

RELATIONSHIP BETWEEN RISK MANAGEMENT DISCLOSURES AND FINANCIAL PERFORMANCE OF LISTED COMPANIES IN THAILAND

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ABSTARCT

The study aimed to investigate the extent and level of risk management disclosures of listed companies in the Stock Exchange of Thailand (SET), and to examine the relationship between risk management disclosures and financial performance. Using quota sampling, 160 firms were used as the samples. Content analysis by word counting was used to quantify risk management disclosures in corporate annual reports during 2017 to 2019, while financial performance and corporate characteristics were collected from samples' websites. Descriptive analysis, correlation matrix, and panel data analysis by pooled OLS regression were used to analyze data. As the results, the study found that the average level of risk management disclosures in annual reports of Thai listed companies during 2017 to 2019 were 2226.11 words. In more details, operational risk management disclosure was the most common disclosure following by following by financial risk, legal and regulatory risk, contingency risk, and major shareholder risk. Moreover, the study found the positive relationship between major shareholder risk management disclosure and financial performance, while financial risk management disclosure had negative influenced on financial performance. The study demonstrated agency theory that can be used to explain risk management disclosures in Thailand where the disclosures were not mandatory reporting yet.

Keywords: Risk Management Disclosures, Financial Performance, The Stock Exchange of Thailand.

INTRODUCTION

Risk and uncertainty are threats of businesses' growth, competitive advantage, and survival (Beasley et al., 2008). Moreover, risk and uncertainty are found in both internal and external environments of businesses in today's world. To close or reduce the businesses' risk and uncertain, the business organizations need to have their risk management. In Thailand, risk management has been included in the topics of corporate governance since 1999 after Asian financial crisis that will provide fairness, transparency, integrity, responsibility, and accountability to corporations, top-management, shareholders, and the other stakeholders. Corporate governance in Thailand is divided by five sections: rights of shareholders; equitable treatment of shareholders; roles of stakeholders; disclosure and transparency; and responsibilities of board committee. Risk management is included and disclose into the fourth section of corporate governance namely disclosure and transparency that Thai listed companies in capital market have to disclose their rick and risk management in terms of operational risk, financial risk, legal and regulatory risk, major shareholder risk, and contingency risk into their media such as annual reports, stand-alone reports, and/or websites. However, risk management disclosures of listed companies in Thailand are still not mandatory reporting yet, but if the corporations choose not to disclose their risk and risk management, they have to explain thoroughly the reasons why they do not report by reporting to the Stock Exchange of Thailand (SET). Information asymmetry is the main reason why the SET asks listed companies to disclose risk management information into their annual reports to stakeholders for decision

making (Jensen & Meckling, 1976). Risk management disclosures aims to balance the conflict of interest between top-management and shareholders, and between top-management and the other stakeholders (Callahan & Soileau, 2017). In addition, the process of risk management disclosures are used to check corporate actions and activities whether top-management can follow by corporate strategic plans. There are advantage and disadvantage of having risk management disclosures in corporations. On one hand, risk management disclosures can close problem of information asymmetry as well as conflict of interest between top-management and shareholders (Jensen & Meckling, 1976). On the other hand, the corporations have to spend more cost and expense on the disclosures (Linsley & Shrivess, 2000). In addition, the disclosures can reduce investor's attention for decision making (Shevlin, 2004).

The main goals of risk management are to forecast uncertain events and developments in its environment (Beasley et al., 2008), to reduce risks that can adversely affect performance (Gordon et al., 2009), and to maximize stakeholder values (Hoyt & Liebenberg, 2011; Quon et al., 2012). The study reported focused on the risk management disclosures of reducing risks and improving firm performance. Risk management disclosures has been found to be positively influenced on corporate financial performance (Quon et al., 2012; Gordon et al., 2009; Hoyt & Liebenberg, 2011). In terms of the relationship between risk management disclosures and corporate performance, agency theory can explain the reason why the corporations with high level of risk management disclosures with earn more performance (Jensen & Meckling, 1976). This is because risk management disclosures will close problem of information asymmetry that make shareholders having more potential and important information to make their decision. Moreover, agency cost and conflict of interest between top-management and shareholders are reduced by reporting risk management.

