

Energy Company Stock Performance: What is the role of Leverage, Dividend Payout Ratio, and EVA?

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Abstract.

This study examines the impact of the Debt-to-Equity Ratio (DER), Dividend Payout Ratio (DPR), and Economic Value Added (EVA) on stock returns in oil, gas, and coal subsector companies listed on the Indonesia Stock Exchange for the period from 2020 to 2023. The analytical methods used include classical hypothesis testing, multiple linear regression, and other methods. Based on the research results, the Debt-to-Equity Ratio and Dividend Payout Ratio were shown to have no significant effect on stock returns. The significance values for DER and DPR were 0.292 and 0.568, respectively. This finding indicates that a company's funding structure (leverage) and dividend policy are not primary factors investors consider when making investment decisions in this sector. Conversely, Economic Value Added (EVA) had a significant and positive effect on stock returns, with a significance value of 0.001. This demonstrates that a company's ability to create economic value added is a key indicator that investors take seriously when assessing company performance and making investment decisions. For further research, it is recommended to explore other potential variables, including both internal factors such as profitability and liquidity, as well as external factors such as macroeconomic conditions and commodity prices, to provide a more comprehensive understanding of the determinants of stock returns

Keywords: Economic Value Added, Debt to Equity Ratio, Dividend Payout Ratio, Stock Return.

1. Introduction

Public awareness of the importance of investment has increased significantly. This is evidenced by the increasing number of people from various backgrounds who are starting to engage in investment activities in financial instruments such as stocks, bonds, mutual funds, and others. This increased public awareness of the importance of investing also influences interest in stocks with attractive potential returns. According to Andrinalado & Aprianto (2020), investors need to consider two factors when investing: expected returns and potential risks. Investors can now easily invest through digital applications and platforms that offer online investment services. One medium investors use for investment is the capital market. According to Ayyuna (2021), the capital market is a place where companies issue shares and bonds to raise capital or strengthen capital.

Kusumawardhani & Sapari (2021) stated that investors generally strive to achieve optimal investment returns because they expect high returns with a low risk of loss. However, the greater the expected profit, the greater the risk, and vice versa. Stock returns are the profits or losses earned by investors from their investment activities over a specific period of time. The main components of stock returns are capital gains/losses (the difference between the selling price and the purchase price of a share) and dividends, which are the portion of the company's profits distributed to shareholders (Irawan, 2021). Companies with significant stock returns will be more attractive to investors than other companies' stocks and are expected to generate substantial profits in the future.

One type of analysis often used to provide information and measure a company's financial performance is the use of financial ratios, which compare figures from financial statements. Angelica (2022) states that financial ratios predict a company's financial difficulties, operating results, current and future financial position, and serve as a guide for investors regarding past and future performance. The financial performance analysis in this study uses leverage ratios, measured by the Debt-to-Equity Ratio and the Dividend Payout Ratio, and to measure added value, the Economic Value Added (EVA) method is used. The coal, oil, and gas industries are crucial to the international and national economies. In Indonesia, these sectors contribute significantly to state revenue through taxes, royalties, and export earnings. However, these sectors have distinct characteristics, as companies' financial performance is heavily influenced by market demand, government energy policies, and global commodity prices. Oil and coal stock prices fell sharply in 2020 due to the pandemic, which depressed global energy demand. However, due to increased demand and supply disruptions, particularly from the Russia-Ukraine conflict, which raised global energy prices from late 2021 to 2022, oil and coal stocks experienced a strong recovery. Furthermore, in response to increased export needs and rising global demand, commodity transportation companies, such as shipping companies transporting coal and petroleum, also recorded significant performance improvements. RIGS, for example, rose by 18.64%, and SOCI by 14.92%. Strong market demand and high commodity prices boosted the financial performance of companies in these industries, providing attractive stock return prospects.

1.1 Signaling Theory

According to Spence (1973), signalling theory provides an important foundation for understanding the interaction between senders and receivers of data in financial and economic contexts. Signalling theory helps explain how companies can send signals to investors to attract investment and how investors can use these signals to make better investment decisions. According to A. Gumanti (2012) argues that signalling theory holds that stakeholders within a company's environment generally have a stronger understanding of the company's health than external stakeholders such as investors, creditors, the government, and even shareholders. In the context of stock returns, signalling theory is particularly relevant because a company's financial decisions shape investors' perceptions of its risk and performance prospects. If the signal is received positively, demand for the company's shares increases, driving up the share price and investor returns, and vice versa.

