Global Financial Accounting Journal, Vol. 07, No. 02, October 2023
ISSN: 2655-836X
https://journal.uib.ac.id/index.php/gfa

Research Paper

THE EFFECT OF ENTERPRISE RISK MANAGEMENT ON FINANCIAL PERFORMANCE AND FIRM VALUE: THE ROLE OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE PERFORMANCE

Factrisia Lestari[1], Ria Karina[2*], Ivone[3]

[1,2,3] Accounting, Business and Management, Batam International University, Batam, Indonesia
* Corresponding Author: ria@uib.ac.id[2]

ABSTRACT

Purpose - Enterprise Risk Management has a crucial role in achieving long-term financial goals and increasing the value of the company. In addition, the focus on environmental, social and governance (ESG) performance is also increasing in business practices and investment decisions. The purpose of this research is to analyze the relationship between corporate risk management with financial performance and corporate value. In addition, this research also aims to determine the role of ESG performance in this relationship.

Research Method - Financial Data is taken from the company's public report listed on the IDX for the period 2017-2021a using purposive sampling method, while ESG performance information is collected from sustainability reports and available ESG data. Panel regression analysis is used to examine the relationship between corporate risk management, financial performance and corporate value.

Findings – The results showed that ERM significantly positive effect on financial performance and no significant effect on the value of the company. This research also found that the effect of Enterprise Risk Management on financial performance moderated by ESG has a significant negative effect and the effect of Enterprise Risk Management on firm value moderated by ESG has no significant effect.

Implication – Previous research has not conducted an empirical investigation into how ESG moderation affects how ERM affects a company's performance and values. These findings have significant ramifications for businesses, as they indicate that in order to gain a competitive edge, they must examine the numerous risks and opportunities related to ESG.

Keywords: Enterprise risk management, financial performance, firm value, environmental performance, social performance, corporate governance, ESG, panel regression

JEL code: G32

Article History	DOI : http://dx.doi.org/10.37253/gfa.v7i2.8706
Received: 30 November 2023 Revised : 14 December 2023 Accepted: 15 December 2023	Web : https://journal.uib.ac.id/index.php/gfa/issue/view/174
Citation Lestari, F., Karina, R., & Ivone. (2023). The effect of enterprise risk management on financial performance and firm value: the role of environmental, social and governance performance. *Global Financial Accounting Journal*, *7*(2), 213-229. doi:10.37253/gfa.v7i2.8706	

INTRODUCTION

In the modern business environment, enterprise risk management has become a top priority for organizations looking to cope with the uncertainty and complexity of the business environment. Enterprise risk management is a strategy used to manage and assess all risks in a business (Faisal & Hasan, 2020). The emergence and popularity of ERM occurs as a response to rapid changes due to globalization in organizations to manage risk comprehensively. The importance of this has increased significantly in recent years due to a series of corporate scams, financial scandals, increasingly complex risks and pressure from regulators (Lechner & Gatzert, 2018). These factors include the company's impact on the environment, social engagement, and good corporate governance. The first aspect, namely the environment, concerns the evaluation of the footprint. In general, the system implemented by the company includes measuring the salaries of executives, who is on the board, whether shareholders have the right to vote and how the company conducts audits and prevents bribery and corruption (Suma Anio Lui Alamsyah, 2023).

This study addresses the issue of how ERM influences firm value and financial performance while accounting for ESG performance. Enterprise risk management (ERM), which identifies, measures, and manages risks—including those connected to sustainability—plays a significant role in the implementation of sustainability in an organization or business. According to (Shad et al., 2019). Additionally, it can guarantee the sustainability of the company, boost productivity, spur economic expansion, and boost stakeholder trust in the enterprise (Shad et al., 2019). Business executives can benefit from the study's practical recommendations on how to apply ERM effectively and include ESG considerations into their overall business plan. Consequently, the purpose of this research is to close the knowledge gap and determine how ESG performance affects the connection between.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

According to (Jensen & Meckling, 1976), agency theory refers to a contract in which one or more individuals (principal) are selected by another individual (agent) to carry out a service on their behalf and grant the agent the authority to decide what is best for the principal. The agent may operate independently of the principal's interests due to the differences in duty between the main and the agent. A conflict of interest may result from these disagreements. In order to provide transparency and reduce conflicts resulting from agency issues, management (the agent) should report the company's operations to the principle.

Stakeholder theory is a strategic issue that pertains to how businesses manage their relationships with stakeholders (Bani-Khalid & Kouhy, 2017). As such, the business must take this into consideration and offer feedback to interested parties, as its existence can impact or be influenced by policies and is implemented by the business in the course of conducting its business. Stakeholders in the business world are crucial to controlling an organization's business environment. They encompass a wide range of stakeholders who have an interest in the company's performance, in addition to shareholders, including staff members, clients, suppliers, and the local community. According to the resource view theory, businesses can obtain a competitive edge by depending on resources that can move.

According to resource view theory (Barney et al., 2001), businesses can obtain a competitive edge by depending on resources that can help them transition to sustainable operations. As a result, it can be claimed that an organization using ERM as a strategy can maximize its competitive advantage as the organization has effective risk management. ESG is a blend of external and internal elements that might influence a company's value and financial performance to make it more likely to be successful. Good resources can aid businesses in enhancing the effectiveness and performance of their operations (Barney, 1991).

