

Non-Financial Information and Firm Risk

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ABSTRACT: This research aims to examine how ESG disclosure and risk disclosure affect the total risk of companies. Using cross section data from 355 companies listed in Indonesia Stock Exchange, data regarding ESG disclosure and risk was collected. In this research, ESG and risk disclosures are measured based on content analysis using GRI 4 guidelines for ESG disclosures and COSO ERM for risk disclosures. Using multiple regression, it is concluded that only risk disclosure can reduce the company's total risk, while ESG disclosure cannot affect the company's total risk. This shows that only risk disclosure is relevant in determining a company's total risk.

KEYWORDS: *ESG disclosure, risk disclosure, firm risk*

I. INTRODUCTION

In recent years, the business environment has been faced with many challenges such as the global financial crisis (Malafronte et al., 2018), technological developments (Haseeb et al., 2019), and the Covid 19 pandemic (Khausal & Srivastava, 2020) which have led to an increasing need for information transparency in decision making (Malafronte et al., 2018).

The transparency required by investors is not only related to financial information but has also expanded to non-financial information (Orens & Lybaert, 2010). Several studies have tried to identify what non-financial information is relevant in investor decision making, based on research conducted by Erkens et al. (2015), researchers generally view non-financial information in the form of information related to the implementation of social and environmental responsibility as well as human resource management as information used by investors in decision making. Apart from that, Hoque (2017) also saw that investors also care about information on how companies manage the risks they face and their impact on society. Therefore, the company seeks to meet these investors' needs by disclosing financial and non-financial information through various reporting media.

In Indonesia, the importance of the need for financial and non-financial information by investors has been recognized by regulators, in this case the Financial Services Authority (OJK). One of the regulations governing the presentation of financial and non-financial information is OJK Regulation Number 29/POJK.04/2016 concerning Annual Reports of Issuers or Public Companies. In general, these regulations stipulate that financial and non-financial information must be presented by companies in a report called the Annual Report. Furthermore, OJK also regulates the types of information that must be disclosed and the format for presenting the annual report in the OJK Circular Letter. In 2021, OJK issued Circular Letter Number 16/SEOJK.04/2021 which replaced the previous arrangement. There are several issues addressed in the regulations, including disclosure of environmental and social responsibility, governance and risk management.

The importance of the role of non-financial information in investor decision making has been carried out by several researchers. Among them is research related to the influence of social responsibility disclosure (CSR) on the cost of capital (Tan et al., 2020; Ng & Raze, 2015 and Goss & Roberts, 2011), company value (Guiral et al., 2020, Naughton et al., 2019, Qiu et al., 2016, and Tsang et al., 2021). Several other studies have raised the influence of ESG disclosure, although ESG disclosure sometimes still overlaps with CSR disclosure (Bassen & Senkl, 2011). Several researchers examine the impact of ESG disclosure on company risk (Li et al., 2022 and Ashwin Kumar et al., 2016), ESG on idiosyncratic risk (Reber et al., 2022, and Sassen et al., 2016). Apart from that, several studies also try to analyze the influence of risk disclosures made by companies. Heinle & Smith (2017) demonstrate how disclosure can reduce the cost of capital. Then Malafronte et al. (2018) tested how risk disclosure can reduce the volatility of stock returns. Haj-Salem et al. (2020) tests how risk disclosure affects a company's total risk and also Bravo (2017) which shows that risk disclosure can reduce idiosyncratic risk.

From an investor's perspective, a company's risk in the capital market is shown in the volatility of stock prices or the volatility of stock returns. The significant changes in share prices and stock returns indicate investors' concerns in the capital market regarding the condition of the company. Investors will react to the available information which will then be shown in the form of a decision to buy, release or maintain their investment. This will then be reflected in the price volatility or returns of the company's shares. Investors consider volatile company shares to pose a greater risk. The existence of certain policies taken by the company that are not in line with investors' expectations or a lack of risk mitigation carried out by the company in dealing with conditions outside the company, can result in investors being careful about investing in the company.

This research intends to examine how non-financial disclosures, especially ESG-related disclosures and risk management disclosures, influence a company's total risk. In contrast to previous studies, this research focuses on the quality of disclosure which is measured using a content analysis approach. Disclosure will be measured using a scale that shows the quality of disclosure made by the company. Apart from that, this research also tested how the size of the supervisory board (board of commissioners) influences the effect of non-financial disclosure on the company's total risk, which to the author's knowledge is still rarely studied.

