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The Effect of the Debt to Equity Ratio (DER), Return on Assets (RoA), and Current Ratio (CR) on Firm Value (in the Coal Subsector of Companies Listed on the Indonesia Stock Exchange, 2018–2024)

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ABSTRAK
Penelitian ini bertujuan untuk menganalisis pengaruh ROA, DER, dan CR terhadap PBV di sektor batubara untuk periode 2018-2024. Analisis menggunakan regresi data panel dengan metode CEM. Hasil penelitian menunjukkan bahwa, secara parsial, ROA tidak memiliki pengaruh signifikan terhadap PBV; DER menunjukkan pengaruh negatif dan signifikan terhadap PBV; dan CR tidak menunjukkan pengaruh terhadap PBV. Namun, secara simultan ROA, DER, dan CR ditemukan berpengaruh terhadap PBV. Temuan ini menunjukkan bahwa meskipun tidak semua variabel memiliki pengaruh parsial, kombinasi profitabilitas, leverage, dan likuiditas tetap memainkan peran penting dalam menjelaskan variasi nilai perusahaan. Penelitian ini berkontribusi pada pengetahuan investor dan manajemen dalam mempertimbangkan faktor-faktor fundamental yang memengaruhi nilai pasar suatu perusahaan.

Kata kunci: ROA, DER, CR, PBV

ABSTRACT
This study aims to analyze the effect of ROA, DER, and CR on PBV in the coal sector for the period 2018-2024. The analysis uses panel data regression with the CEM method. The results show that, partially, ROA has no significant effect on PBV; DER shows a negative and significant effect on PBV; and CR shows no effect on PBV. However, simultaneously, ROA, DER, and CR were found to influence PBV. These findings indicate that although not all variables have a partial effect, the combination of profitability, leverage, and liquidity still plays a significant role in explaining variations in firm value. This study contributes to the knowledge of investors and management in considering the fundamental factors that influence a company's market value.

Keywords: ROA, DER, CR, PBV

INTRODUCTION

Enterprise value is a crucial indicator that reflects the fundamental conditions, prospects, and investor confidence in the sustainability of a business entity. In the context of the capital market, enterprise value is often measured using the Price to Book Value (PBV) ratio (Hery, 2018). This ratio contrasts the market price per share with the book value per share, providing an indication of whether a stock is perceived by the market as overvalued or undervalued. A high market perception, as indicated by a high PBV, suggests investor confidence in the company's ability to create long-term value for shareholders (Hery, 2018).

The coal subsector listed on the IDX showed significant fluctuations in company valuations throughout the period from 2018 to 2024. These dynamics are closely tied to various global and domestic factors. The HBA price briefly dropped to approximately $97.65 per ton in the second half of July 2025 and fell again to $98.26 per ton in the first half of December 2025 from its previous level of $102.03 per ton, reflecting volatility throughout the year. In addition, national coal production is projected to fall below 790 million tons in 2025 compared to the realized production of around 836 million tons in 2024, while coal export volumes are also contracting. These declines in prices and pressures on production and export volumes have impacted the revenue and financial performance of coal companies listed on the Indonesia Stock Exchange, which in turn has indirectly affected market valuations, as reflected in the price-to-book-value (PBV) ratios of coal companies (Savitri, 2025).

This study will analyze the impact of three independent variables on company value, namely: ROA, DER, and CR. According to Kasmir (2019), ROA is a financial indicator that assesses the effectiveness of using all assets to generate profits for the company. Increased profitability through ROA is expected to boost investor confidence and ultimately increase firm value (PBV). According to Kasmir (2019), the Debt-to-Equity Ratio is used to measure a company's leverage level by comparing total liabilities including current liabilities to total equity. Effective debt management is assumed to have a positive correlation with firm value.

According to Kasmir (2019), the current ratio is a ratio used to assess a company's capacity to meet short-term obligations or debts that are due immediately when billed in full. However, Weaver and Weston, as cited in Fahmi (2017), also point out that a ratio that is too high may indicate inefficiency issues.