A psychological bias towards an individual or group of individuals who are highly susceptible to environmental symptoms is known as the legitimacy theory (Silvia Dewiyanti, S.E., M.Si., Ak., CA., CSRA, 2021). According to this theory, an organization that can follow through and function in line with socially acceptable expectations and values will win the confidence and support of its stakeholders. Comparably, businesses ought to demonstrate their ESG commitments and reduce risks in a way that is deemed acceptable by the public or other organizations through their annual reports. Additionally, it may inspire investors to make certain choices.

Hypothesis Development

The Enterprise Risk Management on Financial Performance

The Enterprise Risk Management on Firm Value

The process of deciding on the overall business strategy and operations that are impacted by the management, board of directors, and other staff members of an organization that is intended to detect and control risks is known as enterprise risk management. Risk is consistent with a willingness to assume risk in order to achieve a reasonable level of assurance regarding the goals of the entity (Commitee of Sponsoring Organizations of The Treadway Commission, 2017). This interpretation of ERM is likewise subjective and contingent upon the viewpoint of every group. ERM also refers to a broad concept, which is the management of risks that may arise during business operations in order to decide what steps should be taken by the organization. Additionally, ERM makes sure that risks are minimized or nonexistent, ensuring that the business's.

An effective ERM will also positively affect investor capital. Stakeholder theory dictates that the business considers all of its stakeholders and shareholders since they have the potential to have a direct or indirect impact on the business's operations (Schaltegger et al., 2019). Enhancing the financial performance and overall value of a company is its primary goal. Elevated risk pressure will have a significant impact on the company's value growth. Enterprise risk is reduced and performance is improved in businesses with sophisticated ERM systems (Florio & Leoni, 2017). This demonstrates how ERM systems can lower direct and indirect risk costs while increasing the precision of strategic and operational decisions.

Because they can assess the company's future prospects by reviewing the risk management information disclosed, investors see this as a positive signal. Investors can reduce risk by using ERM as well. The findings and applications of earlier research by (Iswajuni et al., 2018) and (Suardi & Werastuti, 2019) also indicate that the financial performance and firm value of the company are positively impacted by risk management practices. Consequently, investor confidence is also influenced by improved risk management and the application of enterprise risk management (ERM) in a business. Thus, giving rise to the first hypothetical and the second is as follows:

H1 ERM has a positive effect on Financial Performance.

H2 ERM positively effect on Firm Value.

The Effect of Enterprise Risk Management on Financial Performance Moderated by ESG

The Effect of Enterprise Risk Management on Firm Value Moderated by ESG

Based on the theories of stakeholder and legitimacy, business organizations need to understand the norms and values of the society in which they operate in order to establish credibility with the local community and satisfy its stakeholders. Stakeholder theory states that one of the business practices that may affect stakeholders outside the organization is ESG reporting. Environmental, social, and governance (ESG) performance moderates the impact of enterprise risk management on financial performance and firm value. Businesses that concentrate on enhancing ESG standards ought to make sure they can effectively manage business risks while satisfying stakeholder expectations. The issues surrounding ESG give rise to business risks.

There are numerous detrimental effects on the environment, including waste pollution, climate change, and environmental harm. The reason behind the decrease in financial performance, despite the company's environmental efforts, is the underutilization of environmental disclosure data by stakeholders and investors. However, research (Zahara, 2022)demonstrates that a company's performance is positively and significantly impacted by its environmental performance. From a social perspective, there is a great deal of risk to joblessness, income inequality, corporate ethics, and workplace safety. On the other hand, the statement exhibits an inversely proportional relationship when one considers the findings of studies conducted by (Fatemi et al., 2015) and (Malik, 2015). The findings of this investigation are in line with earlier.

In addition, there are concerns about executive compensation, business ethics, bribery, and corruption from a governance standpoint. The research findings by (Murashima, 2020)offer compelling proof that businesses have an impact on their financial performance. There is trustworthy information available regarding the company's management system, which is an internal component that can enhance control effectiveness and lower potential risk for the business (Triyani et al., 2021). Companies can lower the level of corporate risk by minimizing internal conflicts through good governance, claim (Rezaee et al., 2020). Achieving good environmental performance will boost stakeholder trust. Companies can respond to the phases of ESG risk strategies with the assistance of ERM's significant role. COSO ERM 2017 was released.

First, the company's next steps and who is responsible for implementing enterprise risk management are determined by governance and culture. Internal cultures, including workload and existing structures, can be effectively realized in this way. The creation of future planning strategies is the second step in strategy and goal setting. Any strategy, even one that has been examined and approved by the company's leadership, carries some risk. Third, in order to increase the company's capabilities, it needs to be able to assess the risk and create alternative priority scaling strategies. The performance of the business will increase with a sound risk management plan. Fourth, evaluate and revise to identify risk factors that can be avoided or prevented in the future, and make necessary adjustments to guarantee that everything is carried out in compliance with the current order. The company's implementation of enterprise risk management and the requirement to create a report that fully explains the data linked to risk settlement are the fifth and final components. These actions are necessary to carry out corporate risk management on a regular and continuous basis. The aim of sustainable development, according to (Krisyadi & Elleen, 2020), is to satisfy the demand for greater focus on social and environmental issues. In order to accomplish this, a sustainability report was released to assess the degree of environmental protection of businesses, enabling investment in those that are remote from risks to the environment and society. The community's and other stakeholders' trust will grow once the business completes all tasks successfully. So it can give rise to the following hypothetical:

H3 The Effect of ERM on Financial Performance moderated by ESG has a significant positive effect.

H4 The Effect of ERM on Firm Value moderated by ESG has a significant positive effect.