This research is expected to contribute to theoretical and practical aspects. Theoretically, this research is expected to provide empirical evidence of how non-financial information in the form of ESG disclosure and risk disclosure influences company risk from an agency theory framework. Practically, the results of this research can be used by management in deciding on the disclosures required by investors in their decision making.

II. LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

2.1. Literature Review

An agency relationship arises when one or more individuals or owners appoint another party to act on their behalf. In this case, the owner will delegate their rights and authority in making decisions to the party they appoint (Jensen & Meckling, 1976). In the context of Agency Theory, the delegation of rights and authority from the owner to another party (agent) will have an impact on the emergence of agency problems (Jensen & Meckling, 1976). This problem arises because of a mismatch between the interests of the owner and the agent. Jensen & Meckling (1976) said that this condition was a consequence of the separation of management and ownership functions (separation of the decision-making function and the company's risk-bearing function). Decision makers generally bear the risk of decision making errors, however, delegation of rights and authority from the owner to the agent will result in the risk being fully borne by the owner. As a result, management tends to take policies in its own interests.

Mio et al. (2019) see that one of the key factors that causes agency problems to emerge is asymmetric information. For this reason, the mechanism for disclosing non-financial information is one way to overcome asymmetric information. This is important, because non-financial information has now become a necessity for investors in making decisions (Mio et al., 2019). Disclosure of non-financial information will reduce opportunistic behavior from agents so that it will be able to reduce the impact of misalignment of the interests of the owner and the agent.

The role of non-financial information disclosure has attracted the attention of several researchers. However, in contrast to financial information where performance measurement is generally guided by accounting standards, the scope of non-financial information is broader. Several researchers translate non-financial information into intentions, one of which is non-financial information as information related to management analysis (Orens & Lybaert, 2010), facts and non-monetary information (Cinquini et al., 2012), social responsibility (Alali & Romero, 2012; Mio & Venturelli, 2013) and risk disclosure (Fijalkowska & Hadro, 2022). In this research, we focus on non-financial information in the form of ESG disclosures and risk disclosures presented in company annual reports.

Disclosures related to ESG are information presented by management to investors on how companies use the various forms of resources they have—natural, social, human, intellectual, and financial—to provide their products and services, and how their activities affect society (Sakis & Serafeim, 2019). However, many studies use CSR terminology in discussing ESG disclosures (Bassen & Senkl, 2011). Considering that investor attention has begun to pay attention to these issues, several studies have tested the impact of ESG disclosure. Among these studies examine how ESG disclosure can affect the cost of capital as carried out by Tan et al., 2020; Ng & Rezaee, 2015 and Goss & Roberts, 2011. Apart from that, several studies have also examined the influence of ESG disclosure on company value (Rahman et al., 2021), on financial risk (Shakil, 2023), company risk (Sassen et al., 2016; Benlemlih et al., 2016).

The definition of risk disclosure itself continues to develop. Initially, risk disclosure focused more on disclosing risks that had a negative impact on the company. Along with the development of the definition of risk, risk disclosure has developed into risk disclosure that is positive and negative (Ibrahim & Husseiny, 2019). Something similar was used by Ibrahim et al. (2022) who define risk disclosure as conveying information

regarding current and potential risks faced by an organization that can affect its sustainability, which is an important issue for stakeholders (Elamer et al., 2020). Thus, information related to risk should be important information for investors in making decisions (Ibrahim et al., 2022). The need for risk disclosure itself was initially expressed by the Institute of Chartered Accounting in England and Wales (ICAEW) in 1998. ICAEW considers that disclosure of risk management by companies in their annual reports will help investors in decision making (Linsley & Shrive, 2006). Nevertheless, Elshandidy et al. (2018) see that there is still little literature that shows the relevant value of this risk disclosure including its quality, effectiveness and compliance with regulations.

As an investment decision maker, investors will face risks in their decisions related to investment. Zreik (2016) revealed that investors will face two risks, namely systematic risk and non-systematic risk. Systematic risk is risk that originates from the market such as inflation rates, interest rates and foreign currency exchange rates. On the other hand, non-systematic risk is risk related to the company itself which includes bankruptcy risk, business risk and operational risk (Wijoyo & Firmansyah, 2021). Theoretically, this non-systematicity can be reduced by diversifying, but Scott (2015) states that this cannot be done. Based on these conditions, both systematic risk and non-systematic risk can influence investors. This combination of systematic risk and non-systematic risk is then better known as total risk or company risk (Shahzad et al., 2020; Mathew et al., 2018).