However, there are some problems of risk management disclosures in Thailand. First, even though Thai listed companies comply to disclose their risk management in annual reports under requirement of the Stock Exchange of Thailand, risk management disclosures by listed companies in Thailand are still not regulated yet. Therefore, the companies may not disclose risk management in annual reports, but they send the reports to the SET about why they do not report. On the other hand, they may disclose risk management as minimum as they can to cover the requirement of SET. In terms of influence of risk management disclosures on corporate financial performance, the results of previous related studies were mixed (Anton, 2018; Suttipun, et al., 2018; Kakanda et al., 2017; Nahar et al., 2016; Bertinetti et al., 2013; Allayannis et al., 2012; Quon et al., 2012; Hoyt & Liebenberg, 2011; Gordon et al., 2009). For example, Suttipun et al. (2018); Kakanda et al. (2017); and Nahar et al. (2016) found a positive influence of risk management disclosures on financial performance. This is because the disclosures can close conflict of interest between top-management and shareholders (Shleifer & Vishny, 1997). Moreover, the disclosures can reduce corporate risks that make the companies gain better financial performance (Suttipun et al., 2018). However, Bertinetti et al. (2013), and Allayannis et al. (2012) found a negative relationship between risk management disclosures and corporate financial performance. It is because corporations may incur significant costs and expenses in adopting and reporting risk management, which may reduce their performance. But, Quon et al. (2012) and Anton (2018) were unable to find any relationship between risk management and firm performance mainly because the personnel and departments which manage risk are different from those which measure firm performance. The last research problem is that most prior related literatures about risk management disclosures were focused on developed countries (Anton, 2018; Bertinetti et al., 2013; Hoyt & Liebenberg, 2011; Gordon et al., 2009; Linsley & Shrivess, 2000) rather than emerging economic countries (Kakanda et al., 2017; Najjar et al., 2016; Pallakul & Srijunpetch, 2007) especially Thailand (Suttipun et al., 2018; Suwansin et al., 2019).

From research problems above, the study aimed to investigate the extent and level of risk management disclosures in annual reporting during 2017 to 2019 of listed companies in the Stock Exchange of Thailand (SET), and to examine the relationship between risk management disclosures and financial performance. Moreover, there were two main research questions which are (1) what is the extent and level of risk management disclosures in annual reporting during 2017 to 2019 of listed companies in the SET, and (2) is there relationship between risk management disclosures and financial performance, if so how?

The study provides several contributions expected. In terms of theoretical contributions expected, agency theory will be tested whether the theory can be explained reduction of conflict of interest as well as help of information asymmetry between shareholders and top-management by using risk management disclosures in annual reports of listed companies in Thailand as much as the other countries. In addition, the study will shed the light of relationship between risk management disclosures and corporate financial performance in emerging economic country. In terms of practical contributions expected, conflict of interest between shareholders and top-management may be reduced by reporting risk management information. The other stakeholders such as investors, creditors, and policy makers can use corporate risk management disclosures to consider on their own decision making such as common share investment, loan approval, and/or setting the disclosures as mandatory reporting.

