

The Effect of Corporate Social Responsibility Disclosure, Leverage, and Company Size on Company Value with Profitability as a Moderating Variable (Case Study of Energy Sector Companies Listed on the IDX in 2020-2023)

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ABSTRACT

This study aims to determine the effect of Corporate Social Responsibility (CSR), leverage, and company size on firm value, with profitability as a moderating variable. The study population comprised energy sector companies listed on the Indonesia Stock Exchange (IDX) in 2020-2023. This study employed a quantitative method with secondary data in the form of company annual reports. The results show that CSR has a positive effect on firm value. Leverage has a negative effect on firm value. Company size has a positive effect on firm value. Profitability moderates the influence of CSR, leverage, and company size on firm value.

Keywords:Corporate Social Responsibility; Leverage;Company Size; Company Value; Profitability.

INTRODUCTION

The development of the business world in the current era of globalization requires every company to be increasingly adaptive, responsive, and innovative to survive in complex competition. One of the main goals of a company is to increase its value, as it is a crucial indicator of the health, stability, and sustainability of a business entity (RL Putri & Willim, 2024). Company value reflects investors' perceptions of a company's success in managing its resources, as reflected in its stock price over a given period (Brigham & Daves, 2007). Tobin's Q is a comprehensive ratio because it not only reflects internal financial performance but also assesses how the market views the company's long-term prospects (Prasetyorini, 2013). Companies with higher Tobin's Q values tend to be more attractive to investors, as they are perceived to have better growth opportunities, adaptability, and sustainability prospects. Increasing company value is not merely a financial goal but also a strategy to maintain a competitive position in the global market.

A company's value is fundamentally influenced by various aspects, not only financial performance but also non-financial factors such as corporate social responsibility, funding structure, and asset scale (Fujianti & Satria, 2020). In modern industry, CSR, or Corporate Social Responsibility, has become a crucial concern because society increasingly demands that companies conduct business ethically, transparently, and sustainably. The energy sector plays a vital role in the global economy and is the backbone of industrial growth. The energy sector encompasses companies providing oil,

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drilling services, natural gas, and other energy commodities that carry a high level of environmental risk. These characteristics create a strong link between a company's financial performance and its socio-environmental impacts. A lack of synergy in managing both can impact market perception, including a decline in the company's value.

Globally, the energy sector is the largest and most influential, contributing 8%–10% to global GDP (Sovacool, 2018). Indonesia itself is listed as the thirteenth-largest energy consumer in the world, with consumption reaching 909.24 million barrels in 2022 (Shilvina Widi, 2023). In terms of fiscal contribution, the energy sector recorded significant non-tax state revenue (PNBP) in 2023, amounting to IDR 300.3 trillion, or 116% of the target (Adi, 2024). The trend in energy sector company value, as measured by Tobin's Q, in 2020–2023 showed a downward trend from 2,046 to 2,040. This decline indicates internal and external dynamics influencing market perception of the energy sector. This situation raises critical questions about the factors driving changes in company value and how companies respond to the challenges of an increasingly competitive business environment.

One widely studied factor is Corporate Social Responsibility (CSR) disclosure. CSR is a crucial indicator in assessing a company's commitment to social and environmental issues (Orbaningsih, 2022). CSR disclosure is a company's effort to demonstrate its contribution to sustainable development (Alsayegh et al., 2020), and this practice has increasingly gained attention in the ASEAN region with the establishment of the ASEAN CSR Network (ACN) in 2011 (Soderstrom et al., 2017). CSR is legally regulated in Indonesia through Law No. 40 of 2007, Article 74, particularly for companies operating in the natural resources sector. Various studies have shown that the quality of CSR disclosure by Indonesian companies remains low compared to other ASEAN countries (Riva, 2016). The Chairman of Apindo (Indonesian Association of Indonesian Companies) even emphasized that CSR reporting in Indonesia is still limited. This situation is problematic because the energy sector is a major contributor to various types of pollution and environmental damage, such as air pollution, carbon emissions, and ecosystem damage due to overexploitation. This challenge requires companies to improve the quality of their CSR to gain public and investor trust.

