that the firms' clarification of the disclosure of high quality information alleviates

investors' risks of facing losses from trading, thereby attracting more funds into the capital market and having a greater liquidity of firm's shares. In addition, Healy and Palepu (2001) established a signaling framework to show that the manager's declaration of financial reports that are presented fairly gives investors who face information asymmetry the ability to make their own judgments about actual information and forecasts from undisclosed information. As a result, a greater disclosure level subsequently reduces information asymmetry, and then lower required rate of return by investors (Richardson & Welker, 2001).

Third, the disclosure of true MRFs content also lessens the cost of equity by reducing the cost of external monitoring by outside investors. To ensure a given return from the firm's management team, investors must closely monitor the firm's management actions that create monitoring costs (Lombardo & Pagano, 2002). This monitoring costs must be compensated by a higher required rate of return of investors. The disclosure of MRFs can reduce the time and resources spent on monitoring the firm's management team, resulting in a lower required rate of return.

Based on the three possible reasons above, this study hypothesizes that the disclosure of management's responsibility for financial reports will reduce the cost of equity of the firm. The Hypothesis is stated as follows:

Hypothesis: There is a negative relationship between the disclosure of the statement of management's responsibility for financial reports and the cost of equity.

Methods

Sample and Data

The initial sample comprised of firms listed on the Stock Exchange of Thailand (SET) which totaled 1,755 firm-years (data collected from 585 firms for 3 consecutive years) during the period of 2013–2015. The firms in the financial and banking industry are excluded from this study because financial institutions are under strict bank regulations, requirements, restrictions and guidelines which are governed by the Bank of Thailand and the Ministry of Finance. The sample used in this study comprises of firms from seven industries categorized by the SET.

Table 1
Sample selection

		Firm-years	
Number of firm-years in the SET from 2013 to 2015			1,755
Less	Financial sector (excluded)	(177)	
	Property fund & REITs sector (excluded) ^a	(189)	(366)
Total			1,389
Less	Data are not available (excluded)		
	Annual report year 2009–2015 (not available for PDF, hard copy, or HTML format)	(216)	
	Financial data (to compute dependent and independent variables)	(288)	(504)
Final observations			885

^a Firms in the property fund and Real Estate Investment Trust (REIT) sectors are excluded from this study because these sectors are subject to strict supervision as they are offered to the general public and established for specific purposes. Specifically, REIT is governed by two relevant codes. Issues related to the operation of REIT and its trustee are governed by the Trust for Transactions in the Capital Market Act B.E. 2007. Trust certificates are considered a type of security under the Securities and Exchange Act B.E. 1992 (Securities Act). Therefore, the disclosure of information must all comply with the Securities Act

The data sources used in collecting data on the statement of management's responsibility for financial reports of listed firms were annual reports issued in 2013–2015. These reports were acquired from the SET Market Analysis and Reporting Tool (SETSMART), the official websites of each firm, and the website of the SEC. In addition, data related to the cost of equity and dependent variables were acquired from SETSMART and the Bank of Thailand's website.

Table 1 shows the number of samples used in this study. Out of an initial total of 1,755 firm-years of Thai-listed firms (585 individual firms for 3 consecutive years) between 2013 and 2015, 177 firm-years from the financial sector and another 189 firm-years from the property funds and real estate investment trust industries were pulled out of this research sample. An addition of 504 firm-years was taken out of the sample due to incomplete data or the data were unavailable on the SETSMART database, the annual report (form 56–2), or the firm's annual report. A final sample of 885 firm-years (295 distinct firms) were included in this study.

Measure of Management's Responsibility for Financial Reports

In this study, the degree of information disclosure of the statement of management's responsibility for financial reports (MRF) is measured by using an indicator variable. A '1' was assigned to firms that disclosed MRFs in the annual reports in 2013, 2014, and 2015. On the other hand, firms that did not disclose an MRF in each year were assigned a '0'.

