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THE EFFECT OF ENTERPRISE RISK MANAGEMENT AND FIRM FINANCIAL PERFORMANCE: EMPIRICAL STUDY ON MANUFACTURING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

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ABSTRACT

The purpose of this study is to analyze the effect of enterprise risk management on firm financial performance. Those factors include risk committee, risk map, COSO and ISO framework.

This study is done quantitatively. Secondary data is collected through annual report, Bloomberg Finance Laboratories and IDX website using purposive sampling. The population of this research is manufacturing companies as listed on IDX around 2018-2018 with the total of samples are 74 companies. The obtained data then were examined by using multiple linear regression with SPSS 25 software.

The results of the study indicate the findings show that ISO framework positively affect the firm financial performance while risk committee, risk map and COSO framework does not significantly affect the firm financial performance.

Keywords: enterprise risk management, risk committee, risk map, COSO, ISO, manufacturing companies

INTRODUCTION

The industrial sector is one sector that plays an important role in the economy of a country. In the Indonesian context, the manufacturing industry sector has shown a positive trend. Data from the Nikkei Market report show that manufacturing companies are currently performing well which is stated in the Purchasing Manager Index (PMI) report. According to PMI, manufacturing in Indonesia is at a growing with the value of the Indonesian manufacturing industry in February 2018 was over 50, to be more exact 51.4 (Ichsan et al., 2021).

The improved performance of a sector such as the industrial sector indicates that companies in the industry perform well. Good performance indicates the condition of the company to manage all company resources efficiently. On the contrary, the industry that does not provide good performance is potentially said as an industry that is not efficient in managing all its assets (Al-Matari et al., 2014; Maher & Andersson, 1999).

With the advancement of economic globalization, businesses are experiencing dual rivalry and difficulties from within and outside the country. Businesses must be able to swiftly adjust to changes in the economic environment in order to adapt, both at home and abroad to extend the operation scale, gain market share, and maximize enterprise value. Financial risk is unavoidable in the process of financial activity. An in-depth understanding of the origins of financial hazards as well as effective methods to minimize financial risk while it is still controllable, are critical (Fang, 2016).

Since the commencement of the industrial revolution, risk management has been a focal point for financial aficionados (Dima & Orzea, 2014). Risk management has an impact on decision-making and corporate governance. Recent financial crises highlight the

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need of risk management measures for deposit money banks. Financial collapse is not a new issue, but the speed with which firms have fallen into difficulties in recent years is. Another case as an example is Toshiba's CEO who recently resigned in the wake of a $1.2 billion profits management scandal that spanned six years. Microsoft, the software behemoth, reported a $3.2 billion loss in the second quarter. Despite the fact that Apple's second-quarter profits increased by $10.5 billion, the company's stock price fell by 7% (Yahaya et al., 2015).

Traditionally risk management procedures were part of the audit committee's responsibilities. Owing to large regulatory reforms a complicated risk environment, claimed many functions, and big scandals where it leads to separate risk management duties and establish an independent committee (Adabenege et al., 2015). According to research, establishing a separate risk committee allows organizations to perform better and lessen agency concerns when compared to the full board. This is why firms with complicated structures, high agency costs, high leverage, size, or risk structure benefit from having distinct riskcommittees (Elamer & Benyazid, 2018).

Many manufacturing companies form an independent risk committee to handle tasks such as recommending risk appetite and risk limits, establishing limit breaks and mitigation procedures, reviewing risk profiles and risk monitoring, receiving and reviewing risk issue reports, stress testing scenarios, and reviewing, updating, and accepting risk policy changes (Battaglia et al., 2014; BCBS, 2015)

Risk management has traditionally been divided into 'silos,' as firms attempt to organize their activities into functional divisions in order to make effective choices, ERM was developed as a response to the drawbacks of a portfolio-wide silo-based approach to risk management (Otero González et al., 2020c). Mcshane (2018) provides a historical overview of risk management research and practice, as well as an explanation of the fundamental differences between traditional risk management and ERM. This led to ERM denotes a transition in risk management from a fragmented, restricted strategy to an integrated, long-term, and broad approach.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

