






# The Impact of ESG Risk Score and Disclosure on Financial Performance: Moderating Role of Gender Diversity

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**Abstract.** Global efforts to achieve the Sustainable Development Goals (SDGs) have resulted in a shift in business trends that focus on sustainability issues. Environmental, Social, and Governance (ESG) is one of the principles or business practices that can support the sustainability of a company. This study aims to test and analyze the effect of ESG risk score and disclosure on financial performance with gender diversity as a moderating variable. Data is obtained from the financial statements and sustainability reports of 18 companies that are consistently listed in the ESG Leaders index on the Indonesia Stock Exchange for the period 2020-2023. Data were analyzed using multiple linear regression analysis and moderated regression analysis. The findings show that ESG risk score has a negative effect on financial performance (ROA), while ESG disclosure is found to have a positive effect. Additionally, gender diversity is able to moderate the relationship between these variables. The findings of this study imply that companies need to consider ESG risk scores and disclosures on financial performance, especially with gender diversity as a moderator. For investors, these findings can be a reference in investing in companies that care about the social environment and its governance.

**Keywords:** Environmental, Social, Governance, Risk Score, Disclosure, Financial Performance, Gender Diversity.

## 1. Introduction

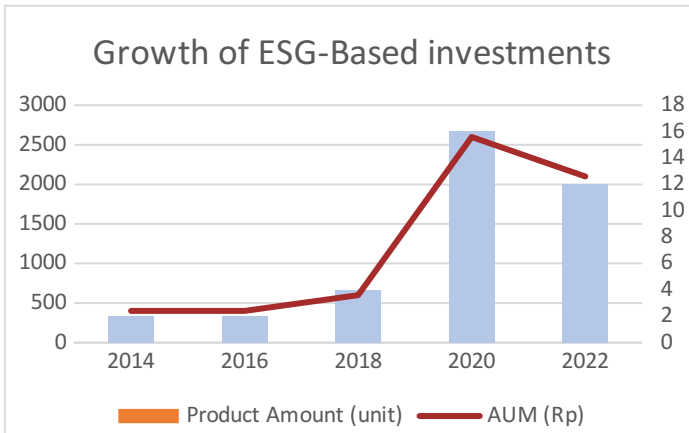
The United Nations (UN) introduced 17 Sustainable Development Goals (SDGs) in 2015, a development model that aims to meet current needs without depleting resources required by future generations (Xu & Wan, 2024). One of the objectives of introducing the SDGs is to promote a sustainable and innovative economy that focuses on the growth and prosperity of all living beings, including humans and the environment (Sadiq, 2022). This has triggered a shift in business trends, redirecting focus toward sustainability issues. One of the business principles or practices that can support a company's sustainability is Environmental, Social, and Governance (ESG). The ESG principle represents a more holistic and comprehensive strategic approach by business organizations to evaluate company performance from various perspectives. ESG performance reflects how much a company contributes to green sustainability and fulfills its social responsibilities (Hin & Liu, 2023). Several methods can be used to measure ESG, including performance, disclosure

ESG performance reflects how much a company contributes to green sustainability and fulfills its social responsibilities (Hin & Liu, 2023). Several methods can be used to measure ESG, including performance, disclosure transparency, and risk exposure levels. This study used risk score and disclosure transparency as indicators for ESG measurement.

The 17 Sustainable Development Goals (SDGs) were established by the United Nations in 2015 to create a development framework that sustains present needs while preserving resources for future generations (Xu & Wan, 2024). According to Sadiq (2022), these SDGs were designed to foster an economy focused on sustainability and innovation, benefiting both human society and the natural world. This initiative has led businesses to increasingly prioritize sustainability in their operations. Environmental, Social, and Governance (ESG) has emerged as a key business framework supporting corporate sustainability efforts. ESG provides organizations with a comprehensive approach to evaluate their performance across multiple dimensions. A company's ESG performance indicates its commitment to environmental sustainability and social responsibility. ESG can be evaluated through various metrics, including performance indicators, transparency in disclosure, and risk exposure (Hin & Liu, 2023). This research specifically focused on risk score and disclosure transparency as the primary ESG measurement tools.

