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THE INFLUENCE OF ENVIRONMENTAL, SOCIAL, GOVERNANCE ON COMPANY FINANCIAL RISKS: A STUDY ON LQ-45

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ABSTRACT

This study aims to see the consequence of environmental, social, and governance (ESG) performance on LQ-45firm's financial risk. This study uses a 23 sample of LQ-45 firms from 2016 to 2020 and applies Generalized Method of Moment (GMM) analysis. The studies find an adverse effect of ESG Performance and firm's risk. Controversies on ESG also adversely influences the firm's risk. However, there is no significant effect on board gender diversity on financial risk of the firm. Also, These findings are in line with stakeholder, signaling, Legitimacy, and risk management theory. The firms that perform reasonably on ESG have lower total risk. However, the firm's negligence on ESG and involvement in ESG Controversies moderates the ESG-total risk nexus. The findings will help investor and portofolio managers evaluate how ESG, ESG Controversies, and Board Gender Diversity influence firm's financial risk and help them make a better investment decisions. Additionally, regulators can revise the ESG and ESG Controversy disclosure criteria and make them accessable to all stakeholders for better decision making.

INTRODUCTION

The concept of sustainability from a business perspective is the ability of a company to survive for a long time, both financially and non-financially (Pertiwi et al., 2022). The Environment, Social, Governance (ESG) aspect was first put forward by the UN Global Compact to prioritize the interests of each of these aspects in financial analysis. The ESG concept refers to a comprehensive approach to sustainable factors in the analysis of decisions by investors and companies in the industry. Aspects of the ESG provide a pleasant opinion for each stakeholder by ensuring that they will not be negatively affected by company activities that are considered unsustainable (Sila and Cek 2017).

ESG investment is an approach used by companies to act in a sustainable manner by taking action in certain areas and in the end can provide value to investors, through company profits. Investment from ESG signifies that the company can be sustainable and operate responsibly, which in turn can add value to society and every other stakeholder . Investments from ESG are increasingly in demand and are an important tool used by company management to gain a more thorough understanding of the risks and opportunities of investment (Amor-Esteban et al. 2019). Thus, every company that can apply ESG principles to its investment will be more attractive to investors. ESG developments guided by the United Nations Sustainable Development Goals (UNDGs) and ESG principles are the key matrix at the 37th Asean Summit. The Asean Development Bank stated that ESG-based companies in ASEAN earn an average margin of 2% greater than non-ESG-based companies.

ESG has become a benchmark for investors in the Indonesian capital market, both foreign and domestic investors. The Indonesia Stock Exchange (IDX) has so far published 4 ESG-based indices on the Indonesian capital market, namely the SRI KEHATI index, the ESG Leaders Index, the IDX KEHATI ESG Sector Leaders Index, and the ESG Quality 45 IDX KEHATI index. This shows that ESG has become one of the big considerations for investors in Indonesia. Based on data from the Financial Services Authority (2020), AUM (Asset Under Management) managed in ESG-based investments has always increased in 2014-2020. As can be seen in Figure 1, there has been a significant increase in managed ESG-based investments in Indonesia. In a period of 6 years, the growth of ESG-based AUM has increased rapidly, where it was only 38 billion in 2014, increasing to 3.1 trillion in 2020.

