



Factors Affecting Firm Value

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Abstract: This Study aims to analyze the effect of Debt to Equity Ratio (DER), Divident Payout Ratio (DPR) and Price to Book Value (PBV) on firm value in the energy sector listed on the Indonesia Stock Exchange. Using data for the period 2019 to 2023 as a sample, this study examines the relationship between these three financial ratios and firm value as measured by Price to Book Value (PBV). The study shows that the dividend payout ratio (DPR) does not affect the value of firms in the energy sector listed on the Indonesia Stock Exchange; in contrast, the debt-to-equity ratio (DER) and the price-to-book value ratio (PBV) affect firm value. The analysis methods used are classical assumption test, multiple linear regression, descriptive statistics, coefficients of determinations, t test and f test to determine the significant effect of each variable on firm value.

Keywords: Debt to Equility (DPR), Devident Payout Ratio (DPR), Price to Book Value (PBV)

Introduction

The energy sector is one of the main pillars of a country's economic development, including Indonesia. With abundant natural resources, Indonesia has great potential to develop various types of energy, both from fossil sources and renewable energy (Putri & Amalia, 2024). In recent years, Indonesia's energy needs have continued to increase along with rapid population growth and industrialization. Therefore, effective and sustainable management of the energy sector is essential to support sustainable economic growth.

The Indonesia Stock Exchange (IDX) serves as a platform for energy companies to access capital and increase their competitiveness in the global market (Ummah, 2019). Through the initial public offering (IPO) process and stock trading, these companies can attract investors to invest in innovative and sustainable energy projects. However, to attract investors, these companies must demonstrate strong financial performance and promising growth prospects.

One of the key concepts that investors consider when evaluating their investments is firm value. The value of a company is a measure of its value in the market as a whole, which is shown in its share price. The higher the stock market value of a company, the greater the interest of investors to invest in the company (Mia Novianti et al., 2023).

Under these circumstances, financial measures become an important tool for assessing business success. Investors assess the financial health and growth potential of a business by using ratios such as debt to equity (DER), dividend payout ratio (DPR), and book value (PBV). A company's ability to generate return on equity, shown in ROE, is one of the important factors that investors consider when making investment decisions.

In addition, DER provides an overview of a company's capital structure, which includes the debt-to-equity ratio. This method is crucial for assessing the financial risk of a business. Meanwhile, DPR shows the amount of profit given to shareholders as dividends, which can affect how stable and attractive the company is to investors. However, to determine whether a company's stock is overpriced or underpriced, PBV provides data on a company's valuation in relation to its book value.

This study aims to examine how DER, DPR, and PBV affect the value of energy companies listed on the Indonesia Stock Exchange. Using quantitative methodology, this study will investigate how these metrics relate to firm value. In addition, this study will provide further explanations on the variables that affect the performance of the energy sector and ascertain the following: the relationship between dividend payout ratio (DPR) and enterprise value (PBV) of the energy sector; the relationship between debt-to-equity ratio (DER) and dividend payout ratio (DPR) and DER.

Literature Overview

DER (Debt to Equity Ratio)

The percentage of earnings given to debt holders in the form of principle and interest payments is known as the debt payout ratio, or DPR. The DPR indicates the extent to which the business uses its earnings to pay down its debt. When assessing a company's financial standing and debt management capabilities, this ratio is essential.

According to (Arison, 2019) for investors and potential investors, the debt to equity ratio (DER) is used to assess the company's ability to pay off debt with the capital it has. According to (Mahayati et al., 2021) the debt-to-equity ratio shows how much debt a company has and how much capital it has. A ratio greater than debt indicates less equity capital. To keep their fixed costs in check, companies should not owe more than they can afford. This method should be as straightforward as possible. In other words, a debt to capital ratio would be safer.

Meanwhile, according to ("FAKTOR-FAKTOR YANG MEMPENGARUHI KINERJA KEUANGAN PERUSAHAAN (DPR, DER, DAN ROE)," 2007) another name for the debt-to-equity ratio is a ratio that assesses the performance of a company backed by debt; an increase in the value of this ratio indicates that there is a problem with the company. Conversely, an increase in debt will impact the amount of net income available to shareholders, including dividends received, as debt repayment takes precedence over dividend distribution. An increase in debt will impact the amount of net income available to shareholders, including dividends received, as debt repayment obligations take precedence over dividend distributions. The debt-to-equity ratio is one of the most important and reliable financial metrics that indicate a company's financial stability.

The use of outside finance sources that lowers a company's net income, which in turn raises interest costs, which in turn lowers dividend payments to shareholders, is known as leverage. Therefore, a high debt level is a sign that the business has a lot of debt and is heavily indebted. Businesses that prioritize debt repayment over dividend distribution will be those with high levels of financial leverage. where the business prioritizes paying off debt before paying dividends (Rosydah et al., 2023).

