

## The Influence of Environmental, Social & Governance (ESG) Risk Rating on Debt Financing in Companies Listed on IDX ESG Leaders

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**Abstract.** *This study analyzes the impact of Environmental, Social & Governance (ESG) Risk Rating on Debt Financing in companies listed on IDX ESG Leaders for the period 2020-2023. Data was obtained through saturated sampling techniques and used an unbalanced panel with 30 companies included in IDX ESG Leaders for each period over the 3-year observation period, resulting in a total of 90 samples. The variables studied include ESG Risk Rating, Leverage, and Profitability. The results show that ESG Risk Rating has a significantly negative impact on Debt Financing. Control variables such as leverage do not impact Debt Financing, whereas profitability has a significantly negative impact on Debt Financing.*

**Keywords:** *Debt Financing, ESG Risk Rating, IDX ESG Leaders*

### 1. INTRODUCTION

For a company to survive and grow, effective financial management is crucial, as it impacts their future operations and growth. Companies need funds to finance their activities and working capital to ensure smooth operations. Working capital can come from internal sources, such as retained earnings, and external sources, such as creditors like banks and other financial institutions (Hairul et al., 2021). One common method of financing is through debt, where companies obtain borrowed capital from creditors, incurring interest costs as the required rate of return for creditors (Hairul et al., 2021).

Regulation Number 51/POJK.03/2017 on the Implementation of Sustainable Finance for Issuers and Public Companies outlines the principles of Environmental, Social, and Governance (ESG). Quoted from the website of the National Bank Association (2023) this regulation emphasizes the integration of ESG principles into financial management, highlighting the importance of sustainable finance. Efforts to promote ESG practices include the Indonesian green taxonomy program, supported by the President, and initiatives to raise awareness of ESG importance, with plans to establish specialized committees (Anggela, 2022). Major banks in Indonesia, such as Bank Mandiri, Bank Rakyat Indonesia (BRI), and Bank Central Asia (BCA), have shown their commitment to ESG by allocating significant funds to sustainable portfolios and prioritizing investments in eco-friendly sectors (Alexandra, 2023;

Sulistiyorini, 2023; Syahputra, 2022; Aprilia, 2023). These actions reflect a broader commitment to sustainability and support Indonesia's transition to a low-carbon economy. The World Bank's efforts in developing sustainable bond markets in developing countries further highlight the global push towards integrating ESG principles in financial practices (World Bank Group, 2024). ESG Risk Rating is closely linked to debt financing due to lenders' concerns about the impact of ESG factors on financial performance and debt risk. A good ESG Risk Rating indicates a company's ability to manage ESG-related risks, enhancing its credibility and reputation and potentially reducing borrowing costs.

ESG (Environmental, Social, and Governance) Risk Rating is closely linked to debt financing due to lenders' concerns about the impact of ESG factors on financial performance and debt risk. ESG Risk Ratings reflect a company's ability to manage environmental, social, and governance risks, making lenders more confident in companies with good ESG ratings. This confidence stems from the perception that such companies are better at identifying, managing, and responding to risks, which can positively influence their debt repayment ability. Additionally, companies with low environmental risk are often seen as having good reputations, which can enhance business sustainability and profitability (Agustina et al., 2023). In Indonesia, the government's commitment to achieving the UN's Sustainable Development Goals (SDGs) by 2030 has led to the issuance of guidelines for implementing ESG principles (Bappenas, 2019). These guidelines aim to increase awareness of the impact of ESG factors on companies and highlight the benefits of integrating ESG for better risk management and capital allocation (Boulos et al., 2014). The Indonesia Stock Exchange (IDX) has launched initiatives like the ESG Leaders Index to encourage better ESG disclosure among listed companies (Saleh, 2020).

Despite the growing importance of ESG, research on its impact on debt financing remains limited and yields inconsistent results. Some studies, like those by Feng & Wu (2021) and Lavin & Montecinos-Pearce (2022), indicate that enhanced ESG disclosure can improve access to capital markets and reduce debt financing costs. In contrast, other studies, such as those by Gigante & Manglaviti (2022) and Hamrouni (2019), find no significant effect of ESG on debt costs. This study aims to address these inconsistencies and further explore the relationship between ESG Risk Rating and debt financing in the Indonesian context.