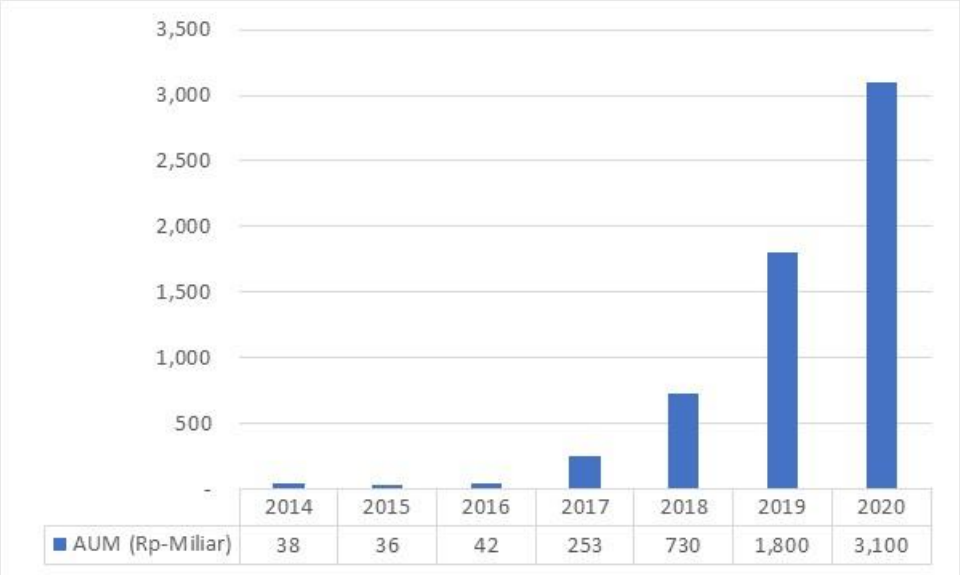

Figure 1. Total ESG Based Management Funds in Indonesia
Source: Financial Services Authority (2020), data processed

In recent years, ESG and financial risk have become very important issues, following the bankruptcy of several major world companies, such as Merrill Lynch, Vivendi, and Lehman Brothers. The bankruptcy of the company was due to violations of regulations and poor management of the company which resulted in damage to the company's reputation followed by a worsening of the company's financial performance. This creates volatility in stock prices on financial markets. In addition, the UN Climate Change Conference (COP26) meeting or commonly called the Glassgow Climate Change Conference which was held in November 2021 which discussed net zero emissions by 2050 and placed ESG as an important factor in achieving this goal.

Based on the background regarding the phenomenon of ESG trends in the world and the development of ESG in Indonesia, and based on previous research regarding the impact of ESG performance on corporate financial risk, the researchers conducted a study entitled: "Effect of Environmental, Social, Governance (ESG) Performance on Financial Risk companies: Case

studies on companies included in the LQ-45 index. The researchers hope that this study can shed a light on the discussed issue and become a foundation for further research.

METHODS

This research was conducted in July 2022. This research was conducted by looking for secondary data sourced from Yahoo Finance and Refinitive Eikon Datastream. This study uses types and sources of data in the form of secondary data sourced from the company's financial reports for 2016-2020. ESG Score, ESG Controversy, and Gender Diversity Board data obtained through the Refinitive Eikon Datastream. Supporting data in this study were obtained from journals, text books, and annual reports which can be accessed via the internet.

The model in this study is divided into 2 models, namely:

$$TR_{it} = \alpha_0 + \alpha_1 ESG_{it} + \alpha_2 ESGCON_{it} + \alpha_3 BGD_{it} + \alpha_4 MTB_{it} + \alpha_5 LEV_{it} + \alpha_6 DY_{it} + \alpha_7 SIZE_{it} + \alpha_8 COVID_{it} + \mu_{it}$$

In which:

TR	= Total Risk
ESG	= ESG Score
ESGCON	= ESG Controversy
BGD	= Board Gender Diversity
MTB	= Market to Book
LEV	= Leverage
DY	= Dividend Yield
SIZE	= Firm Size

Regresi Data Panel Dinamis

The dynamic panel data regression method has developed since the early 1990s. This method was first introduced by Arellano and Bond (1991). In research with economic or financial subjects, the majority of the relationships between variables are dynamic in nature which is indicated by the lag of the dependent variable which is used as the independent variable in the regression estimation.

The most popular approach in dynamic panel regression models is the Generalized Method of Moment (GMM). GMM is a method of estimating the expansion parameters of the moment method. Based on Firdaus (2011), there are at least two reasons underlying this statement, namely:

1) GMM is a common estimator and is able to provide a more useful framework for comparing scores;
2) GMM provides a simple alternative compared to other estimators, especially in terms of maximum likelihood.

However, this method also has some drawbacks, namely:

1) GMM estimator is asymptotically efficient in large data sizes, but not good in finite data samples.

2) this estimation sometimes still requires the implementation of software, thus requiring greater expertise and using more complex software.

There are two types of GMM estimation procedures commonly used for autoregressive linear models, namely First-Difference GMM (FD-GMM) and System GMM.