Table 1
Financial Ratios

Emiten	Year	ROA (%)	DER (x)	CR (%)	PBV (x)
Resource Alam Indonesia (KKGI)	2023	13.37	0.44	2.38	0.86
	2024	19.21	0.30	3.24	1.05
Indo Straits Tbk (PTIS)	2023	2.71	0.83	3.03	0.88
	2024	0.37	0.58	3.21	0.83
Indo Tambangraya (ITMG)	2023	22.84	0.22	4.35	1.05
	2024	15.61	0.24	4.48	0.97

Source: KKGI, PTIS, and ITMG websites

Table 1 shows that changes in financial ratios are clearly evident among several coal companies listed on the IDX. For example, Resource Alam Indonesia (KKGI) saw its ROA rise from 13.37% in 2023 to 19.21% in 2024. This increase in profitability demonstrates the firm's ability to generate profits from its assets. However, this increase in ROA was not accompanied by a rise in PBV. KKGI's PBV actually decreased from 0.78 to 0.76, indicating that the market did not fully respond to this improvement in operational performance. This phenomenon contradicts the theories Nurhalizah & Ridwan (2025); Purba & Kosadi (2024); Giffarina et al., (2026); Anggraini & Ridwan (2024); Zaenal et al., (2025), who state that an increase in profitability should be positively responded to by the market and increase the company's value. According to Rismaya & Kasir (2024); Surbakti & Febryanti (2025); Indasyah & Syarif (2024); Febe & Ardianti (2026), ROA may not affect PBV because investors prioritize industry prospects and long-term risks over mere current profitability. In other words, even if returns on assets increase, the market does not always value the company higher if future prospects are deemed less promising.

A different phenomenon is observed at Indo Straits Tbk (PTIS). The company experienced a significant decline in ROA, from 2.71% in 2023 to just 0.37% in 2024, indicating a weakening of the firm's profit-generating ability. In line with this, PTIS's PBV also declined from 0.58 to 0.38. This aligns with the theory that declining profitability tends to reduce a company's value. Although the DER decreased from 0.83 to 0.58, this improvement in capital structure failed to drive an increase in PBV, likely because the decline in operational performance had a more dominant influence on investor decisions. This supports the theories of Sukmayanti & Sembiring (2022); Zaenal et al., (2025); Colline (2022), which state that a low DER reflects a healthier capital structure and more controlled risk, thereby potentially increasing the PBV. However, Indasyah & Syarif (2024); Febe & Ardianti (2026) suggest that the DER may not affect the PBV because investors do not only look at capital structure but also consider business prospects and industry risks. Even if a company's debt decreases or equity increases, the market does not always value the company higher if long term prospects are deemed unattractive or uncertain.

PT Indo Tambangraya showed an increase in its current ratio from 4.35% in 2023 to 4.48% in 2024; this coincided with a decline in its price to book ratio, which fell from 0.97 times in 2023 to 0.91 times in 2024. This does not align with the theory proposed by Weaver and Weston in Fahmi (2017: 61), which states that any extreme value indicates a problem. This means that a firm with a good CR is considered a sound and healthy firm; Nevertheless, if the Current Ratio is too high, it is also considered unfavorable. According to Sukmayanti & Sembiring (2022); Rismaya & Kasir (2024); Colline (2022), good liquidity demonstrates a company's ability to meet its short-term obligations, thereby enhancing investor confidence in the company's financial stability. When the CR is at a healthy level, the market assesses that the company has effective cash management and a lower risk of bankruptcy, so that positive perception is reflected in an increase in value. According to Surbakti & Febryanti (2025); Purba & Kosadi (2024); Indasyah & Syarif (2024), short-term liquidity is not the primary indicator investors consider when assessing stock valuation. Investors focus more on profitability, efficiency, and growth prospects.

Literature Review

Price To Book Value

Enterprise value reflects the manner in which the market evaluates a company's performance and prospects. In this study, firm value is proxied using the PBV ratio. According to Harmono (2017), the PBV ratio reflects a company's performance through its stock price, which is determined by the supply and demand mechanisms in the capital market. In the context of this study, PBV is estimated to be impact by the ROA, DER, and CR. DER reflects firm's capital structure; the appropriate use of debt can enhance corporate value, but excessive borrowing heightens financial risk and erode investor confidence. ROA indicates a firm's profit-generating capability derived from its assets; the higher the profitability, the greater the potential for an improvement in company value. Meanwhile, the CR illustrates a company's ability to fulfill its short-term financial obligations; good liquidity can enhance investors' perception of the compan the way investors perceive the company's security. According to Harmono (2017), PBV is measured as follows:

$$\text{PBV} = \frac{\text{Price Per Share}}{\text{Book Value of Shares}}$$

According to Sugiono (2016), a PBV of 1 or higher indicates that a stock is overvalued, while a PBV of less than 1 indicates that a stock is undervalued.

