The Role of CSR in Moderating the Influence of Independent Commissioners, Liquidity, Profitability, and Leverage on Stock Prices

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Abstract
Purpose: This study aims to examine factors influencing stock prices of energy sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2021–2024.
Design/methodology/approach: This study uses a quantitative approach with purposive sampling, yielding 39 companies and 156 total observations. Panel data regression analysis was conducted using EViews 13. The Fixed Effect Model (FEM) was selected based on the Chow test and Hausman test results. Moderated Regression Analysis (MRA) was employed to test the moderating role of CSR.
Findings: Profitability has a significant positive effect on stock prices. The independent board of commissioners, liquidity, and leverage show no significant effect on stock prices. Corporate Social Responsibility (CSR) as a moderating variable strengthens the relationship between liquidity and stock prices, while CSR does not moderate the relationship of the independent board of commissioners, profitability, and leverage with stock prices.
Practical implications: Investors should prioritize profitability as the primary financial signal when evaluating energy sector stocks. Companies should optimize the combination of liquidity management and CSR disclosure to strengthen investor confidence and support positive stock price movement.
Originality/value: This study extends prior research by incorporating CSR as a moderating variable across four financial and governance dimensions in the energy sector, providing new empirical evidence on CSR's conditional moderating role during the 2021–2024 period.
Paper type: Empirical.
Keywords: Corporate Social Responsibility (CSR), Independent Board of Commissioners, Leverage, Liquidity, Profitability, Stock Price.

1. Introduction

Stock price is a primary indicator reflecting how the market values a company's performance and long-term prospects (Lovinta et al., 2024). Stock prices are formed through demand-and-supply mechanisms in the capital market, responding to financial and operational information released by companies. Rivandi & Inovella (2023) explains that stock prices are strongly influenced by fundamental information describing corporate health, forming an important basis for investment decision-making.

Energy sector companies listed on the Indonesia Stock Exchange (IDX) experienced a sustained bearish trend from 2021 to 2024. The average stock price was IDR 2,847 in 2021, declined to IDR 2,424 in 2022, partially recovered to IDR 2,612 in 2023, but fell again to IDR 2,343 in 2024 a decline of approximately 10.3% from 2023 to 2024. This pattern forms lower highs and lower lows, signaling a medium-term bearish dominance. Disparity across individual issuers suggests that fundamental conditions are key determinants of each company's stock price trajectory.

The sustained stock price decline is suspected to be influenced by internal corporate factors: (1) governance quality through the proportion of independent board of commissioners, (2) liquidity, (3) profitability, and (4) capital structure (leverage). Corporate Social Responsibility (CSR) disclosure is also hypothesized to moderate these relationships, given the energy sector's vulnerability to sustainability demands and environmental regulation. Prior research reveals inconsistent findings (research gaps) regarding the influence of these variables on stock prices, supporting the need for further empirical investigation (Connelly et al., 2011). For example, regarding the effect of profitability on stock prices, Bahantwelu et al. (2025) and Irawan & Arif (2024) reported a significant positive effect, whereas Lovinta et al. (2024) found a negative effect and Margaretta et al. (2024) found no significant effect, reflecting unresolved inconsistency in prior empirical evidence. A similar inconsistency is found for leverage, where Larantukan & Auliyamartha (2025) and Novietta et al. (2022) reported a significant negative effect on stock prices, while Irawan & Arif (2024) found no significant effect, further reinforcing the research gap this study seeks to address. This study extends Dhana & Yudantara (2025) by incorporating the independent board of commissioners and including CSR as a moderating variable in the energy sector context.

This study contributes to the accounting and finance literature by providing empirical evidence on the conditional moderating role of CSR in a high-risk, high-regulatory-pressure sector. The research questions are: (1) Does the independent board of commissioners affect stock prices? (2) Does liquidity affect stock prices? (3) Does profitability affect stock prices? (4) Does leverage affect stock prices? (5)-(8) Does CSR moderate these relationships?