DPR (Divident Payout Ratio)

Dividend Payout Ratio, also referred to as DPR, shows the percentage of a company's net income that goes to shareholders as dividends. This ratio shows how well a business provides returns to shareholders in relation to the profits it generates. The dividend distribution ratio (DPR) is an important tool for investors to assess a business's dividend policy and how the business manages its earnings. By examining the DPR according to their growth and profit objectives, investors can improve their investment choices.

A corporation's dividend policy determines whether the gains from its operations will be dispersed to investors as dividends or reinvested in the business as retained earnings. Investors use this information to make decisions on dividend policy. Because they are thought to have promising futures, investors will choose to fund businesses with high dividend policies. Both the company's financial health and the investment decisions of shareholders will be impacted by the dividend payout ratio's magnitude. (Santoso & Handayani, 2019).

Meanwhile, according (Santoso & Handayani, 2019) regarding dividend policy as determined by the dividend payout statistic (DPR), which is a statistic that shows how much a company pays out in dividends to its shareholders in relation to its net income. An investor's opinion of the company is positively correlated with the dividend payment ratio. A company's dividend payments to shareholders are viewed by investors as a sign of strength.

The dividend payout ratio, also known as the dividend payout ratio, compares dividends per share to profits per share. If we look at dividend policy from the perspective of the dividend policy ratio, which is the percentage of earnings paid out as cash dividends, then the size of the DPR will have an impact on the investment choices of shareholders and the financial health of the company. (Rosydah et al., 2023)

PBV (Price to Book Ratio)

Knowing a company's worth is crucial in the world of investing. The price-to-book value (PBV) ratio is one often-used technique to assess a company's worth. A ratio called price to book value (PBV) is used to assess a company's market worth in relation to its book value. Investors frequently use this ratio to assess if the shares of a firm are overpriced or underpriced. The purpose of this review is to clarify the meaning of PBV, its application in investment research, and how to compute it (Syahputra & Idawati, 2024).

According to ("FAKTOR-FAKTOR YANG MEMPENGARUHI KINERJA KEUANGAN PERUSAHAAN (DPR, DER, DAN ROE)," 2007) To show price irregularities,

the stock's book value or PBV shows the ratio of the stock's price to its book value. A low PBV number indicates that the stock is inexpensive; if the price is less than the book value, the stock is most likely worth at least as much as its book value, or at least equal to its book value. Therefore, the company has plenty of opportunities to grow and make big profits. A larger PBV value can also be attributed to an increase in share value or a guaranteed level of security. This can be shown by the ratio of stock price to book value; stocks below book value are usually at least as high as book value, and a low price to book value ratio indicates a low stock price. These stocks have the potential to generate significant profits and have significant upside potential.

Research Method

Quantitative data is used in this type of research. Data was taken from the Indonesia Stock Exchange. This study looks at the energy sector. This research only addresses the years 2019-2023, although the Indonesia Stock Exchange (IDX) has listed 81 energy companies. As a result, this study only examined a limited amount of financial data relating to firm value. In addition, this study only uses the Dividend Payout Ratio (DPR), Price to Book Value (PBV), and Debt to Equity Ratio (DER) to calculate firm value. The formulas for DER, DPR, and PBV are as follows:

PBV Formula:

$$DER = \frac{\text{Total Debt}}{\text{Equity}} \times 100\%$$

DPR Formula:

$$DPR = \frac{\text{Total Divident}}{\text{Net Income}} \times 100\%$$

PBV Formula:

$$PBV = \frac{\text{Stck Price}}{\text{Book Value Per Share}} \times 100\%$$

Results and Discussion

The descriptive statistical test, multiple linear regression test, determination coefficient test, t test, f test, and the traditional assumption test (normality, multicollinearity, heteroscedasticity, Auto-Correlation, Linearity) are all used in this work.

Table 1. Normality Test

One-Sample Kolmogorov-Smirnov Test

Unstandardized Residual		
N		8
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	454.89518391
Most Extreme Differences	Absolute	.302
	Positive	.302
	Negative	-.156
Test Statistic		.302
Asymp. Sig. (2-tailed)		.030 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