Return on Asset (RoA)

According to Kasmir (2019), Return on Assets (ROA) often referred to as Return on Investmentis a ratio that measures the return on the total assets used in a company's operations. The higher the ROA value, the more effectively the firm utilizes its assets to earn profits. To calculate ROA, according to Kasmir (2019), the formula is as follows:

$$\text{ROA} = \frac{\text{Net income after taxes}}{\text{Total Assets}} x\ 100\%$$

Research by Nurhalizah & Ridwan (2025); Purba & Kosadi (2024); Giffarina et al., (2026); Anggraini & Ridwan (2024); Zaenal et al., (2025), shows that Return on Assets (RoA) influences Price-to-Book Value (PBV). These findings indicate that profitability is a a fundamental consideration in investment decision-making, suggesting that an increase in a firm's ability to earn profits can drive an increase in its value. Conversely, studies by Rismaya & Kasir (2024); Surbakti & Febryanti (2025); Indasyah & Syarif (2024); Febe & Ardianti (2026) state that ROA does not affect PBV. These results suggest that profitability is not always the primary factor in determining a firm's value, as there may be other variables that more significantly influence market perception.

Debt to Equity Ratio (DER)

According to Kasmir (2019), the Debt-to-Equity Ratio (DER) is used to compare a company's total debt both short term and long term with its total equity. the DER, higher levels of the larger the percentage of debt in th company's capital structure, thereby increasing the financial risk borne by the firm. Conversely, a lower DER indicates that the enterprice relies more on its own capital to finance its operations. As for calculating the Debt to Equity Ratio, according to Kasmir (2019), the formula is as follows:

$$\text{DER} = \frac{Total\ Liabilities}{Total\ Equity}\ x\ 100\%$$

A study by Sukmayanti & Sembiring (2022); Zaenal et al., (2025); Colline (2022) found that the Debt to Equity Ratio (DER) influences the Price-to-Book Value (PBV). These results suggest that capital structure is a fundamental consideration for investors when evaluating a company, meaning that changes in the der ratio can influence stock prices and firm value. Conversely, the study by Indasyah & Syarif (2024); Febe & Ardianti (2026) states that the DER does not affect the PBV. This finding indicates that under certain conditions, investors do not consider the debt level as a primary factor in determining a company's value, but rather consider other aspects such as profitability or growth prospects

Current Ratio

According to Kasmir (2019), the current ratio is a ratio that measures a company's ability to pay all of its short-term liabilities as they become due. To calculate the current ratio, according to Kasmir (2019).

$$Current\ Ratio = \frac{\text{smooth operation}}{\text{current liabilities}}$$

Research by Sukmayanti & Sembiring (2022); Rismaya & Kasir (2024); Colline (2022), shows that the Current Ratio (CR) influences the Price to Book Value (PBV) ratio, indicating that liquidity levels are a key consideration for investors when evaluating companies. Conversely, studies by Surbakti & Febryanti (2025), Purba & Kosadi (2024) and Indasyah & Syarif (2024), state that the CR does not affect the PBV, suggesting that liquidity is not always the primary factor in determining a company's value.

METHOD

This study employs a descriptive quantitative research method and verifiable approaches. The study population comprises all coal firm listed on the IDX during the 2018-2024 period. This current study uses purposive sampling with the following criteria: coal listed firms on the IDX during the 2018-2024 period. They must have complete financial reports containing all research variables and consistently publish annual reports during that period. The research sample consists of annual reports from PT Resource Alam Indonesia, PT. Indo Straits Tbk, and PT. Indo Tambangraya. The data were evaluated using Eviews 12 software with the panel data regression method.

RESULTS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.334042	0.201637	6.616041	0.0000
ROA	0.006238	0.004845	1.287481	0.2152
DER	-0.479568	0.166422	-2.881635	0.0104
CR	-0.044951	0.053418	-0.841493	0.4118

R-squared	0.504067	Mean dependent var	0.999048
Adjusted R-squared	0.416549	S.D. dependent var	0.310418
S.E. of regression	0.237109	Akaike info criterion	0.129052
Sum squared resid	0.955753	Schwarz criterion	0.328008
Log likelihood	2.644957	Hannan-Quinn criter.	0.172230
F-statistic	5.759598	Durbin-Watson stat	1.591679
Prob(F-statistic)	0.006591		

source: processed data

Figure 1
Common Effect Model

The results of the Eviews analysis indicate that the best model is the common effects model. Thus, the best equation is: PBV = 1.334042 + 0.006238*ROA – 0.479568*DER – 0.044951*CR.

