



The Influence of Enterprise Risk Management Reporting on Firm Value of the SET100

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Abstract: The objectives of this research were to study the level of Enterprise Risk Management (ERM) reporting and to study the positive influence of ERM on the Firm Value of companies on the Stock Exchange of Thailand (SET100). The study collected secondary data and also ERM data through the method of counting the word “risk” (in Thai) covering various search terms, i.e., “Strategic Risk”, “Operational Risk”, “Financial and Reporting Risk”, and “Relevant Compliance and Regulatory Risk”, that appeared in the 56-1 ONE REPORT from www.set.or.th. Regarding FV the study used the mean value of the data on the average trading price seven days before and after (15 days) the day that the report was announced and the data of related control variables of businesses from the stock market information. The data collection conditions according to the stratified sampling method were (1) annual reports from 2017–2021, (2) companies must not have an annual fiscal period end date of December 31st, and (3) must not be in the Financials or Consumer Products industry groups. The data search found 74 sample companies and obtained 370 sample reports from the 56-1 ONE REPORT. Analysis was conducted using textual analysis and word counting, descriptive statistics, and multiple regression analysis (MRA) to test the relationships. The results indicate that Firm Size (SIZE), Return On Assets (ROA) and the Technology industry group (control variables) have a positive influence on FV. Nevertheless, there is insufficient data to confirm the positive influence of ERM on FV in accordance with the research objectives.

Keywords: Enterprise Risk, Risk Management, Textual Analysis, Firm Value, SET100

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1. Introduction

Currently, various businesses give great importance to Enterprise Risk Management (ERM), especially amid the global crises such as COVID-19, which brought economic changes and various fluctuations that caused the boards of directors and administrators of businesses to need to search for the methods in risk management as mentioned. This has led to the organizational risk management process, operational risk management, strategic risk management, integrity risk management, capacity building for risk management, and data processing technology for risk management, resulting in new work processes, establishment of risk management teams,

and development of acceptable risk and/or adding or consideration of new guidelines through a business continuity plan (BCP), which is considered to be the a perspective-based approach that is related with the best practices in the ERM of organizations (Tan & Lee, 2022). Nevertheless, one problem that companies often have, especially companies that are on the stock market, is that if there is risk or the possibility of exposure to risk, there may be eventual impact on the confidence of the investors and effects on the prices and value of securities (Tan & Lee, 2022; Maizatulakma et al., 2015; Iswajuni et al., 2018).

Thus, companies that are listed on the stock market are often requested to reveal various data to investors through the stock market by performing various tasks such as the 56-1 ONE REPORT or the reports on risk management of the organization. Subsequently, although the disclosure may be voluntary, the disclosure of data and the impacts of the ERM of the organization often have an uncertain influence on Firm Value (FV) (Maizatulakma et al., 2015; Iswajuni et al., 2018; Tan & Lee, 2022). Thus, a disclosure of ERM and/or non-disclosure does not mean that there is no risk management (Corvellec, 2009). Power (2004, 2009), found that ERM, although numerous studies indicate its necessity in management, can be implemented in widely various ways ranging from universal risk management to applications that do not have any concrete implications. For these reasons, in the education sector that attempts to provide an understanding of ERM and within the context that has both disclosure and non-disclosure of data, this research to achieve the objectives and overcome the limitations to understanding the level of ERM has been conducted. In addition, the method that is based on textual analysis or the use of “word counting”, which is the method that is easiest, namely counting the total number of a word that has a specific meaning repeated in one document, was adapted (Groth & Muntermann, 2011), and this principle is well accepted in the study of ERM obtained from the range of reports that are found within various stock markets (Amran et al, 2009).

Furthermore, the importance of the topic and the problem mentioned above are the origin of the objectives of this research: 1) to study the level of ERM and 2) to study the influence that ERM has on Firm Value (FV) by investigating the target group comprising the primary sample group of the Stock Exchange of Thailand (SET) of the companies on the SET100 that reflects the movement of prices within the securities group of companies on the stock market (<https://www.set.or.th>) and best reflects the overview of the markets (Nongwa, 2022; Lim-U-Sanno, Wiroomratch, Suwansin, & Noonun, 2023; Wahyuningrum et al., 2021). Moreover, this study of the data of companies on the stock market does not include the Financial group due to it including companies that are primarily related with financial institutions (Karamoy & Tulung, 2020).