The ESG risk score stands as a vital metric that captures potential adverse effects and challenges companies face through environmental, social, and governance risks. While corporate social responsibility discussions typically center on how companies affect their environment and society, less attention is paid to how these factors impact the companies themselves. As Mohsin et al. (2020) note, a company's success is inherently tied to its ability to adapt to its operating environment, which significantly influences its performance. Environmental and social factors have demonstrable effects on corporate operations. According to Li et al. (2024), environmental risks like climate change can pose threats to production activities, drive up costs, and impede sustainable corporate development. Social risks, such as community conflicts, can force temporary shutdowns of operations. Beyond external factors, internal governance issues, particularly fraud committed by those in positions of authority, can also pose significant risks. As Rampay and Subekti (2023) observe, numerous fraud cases involving powerful individuals within companies have led to internal disruptions. These various risks can impact financial performance through multiple channels: disrupting operations, increasing expenses, reducing revenue, and damaging corporate reputation among investors and the public. Thus, the ESG risk score serves dual purposes: it measures risk levels while also functioning as a tool for identifying, quantifying, and managing potential threats to operational sustainability, while providing insight into a company's risk resilience.

In addition to ESG risk scores, transparency in disclosing sustainability practices within a company has become one of the factors considered by stakeholders. The importance of this transparency is reflected in the significant increase in ESG-based investments in the stock market.



(Source: KataData, 2022)

**Fig.1.** The growth of ESG-based investments in Indonesia

Modern investors increasingly prefer to invest in companies that excel not only in financial performance but also demonstrate robust ESG practices with thorough documentation. Chininga et al. (2023) observe that the rising popularity of socially responsible investing has led to increased investor demands for transparency regarding fund allocation. This trend has compelled companies to enhance their disclosure of environmental, social, and governance information. According to Putri and Puspawati (2023), ESG disclosure demonstrates a company's commitment to informing stakeholders about their sustainability initiatives. This transparency provides insights into how companies work to minimize their environmental impact, manage community relationships, and implement effective governance policies. Firmansyah et al. (2023) point out, transparency in ESG reporting offers valuable opportunities to understand companies' non-financial performance through their ESG practices and implementation. This information serves a crucial role in maintaining corporate accountability and transparency, providing essential insights for both investors and the public.

Awareness of environmental, social, and governance (ESG) issues has driven changes in the way companies operate. This has triggered numerous studies examining how various internal parties within the company, such as managers, owners, and the board of directors, contribute to ESG performance and corporate social responsibility (Yahya, 2023). The board of directors, with its decision-making authority, is responsible for the company's corporate social responsibility policy. Diversity in the composition of the board of directors is recognized to influence the quality and effectiveness of decision-making related to business sustainability issues (Gaio & Gonçalves, 2022). Thus, in addition to being responsible for the environment, social aspects, governance, and maintaining transparent and ethical business operations, companies are also required to promote diversity and fair labor practices within the organization (Saha, 2024). The demand is outlined in Goal 5 of the Sustainable Development Goals (SDGs) on gender equality, which emphasizes the importance of providing equal opportunities for women and men in various aspects of life, including in the workplace and in decision-making. Decision-making regarding

ESG principles in a company requires careful consideration from various perspectives, including viewpoints from members of different genders. Balanced representation between men and women in board positions can bring diverse perspectives and ideas, thereby fostering innovation and better decision-making, including considerations regarding the implementation of ESG principles in the company.

This research considers the combination of ESG risk scores with ESG disclosures on the financial performance of companies over a 4-year period, from 2020 to 2023. The ESG risk score comes from the assessment provided by the third-party institution Morningstar Sustainalytics. Meanwhile, ESG disclosure is related to the level of transparency demonstrated by the company regarding its ESG commitments and practices, including the information they share with the public. Through this approach, the research aims to understand how external assessments and the internal openness of companies towards ESG practices impact financial performance, as well as how the role of gender diversity on the board of directors can influence this relationship. Moreover, the debates arising from previous research findings encourage researchers to further explore this issue.

