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Determinants of Coal Company Stock Prices: The Value Relevance of Earnings Per Share Accounting Information and Global Coal Proces Using The Fixed Effect Model Approach

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ABSTRACT

Stock price is an important indicator for assessing how the market responds to information about a company's condition and prospects. From an accounting perspective, information presented in financial statements plays an important role in helping investors evaluate company performance and make investment decisions. One accounting information item widely used in company valuation is Earnings Per Share (EPS), as this indicator shows the amount of profit available to each ordinary share. This study aims to analyze the effect of EPS as accounting information and global coal prices as an external factor on the stock prices of coal companies. The population consists of 5 coal companies over the 2019–2025 period. The study uses panel data and compares the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Based on the estimation results, the FEM is more appropriate than the CEM. EPS and Coal Price show negative relationships with stock prices during the observation period. These results indicate that coal company stock-price responses are not determined solely by increases in earnings per share or changes in coal prices, but also by investors' perceptions of earnings quality and sustainability, future expectations, industry conditions, and market risk.

Keywords: Earnings Per Share, accounting information, value relevance, stock price, coal price, panel data, Fixed Effect Model.

JEL Classification: For papers in the economics field only.

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INTRODUCTION

The capital market is an important mechanism in the economy because it connects parties who require funds with parties who have funds available for investment. Within this mechanism, stock prices not only reflect a company's condition at a particular point in time but also represent investors' expectations regarding the company's ability to generate economic benefits in the future. Therefore, information available to investors plays an important role in stock price formation. From an accounting perspective, financial statements are one of the primary sources of information used by investors to evaluate a company's financial position, performance, cash flows, and prospects. Thus, the relationship between accounting information and stock prices has become an important issue in financial accounting and capital market research.

The relevance of accounting information to investors' decisions can be explained through the perspective of value relevance. Accounting information is considered value relevant when it is capable of explaining or being associated with the market value of a company. One type of accounting information directly related to shareholders' interests is earnings per share or Earnings Per Share (EPS). EPS represents the amount of earnings attributable to each outstanding ordinary share. Therefore, EPS serves as a link between earnings information presented in the income statement and the economic interests of shareholders. The greater a company's ability to generate earnings per share, the more likely investors are to perceive the company as having favorable prospects.

Capital-market accounting literature has long demonstrated the importance of earnings numbers in explaining market behavior. Ball and Brown (1968) found a relationship between accounting earnings information and stock prices. Easton and Harris (1991) also showed that earnings information is related to stock returns. Subsequently, Ohlson (2001) developed a model explaining the relationship between accounting information, particularly earnings and book value, and the market value of a company. This development in research shows that accounting numbers serve not only as a management accountability mechanism but also as an information source for investors in the valuation process.

In the context of coal companies, the relationship between accounting information and stock prices becomes particularly interesting because these companies operate in an industry that is strongly influenced by commodity prices. Global coal prices can affect revenue, profit margins, cash flows, production costs, and the prospects of mining companies. Theoretically, an increase in coal prices can increase the potential revenue of coal producers. However, changes in commodity prices do not necessarily produce the same changes in earnings across companies. Cost structure, production volume, coal quality, sales contracts, domestic obligations, transportation costs, interest expense, taxes, and corporate strategy can cause commodity-price effects to differ across companies.

This condition raises an important question from an accounting perspective. Do investors respond more strongly to external information in the form of global coal prices, or do they instead pay greater attention to accounting information that reflects the actual results of company activities? This question is important because commodity prices constitute external economic information, whereas EPS is an accounting measurement of company performance. In other words, coal prices can be viewed as information about the company's economic environment, while EPS provides information about how those conditions are ultimately realized in the company's financial performance.

Research on coal prices and mining-company stocks has also produced results that are not fully consistent. Some studies find that coal prices affect stock returns of mining companies, whereas other studies find that coal prices do not have a significant effect. Research on energy companies in Indonesia also indicates that coal prices may have no effect on stock returns after other fundamental and macroeconomic variables are considered. These differences in findings provide an opportunity to re-examine the relationship between coal prices and stock prices using an approach that incorporates company accounting information.

