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The Influence of Enterprise Risk Management (ERM) On Profitability, Cost of Debt, and Company Value: The Role Of Moderation of Environmental, Social, Governance (ESG) in Asean-5 Countries Period 2017-2021

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Abstract:

This study aims to determine the effect of Enterprise Risk Management (ERM) moderated by Environmental Social Governance (ESG) performance on profitability, cost of debt and firm value. This study sampled 148 companies in ASEAN-5 countries during the 2017-2021, with 740 observations. The hypothesis was tested using the Ordinary Least Square method and showed. It showed moderation increases the significance of ERM implementation on profitability, cost of debt and firm value. The study's results also found that the environmental and social pillars had a significant positive effect. In contrast, the governance pillar did not significantly affect profitability, debt costs and firm value. The findings in this study suggest that regulators make more comprehensive rules regarding the implementation of ERM and ESG.

Keywords: *ERM; ESG; Financial Performance; Corporate Value; Profitability; ASEAN-5*

1. Introduction

Industry competition is a fundamental concern for all companies, so companies need to mitigate threats and opportunities to increase profitability, reduce debt costs and increase company value (Zakaria, 2017; Laisikorn & Rompho, 2019; Shad et al., 2019; Saeidi et al., 2019). The application of the concept of risk management in companies is generally not well integrated, and is still focused on the risks of each division, creating problems within the company (Moeller, 2011). Based on this, it is necessary to implement a more structured and integrated risk management to improvemonitoring of the risk management system (Lundqvist, 2015).

ERM offers a more comprehensive approach to risk management than the traditional silo-based risk management perspective. With systematic and measurable procedures, implementing integrated risk management will help reduce company risk so that superior performance can be achieved (COSO, 2017).

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In recent years, most of the risks companies face have come from the Environmental Social Governance (ESG) issue. These problems occur because the use of natural resources is not in line with production activities, so it impacts environmental pollution, bribery, corruption, business ethics, etc. (Aziz et al., 2016a, 2016b; COSO and WBCSD, 2018). This statement is also supported by the World Economic Forum (2018). The Global Risks Report, shows that risks related to environmental or social issues, such as extreme weather, water crises, natural disasters, failures in climate change mitigation and adaptation, dominate the top risks for companies. With increasing environmental and social issues, the role of governance, such as increasing the effectiveness of internal control and cultural oversight to manage risk, is an important factor that must be considered.

ERM plays an important role in the company's sustainable development by identifying, measuring and managing risks, including those related to sustainability. This also ensures corporate sustainability, improves efficiency and economic growth and increases investor confidence.

Several studies have found that ESG disclosure has increased among public companies, due to efforts to engage stakeholders, respond to investor requests, build credibility, and react to crises and competition within each industry (Olsen et al., 2021). Implementing sustainability is a dynamic and nuanced process over time (Ioannou & Serafeim, 2019, P. 19). Corporations around the world are now voluntarily engaging in more ESG practices, indicating that companies are more likely to receive economic benefits from these activities (Yoon et al., 2018). The impact of ESG performance on company value and profitability has been discussed in business research and academic circles for several years. This is in line with the increasing interest in the issues of climate change, circular economy, and biodiversity, so research is beginning to examine the relationship between environmental performance and stock price performance.

Based on the ASEAN-Japan Center (2019) statement, environmental, social and governance (ESG) investments have gotten the world's attention and its power moving towards Asia, especially in ASEAN Member Countries. Concerning ESG investments originating from financial markets, it is a common belief that ESG investments are only for investors. finance. However, the ESG factor should be a priority for all investors, including investors in the real sector or entrepreneurs. ESG not only important as a signal for investors, but also conducive to business goals andincrease corporate value.

There is increasing demand for ESG investments worldwide and gradually to Asia, especially ASEAN. ASEAN-5 countries show a more promising trend of ESG investment, when compared to other ASEAN members. ESG investment helps companies lower costs, increase revenues and profits. The profitability of ESG companies is on average higher than companies that have not implemented ESG. Ratio of net profit to total revenue is 11.4% for ESG companies and 9.6% for non- ESG companies (ASEAN-Japan Centre, 2019).