Measure of Cost of Equity

The cost of equity is defined as the equivalent of expected return based on the capital asset pricing model (CAPM). In this study, the cost of equity capital is estimated through the capital asset pricing model (CAPM) introduced by Sharpe (1964) and Lintner (1965). In theory, the CAPM reflects the behavior of the capital market and is used to estimate the cost of equity (Ross, Westerfield, & Jaffe, 2005). The CAPM equation is stated as:

$$E(R_i) = R_f + \beta_i(R_m - R_f) \quad (1)$$

The value of $E(R_i)$ is the estimated expected returns of security i at time t which is the cost of equity. The value of R_f is the risk-free rate which, in this study, is based on returns

from treasury bill and one-year government bonds in 2013, 2014, and 2015. R_m is the market return, which is calculated from the percent change in the SET index plus the average market dividend yield from the past ten years, starting from, 2004 to 2015. β_i is the value of beta or coefficient of systematic risk of security i at time t , and is calculated by regressing the market returns and return of each security from the rolling 60 month returns.

Regression Model

This research aims to test the impact of voluntary disclosure of the MRFs on cost of equity of the firm. The model for testing is stated as follows,

$$COE_{i,t} = \beta_0 + \beta_1 MRF_{i,t} + \beta_2 UBETA_{i,t} + \beta_3 LEV_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 MTB_{i,t} + \beta_6 SALE_{i,t} + \beta_7 PAGE_{i,t} + \sum \beta_j YEAR_t + \epsilon_{i,t} \quad (2)$$

where COE is the cost of equity, which can be measured from the estimated expected return derived from the CAPM; MRF is the disclosure of the statement of management's responsibility for financial reports; and the set of control variables. The coefficient of interest in this study is β_1 from the Hypothesis that there is a negative relationship between MRF and COE . Therefore, it is expected that the value of β_1 will be negative.

Control Variables

The control variables include a set of firm-specific risk characteristics and other factors which have been found to have statistically significant relationships with cost of equity. The control variables include $UBETA$, the unlevered beta, which can be measured from $\beta/(1 + (Debt/Equity))$ (Botosan, Plumlee, & Wen, 2011); LEV is the leverage ratio, which can be calculated from $(Long\text{-}term\ debt + Current\ portion\ of\ long\text{-}term\ debt)/Lagged\ total\ assets$ (Botosan et al., 2011; Fama & French, 1992); $SIZE$, the firm size, can be determined from the natural logarithm of the market value of common shares issued in the year (Botosan et al.,

2011; Fama & French, 1992; Khalifa, Othman, & Hussainey, 2018); MTB is the market-to-book ratio, which is calculated from the ratio of the market value to the book value of shareholders' equity at year-end (Botosan et al., 2011; Gebhardt, Lee, & Swaminathan, 2001; Gode & Mohanram, 2003); $SALE$ is the annual change of sales, which is calculated from the percent change in sales from the previous year (Francis, Nanda, & Olsson, 2008; Gode & Mohanram, 2003); and $PAGE$ is the number of pages of the annual report which is determined from the natural logarithm of the number of pages of the annual report (does not include pages that contain the MRFs) (Francis et al., 2008).

Results

Descriptive Statistics

Table 2 demonstrates the descriptive statistics of the dependent and independent variables, and data used to estimate the value of each variable. The samples are divided into two main groups: firms that disclosed the statement of management's responsibility for financial reports (MRF) during 2013–2015 and firms that did not disclose the statement of management's responsibility for financial reports ($NoMRF$). For the 885 firm-years included in this study, 603 firm-years had MRFs, while 282 firm-years did not.

Table 2 also displays results from the tests between firms that disclosed MRFs and firms that did not disclose MRFs. The t -test was used for the continuous variables while the z -test was used on the indicator variables. The table shows that, on average, firms have a cost of equity (COE) of 12.08. The average COE of firms that have MRFs and those that do not ($NoMRF$ group) are 11.15 and 13.24, respectively. It was also found that, with an average leverage ratio (LEV) of 0.84 and 0.61, respectively, firms that disclosed MRFs bear more financial risks than firms that did not.