2.2. Hypothesis Development

2.2.1. The effect of ESG disclosure on company risk

As stated by Jensen & Meckling (1976), the emergence of principals and agents in company management results in agency problems, including asymmetric information. Disclosure of financial and non-financial information will be able to reduce this information asymmetry. One of the disclosures made by management is disclosure regarding ESG. As part of the information needed by investors (Benlemlih et al., 2016), ESG disclosure can reduce the risks faced by investors.

Several studies have also tried to examine how ESG disclosure influences company risk. This was done by Shakil (2021) by examining the influence of ESG performance on oil company risk. The results obtained by Shakil show that ESG performance is able to reduce the total risk of oil companies. Sassen et al. (2016) also tried to measure the performance of each element in ESG, namely environmental, social and governance performance in companies in Europe. Sassen et al. (2016) found that social performance was able to reduce total risk, systematic risk and non-systematic risk in all European companies, but for environmental performance and governance performance this was not visible. A similar thing was also found by Benlemlih et al. (2016) who concluded that ESG disclosure can reduce a company's total risk.

Based on agency theory and several studies that have tested the influence of ESG disclosure on company risk. It can be concluded that ESG disclosure will be able to reduce the company's total risk because this information will be used by investors in making decisions. Thus, the hypothesis that can be built is as follows:

H1: ESG disclosure has a negative effect on company risk

2.2.2. The effect of risk disclosure on company risk

The concept of asymmetry between management (agent) and investors (principal) is that some information will be provided but other relevant data may be kept secret (Nur Probohudono et al., 2011). Information asymmetry will give rise to agency costs in the form of monitoring the agent by the principal (Jensen & Meckling, 1976). Disclosure of information by the agent to the principal can reduce agency costs. Healy & Palipu (2001) see that there is a management interest in disclosing information to the principal in the form of reputation or remuneration. One of the disclosures made by management in the company's annual report is disclosure regarding risk management. Good communication regarding risks allows stakeholders to be more aware of potential material changes so as to reduce agency costs (Nur Probohudono et al., 2011).

Several studies have examined the impact of risk disclosure on companies. Kravet & Muslu (2013) found that risk disclosure actually increases share price volatility. This is caused by increasing risk perceptions from investors. However, Kim & Yasuda (2018) obtained different results regarding risk disclosure made by management. Kim & Yasuda (2018) show that risk disclosure made by companies is able to reduce the company's total risk. Similar results were also obtained by Lemma et al. (2019) which shows that companies that disclose carbon risk obtain a lower cost of capital due to lower risk. Likewise, research conducted by Haj-Salem et al. (2020) in Tunisia which shows that risk disclosure can increase company value. Based on the considerations above, the hypothesis that can be built is as follows:

H2: Risk disclosure has a negative effect on company risk

III. RESEARCH METHODOLOGY

This research is quantitative research. The data obtained for this research was collected manually from information presented in the company's annual report. The information captured in the annual report includes ESG disclosures, risk management disclosures, and financial information including total assets, leverage and

operating cash flow. Meanwhile, for risk measurement, data was obtained from www.idx.co.id. The sample for this research includes all issuers listed on the Indonesia Stock Exchange in 2017 which published annual reports except companies in the financial sector in 2021. Taking into account these criteria, this research involves the following samples:

Table 1: Research Sample

Listed company in 2017	:	420
Data not available	:	(42)
Out layers data	:	(26)
Total sample	:	355

From the data obtained, testing was carried out by carrying out a cross section data regression test. The aim of using cross section data is to be able to identify the influence of independent variables on the dependent variable without considering the influence of trends.

In this research, corporate risk is the risk faced by investors which includes systematic and non-systematic risks. Company risk is measured by following research conducted by Firmansyah & Muliana (2018) where company risk is the standard deviation of the average monthly stock return which is notated as follows:

$$FR = \sqrt{\frac{\sum_{i=1}^n [x_i - (x_i - \bar{X})]^2}{n}} \dots \dots \dots (1)$$

Notes:

- FR = firm risk
- x_i = share i return
- \bar{X} = monthly average return share i
- n = number of observation

ESG disclosure in this research uses content analysis based on indicators contained in the Global Reporting Initiatives (GRI) 4, namely disclosures related to the environment refer to GRI 300, social disclosures refer to GRI 400 and governance disclosures use 102.18 to 102.39. Based on the criteria in GRI 4, there are 86 ESG disclosure indicators. Each disclosure of each indicator will be given a value as done by Morhardt et al. (2002) where the value is 0 if there is no disclosure, the value is 1 if there is a short statement in one sentence, the value is 2 if the disclosure is more than one sentence and the value is 3 if there is a comparison with the previous year's performance. Thus, the maximum score that can be obtained is 225 points. The formula for measuring the quality of ESG disclosure is presented as follows:

$$ESGD_{it} = \frac{\text{Total score acquired}}{\text{Maximum score}} \dots \dots \dots (2)$$