RESEARCH METHODOLOGY

The industrial companies listed on the IDX for the period of 2017–2022 serve as the research's analytical units. The research methodology employed is the quantitative approach, which is grounded in positivist philosophy. Presenting the independent and dependent variables as well as many other variables used in this study is the goal of the quantitative research study. The author of this study presents an annual report for the years 2017–2022 using the time series data method. Purposive sampling was the method used for sampling. The companies that meet specific criteria in line with the study's objectives comprise the sample that was chosen and utilized for this research. This study's sampling criteria are:

1. From 2017 to 2021, the company was listed on the Indonesia Stock Exchange (IDX) for a period of five years.
2. From 2017 to 2021, the company had a comprehensive annual report or financial report data, and it was listed on the Indonesia Stock Exchange (IDX) for five years.
3. From 2017 to 2021, the company's full sustainability report data was available for five (five) years while it was listed on the Indonesia Stock Exchange (IDX).

The study's dependent variables are Return on Assets, or ROA, as a measure of financial performance, and firm value as assessed by Tobin's Q. Enterprise risk management (ERM) is the study's independent variable, and it is measured using AdvERM. Seven criteria total, broken down into three groups, are used to evaluate AdvERM: two of the criteria are related to governance and include the presence of the chief risk officer (CRO) and the risk committee (RiskCom); the other three groups are related to risk assessment and include the risk assessment method (RAmethod), level of risk assessment (RAlevel), and frequency of risk assessment (RAfreq) (Florio & Leoni, 2017) and the third assesses the application of the ERM Framework in two distinct ways by using ISO 31000 and the COSO ERM framework (Pérez-Cornejo et al., 2019). In the study, corporate risk management, or ERP, is a dummy variable. It meets seven requirements, which were previously mentioned. Variables are given values of 1 and 0 depending on whether or not they meet criteria.

Environmental, Social, and Governance Performance (ESG) data from Thomson Reuters are used as moderating variables in this study. A company with a low ESG risk value has a low ESG risk because it can effectively implement ESG. On the other hand, a high ESG score suggests that a company has not integrated ESG into its operations, prompting investors to reconsider all of their holdings in the business. The goal of the ESG score, according to (Thomson Reuters ESG Scores, 2017), is to measure transparently and impartially the relative ESG performance of a company on ten topics, such as emissions, environmental product innovation, human rights, shareholders, and so forth. As a result, the governance components of ERM and ESG measurement differ from one another.

The control variables in this study are the independent board, the percentage of independent board in a company; board size, number of board members; board meet, number of board meetings; size, total assets of the company and the last is leverage. Based on the research model to be applied in this study, the regression model to be tested in this study can be written as follows:

Models (1) and (2):

$$ROA = a_0 + a_1 AdvERM_{it} + a_2 ESG_{it} + a_3 BODind_{it} + a_4 BODmeet_{it} + a_5 BODsize_{it} + a_6 Leverage_{it} + a_7 Size_{it} + e_{it}$$

$$Tobin's\ Q = a_0 + a_1 AdvERM_{it} + a_2 ESG_{it} + a_3 BODind_{it} + a_4 BODmeet_{it} + a_5 BODsize_{it} + a_6 Leverage_{it} + a_7 Size_{it} + e_{it}$$

Models (3) and (4):

$ROA = a_0 + a_1 AdvERM_{it} + a_2 ESG_{it} + a_3 AdvERM*ESG_{it} + a_4 BODind_{it} + a_5 BODmeet_{it} + a_6 BODsize_{it} + a_7 Leverage_{it} + a_8 Size_{it} + e_{it}$

$Tobin's\ Q = a_0 + a_1 AdvERM_{it} + a_2 ESG_{it} + a_3 AdvERM*ESG_{it} + a_4 BODind_{it} + a_5 BODmeet_{it} + a_6 BODsize_{it} + a_7 Leverage_{it} + a_8 Size_{it} + e_{it}$

The following measures of dependent, independent, moderating and control variables will be used in this study:

Table 1. Variable Measurement

Variables	Measurement
ROA	Net income / total assets
Tobin's Q	(Equity market value + total liabilities) / total assets
ESG	GRI data 94 is used to calculate the environmental, social, and government performance disclosure scores. Moreover, from Thomson Reuters' ESG (Buallay, 2019)
Board Size	Many board members, of which 3 if the number of members is 5-10 people, 2 if 11-15 members and 1 if the board members are more than 15 people or less than 5 people (Florio & Leoni, 2017)
Board Meet	Number of board meetings: 3 if there are more than six times, 2 if there are 4-6 times and 1 if tthere are fewer than 4 (Florio & Leoni, 2017)
Board Independent	Proportion of independent directors on the board (Florio & Leoni, 2017)
Adv ERM	1 if the ERM score is at least 4 based on 7 components and 0 if otherwise (Pérez-Cornejo et al., 2019)
Size	Natural logarithm of total assets (Farrell & Gallagher, 2019)
Leverage	Total liabilities to total assets (Farrell & Gallagher, 2019)

RESULTS AND DISCUSSION

The findings of a large sample of descriptive statistics in this study, which included data from 250 companies, are shown in Chart 2. The first dependent variable is financial performance as determined by Return on Asset (ROA), and the value of PT Globe Kita Terang Tbk for the year 2019 is equal to -4.987, the highest and lowest value. The standard deviation is 0.5229 and the average return on assets (ROA) is -0.0329 as well. The firm value, which is the second dependent variable, is determined by Tobin's Q, with PT Gunawan Dianjaya Steel Tbk's 2018 value having the highest and lowest values of 0.0980. Tobin's Q has an average of 870.8324 and a standard deviation of 52517.335.