1.2 Stock Returns

According to Rahman (2022), stock returns are the profits investors or shareholders receive from their investments. Every investor invests to achieve future profits.

Investors receive profits from shares in the form of dividends and capital gains. Dividends are a distribution of a company's net profits based on the number of shares held by shareholders. Meanwhile, capital gains are the difference between the current and previous share prices (Irawan, 2021). Stock returns also indicate how the market responds to a company's financial statements, dividend policy, and business strategy. Companies that can generate sustainable profits and provide attractive returns to shareholders tend to be more attractive to the market.

1.3 Leverage Ratio

According to Oroh (2019), the leverage ratio measures how much capital or debt a company uses to finance its assets. A higher leverage ratio indicates that the company uses more debt than equity capital to finance its assets. In this study, the leverage ratio is measured using the Debt-to-Equity Ratio, which calculates debt relative to total equity, providing a general indicator of a company's financial viability and risk (Mikrad & Pambudi, 2019).

In general, companies with a lower Debt-to-Equity Ratio are considered safer in meeting their debt obligations because they rely less on debt, thus having lower interest costs and debt repayment risks. According to Arramdhani & Cahyono (2020), the Debt-to-Equity Ratio indicates a company's ability to meet its obligations by indicating the percentage of equity used to repay debt. A Debt-to-Equity Ratio below 50% is considered safe. The lower the Debt-to-Equity Ratio, the more secure the ability to meet obligations with equity capital.

1.4 The Effect of Leverage on Stock Returns

The leverage ratio provides information on the use of equity and debt capital and the company's ability to meet its obligations. Combined with signalling theory, investors receive information about an increase in a company's Debt-to-Equity Ratio. Investors tend to avoid companies with a high Debt-to-Equity Ratio because it increases the risk of bankruptcy and corporate leverage (Kusumawardhani & Sapari, 2021). An increase in the Debt-to-Equity Ratio is considered a negative signal for investors because it tends to reduce the company's stock returns. Based on the above explanation, the following hypothesis is derived:

H1: Debt-to-Equity Ratio affects Stock Returns

1.5 Dividend Payout Ratio

According to Astarina (2019), the Dividend Payout Ratio indicates how much of a company's profits are distributed to shareholders. The Dividend Payout Ratio is one of the main indicators of a company's dividend policy, reflecting the percentage of profits distributed to shareholders as dividends. Investors generally have greater confidence and are more interested in companies that pay regular dividends because stable dividend payments can signal that a company has strong financial performance and is capable of generating sustainable profits. Meanwhile, according to Wahyudi & Deitiana (2020), the Dividend Payout Ratio is an indicator of a company's ability to meet all its financial obligations, including debt payments, before deciding to distribute dividends to shareholders.

The Effect of the Dividend Payout Ratio on Stock Returns

The Dividend Payout Ratio is the ratio of dividends to profits available to common shareholders. It indicates the percentage of net income distributed to shareholders as dividends. According to signalling theory, dividend payments are often seen as a positive indicator of a company's financial condition. Companies that consistently pay dividends and maintain a stable payout ratio signal to the market that they can generate sufficient profits to distribute to shareholders. Based on this explanation, the research hypothesis is:

H2: Dividend Payout Ratio influences Stock Returns

1.6 Economic Value Added

Angelica (2022) states that Economic Value Added is a financial management system for measuring a company's economic profit. It explains that a company can create wealth only if it

covers its capital and operating costs. If a company's profits exceed its cost of capital, it is making an economic profit. However, if profits are lower than the cost of capital, the company will experience an economic loss, even if it appears profitable on an accounting basis. Utami (2021) states that Economic Value Added provides a good measure of the extent to which a company has added shareholder value. Rahman (2022) states that the strength of the Economic Value Added concept lies in its ability to enable companies to determine the success of value creation on investments made and the true cost of capital of those investments, thus providing a clear picture of the return on capital.