## **2. LITERATURE REVIEW**

Stakeholder theory, as proposed by Freeman (1984) asserts that companies should consider the interests of all stakeholders, not just shareholders, as these groups are essential to the organization's existence. Stakeholders include individuals or groups that can affect or be affected by the achievement of the organization's objectives (Freeman, 1984). In the context of ESG (Environmental, Social, and Governance) disclosure, the theory highlights the relationship between companies and their stakeholders, influencing debt financing. Effective ESG risk management can enhance corporate sustainability and improve relationships with stakeholders like shareholders, employees, customers, suppliers, and the community. A good ESG Risk Rating reflects a company's commitment to sustainability, potentially increasing stakeholder satisfaction and improving access to debt financing (Gorley, 2022). Poor ESG performance can lead to higher borrowing costs due to perceived higher investment risks, while a low ESG Risk Rating can signal effective risk management, boosting lender confidence and leading to more favorable loan terms (Sustainalytics, 2022). Thus, considering stakeholder interests and adhering to ESG regulations can help companies secure better debt financing terms by building trust and a good reputation (Agustina et al., 2023).

Debt Financing is a policy adopted by management to obtain funding sources for the company, which can be used to finance the company's operational activities (Almarjan et al., 2020). The advantages of debt include tax-deductible interest and fixed returns, so shareholders do not have to share profits. However, debt increases the company's risk and potential for bankruptcy if revenue is insufficient to cover interest costs, especially during economic hardships like the 2020 pandemic (Brigham & Houston, 2022). Companies with stable cash flow and low risk can more easily leverage debt for growth (Harris & Roark, 2019). Debt policy also functions as a management monitoring tool and is preferred by the tax system over equity financing (Brigham & Houston, 2022). However, excessive use of debt beyond standard ratios can increase costs and the risk of default, which is the inability to meet debt payment obligations on time (Nuraeni & Hadiwibowo, 2019).

The ESG (Environmental, Social, and Governance) framework is becoming increasingly important in global business and finance, focusing on long-term sustainability by considering environmental impact, social welfare, and good governance (Kong, 2023). Companies that integrate ESG tend to perform better, reduce environmental risks, enhance their reputation, attract ESG-conscious investors, and gain better access to sustainable financing (Minggu et al., 2023). In Indonesia, although there is positive support such as the Sustainable Finance

Roadmap by OJK, ESG implementation is still in its early stages and not evenly applied due to various challenges like low understanding and limited resources (Kartika et al., 2023). The government supports ESG reporting through regulations to maintain economic stability and inclusiveness (Fachrezi et al., 2024). ESG Risk Ratings help lenders make more sustainable and responsible investment decisions.

ESG Risk Rating measures how well companies manage and report environmental, social, and governance risks (Sustainalytics, 2021). This assessment is crucial due to increasing demands from society and investors for sustainable practices, influencing investment decisions (Yoshio, 2021). The Indonesia Stock Exchange (IDX) promotes ESG disclosures through initiatives like the ESG Leaders Index (Saleh, 2020). While IDX lacks an official system, efforts assess company ESG performance. Government, corporate, and investor support is key for broader ESG Risk Rating adoption, potentially reducing financing costs (Gigante & Manglaviti, 2022). Morningstar Sustainalytics provides these ratings on IDX's website. ESG Risk Rating reflects the unmanaged material risks of a company, comprising Unmanageable Risk and Management Gap (Sustainalytics, 2021). ESG risk assessment involves three stages: determining exposure to material risks, evaluating risk management, and calculating the residual unmanaged risk. This structure is applied to each material ESG issue and the overall company ESG Risk Rating. The final ESG risk rating is calculated as the sum of the unmanaged risk scores from each material issue. ESG risk levels are categorized into five: negligible (0-10), low (10-20), medium (20-30), high (30-40), and severe (40+), indicating severe risk to the company and society. ESG Risk Rating is considered equivalent across sectors, allowing for comparison between companies from different industries (Fachrezi et al., 2024).