2. Literature Review and Hypotheses Development

Signaling Theory

Signaling theory (Spence, 1978) explains how firms communicate information to external parties to reduce uncertainty and information asymmetry between management and investors. In capital markets, investors use these signals to assess risk and return potential, directly influencing investment decisions and stock prices (Connelly et al., 2011). Profitability and liquidity represent positive financial signals, while high leverage signals financial risk. Governance mechanisms (independent board) and CSR disclosure serve as non-financial signals, reflecting commitment to transparency and long-term sustainability (Dhana & Yudantara, 2025).

Stock Price

Stock price reflects market perceptions of a company's performance, risk, and future rospects through demand-and-supply mechanisms (Widya et al., 2023). It serves as an indicator of investor confidence in the company's ability to create economic value. Stock prices respond to both financial and non-financial information, making them a composite signal of corporate governance quality, financial health, and sustainability orientation (Lestari & Rahayu, 2024).

Hypotheses Development

The independent board of commissioners performs an objective oversight function, reducing managerial opportunism and enhancing transparency. In signaling theory, an adequate proportion of independent commissioners signals positive governance quality to the market, increasing investor confidence and driving stock prices upward (Christine et al., 2024; Larantukan & Auliyamartha, 2025).

H_1: Independent board of commissioners has a positive effect on stock prices.

High liquidity signals financial stability and reduces investor risk perception, encouraging investment demand and increasing stock prices (Putri & Setyahuni, 2024; Widya et al., 2023). Companies with adequate liquidity are perceived as having lower default risk, making them more attractive investment targets.

H_2: Liquidity has a positive effect on stock prices.

Profitability signals a company's operational effectiveness and capacity to generate shareholder returns. High profitability strengthens investor confidence in the firm's growth prospects, increasing demand for shares and driving stock price appreciation (Bahantwelu et al., 2025; Dhana & Yudantara, 2025).

H_3: Profitability has a positive effect on stock prices.

High leverage signals elevated financial risk, particularly default risk and cash flow instability. In signaling theory, excessive debt use generates negative market perceptions, reducing investor interest and depressing stock prices (Larantukan & Auliyamartha, 2025; Novietta et al., 2022).

H_4: Leverage has a negative effect on stock prices.

CSR disclosure complements governance signals from independent commissioners. Companies with both strong oversight mechanisms and robust CSR commitments are perceived as credible and transparent, amplifying positive market responses (Chaniago et al., 2022).

H_5: CSR strengthens the positive effect of the independent board of commissioners on stock prices.

The combination of sound short-term financial health and adequate CSR disclosure provides dual positive signals to investors, increasing confidence and driving stock price appreciation (Dhana & Yudantara, 2025; Salsabila & Marsono, 2022).

H_6: CSR strengthens the positive effect of liquidity on stock prices.

Companies that achieve high profitability while disclosing CSR broadly are perceived as having stronger sustainability orientation, amplifying the positive market signal of earnings performance (Bahantwelu et al., 2025; Novietta et al., 2022).

H_7: CSR strengthens the positive effect of profitability on stock prices.

CSR serves as a reputational mechanism that reduces the intensity of negative investor perceptions toward high leverage, mitigating downward pressure on stock prices (Novietta et al., 2022).

H_8: CSR weakens the negative effect of leverage on stock prices.

3. Research Method

This quantitative study employs secondary data from annual reports of energy sector companies listed on the IDX for 2021–2024. Purposive sampling yielded 39 companies meeting the following criteria: (1) continuously listed on the IDX during 2021–2024; (2) published accessible annual reports; (3) possessed complete data for all variables; and (4) did not report a net loss. The total number of observations is 156 (39 companies × 4 years).