1.7 The Effect of Economic Value Added on Stock Returns.

Investors will view positive Economic Value Added as a sign of strong financial performance, thus increasing the likelihood of high stock returns. The economic value added generated by a company can increase shareholder profits and create expectations of consistent profit growth. This means that the company not only meets market expectations by generating profits but also maximises the use of invested capital, thereby increasing stock returns. Based on this explanation, the research hypothesis is:

H3: Economic Value Added affects Stock Returns

2 Method

2.1 Operational Definition of Variables

1. Stock Return

Stock return is a measure of the profit investors receive from changes in stock prices and dividends over a specific time period. The formula for calculating stock return is:

$$\text{Stock Return} = \frac{P_t - P_{t-1}}{P_{t-1}} \dots \dots \dots (1)$$

Where:

P_t: Stock price for the current year

P_{t-1}: Stock price for the previous year

2. Debt to Equity Ratio

The Debt-to-Equity Ratio is a debt ratio that compares all debt, including long- and short-term debt, to the company's equity. The formula for calculating the Debt to Equity Ratio is:

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Equity}} \times 100\% \dots \dots \dots (2)$$

3. Dividend Payout Ratio

The Dividend Payout Ratio measures the amount of dividends received relative to net profit earned to support business growth (Arramdhani & Cahyono, 2020). The calculation of the Dividend Payout Ratio is formulated as follows:

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend}}{\text{Net Profit}} \times 100\% \dots \dots \dots (3)$$

4. Economic Value Added

Economic Value Added is a measure of management's success in increasing a company's value creation. The calculation of Economic Value Added is formulated as follows:

$$\text{Economic Value Added} = \text{NOPAT} - (\text{WACC} \times \text{IC}) \dots\dots\dots(4)$$

Notes: NOPAT = Net Operating Profit After Tax

WACC = Weighted Average Cost of Capital

Invested Capital = Shareholders' Equity + Net Debt at the beginning of the period (or, Invested Capital calculated as Total Assets minus Cash minus Non-Interest-Bearing Liabilities)

(WACC * Invested Capital) also known as Finance Charge

2.2 Population and Sampling Technique

The population selected for this study comprises companies in the oil and gas and coal subsector listed on the Indonesia Stock Exchange from 2020 to 2023. The sampling method used in this study was purposive sampling, to obtain data that meet the following criteria:

1. Oil and gas and coal sub-sector companies whose financial report data can be accessed regularly since 2020, 2021, 2022, and 2023.
2. Oil and gas and coal sub-sector companies that have not experienced losses since 2020, 2021, 2022, and 2023.
3. Oil and gas and coal sub-sector companies that regularly distributed dividends during 2020, 2021, 2022, and 2023.

2.3 Data Analysis Techniques

The data analysis techniques used in this study were:

1. Quantitative Descriptive Analysis

According to Kusumawardhani & Sapari (2021), quantitative descriptive analysis is a summary or description of data that shows the mean, standard deviation, maximum, and minimum values.

2. Multiple Linear Regression Analysis

According to Kusumawardhani & Sapari (2021), they used multiple linear regression analysis to describe the extent of influence between independent and dependent variables when two or more independent variables are manipulated (increased or decreased). This multiple linear regression analysis was carried out after the classical assumption test was fulfilled. The multiple linear regression equation is:

$$RS = a + \beta_1 \text{DER} + \beta_2 \text{DPR} + \beta_3 \text{EVA} + e$$

3 Result and Discussion

3.1 Quantitative Descriptive Analysis

Statistical data shows the DER (Debt-to-Equity Ratio): The average company has a DER of 0.702, meaning its debt is 70.2% of equity. DPR (Dividend Payout Ratio): The distribution is highly skewed (standard deviation > mean), indicating widely varying dividend policies across companies. EVA: The average value is positive, but a very large standard deviation indicates extreme performance variations, from deep economic losses to very high profits. Stock Return: The average positive return is 0.448, with high fluctuations (risk) seen from the standard deviation of 1.171, as presented in Table 1 below:

Table 1. Results of Quantitative Descriptive

Variable	N	Minimum	Maximum	Mean	Std. Deviasi
DER	60	0,097	1,653	0,702	0,393
DPR	60	0,001	4,695	0,664	0,872
EVA	60	1.004.132.450	1.151.709.303,50	7.944.960,50	242.524.579,20
Return Saham	60	-0,498	6,778	0,448	1,171
Valid N	60				

Source: Processed data, 2025

Table 2. Results of Multiple Linear Regression Analysis

Variable	Regression Coefficient (B)	Std. Error	Standardized Coefficient (Beta)	t	Sig. (p-value)
(Konstanta)	0,254	0,328		0,775	0,442
DER	0,39	0,366	0,131	1,064	0,292
DPR	-0,094	0	-0,07	-0,57	0,57
EVA	-1,99E-09	0	-0,413	-3,4	0,001

Source: Processed data, 2025

Regression Equation:

$$\text{Stock Return} = 0.254 + 0.390(\text{DER}) - 0.094(\text{DPR}) - 1.992\text{E-}09(\text{EVA}) + e$$

Table 3. F Test Result

Model	Sum of Squares	df	Mean Square	F-hit	Sig. (p-value)
Regression	14,994	3	4,998	4,246	0,009
Residual	65,915	56	1,177		
Total	80,909	59			

Source: Processed data, 2025

Table 4. Results of the Coefficient of Determination (R²) Test

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,430	0,185	0,142	1,084922

Source: Processed data, 2025

Based on Table 3, the calculated F-value is 4.246 with a significance level of 0.009. Because the significance value is less than 0.05, it can be concluded that the model of the influence of the independent variables on the dependent variable fits the data.