This study aims to analyze the effect of EPS and global coal prices on the stock prices of coal companies using panel data. The contribution of the study is directed primarily toward accounting by positioning EPS as a representation of accounting information whose relevance to the market value of companies is examined. The study also seeks to explain why external information in the form of global coal prices may not have a direct effect on stock prices when such conditions are not reflected in accounting performance. Thus, the study not only examines statistical relationships but also provides an accounting interpretation of how investors process information about company performance.

LITERATURE REVIEW

Value Relevance of Accounting Information Theory

The main theory used in this study is the Value Relevance of Accounting Information. The value-relevance perspective explains that accounting numbers have information value when they can help explain the market value of a company and are used by investors in the decision-making process.

Several supporting studies have examined value relevance. Hadinata, S. (2023) examined the value relevance of earnings and book value to the stock prices of banking and financial institutions listed on the IDX. The results showed that earnings and book value were statistically significantly related to stock prices. The study used panel data from 31 banks and 36 financial institutions. Similarly, Setiawan, Y. C., & Mettan, S. V. (2023) emphasized that information in financial statements is used by investors as a basis for decision-making and examined whether audit quality affects the value relevance of accounting information using 1,480 observations of companies listed on the IDX. The results showed that auditor size increases the value relevance of earnings but decreases the value relevance of book value. Migliavacca (2024) analyzed the need for information to be considered value relevant when used by financial markets in equity valuation and reflected in market value. The study used 3,025 non-financial companies in the euro area.

Conceptually, financial statements provide information about company performance, including through net income reflected in earnings per share. This accounting information can be used by investors to evaluate performance and form expectations or signals regarding the company's prospects, which may be reflected in changes in stock prices. This relationship indicates that EPS is one form of summarized accounting information that investors can use to evaluate company performance.

Signaling Theory

Signaling Theory is used as a supporting theory. Management has more complete information about the company's internal condition than investors. Therefore, published financial information can serve as a signal about the company's condition. An increase in EPS may be perceived as a positive signal because it indicates an improvement in the

company's ability to generate earnings for shareholders. Conversely, a decline in EPS may be a negative signal regarding the company's ability to generate earnings.

An increase in EPS can provide investors with a positive signal about company performance because a higher EPS indicates a larger amount of earnings available for each share. This signal can increase investors' expectations regarding the company's prospects, which may subsequently encourage greater demand for the shares and potentially increase the stock price. However, such a signal must be supported by the quality and credibility of accounting information. Investors do not consider only the magnitude of EPS; they also consider earnings sustainability, earnings quality, cash flows, capital structure, and other fundamental factors.

EPS as Accounting Information

Earnings Per Share is one performance measure that indicates the earnings available for each ordinary share.

In general:

EPS = (Net Income – Preferred Stock Dividends) / Weighted Average Ordinary Shares Outstanding

EPS has several important functions in accounting and investment analysis:

1. Indicates the company's ability to generate earnings for shareholders.
2. Links net income to the number of shares outstanding.
3. Helps investors compare company performance.
4. Serves as an important component in Price-to-Earnings Ratio analysis.
5. Provides information for assessing dividend and capital gain potential.
6. Provides an indicator of company profitability from the shareholders' perspective.

In this study, EPS is viewed not only as a financial ratio but also as accounting information with potential value relevance.

Stock Price

Stock price is the market price formed through the interaction of supply and demand. The price is influenced by information about company performance, earnings expectations, risk, economic conditions, investor sentiment, government policies, and capital-market conditions. From an accounting perspective, stock price can be used as an external measure to assess whether a company's financial information is related to market decisions. If EPS has a significant effect on stock price, this provides empirical evidence that earnings-per-share information is relevant to market valuation.

Global Coal Price

Global coal prices are an external factor reflecting conditions in the commodity market. For coal mining companies, commodity prices can theoretically affect revenues and profitability, as the selling price of coal is important factor influencing the company’s revenue generation. When coal price increase, companies may have greater opportunities to generate higher revenue and profits, which may subsequently affect their stock price.

However, this relationship is not necessarily direct. Changes in coal prices may interact with production costs, production volumes, coal quality, sales contracts, transportation costs, exchange rates, taxes, government policies, and company cost structures. Therefore, coal prices may affect stock prices indirectly through accounting performance.