The enterprise risk management is an independent variable in this research as well as a dummy variable, which is worth 1 in companies that apply ERM and 0 if they do not apply ERM. Viewed from Table 3, there are 40 companies that use COSO ERM and 205 companies do not use COSO ERM, the rest are 5 unknown companies. There are moderation variables in this study, namely Environmental, Social, and Governance Performance (ESG). ESG uses GRI-environmental measurement, under Corporate Social Responsibility. In ESG (GRI-environment), the highest and lowest values are 26,000 and 1,000, the average ESG (GRI-environment) is 9.5920 and the standard deviation is 4.2248.

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	250	-4,7987	0,3929	-0,0361	0,5229
Tobin's Q	250	0,0980	81805,4984	870,8324	5251,7335
ERM COSO	250	0,0000	1,0000	0,1600	0,3673
Board Size	250	1,0000	3,0000	1,6520	0,9372
Board Meet	250	1,0000	3,0000	2,0160	0,2189
Board Independen	250	0,0000	0,8889	0,1086	0,1429
Size	250	19,4349	30,2351	25,2849	2,7113
Leverage	250	0,0337	90,9897	1,6107	8,5739
GRI - Lingkungan	250	1,0000	26,0000	9,5920	4,2248
ERM & GRI	250	0,0000	15,0000	1,5640	3,7883
Valid N (listwise)	250				

Note*: N= Amount of Company Data

Source: SPSS processed Data, 2023

The enterprise risk management is an independent variable in this research as well as a dummy variable, which is worth 1 in companies that apply ERM and 0 if they do not apply ERM. Viewed from Table 3, there are 40 companies that use COSO ERM and 205 companies do not use COSO ERM, the rest are 5 unknown companies. There are moderation variables in this study, namely Environmental, Social, and Governance Performance (ESG). ESG uses GRI-environmental measurement, under Corporate Social Responsibility. In ESG (GRI-environment), the highest and lowest values are 26,000 and 1,000, the average ESG (GRI-environment) is 9.5920 and the standard deviation is 4.2248.

Table 3. Descriptive Statistics of Dummy Variables

ERM COSO					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not using COSO	205	82	83,7	83,7
	Companies using COSO	40	16	16,3	100
	Total	245	98	100	
Missing	System	5	2		
Total		250	100		

Source: SPSS Processed Data, 2023

This study was conducted by testing outliers using SPSS application. The test used is SDR, that is, if it produces data smaller than -1.96 and greater than 1.96, it will be considered as outlier data. Outlier data test results with ROA variable as the first dependent variable as many as 13 Company data and the second dependent variable of two out of every 250 company data points is Tobin's Q variable. As a result, 237 data were examined following the outlier test in the ROA measurement as the first dependent variable, and up to 248 data were examined with outliers in the Tobin's Q measurement as the second dependent variable. A technique that combines cross-sectional and time series data is panel data regression. The panel regression test's findings are as follows:

Table 4. Chow Test Results on Dependent 1

Effects Test	Statistic	d.f.	Prob.
Cross-section F	6,556966	-48.182	0
Cross-section Chi-square	237,959556	48	0

Source: E-views Processed Data, 2023

Chart 4 presents the results of the probability value is < 0.05 then for the best model of the Chow test results are FEM and continue to the Hausman test.

Table 5. Hausman Test Results on Dependent 1

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8,287609	6	0,2178

Source*:* E-views Processed Data, 2023

In Chart 5, the optimal model is FEM if the value of prob is less than 0.05 and the best model is REM if the value of prob is greater than 0.05. Table 4's results indicate that the probability value is greater than 0.05, indicating that the REM model is the most suitable.

Table 6. Lagrange Test Result Dependent Multiplier 1

	Test Hypothesis		
	Cross-section	**Time**	**Both**
Breusch-Pagan	113.0465 0.0000	0.044615 -0.8327	113.0911 0.0000
Honda	10.63233 0.0000	0.211223 -0.4164	7.667552 0.0000
King-Wu	10.63233 0.0000	0.211223 -0.4164	3.153044 -0.0008
Standardized Honda	11.45220 0.0000	0.605119 -0.2726	3.510563 -0.0002
Standardized King-Wu	11.45220 0.0000	0.605119 -0.2726	0.587662 -0.2784
Gourieroux, et al.	--	--	113.0911 0.0000

Source: E-views Processed Data, 2023

In chart 6 shows the results of Breusch-Pagan with a probability value of <0.05 the best match model used is REM.

Table 7. Dependent Brake Test Result 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.20964	0.09436	2.22164	0.02730
ERM COSO	0.02054	0.01360	1.51016	0.13240
BOARD INDEPENDEN	0.03042	0.02849	1.06780	0.28670
BOARD MEET	-0.01796	0.02242	-0.80075	0.42410
BOARD SIZE	-0.00195	0.00714	-0.27319	0.78500
LEVERAGE	-0.06915	0.00705	-9.80916	0.00000
SIZE	-0.00433	0.00286	-1.51404	0.13140
Adjusted R-squared				0.30071
Prob(F-statistic)				0.00000

Source: E-views Processed Data, 2023

As a percentage of model suitability, or a value indicating the amount of the independent variable to explain the dependent variable or the degree to which the independent variable influences the dependent, Chart 7 displays the descriptive results of Adjusted R-squared. The dependent variable is explained by the independent variable in the research model by 30.07%, with the remaining 69.93% being influenced by unutilized variables.

Table 8. Chow Moderating Test Results 1

Effects Test	Statistic	d.f.	Prob.
Cross-section F	6,497446	-48.180	0
Cross-section Chi-square	238,249615	48	0

Source: E-views Processed Data, 2023

Chart 8 shows that the results of the probability value are <0.05, so the best model for the Chow test results is FEM and proceed to the Hausman test.