Correlation Analysis

Table 3 presents the Pearson correlation coefficients for the test variables. The variable shows that the COE has a

Table 2 Descriptive statistics

	All				MRF			NoMRF			
	Min.	Max.	Mean	SD	Min.	Max.	Mean	Min.	Max.	Mean	
COE	-8.60	25.70	12.08	7.12	-8.60	20.04	11.15	-4.83	25.70	13.24	**
MRF	0.00	1	0.68	0.50	1	1	1	0.00	0.00	0.00	***
UBETA	-1.48	2.73	0.74	0.59	-1.48	2.73	0.85	-0.84	2.13	0.67	**
LEV	0.07	7.28	0.77	0.32	0.07	2.92	0.84	0.23	7.28	0.61	***
SIZE	19.16	27.69	22.66	1.59	19.16	27.69	22.56	19.46	27.54	22.87	
MTB	0.05	5.10	1.18	1.06	0.05	0.18	1.12	0.10	5.10	1.32	*
SALE	-5.884	0.574	0.050	0.169	-5.884	0.574	0.056	-4.765	0.390	0.047	***
PAGE	91	286	114	1.17	104	286	121	91	193	108	**
Observation	885				603			282			

The difference between firms with a MRF and firms without a MRF ($NoMRF$). *, **, *** Significant at 10, 5 and 1 percent levels, respectively. Note: COE denotes the cost of equity, measured as the estimated expected return derived from the CAPM; MRF is the statement of management's responsibility for financial reports, identified as disclosed MRFs in the annual reports with value of '1' if the firms disclosed MRFs and value of '0' if firms did not disclose an MRF; $UBETA$ denotes unlevered beta, measured as the beta deflated by $(1 + (Debt/Equity))$; LEV denotes leverage ratio, measured as ratio of the book value of long-term debt and current portion of long-term debt over the book value of lagged total assets; $SIZE$ denotes firm size, measured as the natural logarithm of the market value of equity; MTB denotes the market value of equity divided by book value of equity; $SALE$ denotes annual change of sales, which is calculated from the percent change in sales from the previous year; $PAGE$ denotes number of pages of the annual report, measured as the natural logarithm of the number of pages of the annual report (does not include pages that contain the MRFs); and $YEAR$ denotes year dummy variables

Table 3
Correlation matrix

Variable	COE	MRF	UBETA	LEV	SIZE	MTB	SALE
MRF	-0.193						
UBETA	0.780	-0.044					
LEV	0.330	0.121	0.389				
SIZE	0.310	-0.030	0.117	0.192			
MTB	-0.160	0.026	-0.095	0.126	0.047		
SALE	-0.060	0.080	-0.026	0.079	0.082	0.134	
PAGE	-0.020	0.079	-0.041	0.033	0.121	0.063	0.059

Bold format represents the Pearson correlation, in which its values are significantly different at 5% level or below, two-tailed *t*-tests

negative correlation with the MRF with a correlation coefficient of -0.193 . The correlation between the COE and UBETA and LEV are significantly positive; the correlation coefficient of the UBETA is 0.780, and LEV is 0.330, which is consistent with prior studies. In addition, the SIZE is positively correlated to COE while MTB is negatively correlated to COE. When analyzing the correlation coefficient among control variables using Table 3, it is found that there is a positive relationship between UBETA and LEV which is consistent with predictions of the past studies (Botosan et al., 2011).

A weak correlation in magnitude is found among the control variables (except for the correlation between LEV and UBETA). The variance inflation factors (VIF) of the regression independent variables in model specifications are below two (between 1.008 and 1.603). Based on the rule of thumb, there is a multicollinearity problem if VIF is higher than ten (Montgomery, Peck, & Vining, 2006). Thus, the multicollinearity problem among the regression variables is unlikely to affect empirical inferences.