RESEARCH GAP AND NOVELTY

Based on previous studies, some value-relevance research focuses on earnings, book value, and financial-statement information in general. Research that specifically combines EPS as accounting information with global coal prices as external information

for coal companies remains relatively limited. Second, studies concerning coal prices and mining-company stocks show inconsistent results. Some studies find a positive effect, whereas others find no significant effect. These differences indicate that commodity prices are not necessarily direct determinants of stock prices. Third, studies on coal prices often use financial or capital-market approaches, while the relationship between commodity prices and companies' actual accounting performance has not always been the main focus.

This study uses panel data to account for heterogeneity across companies. Coal companies do not have identical characteristics in terms of capital structure, production capacity, reserve quality, sales contracts, cost efficiency, and business strategy. This study contributes to accounting research by positioning EPS as accounting information with value relevance, rather than merely as a financial-ratio variable.

Research Novelty

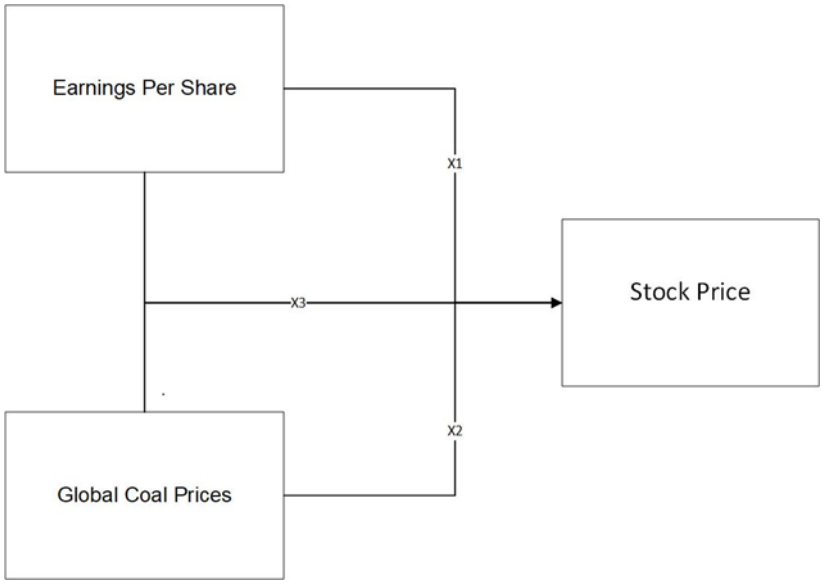
The novelty of this study integrates the accounting value relevance perspective with the external factor of global coal prices to explain coal company stock prices through a panel data approach using the Random Effect Model. This study develops a broader perspective on how accounting information and external economic conditions may jointly explain stock price formation in coal mining companies.

However, the valuation of coal mining companies may not depend solely on firm-specific accounting information, as commodity-based companies, their financial performance is also exposed to changes in external market conditions, particular global coal price. Changes in coal prices may affect the company’s revenue and profitability and consequently, alter economic information available to investors.

Thus, this study emphasizes that external economic conditions do not necessarily constitute the most relevant information for investors when such conditions have not yet been reflected in the company's accounting performance.

CONCEPTUAL FRAMEWORK

The conceptual framework of the study is as follows:



Research Hypotheses

H_1: EPS has a positive effect on the stock prices of coal companies.

This hypothesis is based on value relevance theory. EPS is accounting information representing earnings available for each share. An increase in EPS indicates an improvement in the company's ability to generate earnings for shareholders. This information is expected to improve investors' perceptions of the company's prospects, thereby increasing stock prices.

H_2: Global coal prices have a positive effect on the stock prices of coal companies. This hypothesis is based on the characteristics of the mining industry. An increase in coal prices can theoretically increase the revenues and profitability of coal companies, thereby increasing investor expectations and stock prices.

H_3: EPS and global coal prices simultaneously affect the stock prices of coal companies.

RESEARCH METHOD

Research Type

This study employs a quantitative approach with an explanatory research design. This approach is used to examine the relationship between EPS, global coal prices, and stock prices.

Population and Sample

The population consists of coal subsector companies listed on the Indonesia Stock Exchange.

The sample criteria are:

1. Coal companies listed on the IDX.
2. Companies that publish financial statements during the research period.
3. Companies with consistently available EPS data.
4. Companies with available stock price data during the research period.
5. Companies meeting the sample criteria based on purposive sampling.

The study uses five companies: PTBA, BSSR, ITMG, BYAN, and DSSA. The research period is 2019–2025, with a total of 35 observations.