RESULTS AND DISCUSSION

Descriptive Analysis

Descriptive analysis in this study uses companies that are members of the LQ-45 index. However, only 23 companies were used in this study, this is due to the availability of Refinitive Eikon ESG data for 2016-2020. The proportion of the sample in this study is divided into 7 sectors, namely Basic Materials, Consumer Cyclical, Consumer non-cyclical, Energy, Finance, Healthcare, and Infrastructures. The proportion of each sector can be seen in Figure 2

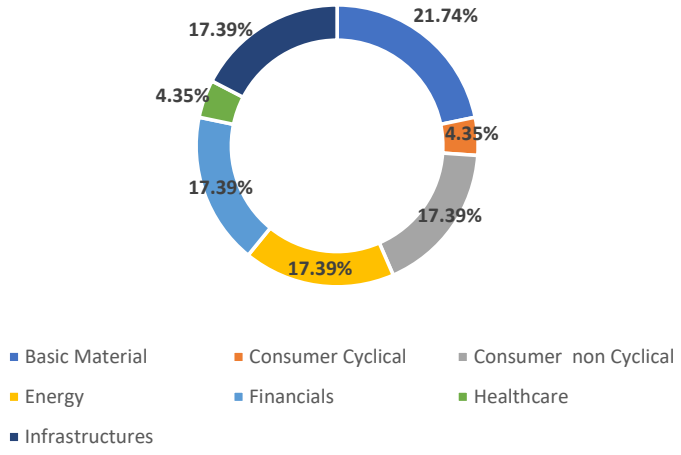

Figure 2. Proportion of Companies Based on Sector
Source: Refinitive Eikon Datastream (2022)

Overview of ESG Performance in LQ-45 Companies

ESG Score is an assessment of a company's ESG performance. The ESG Score approach used in this study uses Refinitive Eikon Research. Based on the ESG Scores Methodology from Refinitive Eikon (2021), the score scale for implementing ESG is divided as follows:

Table 1. ESG Implementation Assessment Scale

ESG Score	Grade	Description
0-25	D	ESG performance is relatively poor, and there is an inadequate level of transparency in publicly reporting ESG material data
26-50	C	ESG performance is relatively satisfactory and a moderate level of transparency in publicly reporting ESG material data

51-75	B	ESG performance is relatively good and the level of transparency is above average in reporting ESG material data publicly
76-100	A	ESG performance is relatively very good and a high degree of transparency in publicly reporting ESG material data

Source: ESG Scores Methodology Refinitive Eikon (2021)

It can be seen in table 3 that the best ESG assessment was achieved by PT. Indo Tambangraya Megah Tbk with an average ESG score of 80.19 in 2016-2020. This is inseparable from the implementation of Good Mining Practices carried out by the company. In addition, based on the ITMG Sustainability Report in 2021, the strategies used in implementing ESG are Sustainable with ITM, Learn with ITM, Empower with ITM, and Obey with ITM. Whereas for companies that still have the lowest average ESG implementation score during 2016-2020, namely PT. Media Nusantara Citra Network Tbk, with an average value of 16.30. Overall, the application of ESG in LQ45 companies has a positive growth. This shows that companies in Indonesia are starting to improve their ESG performance. Comparison of ESG performance assessment in LQ-45 companies is in the following table:

Table 2. ESG Performance Implementation Assessment in LQ-45 Companies

Sector	Code	2016	2017	2018	2019	2020	$\bar{X}$	Categories
Basic Materials	ANTM. JK	72.5	69.4	64.6	70.9	69.9	69.5	B
	INCO. JK	57.4	84.6	83.0	81.4	78.3	76.9	A
	INTP. JK	55.6	49.9	45.9	57.2	62.5	54.2	B
	SMGR.JK	50.0	46.5	43.7	54.3	54.3	49.8	C
	UNTR.JK	60.5	54.1	60.5	65.4	66.3	61.3	B
Consumer Cyclical	ASII.JK	31.3	33.4	33.0	31.9	41.5	34.2	C
Consumer Non Cyclical	CPIN. JK	8.2	10.7	20.3	22.4	21.1	16.5	D
	ICBP. JK	29.0	39.7	37.5	35.7	29.6	34.3	C
	INDF. JK	26.3	40.7	33.9	40.2	41.6	36.5	C
	UNVR. JK	74.1	72.7	74.4	74.4	76.3	74.4	B
Basic Materials	ANTM.JK	72.5	69.4	64.6	70.9	69.9	69.5	B
	INCO.JK	57.4	84.6	83.0	81.4	78.3	76.9	A
	INTP.JK	55.6	49.9	45.9	57.2	62.5	54.2	B
	SMGR.JK	50.0	46.5	43.7	54.3	54.3	49.8	C
	UNTR.JK	60.5	54.1	60.5	65.4	66.3	61.3	B
Consumer Cyclical	ASII.JK	31.3	33.4	33.0	31.9	41.5	34.2	C
Consumer Non Cyclical	CPIN.JK	8.2	10.7	20.3	22.4	21.1	16.5	D
	ICBP.JK	29.0	39.7	37.5	35.7	29.6	34.3	C
	INDF. JK	26.3	40.7	33.9	40.2	41.6	36.5	C