## **2. Theoretical Background and Hypothesis Development**

### **2.1 ESG Risk Score and Financial Performance**

The stakeholder theory proposed by Freeman (1984) provides a strong conceptual framework for understanding the relationship between ESG (Environmental, Social, and Governance) risk scores and corporate financial performance. This theory argues that the long-term success of a company depends on its ability to meet the needs and expectations of various stakeholders, not just shareholders. The ESG risk score is viewed as an indicator of the extent to which a company successfully manages its relationships with various stakeholders and its environment. Given that the indicator in this study is risk, where an increase in value indicates a negative impact, the hypothesis leads to a negative relationship. A high ESG risk score will reduce financial performance, as the company faces significant challenges in managing environmental, social, and governance aspects, which can be interpreted as a failure to effectively meet stakeholder expectations.

Previous research by Coiro (2021) found that ESG risk scores negatively affect ROE. Mendoza (2022) and Saini et al. (2023) also found a negative relationship between ESG risk scores and financial performance measured by ROA. These findings suggest an inverse relationship between a company's sustainability risks and its financial performance. The more sensitive a company is to sustainability risks, the greater the financial benefits it will gain. Rompotis (2023) showed that the effect of ESG risk scores on financial performance has a significant negative impact. In other words, the higher a company's ESG risk score, the lower its ROA. These findings also confirm the argument that low ESG risk scores will improve financial performance.

H1: ESG risk scores negatively affect financial performance.

## 2.2 ESG Disclosure and Financial Performance

Based on the principles of stakeholder theory, transparency in disclosing ESG information can have a direct impact on a company's financial performance. According to this theory, companies are considered to have an obligation to meet the needs and expectations of their stakeholders, including investors, employees, consumers, and society at large. Transparency in disclosing ESG information not only meets the demands of corporate ethics and social responsibility but can also support the sustainability of the company and improve financial performance by strengthening relationships with relevant stakeholders. Thus, it can be concluded that the more transparent a company is in disclosing its ESG practices, the better its financial performance will be.

A study by Chen and Xie (2022) found that transparency in ESG disclosure contributes to improved financial performance. Furthermore, research by Alfalih (2022) showed that ESG disclosure practices significantly impact financial performance both directly and indirectly, using indicators such as Return on Assets (ROA) and Tobin's Q. Findings from Kumar & Firoz (2022) also confirm that ESG information disclosure is positively related to financial performance, using indicators such as Return on Capital Employed (ROCE) and ROA. By improving ESG disclosure, companies can enhance their financial performance, gain a positive image, boost credibility, and encourage ethical practices within the company.

H2: ESG disclosure positively affects financial performance.

## 2.3 Gender Diversity as a Moderating Variable

Upper echelons theory asserts that the background, experiences, and characteristics of leaders influence organizational decisions and performance (Hambrick & Mason, 1984). Gender diversity can moderate by reflecting the decisions made by the board of directors based on the characteristics and understanding of each member. This diversity creates an environment where multiple perspectives can be expressed. This can influence how decisions related to risk management strategies and effective ESG disclosure are made, as well as the impact of these strategies on the company's financial performance.

The findings from the study by Kahloul et al. (2022) indicate that gender diversity on the board of directors can moderate the relationship between CSR reporting and financial performance. Subsequently, Kurnianto and Soewarno (2024) state that gender diversity can act as a moderating variable in the relationship between prospector business strategy and financial performance. Ahmed et al. (2024) and Birindelli et al. (2024) also found similar results regarding the moderating role of gender diversity on the relationship between the audit committee and greenwashing with financial performance.

H3: Gender diversity moderates the effect of ESG risk scores on financial performance.

H4: Gender diversity moderates the effect of ESG disclosure on financial performance.