### **3. METHODS**

Data sourced from the Indonesia Stock Exchange website, individual company sites, and relevant literature comprises secondary quantitative data. The population consists of companies listed on the Indonesia Stock Exchange and included in the ESG Leaders Index, totaling 30 companies annually over a three-year period. This study uses a saturation sampling technique, where all members of the population are included as samples, and an unbalanced panel data approach due to varying observations across companies each year, with a total of 90 samples from the ESG Leaders Index.

This study employs one dependent variable, one independent variable, and two control variables. The dependent variable is Debt Financing, and the independent variable is ESG Risk Rating. The control variables are Leverage and Profitability.

Debt Financing is measured using the interest-to-debt ratio, as applied in previous studies (Ambrose et al., 2005; Feng & Wu, 2021). The Interest to Total Debt Ratio assesses the interest burden a company or entity has to pay relative to its total debt. ESG Risk Rating is measured using the ESG Risk Rating values from the IDX ESG Leaders index, provided by Morningstar Sustainalytics (Wahyuni & Wicaksono, 2020). Leverage is measured using the Debt to Equity Ratio (DER), which divides total debt by total equity (Harris & Roark, 2019; Srivastava et al., 2022). Profitability is measured using the Return on Assets (ROA) ratio, calculated by dividing net income by total assets (Hamrouni et al., 2019).

Data analysis is performed using statistical software such as SPSS. The analysis techniques include: Descriptive Analysis, Classical Assumption Tests, Multiple Linear Regression Analysis, and Hypothesis Testing. The research model used in this study is multiple linear regression. This model assesses the influence of the independent variable (ESG Risk Rating) and control variables (Leverage and Profitability) on the dependent variable (Debt Financing). The multiple linear regression model used in this study is as follows:

$$Debt\ Financing_{i,t} = \beta_0 + \beta_1 ESG\ Risk\ Rating_{i,t-1} + \beta_2 DER_{i,t-1} + \beta_3 ROA_{i,t-1} + \varepsilon$$

Description:

Debt Financing	: The level of debt financing of a company.
ESG Risk Rating	: The ESG Risk Rating assigned to a company.
DER	: The leverage level of a company (Debt to Equity Ratio).
ROA	: The profitability level of a company (Return On Asset).
$\beta_0$	: Intercept or constant.
$\beta_1, \beta_2, \beta_3$	: Regression coefficients indicating the extent to which each variable affects the level of debt financing.
$i, t$	: Indications of the company and the year of the variables used.
$\varepsilon$	: Error term.

#### 4. RESULTS

The population used in this study are companies listed on the Indonesia Stock Exchange and included in the ESG Leaders index. The total population of companies included in the ESG Leaders index each year is 30 companies with a 3-year period. In this research, the researcher analyzes unbalanced data. If the number of observations differs among panel members, it is referred to as an unbalanced panel (Gujarati, 2003). In this study, the researcher has an unbalanced panel because the ESG Leaders Index changes every year, resulting in a different number of observations for each company each year. This study uses a saturated sampling technique, in which case all members in the population are sampled. Of the 30 companies included in the ESG Leaders index with a 3-year observation period. Then the total sample used was 90 samples.

#### Descriptive Statistic Analysis

**Table 1 Descriptive Statistic Result**

<i>Descriptive Statistics</i>					
	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
<i>Y_Debt Financing</i>	90	0,001	0,104	0,037	0,023
<i>X_ESG Risk Ratings</i>	90	11,310	30,260	22,770	5,031
<i>K1_DER</i>	90	0,115	8,911	1,991	2,011
<i>K2_ROA</i>	90	-0,033	0,499	0,071	0,084
<i>Valid N (listwise)</i>	90				

*Source: Processed data with SPSS, 2024*

In table 1 of the descriptive statistical analysis of the variables studied, some important information is obtained regarding the distribution and characteristics of the data. The variables analyzed include Debt Financing (Y), ESG Risk Rating (X1), Debt to Equity Ratio (DER) (K1), and Return on Assets (ROA) (K2), with a total of 90 observations. The following are the results of descriptive statistical analysis of this study:

Debt Financing variable in this research is measured by dividing interest expense with total debt. The analysis result shows that the minimum value is on Herb and Pharmacy Industry company Sido Muncul Tbk. in 2022 with the value of 0,001 while the maximum value is on Media Nusantara Citra Tbk.in 2023 which is 0,104 and has the average value (mean) of 0,037 with the standard deviation of 0,0235.