Table 9. Results of the Hausman Moderating Test 1

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	10,96687	8,00000	0,20360

Source: E-views Processed Data, 2023

Based on the results in chart 9, it shows that the results of the probability value are > 0.05, so the best model is REM.

Table 10. Moderating Lagrange Multiplier Test Results 1

	Test Hypothesis		
	Cross-section	**Time**	**Both**
Breusch-Pagan	106.8913 0	0.003093 -0.9556	106.8944 0
Honda	10.33883 0	0.055613 -0.4778	7.349978 0
King-Wu	10.33883 0	0.055613 -0.4778	2.922106 -0.0017
Standardized Honda	11.40103 0	0.428336 -0.3342	3.265458 -0.0005
Standardized King-Wu	11.40103 0	0.428336 -0.3342	0.360951 -0.3591
Gourieroux, et al.	--	--	106.8944 0

Source: E-views Processed Data, 2023

Chart 10 indicates that the best model to use is REM because the Breusch-Pagan results have a probability value of less than 0.05. Table 11 displays the Adjusted R-squared results, which indicate the model's percent fit or the degree to which the independent variable adequately captures the dependent variable or the impact of the independent variable on the dependent. A dependent variable of 30.18% can be obtained by the research model's independent variables, with the remaining 69.82% being influenced by variables not included in the model.

Table 11. Moderating Brake Test Results 1

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.2399	0.0967	2.4813	0.0138
ERM COSO	0.0627	0.0457	1.3719	0.1714
GRI LINGKUNGAN	-0.0013	0.0013	-1.0485	0.2955
ERM ESG	-0.0044	0.0045	-0.9788	0.3287
BOARD INDEPENDEN	0.0220	0.0289	0.7608	0.4476
BOARD MEET	-0.0172	0.0224	-0.7705	0.4418
BOARD SIZE	-0.0033	0.0072	-0.4622	0.6444
LEVERAGE	-0.0696	0.0071	-9.8340	0.0000
SIZE	-0.0050	0.0029	-1.7119	0.0883
Adjusted R-squared				0.3018
Prob(F-statistic)				0.0000

Source: E-views Processed Data, 2023

In chart 12 shows that the result of the probability value is < 0.05 for the best model of the results of the CHOW Test is FEM and will proceed to the Hausman test.

Table 12. Dependent Chow Test Results 2

Effects Test	Statistic	d.f.	Prob.
Cross-section F	9,6658	-49192,0000	0,0000
Cross-section Chi-square	308,3209	49,0000	0,0000

Source: E-views Processed Data, 2023

Table 13. Dependent Hausman Test Results 2

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16,8246	6,0000	0,0099

Source: E-views Processed Data, 2023

If the value of prob <0.05 is obtained in Chart 13, then FEM is the optimal model. When the probability value in Table 14 is less than 0.05, the FEM model is the best fit for the Chow test results, and the Hausman test is the next step.

Table14. Chow Moderating Test Results 2

Effects Test	Statistic	d.f.	Prob.
Cross-section F	9,3147	-49190,0000	0,0000
Cross-section Chi-square	303,6582	49,0000	0,0000

Source: E-views Processed Data, 2023

Judging from the results in table 15, it has a probability value <0.05, so the best model is FEM.

Table 15. Hausman Moderating Test Result 2

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16,82171	8,00000	0,03200

Source: E-views Processed Data, 2023

Additionally, a dependent variable is included in this study. If the test F part Probability (F-statistic) < 0.05, the independent variable will simultaneously or jointly affect the dependent variable. Additionally, the t-test results from this study include both independent and moderating variables.

Table 16. Dependent T Test Results 1 (Financial Performance (ROA))

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.1244	0.1134	1.0972	0.2736
ERM_COSO	0.1665	0.0746	2.2327	0.0265
BOARD_INDEPENDEN	0.0378	0.0541	0.6981	0.4858
BOARD_MEET	0.0112	0.0352	0.3171	0.7514
BOARD_SIZE	-0.0074	0.0090	-0.8159	0.4153
LEVERAGE	-0.0588	0.0010	-58.0691	0.0000
SIZE	-0.0044	0.0031	-1.4124	0.1591
GRI___LINGKUNGAN	0.0031	0.0019	1.6473	0.1008
ERM___GRI	-0.0164	0.0075	-2.1938	0.0292

Source: E-views Processed Data, 2023

Table 17. Dependent T Test Results 2 (Firm Value (Tobin's Q))

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7157,8700	4917,3930	1,4556	0,1468
ERM_COSO	917,4415	3233,5620	0,2837	0,7769
BOARD_INDEPENDEN	-2176,0710	2347,0400	-0,9272	0,3548
BOARD_MEET	26,1966	1525,5420	0,0172	0,9863
BOARD_SIZE	461,0981	392,0029	1,1763	0,2407
LEVERAGE	-2,9977	43,9197	-0,0683	0,9456
SIZE	-281,2603	135,2723	-2,0792	0,0387
GRI___LINGKUNGAN	35,1634	82,7362	0,4250	0,6712
ERM___GRI	-148,9370	323,5685	-0,4603	0,6457

Source: E-views Processed Data, 2023

Based on the results of the t test, the panel regression equation can be formed in this research model, namely:

$Y = 0.1244 + 0.1665X_1 + 0.0378$ BODind + 0.0112 BODmeet – 0.0074 BODsize – 0.0588 LEV – 0.0588 – 0.0044 SIZE + 0.0031 ESG/GRI + e

