



## Morning Sustainalytics: Environmental, Social, Governance and Financial Leverage Risk Ratings on the Financial Performance of Mining Companies in Indonesia

Marliza

Universitas Trisakti Jakarta, Indonesia

Email: [lizamarsin@mail.com](mailto:lizamarsin@mail.com)

---

### Keywords

Financial Leverage;  
Financial Performance;  
Morning Sustainalytics;  
Environmental; Social  
and Governance Risk  
Rating.

### Abstract

This research investigates the influence of Environmental, Social and Governance (LST) Risk Ratings on the Financial Performance of mining companies in Indonesia. The financial performance of this research is focused on return on assets (ROA). This research design uses associative quantitative. The population of this research is mining companies in Indonesia, which are listed on the Indonesian Stock Exchange (BEI). The sample from the population was selected using a selection approach, namely mining companies that had complete disclosure of ESG Risk Rating information from Morning Sustainalytics and comprehensive financial reports and did not record losses in consecutive financial reports in the 2019-2022 period. Statistical research results show a 95% confidence level that both ESG Risk Rating and Financial Leverage negatively impact financial performance (ROA) in mining companies in Indonesia. ROA is influenced by Risk Rating ESG, which implies that a mining company implements sustainable practices or has a P Risk Rating. Good ESG \_ or low tends to achieve better financial performance. The finding that there is a statistically significant influence between ESG assessments and the economic success of general mining companies in Indonesia indicates that environmental, social and corporate governance factors have a measurable impact on the financial performance of these mining companies.



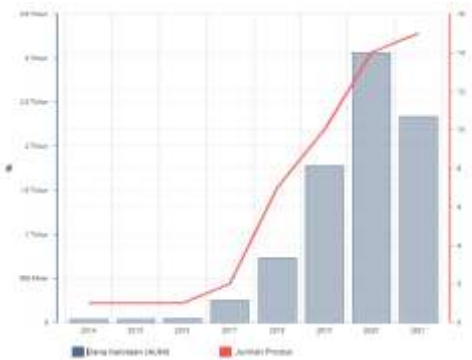
© 2024 by the authors. Submitted for possible open-access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).

---

### 1. Introduction

In recent decades, attention to climate change and social issues has forced regulators and policymakers to emphasise sustainability practices based on the Environmental, Social and Governance (ESG) pillars. Decisive action on climate change is needed to achieve a net-zero transition (Gavrilakis & Floros, 2023). Investors are also pushing companies towards sustainability by increasing resources for green bonds and social impact assets (La Torre, Mango, Cafaro, & Leo, 2020). In Indonesia, ESG has become a business benchmark, reflected in indices such as S&P Dow Jones World Sustainability, SGX ESG Transparency Index, and IDX ESG Leaders, demonstrating the crucial role of environmental impacts in global financial markets (Aydoğmuş, Gülay, & Ergun, 2022).

---



**Figure 1**  
**Trends in ESG Phenomena 2014-2021**

Investments based on environmental, social, and governance (ESG) principles continue to grow in Indonesia. Initially introduced in 2014 with one ESG mutual fund product and Assets under Management (AUM) of IDR 38 billion, the value has been updated to IDR 2.3 trillion. In the mining sector, policy changes focus primarily on ESG risks, identified as the most important risk by (Klass & Mitchell, 2022), followed by decarbonisation and operating licensing. Public and investor awareness of ESG issues is increasing, emphasising the importance of mining companies' commitment to sustainable practices. ESG risks are increasingly crucial, as seen from projects being stalled or closed due to ESG-related concerns, highlighting the need for companies to demonstrate commitment to sustainable practices (Garcia-Zavala et al., 2023).

This study emphasises the importance of sustainability practices based on Environmental, Social and Governance (ESG) principles in new production ecosystems. Success in this ecosystem requires sustainable operations that adhere to ESG guidelines to secure equity and funding, retain customers, and gain positive influence with governments and community groups. (Liu, Marshall, & McColgan, 2021) highlight that non-financial performance, such as ESG practices, can support a company's reputation and attract foreign investment. ESG disclosure is increasingly popular among public companies because it meets investor demands, builds credibility, and responds to industry challenges (Ahmad, Mobarek, & Roni, 2021).