Risk disclosure in this research is measured using a content analysis approach based on indicators contained in COSO Enterprise Risk Management (ERM) 2017. Based on the COSO (2017) framework, there are 20 risk disclosure indicators. Each disclosure is then given a score following Morhardt et al. (2002), namely a value of 0 if there is no disclosure, a value of 1 if there is a brief disclosure in one sentence, a value of 2 if there is a disclosure of more than one sentence and a value of 3 if there is a comparison with the previous year's performance. Based on these criteria, a maximum score of 60 will be obtained. The disclosure score obtained is then compared with the maximum score that can be obtained using the following notation:

$$RD_{it} = \frac{\text{Total score acquired}}{\text{Maximum score}} \dots \dots \dots (3)$$

This research also includes control variables in the form of company size which is measured using the natural logarithm of total assets, leverage which is calculated using total debt t divided by total assets t-1 and operating cash flow t divided by total assets t. The consideration of including these three variables is because these three variables have been proven to be able to influence the company's total risk as explained by Firmansyah & Muliana (2018).

The research hypothesis was tested using ordinary least squares with the following regression equation:

$$TR_{it} = \alpha + \beta_2 ESGD_{it-1} + \beta_3 RD_{it-1} + \beta_9 SIZE_{it-1} + \beta_{10} LEV_{it-1} + \beta_9 OCF_{it-1} \dots \dots \dots (4)$$

Notes:

- TR : Firm Risk
- ESG : ESG Disclosure
- D
- RD : Risk Disclosure
- SIZ : The size of the company
- E
- LEV : Financial leverage of the company
- OCF : Operating cash flow of the company

IV. RESULT AND DISCUSSION

Descriptive statistics used in this research are the average (mean), middle value (median), highest value (maximum), lowest value (minimum), and standard deviation (standard deviation) of the data obtained.

Table 2: Statistical Descriptive

Variabel	Min	Max	Mean	Std. Dev
TR	0.000	1.069	0.336	.226
ESGD	0	0.543	0.234	0.107
RD	0	0.817	0.333	0.148
SIZE	17.365	36.924	29.383	2.524
LEV	0.003	269.978	1.651	15.521
OCF	-22.681	0.6205	0.000	1.260

Notes:

TR= Firm risk; ESGD: ESG Disclosure; RD: Risk Disclosure; SIZE= Size of company; LEV= Leverage;

OCF: Operating Cash Flow

The company risk variable (TR) shows the risk value faced by investors. This value shows the risk value which includes systematic risk and non-systematic risk. Based on Table 2 above, the lowest total risk value is 0.000 while the highest risk is 1.069. The average company risk value in the sample is 0.336 with a standard deviation of 0.226. This shows that there is not much difference in the risks faced by investors.

From Table 2 we can see that the lowest value for ESG disclosure is 0 while the highest value is 54.264. The average ESG disclosure value in the sample is 0.234 with a standard deviation of 0.107. This shows that in general the quality of ESG disclosure in the sample is only 23% when compared to the GRI 4 criteria with the highest disclosure quality being 54.30%. It is still far from the maximum value that can be obtained.

Table 2 also shows that the lowest risk disclosure value is 0.000 while the highest value is 0.817. The average risk disclosure value in the sample is 0.329 with a standard deviation of 0.145. From this data it can be seen that the average quality of risk disclosure in the sample is 32% compared to the maximum disclosure value. However, there are companies that do not disclose risks and there are companies that have disclosed risks with a score of 81.7% of the maximum score.

Hypothesis testing in this research uses ordinary least squares. In the initial stage, outliers were tested with the help of SPSS. The results of outlier testing identified 26 outliers so they were not included in hypothesis testing. To obtain a regression model that meets the ordinary least squares criteria, we also carried out normality tests, multicollinearity tests and heteroscedasticity tests. Based on initial testing, there are symptoms of heteroscedasticity in the risk disclosure (RD) variable. For this reason, treatment is carried out by dividing all variables by the risk disclosure (RD) variable. By carrying out this treatment, the symptoms of heteroscedasticity can be overcome. Next, hypothesis testing was carried out using Eviews 9. The results of hypothesis testing are presented in Table 3.