2. Literature Review and Hypothesis Development

Stock Exchange of Thailand Listed Companies and the SET100

In the measurement of the changes of the indexes of the Stock Exchange of Thailand (SET) that reflect the movement of the prices of the securities group of companies on the stock market, there are the SET50 and SET100 indexes that list the 50 and 100 top-ranking companies that were selected from the securities with the highest values, the sSET, which was developed as an additional index in the Market Cap with small size companies group, the SETHD, an index of the 30 top quality dividend stocks that were selected by the SET, the “mai” index (Market for Alternative Investment), which is a stock index of SME or startup companies that have high growth, or the SETESG index that reflects the movement of prices of of the securities group of companies that have sustainable business practices (Environmental, Social and Governance: ESG) (<https://www.set.or.th>). Thus, this study was conducted on the SET100 group, which is the principle group of the SET and best reflects the overview of the markets (Nongwa, 2022; Lim-U-Sanno et al., 2023; Wahyuningrum et al., 2021). Meanwhile, Karamoy and Tulung (2020) found that when studying the information of companies on the stock market, it is possible to choose the group that you are interested in studying and most often this does not include the Financials group due to it primarily being companies that are related with financial institutions.

Enterprise Risk Management Reporting (ERM) of Listed Companies

One of the important factors of success of an organization is an ability to identify and manage risk that is adaptable to the constantly changing technology, and includes the business environment (Tan & Lee, 2022). Studies based on the objectives to investigate the ERM that an organization is facing at any time can be summarized as a perspective that is related with best practices based on the ERM level of the organization, its

implementation, and the level of applying the practices of ERM to use in the organization. The research results of Tan and Lee (2022) also specify that ERM is a major problem that is important for various companies as mentioned in the different reports and results in a Business Continuity Plan (BCP). This is considered to be the guidelines for risk management that are found most often, including efforts such as establishment of a risk management team and development of acceptable risk and/or an explanation of the acceptance of risk in the organization that has relevance and the possibility of adding to or consideration of the guidelines of ERM. Maizatulakma et al. (2015) found that the disclosure of data and the impacts of ERM of the organization are often merely voluntary business activities; however, it was also found that ERM has a positive influence on FV (Iswajuni et al., 2018). Thus, the study of ERM is based on the data that is disclosed through the various reports of the organizations, such as operational risk management, strategic risk management, integrity risk management, capacity building for risk management, and data processing technology for risk management.

ERM with Textual Analysis and Word Counting

Nevertheless, although numerous studies indicate the necessity of ERM in management, it can be implemented in a wide variety of ways, including risk management that ranges from the universal to that without any concrete inferences (Power, 2004; 2009). For this reason, the studies of the ERM that has disclosure to manage risk are beneficial, and non-disclosure does not mean that there is no risk management being implemented Corvellec (2009). In the educational sector, educational limitations have been overcome and the method of using "word counting" has been accepted in principle based on textual analysis as the method that is easiest, which involves counting the total number of the words with a specific meaning that are repeated within a document (Groth & Muntermann, 2011). Moreover, the principle of word counting and textual analysis have been accepted in the administration of ERM (Amran et al., 2009).

Firm Value (FV) and the Effect of 7 Days Before & After Reporting

The study of the impacts that a particular issue has on listed companies, such as the disclosure of annual reports, disclosure of payments of dividends, the various changes that companies need to disclose to the investors and shareholders, and measurement of the impacts that occur on FV, will use the calculations and observation of the changes of the prices of those securities in the market (Maizatulakma et al., 2015; Iswajuni et al., 2018). The content analysis of this study used the counting of words in the reports of risk management in the 56-1 ONE REPORT in the sections of the reports on risk management in the annual reports of the businesses. Regarding the dependent variable FV, it was measured from stock prices with the use of the average price of the total stock prices seven days before and after the announcement of the annual report in order to study the influence of the disclosure of risk. In addition, this study used the size of the businesses, liquidity, risk of business activities, rate of return on assets, type of industry, and COVID-19 as the control variables with a total number of six variables (Maizatulakma et al., 2015; Gonzalez & Yun, 2013; Tahir & Razali, 2011; Hoyt & Liebenberg, 2011).

The Influence of ERM on the FV of Listed Companies

Signalling Theory explains the impacts of ERM that have an effect on FV; however, awareness of the various types of information allows the administration to be able to choose to communicate to the investors in order to inform them of various impacts and related business activities that have developed improved performance through the channels for the disclosure of data in the various business reports such as the 56-1 ONE REPORT. From the literature review, most of the related research work found that ERM has a positive influence on the value of businesses (Hoyt & Liebenberg, 2011; Gatzert & Martin, 2015; Maizatulakma et al., 2015; Burhanuddin et al., 2020; Alam & Gupta, 2018; Krause & Tse, 2016). Due to the reports of risk management being one part of the strategy of businesses, risk management reporting helps provide the administration with the ability to effectively manage uncertainty that is related with risk by applying the reports of risk management to business practices, which is also viewed in a positive light by the investors in order to create the trend that will lead to consideration of investment and good feedback from the investors and the ability to increase the value of businesses as well. However, Gonzalez and Yun (2013), Tahir and Razali, 2011, and Agustina and Baroroh (2016) argued that ERM does not have an influence on FV due to the reason that, in order to achieve the obligatory objectives according to the regulations of the banks and the data related with the reporting of ERM, the qualitative data must be individually examined in each report and compared using expertise. Thus,

this causes the use of the work of ERM to not have an influence on FV, and the various related previous research studies led the researchers to be able to formulate the hypothesis as follows:

H1: ERM has a positive influence on FV.