The research structure is begun with literature review including hypothesis development. Next, methods are explained by population and sample, data collection and variable measurement, and data analysis. Findings and discussions are indicated following by objectives of this study. Finally, summary, contributions and implications, limitations, and suggestion for future study are shown in the last section.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

After Tom-Yum-Goong (Asian) financial crisis in 1997, corporate governance practices have worked as corporate management tools of listed companies in the Stock Exchange of Thailand (SET). Corporate governance practices aim to provide fairness, transparency, integrity, responsibility, and accountability to not only the corporations, top-management, and shareholders, but also the other stakeholders such as investors, labors, customers, creditors, competitors, society and community, and environment. The present corporate governance practices in Thailand are separated by five sections which are (1) rights of shareholders, (2) equitable treatment of shareholders, (3) roles of stakeholders, (4) disclosure and transparency, and (5) responsibilities of board committee. Risk management is included and disclose into the fourth section of disclosure and transparency that makes listed companies in the SET have to disclose their risk and risk management in terms of operational risk, financial risk, legal and regulatory risk, major shareholder risk, and contingency risk into their media such as annual reports, stand-alone reports, and/or websites. However, risk management disclosures of listed companies in Thailand are still not mandatory reporting yet, but if they choose not to disclose their risk and risk management, they have to explain thoroughly the reasons why they do not report by reporting to the Stock Exchange of Thailand. Therefore, the extent and level of risk management disclosures of companies listed in the SET were unsure whether all Thai listed companies provided the disclosures in their annual reports, which kind of risk management information that companies choose to report, and level of the disclosures which Thai corporations provide each year. This is because risk management disclosures provide both advantage and disadvantage for the corporations. On one hand, risk management disclosures can close problem of information asymmetry as well as conflict of interest between top-management and shareholders (Jensen & Meckling, 1976). On the other hand, the

corporations have to spend more cost and expense on the disclosures (Linsley & Shrivies, 2000). In addition, the disclosures can reduce investor's attention for decision making (Shevlin, 2004).

To examine the influence of risk management disclosures on corporate performance, although there were not many pervious related studies testing the influence of risk management disclosures on corporate financial performance, most literatures found positive relationship between both variables (Suttipun, et al., 2018; Kakanda et al., 2017; Nahar et al., 2016; Hoyt & Liebenberg, 2011; Gordon et al., 2009). For example, Nahar et al. (2016) found a positive relationship between risk management disclosures and financial performance of Australian banks. Kakanda et al. (2017) found a positive influence of risk management disclosures on performance of listed companies in the Nigerian Stock Exchange. Suttipun et al. (2018) found positive influence of enterprise risk management on performance measured by balanced scorecard of small and medium enterprises in Thailand. The reason of positive influence can be explained by agency theory because the disclosures can close conflict of interest between top-management and shareholders (Shleifer & Vishny, 1997). The disclosures also can help to cushion for information asymmetry and enhance corporate governance practice (Solomon et al., 2000). On the other hand, a few prior related studies found a negative influence of risk management disclosures on firm financial performance such as Allayannis et al. (2012), and Bertinetti et al. (2013). It is because corporations may incur significant costs and expenses in adopting and reporting risk management, which may reduce their performance. However, Quon et al. (2012) and Anton (2018) were unable to find any relationship between risk management and firm performance mainly because the personnel and departments which manage risk are different from those which measure firm performance (Calandro & Lane, 2006). Nevertheless, despite the previous mixed results, this study hypothesized that:

H1 There was a positive relationship between operational risk management disclosure and financial performance.

H2 There was a positive relationship between financial risk management disclosure and financial performance.

H3 There was a positive relationship between legal and regulatory risk management disclosure and financial performance.

H4 There was a positive relationship between major shareholder risk management disclosure and financial performance.

H5 There was a positive relationship between contingency risk management disclosure and financial performance.

METHODS

This study was quantitative research by using secondary data of risk management disclosures, financial performance, and corporate characteristics. Population was all listed companies from the Stock Exchange of Thailand (SET) during 2017 to 2019. The study excluded listed companies which were (1) no annual reports between 2017 and 2019, (2) in the Market for Alternative Investment of Thailand (MAI), (3) registered in the SET after 2017, and (4) under rehabilitation. Using quota sampling, 20 firms of each industry, which there are eight main industries in the SET, were used as the samples in this study. Thus, there were 160 listed companies were the samples by using $160 \times 3 = 480$ annual reports.

