Jurnal Reviu Akuntansi dan Keuangan, vol 14 no 1, p. 103-121

Website:
ejournal.umm.ac.id/index.php/jrak

***Correspondence:**
widyacitap@student.ub.ac.id

DOI: 10.22219/jrak.v14i1.32849

Citation:
Pramesti, W, C., Sudarma, M., Ghofar, A. (2024). Environmental, Social, And Governance (ESG) Disclosure, Intellectual Capital And Firm Value: The Moderating Role Of Financial Performance. Jurnal Reviu Akuntansi Dan Keuangan, 14(1), 103-121.

Article Process
Submitted:
March 24, 2024

Reviewed:
April 3, 2024

Revised:
April 26, 2024

Accepted:
April 27, 2024

Published:
April 30, 2024

Office:
Department of Accounting
University of
Muhammadiyah Malang
GKB 2 Floor 3.
Jalan Raya Tlogomas 246,
Malang, East Java,
Indonesia

P-ISSN: 2615-2223
E-ISSN: 2088-0685

Article Type: Research Paper

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) DISCLOSURE, INTELLECTUAL CAPITAL AND FIRM VALUE: THE MODERATING ROLE OF FINANCIAL PERFORMANCE

Widya Cita Pramesti[1*], Made Sudarma[2], Abdul Ghofar[3]

Affiliation:

[1,2,3]Master of Accounting, Faculty of Economics and Business, Brawijaya University, Malang, Indonesia

ABSTRACT

Purpose: *This study aims to empirically examine the effect of Environmental, Social, and Governance (ESG) disclosure and intellectual capital on firm value moderated by financial performance.*

Methodology/approach: *This study uses a quantitative approach with a positivism paradigm. The sample in the study was 125 observations from 25 energy sector companies listed on the Indonesia Stock Exchange during the 2018-2022 period. The data analysis technique in this study uses Hierarchy Regression Analysis through the use of Multiple Regression Analysis and Moderated Regression Analysis (MRA).*

Findings: *The results showed that Environmental, Social, and Governance (ESG) disclosure has no effect on firm value, while intellectual capital has a positive effect on firm value. This study also shows that financial performance is able to moderate by strengthening the relationship between Environmental, Social, and Governance (ESG) disclosure and intellectual capital on firm value.*

Practical implications: *Companies should strengthen and pay more attention to Environmental, Social, and Governance (ESG) disclosure to fulfill the needs of interested parties. Investors should also consider more financial and non-financial information in assessing companies for decision making.*

Originality/value: *This study is a development of previous research that examines separately the effect of Environmental, Social, and Governance (ESG) disclosure*

and intellectual capital on firm value. This study also adds financial performance variables with Return on Assets measurement as a moderating variable.

Keywords: *Environmental, Social, and Governance Disclosure; Financial Performance; Firm Value; Intellectual Capital.*

ABSTRAK

Tujuan penelitian: Penelitian ini bertujuan untuk menguji secara empiris pengaruh *Environmental, Social, and Governance (ESG) disclosure* dan *intellectual capital* terhadap nilai perusahaan yang dimoderasi oleh kinerja keuangan.

Metode/pendekatan: Penelitian ini menggunakan pendekatan kuantitatif dengan paradigma positivisme. Sampel dalam penelitian adalah 125 observasi dari 25 perusahaan sektor energi yang terdaftar di Bursa Efek Indonesia selama periode 2018-2022. Teknik analisis data dalam penelitian ini menggunakan *Hierarchy Regression Analysis* melalui penggunaan *Multiple Regression Analysis* dan *Moderated Regression Analysis* (MRA).

Hasil: Hasil penelitian menunjukkan bahwa *Environmental, Social, and Governance (ESG) disclosure* tidak berpengaruh terhadap nilai perusahaan, sedangkan *intellectual capital* berpengaruh positif terhadap nilai perusahaan. Penelitian ini juga menunjukkan bahwa kinerja keuangan mampu memoderasi dengan memperkuat hubungan antara *Environmental, Social, and Governance (ESG) disclosure* dan *intellectual capital* terhadap nilai perusahaan.

Implikasi praktik: Perusahaan lebih memperkuat dan memperhatikan *Environmental, Social, and Governance (ESG) disclosure* untuk pemenuhan kebutuhan pihak yang berkepentingan. Investor juga harus lebih mempertimbangkan informasi keuangan dan non keuangan dalam menilai perusahaan untuk pengambilan keputusan.

Orisinalitas/kebaharuan: Penelitian ini merupakan pengembangan dari penelitian sebelumnya yang menguji secara terpisah pengaruh *Environmental, Social, and Governance* (ESG) *disclosure* dan *intellectual capital* terhadap nilai perusahaan. Penelitian ini juga menambahkan variabel kinerja keuangan dengan pengukuran *Return on Assets* sebagai variabel moderasi.