	UNVR. JK	74.1	72.7	74.4	74.4	76.3	74.4	B
energy	ADRO. JK	31.2	30.1	37.9	53.5	62.4	43.0	C
	ITMG. JK	77.0	84.3	80.5	80.0	79.2	**80.2**	A
	PGAS. JK	65.9	73.0	72.8	71.2	71.0	70.8	B
	PTBA. JK	66.4	60.7	59.6	57.5	59.4	60.7	B
Financials	BBCA. JK	63.0	72.4	74.4	78.5	87.3	75.1	B
	BBNI. JK	65.6	66.8	71.4	70.1	79.6	70.7	B
	BBRI. JK	65.7	71.7	82.1	80.8	73.0	74.6	B
	BMRI. JK	58.0	58.1	66.0	72.9	79.4	66.9	B
Healthcare	KLBF. JK	52.4	52.5	52.9	52.9	64.0	55.0	B
Infrastructures	EXCL. JK	51.5	58.1	64.2	71.8	64.2	62.0	B
	TBIG. JK	15.9	17.2	17.5	24.7	31.8	21.4	D
	TLKM. JK	62.1	57.8	54.4	46.6	51.0	54.4	B
	MNCN. JK	14.4	14.8	19.9	15.8	16.7	**16.3**	D

Source: Refinitive Eikon Datastream (2022), data processed

Overall, ESG performance in LQ-45 companies can be said to be relatively good and tend to experience performance developments from year to year. Based on Table 3, the financial sector has the best average ESG performance compared to other sectors. This shows that banks on LQ-45 have a tendency to only make loans to companies that are sustainable and do not damage the environment, so that the financial sector has an average ESG performance that is better than other sectors.

Best Model Determination

Estimating the dynamic panel data regression model in this study uses the Generalized Method of Moment (GMM) method. The first step to be taken in using this method is to determine the best model to be used in this study. In determining the best model in the GMM method, it can be done through two tests, namely the Arellano-Bond test and also the Sargan test. So, it can produce a valid and consistent model.

Based on the results of the Arellano-Bond test and the Hansen test, the best GMM model is to use FD-GMM. This can be proven by the Arellano-Bond test, with a p-value in the 1st order of 0.1381 and in the 2nd order of 0.9588. The P-value in both orders is greater than α, so it can be said that this model is consistent. Based on the results of the Hansen test, the chi-square value is 0.051. So, because the probability value of chi-square is greater than α, this model can be said to be valid.

Dynamic Panel Regression Results and Discussion

Table 3. Dynamic Panel Regression Output

Dependent Variables	**Total Risk**
Independent Variables	
Vols $_{(t-1)}$	-0.5875***
	(0.06934)
ESG Score	-0.00056***
	(0.00018)
ESG Controversies	-0.00029***
	(0.00009)
BGD	0.0199
	(0.01226)
Control Variable	
DY	0.00011
	(0.00012)
Leverage	-0.00688
	(0.00803)
Size	0.00046
	(0.00255)
MTB	-0.00008***
	(0.00001)
COVID	0.01029***
	(0.00063)
Sargan Stat	0,051
AR(2)	0,9588
Constant	0.03201
	(0.08241)

******* Significant with α<1%; **Significant with α<5%; *Significant with α<10%.

Table 3 shows the results of the dynamic panel regression estimates used in this study. Based on the results of the regression estimation, it can be seen that ESG performance in LQ-45 companies has a negative effect on financial risk. The results of this study are in line with stakeholder theory, which says that ESG performance can increase benefits for each stakeholder. In addition, the results of this study are also supported by the legitimacy theory, which says that companies that carry out legitimacy activities in accordance with applicable social standards, and companies that think about the impact on community welfare, can reduce the risks borne by the company.