Multiple Regression Analysis

The relationships between cost of equity and the presentation of MRF with other control variables are tested through multiple regression by applying the ordinary least squares (OLS) method. Tests of the assumptions of regression analysis were conducted to increase the robustness of the test. Table 4 reports the regression results of the research Hypothesis. In this model, the year dummy variables are included. The *t*-statistics, presented in the parentheses below the coefficients, are corrected for heteroscedasticity. The

Table 4
Multiple regression analysis: Ordinary least squares (OLS) method, robust regression for Hypothesis testing

Variable	Predicted sign	Coefficient (<i>t</i> -stats)
MRF	-	-0.386** (-2.481)
UBETA	+	0.196** (2.767)
LEV	+	2.232** (39.621)
SIZE	-	0.126** (3.505)
MTB	+	0.068** (3.402)
SALE	-	-0.016 (-1.052)
PAGE	-	0.020 (0.906)
Constant		1.097** (11.583)
ΣYEAR		-0.582** (-18.323)
F-value		729.31
Sig.F		0.000
Adjusted R ²		65.90%
Observations		885

** indicate statistical significance at the 5 percent level, respectively. The *t*-statistics are corrected for heteroscedasticity

results show that the overall model is significant ($F = 729.31$, $p < .000$). In addition, the model's explanatory power is high, as reflected by the adjusted R^2 of 65.90 percent.

According to Table 4, the analysis of the relationship between cost of equity and the disclosure of MRFs reveal that the negative relationship between the cost of equity and the disclosure of MRFs is statistically significant at 0.05 (coefficient = -0.386 , $t = -2.481$, $p < .012$), supporting the prediction of the study. This suggests that the disclosure of MRFs in annual reports reduce the cost of equity of the firm.

In terms of the relationship between cost of equity and the control variable, namely unlevered beta (UBETA), which represents information risks, results show that the positive relationship between cost of equity and UBETA is statistically significant with a regression coefficient of 0.196 ($t = 2.767$, $p < .001$). Findings from the analysis show that the direction of the relationship was as expected in the study. Since the cost of equity in this study was estimated using the CAPM, the cost of equity increased when the value of market beta was high. In addition, the relationship between LEV and MTB is positive associated with cost of equity. The direction of the relationship is consistent with the expectations of this study.

From Table 4, results of the analysis show that the relationship between SIZE and COE is positive (coefficient = 0.126, $t = 3.505$, $p < .001$) which does not support the prediction of the study. The result is consistent with the notion that larger firms generally face greater public scrutiny for financial information disclosures (Healy & Palepu, 2001; Hirst, Koonce, & Venkataraman, 2008). To support this viewpoint, the investors must closely monitor the firm's management's actions that create external monitoring costs (Lombardo & Pagano, 2002). As a result, the higher required rates of return by external investors to compensate for their monitoring costs create higher cost of equity of the firm.

In addition, the analysis shows that no relationship is found between SALE and COE, and between PAGE and COE. These imply that the sales growth and the number of pages of annual report do not have the impact on variations in the firm's cost of equity. Finally, the analysis shows the effects of each distinct year (2013, 2014, 2015) which reflects the negative relationship between years and cost of equity (coefficient = -0.582 , $t = -18.323$, $p < .000$). The implication is that cost of equity decreases as the year of study progresses.

Additional Test

In addition to the cost of equity capital which was estimated based on the capital asset pricing model (CAPM), the

Fama and French's (1993) three-factor asset pricing model was employed as an alternative approach to estimate expected returns or cost of equity, in support of the current test. Fama and French (1993) added two more factors, the *SMB* (Small company minus big company) and *HML* (high book-to-market ratio minus low book-to-market ratio), to the original CAPM. The three-factor asset pricing model is shown as follows: $R_i - R_f = a + b[R_m - R_f] + sSME + h(HML) + e_t$; where R_i is expected returns; R_f is risk-free rate; R_m is market return; e_t is the error term; a is the constant; and b , s , and h are the slope coefficients.