A company's funding structure through leverage is also a significant factor influencing its value. A high DER can increase financial risk and erode investor confidence. The decline in company value, as experienced by PT Transcoal Pacific Tbk in 2023, despite its well-managed DER in the previous year, demonstrates that leverage does not always lead to increased company value if not accompanied by an appropriate operational strategy. Consistent with empirical findings, research on the effect of leverage on company value continues to show inconsistent results. Some studies demonstrate a significant effect of leverage on company value (Jihadi et al., 2021; Noviyati & Wulandari Agustiningsih, 2023), while others show no effect (Natalia & Kristianti Maharani, 2024; Permatasari & Sasongko, 2022). This highlights the need for further study of how leverage plays a role in the energy sector, which faces significant capital requirements and dynamic business cycles.

Company size is another variable that influences company value. Large total assets generally reflect a company's capacity to exploit opportunities, absorb risks, and gain broader access to funding (Khotimah et al., 2020). Large companies also tend to have high public visibility, thus gaining greater investor trust. The phenomenon at PT TBS Energi Utama Tbk demonstrates the opposite: despite the company's large total assets, its value still declined the following year. This fact suggests that company size is not always linear with increasing company value. Research results show variability; some studies conclude that company size has a positive effect on company value (Firda & Efriadi, 2020; Wahyudi,

2020; Widnyana et al., 2021), but others find no significant effect (Puspasari & Haryati, 2023). The role of company size in increasing company value in the energy sector remains a subject of interesting empirical debate.

Profitability is a variable that has the potential to moderate the relationship between CSR, leverage, and company size on firm value. Based on stakeholder theory (Freeman, 1984), profitable companies will have more resources to meet the needs and expectations of stakeholders, including engaging in quality CSR activities. From a signaling perspective, profitability provides a positive signal to investors regarding a company's ability to effectively manage operations, funding risks, and asset scale. The energy sector itself showed a decline in profitability in 2023, with several issuers, such as PTBA, ANTM, and TINS, recording significant profit declines. This decline was due to weakening export markets and falling energy commodity prices. These conditions have made investors more selective, thus profitability plays a significant role in strengthening or weakening the relationship between fundamental variables and firm value. Given the research gap from previous studies that have produced inconsistent findings, as well as the real-world phenomena occurring in the energy sector in Indonesia, this study is relevant to provide more comprehensive empirical evidence regarding the influence of CSR, leverage, and company size on firm value, with profitability as a moderating variable in energy sector companies in 2020–2023.

METHODS

This study uses a quantitative approach to examine the influence of Corporate Social Responsibility (CSR), leverage, and company size on firm value, with profitability as a moderating variable. The research subjects were all energy sector companies listed on the Indonesia Stock Exchange (IDX) for the 2020–2023 period. The data used were entirely secondary data obtained from each company's annual report and sustainability report, as well as market information published by the IDX. The sample was selected using a purposive sampling technique based on four criteria: consistently listed companies, accessible financial reports, profitable earnings, and CSR disclosures. Based on these criteria, 24 companies, or 96 panel data observations, were selected. A summary of the sample selection process is shown in the following table.

Table 1. Sample Selection Criteria

No	Criteria	Amount
1	Energy sector companies on the IDX 2020–2023	66
2	Report cannot be accessed	(5)
3	The company suffered losses	(33)
4	Not disclosing CSR	(4)
Total Company		24
Research Period		4
Total Sample (24×4)		96

The observed variables include dependent, independent, and moderating variables. Firm value is proxied by Tobin's Q, which reflects the market's assessment of the firm's prospects. The formula used to measure firm value is as follows:

$$\text{Tobin's q} = \frac{MVE+D}{TA}$$

Market value of equity is calculated by multiplying the year-end share price by the number of outstanding shares, with D representing total debt and TA representing the company's total assets. CSR is measured using a disclosure index based on the 2021 GRI Standards, which consists of 117 items. Each item is scored 1 if disclosed and 0 if not disclosed. The formula for calculating the CSR index is:

$$\text{CSRdi} = \frac{\sum X_{ij}}{n_j}$$

Leverage is assessed using the Debt to Equity Ratio (DER) because it is commonly used in assessing a company's funding structure, with the formula:

$$\text{DER} = (\text{Total Debt}) / (\text{Equity})$$

Company size is measured using the natural logarithm of total assets, while profitability as a moderating variable is proxied by Return on Assets (ROA) through the formula:

$$\text{Return on assets} = \frac{\text{Laba Usaha}}{\text{Total Aset}}$$

The operationalization of the variables is summarized in the following table.