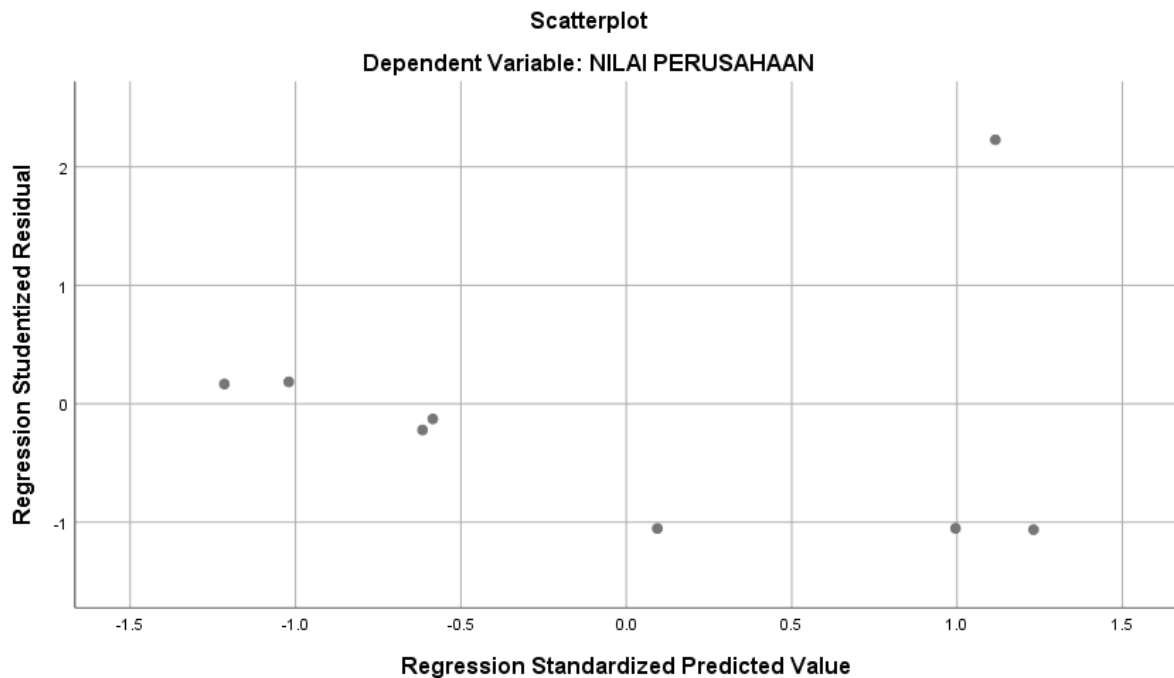
It is said to be normal if the value of the significance level it $> 0,05$, otherwise if the sign value $< 0,05$ then the data is not normal. On sample Kolimogrov – Smirnov shows $0,030 > 0,05$ means data distributed normal.

Table 1. Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	B	Std. Error	Beta	t		Tolerance	VIF
1 (Constant)	-245.479	417.747		-.588	.582		
EKUITAS	9.255	6.369	.712	1.453	.206	.566	1.768
DEVIDEN	-.893	1.537	-.285	-.581	.586	.566	1.768

a. Dependent Variable: NILAI PERUSAHAAN

VIF (Variance Inflation Factor) if VIF below or < 10 and Tolarance Value above $> 0,1$ then there is no Multicollinearity. Interpretation: Based on the table, the VIF of the equity variable (X1) and the dividend (X2) is $1,768 < 10$ and the Tolarance Value is $0,566 > 0,1$. So the data does not occur Multicollinearity.

Table 3. Heteroscedasticity Test

In the Heteroscedasticity Test the data forms a pattern that spreads from point zero then data is free from Heteroscedasticity.

Table 4. Descriptive Stastical Test**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
EKUITAS	8	23	118	74.75	42.466
DEVIDEN	8	22	554	138.88	176.021
NILAI PERUSAHAAN	8	15	1664	322.25	551.965
Valid N (listwise)	8				

To provide an overview of the data, descriptive statistical measurements should be made of these variables. These measurements should include the mean, highest value (max), lowest value (min), and standard deviation of each variable, namely equity (X1), dividends (X2) and firm value (Y).

Based on the Descriptive Test resultd above, the distribution can be described:

1. Equity Variable (X1) from the data can be described that the minimum value is 23 while the maximum value is 118 and the average. Equity of 74,75. The standard deviation of Equity data is 42.466.
2. Devidend Variable (X2) from the data it can be described that the minimum value is 22 while the maximum 554 average value. Devidend amounted to 138,88 and the standard deviation and Devidends we're 176.021.

3. Variable Company Value (Y) from the data it can be described that the minimum value is 15 while the maximum is 1.664 average value. The Company Value is 322,25 and the standard deviation of The Company Value data is 551.965.

Table 5. Multiple Linear Regression Test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-245.479	417.747		-.588	.582
	EKUITAS	9.255	6.369	.712	1.453	.206
	DEVIDEN	-.893	1.537	-.285	-.581	.586

a. Dependent Variable: NILAI PERUSAHAAN

$$Y = a + b_1 \cdot x_1 + b_2 \cdot x_2$$

$$= -245.479 + 9.255 + (-0,893)$$

Interpretation: The value a of -245,479 is a constant or a state when the equity (X1) and dividend (X2) variables do not affect the firm value variable. If the independent variable does not exist, the firm value variable does not experience the company.

b1 (X1 regression coefficient value) of 9.255 indicates that the equity variable has a positive influence on firm value; assuming that other variables are not examined in this study, each 1 unit increase in the equity variable will affect firm value by 9.255.

b2 (X2 regression coefficient value) of -0.893 shows that the dividend variable has a negative effect on firm value; in other words, each one unit increase in the dividend distribution variable will affect firm value.