Kata kunci: *Environmental, Social, and Governance Disclosure*; *Intellectual Capital*; Kinerja Keuangan; Nilai Perusahaan.

INTRODUCTION

Firm value is the result of capital market activities that provide perceptions for investors of the company and is often associated with stock prices that can prosper shareholders (Damayanthi, 2019; Sumarno et al., 2023). Firm value is very important for companies in helping company funding and describing performance that can provide information for investors so that it can influence investment decision making (Kurniansyah et al., 2021; Rosyid et al., 2022).

The issue of decreasing firm value is currently happening from various company sectors, one of which is the energy sector. According to the main report of the International Energy Agency (IEA) in 2020 during the covid-19 pandemic, global investment in the energy sector decreased by 31% or around Rp310 trillion, then in 2021 the energy stock sector fell again by 6.47% (CNBC Indonesia, 2020; Liputan6, 2021). After that, according to data from the Indonesia Stock Exchange (IDX), from the beginning of 2022 to mid-May 2022, the energy sector stock index was again excellent as energy commodity prices rose in the global market (Databoks, 2022). After excelling in the previous year, at the beginning of 2023 the energy sector companies again experienced a decline in share value and were listed as the worst performing sector (CNBC Indonesia, 2023). Based on data from the Indonesia Stock Exchange (IDX), energy sector stocks decreased by 25% until the end of May 2023, such as PT Bayan Resources Tbk (BYAN) shares decreased by 28.6%, PT Adaro Energi Indonesia Tbk (ADRO) shares decreased by 47%, PT Bumi Resources Tbk (BUMI) shares decreased

by 40.4%, PT Indo Tambangraya Megah Tbk (ITMG) shares decreased by 43.3%, and PT Adaro Mineral Indonesia Tbk (ADMR) with a decrease of 54% (Investor.id, 2023).

Stakeholder theory suggests that the relationship between company management and its stakeholders (Freeman, 1984). The relationship is that company management is responsible for carrying out and managing activities in creating value and reducing potential losses for stakeholders. According to Deegan (2014:380), stakeholders have the right to obtain all financial and non-financial information about organizational activities that will influence decision making. Through the transparency of Environmental, Social, and Governance (ESG) disclosure, intellectual capital management, and financial performance information in the annual report, this means that the company provides information and meets the needs of stakeholders that the company has good potential in the future, because it can be used by investors to evaluate the company's sustainability performance more comprehensively, so as to attract investor interest in investing (Deniswara et al., 2019; Triyani et al., 2020).

Non-financial information has a positive impact on the sustainability of the company and can increase the issuer's share price which can attract investor interest, one of which is Environmental, Social, and Governance (ESG) disclosure. Environmental, Social, and Governance (ESG) disclosure is the newest form of voluntary information reporting development, which began with stand-alone CSR reporting, sustainability reporting, and then followed by integrated reporting (Faisal et al., 2018). Some previous studies such as those conducted by Li et al., (2018) and Triyani et al., (2020) show the results that Environmental, Social, and Governance (ESG) disclosure has a positive effect on firm value. These results indicate that the better the quality of Environmental, Social, and Governance (ESG) disclosure can increase company value through increased transparency and accountability to support the investment process in attracting stakeholders and getting a more comprehensive picture of the company's sustainability performance. In contrast to Fatemi et al., (2018), the results show that Environmental, Social, and Governance (ESG) has a negative effect on firm value. This is due to the market which may assume that the gradual disclosure of Environmental, Social, and Governance (ESG) is an attempt by the company to provide a legitimate reason for excessive investment in these Environmental, Social, and Governance (ESG) activities. Sumarno et al., (2023) showed the result that Environmental, Social, and Governance (ESG) Assessment has no effect on firm value. This implies that disclosure of Environmental, Social, and Governance (ESG) performance is still not strong enough to have a direct impact on firm value.

Intellectual capital is also very important for investors for business analysis and investment. Intellectual capital is an intangible asset that is directly connected to knowledge, intellectual property, and experience that can be utilized to create wealth and advantages in competition as added value for the company which is regulated in the Statement of Financial Accounting Standards (PSAK) 19 concerning Intangible Assets (Aryanti & Mertha, 2022; Salvi et al., 2020). Several previous studies such as those conducted by Deniswara et al., (2019) and Indriastuti & Kartika (2021) shows that intellectual capital has a positive effect on firm value, this states that intellectual capital that is properly managed and utilized will produce higher added value to increase firm value. In contrast to research conducted by Aryanti & Mertha (2022), the results of the study explain that intellectual capital has a negative effect on firm value, this means that if the intellectual capital owned by the company is high, it will reduce the company's value. Research conducted by Indrawati et al., (2023) shows the results that intellectual capital has no effect on firm value. This is because when appreciating market value, investors are less or even do not care about the impact of intellectual property generated by the company.