ESG-related risks are business risks, so it will be appropriate if they are integrated into management and ERM strategy. Improving the enterprise 's risk management framework effectively reduces potential ESG risks and captures opportunities arising from related issues (WBCSD, 2019).

Based on the previous explanation, this study aims to determine the effect of Enterprise Risk Management (ERM) moderated by Environmental Social Governance (ESG) performance on profitability, cost of debt and firm value.

2. Theoretical Background

Agency Theory

Agency theory or *agency theory* is a concept used to explain the important relationships *between principals* (owners of capital) and their relative agents, first appeared by Jensen's and Meckling's (1976). In the most basic sense, the owner of capital is highly dependent on an agent to carry out certain financial decisions and transactions that can produce fluctuating results. The owner relies heavily on the agent to make the right decisions, making the occurrence of various conflicts or disagreements possible.

Interest Theory

The first person to define stakeholder theory was organization theorist Ian Mitroff in his book *Stakeholders of the Organizational Mind* 1983. Shortly after that, R. Edward Freeman released an article on stakeholder theory in 1983 in the California Management Review by R. Edward Freeman. Stakeholder theory assumes that businesses can only be successful when they provide value to the majority of their stakeholders. This is in line with CSR (*Corporate Social Responsibility)* and continuity. This means that profit alone cannot be considered the sole measure of business success, and value creation is more than just about money.

Enterprise Risk Management (ERM)

COSO

COSO defines ERM as the culture, capabilities, and practices integrated with strategy setting and performance, that organizations rely on to manage risk in creating, sustaining, and delivering value.

Figure 1. Example of figure numbering

The components and principles of integrated risk management according to COSO standards include: *Governance and Culture,* which is this component related to principles, training risk supervision by directors, establishing an operating structure, defining the desired culture, demonstrating commitment to core values and attracting, developing and maintaining competent individuals. The second is *the Strategy and Objective Setting,* a component related to the next four principles in ERM, analyzing the business context, defining risk appetite, evaluating alternative strategies and formulating business objectives. The third is *Performance,* this component relates to the next five principles in ERM, namely identifying risks, assessing the severity of risks, prioritizing risks, implementing risk responses and developing portfolios. The four *Reviews and Revisions* are components related to the next three principles in ERM : assessing substantial changes, reviewing risks and their relation to performance, and seeking continuous improvement in ERM. The last is *Information, Communication, and Reporting,* wh component relates to the five principles in ERM: utilizing information technology, communicating risk information and preparing reports for risk, culture, and company performance (COSO, 2017).
The next standard in the application of ERM is Iso 31000:2018

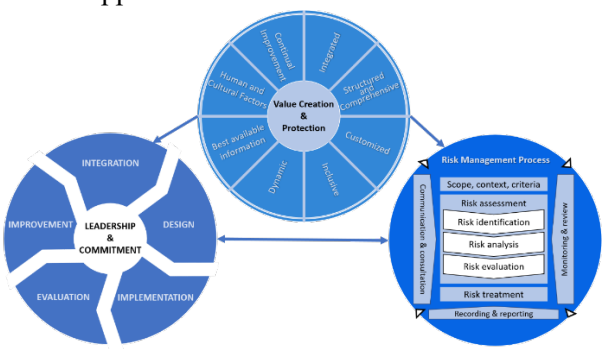

Figure 2. The next standard in the application of ERM is Iso 31000:2018

The three main components of Enterprise Risk Management in ISO 31000:218 are: The principle is the risk culture within an organization, whether appropriate or weak. culture that appropriately will most likely lead to a risk mitigation outcome appropriate, while a weak risk culture can lead to undirected risk mitigation, which will exacerbate the impact of risks. The second is the Risk Management Framework, once the risk management team has acquired a comprehensive knowledge of the types of risks that can be faced by the organization and the principles of risk management, they can begin to design a risk management framework that is suitable with the support and leadership of the organization's top management. ISO 31000 outlines developing a framework that fully integrates risk management processes into the organization. Next, the third is the Risk Management Process , which includes five main activities: communication, determining context, risk assessment, risk treatment, monitoring and review (ISO, 2018).