Control Variables' Influence on the Firm Value (FV) of Listed Companies

Iswajuni et al. (2018) discussed the aspiration based on the educational objectives that are linked to ERM that it can be studied by using other factors as the control variables, such as firm size, return on assets (ROA) and other variables that are of academic interest, namely firm leverage, current ratio, listed company groups, and the various circumstances that can occur, such as the COVID-19 pandemic (Tariq et al., 2020). The data of the relationships of each control variable can be explained as follows.

Return On Assets (ROA) and FV

A large number of studies have examined the impacts on FV from the factor ROA, which is calculated from the accounting of profits before deducting tax%/total assets, and confirmed its positive relationship with FV (Galih (2024). From this, Sirui (2024) provided the reason that companies that have better ROA may provide motivation to the investors who are willing to invest, causing there to be a stronger demand for those securities in the markets, which has an effect on the changes of those securities prices. Additionally, Iswajuni et al. (2018) found that ROA that was studied together with ERM has a positive influence on FV. Thus, as this positive effect was found in the industrial group of companies and from the literature above, the authors concluded the research hypothesis as follows:

H2: ROA has a positive influence on FV.

Firm Size (SIZE) and FV

An important point found by empirical research indicated that the size of larger companies provides more capability in financial and strategic investment than small companies, resulting in FV that has higher value (Lim-U-Sanno et al., 2023), and other research work supports the positive correlation that SIZE has with FV (Bataineh, 2021; Bustani et al., 2021; Maha Martabar et al., 2024). However, the findings of Yulianson and Hastuti (2024) were different in that SIZE was found to have a negative influence on FV but has significant impacts, which is in conflict with the results that found that SIZE is an indicator of an increase in the confidence of investors. Thus, in this case, the conclusion is based on the possibility of a negative influence from SIZE that is due to having a company size that is too large, causing the administration to lack efficiency in the supervision of operational activities and the strategies which will have result in the lack of confidence of the investors and subsequently cause the FV to decrease. Additionally, Kanita and Surya (2024) did not find the relationship of SIZE on FV, or in some businesses such as mining companies. Nevertheless, this study set the hypothesis regarding the impact of SIZE on FV as follows:

H3: SIZE has a positive influence on FV.

Firm Leverage (LEV) and FV

LEV is another variable that was found to have an influence on or a relationship with FV and is commonly used in joint studies in research on the various correlations of companies in the stock market and in calculations of the LEV value obtained from the formula total liabilities%/total assets. LEV has often been explained as the reason that some companies have high growth and maintenance of financial liquidity, which was found to be due to the impacts from the capital structure of these companies. In previous research, it was found that having a LEV that is high has an effect on the failure to consider payment of dividends and causes a negative effect on FV in the case of major companies that are the main value of the stock market (Siagian et al., 2020). Thus, it is accepted that LEV is a guideline and a strategy in management during situations when companies may be forced to maintain a percentage of revenue that it is expected to be continuously higher, making it necessary to maintain the power to earn money from the assets that are most available, while resulting in the necessity of capital that must be sufficient to replace that assets of the companies that are becoming obsolete and compliance with the conditions of the obligations of currently existing and future debt, as well as its use. This is the reason that it is necessary to maintain confidence for the shareholders with expectations of higher dividends within the same time period (Lotto, 2020), and this study has therefore set the hypothesis as follows:

H4: LEV has a positive influence on FV.

Current Ratio (RATIO) and FV

RATIO refers to the ratio that informs us of the level of ability of an organization in the repayment of debt and short-term loans. It is calculated from Current Assets%/Current Liabilities, in which the indication of RATIO is often focused on values that are > 1 , and it demonstrates the ability of a business to convert current assets into cash quickly (Honkova & Kubenka, 2020; Shygun et al., 2020). A study of RATIO with impacts on FV by Siagian et al. (2020) found a positive influence of RATIO on FV in the period before COVID (2016–2019) in the group of Pharmaceutical sector listed companies. Regarding the study of Galih (2024), it was not possible to conclude the findings regarding the influence of RATIO, and the results only showed the trend of the negative influence that it has on FV in the group of Industrial and Chemical sector manufacturing listed companies listed on the Indonesia Stock Exchange at the beginning of the influence of COVID (2019–2021). Thus, this study has set the hypothesis as follows:

H5: RATIO has a positive influence on FV.