In terms of data collection, there were two mediums used in this study which were annual reports and websites. Annual reports during 2017 to 2019 were used to collect the extent and level of risk management disclosures of listed companies, while corporate websites were used to collect data of financial performance and corporate characteristics. There were three main groups of variables used in this study consisting of risk management disclosures as

independent variables (Anton, 2018; Kakanda et al., 2017; Nahar et al., 2016), financial performance as dependent variable (Suttipun, et al., 2018; Quon et al., 2012; Hoyt & Liebenberg, 2011; Gordon et al., 2009), and corporate characteristics as control variables (Suwansin et al., 2019; Suttipun et al., 2018; Pallakul & Srijunpetch, 2007). In terms of independent variables, risk management disclosures were divided by five risks: operational risk; financial risk; legal and regulatory risk; major shareholder; and contingency risk management disclosures. The independent variables were measured by content analysis based on word counting by which the level of each risk management disclosures in the corporate annual reports was quantified. The main reason that content analysis was used in the study was because it is an analysis technique allowing a replicable and valid inference to be drawn from data according to the context (Krippendorff, 1980). The dependent variable was measured by financial performance using return on asset (ROA). In terms of control variables, there were seven variables used in this study such as firm size, firm age, industry type, audit type, solvency, liquidity, and audit committee. Firm size was measured by ROA. Firm age was measured by age of listed companies as year. Dummy variables used in this study were industry type (1 = agricultural and food industry, 2 = consumer product industry, 3 = financial industry, 4 = industrial product industry, 5 = property and construction industry, 6 = resource industry, 7 = service industry, and 8 = technology industry), and audit type (1 = Big 4 auditors, and 0 = Non-big-4 auditors). Financial ratios were used in this study as solvency ratio measured by debt to equity ratio, and liquidity ratio by current ratio. Finally, audit committee was measured by number of audit committee member in each listed companies during the period being study. All variables' measurement was indicated in Table 1 as:

Dependent Variable	Notation	Measurement
Financial performance	ROA	Return on asset (ROA) ratio
Independent Variables		
Operational risk	RISK1	Content analysis by word counting
Financial risk	RISK2	Content analysis by word counting
Legal and regulatory risk	RISK3	Content analysis by word counting
Major shareholder risk	RISK4	Content analysis by word counting
Contingency risk	RISK5	Content analysis by word counting
Control Variables		
Firm size	SIZE	Total asset (Million Baht)
Firm age	AGE	Firm age (Year)
Industry type	Industry	Dummy variable as 1 = agricultural and food industry, 2 = consumer product industry, 3 = financial industry, 4 = industrial product industry, 5 = property and construction industry, 6 = resource industry, 7 = service industry, and 8 = technology industry
Audit Type	AUDIT	Dummy variables as 1 = Big 4 auditors, and 0 = otherwise
Solvency	Solvency	Debt to equity ratio
Liquidity	Liquid	Current ratio
Audit committee	Commit	Number of audit committee

The data were analyzed using the SPSS statistical software program by version 23. Descriptive analysis was used to investigate the extent and level of risk management disclosure in corporate annual reports during 2017 to 2019 by using mean, standard deviation, ranking, and percentage of each risk management on total risk management disclosure. One-way ANOVA was used to test whether there was a significant different levels of risk management disclosures between different groups of industry. Correlation matrix was used to test for

multicollinearity between variables used in this study. Finally, panel data analysis by pooled OLS regression was used to test the relationship between each risk management disclosure and financial performance of listed companies in the Stock Exchange of Thailand. This is because panel data analysis can provide advantages over times series and cross sectional analysis (Wooldridge, 2002). For example, the panel data analysis can control individual heterogeneity that is not controlled by time series analysis and cross sectional analysis and it minimizes the risk of bias. Moreover, the panel data analysis also provides more observation since the data have come from both time series analysis and cross sectional analysis. To use pooled OLS regression in this study, it is because the panel data analysis model provided low level of Durbin-Watson, low level of adjust R-square, and low t statistic (the coefficient). There were some equations in this study which are:

$$ROA = \beta_0 + \beta_1RISK1 + \beta_2RISK2 + \beta_3RISK3 + \beta_4RISK4 + \beta_5RISK5 + \varepsilon \text{ (Model 1)}$$

$$ROA = \beta_0 + \beta_1RISK1 + \beta_2RISK2 + \beta_3RISK3 + \beta_4RISK4 + \beta_5RISK5 + \beta_6SIZE + \beta_7AGE + \beta_8Industry + \beta_9AUDIT + \beta_{10}Solven + \beta_{11}Liquid + \beta_{12}Commit + \varepsilon \text{ (Model 2)}$$

In addition, sensitivity analysis was used to test in this study by changing from return on asset (ROA) to return on equity (ROE). Therefore, there were another two alternative models as:

$$ROE = \beta_0 + \beta_1RISK1 + \beta_2RISK2 + \beta_3RISK3 + \beta_4RISK4 + \beta_5RISK5 + \varepsilon \text{ (Model 3)}$$

$$ROE = \beta_0 + \beta_1RISK1 + \beta_2RISK2 + \beta_3RISK3 + \beta_4RISK4 + \beta_5RISK5 + \beta_6SIZE + \beta_7AGE + \beta_8Industry + \beta_9AUDIT + \beta_{10}Solven + \beta_{11}Liquid + \beta_{12}Commit + \varepsilon \text{ (Model 4)}$$

FINDINGS AND DISCUSSIONS

To investigate the extent and level of risk management disclosures of 480 Thai corporate annual reports during 2017 to 2019 as the first research question, the study found that the average level of risk management disclosures were 2226.11 words (SD = 2050.52) in Table 2. In addition, operational risk management disclosure was the most common disclosure as 1095.57 average words (SD = 917.96) following by financial risk management disclosure as 446.88 average words (SD = 404.85), legal and regulatory risk management disclosure as 345.18 average words (SD = 294.98), contingency risk management disclosure as 234.19 average words (SD = 266.39), and major shareholder risk management disclosure as 104.29 average words (SD = 100.57). The proportion of each risk to total risk management disclosures was around 50% as operational risk, 20% as financial risk, 15% as legal and regulatory risk, ten percent as contingency risk, and five percent as major shareholder risk. The result was consistent with Suwansin et al. (2019), Suttipun et al. (2018), and Pallakul & Srijunpetch (2007) finding the most common risk management disclosures was operational risk because all listed companies in the SET have to provide this risk management disclosures such as human risk, process risk, technology risk, and external risk. Table 2 also indicates that risk management disclosures by listed companies in Thailand were still not mandatory disclosure yet because some samples still provided nothing on risk management disclosures in their annual reports (Minimum total risk management disclosures = .00). However, if they choose not to disclose their risk and risk management into annual reports, they have to explain thoroughly the reasons why they do not report by reporting to the Stock Exchange of Thailand.

Table 3 shows correlation matrix testing for multicollinearity between variables used in this study. There were 13 variables consisting of one dependent variable as ROA, five

independent variables as RISK1, RISK2, RISK3, RISK4, and RISK5, and seven control variables as SIZE, AGE, Industry, AUDIT, Solvency, Liquid, and Commit. Based on a fixed effects model for panel testing, the highest Variance Inflation Factor (VIF) of the correlation matrix between the variables used was 1.527, which indicates that there was no multicollinearity which would be indicated by a VIF exceeding 10 (Vanstraelen et al., 2012). Moreover, the value of tolerance range was between .655 to .951. The low coefficients in the correlation matrix between the variables used in the study also indicated that multicollinearity was unlikely to be a problem in the multiple regression (Hinkle et al., 1998). There is no multicollinearity problem between variables, if coefficients of Pearson correlation are between 0.00 to 0.50. Based on the correlation coefficients between the 13 variables used in this study, there were significant positive correlations between the dependent variable, ROA and RISK4, and Liquid variables at 0.01 level, while ROA had significantly negative correlation with RISK2 variable at 0.05 level. However, there was no any correlation between RISK1, RISK3, RISK5, and ROA at 0.05 level.