Panel data regression using EViews 13 is the primary analysis method. The Fixed Effect Model (FEM) was selected based on Chow test ($\chi^2 = 324.230$, $p = 0.000$) and Hausman test ($\chi^2 = 16.259$, $p = 0.003$) results. Moderated Regression Analysis (MRA) tests the moderating effects of CSR on the relationships between independent variables and stock price. Variables are measured as follows:

1) Stock price: closing price at year-end;
2) Independent board of commissioners: number of independent commissioners;
3) Liquidity: Current Ratio (CR = Current Assets / Current Liabilities);
4) Profitability: Return on Equity (ROE = Net Income / Total Equity);
5) Leverage: Debt to Assets Ratio (DAR = Total Debt / Total Assets);
6) CSR: Corporate Social Responsibility Disclosure Index (CSRI = Disclosed CSR Items / Total CSR Items based on GRI guidelines).

4. Result and Discussion

Descriptive Statistics

Table 1. Descriptive statistics

Variable	Mean	Std. dev.	Min	Max
Stock Price (Y)	3.394	0.046	39.300	6.634
Ind. Board of Comm. (X_1)	0.727	0.153	4.145	0.749
Liquidity (X_2)	2.275	0.203	12.982	2.118
Profitability (X_3)	0.263	0.005	1.783	0.269
Leverage (X_4)	0.585	0.017	22.402	1.814
CSR (Z)	0.378	0.136	0.982	0.257

Source(s): Authors' own creation (data processed with EViews 13, 2026)

The standard deviation of stock price (6.634) exceeds its mean (3.394), indicating wide dispersion across companies. Profitability (mean: 0.263) and leverage (mean: 0.585) display relatively low averages, while high standard deviations reflect substantial inter-firm variation. CSR disclosure (mean: 0.378) indicates that most sample companies are in the low-to-moderate disclosure range.

Hypothesis Testing Results

Table 2. Hypothesis Testing Results (FEM and MRA)

Variable	FEM Coeff	FEM Sig	MRA Coeff	MRA Sig
Intercept	0.388	0.143	-0.349	0.533

Variable	FEM Coeff	FEM Sig	MRA Coeff	MRA Sig
Ind. Board of Comm. (X_1)	0.109	0.397	0.464	0.127
Liquidity (X_2)	-0.172	0.146	-0.558	0.006
Profitability (X_3)	0.191	0.002	0.277	0.011
Leverage (X_4)	0.073	0.427	-0.174	0.315
CSR (Z)	-	-	1.298	0.240
$X_1 \times$ CSR	-	-	-0.399	0.335
$X_2 \times$ CSR	-	-	1.177	0.032
$X_3 \times$ CSR	-	-	-0.199	0.412
$X_4 \times$ CSR	-	-	0.890	0.096
R-squared	0.923		0.928	
Adj. R-squared	0.894		0.897	
F-statistic (Sig.)	32.316 (0.000)		29.946 (0.000)	

Source(s): Authors' own creation (EViews 13, 2026)

Discussion

The independent board of commissioners does not significantly affect stock prices (coeff. = 0.109, p = 0.397). This finding contradicts signaling theory expectations. The mean value of 0.727 with a standard deviation of 0.749 reveals high variability in the proportion of independent commissioners across sample companies. This suggests that independent commissioners' presence is largely regulatory compliance-driven rather than substantively effective. Consistent with Chaniago et al. (2022), when oversight function is only formal and not backed by adequate domain competence, it fails to transmit credible governance signals to the market.

H_1: The Influence of the Independent Board of Commissioners on Stock Prices (Rejected)

Liquidity does not significantly affect stock prices (coeff. = -0.172, p = 0.146). The mean liquidity of 2.275 is relatively low with a very large standard deviation (2.118), indicating extreme heterogeneity that makes liquidity signals unreliable for investor evaluation. Energy sector investors prioritize long-term profitability and commodity price sensitivity over short-term financial flexibility, consistent with Bahantwelu et al. (2025) and Irawan & Arif (2024).

H_2: The Influence of the Liquidity on Stock Prices (Rejected)

Profitability positively and significantly affects stock prices (coeff. = 0.191, p = 0.002), supporting signaling theory. In the context of normalized global commodity prices since 2023 compressing sector-wide margins, companies that maintain relatively superior profitability signal stronger competitive advantage and operational efficiency, attracting investor premium. This finding aligns with Bahantwelu et al.(2025), Dhana & Yudantara (2025), and Irawan & Arif (2024).