Environmental Risk Management **(ESG)**
The ESG, or "Environmental, Social and Governance", is a set of standards that refers to three main criteria for measuring sustainability. ESG is often used in business as a

key metric in making investment decisions and also serves as a reference for companies to report on their business impact. With issues such as climate change, ethical supply chains, environmental degradation and global well-being becoming increasingly critical, the ESG aspect is rapidly coming into the limelight as more investors, regulators and other stakeholders now aim to conduct business in a way that positively contributes to solving these issues. As a result, ESG has become a globally recognized consideration in making investment decisions and is increasingly the focus of corporate strategic and operational agendas.

Hypothesis Development

Even though the implementation of ERM does not specifically change the level of company risk, ERM impacts risk measurement and monitoring throughout the company (Callahan and Soileau, 2017). The main objective of ERM is to maximize shareholder value (COSO, 2004; Sobel and Reding, 2004; Beasley et al., 2008; Hoyt and Liebenberg, 2011). ERM implementation helps companies to understand the risks inherent in all aspects of business activities, thereby providing an objective basis for allocating company resources and improving decision-making processes. Existing studies have examined the influence of ERM on firm performance and value. Much evidence has been found to support the alleged positive influence of ERM on company performance and firm value (Hoyt and Liebenberg, 2011; McShane et al., 2011; Florio and Leoni, 2017; Farrell and Gallagher, 2019). Agustina and Baroroh (2016) state that ERM assures stakeholders that companies must maximize profits while optimizing existing risks. Eckles et al. (2014) also stated that companies that adopt ERM will increase company profits while reducing risk. ERM equips companies with reliable risk management and superior risk policies that will improve financial performance.

Meanwhile, Nocco and Stulz (2006) state that ERM is intended to create shareholder value by increasing the risks and returns on various projects. This helps in making strategic and business plans and exposure to all business risks, ultimately increasing the business's competitive advantage. (Lai et al., 2011) show that ERM in organizations leads to shareholder value creation. ERM implementation in business leads to some real advantages. Gains derived from ERM adoption contribute to reduced capital costs and improved business performance. Waweru and Kisaka (2013) investigated whether ERM has a positive or negative relationship.

Integrating ERM into the rating process improves the risk profile and can create a lower credit risk so that the interest payments will be lower as well. ERM program implementation will reduce risk and motivate the debt market to provide lower debt costs (Berry-Stölzle and Xu, 2018).

Based on the above studies, the following hypotheses can be made:

H1a. ERM affects financial performance (ROA)

H1b. ERM affects firm value (TobinsQ)

H1c. ERM affects the cost of debt.

Based on stakeholder and legitimacy theories, social responsibility can reduce asymmetric information because it signifies better management quality (Godfrey et al., 2009). *Stakeholders* consider social responsibility to positively impact the

company's future performance. They also conclude that higher social responsibility reduces the company's sensitivity to negative shocks that may be detrimental to the company. (Buslah et al., 2013). From resource-based research (Barney, 1991) it was explained previously that ESG moderates the effect of ERM on performance and value where companies with better ESG performance translate their ERM into higher performance (Fraj et al., 2011).

Thus, it is expected that ESGs play a moderating role in enhancing the positive effects of ERM on financial performance and firm value:
H2a. ESG increases the influence of ERM on financial performance.
H2b. ESG increases the influence of ERM on company value.
H2c. ESG increases the influence of ERM on a company's cost of debt.

3. Methodology

The study sample selection used data from all companies registered in ASEAN-5 (Indonesia, Malaysia, Singapore, the Philippines and Thailand) over five years (2017–2021). ASEAN-5 was chosen because it has the highest economic growth value compared to other ASEAN countries. Investment activities influence high economic growth in the ESG sector (ASEAN-Japan Center, 2019).

This study uses secondary data from annual reports, related company websites, Thomson Reuters and the World Bank. The definition of the dependent variable is financial performance (Return on Assets, ROA), firm value (Tobin's Q) and profitability from *the cost of debt.* According to Horne & Wachowicz (2005:235), ROA is a measurement tool to assess the overall level of effectiveness of a company in generating net profit through available assets. More continued *Munawir* (2007) said that *Return on Assets* is company's financial ratios related to profitability to measure the company's ability or effectiveness in generating profits or profits by utilizing all of its assets owned (Cashmere 2014).