Financial information factors can also affect firm value through financial performance. One of the factors considered by potential investors to invest is the company's financial performance. Financial information also affects the company's success in managing and representing the company's overall performance. Evaluation of financial performance is carried out by referring to the company's financial statements, this has a very important significance because the company's financial condition shows its ability to provide the expected rate of return (Abdi et al., 2022). This financial information acts as a tool to provide information, a means of management accountability to company owners, describe indicators of company success, and become a basis for consideration in decision making (Irdiana et al., 2022). The existence of financial and non-financial information in a company will attract the attention of investors in considering their decisions (Laksmi & Wirawati, 2022).

Based on the things that have been described above, this research is interesting to do. The differences between this study and previous studies include, this study is a development of previous studies that separately examine the effect of Environmental, Social, and Governance (ESG) disclosure on firm value (Aboud & Diab, 2018; Li et al., 2018; Prayogo et al., 2023; Ruan & Liu, 2021; Sumarno et al., 2023; Triyani et al., 2020) and the effect of intellectual capital on firm value (Aryanti & Mertha, 2022; Deniswara et al., 2019; Indrawati et al., 2023; Nguyen & Doan, 2020; Pangestuti et al., 2022). Previous studies tested the independent variables partially on the dependent variable, while in this study combined all the variables in previous studies consisting of Environmental, Social, and Governance (ESG) disclosure and intellectual capital. This study also adds financial performance variables that are expected to increase firm value by using Return on Assets (ROA) measurement as a moderating variable. The reason for selecting Return on Asset (ROA) as a moderating variable is because Return on Asset (ROA) has an important role in relation to Environmental, Social, and Governance disclosure and intellectual capital. Return on Asset (ROA) is an indicator of the company's success in generating profits based on its total assets. ESG disclosures can relate to a company's investment in environmentally friendly assets or in projects that have a positive social impact. These can be reflected in ESG reports and also affect financial performance, including ROA. In addition, the relationship between ROA and ESG disclosure is considered a social response, which indicates that it will provide more information if it is able to achieve high profitability or profits. This gives investors confidence that the company is in a safe and strong position and operates efficiently (Aydoğmuş et al., 2022). On the other hand, research Deniswara et al., (2019) states that the higher the ROA value, the more efficient the company is in utilizing its assets, both in the form of tangible and intangible assets, such as intellectual capital. This shows that the company is able to generate greater income with a lower investment value. In addition, this study aims to cover the research gap of inconsistent results from previous studies in terms of Environmental, Social, and Governance (ESG) disclosure and intellectual capital variables that affect firm value. The purpose of this study is to empirically test the effect of Environmental, Social, and Governance (ESG) disclosure and intellectual capital on firm value by using financial performance as a moderating variable.

Analysis of a company's Environmental, Social, and Governance (ESG) disclosure can be a source of informational data, a more complete and transparent consideration of information about how the company operates and its impact on society and the environment for various stakeholders, such as investors, customers, regulators, and the general public (Aboud & Diab, 2018). In line with stakeholder theory which states that sustainability reports are strategic resources that can increase investor confidence in the company to invest in the company. Environmental, Social, Governance (ESG) disclosure is one form of dialog of the concept

of disclosing non-financial information which states that the company has fulfilled the rights of stakeholders to obtain information on sustainable aspects of company operations. Research conducted by Aboud & Diab (2018); Li et al., (2018); Triyani et al., (2020) states that Environmental, Social, and Governance (ESG) disclosure has a positive effect on firm value. These results indicate that the better the quality of Environmental, Social, and Governance (ESG) disclosure can increase company value through increased transparency and accountability to meet the needs of supporting the investment process in attracting stakeholder interest and getting a more comprehensive picture of the company's sustainability performance. Based on the previous explanation, the first hypothesis can be formulated as follows:

H_1: *Environmental, Social, and Governance (ESG) Disclosure has a positive effect on Firm Value*

Intellectual capital is a resource that can be explained as intangible assets that are not directly recorded in the company's financial statements that have the potential to create value and provide a competitive advantage to the company (Edvinsson & Malone, 1997; Stewart, 1997). In line with stakeholder theory which states that if company managers can manage resources well, including intangible assets, it will create value added for the company and help achieve good long-term performance for the benefit of stakeholders in making investment decisions. Research conducted by Deniswara et al., (2019); Nguyen & Doan (2020); Indriastuti & Kartika (2021); and Pangestuti et al., (2022) which examines the effect of intellectual capital on firm value. The results show that intellectual capital has a positive effect on firm value, this states that intellectual capital that is properly managed and utilized will produce higher added value to increase firm value. Based on the previous explanation, the second hypothesis can be formulated as follows:

H_2: Intellectual Capital has a positive effect on Firm Value

Financial performance as measured using the profitability ratio (ROA) is one of the factors that can be used to assess the company's ability to generate profits and maintain the company's business continuity. Based on stakeholder theory, stakeholders have the right to obtain all information, namely financial and non-financial regarding organizational activities that will influence decision making. Companies that have good financial performance capabilities will have high trust to inform stakeholders because the company is able to show that the company can meet the needs and expectations of stakeholders, especially investors. According to Aydoğmuş et al., (2022), Environmental, Social, and Governance (ESG) disclosure is considered a social response, which indicates that it will provide more information if its ability to achieve profitability or high profits. This gives investors confidence that the company is in a safe and strong position and operates efficiently. The increase in profitability gives investors the confidence to invest in the company which will have an impact on increasing the company's value. Research conducted by Deniswara et al., (2019) and Pangestuti et al., (2022) states that profitability has a significant positive effect on firm value. The higher the ROA value, the more efficient the company's management is in utilizing its assets in managing intellectual capital with the aim of convincing investors in making decisions. Based on the previous explanation, the third and fourth hypotheses can be formulated as follows:

H_3: Financial Performance strengthens the relationship between Environmental, Social, and Governance (ESG) Disclosure on Firm Value

H_4: Financial Performance strengthens the relationship between Intellectual Capital to Firm Value

Based on the hypothesis above, the conceptual framework of this study is formulated as follows:

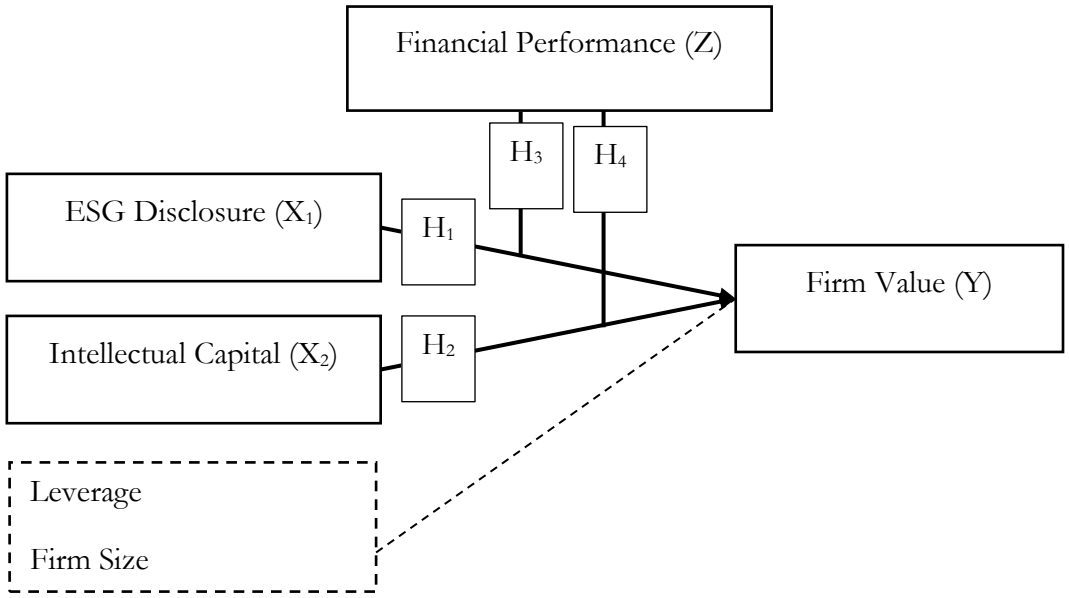

Figure 1. Conceptual Framework

METHOD

This study uses a quantitative approach research type with a positivism paradigm. The population in this study is energy sector companies listed on the Indonesia Stock Exchange (IDX) in the period of 2018-2022 using secondary data in the form of annual reports and sustainability reports obtained from the Indonesia Stock Exchange website (www.idx.co.id) and the sample companies website. The reason researchers use data in the 2018-2022 period is to get more updated research results. In addition, the 2018-2022 period also has a covid period, so researchers conducted a robustness test by excluding the covid period and whether the results and models in this study are valid and unbiased. This is what distinguishes this study from previous studies. The basis for selecting energy sector companies in this study is because according to the Minister of Energy and Mineral Resources (ESDM), the energy sector is one of the most important sectors in the global economy and is still an attractive sector for investors to invest in Indonesia (Kementerian ESDM, 2022). In addition, energy sector companies also conduct most of their business activities related to resource utilization, such as environmental impacts that have a significant impact on firm value. Therefore, research on how these companies disclose Environmental, Social, and Governance (ESG) is highly relevant. The energy sector also continues to innovate to meet environmental and social demands, so this research relates to intellectual capital which shows how innovation and knowledge in the energy sector can affect firm value. The sample of this study was selected using a purposive sampling method with several criteria (See Table 2).