Studies on the influence of ESG on financial performance show mixed results, with some indicating a positive impact, especially in the mining sector, while some suggest a negative effect. ESG risk ratings are also increasingly becoming an essential consideration for investors when making investment decisions. This study is relevant to global demands for sustainability and highlights the importance of implementing ESG practices in the business world, especially in the Indonesian mining sector. This research evaluates the influence of ESG Risk Rating and financial leverage on the financial performance of mining companies in Indonesia.

### **Theoretical basis**

#### **Signal Theory (Signalling Theory)**

(Setiyowati & Mardiana, 2022) As put it, signal theory in management sees a company's future through two positive signals: those heard by investors and those problematic for other businesses to imitate. The aim is to reduce the information gap between management and shareholders to increase company value (Endiana & Suryandari, 2022). Signal theory concludes that management actions, such as performance disclosure and dividends, aim to reduce uncertainty and increase company value through share prices.

#### **Legitimacy Theory**

Legitimacy theory states that organisations need social and environmental support to survive and develop, assessed through legitimacy or society's perception of the value and sustainability of the organisation (Deephouse, Bundy, Tost, & Suchman, 2017). Organisations must maintain legitimacy by meeting social and sustainable environmental expectations according to societal norms. Legitimacy, a social responsibility to improve the company's image, is the key to obtaining resources and a positive reputation. However, companies

must continue to adapt to shifts in societal values because legitimacy is dynamic (Martens, Yapa, & Safari, 2021), and this theory underlies management and marketing practices in building a positive image.

### Financial performance

Company performance is reflected in achieving financial and non-financial goals. Financial success shows the health and value of the organisation, attracting potential investors with performance stability. Financial reports are essential for accountability and understanding financial situations, including the growth and efficiency of business assets (Bémer et al., 2016). This reflects the company's success and management's ability to generate profits.

### Environmental, Social, and Governance (ESG) Risk Rating

Implementing Environmental, Social and Governance (ESG) principles in business improves the company's economic, social and environmental performance. ESG aspects, such as ecosystem protection and business ethics, bring benefits in the form of transparency and stakeholder trust (Association of Chartered Certified Accountants, 2013). Indonesian Regulation, POJK No. 51/POJK.03/2017, encourages ESG involvement in sustainability. IDXLLST on the Indonesia Stock Exchange describes a company's ESG risk management, while in-depth research continues to be conducted to understand the impact of ESG on business financial performance.

### Financial Leverage

The leverage ratio reflects the use of debt in investment financing and is considered a risk factor. High debt levels can reduce investor interest. Leverage, the ratio of total debt to business capital, indicates the company's funding sources. This ratio also assesses the ability to pay long-term and short-term debt (Bémer et al., 2016) and is used to understand responsibility towards creditors. Debt to Total Assets Ratio, a form of leverage ratio, compares a company's debt and total assets. Several studies show a positive relationship between financial leverage and company performance.

### Framework

Implementing ESG practices, including in the mining sector, has become a mandatory prerequisite according to Indonesian regulations, such as POJK No.m51/POJK.03/2017. This improves the company's reputation and stakeholder relationships. With the potential influence of ESG and financial leverage on Return on Assets (ROA), the following framework can be developed.