### 3. Method

#### 3.1 Data and Sample

This study uses secondary data obtained from financial statements, annual reports, sustainability reports, and ESG scores sourced from [www.idx.co.id](http://www.idx.co.id) and the official company websites from 2020-2023. The research sample consists of companies listed in the ESG Leaders Index (IDX ESGL). This index features companies that consistently prioritize sustainability aspects in their operations and business decision-making, providing a stock list for investors who prefer environmental, social, and governance practices. (ESG). Sample selection using the purposive sampling method determined based on criteria established by the researcher (Cooper & Schindler, 2014). The criteria established as determinants for the research sample are as follows:

1. Companies that are listed and consistently included in the IDXESGL index on the Indonesia Stock Exchange from 2020-2023.
2. Companies that consistently publish financial statements, annual reports, and sustainability reports from 2020-2023.

#### 3.2 Measures and Variables

This study includes four variables: independent variables (ESG risk scores and disclosure), one dependent variable (financial performance), and one moderating variable (gender diversity). The following research framework illustrates the relationship between these variables.

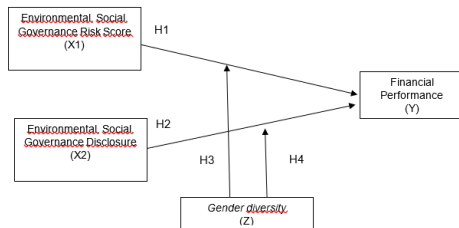


Fig. 2. Research Framework

This study uses a quantitative approach to test the consistency between theory and data, formulate hypotheses, and conduct data analysis using SPSS 26 as the testing tool. The research design is specifically structured to answer the pre-

determined research questions. The operational definitions for each variable can be seen in the following table.

**Table 1.** Operational Definition

Variables	Definition	Indicator/Measurement
ESG Risk Score	Environmental, Social, and Governance (ESG) scores refer to the ESG risk ratings provided by Morningstar Sustainalytics. This score measures the extent to which a company is exposed to environmental, social, and governance risks (ESG).	<p>The company’s ESG risk scale based on Sustainalytics:</p> <ul style="list-style-type: none"> <li>● 0-10 : Very low</li> <li>● 10-20: Low</li> <li>● 20-30: Moderate</li> <li>● 30-40: High</li> <li>● 40+ : Severe</li> </ul> <p>Coiro (2021); Mendoza (2022); Saini et al. (2023); Rompotis (2023).</p>
ESG Disclosure	ESG disclosure refers to a company's transparency in informing stakeholders about its sustainability practices based on three aspects: social, environmental, and governance.	<p>The ESG disclosure indicators are traced using the Global Reporting Initiative (GRI) Standards. A value of 1 is assigned if a GRI item is disclosed, and a value of 0 is assigned if the GRI item is not disclosed.</p> $ESG_i = \frac{\text{Sum of company's disclosure item}}{\text{Total of GRI's disclosure standard item}}$ <p style="text-align: right;">Ghazali &amp; Zulmaita (2020)</p>
Financial Performance	Financial performance is a reflection of a company’s financial condition, evaluated through analysis using financial instruments. It is useful for assessing the company’s financial state, whether in a positive or negative situation.	<p>Return on Assets (ROA)</p> $\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Asset}} \times 100$

Alfalih (2022); Kumar & Firoz (2022);  
Mendoza (2022); Rompotis (2023);  
Saini *et al* (2023).

Gender Diversity Gender diversity refers to the presence and balanced representation of men and women within a company's board of directors.

$$GD = \frac{\text{Number of female director}}{\text{number of board members}}$$

Ionascu *et al.* (2018)

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Source: *Authors own estimation (2024)*

### 3.3 Multiple Regression Analysis and Moderated Regression Analysis

The data are analyzed using multiple linear regression and moderated regression analysis. The primary objective of this test is to understand the extent to which the independent variables influence the dependent variable and to examine whether the relationship between the independent and dependent variables is affected by a third variable, known as the moderator. This relationship model can be described as follows:

The first stage model – Multiple linear regression :

$$Y = \alpha + \beta_1.X_1 + \beta_2.X_2 + e \tag{1}$$

The second stage model – Moderated Regression Analysis :

$$Y = \alpha + \beta_1(X_1.Z) + \beta_2(X_2.Z) + e \tag{2}$$

Description:

- Y = Financial performance (ROA)
- $\alpha$  = Constant
- $\beta_1 - \beta_2$  = Regression coefficient
- X1 = ESG Risk Score (SCORE)
- X2 = ESG Disclosure (DISC)
- Z = *Gender Diversity* (GD)
- X1.Z = Interaction between gender diversity and ESG risk score
- X2.Z = Interaction between gender diversity and ESG disclosure
- e = error term

## 4. Result

### 4.1 Descriptive Statistic

The first step in conducting the analysis is descriptive statistics, which allows us to understand the distribution and variation of the data, as well as its basic characteristics. This study collected 72 samples to show the minimum, maximum, mean, and standard deviation values. The following presents the descriptive statistics results from the collected samples.