This study uses dependent, independent, moderating, and control variables. The dependent variable is firm value. Firm value is the market value that can provide benefits to shareholders when there is an increase in the company's share price (Indrawati et al., 2023). The independent variables are Environmental, Social, and Governance (ESG) disclosure and intellectual capital. Environmental, Social, and Governance (ESG) disclosure is a form of corporate reporting in business and investment practices by integrating and implementing corporate policies from an environmental, social, and corporate governance perspective (Faisal et al., 2018; Ihsani et al., 2023). Intellectual capital is an intangible asset owned by an organization, provides a competitive advantage, and has the potential to generate profits in the future (Ulum, 2017:74). The moderating variable is financial performance, and the control variables are leverage and firm size. Financial performance is one of the factors that can be used to assess the company's ability to generate profits and maintain the company's business continuity (Abdi et al., 2022). The measurement of financial performance in this study uses the profitability ratio with the Return on Assets (ROA) formula. Return on Assets (ROA) can be an illustration of how the company's management performance in generating profits from what the company has, namely asset management (Arifianti & Widianingsih, 2023). Leverage is a ratio that reflects the company's ability to manage long-term and short-term debt obligations with the aim of achieving profit and the ability to repay the debt (Lamba & Atahau, 2022). Firm size is an indicator that describes the strength of a company based on its finances and can be observed through the total number of assets owned (Nursetya & Nur Hidayati, 2021). The measurement is explained in the following section:

Variable	Measurement	References
Firm Value	$\text{Price Book Value} = \frac{\text{Stock Price}}{\text{Book Value per Share}}$	(Indrawati et al., 2023; Pangestuti et al., 2022)
ESG Disclosure	$\text{ESGDij} = \frac{\text{Number of Indicators Disclosed}}{\text{Total Number of Indicators}}$	(BGK Foundation, 2020; Ihsani et al., 2023)
Intellectual Capital	MVAIC = HCE + SCE + RCE + CEE	(Ulum, 2017:124)
Financial Performance	$\text{ROA} = \frac{\text{Earning After Tax}}{\text{Total Assets}}$	(Arifianti & Widianingsih, 2023; Aryanti & Mertha, 2022)
Leverage	$\text{Leverage} = \frac{\text{Total Debt}}{\text{Total Assets}}$	(Lamba & Atahau, 2022)
Firm Size	Size = Log Total Assets	(Nursetya & Nur Hidayati, 2021)

Table 1. Variables Measurement

Source: Data Author

Data analysis in this study used Hierarchy Regression Analysis through the use of Multiple Regression Analysis and Moderated Regression Analysis (MRA). The stages of data analysis include descriptive analysis, classical assumption test, regression analysis, hypothesis test, and robustness test. The following is the regression model equation used:

$$PBV = a + \beta_1 ESGD_{it} + \beta_2 IC_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_{it} + \varepsilon \quad (1)$$

$$PBV = a + \beta_5 ESGD_{it} + \beta_6 IC_{it} + \beta_7 ROA_{it} + \beta_8 LEV_{it} + \beta_9 SIZE_{it} + \varepsilon \quad (2)$$

$$PBV = a + \beta_{10} ESGD_{it} + \beta_{11} IC_{it} + \beta_{12} ROA_{it} + \beta_{13} ROA_{it}*ESGD_{it} + \beta_{14} ROA_{it}*IC_{it} + \beta_{15} LEV_{it} + \beta_{16} SIZE_{it} + \varepsilon \quad (3)$$

RESULT AND DISCUSSION

The sample of this study was selected using a purposive sampling method with several criteria which can be seen in Table 2 below.

No	Description	Total
1	Energy sector companies listed on the IDX in 2018-2022.	62
2	Energy sector companies whose annual reports and sustainability reports cannot be accessed during 2018-2022.	(9)
3	Energy sector companies that have negative profits during 2018-2022.	(18)
4	Energy sector companies that do not present data related to research variables during 2018-2022.	(10)
	Total of Company Samples	25
	Total of Observations (Total of Samples x 5 Years)	**125**

Table 2. Sample Selection Criteria

Source: Data Processed (2024)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Firm Value	125	0.18	10.36	1.2616	1.34401
ESG Disclosure	125	0.39	1.00	0.6643	0.13757
Intellectual Capital	125	1.63	34.50	6.1651	5.49901
Financial Performance	125	0.00	0.62	0.1038	0.12156
Leverage	125	0.00	0.80	0.4514	0.18814
Firm Size	125	27.62	32.77	29.8920	1.25654

Table 3. Descriptive Statistics

Source: Data Processed (2024)