Table 2. Operational Variables

Variables	Definition	Indicator	Scale
CSR (X1)	Social & environmental commitment	GRI Index 2021 (117 items)	Dummy
Leverage (X2)	Ability to fulfill obligations	DER = Total Debt / Equity	Ratio
Company Size (X3)	The size of the company	Ln(Total Assets)	Ratio
Company Value (Y)	Market assessment	Tobin's Q	Ratio
Profitability (M)	Profit-generating ability	ROA	Ratio

The analysis was conducted using EViews, with stages including descriptive statistics, panel data regression model selection (Common Effect, Fixed Effect, or Random Effect), and classical assumption testing, including residual normality, multicollinearity, and heteroscedasticity. The best model was selected using the Chow test, the Hausman test, and the Lagrange Multiplier test. Furthermore, the t-test was used to examine the partial effect of each independent variable on the dependent variable, while the coefficient of determination (R^2) was used to measure the model's ability to explain variability in firm value.

To test the moderating effect of profitability, this study used Moderated Regression Analysis (MRA) by adding interaction variables between ROA and each independent variable. The regression equation model used is:

$$Y = \alpha_1 + \beta_1 \text{CSR} + \beta_2 \text{DER} + \beta_3 \text{SIZE} + \beta_4 \text{ROA} + \beta_5 \text{CSR.ROA} + \beta_6 \text{DER.ROA} + \beta_7 \text{SIZE.ROA} + e_1$$

This model allows researchers to test whether profitability strengthens or weakens the relationship between CSR, leverage, and firm size and firm value. This approach provides a more comprehensive understanding of the role of profitability in the dynamics of market valuations of energy sector companies.

RESULTS AND DISCUSSION

Results

This research was conducted on energy sector companies listed on the Indonesia Stock Exchange during the 2020–2023 period. Of the 66 listed companies, only 24 companies met the research criteria through a purposive sampling technique, namely companies that were consistently listed, had accessible annual reports, were profitable, and presented CSR disclosures. The number of observations used was 96 panel data with a list of sample companies as shown in Table 1, which includes major companies in the energy industry such as Adaro Energy Indonesia Tbk., Bayan Resources Tbk., Golden Energy Mines Tbk., Bukit Asam Tbk., and TBS Energi Utama Tbk.

Table 3.List of Research Sample Companies

No	Company Code	Company name
1	ADRO	Adaro Energy Indonesia Tbk.
2	AKRA	AKR Corporindo Tbk.
3	BIPI	Astrindo Nusantara Infrastructure
4	BSSR	Baramulti Suksessarana Tbk.
5	BYAN	Bayan Resources Tbk.
6	DWGL	Dwi Guna Laksana Tbk.
7	ELSA	Elnusa Tbk.
8	ENRG	Energi Mega Persada Tbk.
9	GEMS	Golden Energy Mines Tbk.
10	HRUM	Harum Energy Tbk.
11	ITMA	Reliable Energy Resources Tbk.
12	ITMG	Indo Tambangraya Megah Tbk.
13	MBAP	Mitrabara Adiperdana Tbk.
14	MYOH	Samindo Resources Tbk.
15	PSSI	IMC Pelita Logistics Tbk.
16	PTBA	Bukit Asam Tbk.
17	PTRO	Petrosea Tbk.
18	KING	Rukun Raharja Tbk.
19	SGER	Sumber Global Energy Tbk.
20	SHIP	Sillo Maritime Perdana Tbk.
21	SOCI	Soechi Lines Tbk.
22	TCPI	Transcoal Pacific Tbk.
23	TOBA	TBS Energi Utama Tbk.
24	TPMA	Trans Power Marine Tbk.

Source:www.idx.co.id(processed)

Descriptive statistical analysis was used to describe the basic characteristics of the research variables, such as firm value (Tobin's Q), CSR, leverage, firm size, profitability, and interaction variables. The descriptive results in Table 2 show that Tobin's Q has an average value of 2.11 with a relatively high standard deviation (3.11), indicating strong variations in the market value of energy companies. CSR has an average value of 0.74 with a low spread, reflecting a relatively stable level of CSR disclosure in general. Leverage shows quite extreme variations (min -14.39 to max 10.79), indicating that the funding structure of energy companies varies substantially. Firm size tends to be stable with an average of 29.71. Meanwhile, ROA has a mean of 0.13, indicating moderate profitability in the energy sector.