Listed Company Groups and FV

The industry groups, which are defined as control variables, were found to have relationships that differ from the results of previous studies, such as those on firm assets (FA) (Iswajuni et al, 2018). The SET (<https://www.set.or.th>) has divided companies into eight various industry groups, namely (1) Agro & Food Industry (AGRO), (2) Consumer Products (CONSUMP), (3) Financials (FINCIAL), (4) Industrials (INDUS), (5) Property & Construction (PROPCON), (6) Resources (RESOURC), (7) Services (SERVICE), and (8) Technology (TECH). In addition, this study has set the differences of the industry groups by setting the value of the variable for the industry groups as “1” to denote companies in the industry group, and “0” represents the companies in other industry groups. This study also found that industry group is a variable that has associations with FV that differ in accordance with the specific industry studied (Bataineh, 2021; Bustani et al., 2021; Lotto, 2020; Lim-U-Sanno et al., 2023; Siagian et al., 2020 and Galih, 2024). Thus, this study has set the hypothesis as follows:

H6: Listed Company Group has a positive influence on FV.

Effects of COVID-19 and FV

During the time of the study, it was the period of the events of the pandemic of COVID-19, which had severe impacts on supply chains throughout the world and also led to financial impacts (Abbasi, 2024). Therefore, based on the conditions of consideration and the need to face uncertainty and risk in management that must be taken in consideration in the research (Khunkaew et al., 2021), in this research work, COVID-19 was applied as a control variable to analyze the relationships among variables by setting “1” to represent the years that included the pandemic of the COVID-19 virus (2020–2021), and “0” denotes the years that did not include the pandemic (2017–2019). The study of Yu and Xiao (2024) investigating the impacts of COVID that occurred on the Chinese stock market found negative impacts in the overview. However, it was not possible to summarize the degree of influence that it had on the size of companies according to the groups of small/medium size/large companies. Nevertheless, the negative impacts on many industry groups were discovered, although there were some industry groups in which it was found to have a positive influence on FV, such as Health Care, Consumer Discretionary, Information Technology and Consumer Staples. Subsequently, this study has set the hypothesis as follows:

H7: COVID-19 has a positive influence on FV.

Research Framework

This study has the classification of variables into three groups, namely the dependent variable: ERM, the independent variable: FV, and the control variables: ROA, SIZE, LEV, RATIO, Listed Company Groups (AGRO, INDUS, PROPCON, RESOURC, SERVICE, TECH, FINCIAL, and CONSUMP), and COVID. Thus, the research framework can be summarized as seen in Figure 1.

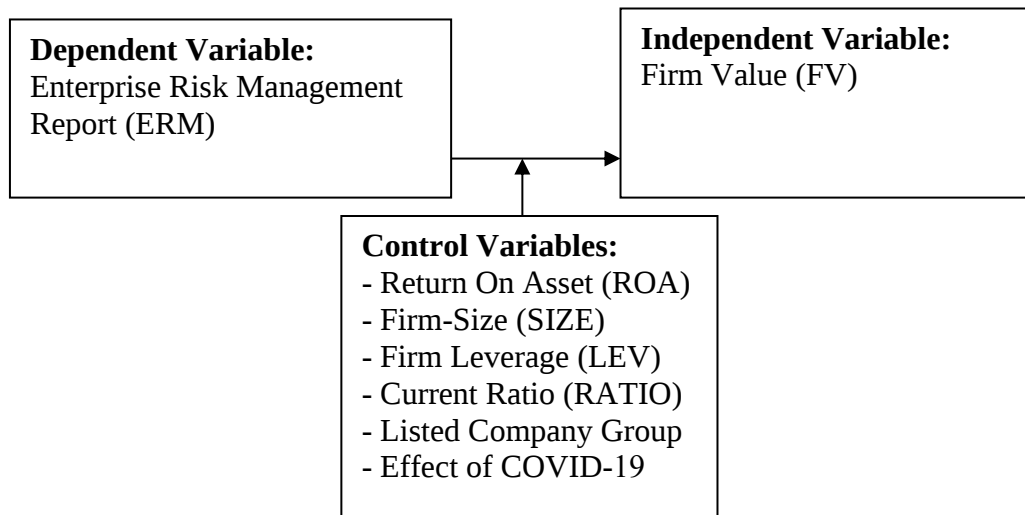


Figure 1: Research framework

3. Research method

Population and Sample:

The population in this study includes 500 companies listed on the stock market of Thailand between the years 2017–2021. The sample selection method of stratified sampling was used to select 74 companies in the sample group with the inclusion criteria of (1) companies that do not have the fiscal period end date on the 31st day of December of every year, and (2) companies that are not included in the industry groups of Financials (FINCIAL) and Consumer Products (CONSUMP) (insufficient data for analysis) This was followed by the search for risk management report data from the total of 74 sample companies, and data reports totaling 370 sample reports were obtained.