For firm value, it is calculated using Tobin's Q. Tobin's Q ratio (Tobin and Brainard, 1968; Tobin and Brainard, 1977; Tobin, 1969; and Tobin, 1978) is widely used in financial literature as a proxy for the consideration of future investment opportunities. Tobin's Q ratio is defined as a market value company divided by the replacement cost from company assets.

The main independent variable is ERM (AdvERM). COSO (2004) defines ERM as a process that is influenced by directors, management and other employees, which is implemented in the company's strategy to identify the potential of a phenomenon that affects the company in managing risk. Nocco and Stulz (2006) argue that ERM can create long-term competitive advantage for firms by creating value at the macro level, by helping firms maintain access to capital markets and other resources, and at the micro level by creating a "way of life" for managers and employees.

In this study AdvERM is measured based on seven aspects consisting of three groups: the first group consists of two aspects related to governance which consist of the presence of the Chief Risk Officer (CRO) and the Risk Committee (RiskCom); the second group consists of three aspects to assess risk assessment, which consists of the frequency of risk assessment (RAfreq), the level of risk assessment (RAlevel) and the risk assessment method (RAmethod) (Florio and Leoni, 2017) and the third group consists of two aspects to assess the use of the ERM framework using the COSO ERM framework (Pérez-Cornejo et al., 2019) and ISO 31000-2018.

Each of these seven aspects is analyzed and given a value of 1 if it meets the criteria and 0 if it doesn't. Next, add all the values of the seven components and assign an AdvERM score of 1 if the value is at least 4 out of 7 and 0 otherwise.
This study uses the above ERM measurements because ERM is a complex multidimensional measurement concept (Florio and Leoni, 2017; Pérez-Cornejo et al., 2019) and to date, no studies have reached consensus on a single measurement that can be used to measure ERM quality (Agustina and Baroroh, 2016; Lechner and Gatzert, 2018; Lai and Shad, 2017; Callahan and Soileau, 2 017). Considering the limitations of previous measurements, this study links the concept of governance and ERM operational mechanisms that focus on the frequency, depth, and methodology of risk assessment (Florio and Leoni, 2017) as ERM measurements.

ESG performance as a moderating variable was obtained from Thomson Reuters data. ESG is an investment consideration factor used in ESG risk assessment strategies thaorporated into investment decisions and risk management processes (World Wide Fund for Nature-WWF Report, 2014). Thomson Reuters (2017) says that the ESG Score is designed to transparently and objectively measure the company's relative ESG performance with themes that reflect issues of emissions, environmental product innovation, human rights and shareholders, based on data reported by the company. The governance risks discussed throughout the ESG tend to focus on governance of environmental, social or other issues of concern to the community (COSO and WBCSD, 2018; MSI, 2019). In addition, the control variables consist of governance characteristics, company characteristics, and country characteristics. The governance characteristics are the percentage of independent boards (BODInd), number of board members (BODSize) and number of board meetings (BODMeet). The characteristics of the company are the company's total assets (SIZE) and leverage (LEV). The country's characteristics include economic growth (GDP) and inflation (INFLATION).

Table 1. Variable Measurement

No	Variable	Measurement
1	ROA	Net income/total assets t
2	Tobin's Q	(Market value of equity + total liabilities)/total assets t
3	Cost of Debt	The ratio of *financial interest expense* to total *financial debt* after being taxed
3	CRO	1 if the company has a risk management director or chief risk officer and 0 if otherwise (Florio and Leoni, 2017)