Based on Table 3, the descriptive analysis results show that the firm value variable has a minimum value of 0.18; a maximum value of 10.36, an average value of 1.2616, and a standard deviation value of 1.34401. The standard deviation value shows a result greater than the average value, this indicates that the firm value variable data has a relatively high data deviation. The Environmental, Social, and Governance (ESG) disclosure variable has a minimum value of 0.39, a maximum value of 1.00, an average value of 0.6643, and a standard deviation value of 0.13757. The standard deviation value shows smaller results than the average value, this indicates that the Environmental, Social, and Governance (ESG) disclosure variable data has a relatively small data deviation. The intellectual capital variable has a minimum value of 1.63, a maximum value of 34.50, an average value of 6.1651, and a standard deviation value of 5.49901. The standard deviation value shows smaller results than the average value, this indicates that the intellectual capital variable data has a relatively small data deviation. The financial performance variable has a minimum value of 0.00, a maximum value of 0.62, an average value of 0.1038, and a standard deviation value of 0.12156. The

standard deviation value shows a result greater than the average value, this indicates that the financial performance variable data has a relatively high data deviation. The standard deviation values of leverage and company size are 0.18814 and 1.25654, so the data deviation of each control variable is good because there is no data that has extreme values.

Classical Assumption Test

Classical assumption testing is carried out to ensure that the model has met the Best Linear Unbiased Estimator (BLUE). The following are the results of each classical assumption test in this study:

Based on Table 4, normality testing through Kolmogorov-Smirnov analysis resulted in a significance level of 0.200 ($\alpha > 0.05$). The results indicates that the data is normally distributed.

Based on Table 5, the multicollinearity test shows that the tolerance value of each research variable is greater than 0.1 and the VIF value is < 10. The results indicates that there is no multicollinearity problem in this study.

Based on Table 6, the autocorrelation test shows that the result of the Durbin-Watson (DW) value is 1.097, this value is between -2 to +2. The results indicates that there is no autocorrelation in this study.

Table 4. Normality Test

Unstandardized Residual	Alpha (5%)	Description
0.200	0.05	Normally Distributed

Source: Data Processed (2024)

Table 5. Multicollinearity Test

Variable	Collinearity Statistics		Description
	Tolerance	VIF	
ESG Disclosure	0.857	1.167	No Multicollinearity
Intellectual Capital	0.284	3.521	No Multicollinearity
Leverage	0.812	1.232	No Multicollinearity
Firm Size	0.766	1.306	No Multicollinearity
Kinerja Keuangan	0.299	3.344	No Multicollinearity

Source: Data Processed (2024)

Table 6. Autocorrelation Test

Durbin-Watson (DW)	Description
1.097	No Autocorrelation

Source: Data Processed (2024)

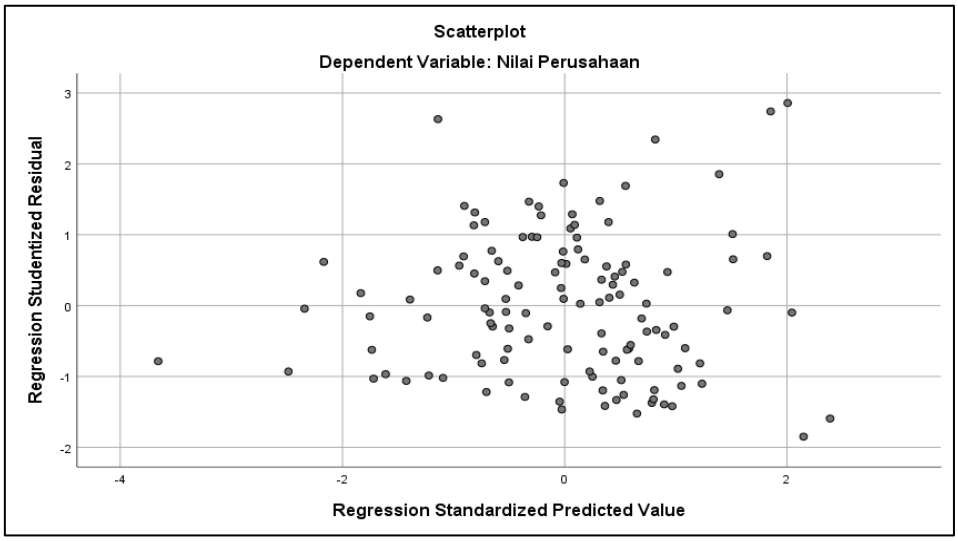

Figure 2. Heteroscedasticity Test

Source: Data Processed (2024)

Based on Figure 2, the heteroscedasticity test shows that the distribution of points spreads above, below, or around the number 0, and is not patterned. This indicates that there are no symptoms of heteroscedasticity in this study.