This study examined the effect of enterprise risk management and firm financial performance, focusing on four aspects risk committee, risk map, COSO, and ISO. Risk committee which is one of the primary board committees that may raise awareness about the importance of risk management and control. Under the supervision of corporate governance, the risk committee has a risk control system that allows the business to regulate various risk elements (Hines & Peters, 2015). Risk map is to assess and prioritize risks in order for them to be managed within specified tolerance levels without being too regulated or missing out on opportunities (COSO, 2021). COSO Framework is a joint effort by five non-profit organizations in the private sector to provide a framework and guidelines for risk management, internal control, and fraud prevention. ISO is an abbreviation for the International Organization for Standardization, which is located in Switzerland. The ISO creates rules and standards to help in tasks for practically all items that people use, including rules and standards governing how things are manufactured and how quality control tests should be conducted (Mitnick, 2013).

The theoretical framework predicated on two fundamental assumptions about agents which are effort aversion and risk aversion. Agents are said to have their own aims, which are not always the same as the principal. Because agents have a tendency to pursue their own interests at the expense of the principal's, the principle receives less effort from

the agent than he would like. This is known as effort aversion. Agents are often seen to be riskier than principals (Pepper & Gore, 2015).

Risk committees are critical to a company's success or failure. However, in most nations throughout the globe, risk monitoring has historically been one of the audit committee's and board of directors' responsibilities, which has caused some misunderstanding. Previous research has shown two contradicting conclusions. For starters, including a risk committee into the organizational structure will boost the company's financial performance (Jia & Bradbury, 2020). Second, organizations with a separate risk committee will experience communication issues and internal disagreements, resulting in lower financial performance (Elamer & Benyazid, 2018). The hypothesis that can be formulated based on the explanation is:

H1: Risk Committee Positively Influence Firm Financial Performance

A good risk map is essential in every firm since return and risk are intricately connected, which means that raising one will always increase the other, and vice versa. The manufacturing sector understands that an institution should neither conduct business in a way that exposes it to needless risk, nor should it absorb risk that can be successfully transferred to other participants. Instead, it should only deal with risks at the corporate level if they can be managed more efficiently there than by the market or their owners in their personal portfolios. To summarize, it should only assume risks that are exclusive to the bank's services (Otero González et al., 2020c).

H2: Company's Risk Map Positively Influence Firm Financial Performance

COSO expects management to be able to provide more reliable financial and management reports, boost compliance with laws and regulations, and improve operational efficiency and effectiveness, therefore achieving and preserving a company's fundamental objectives (COSO, 2004; Saputra & Sudarmojo, 2017). In addition, investors also are closely examining public firms' performance. By implementing the 2013 COSO framework, your firm will have a more effective set of risk management procedures, increasing its appeal to potential investors and enhancing its readiness for an IPO. The application of COSO framework principles in an Indonesian firm will demonstrate the adaptability of the COSO framework to Indonesian enterprises. COSO predicts that by implementing these control components, management will be able to produce more reliable financial and management reports, improve compliance with laws and regulations, and improve the efficiency and effectiveness of operations, thereby acquiring and maintaining a company's primary objectives (Saputra & Sudarmojo, 2017).

H3: COSO Framework Implementation Positively Influence Firm Financial Performance

ISO 31000 as risk management must be used to manage risk in a firm. Risk management is a systematic application of management approach to identify and regulate risk utilization in order to minimize losses caused by failure to meet established objectives (Mariana, 2017; Moktadir & Ali, 2018; Rilyani et al., 2015). Risk refers to the possibility of the organization failing to meet its strategic objectives. The ISO 31000 standard outlines the key obligations of businesses in risk management area, including developing a risk management policy, informing diverse stakeholders of its benefits, and ensuring that adequate resources are available. The documentation for ISO 31000 presents a systematic and complete approach that could assist avoid major mistakes, particularly when preparing for crisis preventive and management methods. From this vantage point, organizations and managers may benefit from the management framework offered by ISO 31000 in a number of ways (Carole & Olivier, 2012).

H4: ISO 31000 Framework Implementation Positively Influence Firm Financial Performance

RESEARCH METHOD

This study is a quantitative and uses three variables. The research variables were divided into 2 (two) types, namely the dependent variable, the independent variable and the moderating variable. The dependent variable used is the firm financial performance (Y). The independent variables used are derived from the determinants of Enterprise Risk Management that proxied through Risk Committee (X1), Risk Map (X2), COSO Framework Implementation (X3) and ISO 31000 Framework Implementation (X4).