The ESG Risk Rating variable shows the minimum value found in the Erajaya Swasembada Tbk. company in 2021 and 2022 with a value of 11.310, while the maximum

value is in the Bank Tabungan Negara (Persero) Tbk. company. 2021 amounting to 30,260 and has an average value of 22.770 and a standard deviation of 5.031.

The DER control variable has a minimum value found in the Elang Mahkota Teknologi Tbk. company in 2022 with a value of 0.115 while the maximum value found in the Matahari Department Store Tbk. company in 2021 is 8.911 and has an average value of 1.991 and a standard deviation of 2.011.

The second control variable ROA shows the minimum value found in the Mitra Adiperkasa Tbk. company in 2020 with a value of -0.033 while the maximum value found in the Unilever Indonesia Tbk. company in 2022 is 0.499 and has an average value of 0.071 and a standard deviation of 0.084.

## Classic Assumption Test

### Normality Test

The normality test used in this study is the Kolmogorov-Smirnov (K-S) normality test. Data is declared normally distributed if the significance is greater than 5% or 0.05. Based on table 2, the results of the normality test calculation show that the Asymp.Sig (2-tailed) value is 0.200 or greater than 0.05. This shows that the data in this study are normally distributed.

**Table 2 One-Sample Kolmogorov-Smirnov Test**

		<i>Unstandardized Residual</i>
<i>N</i>		90
<i>Normal Parameters<sup>a,b</sup></i>	<i>Mean</i>	0,000
	<i>Std. Deviation</i>	0,021
<i>Most Extreme Differences</i>	<i>Absolute</i>	0,056
	<i>Positive</i>	0,056
	<i>Negative</i>	-0,051
<i>Test Statistic</i>		0,056
<i>Asymp. Sig. (2-tailed)</i>		.200 <sup>c,d</sup>

*Source: Processed data with SPSS, 2024*

### Multicollinearity Test

Multicollinearity test is a linear relationship that occurs between independent variables. Testing for symptoms of multicollinearity can be done by calculating the Variance Inflation Factor (VIF). If the VIF is below 10 then between the independent variables there is no linear relationship (no multicollinearity). Based on the results in table 3, the tolerance value of all variables is greater than 0.1 and the Variance Inflation Factors (VIF) value of all variables shows a value of less than 10, these results are in accordance with the criteria mentioned earlier. So it can be concluded that there is no multicollinearity problem.

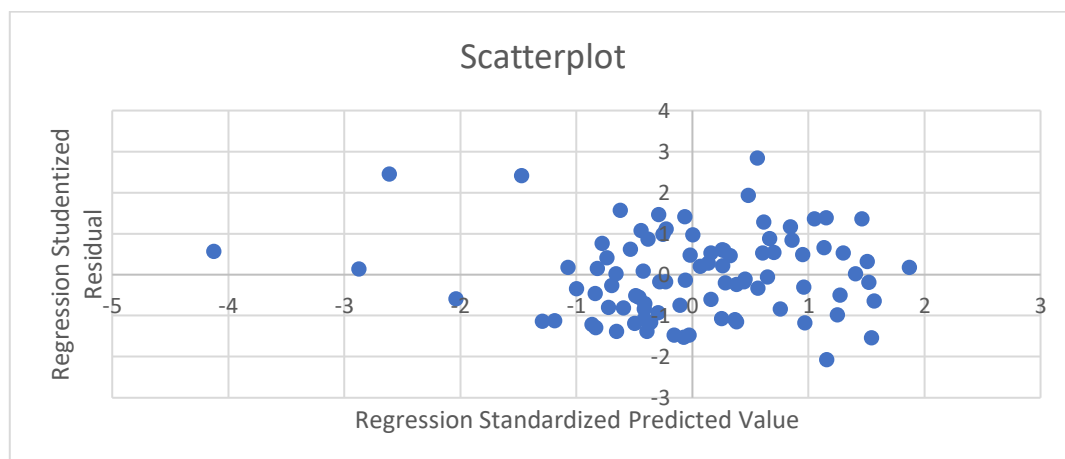
**Table 3 Multicollinearity Test Result**