$Y = 7157,8700 + 917,4415X_2 –$ 2176,0710 BODind + 26,1966 BODmeet +461,0981 BODsize – 2,9977 LEV – 281,2603 SIZE + 35,1634 ESG + e

$Y = 0.1244 .1665X_1 +$ 0.0378 BODind + 0.0112 BODmeet – 0.0074 BODsize – 0.0588 LEV – 0.0588 – 0.0044 SIZE + 0.0031 ESG – 0.0164 ERM*ESG + e

$Y = 7157,8700 + 917,4415X_2 –$ 2176,0710 BODind + 26,1966 BODmeet +461,0981 BODsize – 2,9977 LEV – 281,2603 SIZE + 35,1634 ESG – 148,9370 ERM*ESG + e

H1 Enterprise Risk Management has a significant positive effect on financial performance

The probability value of the ERM variable is 0.0265, as shown in Chart 16, demonstrating the significant improvement in financial performance (ROA) that it brings about. Conversely, the leverage control variable has a probability value of 0.0000, a coefficient of -0.0588, and a significant negative correlation with financial performance (ROA). The degree to which an organization implements enterprise risk management correlates with the level of financial performance attained (ERM) in the business world. This is due to the fact that ERM will boost corporate profits by offering dependable risk management and sufficient risk policies to businesses that contribute to bettering their financial performance (Eckles et al., 2014). Furthermore, ERM will benefit the growth of shareholder confidence (Agustina & Baroroh, 2016). The study's findings align with those of (Alawattegama, 2018) and (Pagach & Warr, 2011). From the above analytical explanation, it is clear that hypothesis 1 is true.

H2 Enterprise Risk Management does not significantly affect the firm value

Chart 17 demonstrates that the firm value probability value of 0.7769 is not significantly impacted by enterprise risk management. and uses size as a control variable, which has a coefficient of -281.2603 and a probability value of 0.0387. Naturally, investors do not consider risk management information when making investment decisions. In order to prevent enterprise risk management from having an impact on raising the firm value, investors have more freedom to make decisions based on information about the company's financial performance and issues pertaining to its finances and operational activities. The study's findings align with the findings of (Emar & Ayem, 2020) and (Yolanda et al., 2018). The study's findings, however, contradict the findings of (Phan et al., 2020) and (Septyanto & Nugraha, 2021), which demonstrate the beneficial effects of enterprise risk management (ERM) on firm value. The above analytical explanation does not support hypothesis 2.

H3 The Effect of Enterprise Risk Management on Financial Performance moderated by ESG has a significant negative effect

Chart 16 explains that the probability value of the main variables in the model is enterprise risk management is 0.0265 and the probability value of environmental, social, and governance (ERM_GRI) is 0.0292 and the coefficient -0.0164. Thus, H3 is accepted. This is because investors take longer to implement ERM and ESG correctly so that positive results are realized. The results of the study are consistent with the research (Priandhana, 2022).

H4 The Effect of Enterprise Risk Management on Firm Value moderated by ESG has no significant effect

The probability values for ERM and ESG are 0.7769 and 0.6457, respectively, as shown in Chart 17. This makes the results more understandable and shows that enterprise risk management and firm value, which are moderated by ESG, do not significantly correlate. These findings are consistent with research by (Behl et al., 2021), which discovered that environmental performance has a large positive impact over the long run but a significant negative impact in the short term. Different opinions about environmental responsibility disclosure arise from contradictory findings. Furthermore, an enterprise's environmental performance is viewed as an expense. The social impact is thought to consist solely of higher spending. Furthermore, in line with the findings and conclusions of the studies conducted by (Behl et al., 2021), (Xaviera & Rahman, 2023), and (Williansyah & Meiliana, 2022).

Table 18. Coefficient of Determination Test Results

	Model 1 (financial performance)		Model 2 (firm value)		Model 3 (ERM – Financial Performance – ESG)		Model 4 (ERM – Firm Value – ESG)	
Variable	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**	**Coefficient**	**Probability**
C	-0,190115	0,391	8453,626	0,0011	-0,170342	0,4413	8433,71	0,0012
ERM COSO	0,023107	0,1446	154,4099	0,4092	0,052963	0,3172	745,3167	0,2449
GRI___LINGKUNGAN	--	--			-0,002417	0,1002	-5,70192	0,7482
ERM___GRI	--	--			-0,00321	0,5347	-59,98118	0,3318
BOARD SIZE	-0,003413	0,7451	571,9421	0	-0,004345	0,6794	558,9541	0
BOARD INDEPENDEN	0,052568	0,098	188,1058	0,6212	0,041933	0,1978	92,22043	0,8139
BOARD MEET	0,004364	0,8815	-550,9538	0,1187	0,007648	0,794	-515,1328	0,1471
SIZE	0,009481	0,1951	-307,3753	0,0003	0,009468	0,1939	-306,3089	0,0003
LEVERAGE	-0,059288	0	-0,915338	0,9206	-0,060045	0	2,895642	0,7718
Adj. R-Squared		0,769947		0,778935		0,77429		0,780278
Prob(F-statistic)		0		0		0		0

Source: E-views Processed Data, 2023

The four models will be described in Chart 14. According to the first model, the independent variable used can account for 76.99% of the enterprise risk management; however, other independent variables not included in the study's model form can account for 23.01% of the variance. The second model describes how the independent variable used can explain the probability value of the Adjusted R-Squared of 77.89%, whereas the remaining 22.11% can be explained by other independent variables that are not included in this research model.