**Table 2.** Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SCORE	72	11,31	29,74	22,3265	5,31657
DISC	72	,10	,86	,3689	,17702
ROA	72	-3,32	34,89	6,7506	7,05226
GD	72	,10	,60	,2828	,14783
Valid N (listwise)	72				

(Source: SPSS 26, 2024)

Based on Table 2, the results of the descriptive statistical analysis for each variable show that SCORE has a minimum value of 11.31 and a maximum value of 29.74, with a mean of 22.32. Meanwhile, the disclosure variable, represented by DISC, has a minimum value of 0.10 and a maximum value of 0.86 with a mean of 0.36. Next, the ROA variable, representing financial performance shows a minimum value of -3.32 and a maximum value of 34.89, with a mean of 6.75. The moderating variable GD has a minimum value of 0.10 and a maximum value of 0.60 with a mean of 0.28.

### 4.2 Classical Assumption Test

The Classical Assumption Test refers to a series of tests used in statistical analysis, particularly in regression analysis. It aims to examine the fundamental assumptions that must be met for the results of statistical analysis to be considered accurate and reliable.

#### Normality Test

**Table 3.** One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
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N		72
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	3,10058302
	Absolute	,077
Most Extreme Differences	Positive	,077
	Negative	-,067
Kolmogorov-Smirnov Z		.077
Asymp. Sig. (2-tailed)		.200

(Source: SPSS 26, 2024)

Based on the normality test using the one-sample Kolmogorov-Smirnov test, the significance value of the data is 0.200, which indicates that this value is greater than 0.05. Therefore, according to the testing criteria, it can be concluded that the data in this study follow a normal distribution.

**Multicollinearity Test**

**Table 4.** Multicollinearity Test

<b>Coefficients<sup>a</sup></b>			
<b>Model</b>		<b>Collinearity Statistics</b>	
		<b>Tolerance</b>	<b>VIF</b>
1	SKOR	,807	1,239
	DISC	,942	1,062
	GD	,845	1,183

(Source: SPSS 26, 2024)

Based on the testing criteria, it can be concluded that all variables are free from multicollinearity, as the tolerance values are greater than 0.1. Meanwhile, the VIF values for all variables are less than 10.

**Autocorrelation Test**

**Table 5.** Durbin-Watson Test

<b>Model</b>	<b>R</b>	<b>Durbin-Watson</b>
1	,259 <sup>a</sup>	2,113

(Source: SPSS 26, 2024)

To detect autocorrelation in this study, the Durbin-Watson test was used. Decisions were made based on the criterion  $D_u < D_w < 4 - D_u$  which indicates the absence of autocorrelation. Referring to Table 5 above, it can be concluded that the results of the Durbin-Watson autocorrelation test are as follows:

- N = 72
- Dw = 2,113
- Du = 1,7054

$$4 - D_u = 2,2946$$

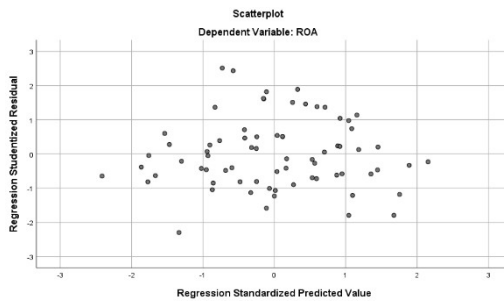
Result:  $D_u < D_w < 4 - D_u = 1,7054 < 2,113 < 2,2946$  Thus, the conclusion is that there is no autocorrelation.