<i>Coefficients<sup>a</sup></i>		
<i>Model</i>	<i>Collinearity Statistics</i>	
	<i>Tolerance</i>	<i>Tolerance</i>
<i>X_ESG Risk Ratings</i>	0,866	1,154
<i>K1_DER</i>	0,932	1,073
<i>K2_ROA</i>	0,923	1,083
<i>a. Dependent Variable: Y_Debt Financing</i>		

*Source: Processed data with SPSS, 2024*

### Heteroscedasticity Test

The heteroscedasticity test is used to test whether in the regression model there is an inequality of variance of the residuals. Based on the results of the heteroscedasticity test using the scatterplot graph, the graph shows that the points are randomly scattered around the Y axis and evenly distributed to all sides without showing a repeating pattern, in this case it can be concluded that there is no indication of heteroscedasticity in the regression model.

**Picture 1 Heteroscedasticity Test Result**

*Source: Processed data with SPSS, 2024*

### Autocorrelation Test

The autocorrelation test aims to determine whether in a linear regression model there is a correlation between residual errors in period  $t$  and errors in period  $t-1$  in linear regression (Gujarati, 2003). In this study, the autocorrelation test was carried out using the Durbin-Watson test method. The calculation results in table 4 show that the Durbin-Watson (dW) value obtained is 2,030. This value is then compared with the Du-table and 4-Du value. Autocorrelation will not occur if the Durbin-Watson value is between dU and 4-dU with a total data of 90. By looking at the Durbin-Watson table, the dU value is 1,726, and the dL value is



1,588 so that the 4-dU value is 2,273. Therefore, it can be concluded that this study is free from autocorrelation, because the value of dU table  $< DW < 4-Du$  ( $1,726 < 2,030 < 2,273$ ).

**Table 4 Autocorrelation Test Result**

<i>Model Summary<sup>b</sup></i>					
<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>	<i>Durbin-Watson</i>
<i>1</i>	<i>.413<sup>a</sup></i>	<i>0,170</i>	<i>0,141</i>	<i>0,021</i>	<i>2,030</i>
<i>a. Predictors: (Constant), K2_ROA, K1_DER, X_ESG Risk Ratings</i>					
<i>b. Dependent Variable: Y_Debt Financing</i>					

*Source: Processed data with SPSS, 2024*

## Hypothesis Test

**Table 5 Multiple Linier Regression Analysis Result**

<i>Coefficients<sup>a</sup></i>						
<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
<i>1</i>	<i>(Constant)</i>	<i>0,074</i>	<i>0,012</i>		<i>6,241</i>	<i>0,000</i>
	<i>X_ESG Risk Ratings</i>	<i>-0,001</i>	<i>0,000</i>	<i>-0,242</i>	<i>-2,293</i>	<i>0,024</i>
	<i>K1_DER</i>	<i>-0,002</i>	<i>0,001</i>	<i>-0,134</i>	<i>-1,320</i>	<i>0,190</i>
	<i>K2_ROA</i>	<i>-0,102</i>	<i>0,028</i>	<i>-0,365</i>	<i>-3,574</i>	<i>0,001</i>
<i>a. Dependent Variable: Y_Debt Financing</i>						

*Source: Processed data with SPSS, 2024*

Based on the results of the table above, the ESG Risk Rating (X) variable shows a t value of -2.293 with a significance of 0.024. The significance value is smaller than 0.05. This shows that ESG Risk Rating has a significant negative effect on Debt Financing.