Data Type and Sources

The study uses secondary data consisting of:

a. Company financial statement
b. EPS;
c. Stockprices (close price) ;and
d. Global coal prices.

The data sources may include company annual reports, the Indonesia Stock Exchange, capital market databases, and commodity price sources used by the researchers.

Operational Definitions Of Variables

Table 1. Variables and Measurements

Variable	Symbol	Definition	Measurement
Stock Price	Y	Market price of the company's shares	Closing stock price
EarningsPer Share	EPS	Earnings available per share	Net income/preferred dividends divided by ordinary shares
Coal Price	CP	Global market price of coal	Global coal price

REGRESSION MODEL

The basic model is:

$$SP_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 CP_t + \varepsilon_{it}$$

Where:
SP = Stock price
EPS = Earnings Per Share
CP = Global coal price
i = Company
t = Time period
α = Constant
β_1, β_2 = Regression coefficients
ε = Error term

PANEL DATA MODEL SELECTION

1. Common Effect Model (CEM)

The Common Effect Model (CEM) assumes that all companies or individuals in the panel data have the same characteristics. This model does not distinguish between company-specific or time-specific effects, so estimation is performed using ordinary OLS regression by pooling all observations.

2. Fixed Effect Model (FEM)

The Fixed Effect Model (FEM) assumes that each company has specific characteristics that differ across companies and may affect the dependent variable. Differences across companies are controlled through different intercepts, while the coefficients of the independent variables are assumed to be the same.

3. Random Effect Model (REM)

The Random Effect Model (REM) assumes that differences in characteristics across companies are random individual effects and form part of the error component. This model is used when individual company effects are assumed to be uncorrelated with the independent variables.

Model Selection

Panel data regression model selection is conducted to determine the most appropriate estimation model, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM). The tests employed are the Chow test, Hausman test, and Lagrange Multiplier (LM) test.

1. Chow Test

The Chow test is used to determine whether the Common Effect Model (CEM) or Fixed Effect Model (FEM) is more appropriate. If the Cross-section F probability is < 0.05, the CEM is rejected and the FEM is selected. Conversely, if the probability is > 0.05, the CEM is considered more appropriate.

2. Hausman Test

The Hausman test is used to choose between the Fixed Effect Model (FEM) and Random Effect Model (REM). If the probability value is < 0.05, the FEM is selected because there is a correlation between individual effects and the independent variables. If the probability is > 0.05, the REM is considered more appropriate.

3. Lagrange Multiplier (LM) Test

The Lagrange Multiplier test is used to determine whether the Random Effect Model (REM) is more appropriate than the Common Effect Model (CEM). If the Breusch-Pagan probability is < 0.05, the CEM is rejected and the REM is selected. Conversely, if the probability is > 0.05, the CEM is used.

RESULTS

Table 2. Common Effect Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	14.82587	2.720687	5.449310	0.0000
LNEPS	-0.669309	0.304095	-2.200990	0.0351
LNPRICE	-0.454575	0.246881	-1.841268	0.0749

R-squared	0.229841
Adjusted R-squared	0.181706

Under CEM, EPS has a negative coefficient of -0.669309 and is significant with a probability of 0.0035. Coal Price has a negative coefficient of -0.454575 but is not significant with a probability of 0.0749.
The Adjusted R-squared of 0.181706 indicates that approximately 18.17 percent of the variation in stock prices can be explained by the variables in the CEM.

Table 3. Fixed Effect Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	25.18731	2.591667	9.718576	0.0000
LNEPS	-1.487221	0.382201	-3.891200	0.0006
LNPRICE	-1.036231	0.386333	-2.682223	0.0121

R-squared	0.700232
Adjusted R-squared	0.635996

Under FEM, EPS continues to show a negative and significant relationship, with a coefficient of -1.487221 and a probability of 0.0006. Coal Price has a negative coefficient of -1.036231 and is significant with a probability of 0.0121. The FEM Adjusted R-squared of 0.635996 indicates that the model explains approximately 63.59 percent of the variation in stock prices.