The goal of this study is to put the firm's financial performance to the test as the dependent variable. Firm performance is a systematic effort made by a corporation to examine the efficiency and effectiveness of its activities carried out over a certain time period. Return on Asset is used to measure financial performance in this study. ROA is a profitability ratio that measures a company's capacity to create profits with its current capital. According to Gamayuni (2016), ROA has a favorable and significant influence on business performance.

The independent variables in this research are based on the study which have been conducted before by (Gordon et al., 2009; Otero González et al., 2020c; Songling et al., 2018) which consist of enterprise risk management that proxied through risk committee, risk map, COSO framework implementation, ISO 31000 framework implementation and firm financial performance. The existence of a risk committee is measured using a dummy variable, where companies that disclose the existence of RMC (either incorporated with the Audit Committee or separately from the Audit Committee) are given a value of one (1), while are given a value of zero (0) if the company does not disclose the existence of a risk committee. risk committee in its annual report. In this study, the presence of a company's risk map will be used to assess its risk map. Whereas companies that offer their risk maps will be assigned a rating of one (1), companies that do not present their risk maps will be assigned a value of zero (0). COSO Framework will be measured in this study by tracking COSO Framework. Whereas companies that utilize COSO as a framework for risk management will be assigned a rating of one (1), companies that do not use COSO as a framework for risk management will be assigned a value of zero (0). The ISO Framework will be measured in this study through the tracking of the ISO 31000 Framework. Whereas companies that utilize ISO as a framework for risk management will be assigned a rating of one (1), companies that do not use ISO as a framework for risk management will be assigned a value of zero (0).

The population and sample for this study are manufacturing companies that were listed on the Indonesia Stock Exchange between 2016 and 2019. The population of this research was made up of manufacturing companies. Annual reports and financial statements will be treated as data. Purposive sampling is utilized, which is a sampling approach that fulfills the study's requirements, with the purpose of getting a sample that represents the criteria that have been established to support this research. The following are the criteria that can be chosen as the sample taken using the purposive sampling technique. First is manufacturing companies in Indonesia as listed on Indonesia Stock Exchange for 2018 – 2019. Second is manufacturing companies in Indonesia as listed on Indonesia Stock Exchange that publish annual reports around 2018 – 2019. Third is manufacturing companies that have all the data needed in research.

Researchers employ data collection tactics to obtain information from companies in the form of annual reports. Literature research is a method of collecting data that includes references from books, journals, and other written sources. Documentation and data gathering methods are available from Bloomberg Finance Laboratories and the Indonesia Stock Exchange (IDX), which may be found at www.idx.co.id.

Multiple linear regression is a statistical approach for determining the effect of several independent factors on a dependent variable. Multiple linear regressions were converted to moderated regressions in this study. The multiple linear regression analysis is formulated as follows:

$$PERF_{it} = \beta_0 + \beta_1 ERM_{it} + \beta_2 RC_{it} + \beta_3 CRM_{it} + \beta_4 COSO_{it} + \beta_5 ISO_{it} + \varepsilon_{it}$$

Description:
PERF : Company performance
ERM : Enterprise Risk Management
RC : Risk Committee
CRM : Company Risk Map
COSO : COSO
ISO : ISO

RESULT AND DISCUSSIONS

Description of the sample

Table 1
Sample that Qualified the Criteria

No.	Criteria	Total of Samples
1	Manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2018-2019	168
2	The number of samples that qualify the criteria	105
3	Outlier data	(31)
4	The number of samples after outliers	74

Table 1 shows the number of manufacturing firms that were listed on the Indonesia Stock Exchange (IDX) in 2018-2019, with a total of 168 companies and 105 samples matching the criteria. Data outliers are records that have excessive values in their category or vary in value from other records. Outlier samples are also known as odd samples because they have extreme values that differ from the rest of the data. As a result, the outlier sample must be subtracted from the test population. 31 outlier samples were detected in this analysis. The ultimate result of the sample was 74.