**Table 6.** Autocorrelation Test Value

Du	Dw	4-Du
1,7054	2,113	2,2946

(Source: Data processed, 2024)

### Heteroscedasticity Test



(Source: SPSS 26 ,2024)

**Fig 3.** Scatterplot Graph

To detect heteroskedasticity, this study uses a Scatterplot. The graph above shows points that are randomly scattered and do not form any specific pattern, indicating that the residual variance is consistent and there is no heteroskedasticity problem in the model.

### 4.3 Multiple Linear Regression and Hypothesis Testing

**Table 7.** Multiple Linear Regression Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant )	7,644	2,047		3,734	,000
	SCORE	-,197	,086	-,266	-2,279	,026
	DISC	5,621	2,744	,239	2.048	,044

a. Dependent Variable: ROA  
(Source: SPSS 26, 2024)

Table 7 shows that the results of the coefficient test can be formulated in the following regression equation:

$$Y = 7.644 - 0.197X_1 + 5.621X_2 + e \tag{1}$$

The multiple linear regression equation above explains that the constant value is 7.644 and the regression coefficients for SCORE and DISC are -0.197 and 5.621, respectively. This means that if the independent variables (SCORE and DISC) are zero, the dependent variable (ROA) will equal the constant value. For the SCORE variable, each one-unit increase in SCORE will decrease the ROA variable by the value of the regression coefficient of the SCORE variable. Meanwhile, for the DISC variable, each increase will increase the ROA variable by the value of the regression coefficient of the DISC variable.

**4.4 Moderated Regression Analysis**

**Table 8.** Moderated Regression Analysis Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	12,734	2,880		4,422	,000
SCORE	-,375	,105	-,508	-3,562	,001
DISC	9,511	3,295	,405	2,887	,005
GD	-	7,246	-,432	-2,184	,033
1 SCORE*GD	15,824				
D	,559	,229	,499	2,439	,017
DISC*GD	-	10,427	-,352	-2,048	,045
	21,355				

a. Dependent Variable: ROA  
(Source: SPSS 26, 2024)

Table 8 shows that the results of the coefficient test can be formulated into the following regression equation:

$$Y = 12,734 - 0,375X_1 + 9,511X_2 - 15,824Z + 0,559X_1.Z - 21,355X_2.Z + e \tag{2}$$

The results of moderater regression analysis show that the moderating variable GD has a significant effect and is able to moderate the relationship between SCORE and ROA, as well as between DISC and ROA. The regression coefficient for the interaction of SCORE\*GD indicates that the moderating effect of GD on the relationship between SCORE and ROA is positive. This means that an increase in GD will strengthen the negative relationship between SCORE and ROA. On the other hand, the regression coefficient for the interaction of DISC\*GD shows that the moderating effect of GD on the relationship between DISC and ROA is negative. It means that an increase in GD will weaken the positive relationship between DISC and ROA.

## 4.5 Coefficient of Determination

**Table 9.** Coefficient of Determination Test Before Moderation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,745 <sup>a</sup>	,555	,542	,95159

(Source: SPSS 26, 2024)

Table 9 shows that the Coefficient of Determination (R<sup>2</sup>) value of 0.555 means that the contribution of the independent variables (SCORE and DISC) affects the dependent variable (ROA) by 55.5%, while the remaining 44.5% is influenced by other variables outside the model.

Further analysis of the moderation impact can be seen from the change in the coefficient of determination (R<sup>2</sup>) values before and after the addition of the moderation variable in the model. By understanding the changes in the R-square value, we can determine the extent to which the moderation variable can enhance the model's ability to explain the variation occurring in the dependent variable. Here is the table of the coefficient of determination (R-square) test results after moderation.

**Table 10.** Coefficient of Determination Test After Moderation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,796 <sup>a</sup>	,633	,606	,95152

(Source: SPSS 26, 2024)

After the addition of moderation variables (GD, GD\*SCORE, GD\*DISC), the R<sup>2</sup> value increased to 0.633. This 7.8% increase in the R<sup>2</sup> value indicates that the moderation variables significantly contribute to explaining an additional 7.8% variation in the dependent variable, thereby enhancing the model's ability to explain variation in the dependent variable from 55.5% to 63.3% after moderation.