Table 3: Hypothesis Test

$TR_{it} = \alpha + \beta_2 ESGD_{it-1} + \beta_3 RD_{it-1} + \beta_9 SIZE_{it-1} + \beta_{10} LEV_{it-1} + \beta_9 OCF_{it-1}$				
Variable	Prediction	Koefisien	p-value	Conclusion
ESGD	(-)	-0.0371	0.166	Reject H1
RD	(-)	-0.1519	0.0003***	Do not reject H2
SIZE		0.2433	0.000	
LEV		0.0894	0.319	
OCF		-0.0703	0.342	
C		0.328	0.010	
R-Squared			0.3861	
Adj R-Squared			0.3700	
Prob F-Stat			0.00000	

Notes:

***Significant at 1%

ESGD= ESG disclosure ; RD= risk disclosure; SIZE= firm size; LEV= firm leverage; OCF= operating cash flow.

Hypothesis 1 in this research was carried out with the aim of testing the negative influence of ESG disclosure on company risk. The processing results as presented in Table 3 show that the statistical t value of the influence of ESG disclosure variables on company risk is -0.992874 with a p-value of 0.1657 which is higher than the significance value of 10%. Thus, hypothesis 1 which states that ESG disclosure has a negative effect on company risk is rejected.

This conclusion shows that ESG disclosure in the company's annual report has no influence on the company's total risk. Thus, investors have not paid attention to disclosures made by management related to ESG. Information related to ESG is not considered important by investors in their decision making. The non-use of ESG disclosures by investors can be due to the lack of quality of disclosures made by companies. As described in descriptive statistics, the average ESG disclosure score of sample companies is 23%. This shows that ESG disclosure is still very low. This then results in ESG disclosure not being considered in determining a company's total risk.

Apart from being related to the still minimal quality of ESG disclosure. Another thing that influences why ESG disclosure is not considered by investors in determining company risk is the relevant value of the ESG disclosure. Several studies also show that disclosure still does not have relevant value in investor decision making. Griffin et al. (2017) who tested how disclosure of greenhouse gas emissions influences investor decisions concluded that disclosures made by companies regarding the environmental impact of greenhouse gas emissions do not influence how investors assess the company. Elliott et al. (2014) also found something similar where in the research it was concluded that there was no relationship between CSR disclosure and investors' desire to invest. Likewise, the results obtained by Friedman & Heinle (2016) concluded that investors did not react to CSR disclosures made by companies.

Hypothesis 2 in this research was carried out with the aim of testing the negative influence of risk disclosure on the company's total risk. The processing results as presented in Table 3 show that the estimated coefficient value is minus 0.1519. A minus value indicates a negative relationship between risk disclosure and the company's total risk. In this case, for every increase in risk disclosure by one unit, the total risk will decrease by 0.1519 units. Likewise, if risk disclosure decreases by one unit, idiosyncratic risk will also increase by 0.1519 units. In Table 3 it can also be seen that the p-value is 0.0003 which is lower than the significance value of 1%. Thus, hypothesis 2 which states that risk disclosure has a negative effect on the company's total risk is proven.

The results of this test show that disclosure regarding how management manages risk is able to reduce the risks faced by investors. From an agency theory perspective, risk disclosure carried out by management is able to reduce asymmetric information between management and investors. By reducing the information asymmetry that occurs, investors can make more precise decisions because the assessment of management performance is more accurate. These results are empirical evidence of how information disclosure is an effective way to manage conflicts of interest and reduce manager supervision by investors and creditors (Haj-Salem et al., 2020).

The role of risk disclosure in being able to reduce the company's total risk is also in line with the results of research conducted by Kim & Yasuda (2018) where risk management disclosure carried out by companies in Japan was able to reduce the company's total risk. Similar results were also obtained by Lemma et al. (2018) where companies in South Africa that disclose carbon risk will have a lower cost of capital compared to companies that do not disclose carbon risk.

V. CONCLUSION

This research aims to examine how non-financial disclosures in the form of ESG disclosures and risk disclosures affect a company's total risk. Based on the results obtained, it can be concluded that ESG disclosure does not affect company risk. This shows that ESG disclosure has not been used by investors in assessing company risk. However, risk disclosure is able to reduce company risk, which shows that risk disclosure has relevant value in determining company risk. This research contributes to providing empirical evidence of how non-financial information, especially risk disclosure, is used in determining company risk.

This research still has several weaknesses, including measuring the quality of ESG disclosures and risks using a content analysis approach which has an element of subjectivity. Apart from that, this research still uses cross-section data which might produce different conclusions when using panel data.

Several improvements can be made for future research. Among them is using panel data and different methods of measuring the quality of disclosure. In this way, a better picture can be obtained regarding the role of non-financial disclosure in determining company risk. In addition, further research regarding the role of the competence of the board of directors or supervisory board in influencing ESG disclosure and risk disclosure can also be considered.

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