Table 4. Descriptive Statistics

	TOBINS Q	CSR	DER	SIZE	ROA	CSR_ROA	DER_ROA	SIZE_ROA
Mean	2.111850	0.749287	0.952105	29.71657	0.138817	0.106406	0.099352	4.173689
Median	1.230293	0.752140	0.783818	29.65714	0.077279	0.058866	0.051644	2.256803
Maximum	18.10736	0.965810	10.79066	32.75569	0.616346	0.521523	0.692147	18.79805
Minimum	0.203855	0.512820	-14.39175	27.25414	0.002392	0.001472	-0.727394	0.066945
Std. Dev.	3.115955	0.095761	2.253678	1.191664	0.151215	0.118527	0.167634	4.608686
Skewness	3.551319	-0.246453	-1.620467	0.293083	1.682740	1.723605	0.395554	1.689908
Kurtosis	15.05100	2.865702	29.58801	2.648661	5.041365	5.287054	11.34596	5.042615
Jarque-Bera	782.6958	1.043970	2869.703	1.868120	61.97450	68.45548	281.1234	62.38172
Probability	0.000000	0.593342	0.000000	0.392955	0.000000	0.000000	0.000000	0.000000
Sum	202.7376	71.93157	91.40205	2852.791	13.32640	10.21500	9.537836	400.6742
Sum Sq. Dev.	922.3714	0.871163	482.5111	134,9061	2.172269	1.334619	2.669620	2017,799
Observations	96	96	96	96	96	96	96	96

The best panel model was determined first through three main tests used to ensure that the selected estimation model fits the data characteristics. The Chow test showed that the fixed effect model was more appropriate than the common effect, as indicated by a Chi-Square probability value of 0.0000. The Hausman test showed a probability value of 0.0274, indicating that the fixed effect was more appropriate than the random effect. To confirm the choice between the common effect and the random effect, a Lagrange Multiplier (LM) test was performed, and the Breusch-Pagan result with a probability of 0.0000 indicated that the random effect was more appropriate than the common effect. Considering the hierarchy of panel model selection, the model used in this study was the Random Effect Model, which was then used for hypothesis testing.

The classical assumption test indicates that the panel regression model meets the feasibility assumption. The normality test using Jarque-Bera yields a probability value of 0.09 (>0.05), thus the residuals are declared normally distributed. The multicollinearity test results indicate that all correlations between independent variables are below 0.80, thus the model is free from multicollinearity. The heteroscedasticity test using Breusch-Pagan-Godfrey shows a probability value above 5% alpha, thus the model is declared free from heteroscedasticity and suitable for further interpretation.

The results of the Moderated Regression Analysis (MRA) are shown in Table 3 and indicate that all primary variables and interaction variables have a significant influence on firm value. The resulting regression model is as follows:

$$Y=8.563221 + 0.136324 \text{ CSR} - 0.241973 \text{ DER} + 0.477444 \text{ SIZE} + 0.018483 \text{ ROA} + 0.016434 \text{ CSR.ROA} + 4.691905 \text{ DER.ROA} + 0.003175 \text{ SIZE.ROA}$$

This model shows that CSR has a positive effect on firm value, while leverage has a negative effect and firm size has a positive effect. Profitability not only has a direct effect but also strengthens the relationship between all independent variables and firm value. Increasing profitability strengthens the influence of CSR, leverage, and firm size in increasing or decreasing firm value, depending on the direction of the relationship between each variable.

Table 5.MRA Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.563221	4.060294	2.109015	0.0358
CSR	0.136324	0.035204	3.872428	0.0015
DER	-0.241973	0.105037	-2.303700	0.0244
SIZE	0.477444	0.120006	3.978499	0.0001
ROA	0.018483	0.007563	2.443880	0.0151
CSR_ROA	0.016434	0.004215	3.898924	0.0001
DER_ROA	4.691905	1.984642	2.364106	0.0211
SIZE_ROA	0.003175	0.001371	2.315708	0.0211

Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.820729	Mean dependent var		1.947720
Adjusted R-squared	0.787335	SD dependent var		2.299043
SE of regression	1.060217	Akaike info criterion		3.099937
Sum squared residual	343.9625	Schwarz criterion		3.720912
Log likelihood	-506.1885	Hannan-Quinn criter.		3.346746
F-statistic	24.57740	Durbin-Watson stat		2.013226
Prob(F-statistic)	0.000000			