The results show that the negative coefficient remains highly significant (coefficient = -0.073 , t -statistic = -2.208) when the measure of expected rate of return or cost of equity is derived from the three-factor pricing model. Thus, the result holds for alternative measures of cost of equity.

Conclusion and Discussion

The main objective of this research is to test the relationship between the disclosure of the statement of management's responsibility for financial statements and the cost of equity. Using listed firms in Thailand, this study finds that MRF disclosure is significantly and negatively associated with cost of equity. The result is consistent with the notion of the signaling theory and other empirical research (Healy & Palepu, 2001). As a voluntary disclosure, MRFs decrease the estimation risks and monitoring costs of external investors, and reduce information asymmetry between the firm and investors. In addition, the degree of disclosure of MRFs should enable external investors to assess the value of the firm. The result also extends Kiattikulwattana's (2014) study which presents that some firms with an MRF may engage in less accrual-based earnings management. Similar to results of Kiattikulwattana's (2014) study, external investors required lower expected rate of returns from the firm that disclose their MRFs. In other words, by rewarding firms with lower expected rate of returns, the cost of capital of companies decreases. Findings from this study also support past research that found that the cost of equity would reduce when the degree of disclosure of firms increases (Botosan & Plumlee, 2002; Botosan, 1997; Gow, Taylor, & Verrecchia, 2011).

Thailand uses the civil law and is an emerging market with an institutional environment that consists of a low investor protection environment, weak law enforcement and information in a market that has been described as less efficient when compared to developed markets (Connelly et al., 2012; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000; Wiwattanakantang, 2001). These factors might deter the effectiveness of a voluntary MRF to truly signal the quality of financial information. Common in many Southeast Asian countries, the civil law's protection of outside investors is considered very weak with a lower quality of law enforcement than common law countries (La Porta et al., 2000). Thus, the empirical findings focusing on the impact of voluntary disclosure of MEFs may also apply to other countries.

The empirical evidence drawn from this study adds to the current field of study through academic and managerial

contributions. First, the Thai SEC could attempt to increase investors' confidence in financial information by considering the US SEC's practice of MRF and making it compulsory for all Thai-listed firms. The Thai SEC should accept that inaccurate or incomplete MRFs affect the level of confidence that investors have towards the quality of information in the stock market. In addition, MRFs should be consistently monitored for accuracy and completeness. Consequently, firms that intentionally release inaccurate MRFs to the public should be penalized by law. Next, firms should be aware that investors will further scrutinize firms that avoid disclosing their MRFs in search of higher quality financial information. Finally, it is useful for academic scholars and regulators to gain knowledge regarding the roles of reported financial information and voluntarily disclosed information especially for countries in emerging markets. Academic scholars and regulators should be concerned that information in emerging markets have been described as less efficient when compared to developed markets. Therefore, the credibility of reported financial information and voluntarily disclosed information are critical issues.

Limitations and Future Research

The sample used in this study comprises of firms listed in the SET. However, since the SEC has not strictly enforced an official set of rules for listed firms to disclose a statement of management's responsibility for financial reports, there is possibility for selection bias. It should be taken into consideration that listed firms that disclose information on MRFs might possess unique characteristics that may be different from others. A countermeasure used in this study was to gather control variables identified from past studies and add them into the equation.

A suggestion for future research is to expand the scope of study that yields findings that bring beneficial contributions, such as CEO characteristics and factors that motivate firms to willingly disclose MRFs. In the area of corporate governance, some parts of the SOX are commonly used in Asian countries, particularly the disclosure of financial reports in Southeast Asian countries (MRF is a subset of corporate governance). Future research should also test the implications of corporate governance that follow the US SOX and other requirements on the reporting behavior of financial statements of listed firms, as well as the effects on the market value of these firms. In addition, expanding the sample of the study could help support if the findings can be generalized to other contexts. Also, a comparative study of different countries and regions could also be a contribution to existing literature.

Conflict of interest

None.

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