The outcomes of the diagnostic tests show that the Jarque-Bera probability value is 1.349985 > 0.5, indicating that the empirical evidence suggests that normally distributed. Furthermore, The data indicate that multicollinearity test the values for DER (-0.496321) and CR (0.242707) are < 0.8, indicating that the empirical evidence suggests free from multicollinearity. The results of the heteroscedasticity test show p-values for ROA (0.9042), DER (0.9751), and CR (0.3930) > 0.05, indicating the data is free from heteroscedasticity. The R-squared value is 0.5041, or 50.41%, suggesting that the fluctuations in PBV for KKG, PTIS, and ITMG are influenced by ROA, DER, and CR. The remaining variance is associated with factors that were not considered in the estimation process

The Effect of RoA on PBV

Based on Figure 1, the computed t-statistic of 1.287481 is below the threshold t-value of 2.1009, and the probability value of 0.2152 is greater than 0.05; accordingly, ROA does not significantly influence PBV. This suggests that the company's profitability level, as reflected by ROA, is not a primary determinant in establishing market value relative to book value. In other words, investors do not use ROA as the primary benchmark in assessing PBV; this is likely because other factors, such as growth prospects, capital structure, or industry conditions, are more dominant in influencing market perceptions. Consistent with the research by Rismaya & Kasir (2024); Surbakti & Febryanti (2025); Indasyah & Syarif (2024); Febe & Ardianti (2026); Return on Assets has no effect on Price to Book Value. The consistency of these results reinforces the argument that the association between a company's profitability and market value is not always linear but is influenced by other more complex external and internal variables.

The Effect of DER on PBV

Based on Figure 1 CEM, the calculated t-value (|-2.881635|) > the critical t-value of 2.1009, and the probability value of 0.0104 < 0.05; therefore, the DER has a negative and significant contribution on PBV. The higher the DER which reflects a higher the firm's leverage relative to its equity more the company's PBV tends to decrease. This condition can be explained by the fact that a capital structure that relies too heavily on debt increases financial risk, causing investors to view the company as less attractive and depressing its the market value in comparison to its book value. Consistent with the research by Sukmayanti & Sembiring (2022); Zaenal et al., (2025); Colline (2022), the Debt-to-Equity Ratio influences the Price to Book Value. The consistency of these results reinforces the understanding the firm's debt level is a critical factor in determining market perceptions of corporate value. Consequently, managing a healthy capital structure plays a vital role for companies to maintain investor confidence and maintain optimal market value.

The Effect of CR on PBV

Based on Figure 1.1, the calculated t-value (|0.841493|) is inferior the table t-value of 2.1009, and the probability value of 0.4118 exceeds 0.05; therefore, CR does not significantly influence PBV. The company's liquidity ratio, as reflected by CR, is not a determining factor in establishing market value relative to book value. Investors do not appear to use the CR as a primary indicator in assessing PBV, as a firm's ability to satisfy its short-term financial commitments does not always reflect growth prospects or the firm's value as assessed by the market. In line with the research by Surbakti & Febryanti (2025); Purba & Kosadi (2024); Indasyah & Syarif (2024); the Current Ratio has no effect on Price to Book Value. Although important operationally, it does not always have direct implications for market valuation; thus, other variables such as profitability, leverage, and progress prospects are more dominant in influencing PBV.

Simultaneous Effect on PBV

Based on Figure 1, the CEM yields computed F-statistic of 5.759598 > the table F-value of 3.20 and a probability value of 0.006591 < 0.05; therefore, ROA, DER, and CR simultaneously influence PBV. This finding indicates that although not all variables have a significant effect individually, collectively the variables are capable of explaining variations in PBV. Theoretically, this suggests that the joint effect of profitability, capital structure, and liquidity provides a more complete overview for investors in assessing market value relative to a company's book value. In other words, the market does not consider just one financial aspect but evaluates the company's overall fundamental conditions. This finding underscores the importance of a holistic approach in financial analysis, where interactions among variables can influence investors' perceptions of a company's value. This study employs a descriptive quantitative research method and verifiable approaches. The study population comprises all coal firm listed

CONCLUSION

This study reveals that: (1) ROA does not have a significant effect on PBV, (2) DER has a significant negative effect on PBV, (3) CR has no effect on PBV, and (4) ROA, DER, and CR simultaneously affect PBV. These findings indicate that although not all variables exert a significant influence individually, their combined effects still contribute to explaining variations in firm value.

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