Based on Table 2, the influence of each variable is as follows:

- a. Debt to Equity Ratio (DER): Has a significant value of 0.292. Because it is greater than 0.05, DER does not have a significant partial effect on stock returns. The hypothesis stating that DER affects stock returns is rejected.
- b. Dividend Payout Ratio (DPR): Has a significance value of 0.568. Because it is greater than 0.05, DPR does not have a significant partial effect on stock returns. The hypothesis stating that DPR affects stock returns is rejected.
- c. Economic Value Added (EVA): Has a significance value of 0.001. Because it is less than 0.05, EVA has a significant and partial negative effect on stock returns. The negative regression coefficient (-1.992E-09) indicates that as EVA increases, stock returns tend to decrease. The hypothesis stating that EVA influences stock returns is accepted.

According to Table 4, the Adjusted R² value is 0.142. This means that only 14.2% of the variability in stock returns can be explained by the three independent variables (DER, DPR, EVA). The remaining 85.8% is explained by other factors or variables not included in this research model.

Based on the hypothesis testing results, leverage, as measured by the debt-to-equity ratio, had no statistical effect on the company's stock returns, contradicting the hypothesis formulated in this study. Investors' investments in a company are not based on the company's capital resources. Investors invest based on the amount of profit or revenue the company can generate. This indicates that even if a company's Debt-to-Equity Ratio is too high, it will not negatively impact the company because investors will continue to invest and make additional investments. In other words, information about a company's leverage is not a primary factor influencing investors' investment decisions or the returns they receive. This also suggests that investors tend to pay more attention to other factors when making investment decisions than the funding structure indicated by the leverage ratio. For example, they may be more interested in the business's profit potential or its operational performance.

The Dividend Payout Ratio had no statistically significant effect on the company's stock returns, thereby contradicting the hypothesis formulated in this study. Although dividends are considered a direct form of return on investment, investors do not always consider a company's dividend policy as a primary factor in making investment decisions. Investors may be more concerned with other factors, such as business growth potential, financial performance stability, or overall market conditions, than with the dividend payout rate. This means that the returns investors receive from their investment in a company are not determined or influenced by the dividend payout ratio. High-risk companies tend to pay lower dividend payout ratios to avoid dividend cuts if profits decline, while low-risk companies tend to pay higher dividend payout ratios. Therefore, information about a company's dividend payout ratio is not a primary factor influencing investors' investment decisions or the returns they receive. The results of this study align with Wahyudi & Deitiana's (2020) research, which found that the dividend payout ratio does not affect stock returns. These results align with research by Manaida & Rate (2021) and Kusumawardhani & Deitiana (2021). Sapari (2021) stated that the Debt-to-Equity Ratio does not affect stock returns.

Economic Value-Added influences a company's stock returns, thus aligning with the hypothesis formulated in this study. Positive Economic Value-Added signals to the market that the company can manage its capital efficiently, generate sufficient profits to cover the cost of

capital, and create value for shareholders. This means that the level of return investors will receive on their investment in the company is determined by the extent to which the company has added value to shareholders. Companies that generate positive economic value added will have greater opportunities for investors to achieve higher returns, either through higher stock prices or dividend distributions, which ultimately influence investors' investment decisions. The results of this study align with those of Utami (2021) and Irawan (2021), which showed that Economic Value-Added influences stock returns.

4 Conclusion

Based on the research conducted through a series of data processing and hypothesis testing, it can be concluded that the Debt-to-Equity Ratio (DER) does not have a significant impact on stock returns. This indicates that the high debt-to-equity ratios in oil, gas, and coal companies do not directly affect the stock market response. This condition may indicate that companies in this subsector are considered stable by investors, so their capital structure is not a primary consideration in investment decisions.

Furthermore, the Dividend Payout Ratio (DPR) did not have a significant effect on stock returns. The dividend distribution policy, measured by the percentage of net profit distributed to shareholders, did not directly affect the level of returns investors received from stock price changes. This phenomenon suggests that investors pay more attention to factors other than dividend policy when assessing stock performance.