Table 4. Random Effect Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	20.89726	2.311179	9.041818	0.0000
LNEPS	-1.189003	0.281927	-4.217415	0.0002
LNPRICE	-0.760894	0.255234	-2.981163	0.0055
Weighted Statistics				
R-squared	0.482969			
Adjusted R-squared	0.450655			
Unweighted Statistics				
R-squared	0.105863			
Sum squared resid	210.2536			

The REM results show that EPS has a coefficient of -1.189003 with a probability of 0.0002. Because the probability is less than 0.05, EPS has a negative and significant relationship with stock prices.
Coal Price has a coefficient of -0.760894 with a probability of 0.0055. Because the probability is less than 0.05, Coal Price has a negative and significant relationship with stock prices.

COMPARISON OF CEM, FEM, AND REM RESULTS

Table 5. Model Estimation Comparison

Variable	CEM Coef.	CEM Prob.	FEM Coef.	FEM Prob.	REM Coef.	REM Prob.
EPS	-0,669309	0,0351	-1,487221	0,0006	-1,189003	0,0002
Coal Price	-0,454575	0,0749	-1.036231	0,0121	-0,760894	0,0055
Adj. R^2	0,181706		0,635996		0,450655	
F-statistic	4,774939	0,015321	10,90091	0,000003	14,94593	0,000026

Based on the panel-data estimation results, coefficient and probability values were obtained for EPS and Coal Price under three approaches: the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Overall, both independent variables show negative coefficients for coal-company stock prices across the three models, although their levels of statistical significance differ.

Under the Common Effect Model (CEM), EPS has a coefficient of -0.669309 with a probability of 0.0351. Because the probability is less than 0.05, EPS has a negative and significant relationship with stock prices at the 5% significance level. This means that a 1% increase in EPS is statistically associated with an approximately 0.669% decrease in stock price, holding other variables constant. Meanwhile, Coal Price has a coefficient of -0.454575 with a probability of 0.0749. Because the probability is greater than 0.05, Coal Price has a negative but statistically insignificant relationship with stock prices at the 5% significance level.

Under the Fixed Effect Model (FEM), the relationship between EPS and stock prices is stronger in absolute magnitude. EPS has a coefficient of -1.487221 with a probability of 0.0006. This result indicates that EPS has a negative and significant relationship with stock prices. Meanwhile, Coal Price has a coefficient of -1.036231 with a probability of 0.0121, indicating that Coal Price also has a negative and significant relationship with stock prices at the 5% level. Thus, after accounting for time-invariant characteristics specific to each company, both variables show a statistically significant negative relationship with stock prices.

Under the Random Effect Model (REM), EPS has a coefficient of -1.189003 with a probability of 0.0002. This indicates that EPS has a negative and significant relationship with stock prices. Furthermore, Coal Price has a coefficient of -0.760894 with a probability of 0.0055, indicating that Coal Price also has a negative and significant relationship with stock prices. Thus, the REM results show that both independent variables are statistically significantly and negatively related to coal-company stock prices.

Coefficient of Determination and Simultaneous Test

In terms of the model's ability to explain variation in stock prices, the Adjusted R-squared under CEM is 0.181706, meaning that approximately 18.17% of stock-price variation can be explained by EPS and Coal Price in the model, while the remainder is explained by factors outside the model.

Under FEM, the Adjusted R-squared is 0.635996, meaning that approximately 63.60% of stock-price variation can be explained by EPS and Coal Price after accounting for company-specific effects. Meanwhile, REM produces an Adjusted R-squared of 0.450655, meaning that approximately 45.07% of stock-price variation can be explained by the independent variables in the model.

The F-statistic results show that all three models are jointly significant. Under CEM, the F-statistic is 4.774939 with a probability of 0.015321. Under FEM, the F-statistic is

10.90091 with a probability of 0.000003, while under REM the F-statistic is 14.94593 with a probability of 0.000026. All probability values are below 0.05, indicating that EPS and Coal Price jointly have a statistically significant relationship with coal-company stock prices.

Comparison of CEM, REM, and FEM Results

Model	EPS	Coal Price	Adj. R^2	Conclusion	Simultan	Remarks
CEM	Negative	Significant	Negative	Not Significant	18,17%	Significant
FEM	Negative	Significant	Negative	Significant	63,60%	Significant
REM	Negative	Significant	Negative	Significant	45,07%	Significant

EPS consistently has a negative and significant relationship with stock prices under CEM, FEM, and REM. Coal Price also has a negative coefficient in all models, but its significance differs: it is not significant under CEM but is significant under FEM and REM.