Table 1 Population and the sample group

Industry	Population	Sample group	
	Total number	Total number	Percentage
Agro & Food Industry (AGRO)	50	40	10.81%
Industrials (INDUS)	15	10	2.70%
Property & Construction (PROPCON)	85	75	20.27%
Resources (RESOURC)	125	120	32.43%
Services (SERVICE)	115	90	24.32%
Technology (TECH)	35	35	9.46%
Financials (FINCIAL)	75	0	0.00%
Consumer Products (CONSUMP)	-	0	0.00%
Total	500	370	100.00%

Data collection:

- This study used the data collection method of the secondary data from the form providing the annual data report of companies listed on the stock market of Thailand (the 56-1 ONE REPORT form) in the SET100 group of stocks between the years 2017–2021 of 74 companies in the sample group. The source data is the data that was available on the website of the stock market of Thailand and obtained from www.setsmart.com. It was found that there is data totaling 370 yearly reports. In addition, data collection included trading prices on stock indexes, historical retrospective stock indexes, and data that are related with the business firm value (FV): average stock prices 7 days before and after the day that the annual report is announced); Return On Assets (ROA); Firm Size (SIZE); Firm Leverage (LEV); Current Ratio (RATIO); Listed Company Groups (IDTx) and the COVID-19 affected years, in accordance with the data application concept for research based on historical data (Hoyt & Liebenberg, 2011; Gatzert & Martin, 2015; Maizatulakma et al., 2015;

Burhanuddin et al., 2020; Alam & Gupta, 2018; Gonzalez & Yun, 2013; Tahir & Razali, 2011; Agustina & Baroroh, 2016; Krause & Tse, 2016).

- The data collection of the Enterprise Risk Management Reporting (ERM) employed the techniques of the method of content analysis by searching for the word “risk” (in Thai) and counting the number of times the word appears in order to represent the ERM obtained from the 56-1 ONE REPORT form of the securities (Maizatulkama et al., 2015; Iswajuni et al., 2018).

Data analysis:

Table 2: Determination of Definition & Measures of Variables used in the study

Variable	Definition & Measures of Variables
Firm Value (FV)	Average stock prices 7 days before and after the day that the annual report was announced.
Enterprise Risk Management (ERM)	Number of times the word appears in reports of companies in the 56-1 ONE REPORT comprising “risk” (in Thai), including “Strategic Risk”, “Operational Risk”, “Financial and Reporting Risk”, and “Relevant Compliance and Regulatory Risk”.
Return On Asset (ROA)	The capability of making profits from the rate of return from assets.
Firm-Size (SIZE)	Natural logarithm value of total assets.
Firm Leverage (LEV)	Risk of the business and Total debt to total assets ratio.
Liquidity Ratio/Current Ratio (RATIO)	Rate of working capital.
Listed Company Groups	Agro & Food Industry (AGRO), Industrials (INDUS), Property & Construction (PROPCON), Resources (RESOURC), Services (SERVICE), Technology (TECH), Financials (FINCIAL) and Consumer Products (CONSUMP).
COVID-19 affected years (COVID)	“1” = 2020–2021, “0” = 2017–2019.

In order to obtain the results in accordance with the objectives of the study to investigate the level of the influence and test the relationships of ERM on FV, this study used descriptive analysis (frequency, percentage, mean, and standard deviation) and multiple regression analysis (MRA) in order to test the relationships between the risk management reports and firm value of the businesses according to the linear equation as shown below.

$$FV_{\text{Standard}} = b_1 * ERM + b_2 * ROA + b_3 * SIZE + b_4 * LEV + b_5 * RATIO + b_6 * AGRO + b_7 * INDUST + b_8 * PROPCON + b_9 * SERVICE + b_{10} * RESOURC + b_{11} * TECH + b_{13} * COVID$$

4. Research Results

The research results indicated the annual average ERM of the sample companies in the group SET100 and the standard deviation (SD) as shown in Figure 2.