TABLE 2
DESCRIPTIVE ANALYSIS

Risk management disclosure	Min.	Max.	Mean	SD	Rank	Percent
Operational risk	0.00	6688	1095.57	917.96	1	49.21
Financial risk	0.00	4113	446.88	404.85	2	20.07
Legal and regulatory risk	0.00	7078	345.18	294.98	3	15.50
Major shareholder risk	0.00	993	104.29	100.57	5	4.68
Contingency risk	0.00	6864	234.19	266.39	4	10.54
Total risk management	0.00	25736	2226.11	2050.52		100.00

To examine the relationship between risk management disclosures and financial performance in annual reports of listed companies from the SET, panel data analysis by pooled OLS regression was used in Table 4. Based on the findings, the adjusted R-squared for the main model amounted 3.2% and 4.9% in model 1 and 2 indicating that the independent and control variables explain moderate proportion of the change in share price, while F-statistic and its probability indicate the model goodness of fit (4.154 and 3.041 in both main models). As the results of main model (Model 1), the study found the positively significant relationship between RISK4 and ROA at 0.01 level, while there was negatively significant influence of RISK2 on ROA at 0.05 level. However, the study found no relationship between RISK1, RISK3, RISK5, and ROA at 0.05 level. Using control variables in model 2, the study found the same relationship between each risk management disclosures and ROA as same as model 1. Moreover, there was a positively significant correlation of Liquid on ROA at 0.01 level, while no influence of the other control variables such as SIZE, AGE, Industry, AUDIT, Solvency, and Commit was on ROA at 0.01 level.

The result of positive relationship between major shareholder risk management (RISK4) disclosures and financial performance was consistent with most previous related studies of Suttipun et al. (2018); Kakanda et al. (2017); Nahar et al. (2016); Hoyt & Liebenberg (2011), and Gordon et al. (2009). The reason of positive relationship can be explained by agency theory because the disclosure can close conflict of interest between top-management and shareholders (Shleifer & Vishny, 1997). The disclosures also can help to cushion for information asymmetry and enhance corporate governance practice (Solomon et al., 2000). Moreover, in Thai context, many listed companies in capital market have been run by family businesses that major shareholders and top-management are the same person or they are family members or relatives. In this case, they may not have any problem of information asymmetry and conflict of interest between top-management and major shareholders. Therefore, although major shareholder risk management disclosure were provided as the last level of disclosure

(104.29 average words) in annual reports of Thai listed companies, this disclosure had positively correlated on financial performance.

The result of negative relationship between financial risk management disclosure (RISK2) and financial performance was consistent with Allayannis et al. (2012), and Bertinetti et al. (2013) finding a negative relationship between risk management disclosure and corporate financial performance. This is because corporations may incur significant costs and expenses in adopting and reporting risk management, which may reduce their performance. In addition, within five risk management disclosures, only financial risk management disclosure was indicated financial information, while the other four risk management disclosures were shown non-financial information. Therefore, if financial risk management disclosure provided risks or uncertainties of financial information, the disclosure had negatively and directly affected to shareholders decision making and corporate financial performance.

The results of no correlation of operational risk (RISK1), legal and regulatory risk (RISK3), and contingency risk (RISK5) management disclosures on financial performance were consistent with Quon et al. (2012) and Anton (2018) who found no relationship between risk management and firm performance. The reason of no relationship is because the personnel and departments which manage risk are different from those which measure firm performance (Calandro & Lane, 2006). Therefore, this study accepted only H4, but rejected H1, H2, H3, and H5.