Table 2
Descriptive Statistical Analysis

	N	Range	Minimum	Maximum	Mean	Std. Dev
Financial Performance	74	-18,34	46,29	7,3901	7,3901	9,34308

Table 2 displays the findings of data processing for each variable in this study using descriptive statistical analysis. Each variable is given a minimum and maximum value, as well as a mean and standard deviation. Financial performance, the independent variable,

has a minimum value of -18.34 and a maximum value of 46.29. For sustainability reporting, the standard deviation and mean values are 7.3901 and 9.34308.

Table 3
Descriptive Statistical Analysis of ERM

Variabel Dummy	Category	Frequency	Percent	Valid Percent	Cumulative Percent
Risk Comitte	0	41	55,4	55,4	55,4
	1	33	44,6	44,6	100
	Total	**74**	**100**	**100**	
Risk Map	0	57	77	77	77
	1	17	23	23	100
	Total	**74**	**100**	**100**	
COSO	0	32	43,2	43,2	43,2
	1	42	56,8	56,8	100
	Total	**74**	**100**	**100**	
ISO	0	15	20,3	20,3	20,3
	1	59	79,7	79,7	100
	Total	**74**	**100**	**100**	

Table 3 shows numerous dependent variables that describe Enterprise Risk Management, including the risk committee, risk map, COSO, and ISO, which are quantified using a dummy variable. For 0 and 1, this variable has a minimum and maximum value. In contrast, the frequency of 0 value of risk committee is 41, while the frequency of 1 value is 33. Meanwhile, the valid proportion of value 0 is 55.4 percent, as is the cumulative percentage, and the 0 value is 44.6 percent, but the cumulative percentage is 100 percent. The risk map, like the other dependent variable, has a 0 value 57 times and a 1 value 17 times. This indicates that the legitimate percentages of 0 and 1 are 77 and 23 percent, respectively, but the cumulative percentage of 1 is 100 percent. COSO has a frequency of 0 for 32 and a frequency of 1 for 42. It is a valid percentage for both 0 and 1 for 43.2 and 56.8 percent. Meanwhile, the cumulative percent of a 0 value is 43.2 &, and a 1 value is also 100%. Last but not least, ISO, as the dependent variable, has a 0 value for 15 and a 1 value for 59, implying that the valid proportion of a 0 value is 20.3 percent and a 1 value is 79.7 percent, respectively, while the cumulative percentage of both a 0 and a 1 value is 20.3 percent and 100 percent.

Table 4
Individual Parameter Significance Test Result (t Test)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.479	.594		4.172	.000
	Risk Committee	-1.338	.590	-.297	-2.270	.026
	Risk Map	.647	.688	.121	.940	.350
	COSO	-.127	.551	-.028	-.230	.819
	ISO	1.629	.644	.292	2.529	.014

The equation formed from multiple regression analysis is as follows:
Financial Performance = 2,479 – 1,338(Risk Committee) + 0,647(Risk Map) – 0,127(COSO) + 1,629(ISO)

H1: The risk committee has an impact on business financial performance
As indicated in the table of results with the independent variable, namely financial performance, the Risk Committee has no impact since the t count = -2.270 (absolute value = 2.270) is bigger than the t table = 1.995 and the significance value is 0.026 or less than 0.0. As a result of the test, the first hypothesis is rejected. This study found that risk committees had a negative influence on corporate financial performance, hence rejecting the premise. The findings of this study are comparable to those of Benyazid (2018), Battaglia et al. (2014) and Zemzem and Kacem (2014). This negative link may be explained by agency theory, which posits that the knowledge asymmetry or gap that may arise as a result of the establishment of a separate risk committee can lead to communication issues and, as a result, conflicts. As a result, the study's findings may be explained in light of Hines and Peters' (2015) belief that having a risk committee serves a symbolic purpose by notifying shareholders that proper risk management steps are being performed. Financial performance measurements like ROA do not reflect the risk committee's positive impact on the firm's financial success. Risk committee is not a one-size-fits-all solution, but for businesses with unique circumstances, a separate risk committee of the board may be a better match. As a result, one of the most important actions adopted by the corporate governance system in the manufacturing sector is the formation of a specialist risk committee.