The third model is called Adjusted R-squared, and it indicates the fit value or percentage of the model that indicates how well the independent variable (ERM) explains the moderation (ESG) and dependent variable (financial performance and firm value) as well as the extent to which the independent variable influences both. And the research model's non-zero independent variable is related to the remaining 22.58% of the dependent variable's moderation, leaving the independent variable's ability to explain the dependent variable and moderation at 77.42%.

The fourth and last model, the fit value or percentage, shows how much the independent variable affects both the moderator and the dependent variable, as well as how much it modifies or has an impact on both. Furthermore, the research model's independent variables account for 78.02% of the dependent variable's moderation, while independent variables that are not necessary for the model account for 21.98% of the remaining variance.

CONCLUSION AND SUGGESTION

This article examines how corporate value and financial performance are related, as well as how enterprise risk management uses environmental, social, and governance (ESG) performance (ERM). This study demonstrates how ERM improves firm value and financial performance. The findings demonstrate that businesses with successful ERM implementations frequently have stronger financial performance. This makes sense given that ERM assists businesses in recognizing, controlling, and reducing the risks they encounter, all of which can improve their financial performance.

The study also suggests that a key factor in enhancing the connection between ERM, financial performance, and firm value is the performance of the environmental, social, and governance (ESG) components. Businesses that effectively incorporate ESG considerations into their ERM procedures stand to gain from increased enterprise value and financial performance. Within the framework of corporate risk management practices, this study offers evidence in favor of the significance of taking environmental, social, and governance factors into account. When combined with ESG, ESG risk management can give a business a competitive edge and improve its value and financial performance.

However, bear in mind that this study's findings are correlational, so drawing inferences about a causal relationship is not possible. Furthermore, since this study takes into account ESG factors generally, there might be variations in how environmental, social, and governance performance affects the connection between ERM, financial performance, policies, and firm value depending on the industry or business setting. All things considered, this article offers a clearer illustration of how enterprise risk management (ERM) affects a company's financial performance and firm value, as well as the significance of taking ESG factors into account.

REFERENCES

Agustina, L., & Baroroh, N. (2016). The relationship between Enterprise Risk Management (ERM) and firm value mediated through the financial performance. *Review of Integrative Business and Economics Research*, *5*(1), 128–138.

Alawattegama, K. K. (2018). The Effect of Enterprise Risk Management (ERM) on Firm Performance: Evidence from the Diversified Industry of Sri Lanka. *Journal of Management Research*, *10*(1), 75. https://doi.org/10.5296/jmr.v10i1.12429

Bani-Khalid, T., & Kouhy, R. (2017). The Impact of National Contextual Factors on Corporate Social and Environmental Disclosure (CSED): The Perceptions of Jordanian Stakeholders Enterprise Resource Planning View project Credit Risk View project. *International Review of Management and Business Research*, *6*(2).

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, *17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Barney, J., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, *27*(6), 625–641. https://doi.org/10.1177/014920630102700601

Behl, A., Kumari, P. S. R., Makhija, H., & Sharma, D. (2021). Exploring the relationship of ESG score and firm value using cross - lagged panel analyses : case of the Indian energy sector. *Annals of Operations Research*, *0123456789*. https://doi.org/10.1007/s10479-021-04189-8

Commitee of Sponsoring Organizations of The Treadway Commission. (2017). Enterprise Risk Management Integrating with Strategy and Performance. *Commitee of Sponsoring Organizations of The Treadway Commission*, *I*(June), 1–16.

Eckles, D. L., Hoyt, R. E., & Miller, S. M. (2014). Reprint of: The impact of enterprise risk management on the marginal cost of reducing risk: Evidence from the insurance industry. *Journal of Banking and Finance*, *49*, 409–423. https://doi.org/10.1016/j.jbankfin.2014.10.006

Emar, A. E. S., & Ayem, S. (2020). Pengaruh Pengungkapan Enterprise Risk Management dan Pengungkapan Intellectual Capital Terhadap Nilai Perusahaan dengan Good Corporate Governance Sebagai Moderasi. *WACANA EKONOMI (Jurnal Ekonomi, Bisnis Dan Akuntansi)*, *19*(2), 79–90. https://doi.org/10.22225/we.19.2.1956.79-90

Faisal, M., & Hasan, N. N. (2020). Enterprise risk management and firm value: The case in emerging market. *International Journal of Innovation, Creativity and Change*, *6*, 272–286.

Fatemi, A., Fooladi, I., & Tehranian, H. (2015). Valuation effects of corporate social responsibility. *Journal of Banking and Finance*, *59*, 182–192. https://doi.org/10.1016/j.jbankfin.2015.04.028

Florio, C., & Leoni, G. (2017). Enterprise risk management and firm performance: The Italian case. *British Accounting Review*, *49*(1), 56–74. https://doi.org/10.1016/j.bar.2016.08.003

Iswajuni, I., Manasikana, A., & Soetedjo, S. (2018). The effect of enterprise risk management (ERM) on firm value in manufacturing companies listed on Indonesian Stock Exchange year 2010-2013. *Asian Journal of Accounting Research*, *3*(2), 224–235. https://doi.org/10.1108/AJAR-06-2018-0006

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. Fin. Econ. 305 (1976). *Economic Analysis of the Law*, *H.*

MECKLING Copyright © 2003 by Blackwell Publishing Ltd, 162–176.