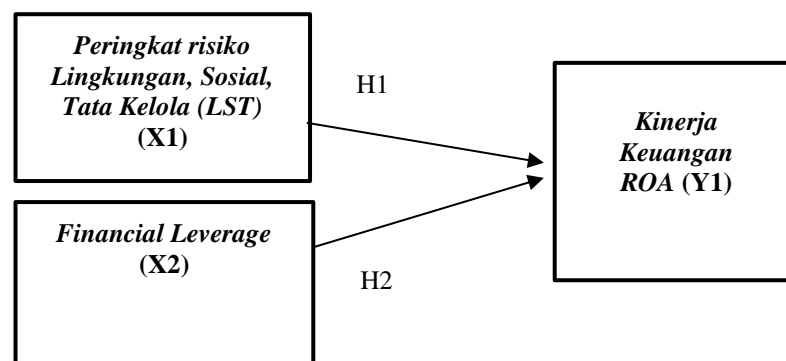


Figure 2 Framework of Thought

### Hypothesis

H1 = The influence of the ESG Risk Rating on the financial performance of mining companies in Indonesia is significant.

H2 = There is an influence of financial leverage on the financial performance of mining companies in Indonesia.

## 2. Materials and Methods

This research uses an associative quantitative design using panel data, namely a combination of cross-sectional and time series data on mining sector companies listed on the Indonesia Stock Exchange (BEI) in the 2019-2020 period. This research has two independent variables and one dependent variable.

**Table 1**  
**Operational Definition of Independent Variables**

Variable	Measurement	Reference	
<b>Dependent</b>			
Financial performance	ROA = $\frac{\text{Laba bersih setelah pajak}}{\text{Total aktiva}}$	Jufrizen & Fatin, 2020	
<b>Independent</b>			
ESG Risk Rating (ESGRR)	0-10	Negligible	Morning Sustainalytics
	10.-20	Low	
	20-30	Currently	
	30-40	Tall	
	>40	Heavy	
Financial Leverage	$\frac{\text{Total amount of debt}}{\text{Total assets}}$	Irfani, 2020	

The population of this research is 64 companies in the mining sector in Indonesia listed on the Indonesia Stock Exchange in the 2019-2022 period. This research sample consists of 8 mining companies listed on the Indonesia Stock Exchange. The sample selection criteria involve the mining sub-sector, ESG risk data from 2019 to 2022, the presentation of comprehensive financial information, and the absence of losses in financial reports from 2019-2022. A non-participant observation approach was used to collect data for this research. The data analysis method in this research uses descriptive analysis and panel data regression analysis with three approaches 1) Common Effect Model (CEM); 2) Fixed Effect Model (FEM); 3) Random Effect Model (REM), model suitability test, hypothesis testing model, classical assumption test.

## 3. Results and Discussions

### Description of Research Objects

This research focuses on eight mining industry companies on the Indonesia Stock Exchange, selected from 64 companies in the mining sub-sector category during 2019-2022 (Behl, Kumari, Makhija, & Sharma, 2022). The data used includes annual reports, sustainability reports and ESG Risk Ratings. Sample selection was done using a purposive approach, ensuring companies met specific criteria.

**Table 1**  
**List of Company Names**

No	Company	Issuer Name
1	PT Adaro Energy Indonesia Tbk	ADRO
2	PT Aneka Tambang Tbk	ANTM
3	PT Harum Energy Tbk	HRUM
4	PT. Vale Indonesia Tbk	INCO
5	PT. Indo Tambangraya Megah Tbk	ITMG
6	PT. Merdeka Copper Gold Tbk	MDKA
7	PT. Medco Energy International Tbk	MEDIA
8	PT. Bukit Asam Tbk	PTBA

### Descriptive Analysis

Descriptive statistical analysis explains this research data, including average, standard deviation, and minimum and maximum values (Purnomo, 2016). Table 1 provides a descriptive statistical overview of 32 observations from 2019 to 2022. The dependent variable is Return on Assets, with the independent variables ESG Risk Rating (ESGRR) and Financial Leverage. Statistical details are contained in the table.

### Panel Data Regression Analysis

#### Common Effect Model

The Common Effect Model (CEM) is a simple model that assumes the stability of the intercept and slope over time and individuals. Eviews output shows that the ESG Risk Rating (ESGRR) variable has a significant effect on financial performance with a probability value of 0.0083 (<0.05).