No	Variable	Measurement
4	RiskCom	1 if the company has established a risk committee and 0 otherwise (Florio and Leoni, 2017)
5	RAFreq	1 if the company carries out risk assessment procedures and or risk reporting at least twice in a year and 0 otherwise (Florio and Leoni, 2017)
6	RA levels	1 if the company carries out risk assessment procedures on an ongoing basis down to the lowest company level (eg by business unit or function) and 0 otherwise (Florio and Leoni, 2017)
7	RAM method	1 if the company adopts both qualitative and quantitative risk assessment methods certain and 0 otherwise (Florio and Leoni, 2017)
8	COSO	1 if the company uses COSO as the ERM framework and 0 otherwise (Pérez- Cornejo et al., 2019)
9	ISO	1 if the company uses ISO as the ERM framework and 0 otherwise
10	AdvERM	1 if the ERM score is at least 4 based on 7 components and 0 otherwise (Florio et al Leoni, 2017; Pérez Cornejo et al., 2019)
11	ESG	ESG from Thomson Reuters (Buallay, 2019;Garciaet al., 2017; Sassenet al., 2016
12	BODSize	Number of board members, 3 if the number of members is 5–10 people, 2 if 11–15 people member and 1 if member board of more than 15 people or less than 5 people (Florio and Leoni, 2017)
13	BODMMeet	Number of board meetings, where 3 if the number of meetings is more than six, 2 if the number of meetings is 4-6 times and 1 if the number of meetings is less than 4 times (Florio and Leoni, 2017)
14	BODInd	Percentage of independent board members (Florio and Leoni, 2017)
15	size	Natural logarithm of total assets (Farrell and Gallagher, 2019; Buallay, 2019; Florio and Leoni, 2017;Garcia et al., 2017;Sassenet al., 2016)
16	leverage	Total liabilities to total assets (Farrell and Gallagher, 2019;Garcia et al., 2017;Sassen et al., 2016)
17	Inflation	Inflation rate (Farrell and Gallagher, 2019;Garciaet al., 2017; Sassenet al., 2016)
18	GDP	GDP Growth from the World Bank (Jubaedahet al., 2016)

From the research it is expected that ERM has a positive effect on financial performance, firm value, firm profitability and a positive moderating role of ESG on the relationship between ERM and financial performance and firm value.
The research model used is as follows:
Models 1, 2 and 3 are for testing H1a, H1b and H1c

(1) $ROA_{it} = \alpha0 + \alpha1AdvERM_{it} + \alpha2BODSize_{it} + \alpha3BODIn_{it} + \alpha4zBODMeet_{it} + \alpha5Size_{it} + \alpha6Lev_{it} + \alpha7Inflation_{it} + \alpha8GDP_{it} + \varepsilon_{jt}$

(2) $TobinsQijt = \alpha0 + \alpha1AdvERM_{it} + \alpha2BODSize_{it} + \alpha3BODIn_{it} + \alpha4zBODMeet_{it} + \alpha5Size_{it} + \alpha6Lev_{it} + \alpha7Inflation_{it} + \alpha8GDP_{it} + \varepsilon_{jt}$

(3) $CostofDebt = \alpha0 + \alpha1AdvERM_{it} + \alpha2BODSize_{it} + \alpha3BODIn_{it} + \alpha4zBODMeet_{it} + \alpha5Size_{it} + \alpha6Lev_{it} + \alpha7Inflation_{it} + \alpha8GDP_{it} + \varepsilon_{jt}$

Models 4, 5 and 6 to test H2a, H2b and H2c

(4) $ROA_{it} = \alpha0 + \alpha1AdvERM_{it} *ESG_{it} + \alpha2\ BODSize_{it} + \alpha3BODIn_{it} + \alpha4zBODMeet_{it} + \alpha5Size_{it} + \alpha6Lev_{it} + \alpha7Inflation_{it} + \alpha8GDP_{it} + \varepsilon_{it}$

(5) $TobinsQijt = \alpha0 + \alpha1AdvERM_{it} *ESG_{it} + \alpha2\ BODSize_{it} + \alpha3BODIn_{it} + \alpha4zBODMeet_{it} + \alpha5Size_{it} + \alpha6Lev_{it} + \alpha7Inflation_{it} + \alpha8GDP_{it} + \varepsilon_{it}$

(6) $CostofDebt = \alpha0 + \alpha1AdvERM_{it} *ESG_{it} + \alpha2\ BODSize_{it} + \alpha3BODIn_{it} + \alpha4zBODMeet_{it} + \alpha5Size_{it} + \alpha6Lev_{it} + \alpha7Inflation_{it} + \alpha8GDP_{it} + \varepsilon_{it}$

Where i denotes the individual company, j denotes the country and t denotes the year