The Hausman test produces a Chi-square value of 14.77 with a probability of 0.0006; therefore, REM is rejected and FEM is selected as the preferred model. Accordingly, the model used is FEM: EPS = -1.487221 (p = 0.0006) and Coal Price = -1.036231 (p = 0.0121).

CHOW TEST

Table 6. Chow Test Results:

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.984261	(4,28)	0.0000
Cross-section Chi-square	33.025538	4	0.0000

The Chow test results show a Cross-section F value of 10.984261 with a probability of 0.0000 and a Cross-section Chi-square value of 33.025538 with a probability of 0.0000. Because the probability value is < 0.05, H_0 is rejected. Thus, there are significant individual effects across companies, so FEM is more appropriate than CEM, followed by the Hausman test to determine the choice between FEM and REM.

HAUSMAN TEST

Table 7. Hausman Test Results:

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.776138	2	0.0006

Based on the Hausman test, the Chi-square value is 14.77 with a probability of 0.0006. Because 0.0006 < 0.05, H_0 is rejected and H_1 is accepted. This means that there is a significant difference between the Fixed Effect Model (FEM) and Random Effect Model (REM) estimates.

Therefore, based on the Hausman test, the Fixed Effect Model (FEM) is more appropriate than the Random Effect Model (REM) in this study. The result indicates that individual effects for each cross-sectional unit are correlated with the independent variables in the model, so the FEM approach is more appropriate for estimating the research parameters.

LAGRANGE MULTIPLIER TEST

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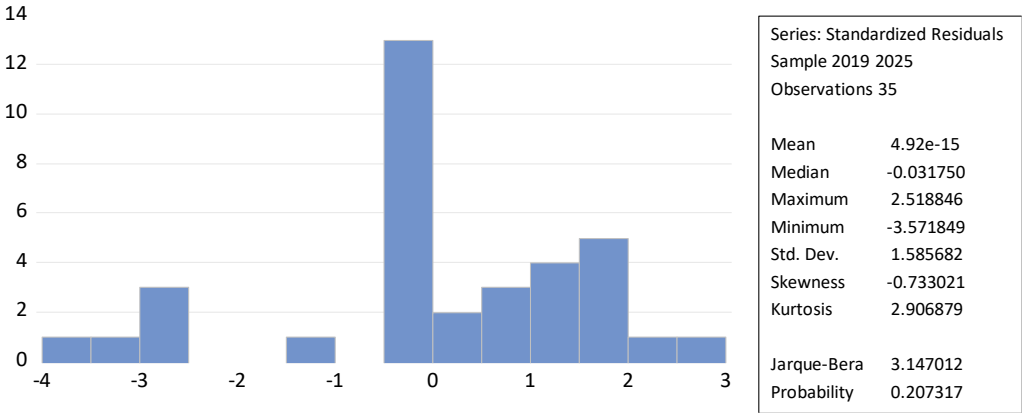
Table 8. Lagrange Multiplier Test Results:

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	7.428830 (0.0064)	5.364300 (0.0206)	12.79313 (0.0003)

The Lagrange Multiplier (LM) test results show a cross-section probability of 0.0064 < 0.05. Therefore, H_0 is rejected, indicating a significant individual (cross-section) effect across companies.

NORMALITY TEST

Table 9. Normality Test Results:



The probability value of 0.207317 > 0.05 indicates that the residuals do not show a significant deviation from a normal distribution. Therefore, the residual normality assumption can be accepted.

MULTICOLLINEARITY TEST

Table 10. Multicollinearity Test Results:

	EPS	Coal
EPS	1,000000	-0,385027
Coal	-0,385027	1,000000

The multicollinearity test shows that the correlation between EPS and Coal Price is -0.385027. The absolute correlation value is 0.385027, which is below the 0.80 threshold. Therefore, it can be concluded that there is no serious multicollinearity problem among the independent variables in the research model.

DISCUSSION

Previous studies have reported different findings regarding the effect of coal prices on stocks. Some studies find a positive effect, while others find no significant effect. These differences may be caused by: 1. Differences in the research period. Periods of high and low coal prices may generate different investor responses. 2. Differences across companies. Coal companies differ in efficiency, reserves, contracts, coal quality, and cost structures. 3. Differences in the dependent variable. Stock price differs from stock

return. 4. Differences in methodology. Cross-sectional, time-series, and panel regressions can produce different estimates. 5. Macroeconomic factors. Exchange rates, interest rates, inflation, the composite stock price index, and global economic conditions can affect stocks. 6. Policy factors. Government policies, including energy and mining-sector policies, can affect the relationship between commodity prices and stocks.