Using control variable, the study found that there was a positive relationship between liquidity (Liquid) and corporate financial performance at 0.01 level. This is because the increase of return on asset was reflected positively on the current ratio in general and on the networking capital in particular. However, the study did not found any possible relationship between firm size, firm age, industry type, audit type, solvency, audit committee, and firm performance at 0.05 level.

Sensitivity analysis was used in model 3 and 4 of Table 4. The study found that they were accordance with the main model of 1 and 2. In more detail, the results were found that there was a positive relationship between major shareholder risk management disclosure (RISK4) and firm performance as same as the results of main models.

Table 3
CORRELATION MATRIX

Variables	ROA	Risk1	Risk2	Risk3	Risk4	Risk5	SIZE	AGE	Indus	AUDIT	Solvency	Liquid	Commit
ROA	1	0.028	-0.095*	-0.047	0.169**	-0.015	-0.047	-0.041	0.009	-0.047	-0.039	0.164**	0.027
Risk1	-	1	0.253**	0.306**	0.052	0.123**	0.118**	-0.107*	0.130**	0.096*	0.146**	-0.156**	-0.010
Risk2	-	-	1	0.236**	0.018	0.261**	0.444**	0.052	-0.089	0.091*	0.363**	-0.046	0.096*
Risk3	-	-	-	1	0.004	0.248**	0.295**	-0.042	0.189**	0.105*	0.157**	-0.179**	-0.041
Risk4	-	-	-	-	1	0.005	-0.068	-0.133**	-0.050	-0.017	-0.040	0.082	0.098*
Risk5	-	-	-	-	-	1	0.223**	0.154**	-0.002	0.118**	-0.013	-0.106*	0.001
SIZE	-	-	-	-	-	-	1	0.236**	-0.047	-0.002	0.303**	-0.095*	0.033
AGE	-	-	-	-	-	-	-	1	-0.243**	0.071	0.169**	-0.004	-0.021
Indus	-	-	-	-	-	-	-	-	1	0.022	-0.018	-0.153**	-0.051
AUDIT	-	-	-	-	-	-	-	-	-	1	0.093*	-0.037	0.075
Solvency	-	-	-	-	-	-	-	-	-	-	1	-0.174**	0.026
Liquid	-	-	-	-	-	-	-	-	-	-	-	1	-0.188**
Commit	-	-	-	-	-	-	-	-	-	-	-	-	1
Mean	5.7494	1095.57	446.88	345.18	104.29	234.19	141440.39	36.2875	4.4750	0.6729	1.1916	2.4080	3.1250
SD	5.0235	917.96	404.85	294.98	100.57	266.39	479232.58	17.7036	2.3098	0.4696	1.6174	2.8668	0.6339
Tolerance	-	0.836	0.655	0.762	0.951	0.828	0.690	0.813	0.866	0.950	0.771	0.862	0.921
VIF	-	1.196	1.527	1.312	1.052	1.208	1.448	1.229	1.155	1.053	1.296	1.160	1.088

** is significant at 0.01 and * is significant at 0.05

Table 4
MULTIPLE REGRESSION AND SENSITIVITY ANALYSIS

Variables	Main model (Multiple regression): ROA				Alternative model (Sensitivity analysis): ROE			
	Model 1		Model 2		Model 3		Model 4	
	B	t (sig.)	B	t (sig.)	B	t (sig.)	B	t (sig.)
Constant	5.169	8.386**	1.384	0.567	4.923	2.833**	-10.852	-1.582
Risk1	0.001	1.199	0.001	1.594	0.001	0.916	0.001	1.010
Risk2	-0.001	-2.195*	-0.002	-2.441*	0.000	-0.192	-0.003	-1.254
Risk3	-0.001	-0.915	0.000	-0.570	0.000	0.235	0.000	-0.077
Risk4	0.007	3.735**	0.007	3.252**	0.015	2.619**	0.015	2.713**
Risk5	0.000	0.339	0.001	0.799	0.002	0.921	0.003	1.294
SIZE	-	-	3.616E-7	0.403	-	-	1.212E-6	0.480
AGE	-	-	-0.006	-0.265	-	-	0.065	1.028
Indus	-	-	0.104	0.628	-	-	0.954	2.041*
AUDIT	-	-	-0.721	-0.923	-	-	0.467	0.213
Solvency	-	-	0.195	0.776	-	-	2.024	2.862**
Liquid	-	-	0.505	3.761**	-	-	0.997	2.641**
Commit	-	-	0.783	1.333	-	-	1.486	0.900
R Square	0.042		0.072		0.020		0.058	
Adj. R ²	0.032		0.049		0.009		0.038	
F-value (sig)	4.154**		3.041**		1.892		2.388**	
N	480				480			