**Table 2**  
**Hasil Regresi Data Panel Common Effect Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	45.71166	10.90077	4.193435	0.0002
ESGRR	-0.700302	0.247032	-2.834863	0.0083
FL	-0.153180	0.086587	-1.769092	0.0874

#### Fixed Effect Model (FEM)

The Fixed Effects Model (FEM) in panel data analysis shows constant differences between objects in the same regression coefficient. The results of the Eviews analysis show that the independent variables, ESGRR Risk Rating (ESGRR) and financial leverage, do not have a significant effect on the dependent variable (financial performance) because the probability value is <0.05.

**Table 3**  
**Fixed Effects Model Panel Data Regression Results**

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	26.60520	17.87244	1.488616	0.1508
ESGRR	0.034187	0.357936	0.095513	0.9248
FL	-0.484710	0.370513	-1.308214	0.2043

#### Random Effect Model

The random Effect Model (REM) considers the specific effects of each individual as part of the error component, which is arbitrary and does not correlate with the observed explanatory variables. Eviews analysis shows that the environmental, social and governance (ESG) risk rating variable significantly influences financial performance with a probability value of <0.05.

**Table 4**  
**Random Effect Model Panel Data Regression Results**

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	45.71166	10.52287	4.344030	0.0002

ESGRR	-0.700302	0.238468	-2.936669	0.0064
FL	-0.153180	0.083585	-1.832624	0.0771

### Selection of Panel Data Regression Model Estimates Test Chow

Chow test is used to select a model between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). This test hypothesis is:

- H0: The model follows the Common Effect Model (CEM) if the Cross-Section F and Cross-Section chi-square probability  $> 0.05$ .
- H1: The model follows the Common Effect Model (CEM) if the Cross-Section F probability and Cross-Section chi-square  $< 0.05$ .

**Table 5**  
**Chow Test Results**

Effects Test	Statistics	df	Prob.
Cross-section F	1.302902	(7.22)	0.2950
Chi-square cross-section	11.098183	7	0.1344

Based on the calculation results in the table, the probability value of Cross-Section F and Cross-Section chi-square is  $> 0.05$ . Thus, it can be concluded that the Common Effect Model (CEM) is more suitable to use than the Fixed Effect Model (FEM).

### Hausman test

The Hausman test is used to select a model between the Random Effect Model (REM) and the Fixed Effect Model (FEM). This test hypothesis is:

- H0: The model follows the Random Effect Model (REM) if the Cross-Section Random probability and Cross-Section chi-square  $> 0.05$ .
- H1: The model follows the Random Effect Model (REM) if the Random Cross-Section probability and Cross-Section chi-square  $< 0.05$ .

**Table 6**  
**Hausman Test Results**

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
	7.575767	2	0.0226
Random cross-section	7.575767	2	0.0226

The Hausman test results show that the Random Cross-Section probability value is 0.0226, less than the significance level of  $\alpha = 5\%$  ( $0.0226 < 0.05$ ). Therefore, it is concluded that the Random Effect Model (REM) is more suitable to use than the Fixed Effect Model (FEM).

### Lagrange Multiplier Test

The Lagrange Multiplier test selects a model between the Random Effect Model (REM) and the Common Effect Model (CEM). This test hypothesis is:

- H0: The model follows the Common Effect Model (CEM) if the Breush-Pagan Cross-Section probability is  $> 0.05$ .
- H1: The model follows the Random Effect Model (REM) if the Breush-Pagan Cross-Section probability  $< 0.05$ .

**Table 7**  
**Lagrange Multiplier Test Results**

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	0.819856 (0.3652)	0.627594 (0.4282)	1.447449 (0.2289)
Honda	-0.905459 --	0.792208 (0.2141)	-0.080080 --
King-Wu	-0.905459 --	0.792208 (0.2141)	0.166869 (0.4337)
Standardised Honda	-0.397950 --	1.215530 (0.1121)	-2.635653 --
Standardised King- Wu	-0.397950 --	1.215530 (0.1121)	-2.162839 --
Gourierioux, et al.*	--	--	0.627594 ( $\geq 0.10$ )
*Mixed chi-square asymptotic critical values:			
	1%	7.289	
	5%	4,321	
	10%	2,952	

Based on the Lagrange Multiplier test results table, the Breush-Pagan Cross-Section probability value is 0.0655, greater than the significance level  $\alpha=5\%$  ( $0.0655 > 0.05$ ). Thus, it can be concluded that the Common Effect Model (CEM) is more suitable than the Random Effect Model (REM).