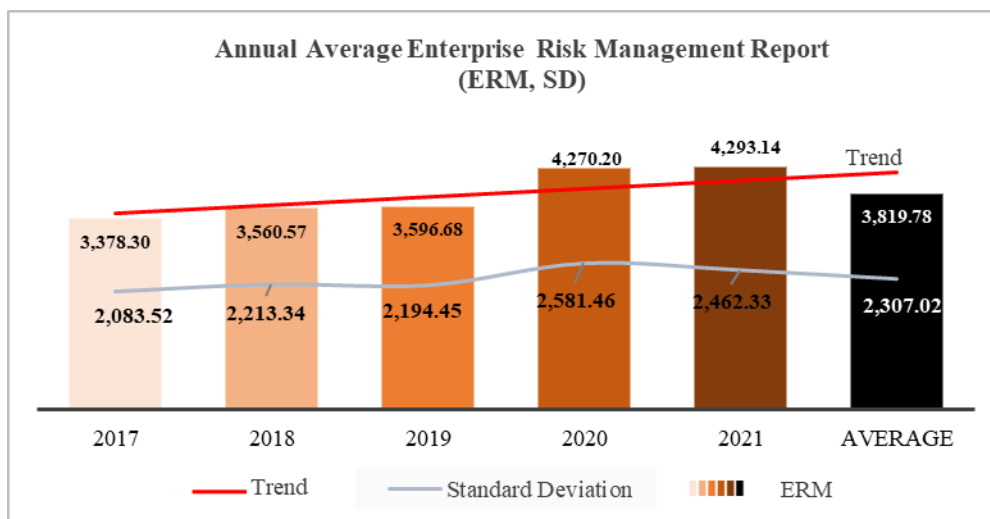


Figure 2: The annual average ERM and Standard Deviation (SD) of the SET100

Figure 2 shows the data of the annual average ERM between the years 2017–2021 as 3,819.78 (SD = 2,307.02) with the year 2017 having the ERM value = 3,378.30 (SD = 2,083.52), 2018 had the value of ERM = 3,560.57 (SD = 2,213.34), 2019 had ERM = 3,596.68 (SD = 2,194.45), 2020 had the value of ERM = 4,270.20 (SD = 2,581.46), and 2021 had the ERM value = 4,293.134 (SD = 2,462.33). By identifying the trend of the increase of ERM, there is the possibility that listed companies will need to add the content of the risk of the disease into the 56-1 ONE REPORT in order to provide the risk management reports of companies that inform the stakeholders.

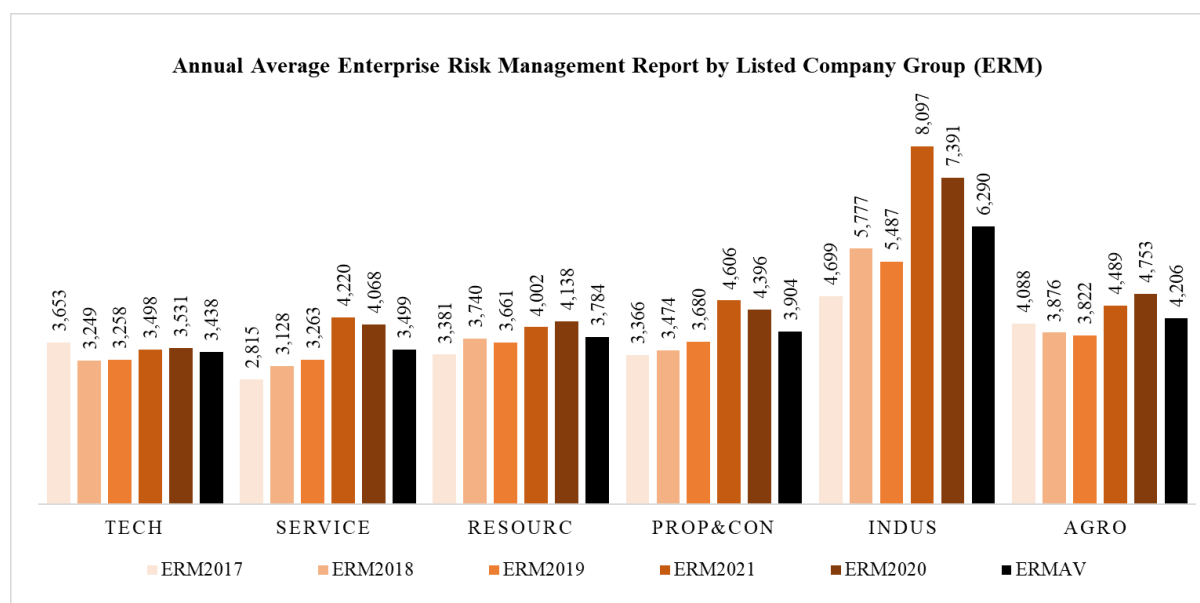


Figure 3: The level of annual average ERM reporting by the Listed Company Groups of the SET100

As seen in Figure 3, it was found that the ERM levels of the listed company groups of the SET100 from 2017 to 2021, which report the average annual level of the total number of the word “risk” in ERM, were as follows: the INDUS group mean = 6,290 was the highest, followed by the AGRO group mean = 4,206, the PROP&CON group mean = 3,904, the RESOURC group mean = 3,784, the SERVICE group mean = 3,499, and the TECH group mean = 3,438, respectively, due to these industries being different, which causes the level of the risk management reports to vary.