Table 6. Coefficient Of Determination Test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.566 ^a	.321	.049	538.239

a. Predictors: (Constant), DEVIDEN, EKUITAS

b. Dependent Variable: NILAI PERUSAHAAN

$$R \text{ Square} = 0.321$$

Interpretation: Based on the table, it is influenced by the value of the R Square coefficient (R²) of 0.321 or 32.1%. So it can be concluded that the influence of equity variables on firm value is 0.321 (32.1%).

Table 7. T-Test (Partial) on Variable X1Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-187.132	382.496		-.489	.642
	EKUITAS	6.814	4.519	.524	1.508	.182

a. Dependent Variable: NILAI PERUSAHAAN

Sign.value. < 0,05

(Calculated t value > t table value)

t table = t (a/2 : n-k-1)

a = 5% = t (0.05/2: 8-2-1)

= 0,025 : 5

= 2,570

Variable X1 to Y

Sign value 0.182 > 0.05

t count > t table

1,508 < 2,570

Interpretation: The t-test results (partial) from the table show that the significance value of the effect of equity (X1) on firm value (Y) is 0.182 greater than 0.05, and the calculated t value of 1.508 is smaller than the t table value of 2.570. Therefore, it can be concluded that the data is not significant, and Ho is rejected. The independent variable affects the dependent variable.

Table 9. T-Test (Partial) on Variable X2Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	241.994	271.027		.893	.406
	DEVIDEN	.578	1.258	.184	.459	.662

a. Dependent Variable: NILAI PERUSAHAAN

Variable X2 to Y

Sign value 0.662 > 0.05

t count > t table

0,459 < 2,570

Interpretation: The t-test results (partial) from the table show that the significance value of the effect of dividends (X2) on firm value (Y) is 0.662 greater than 0.05 and the calculated t

value of 0.459 is lower than the t table value of 2.570. Therefore, it can be concluded that the data is not significant, and H_0 is rejected. The dependent variable is also influenced by the independent variable.

Table 10. F-Test (Simultan)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	684152.102	2	342076.051	1.181	.380 ^b
	Residual	1448507.398	5	289701.480		
	Total	2132659.500	7			

a. DEPENDENT VARIABLE: NILAI PERUSAHAAN

b. PREDICTORS: (Constant), DEVIDEN, EKUITAS

X1 and X2 to Y

Sign value, $< 0,05$

F value $>$ F table value

The Value off f table = 5.79

Sign Value = 0.380 $>$ 0.05

Interpretation: From the table, the significance value of the effect of equity (X1) and dividends (X2) on firm value (Y) is 0.380 greater than 0.05, and the fcount value of 1.181 is greater than 5.79. Therefore, it can be concluded that the data does not have any value. The independent variable affects the dependent variable, with H_0 rejected and H_a accepted.

Conclusion

This research aims to study how price-to-book value (PBV), dividend payout ratio (DPR), and debt-to-equity ratio (DER) affect firm value as indicated by stock prices. We find that large differences in firm value can be explained by our model, using multiple regression analysis. Before conducting regression analysis, ensure that the data used meets the traditional assumptions. The normality test proves the validity of the analysis results, showing that the regression model residuals are normally distributed. A multicollinearity analysis is also performed to ensure that there is no significant linear relationship between the independent variables.

The results show that each independent variable can be checked independently as no multicollinearity is seen. The heteroscedasticity test is used to ensure that the residual variance remains constant. The test results, which show that the model is heteroscedastic, make the analysis results more trustworthy. The F-test findings show that the regression model as a whole is significant, with a p-value < 0.05 . This indicates that at least one independent factor is significantly affected by changes in business value. The null hypothesis is rejected as it says that all regression coefficients are equal to zero. According to the statistical decision test (R^2), the regression model can explain about X% of the variation in enterprise value indicated by stock prices. This indicates that the independent

variables studied can largely explain changes in business value. According to the regression coefficient test, each $p\text{-value} < 0.05$ indicates that DER and PBV significantly affect firm value. These findings suggest that investor perceptions of business value are not much impacted directly by the company's dividend policy. Market conditions, firm growth expectations, and other external factors that affect investment decisions can all contribute to this. All things considered, this study offers managers and investors valuable insights. Investors should focus on the core elements that can impact the company's value, even if management should take the capital structure and valuation into account when making decisions. Additionally, this study creates opportunities for future research that might examine additional factors that may impact business value and take the larger industry and economic environment into account.

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