4. Empirical Findings/Result

Table 2. Descriptive Statistics

Variable	Means	Standard Deviation	Min	Max
ESG Combined Score	56.09	17,20	7,29	92.02
Environmental Pillars	50,14	23.76	0.00	97.50
Social Pillars	62,31	20.04	3,43	97.54
Governance Pillars	53,82	21.92	3.00	95.44
Adv ERM	0.83	0.37	0.00	1.00
BOD Indonesia	43,48	10.59	22,22	83,33
BOD Size	2.98	0.15	2.00	3.00
BOD Meet	2.96	0.19	2.00	3.00
ROA	4.72	6,38	-35.90	46.30
TOBINS' Q	1.86	2.72	0.22	39,61
COD	0.02	0.01	0.00	0.23
Size Million USD	26490.06	60880,80	276.05	520881.98
leverage	0.59	0.37	0.02	8.96
GDP Growth	2.57	4.05	-9.50	7,60
Inflation	1.61	1.53	-1.10	5.30

Table 1 shows the results of a statistical descriptive analysis of 740 observations consisting of 148 sample companies in five years, namely 2017 to 2021. We can see that the average ROA is 4.72%, this indicates that the average sample of companies listed in ASEAN-5 is a profitable company. Tobin's Q value has an average of 1.86 indicating that investors perceive firm value to be higher than the book value of assets, so the average sample investment opportunity is high. Furthermore, AdvERM shows that 83% of the sample implements good ERM. ESG performance also looks quite good, averaging 56.09 out of 100. This shows the company's commitment, performance and effectiveness in these three aspects.

Table 3. Research Model T Test on ROA, TOBINS'Q and COD (1a, 1b, 1c)

Variable	ROA		TOBINS' Q		COD	
	Coefficient	p-values	Coefficient	p-values	Coefficient	p-values
(Constant)	10,624	0.000	4,414	0.000	0.031	0.000
AdvERM	2,258	0.013	0.295	0.254	-0.007	0.002
BODInd	0.066	0.002	0.031	0.001	0.000	0.002
BODSize	-0.010	0.985	-0.08	0.726	0.001	0.359
BODMMeet	0.046	0.923	0.034	0.866	-0.003	0.027
LnSize	-1,018	0.000	-0.630	0.000	0.000	0.256
leverage	-2,337	0.000	0.918	0.000	0.002	0.244
GDP	0.170	0.006	0.080	0.003	0.000	0.056
Inflation	0.282	0.091	-0.094	0.187	0.001	0.003

Based on the table above, AdvERM to ROA and TOBINS'Q show a positivedirection, while AdvERM to COD shows a negative direction. AdvERM's significance value for ROA and COD is <0.05, indicating that H0 is rejected and Ha is accepted, so it can be concluded that AdvERM significantly affects ROA and COD. While AdvERM to TOBINS'Q > 0.05, positive AdvERM is not significant to TOBINS'Q.

Table 4. Research Model T Test on ROA, TOBINS'Q and COD (2a, 2b, 2c)

Variable	ROA		TOBINS' Q		COD	
	Coefficient	p-values	Coefficient	p-values	Coefficient	p-values
(Constant)	10,624	0.000	4	0.000	0.031	0.000
AdvERMxESG	2,861	0.001	0.414	0.001	-0.0081	0.000
LnSize	-1,018	0.000	-0.630	0.000	0.000	0.256
leverage	-2,337	0.000	0.918	0.000	0.002	0.244
BODInd	0.002	0.002	0.001	0.001	-5.53E-03	0.002
BODSize	0.000	0.985	-0.003	0.726	4.17E-02	0.359
BODMMeet	0.002	0.923	0.001	0.866	-8.94E-02	0.027
GDP	0.006	0.006	0.003	0.003	-9.99E-03	0.056
Inflation	0.010	0.091	-0.003	0.187	4.26E-02	0.003

AdvERMxESG is good for ROA and TOBINS'Q shows a positive direction, while towards COD is negative. The significance value of AdvERMxESG on ROA, TOBINS'Q and COD is <0.05, indicating that H0 is rejected and Ha is accepted, so it can be concluded that AdvERMxESG has a significant positive effect on ROA and TOBINS'Q. Advermxesg has a negative and significant effect on COD.
Table 3 shows that ESG moderation increases the value and significance of ROA and TOBINS'Q, reducing COD significantly. This is in line with previous research, ESG moderates the effect of ERM on performance and value where companies with better ESG performance are more likely to translate their ERM into higher performance (Fraj et al., 2011)

5. Discussion

The first hypothesis which states that ERM affects company profitability, which ROA and COD show. The results of hypothesis testing in Table 2 prove the suitability of these predictions, namely that ERM has a positive and significant impact on ROA.