The various average data of the enterprises and of the other control variables are shown in Table 3.

Table 3: Data analysis using descriptive statistics

Variable	Mean	SD	Max	Min
Firm Value (FV)	36.88	61.10	479.87	.39
Enterprise Risk Management (ERM)	3,819.78	2,333.80	12,935.00	192.00
Return On Assets (ROA)	8.97	7.11	63.25	-16.96
Firm Size (SIZE)	17.82	1.59	21.85	10.36
Current Ratio (RATIO)	3.90	45.93	670.28	.12
Firm Leverage (LEV)	1.66	1.13	8.86	.01

From Table 3, it can be seen that the FV mean = 36.88 (SD = 61.10), the ERM mean = 3,819.78 (SD = 2,333.80), the ROA mean = 8.965 (SD = 7.11), the SIZE mean = 17.82 (SD = 1.59), the RATIO mean = 3.90 (SD = 45.93), and the LEV mean = 1.661 (SD = 1.13).

Table 4: Results of the Pearson Correlation analysis

	FV	ERM	ROA	LEV	SIZE
ERM	0.056				
ROA	0.104*	-0.140**			
LEV	0.000	0.059	-0.019		
SIZE	0.344*	0.140**	0.262**	0.061	
RATIO	0.035	-0.180**	0.192**	0.008	-0.094

Note: *** significance level at 0.001, ** significance level at 0.01, * significance level at 0.05

Table 4 shows that the Pearson's Correlation of the various variables was $< + 0.7$, and the Variance Inflation Factors (VIF) value was < 10 . Thus, it can be concluded that the relationships between the variables avoids the problem of multicollinearity in the MRA analysis.

Table 5: MRA testing results

	B	Beta	t (Sig.)	Tolerance	VIF
Constant	-274.200	-	-7.096 (.000)		-
ERM	.001	.051	1.003 (.317)	.890	1.123
ROA	1.718	.200	3.885 (.000)	.865	1.156
SIZE	15.884	.413	7.873 (.000)	.832	1.060
LEV	-0.012	-.009	-0.189 (.850)	.943	1.203
RATIO	2.356	.043	.838 (.402)	.855	1.170
AGRO	-6.039	-.031	-.577 (.565)	.807	1.239
INDUST	-10.806	-.029	-.556 (.578)	.861	1.162
PROPCON	6.177	.041	.739 (.460)	.757	1.322
SERVICE	5.269	.037	.634 (.527)	.671	1.491
TECH	25.686	.123	2.349 (.019)	.833	1.200
RESOURC	-	-	-	-	-
COVID	-.774	-.006	-.127 (.899)	.960	1.042
R	.424				
R Square	.179				
Adjusted R Square	.154				
F-value	7.115 (.000)				
Note: ** significance level at 0.01, * significance level at 0.05					

As seen in Table 5, the results of the MRA testing indicate that from the data it is possible to explain the overall relationship at 15.4% (R Square = .154) that has statistical significance at .05. Moreover, the equation and hypotheses can be summarized as seen below and in Table 6.

$$FV_{\text{Standard}} = .200*ROA + .413*SIZE + .123*TECH$$

Table 6: Hypothesis summary

Hypothesis	Relationship	Evidence	Result
H1	ERM has a positive influence on FV.	Beta = .051 (t-Value = 1.003, Sig = .317)	Not supported
H2	ROA has a positive influence on FV.	Beta = .200 (t-Value = 3.885, Sig = .000)	Supported
H3	SIZE has a positive influence on FV.	Beta = .413 (t-Value = 7.873, Sig = .000)	Supported
H4	LEV has a positive influence on FV.	Beta = -.009 (t-Value = -0.189, Sig = .850)	Not supported
H5	RATIO has a positive influence on FV.	Beta = .043 (t-Value = .838, Sig = .402)	Not supported
H6	Listed Company Group has a positive influence on FV (Only TECH group)	Beta = .123 (t-Value = 2.349, Sig = .019)	Supported
H7	COVID has a positive influence on FV.	Beta = -.006 (t-Value = -.127, Sig = .899)	Not supported

5. Conclusions and Discussion

Based on the research objectives, the conclusions are as follows:

- 1) The level of EMR of the companies in the SET100 group listed on the stock market of Thailand

The objective of this research was to study the level of the Enterprise Risk Management Reporting (ERM). This study used secondary data in order to collect the ERM data with textual analysis and a word counting process and obtained the total number of a word or phrase that appeared in the reports in the 56-1 ONE REPORT form comprising the use of the method of counting the word “risk” (in Thai) covering “Strategic Risk”, “Operational Risk”, “Financial and Reporting Risk”, “Relevant Compliance”, and Regulatory Risk”, respectively, that appeared in the 56-1 ONE REPORT forms obtained from the source, which is www.set.or.th.