## 5. Discussion

### 5.1 ESG Risk Score on Financial Performance

The hypothesis testing results reveal a significant negative relationship between ESG risk scores and the financial performance of companies listed in the ESG Leaders index, leading to the acceptance of H1. This finding demonstrates that higher ESG risk scores correlate with declining financial performance.

Stakeholder theory provides a foundational understanding that a company's success depends on its ability to meet the expectations of all stakeholders. This theory also validates the premise that neglecting stakeholder interests will be detrimental to the company. ESG risk scores are used by stakeholders to assess the level of risk exposure faced by companies in relation to their sustainability practices. For example, risk-averse investors tend to favor companies with low ESG risk scores because these

companies demonstrate better management of risks that could potentially harm their investments in the future. The research findings show a negative relationship between ESG risk scores and financial performance. This means that high ESG risk scores reflect a company's failure to meet these expectations, particularly in managing risks related to environmental, social, and governance issues. When companies fail to manage ESG risks, stakeholder trust and support will diminish. This support can manifest in various forms, including customer loyalty, increased employee productivity, and investor interest in companies perceived as more sustainable.

These findings align with research by Coiro (2021), Mendoza (2022), Saini et al. (2023), and Rompotis (2023), which demonstrate a negative correlation between ESG risks and financial performance, where higher ESG risk scores lead to decreased financial performance. Saini et al. (2023) further elaborate that due to ESG risks such as climate change, changes in financial reporting, and heightened social awareness, investors are increasingly scrutinizing companies' ESG risks. Companies that fail to manage ESG risks may face difficulties in obtaining funding and become less attractive to investors who consider ESG factors in their investment decisions. Therefore, it becomes imperative for companies to address ESG risks to gain stakeholder trust, which will ultimately enhance their financial performance.

## **5.2 ESG Disclosure on Financial Performance**

The results of the hypothesis testing indicate that ESG (Environment, Social, and Governance) disclosure has a positive impact on the company's financial performance, thus H2 is accepted. It means that the more transparent the disclosure of ESG information, the better the company's financial performance. Stakeholder theory argues that a company's long-term success is not only determined by financial profits but also by how well the company meets the needs and expectations of various stakeholder groups. ESG disclosure serves as an important tool for communicating how companies address environmental, social, and governance issues. By increasing transparency and accountability through ESG disclosure, companies can build stronger relationships with stakeholders, which ultimately contributes to improved financial performance.

These findings are in line with the research of Alfalih (2022), Chen & Xie (2022), and Kumar & Firoz (2022), which show that the transparency of ESG disclosures can enhance financial performance through strategies that promote ethical practices and social responsibility to the public, thereby improving the company's credibility and image. ESG disclosure has various significant benefits in improving a company's financial performance. First, ESG disclosure can reduce information asymmetry between companies and stakeholders. Second, ESG disclosure serves as a legitimate tool to demonstrate that companies are actively fulfilling their ecological and social responsibilities, thereby influencing consumer preferences and attracting investors who prioritize ESG factors in their investment decisions to mitigate risks. As a result, this strengthens the company's reputation, enhances its competitive advantage, and allows the company to access capital at a lower cost. (Alfalih, 2022; Chen & Xie, 2022; Kumar & Firoz, 2022).

### **5.3 Gender Diversity Moderates the Relationship Between ESG Risk Score and Financial Performance**

The results of the hypothesis testing indicate that the third proposed hypothesis is accepted. Thus, the research findings indicate that gender diversity can moderate the relationship between ESG Risk Scores and the Financial Performance of companies listed in the BEI ESG Leaders index for the years 2020-2023. It means that the presence of gender diversity in a company affects how the ESG Risk Score impacts Financial Performance.