The results of the partial significance test (t-test) support the main findings. The test results can be seen in the table below:

Table 6.t-test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.563221	4.060294	2.109015	0.0358
CSR	0.136324	0.035204	3.872428	0.0015
DER	-0.241973	0.105037	-2.303700	0.0244
SIZE	0.477444	0.120006	3.978499	0.0001
ROA	0.018483	0.007563	2.443880	0.0151
CSR_ROA	0.016434	0.004215	3.898924	0.0001
DER_ROA	4.691905	1.984642	2.364106	0.0211
SIZE_ROA	0.003175	0.001371	2.315708	0.0211

Source: Processed by Researchers (2025)

CSR has a significant positive effect on firm value ($p = 0.0015$), indicating that good social responsibility disclosure is appreciated by the market. Leverage has a significant

negative effect ($p = 0.0244$), indicating that excessive use of debt reduces the perception of firm value. Firm size has a significant positive effect ($p = 0.0001$), indicating that larger firms tend to have higher market value. All three moderating variables (CSR \times ROA, DER \times ROA, SIZE \times ROA) are all significant, confirming that profitability strengthens the influence of each independent variable on firm value.

Simultaneously, the results of the F test show that all independent variables and moderating variables together have a significant effect on company value, indicated by the F-statistic probability of $0.000 < 0.05$.

Table 7.F test

R-squared	0.820729	Mean dependent var	1.947720
Adjusted R-squared	0.787335	SD dependent var	2.299043
SE of regression	1.060217	Akaike info criterion	3.099937
Sum squared residual	343.9625	Schwarz criterion	3.720912
Log likelihood	-506.1885	Hannan-Quinn criter.	3.346746
F-statistic	24.57740	Durbin-Watson stat	2.013226
Prob(F-statistic)	0.000000		

Source: Processed by Researchers (2025)

The coefficient of determination is also very strong; the Adjusted R^2 of 0.7873 indicates that 78.73% of the variation in firm value can be explained by CSR, leverage, firm size, profitability, and their interactions. These findings indicate that the model used is highly relevant in explaining the determinants of firm value in the energy sector in Indonesia.

Discussion

The research results provide a comprehensive overview of how CSR dynamics, leverage, and company size influence the value of companies in the energy sector listed on the IDX, as well as how profitability plays a role as a determining factor in strengthening or weakening this relationship. In an energy industry that is highly sensitive to environmental issues, operational risks, regulations, and global commodity price volatility, these empirical findings provide a richer understanding of how investors interpret a company's fundamental characteristics and sustainability strategies. Overall, the pattern of relationships between variables indicates that the market places different values on each factor depending on the quality of the company's financial performance.

One of the most consistent findings is the positive and significant influence of CSR on company value. The high statistical significance indicates that CSR disclosure is an important consideration for investors in the energy sector. This is quite reasonable because energy companies have significant potential for negative externalities such as pollution, resource exploitation, and social impacts in their operational areas. Companies that transparently disclose CSR activities through international standards such as GRI 2021 are seen as more responsible and have better sustainability prospects. From a signaling theory perspective, CSR signals that a company has strong governance, is long-term oriented, and is able to maintain harmonious relationships with stakeholders. CSR not only reduces operational and litigation risks but also enhances a company's reputation, ultimately increasing investor interest. Stakeholder theory asserts that company value increases when a company is able to meet the needs and expectations of

various parties, not just shareholders. This finding aligns with Sirait et al. (2022), Taufik & Bambang (2023), and Lee & Choi (2021), who assert that CSR improves market perception and directly strengthens company value.

The negative effect of leverage on firm value indicates that the market interprets high DER as a signal of increased financial risk. With increasing DER, a company's obligation to pay interest and principal increases, reducing financial flexibility and increasing the likelihood of financial distress. This is particularly critical in capital-intensive sectors like energy, where commodity price volatility often impacts a company's cash flow. High leverage is considered a negative signal based on trade-off theory, as the benefits of using debt are only optimal up to a certain point, after which bankruptcy costs and liquidity risks outweigh the benefits. Indonesian investors generally have moderate risk preferences, so companies with high leverage are immediately perceived as high risk, which lowers their market value, as reflected in the Tobin's Q ratio. This finding aligns with research by Natalia & Kristianti Maharani (2024), Permatasari & Sasongko (2022), and Putu et al. (2021), all of which confirm that excessive leverage worsens market perceptions, particularly in volatile sectors like energy.