Krisyadi, R., & Elleen, E. (2020). Analisis Pengaruh Karakteristik Perusahaan dan Tata Kelola Perusahaan terhadap Pengungkapan Sustainability Report. *Global Financial Accounting Journal*, *4*(1), 16. https://doi.org/10.37253/gfa.v4i1.753

Lechner, P., & Gatzert, N. (2018). Determinants and value of enterprise risk management: empirical evidence from Germany. *European Journal of Finance*, *24*(10), 867–887. https://doi.org/10.1080/1351847X.2017.1347100

Malik, M. (2015). Value-Enhancing Capabilities of CSR: A Brief Review of Contemporary Literature. *Journal of Business Ethics*, *127*(2), 419–438. https://doi.org/10.1007/s10551-014-2051-9

Murashima, M. (2020). Do investors' reactions to CSR-related news communication differ by shareholder? An empirical analysis from Japan. *Corporate Governance (Bingley)*, *20*(5), 781–796. https://doi.org/10.1108/CG-11-2019-0346

Pagach, D. P., & Warr, R. S. (2011). The Effects of Enterprise Risk Management on Firm Performance. *SSRN Electronic Journal*, 6–30. https://doi.org/10.2139/ssrn.1155218

Phan, T. D., Dang, T. H., Nguyen, T. D. T., Ngo, T. T. N., & Hoang, T. H. Le. (2020). The effect of enterprise risk management on firm value: Evidence from Vietnam industry listed enterprises. *Accounting*, *6*(4), 473–480. https://doi.org/10.5267/j.ac.2020.4.011

Priandhana, F. (2022). Pengaruh Risiko Environment Social and Governance Terhadap Kinerja Keuangan Perusahaan (Studi Pada Perusahaan Didalam Indeks IDXESGL). *Business Economic, Communication, and Social Sciences (BECOSS) Journal*, *4*(1), 59–63. https://doi.org/10.21512/becossjournal.v4i1.7797

Rezaee, Z., Alipour, M., Faraji, O., Ghanbari, M., & Jamshidinavid, B. (2020). Environmental disclosure quality and risk: the moderating effect of corporate governance. In *Sustainability Accounting, Management and Policy Journal* (Vol. 12, Issue 4). https://doi.org/10.1108/SAMPJ-10-2018-0269

Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business cases for sustainability: A stakeholder theory perspective. *Organization and Environment*, *32*(3), 191–212. https://doi.org/10.1177/1086026617722882

Septyanto, D., & Nugraha, I. M. (2021). The Influence of Enterprise Risk Management, Leverage, Firm Size and Profitability on Firm Value in Property and Real Estate Companies Listed on the Indonesian Stock Exchange in 2016-2018. *KnE Social Sciences*, *2021*, 663–680. https://doi.org/10.18502/kss.v5i5.8850

Shad, M. K., Lai, F. W., Fatt, C. L., Klemeš, J. J., & Bokhari, A. (2019). Integrating sustainability reporting into enterprise risk management and its relationship with business performance: A conceptual framework. *Journal of Cleaner Production*, *208*, 415–425. https://doi.org/10.1016/j.jclepro.2018.10.120

Silvia Dewiyanti, S.E., M.Si., Ak., CA., CSRA, cert. D. (2021). *Legitimacy Theory and Its Relationship to CSR*. 15 November. https://accounting.binus.ac.id/2021/11/15/legitimacy-theory-and-its-relationship-to-csr/

Suardi, I. G. . A. D. A. R., & Werastuti, D. N. S. (2019). Pengaruh Pengungkapan Enterprise Risk Management , Intellectual Capital, Corporate Social Responsibility, Dan Sustainability Report Terhadap Nilai Perusahaan. *Jurnal Bisnis Darmajaya*, *5*(2), 53–79.

Suma Anio Lui Alamsyah, S. A. (2023). *Memahami Perbedaan ESG dan Sustainability bagi Perusahaan*. 8 May 2023. https://accounting.binus.ac.id/2023/05/08/memahami-perbedaan-esg-dan-sustainability-bagi-perusahaan/

Thomson Reuters ESG Scores. (2017). Date of issue : March 2017. *Thomson Reuters EIKON*, *March*.

Triyani, A., Setyahuni, S. W., & Makwuna, F. D. (2021). Pengaruh Kinerja Non Keuangan (Environmental, Social, Governance) terhadap Resiko Investasi Perusahaan. *JURNAL AKUNTANSI DAN BISNIS : Jurnal Program Studi Akuntansi*, *7*(2), 155–165.

https://doi.org/10.31289/jab.v7i2.5602

Williansyah, F., & Meiliana, M. (2022). Kesulitan Keuangan: Efek Struktur Kepemilikan, Karakteristik Dewan Direksi, dan Indeks Tata Kelola Perusahaan. *Global Financial Accounting Journal*, *6*(2), 288. https://doi.org/10.37253/gfa.v6i2.6901

Xaviera, A., & Rahman, A. (2023). *PENGARUH KINERJA ESG TERHADAP NILAI PERUSAHAAN DENGAN SIKLUS HIDUP PERUSAHAAN SEBAGAI MODERASI : BUKTI DARI INDONESIA Pendahuluan*. *16*(2), 226–247.

Yolanda, Y., Ulum, I., & Setyawan, S. (2018). Enterprise Risk Management Dan Intellectual Capital Disclosure : Perspektif Investor. *Jurnal Reviu Akuntansi Dan Keuangan*, *8*(2), 187. https://doi.org/10.22219/jrak.v8i2.38

Zahara, F. (2022). Pengungkapan Kinerja Lingkungan Sebagai Mekanisme Peningkatan Kinerja untuk Menciptakan Nilai Perusahaan. *Owner*, *6*(4), 4284–4290. https://doi.org/10.33395/owner.v6i4.1086