The results of this study imply that companies that implement good ESG performance will be preferred by shareholders and other stakeholders, because they can reduce the company's

financial risk. The results of this study also found that high ESG performance of a company can improve the company's reputation and good name, and in the end can provide protection for the company's cash flow (Godfrey, 2005). If the company's cash flow is good, the company's operational performance will be better, and in the end it will reduce the company's risk (Benlemlih et al. 2018; Shakil, 2020).

In addition, company involvement in social and environmental activities is also the application of good business ethics, and can help companies reduce risk (Sassen et al., 2016). Efficient application of ESG can be a strategy for risk management for every company, and can strengthen the company's financial condition (Sharfman & Fernando, 2008).

The regression results from this study also found that there is a negative effect of the ESG Controversy score on the company's financial risk. ESG is a very crucial factor for a company's reputation. In addition, ESG Controversy can affect a company's reputation, reduce a company's market value, and will increase share price volatility due to unethical and controversial company activities (Aouadi & Marsat, 2018).

The results of this study are also in line with Shakil's research (2021). In addition, this research also supports the legitimacy theory. This controversy can occur due to negative news about a company, scandals that occur in a company, and suspicious activities that are known by investors (Aouadi & Marsat, 2018).

Negative news covered by the media raises doubts about the prospects for a company's sustainability. The financial risk of a company will increase along with the high ESG controversy. Ernst and Young (2017) also conducted a survey of investors in Indonesia which found that investors have a tendency to make negative news from the press the fourth determining factor, after company financial and sustainability reports, company presentations, and third-party data providers in determining the potential of a company.

BGD has an important role in reducing the company's financial risk. However, BGD had no significant effect on this study. This can happen because the number of female leaders in the LQ-45 company is still very low. In general, a company with different leadership faces less risk than a company dominated by male leaders (Sila et al., 2016). BGD can affect ESG performance (Arayssi et al., 2020), and improving ESG performance will help companies to increase cash inflows from investors (Jizi, 2017). Positive cash inflows can affect the market value of a company, which will ultimately result in a reduction in the risks faced by the company. In addition, women leaders also focus more on environmental and social welfare (Arayssi et al., 2020). Women who are on the board of directors tend to offer more various kinds of environmentally friendly solutions, and these solutions can assist companies in improving strategic decisions on environmental and social issues (Liu, 2018).

In addition to the independent variables, this study also uses control variables in this study. Control variables are used to provide a deeper understanding of the determinants of a company's financial risk. The dummy variable of the covid pandemic has a significant influence on the company's financial risk. The covid pandemic increases the Total Risk or volatility of the stock price of an LQ-45 company. Hutauruk's research (2021) says that the volatility of the stock price

of LQ-45 companies increased during the Covid period. The implementation of the PSBB caused a sharp decline in the Indonesian economy and also the share price of LQ-45 companies. Uncertainty about the future of the Indonesian economy due to covid makes it difficult to predict the stock price, resulting in higher volatility in the LQ-45 share price.

Based on the regression estimation results, Dividend Yield has no significant effect on the company's financial risk. Leverage has a positive but not significant effect on the company's financial risk. A high level of leverage or debt from a company can increase interest costs, which can increase the company's financial risk.

Size Of Firm has a negative but not significant relationship to financial risks faced by the company. Companies with a large size are more financially stable and have more resources to improve operational efficiency. Better efficiency can increase cash inflows, and more cash inflows will help companies to control the risks faced by a company (Chollet & Sandwidi, 2018). MTB or Market to Book ratio has a negative and significant impact on the financial risks faced by the company. A higher market value indicates a high market growth company. Companies with lower growth will face more volatility in the market (Bouslah et al., 2013).

CONCLUSION

ESG performance has a negative and significant effect on company financial risk in LQ-45 companies. ESG Controversy has a negative and significant effect on financial risk in LQ-45 companies. BGD has a negative but not significant effect on the company's financial risk.

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