Company size has also been shown to have a significant positive effect on firm value, indicating that larger companies tend to have a higher capacity to create value. Larger companies have more assets, stronger diversification capabilities, more solid management structures, and are more attractive to institutional investors. Larger companies are more stable in the face of macroeconomic shocks and have stronger negotiating power in accessing funding, both through capital markets and banks. From a signaling theory perspective, company size signals a strong competitive position and more efficient operational capabilities. This creates a positive perception among investors, thereby increasing stock demand and market value. These findings align with research by Natalia & Kristianti Maharani (2024), Wahyudi (2020), and Widnyana et al. (2021), which states that the larger the company size, the greater the company's value in the eyes of the market.

At a more complex level, this study found that profitability plays a very strong moderating role in influencing the relationship between the three main variables and firm value. This finding reinforces the notion that financial performance is a crucial element in determining how the market interprets a company's strategy and characteristics. First, profitability has been shown to strengthen the influence of CSR on firm value. This suggests that CSR will be more highly valued by the market when a company is able to demonstrate solid financial performance. With a high ROA, CSR activities are not viewed as a waste of resources, but as a long-term investment strategy that enhances the company's sustainability, stability, and reputation. CSR carried out by highly profitable companies sends a strong signal that the company has financial capacity and a long-term commitment to sustainability. This is consistent with Sirait et al. (2022), Riyadh et al. (2022), and Kusumawati & Riyanto (2021), which emphasize that profitability strengthens the effectiveness of CSR in creating firm value.

Profitability also strengthens the influence of leverage on firm value, but with different dynamics. When a company has a high ROA, debt use is no longer seen as a risk, but rather as an effective financing tool to increase returns. Investors perceive companies with high profitability as having a greater ability to manage their debt obligations and generate profits from debt-based financing. A high ROA neutralizes the negative impact

of leverage and can even shift market perceptions to positive ones. This emphasizes that the effect of leverage is highly dependent on a company's ability to generate profits. This finding aligns with Wahyudi (2020), Juliana et al. (2020), and Putu et al. (2021), who stated that high profitability can transform leverage into a factor that increases firm value.

Profitability has been shown to strengthen the influence of company size on firm value, indicating that companies with large asset scale and high profit performance are perceived by the market to have stronger prospects. Large companies capable of generating high profits are considered highly efficient in managing their assets. From an investor perspective, this signals a company's competitive advantage, strong operational capabilities, and long-term growth prospects. Large company size without high profitability is not always considered an indicator of strength, but when large size is supported by a high ROA, investors view the company as an efficient and stable entity. This finding aligns with research by Natalia & Kristianti Maharani (2024), Prakoso et al. (2022), and Wahyudi (2020), which emphasizes that profitability is a crucial element in maximizing the contribution of company size to market value.

The results of this study reveal that company value in the energy sector is not only determined by structural factors such as CSR, leverage, and company size, but also significantly influenced by the company's ability to generate profits. Profitability is key in determining whether sustainability strategies, capital structure policies, and business scale can truly translate into high market value. These findings have important implications for companies, investors, and regulators: increasing company value requires a balanced strategy between financial performance, a healthy capital structure, and a commitment to sustainability through CSR. In Indonesia's energy sector, which is under pressure to transform towards a green economy, these findings further emphasize the importance of profitability and sustainability as the primary foundations for creating long-term corporate value.

CONCLUSIONS

In energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period, Corporate Social Responsibility (CSR), leverage, company size, and profitability play a significant role in influencing company value. CSR has been shown to have a positive effect on company value, confirming that socially responsible activities significantly contribute to increasing market value. Conversely, leverage has a negative effect, indicating that a high proportion of debt increases investors' risk perception and lowers company value. Company size has been found to have a positive effect, reflecting that companies with larger asset scales tend to achieve higher market values. Profitability has been shown to significantly moderate the effects of CSR, leverage, and company size on company value; high profitability strengthens the positive effects of CSR and company size, and reduces or even reverses the negative effects of leverage. Therefore, ROA plays a strategic role in determining the extent to which these fundamental variables are able to create value for energy companies in Indonesia.

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