The Role of Accounting Information in the Coal Industry

The findings imply that accounting information has an important position in commodity-based industries. Investors can observe coal prices from the commodity market, but those prices do not explain production costs, company margins, net income, company debt, operating cash flows, the number of shares outstanding, or earnings per share. All of this information can be obtained from financial statements. Therefore, EPS is important because it summarizes part of company performance in an indicator directly related to shareholders' interests.

From an accounting perspective, this study produces three main findings. First, earnings information has relevance to the market, as indicated by the significance of EPS. Second, external information is not always a direct determinant of company value. Coal Price is not significant. Third, actual company performance is more informative than merely the condition of the economic environment. Commodity prices have stronger meaning for investors when they have been translated into financial performance. Thus, the study argues that accounting numbers still play a role in explaining a company's market price.

Based on the estimation results, the following can be stated:

1. LNEPS and Stock Price

LNEPS coefficient = -1.487221 with probability = 0.0006 < 0.05.
This means that EPS has a negative and significant relationship with the stock prices of coal companies. Because the model is in log-log form, a 1% increase in EPS is statistically associated with an approximately 1.49% decrease in stock price, holding other variables constant.
The t-statistic value = -3.891200 further supports that the relationship is statistically significant.
Economic interpretation: in the sample and research period, an increase in EPS was accompanied by a decrease in stock prices.

2. LNPRICE and Stock Price

LNPRICE coefficient = -1.036231 with probability = 0.0121 < 0.05.
This means that PRICE has a negative and significant relationship with the stock prices of coal companies. In the log-log model, a 1% increase in PRICE is associated with an approximately 1.04% decrease in stock price, ceteris paribus.
The t-statistic value = -2.682223 indicates that the relationship is statistically significant at the 5% level.

3. Constant

The constant is 25.18731 with a probability of 0.0000, indicating that the constant is statistically significant. Based on the Fixed Effect Model (FEM) estimation, LNEPS has a coefficient of -1.487221 with a probability of 0.0006. This result indicates that EPS has a negative and significant relationship with coal-company stock prices at the 5% significance level. In elasticity terms, a 1% increase in EPS is associated with a 1.487% decrease in stock price, holding other variables constant. Furthermore, LNPRICE has a coefficient of -1.036231 with a probability of 0.0121. This indicates that PRICE has a

negative and significant relationship with stock prices. A 1% increase in PRICE is associated with a 1.036% decrease in stock price, ceteris paribus.

Discussion of LNEPS and LNPRICE Results

The estimation results show that LNEPS has a negative relationship with stock prices. Empirically, the negative coefficient indicates that an increase in EPS in the research model is accompanied by a decrease in stock prices, holding other variables constant. This finding appears different from the theoretical relationship that generally assumes that a higher EPS indicates a greater ability to generate earnings per share and therefore a more positive investor perception of the company.

From the perspective of Value Relevance Theory, EPS information is fundamentally one form of accounting information that investors can use to assess a company. However, the relevance of accounting information does not necessarily mean that a change in EPS will produce a positive change in stock prices. Investors may consider other factors simultaneously, such as expectations of future earnings, coal-industry conditions, commodity-price volatility, company risk, and the sustainability of earnings. Thus, the negative coefficient may indicate that, during the observation period, EPS did not stand alone in determining stock prices.

This finding can also be explained through Signaling Theory. A high nominal EPS may not necessarily be perceived as a positive signal if the increase in earnings is considered temporary or derived from unsustainable industry conditions. In coal companies, for example, changes in earnings can be strongly affected by fluctuations in global coal prices. If investors expect the increase in earnings to be temporary, an increase in EPS does not necessarily lead to increased demand for the stock. Therefore, earnings quality and sustainability can be important considerations when interpreting EPS as a signal.

This relationship does not necessarily contradict the theory. Directly, an increase in coal prices can theoretically increase the revenue and profitability of mining companies. However, high commodity prices can also increase uncertainty about earnings sustainability, affect production costs, increase market expectations regarding company performance, and be accompanied by changes in government policy or global conditions. Therefore, stock-price responses to coal prices can differ from the simple relationship expected theoretically.