The first control variable (K1), namely Debt to Equity Ratio (DER), shows a t value of -1.320 with a significance value of 0.190. The significance value is greater than 0.05. This shows that DER has no significant effect on Debt Financing. The second control variable (K2), namely Return On Asset (ROA), shows a t value of -3.574 with a significance of 0.001. The significance value is smaller than 0.05. This shows that ROA has a significant negative effect on Debt Financing.

## 5. DISCUSSION

The regression analysis results show a significance value of 0.024, which is greater than 0.05, with an unstandardized beta value of -0.001 indicating a negative direction. This suggests that a lower ESG Risk Rating score will affect the increase in Debt Financing. Thus, these results are in line with the study conducted by Gigante & Manglaviti (2022), which found no strong, statistically significant, and positive effect on debt costs for companies with above-average ESG scores. Additionally, Hamrouni's (2019) research found that overall CSR disclosure, including ESG information, does not significantly affect all debt measures, possibly due to different lender sensitivities to varying types of CSR information. This research supports the analysis that ESG Risk Rating has a negative influence on Debt Financing.

This result is supported by stakeholder theory, which explains that companies should not operate solely for their own interests but also benefit various stakeholders, with this research focusing on lenders. An increase in ESG Risk Rating indicates that a company is perceived to have higher environmental, social, and governance risks. Stakeholder theory can explain why this does not always affect lenders' decisions in setting interest rates on company debt. Lenders view ESG risk as an important factor for the company's long-term sustainability. However, if they believe that the company is taking steps to manage and reduce ESG risks, lenders will not raise the interest on the debt they provide, even if the company's ESG rating is high, with the belief that the company will become more sustainable and profitable in the long term.

Lenders who care about reputation and social responsibility may choose to support companies with high ESG Risk Ratings if these companies demonstrate a commitment to addressing their ESG issues. In this way, lenders can enhance their image as responsible institutions that support sustainability. In some situations, lenders have long-term relationships with the related company and have strong trust in the company's management and its ability to handle ESG issues. This trust can influence the decision not to raise interest rates on debt, even though the company has high ESG Risk Rating.

## **6. CONCLUSION**

This study aims to analyze the impact of ESG Risk Rating on Debt Financing, using companies included in the ESG Leaders Index from 2020-2023 as research objects. By employing a saturated sampling technique, 30 companies included in the ESG Leaders Index over a three-year observation period resulted in 90 company data points used as samples in this study. The companies sampled have been described in the previous chapter.

From the data analysis results described, it can be concluded that this study shows the hypothesis stating that ESG Risk Rating has a positive effect on Debt Financing is not supported. This study shows that ESG Risk Rating has a significant negative impact on Debt Financing. The regression analysis results indicate that the lower the ESG Risk Rating score, the higher the Debt Financing, with a significance value of 0.024 and an unstandardized beta of -0.001. These findings are consistent with previous research by Gigante & Manglaviti (2022) and Hamrouni (2019), who also found no significant effect of ESG on debt costs. Stakeholder theory supports these findings, suggesting that companies with high ESG risk do not always experience increased interest on their debt. Lenders may consider the company's efforts to manage ESG risks and view long-term sustainability as an important factor. They are also likely to support companies committed to improving ESG to enhance their reputation as responsible institutions. Long-term trust in company management also influences this decision, even if the company has high ESG risks.

## **7. LIMITATION**

The results of this study are influenced by several limitations, such as the relatively new publication of ESG Risk Ratings, which has led to a lack of awareness and understanding among lenders about the importance of ESG risk levels. Additionally, the limited availability of data has also affected the results of this study, particularly regarding the ESG Risk Rating variable, due to the ESG Leaders Index only being launched by the Indonesia Stock Exchange in 2020 and the restricted access to ESG risk levels for companies not included in the ESG Leaders Index announcement documents.

It is recommended that future researchers expand the research object beyond the ESG Leaders Index to extend the observation period beyond three years in order to obtain a more comprehensive view of changes over each period. Future researchers can also use or add other variables that may have a greater impact on Debt Financing.

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