According to previous research, ERM positively affects company performance and firm value (Hoyt and Liebenberg, 2011; McShane et al., 2011; Florio and Leoni, 2017; Farrell and Gallagher, 2019). Agustina and Baroroh (2016) state that ERM assures

stakeholders that companies can maximize profits while optimizing existing risks. Eckles et al (2014) also stated that companies that adopt ERM will increase company profits while reducing risk. In line with previous empirical literature, a rigorous ERM system will significantly impact business performance. However, starting and maintaining an ERM system in an organization may be expensive (Lechner and Gatzert, 2017).

From the results of testing the hypothesis for the effect of ERM on firm value, which in this study is indicated by the value of Tobin's Q, from Table 2 it can be seen that ERM does not show a significant effect. From these results, Risk Management has no direct effect on the company's added value. The sampling period which also included the Covid-19 pandemic period, she also played a role in the results of this study. The COVID-19 outbreak has hit companies worldwide, affecting almost every area of business and industry, although unevenly depending on size, complexity and business (Parveen, 2020).

Some new literature also studies the impact of COVID-19 on firm value using stock market data from developing countries (Al Ali, 2020; Natural, Nature, & Chavali, 2020; He, Sun, Zhang, & Li, 2020) and economics forward (eg, Alam, Wei, & Wahid, 2020; Heyden & Heyden, 2021). Existing studies usually find that companies respond negatively post- policy stock market returns *lockdown* domestic or COVID-19 pandemic announcements. During the COVID-19 crisis, most companies stopped or slowed production hurting stock returns (Ashraf, 2020a,b; Zhai et al., 2021).

ESGs have a role to play significant moderation of ERM. The ESG, which refers to the performance of environmental, social and governance aspects, implies a strong ERM framework prioritizing risks related to environmental, social and governance aspects, which will further assist the company in creatively develop strategies for responsible decision-making to achieve higher financial performance and corporate value (Chairani, 2021).

The prevalence of ESG-related risks continues increased while more traditional risks i.e. economic, geopolitical or technological risks were less predominant. Companies worldwide have experienced a measurable impact with recall events product safety returns, worker deaths, child labour, spillage pollution, etc. Most of these events have been translated to financial or reputational loss. With the ESG challenge in mind on company, it will offer opportunities for the business leaders to develop their understanding of the profile company risks while considering the impact of this issue on shareholders and society (COSO-WBCSD, 2018).

6. Conclusions

This study aims to examine the effect of ERM on ROA, Tobin's Q and cost of debt, which is moderated by the quality of the ESG component in ASEAN-5 countries for the period 2017 – 2021. The study found that ERM had a significant positive effect on ROA, a positive but not significant effect on Tobin's Q and a significant negative

effect on the cost of corporate debt. This study also found that ESG has a significant moderating role. This implies that a robust ERM framework prioritises risks related to ESG aspects, which will further assist companies in creating responsible decision-making strategies to achieve higher financial performance and corporate value.

There are some limitations of this research. First, it has not considered aspects of ERM maturity that can affect company performance and value. Different ERM maturity levels will impact differences in financial performance, company value and the cost of debt. Second, this research has only examined the impact on the performance, value and cost of corporate debt, but needs to consider the possibility that ESG and ERM also positively impact corporate reputation. Third, the number of samples is limited due to the limited number of companies in ASEAN 5 countries with ESG data.

With the limitations described in the previous section, suggestions for further research are as follows. First, future research can develop other ERM measurements by looking at the ERM maturity level (ERM Maturity level) in a similar way to Farrell's research and Gallagher (2019). Second, future research can look at ERM's effect on a company's reputation, as in the research by Pérez-Cornejo et al. (2019). Third, further research can be conducted in other countries that have more complete ESG data.

Based on these results, there are several important practical implications, namely the moderate role of ESG in increasing the positive influence of ERM on financial performance and firm value. This result implies that companies and investors increasingly need ESG. Companies must be more aware of how to implement ESG in their business activities so that they always consider risk and ESG in achieving good performance

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