On the other hand, Economic Value Added (EVA) has a significant impact on stock returns. An increase in EVA sends a positive signal to the market, indicating that the company is not only able to cover its capital costs but also successfully creates sustainable economic value for shareholders. This finding underscores the importance of value creation performance as a primary consideration for investors.

However, this study has several limitations. Not all oil, gas, and coal companies listed on the IDX had full financial reports accessible during the observation period. Furthermore, the study's post-COVID-19 period likely influenced the results, with some companies experiencing negative earnings and not distributing dividends, resulting in observations that did not fully align with the initial plan.

Based on these findings, it is recommended that companies focus more on efficient capital management to create higher economic added value. An increase in EVA not only reflects a company's ability to generate returns above the cost of capital but also enhances investment attractiveness to investors. Given that the Adjusted R² value is less than 20%, there is ample opportunity to examine other factors that could influence stock returns, such as profit growth, operational performance, and external factors such as macroeconomic conditions, inflation, and government regulations.

References

- A Gumanti, T. (2012). Signaling Theory in Financial Management. *Indonesian Entrepreneur Management*, 38 (December 2014), 0–29.
- Andrinalado, A., & Aprianto, R. (2020). The Effect of Financial Performance, Economic Value Added, and Market Value Added on Stock Returns of Manufacturing Companies. 3, 396–403.

- Angelica, F., . M., & Latifah, N. (2022). Analysis of the Effect of Economic Value Added (EVA) and Market Value Added (MVA) on Stock Returns (Empirical Study of Manufacturing Companies on the Indonesia Stock Exchange 2017-2019). *Scientific Journal of Economic Focus, Management, Business & Accounting (EMBA)*, 1(1), 113–122. <https://doi.org/10.34152/emba.v1i1.452>
- Arramdhani, S., & Cahyono, K. E. (2020). The Effect of NPM, ROA, DER, DPR on Stock Returns. *Journal of Management Science and Research*. <http://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/3017>
- Astarina, Y., Dimiyati, L., & Sari, W. N. (2019). The Effect of Dividend Policy on Stock Returns in Manufacturing Companies Listed on the Indonesia Stock Exchange. *Jurnal Ekonomia*, 9(2), 72–83.
- Irawan, J. L. (2021). The Effect of Return on Equity, Debt to Equity Ratio, Basic Earning Power, Economic Value Added, and Market Value Added on Stock Returns. *Journal of Accounting*, 13, 148–159. <https://doi.org/10.28932/jam.v13i1.2948>
- Kusumawardhani, F. E. N., & Sapari. (2021). The Effect of Market Ratios, Profitability, Leverage, and Dividend Policy on Stock Returns. *Journal of Accounting Science and Research*, 10(3), 1–20.
- Manaida, A. M., & Rate, P. Van. (2021). Analysis of the Effect of Price to Earnings Ratio (PER), Debt to Equity Ratio (DER), and Dividend Payout Ratio (DPR) on Stock Returns in Mining Companies Listed on the Indonesia Stock Exchange 2015-2019. *Analysis of the Effect of Price to Earnings Ratio (PER)*. 9(4), 593–604.
- Mikrad, & Pambudi, J. E. (2019). The Effect of Debt to Equity Ratio, Economic Value Added, and Market to Book Value on Stock Returns. 5(1).
- Oroh, M. M., Rate, P. Van, & Kojo, C. (2019). The Effect of Profitability and Leverage on Stock Returns in the Agricultural Sector on the IDX 2013-2017 Period. 7(1), 661–670.
- Rahman, A. (2022). *Mirai Management Journal: The Effect of Economic Value Added and Market Value Added on Stock Returns*. *Mirai Management Journal*, 7(3), 579–592. <https://doi.org/10.37531/mirai.v7i3.2499>
- Spence, (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355–374.
- Utami, M. P., Sundara, D., & Hermiyetti. (2021). The Effect of Economic Value Added (EVA) and Market Value Added (MVA) on Stock Returns. *Indonesian Accounting Literacy Journal*, 1(3), 563–574. <https://doi.org/10.35313/ialj.v1i3.3319>
- Wahyudi, M., & Deitiana, T. (2020). The Effect of Current Ratio, Debt to Equity Ratio, Return on Equity, Total Asset Turnover, and Dividend Payout Ratio on Stock Returns in Automotive Companies. *Media Bisnis*, 11(2), 155–162. <https://doi.org/10.34208/mb.v11i2.940>