Regression Analysis and Hypothesis Test

Regression data analysis in this study uses Hierarchy Regression Analysis through the use of Multiple Regression Analysis and Moderated Regression Analysis (MRA). The following are the results of the regression analysis in this study:

	Coeff.	t	Sig.	Adjusted R^2	Sig. F
Model 1					
(Constant)	8.130	2.910	0.004		
ESG Disclosure	0.354	0.408	0.684		
Intellectual Capital	0.103	4.528	0.000	0.162	0.000
Leverage	1.811	2.836	0.005		
Firm Size	-0.286	-2.925	0.004		
Model 2					
(Constant)	4.559	1.773	0.079		
ESG Disclosure	0.191	0.247	0.805		
Intellectual Capital	-0.049	-1.451	0.149	0.334	0.000
Leverage	2.463	4.239	0.000		
Firm Size	-0.171	-1.905	0.059		
Financial Performance	8.366	5.645	0.000		
Model 3					
(Constant)	7.149	2.789	0.006		
ESG Disclosure	-1.347	-1.398	0.165		
Intellectual Capital	0.057	1.288	0.200		
Leverage	2.516	4.432	0.000	0.397	0.000
Firm Size	-0.243	-2.776	0.006		
Financial Performance	1.677	0.371	0.712		
ESGD*FP	15.369	2.577	0.011		
IC*FP	0.449	3.527	0.001		

Table 7. Regression Analysis and Hypothesis Test

Source: Data Processed (2024)

14.1

Model 1 shows the results that the Environmental, Social, and Governance (ESG) disclosure variable obtained a significance value of 0.684 > 0.05 with a positive direction regression coefficient of 0.354. These results indicate that the Environmental, Social, and Governance

(ESG) disclosure variable has no effect on firm value, so it can be concluded that **H_1 is rejected**. The intellectual capital variable obtained a significance value of 0.000 < 0.05 with a positive directional regression coefficient of 0.103. These results indicate that the intellectual capital variable has a positive effect on firm value, so it can be concluded that **H_2 is accepted**. Model 1 has an adjusted R^2 value of 0.162 and an F significance value of 0.000 < 0.05. These results indicate that model 1 is feasible to use in predicting the firm value variable.

Model 2 shows the results that the adjusted R^2 value is 0.334 and the F significance value is 0.000 < 0.05. These results indicate that model 2 is feasible to use in predicting the firm value variable. The adjusted R^2 value increases when the moderating variable acts as an independent variable, namely the financial performance variable with a significance value of 0.000 < 0.05 with a positive direction regression coefficient of 8.366.

Model 3 shows the results of the moderation regression of financial performance on the effect of Environmental, Social, and Governance (ESG) disclosure on firm value obtained a significance value of 0.011 < 0.05 with a positive direction regression coefficient of 15.369. These results indicate that the financial performance variable can moderate by strengthening the relationship between the Environmental, Social, and Governance (ESG) disclosure variable and firm value, so it can be concluded that **H_3 is accepted**. The results of the moderation regression of financial performance on the effect of intellectual capital on firm value obtained a significance value of 0.001 < 0.05 with a positive direction regression coefficient of 0.449. These results indicate that the financial performance variable can moderate by strengthening the relationship between the intellectual capital variable and firm value, so it can be concluded that **H_4 is accepted**. In model 3, the adjusted R^2 value has increased by 0.397 and the F significance value is 0.000 < 0.05. These results indicate that model 3 is feasible to use in predicting the firm value variable.

Robustness Test

The robustness test in this study was carried out by excluding the covid period, namely using the 2018, 2019, 2022 period, so that it can be seen whether the main results of the hypothesis test remain consistent when calculated using a different approach. The following are the results of the robustness test in this study:

Based on table 8, it shows that the results of the robustness test by excluding the covid period, namely using the 2018, 2019, 2022 period, get consistent or the same results as the main results of the study, so that the research model equation is proven valid and robust during the model robustness test.

Hypothesis	B	Sig.	Description
H_1	0.796	0.392	Valid
H_2	0.088	0.000	Valid
H_3	4.889	0.047	Valid
H_4	0.271	0.007	Valid

Table 8. Robustness Test

Source: Data Processed (2024)

Discussion

The results of the test on hypothesis 1 show that Environmental, Social, and Governance (ESG) disclosure has no effect on firm value. The results of the study did not successfully support stakeholder theory which states that the success of an organization depends on the company's ability to achieve economic and non-economic goals, one of which is a sustainability report that can increase investor confidence in the company to invest in the company. The results of the study are not in line with previous research conducted by Aboud & Diab (2018); Li et al., (2018); Triyani et al., (2020), but the research results are in line with the findings of Sumarno et al., (2023) and Velte (2017). The results of the study did not successfully support stakeholder theory which states that the success of an organization depends on the company's ability to achieve economic and non-economic goals, one of which is a sustainability report that can increase investor confidence in the company to invest in the company, such as Environmental, Social, Governance (ESG) disclosure. In this case, investors have not considered Environmental, Social, Governance (ESG) disclosure in terms of making investment decisions, investors have other considerations in investing so that they are not based on Environmental, Social, Governance (ESG) disclosure alone, so it can be said that Environmental, Social, Governance (ESG) disclosure is still not strong enough to have a direct impact on firm value.