H2: Risk map have an impact on business financial performance
The risk map has no effect on financial performance because the t count value is 0.940, which is less than the t table value of 1.995, and the significance value is 0.350, which is more than 0.05. The second hypothesis, on the other hand, has been debunked: the risk map improves firm financial performance. Ineffective management may be caused by an ineffective risk map, according to agency theory; management frequently depends on particular data points, such as a single incidence, rather than the complete range of probable loss events. Management, on the other hand, may still analyze the risk using heat maps, which often result in two recommendations: do nothing and do something. One of the most common errors that management does is doing a risk assessment without a clear procedure in place. Instead they will gather a group of people to go through a certain procedure, for example, and have everyone check for potential hazards or threats. While

this is a useful method for detecting potential problems, it is insufficient for reaping the full benefits of a scheduled operation. A validated risk assessment approach can assist you in completely analyzing potential hazards, helping you to avoid neglecting any challenges. Another reason risk assessments fail is if they are conducted at the incorrect time.

H3: The application of the COSO framework has an impact on business financial performance

According to the third hypothesis, the COSO framework has a favorable influence on business financial performance. The findings of this analysis of the third hypothesis, which led to its rejection. COSO has no effect on financial performance since the t count value is -0.230, less than the t table value of 1.995, and the significance value is 0.819, more than 0.05. The COSO matrices are based on abstract business process models that lack detailed information on the systems or people involved. In reality, a basic job like "raise a bill" may be distributed among a half- dozen computer systems and a myriad of user interfaces. There is plenty of room for missing controls, which the COSO matrices do not reveal. Aside from that, there is no consistent structure for setting objectives or verifying that they are met. Second, while controls are indicated on the matrix, not all of them are reported, and not all of them are mentioned just once. Because they manage various goals, many controls will appear many times. In practice, it is common to encounter the same control with many names. De-duplication is a difficult task objective (Rilyani et al., 2015). Third, because of the duplication, individuals are less likely to jot down a control every time it is associated with a goal or danger. As a result, the scope of control is usually exaggerated.

H4: ISO 31000 influence firm financial performance

According to the third hypothesis, the ISO framework has a favorable influence on corporate financial performance (H4). The findings of this research, ISO 31000 framework implementation has influence Firm Financial Performance because the value of t count = 2.529 which is greater than t table = 1.995 and also the significance value is 0.014 or less than 0.05. That is, the more the adoption of the ISO 31000 standard, the higher the firm's financial performance. Furthermore, this suggests that a better firm's financial performance would most likely lead to the implementation of the ISO 31000 framework. The Framework part, which has major links to governance and decision- making and is backed by agency theory, is centered on leadership and dedication. It focuses on integrating, planning, implementing, assessing, and improving risk management throughout the organization, as one would expect from a quality standard. ISO 31000 is "essential to all businesses, regardless of kind, size, activity, or location," according to the International Standards Organization, and "covers all types of risk." It was created in collaboration with a wide variety of stakeholders and is designed for use by anybody who manages risks, not only professional risk managers. It mixes risk mechanics (process stages) with the commercial necessity of raising risk to the level of strategy and objectives. Raising the degree of risk to the level of strategy and objectives is a business need. ISO 31000 is more of a set of guidelines than a certification structure.

CONCLUSION

Based on the results of research and analysis, the conclusions of this study are as follows. First, the result of the first hypothesis (H1) indicates that risk committee positively influence firm financial performance. This hypothesis is rejected. Company will likely have a lower financial performance if the risk committee is high. Thus, the outcome of the second hypothesis (H2) shows that risk map positively influences firm financial performance. This hypothesis is rejected. The higher risk map implementation, the lower the firm financial performance. Meanwhile, the outcome of the third hypothesis (H3) shows that COSO framework implementation positively influence firm financial performance. This hypothesis is rejected. The more COSO implementation in a company,

the lower the firm financial performance. The fourth hypothesis (H4) demonstrates that ISO 31000 framework implementation positively influences firm financial performance. This hypothesis is accepted. The better ISO 31000 implementation will likely follow by the higher firm financial performance. Based on the constraints indicated above, future research is likely to broaden the sample size and employ an interview technique to show in greater depth how and why enterprise risk management affects business financial.

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