Overall, the findings indicate that gender diversity can act as a moderator. However, gender diversity moderates by strengthening the negative relationship between ESG risk scores and financial performance. This can be explained through the perspective of the upper echelon theory proposed by Hambrick and Mason. (1984). This theory states that the characteristics of leaders, including gender diversity, can influence the strategic decision-making process and organizational performance. In this study, gender diversity at the board level appears to increase sensitivity to ESG risks and results in a decline in the company's financial performance. The diversity of characteristics within an organization can have a dual effect. On one hand, this diversity provides a broader integration of information and knowledge, which has the potential to improve the quality of decision-making related to ESG issues and threats. On the other hand, the presence of diverse characteristics within the organization can lead to relationship conflicts among team members (Chen et al., 2019). The existence of differing opinions and understandings has led to debates regarding ESG risk management strategies. This can slow down decision-making and worsen the negative impact of ESG risks on financial performance.

Previous research supporting the finding that gender diversity can act as a moderating variable includes studies conducted by Kahloul et al. (2022), Kurniawan & Soewarno (2024), Ahmed et al. (2024), and Birindelli et al. (2024), which reveal that the presence of gender diversity or representation of various genders in companies can moderate the effect of independent variables on financial performance. Specifically, Birindelli's (2024) research aligns with the results of this study, where the presence of gender diversity can moderate by strengthening the negative relationship between independent variables and financial performance.

### **5.4 Gender Diversity Moderates the Relationship Between ESG Disclosure and Financial Performance**

The results of the hypothesis testing indicate that the fourth proposed hypothesis is accepted. Thus, the research findings state that gender diversity can moderate the relationship between ESG disclosure and the financial performance. It means, the presence of gender diversity can influence the level of transparency in ESG disclosures regarding the company's financial performance.

More specific, findings explain that gender diversity moderates by weakening the positive relationship between ESG disclosures and financial

performance. This can be explained through the perspective of upper echelon theory. This theory posits that organizational decisions and performance are influenced by the characteristics of individuals in top positions, including their backgrounds, experiences, and values. In this case, gender diversity in the composition of the board of directors can bring different perspectives in decision-making related to ESG disclosures. This can trigger internal conflicts within the board of directors due to value, style, or approach mismatches among individuals with diverse backgrounds, including gender differences. The differences in characteristics can trigger internal conflicts and disrupt decision-making or strategies regarding the transparency of ESG disclosures within the company. Moreover, the policies related to ESG disclosure in Indonesia are not very strict, so some members of the board of directors may feel less encouraged to pay attention to transparency in their reports. This shows that when the board of directors cannot unify differing views and manage emerging conflicts, the positive potential of ESG disclosure can be hindered, which can ultimately have a negative impact on the company's financial performance.

This study is consistent with the findings of Kurniawan & Soewarno (2024) and other studies, such as Kahloul et al. (2022), Ahmed et al. (2024), and Birindelli et al. (2024), which also state that gender diversity can moderate the influence of independent variables on financial performance. Specifically, the research by Kurniawan & Soewarno (2024) supports the findings by stating that gender diversity is capable of moderating by weakening the positive relationship between the independent variable and financial performance.

## 6. Conclusion

Based on the test results, it can be concluded that ESG risk scores negatively affect financial performance, while ESG disclosure positively influences it. These findings align with stakeholder theory, which asserts that companies that are more responsive to stakeholder interests through effective ESG risk management and transparent disclosure will gain greater support from investors, customers, and communities, thereby improving financial performance. Conversely, if companies neglect ESG risks and transparency, their financial performance will decline. Furthermore, gender diversity moderates both of these relationships. These findings support the upper echelon theory, which emphasizes that a company's performance is reflected in the characteristics of its leaders or internal board members.

The implications of this research suggest that companies need to pay attention to how ESG risk scores and disclosures affect financial performance, particularly with gender diversity as a moderating factor. For investors, the findings are expected to provide useful information that can be considered when making investment decisions, especially in companies that implement sustainable practices and have strong social responsibility. Future research is recommended to expand the sample to include companies outside of the ESG Leaders index to enhance the generalizability of the findings, extend the research period to more than four years to observe long-term trends, and add other variables as moderators, such as company size or ownership structure. Additionally, industry-specific analysis is advised to determine whether the

relationships observed apply broadly or vary depending on industry characteristics, especially in sectors closely tied to environmental issues.

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