With regard to FV (dependent variable), calculations from the average trading price data seven days before and after (15 days total) of the day of the announcement of the report were used, and the data of the control variables that are related with business activities were collected from the data source <https://www.setsmart.com>, which is the data that are related with securities in the past. The data collection used purposive sampling with the following conditions: (1) the time period of the reporting of 2017–2021, (2) companies that do not have day of the fiscal period end date on the 31st day of December of every year, and (3) companies that are not within the industry groups Financials and Consumer Products. The search for data found 74 sample companies and obtained the 56-1 ONE REPORTS totaling 370 sample reports.

Analysis was conducted using textual analysis and word counting together with descriptive statistics in order to study the level of EMR. It was found that the ERM levels of the group of listed companies of the SET100 from 2017 to 2021, based on the report of the average level yearly of the total number of the word “risk” in ERM, were identified in the following groups: the INDUS group mean = 6,290 was the highest, followed by the AGRO group mean = 4,029.00, the PROPCON group mean = 3,904.40, the RESOURC group mean = 3,784.41, the SERVICE group mean = 3,498.88 and the TECH mean group = 3,437.94, respectively. This is due to the various industries having the levels of risk management reporting that are different.

2) From the objective to study the influence of EMR on FV of the businesses that are companies in the group listed on the SET100 stock market of Thailand, the results of the MRA test on the relationships studied did not have the data that is sufficient to conclude support regarding a positive influence of ERM on FV according to the research objectives. This result is a possibility that is in line with the research of Tan and Lee (2022), who stated that ERM in the various reports and the process of the Business Continuity Plan (BCP) has occurred already, causing risk management to be commonly found as reporting only with the possibility of adding or consideration of the guidelines for ERM. With regard to Maizatulkama et al. (2015), it was found that the disclosure of data and the impacts of ERM of the organization are often only voluntary, causing the administrators of various organizations that face risk to attempt to avoid negative effects on the organization and to not have an impact on FV. This is in accordance with Iswajuni et al. (2018), and it is possible according to the conclusions of Power (2004, 2009), which explain that ERM, although numerous studies indicate its necessity in management, includes practices that can range from the universal to the intangible risk management.

3) The research results support the hypothesis that ROA has a positive influence on FV (H2) and SIZE has a positive influence on FV (H3), in which it can possibly be explained that large companies (SET100) have stronger financial and investment capability than small companies, resulting in FV that has a higher value (Lim-U-Sanno et al., 2023; Bataineh, 2021; Bustani et al., 2021; Maha Martabar et al., 2024). Regarding the reason that companies have better ROA, it may be due to providing motivation to the investors, resulting in a willingness to invest, which causes the FV to increase accordingly (Sirui, 2024; Iswajuni et al., 2018). Additionally, the fact that the listed company group of TECH has a positive influence on FV (H6) may possibly be due to the time period in which the pandemic and the move toward giving more importance to technology occurred (Bataineh, 2021; Lotto, 2020; Lim-U-Sanno et al., 2023).

4) The research results did not support (rejected) the hypotheses that LEV has a positive influence on FV (H4), RATIO has a positive influence on FV (H5), and COVID has a positive influence on FV (H7). This is possibly due to the fluctuations of COVID-19 in which companies were facing uncertainty and many other risks that had stronger impacts, causing it to not be possible to reach a conclusion regarding the impacts on FV during that time period (Abbasi, 2024; Khunkaew et al., 2021; Yu & Xiao, 2024).

Limitations and future directions

1. This study has limitations concerning the continuity of the year in which changes occurred due to the COVID-19 crisis, which caused the results of the testing of several of the hypotheses to possibly not be able to be summarized. Therefore, the study should be repeated during a period of time that does not have changes occurring throughout a crisis again.

2. This study of ERM selected as the sample the SET100, which is the major principle organization of the markets and is seen as having risk management that is effective. Thus, if the focus is on a sample group that includes SME or research on the group "mai" (Market for Alternative Investment) or in other contexts, it may possibly provide additional explanation in further detail.

3. In future studies, there should be a change of the method in the measurement of ERM values by using other methods, which may provide results in the research findings that differ from those of this study.

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