From the Value Relevance perspective, the negative LNPRICE result indicates that investors may not respond only to the current level of coal prices but may also consider how changes in commodity prices affect future cash-flow and earnings prospects. In other words, coal prices constitute external information that needs to be interpreted together with company fundamentals, including EPS.

Thus, the negative coefficients on LNEPS and LNPRICE should not immediately be interpreted as meaning that increases in EPS or coal prices are 'harmful' to companies. The coefficients indicate the direction of the statistical relationship in the model and research period, while their economic interpretation needs to consider the characteristics of coal companies and market conditions during the observation period. This result further emphasizes the importance of using Value Relevance Theory and Signaling Theory together to explain how investors interpret accounting and market information when determining stock prices.

Implications Of The Findings

1. Management. Coal-company management needs to pay attention to the quality of earnings performance and the presentation of financial information. An increase in coal prices does not automatically improve investor perceptions if it does not generate higher earnings. Therefore, management needs to focus on cost efficiency, productivity, production-cost control, asset optimization, debt management, earnings quality, cash flows, and financial-statement transparency.
2. Investors. Investors should not use coal prices as the sole basis for investment decisions. Investors need to analyze EPS, net income, ROA, operating cash flow, book value, and other indicators. The findings indicate that EPS is relevant information in valuing coal-company stocks.
3. Financial Reporting. The findings reinforce the importance of financial-statement quality as a source of market information. Because EPS is significantly related to stock prices, information about earnings and the number of shares outstanding has economic consequences for investors. Companies should ensure that earnings information is presented in a relevant, reliable, timely, comparable, and transparent manner.
4. Financial Accounting. This study contributes to the financial-accounting literature by showing that earnings-based information still has relevance to market value. This finding is important in an economic environment increasingly influenced by non-financial information, commodity data, market sentiment, and macroeconomic information.

Although investors have access to real-time coal-price information, the results indicate that this information is not statistically related to stock prices in the research model. This suggests that accounting information continues to serve an important function by translating external economic conditions into company performance that can be evaluated by investors.

CONCLUSION

Based on the FEM estimation, it can be concluded that LNEPS has a negative and significant relationship with coal-company stock prices, with a coefficient of -1.487221 and a probability of 0.0006. In the log-log model, a 1% increase in EPS is associated with an approximately 1.49% decrease in stock price. Meanwhile, LNPRICE also has a negative and significant relationship, with a coefficient of -1.036231 and a probability of 0.0121, meaning that a 1% increase in coal prices is associated with an approximately 1.04% decrease in stock price.

Thus, both variables show negative relationships with stock prices during the observation period. The results indicate that stock-price responses of coal companies are not determined solely by increases in earnings per share or changes in coal prices, but also by investors' perceptions of earnings quality and sustainability, future expectations, industry conditions, and market risk. These findings imply that EPS and coal prices remain relevant information in company valuation, but their empirical relationships during the research period do not necessarily follow the positive relationships theoretically expected.

From an accounting perspective, the main finding is that EPS has value relevance to stock prices. Investors appear to pay attention to information reflecting the actual results of company activities. Coal prices as an external factor remain important, but their influence may operate through indirect mechanisms such as revenue, costs, margins, net income, and ultimately EPS.

This study reinforces the value-relevance perspective that accounting information continues to play an important role in explaining market valuation of companies. For coal-company management, increases in commodity prices should be accompanied by improvements in efficiency and earnings performance so that they can be translated into increased value for shareholders.

RESEARCH LIMITATIONS

This study has several limitations. First, the model includes only EPS and coal prices as independent variables, so other factors may also explain stock prices. Second, coal prices are used as a direct external variable, whereas the actual relationship may occur through intervening variables such as revenue, net income, ROA, ROE, and EPS. Third, differences in company characteristics may still cause differences in stock sensitivity to commodity prices. Fourth, the study does not test for possible lag effects. Changes in coal prices in one period may only be reflected in financial statements and stock prices in the following period. Fifth, the study uses stock price as the dependent variable. Future studies may use stock returns or abnormal returns to provide a different capital-market perspective.

SUGGESTIONS FOR FUTURE RESEARCH

Future research can expand the model by including other important variables such as earnings perception, risk, ROA, ROE, book value per share, dividend payout ratio, operating cash flow, firm size, the rupiah exchange rate, and investor sentiment.

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