H_3: The Influence of the Profitability on Stock Price (Accepted)

Leverage does not significantly affect stock prices (coeff. = 0.073, p = 0.427). The mean DAR of 0.585 is relatively low, with an extreme standard deviation of 1.814, suggesting that most companies maintain manageable debt levels. Energy sector investors accept leverage as inherent to the capital-intensive business model and focus more on earnings than debt structure. This aligns with Irawan & Arif (2024) and Prabowo et al. (2020)(2020).

H_4: The Influence of the Leverage on Stock Price (Rejected)

The interaction DKI × CSR is not significant (coeff. = -0.399, p = 0.335), indicating CSR does not strengthen the governance signal from independent commissioners. When commissioner oversight itself lacks substantive effectiveness particularly if commissioners lack relevant educational backgrounds in finance or energy CSR disclosure cannot substitute for or amplify credible governance signals. Consistent with Minsi et al. (2024).

H_5: CSR Moderates the Influence of the Independen Commissioners on Stock Price (Rejected)

The interaction Liquidity × CSR is positive and significant (coeff. = 1.177, p = 0.032), confirming that CSR strengthens the liquidity–stock price relationship. Liquidity alone fails to influence stock prices due to its heterogeneity, but when combined with adequate CSR disclosure, it forms a dual positive signal. Investors perceive companies with sound liquidity and strong CSR commitment as lower-risk and sustainability-oriented, driving positive stock price responses. This finding is consistent with Dhana & Yudantara (2025) and Salsabila & Marsono (2022).

H_6: CSR Moderates the Influence of the Liquidity on Stock Price (Accepted)

The interaction Profitability × CSR is not significant (coeff. = -0.199, p = 0.412). Since relative profitability already dominates investor evaluation in the energy sector, CSR disclosure does not provide additional informational value. Furthermore, the substantial heterogeneity in CSR quality (mean 0.378, std. dev. 0.257) suggests that CSR is perceived as quantitative reporting rather than substantive implementation, rendering it insufficient to amplify the already-strong profitability signal. Consistent with Prabowo et al. (2020).

H_7: CSR Moderates the Influence of the Profitability on Stock Price (Rejected)

The interaction Leverage × CSR is not significant (coeff. = 0.890, p = 0.096). Since leverage itself does not significantly affect stock pricesprimarily because most sample companies maintain low leverage there is no material negative signal for CSR to mitigate. The energy sector's tolerance for capital-intensive debt structures means leverage risk is not perceived as threatening, making CSR's reputational moderating role redundant in this context. Consistent with Prabowo et al. (2020).

H_8: CSR Moderates the Influence of the Leverage on Stock Price (Rejected)

5. Conclusion

This study empirically examines factors affecting stock prices of energy sector companies listed on the IDX during 2021–2024. Key findings: (1) Profitability is the only variable with a significant positive effect on stock prices, confirming signaling theory in the energy context. (2) The independent board of commissioners, liquidity, and leverage do not directly affect stock prices. (3) CSR significantly moderates and strengthens only the liquidity stock price relationship; it fails to moderate the other three relationships.

These results suggest that investors in the energy sector prioritize relative earnings performance above other fundamental indicators. CSR's moderating role is conditional and sector-specific it adds informational value primarily when paired with liquidity signals in high-regulatory-pressure industries. Limitations include the focus on a single sector and the inability to generalize to other industries. Future research should extend the study to other sectors, incorporate additional variables (firm size, inflation, interest rates), extend the time period, and explore alternative moderating variables such as institutional ownership and audit quality.

Acknowledgement

The authors express sincere gratitude to the thesis supervisor, Bapak Mohammad Ridwan, S.E., M.Ak.,Ak., and Accounting Program Study Universitas Muhammadiyah Semarang for institutional support in conducting this research.

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