The results of the test on hypothesis 2 show that intellectual capital has a positive effect on firm value. The results of the study successfully support stakeholder theory which states that companies need to maintain relationships with their stakeholders by paying attention to and fulfilling their wants and needs in improving the sustainability of their companies. If company managers can manage resources properly and efficiently, one of which is intangible assets, it will create added value. The research results are in line with the findings of Deniswara et al., (2019); Nguyen & Doan (2020); Indriastuti & Kartika (2021); and Pangestuti et al., (2022). The results of the study successfully support stakeholder theory which states that companies need to maintain relationships with their stakeholders by paying attention to and fulfilling their wants and needs in improving the sustainability of their companies. If company managers can manage resources properly and efficiently, one of which is intangible assets, it will create added value and have a positive impact on the company's market value so that it helps achieve good long-term performance for the benefit of stakeholders in making investment decisions, so it can be concluded that properly managed and utilized intellectual capital will produce higher added value to increase company value. In efficient capital market conditions, investors tend to give higher valuations to companies that have greater intellectual capital value.

The results of the test on hypothesis 3 show that financial performance strengthens the influence of Environmental, Social, and Governance (ESG) disclosure on firm value. The results of the study successfully support stakeholder theory which states that stakeholders have the right to obtain all information, namely financial and non-financial, regarding organizational activities that will influence decision making. This states that the increase in profitability provides information about Environmental, Social, and Governance (ESG) disclosure that is getting better so that investors are interested and believe in investing shares in the company which will have an impact on increasing the value of the company (Aydoğmuş et al., 2022). Companies that have good financial performance capabilities will have high confidence to inform stakeholders because the company is able to show that the company can meet the needs and expectations of stakeholders, especially investors. These data can strengthen trust in the company, build a positive image, and create a competitive advantage.

The results of the test on hypothesis 4 show that financial performance strengthens the influence of intellectual capital on firm value. The results of the study successfully support stakeholder theory, the higher the value of financial performance, the more efficient the company's management is in utilizing its assets with the aim of convincing investors in making decisions. The findings of Deniswara et al., (2019) and Pangestuti et al., (2022) state that companies that have high profitability are considered to have good performance in generating profits. In addition, the market will also give a higher evaluation to companies that have good and high profitability by linking the company's ability to manage intellectual capital which has an impact on increasing company value so that it can meet the needs of stakeholders.

CONCLUSION

This study aims to examine the effect of Environmental, Social, and Governance (ESG) disclosure and intellectual capital on firm value by using financial performance as a moderating variable. This research was conducted with data analysis techniques using Hierarchy Regression Analysis through the use of Multiple Regression Analysis and Moderated Regression Analysis (MRA) on energy sector companies listed on the Indonesia Stock Exchange with as many as 125 observations from 25 companies during the period 2018-2022. The results showed that Environmental, Social, and Governance (ESG) disclosure has no significant effect on firm value. Meanwhile, intellectual capital has a positive effect on firm value. Then, financial performance can moderate by strengthening the relationship between Environmental, Social, and Governance (ESG) disclosure and intellectual capital on firm value.

This study has limitations that can be taken into consideration for further research, so that better results can be obtained in the future. The limitations in this study are in the measurement of Environmental, Social, and Governance (ESG) disclosure, so that the subjectivity of one researcher with another researcher may differ. In addition, this study had difficulty in identifying components to measure intellectual capital because each company has a different way of reporting its finances, so researchers must be careful in finding and including intangible asset components. Based on the above limitations, future research should obtain the Environmental, Social, and Governance (ESG) disclosure index by triangulation (researched by several people), so that each disclosure index used is the average value of each researcher. Future research should also determine in advance the items in the financial statements used to fulfill the measurement of intellectual capital and conduct a review of the annual report and financial statements made by the company to facilitate the process of identifying and measuring intellectual capital.

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Appendix

Index Environmental, Social, and Governance (ESG) Disclosure

Environmental	Social	Governance
GHG Emissions	CEO Pay Ratio	Board Diversity
GHG Intensity	Gender Pay Ratio	Board Independence
Energy Usage	Employee Turnover	Incentivized Pay
Energy Intensity	Gender Diversity	Collective Bargaining
Energy Mix	Temporary Worker Ratio	Supplier Code of Conduct
Water Usage	Non-Discrimination	Ethics & Anti-Corruption Compliance
Environmental Operations	Injury Rate	Data Privacy

Climate Oversight/Board	Global Health and Safety	ESG Reporting
Climate Oversight/Management	Child and Forced Labor	Disclosure Practice
Climate Risk Mitigation	Human Rights	Independent/External Assurance
Forestry CSR	Social CSR	Tax Transparency

Source: BGK Foundation (2020)