#### Panel Data Regression Model Conclusion

**Table 8**  
**Conclusion Results of Panel Data Regression Model**

No	Method	Testing	Results
1	Test Chow	CEM vs FEM	CEM
2	Hausman test	REM vs FEM	BRAKE
3	Lagrange Multiplier Test	CEM vs REM	CEM

Based on the results of the three tests carried out, it can be concluded that the panel data regression model used in this research is the Common Effect Model (CEM) for estimates.

#### Classic assumption test

The classical assumption test is a statistical requirement that must be met in regression analysis, and it uses the Ordinary Least Squared (OLS) approach in its estimation technique. Based on the classic assumption test table, all assumptions have been fulfilled and will be continued in the next test.

**Table 9**  
**Summary of Classical Assumption Test Results**

Classic assumption test			
Autocorrelation	Multicollinearity	Heteroscedasticity	Normality of Error
There is no Prob > 0.05	There is no VIF < 10	There is no Prob > 0.05	Normally Distributed Error Prob > 0.05

## Hypothesis testing

### F Test (Model Feasibility)

The F test or model feasibility determines whether the independent variables significantly influence the dependent variable. The hypothesis in the F test is as follows:

- H0: If the F-statistic value < F table, then H0 is accepted, which means that the independent variables have no significant effect on the dependent variable.
- H1: If the F-statistic value > F table, then H1 is accepted, meaning that the independent variables significantly affect the dependent variable.

**Table 10**  
**F Test Results**

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	45.71166	10.90077	4.193435	0.0002
ESGRR	-0.700302	0.247032	-2.834863	0.0083
FL	-0.153180	0.086587	-1.769092	0.0874
R-squared	0.289471	Mean dependent var		10.39313
Adjusted R-squared	0.240469	S.D. dependent var		10.93115
S.E. of regression	9.526615	Akaike info criterion		7.435116
Sum squared resid	2631.936	Schwarz criterion		7.572529
Log-likelihood	-115.9619	Hannan-Quinn criteria.		7.480664
F-statistic	5.907335	Durbin-Watson stat		1.114863
Prob(F-statistic)	0.007046			

Based on the table above, the results of the model feasibility test show that the F-statistic value is 5.907335, while the F table is 2.305. Therefore, it can be concluded that the F-statistic value > F table (5.907335 > 2.305) and the F-statistic probability value < 0.05 (0.007046 < 0.05). This shows that the alternative hypothesis (H1) is accepted, which means this model is feasible or significant.

### Test (Coefficient of Determination)

The Adjusted R-Square test or coefficient of determination test is used to assess the ability of the regression model to explain variations in independent variables that influence the dependent variable. The adjusted R-Square value in the table shows 0.240469, which indicates that around 24% of changes in financial performance can be explained by environmental, social, and governance (ESG) risk ratings and financial leverage. The remainder, around 76% of the variation, is defined by other factors not examined in this study.

**Table 11**  
**Test Results (Coefficient of Determination)**

Variables	Coefficient	Std. Error	t-Statistics	Prob.
-----------	-------------	------------	--------------	-------



C	45.71166	10.90077	4.193435	0.0002
ESGRR	-0.700302	0.247032	-2.834863	0.0083
FL	-0.153180	0.086587	-1.769092	0.0874
R-squared	0.289471	Mean dependent var	10.39313	
Adjusted R-squared	0.240469	S.D. dependent var	10.93115	
S.E. of regression	9.526615	Akaike info criterion	7.435116	
Sum squared resid	2631.936	Schwarz criterion	7.572529	
Log-likelihood	-115.9619	Hannan-Quinn Criter.	7.480664	
F-statistic	5.907335	Durbin-Watson stat	1.114863	
Prob(F-statistic)	0.007046			