** is significant at 0.01 and * is significant at 0.05

SUMMARY AND SUGGESTION FOR FUTURE STUDY

To answer two main research questions, the study found that the average level of risk management disclosures in annual reports of Thai listed companies during 2017 to 2019 were 2226.11 words. In more details, operational risk management disclosure was the most common disclosure following by following by financial risk management disclosure, legal and regulatory risk management disclosure, contingency risk management disclosure, and major shareholder risk management disclosure. There also was a significant different levels of risk management disclosures between different groups of industry. The study found the positive relationship between major shareholder risk management disclosure and financial performance, while financial risk management disclosure had negative influenced on financial performance. However, there was no possible correlation of operational risk, legal and regulatory risk, and contingency risk management disclosures on financial performance. Moreover, using control variable, there was a positive relationship between liquidity and financial performance.

The study provide several contributions and implications. In terms of theoretical contributions, agency theory was already demonstrated in this study that the theory can be used to explain risk management disclosures in annual reports of listed companies in Thailand, although the disclosures in Thailand were still not mandatory disclosures yet. This is because risk management disclosures can close conflict of interest between shareholder and top-management as well as reduce information asymmetry. The study also shed the light of relationship between risk management disclosures and corporate financial performance in Thailand where there was less and lack evidences. Finally, this study provides the database of risk management disclosures in emerging economic countries as well as developed countries.

In practical contributions and implications, the study's result found that having major shareholders in Thailand may not make problems for Thai listed companies in terms of conflict of interest and information asymmetry between shareholders and top-management. It is

because they may be the same person, family members, or relatives, therefore, minor shareholders, on the other hand, need to be careful to invest into family business companies. The results of both positive correlation of major shareholders disclosure on financial performance, and negative influence of financial risk management disclosure on the performance were already demonstrated that policy-makers in Thailand such as the SET, Bank of Thailand, and the other government organizations should regulate corporate risk management disclosures as mandatory reporting because they are one of important and potential information for not only shareholders but also the other stakeholders. The study's results also contribute to the other stakeholders of listed companies in Thailand either. For example, investors can use the information of risk management disclosures to consider for their decision making on investment. Creditors can use risk management disclosures together with corporate financial background to consider for loan approval.

There are some limitations in this study. First, the study focused on only corporate annual reports to collect data of risk management disclosure but the corporations have more than one channel to communicate to their shareholders and the other stakeholders such as stand-alone reports, corporate letters, or corporate websites. This is because risk management disclosures are still not mandatory reporting in Thailand yet so the corporations may be able to disclose risk management information in the other channels instead of annual reports. Second, although this study claimed to use longitudinal study to investigate risk management disclosures in Thai corporate annual reports during 2017 to 2019, there were only three years. It may be too short to find the change of risk management disclosures compared with longer period of five or ten years of prior related studies. Finally, low level of adjust R^2 of all models used in this study can indicate weak ability of forecasting dependent variable from both independent and control variables. This is because even though control variables were picked up from the previous related studies, most control variables could not be found any correlation with corporate financial performance including increasing adjust R^2 . Therefore, the suggestion for future study will be investigated and compared risk management disclosures in different mediums such as stand-alone reports and corporate websites. Moreover, longer period being study and more potential and important control variables in Thai context should be considered in the future study.

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