### t Test (Partial Significance)

The Partial Test (T-Test) is used to assess the extent of the influence of individual independent variables in explaining variations in the dependent variable (PUTRI, 2021). Decisions are taken based on the following levels of significance:

- If the significant probability value is  $> 0.05$ , the independent variable is considered to have no significant effect on the dependent variable.
- If the significant probability value is  $< 0.05$ , the independent variable is considered to affect the dependent variable significantly. The following is a table of partial test results for the independent variable on the dependent variable.

**Table 12**  
**T-Test Results**

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	45.71166	10.90077	4.193435	0.0002
ESGRR	-0.700302	0.247032	-2.834863	0.0083
FL	-0.153180	0.086587	-1.769092	0.0874

The table above shows that:

### H 1: Environmental, Social and Governance Risk Ratings have a negative influence on the Company's Financial Performance

Based on statistical test results, the Environmental, Social and Governance Risk Rating (ESGRR) coefficient is -0.700302, indicating a negative influence on the Company's Financial Performance. The significance test ( $\text{sig} = 0.0042 < 0.05$ ) confirms that the relationship is statistically significant at the 95% confidence level. So, it can be concluded that ESGRR hurts the Company's Financial Performance.

### H 2: Financial Leverage Hurts the Company's Financial Performance

Based on the results of statistical tests, the Financial Leverage coefficient is -0.153180, indicating a negative influence on the Company's Financial Performance. The significance test ( $\text{sig} = 0.0437 < 0.05$ ) suggests that the relationship is statistically significant at the 95% confidence level. So, it can be concluded that Financial Leverage hurts the Company's Financial Performance.

This research concludes that the Environmental, Social and Governance (LST) Risk Rating has a significant adverse effect on the financial performance of mining companies. With a coefficient of -0.700302, if the ESG Risk Rating increases by one unit, the company's financial performance tends to decrease by 0.700302 units. The significance test results show a sig value of  $0.0042 < 0.05$  (alpha 5%), indicating a statistically measurable impact.

These findings support the idea that good ESG risk management can contribute positively to the financial performance of mining companies. Risk management and integration of sustainable practices are essential for achieving long-term sustainability and improving financial performance. For mining companies, paying more attention to environmental, social and corporate governance aspects can be an effective strategy for achieving financial success.

The analysis results show that the ESG risk rating (ESGRR) negatively and significantly affects the financial performance of mining companies in Indonesia, with a coefficient of -0.700302 and a significance value of  $0.0042 < 0.05$ . Apart from that, Financial Leverage also has a significant negative influence with a coefficient of -0.153180 and a significance value of  $0.0437 < 0.05$ . This means the company's financial performance tends to fall when the ESG risk rating or Financial Leverage rises. These results show that environmental, social and corporate governance aspects, as well as debt levels, have a measurable impact on the financial performance of mining companies in Indonesia, reinforcing the concept that sustainable practices can positively influence a company's value and financial stability. The findings of this investigation relate to research conducted by (PUTRI, 2021), (De Lucia, Paziienza, & Bartlett, 2020).

#### **4. Conclusion**

The results of the research "The Influence of ESG Risk Ratings, Proportion of Independent Commissioners, Firm Size, and Financial Leverage on the Financial Performance of Public Mining Companies in Indonesia" conclude that ESG Risk Ratings (ESGRR) hurt Return on Assets (ROA), indicating that sustainable practices are increasing associated with improving financial performance. Financial Leverage also affects ROA significantly, meaning increasing leverage could be a shareholder risk. Therefore, maintaining financial leverage is essential for managing ESG-related risks, and these findings support the complex relationship between sustainable practices, leverage and the financial performance of mining companies in Indonesia.

## 5. References

- Ahmad, Nisar, Mobarek, Asma, & Roni, Naheed Nawazesh. (2021). Revisiting the impact of ESG on financial performance of FTSE350 UK firms: Static and dynamic panel data analysis. *Cogent Business & Management*, 8(1), 1900500. <https://doi.org/10.1080/23311975.2021.1900500>
- Aydođmuş, Mahmut, Gülay, Güzhan, & Ergun, Korkmaz. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*, 22, S119–S127.
- Behl, Abhishek, Kumari, P. S. Raghu, Makhija, Harnesh, & Sharma, Dipasha. (2022). Exploring the relationship of ESG score and firm value using cross-lagged panel analyses: Case of the Indian energy sector. *Annals of Operations Research*, 313(1), 231–256.
- Bémer, Pascale, Léger, Julie, Tandé, Didier, Plouzeau, Chloé, Valentin, Anne Sophie, Jolivet-Gougeon, Anne, Lemarié, Carole, Kempf, Marie, Héry-Arnaud, Geneviève, & Bret, Laurent. (2016). How many samples and how many culture media to diagnose a prosthetic joint infection: a clinical and microbiological prospective multicenter study. *Journal of Clinical Microbiology*, 54(2), 385–391.
- De Lucia, Caterina, Paziienza, Pasquale, & Bartlett, Mark. (2020). Does good ESG lead to better financial performances by firms? Machine learning and logistic regression models of public enterprises in Europe. *Sustainability*, 12(13), 5317.
- Deephouse, David L., Bundy, Jonathan, Tost, Leigh Plunkett, & Suchman, Mark C. (2017). Organizational legitimacy: Six key questions. *The SAGE Handbook of Organizational Institutionalism*, 4(2), 27–54.
- Endiana, I., & Suryandari, Ni Nyoman Ayu. (2022). Value relevance of sustainability report: evidence from Indonesia. *Jurnal Akuntansi Dan Keuangan Indonesia*, 18(2), 3.
- Garcia-Zavala, Consuelo, Ordens, Carlos M., Pagliero, Liliana, Lèbre, Éléonore, Aitken, Douglas, & Stringer, Martin. (2023). An approach for prioritising environmental, social and governance (ESG) water-related risks for the mining industry: The case of Chile. *The Extractive Industries and Society*, 14, 101259.
- Gavrilakis, Nektarios, & Floros, Christos. (2023). ESG performance, herding behavior and stock market returns: evidence from Europe. *Operational Research*, 23(1), 3.
- Klass, Alexandra B., & Mitchell, Allison. (2022). *The Energy Transition and Mining: Reconciling the Growth of Renewable Energy with the Need for New Mineral Development*.
- La Torre, Mario, Mango, Fabiomassimo, Cafaro, Arturo, & Leo, Sabrina. (2020). Does the ESG index affect stock return? Evidence from the Eurostoxx50. *Sustainability*, 12(16), 6387.
- Liu, Mei, Marshall, Andrew, & McColgan, Patrick. (2021). Foreign direct investments: The role of corporate social responsibility. *Journal of Multinational Financial Management*, 59, 100663. <https://doi.org/10.1016/j.mulfin.2020.100663>
- Martens, Wil, Yapa, Prem, & Safari, Maryam. (2021). Earnings management in frontier market: Do institutional settings matter? *Economies*, 9(1), 17.
- Purnomo, Rochmat Aldy. (2016). *Analisis statistik ekonomi dan bisnis dengan SPSS*. CV. Wade Group bekerjasama dengan UNMUH Ponorogo Press.

PUTRI, Dewi Anggriani Riyanto. (2021). *Analisis Pengaruh Literasi Keuangan, Sikap Keuangan, dan Gaya Hidup Terhadap Perilaku Pengelolaan Keuangan Mahasiswa Akuntansi*. Universitas Jenderal Soedirman.

Setiyowati, Wahyu Supami, & Mardiana, Mardiana. (2022). Profitabilitas terhadap financial distress dimediasi corporate social responsibility. *IQTISHODUNA Jurnal Ekonomi Dan Bisnis Islam*, 18(1), 51–62.