Fundamental Analysis and Trading Volume on Stock Prices with Company Size as a Control Variable

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ABSTRACT
This research aims to determine the influence of fundamental variables and trading volume on stock prices in energy sector companies. This research uses the variables Debt Equity Ratio, Return on Assets, Trading Volume and Share Price. The population used in this research is energy sector companies in 2019 - 2022. The sampling method in this research is purposive sampling method so that 120 company data is obtained in 4 years. The analysis method uses multiple linear regression. Conclusions from the results of this research in the energy sector on the Indonesia Stock Exchange (BEI) in the 2019-2022 period the debt equity ratio variable has a negative and significant influence on shares, the return on assets variable has a negative and significant influence on share prices, the trading volume variable does not has an influence on share prices. Then the control variable, namely company size, has no effect on share prices.

ARTICLE INFO
Keywords: Debt Equity Ratio (DER), Return on Assets (ROA), Share Price, Trading Volume.

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INTRODUCTION
The energy industry is a strategic sector that can support significant employment and foreign exchange absorption for the country (Usman, 2021). This is because the energy industry has the energy resources needed to carry out economic development (Indriani, 2023). Energy sector companies definitely need large amounts of capital to be able to explore resources in order to carry out the company's operational activities (Surenjani et al., 2023). Therefore, many companies enter the capital market with the aim of absorbing investment from investors so they can strengthen their financial position.

Table 1. Company Share Prices 2023

<table>
<thead>
<tr>
<th>Stock code</th>
<th>Last price</th>
<th>YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMMT</td>
<td>1,295</td>
<td>99.23%</td>
</tr>
<tr>
<td>DOID</td>
<td>352</td>
<td>15.79%</td>
</tr>
<tr>
<td>BYAN</td>
<td>19,200</td>
<td>-9.65%</td>
</tr>
<tr>
<td>BSSR</td>
<td>3,850</td>
<td>-10.67%</td>
</tr>
<tr>
<td>ADRO</td>
<td>2,600</td>
<td>-27.58%</td>
</tr>
<tr>
<td>BOSS</td>
<td>50</td>
<td>-45.65%</td>
</tr>
<tr>
<td>EARTH</td>
<td>86</td>
<td>-46.58%</td>
</tr>
</tbody>
</table>

Source: www.cnbnindonesia.com

Based on sources from www.cnbnindonesia.com. There are fluctuations in coal stock prices every year. This happened because of the commodity boom phenomenon that occurred last year and began to decrease, thus affecting the movement of the majority of coal shares. Several companies experienced significant increases because they had a good average selling price (ASP). However, on the contrary, the majority of exports and selling prices refer to world prices, the refore when coal prices fall it will affect the average selling price (ASP). When the ASP falls then the company's income will fall, even though the volume of exports or sales increases. This condition causes issuers to decline because investors assess that the prospects for profitability performance are also decreasing.

THEORETICAL REVIEW
Signal Theory (Signalling Theory)
Signaling theory, also called signal theory discovered by (Michael Spence, 1973). Signal theory is a theory that provides instructions or signals to users of financial reports. This theory also explains how the state of the company which is translated and submitted to investors is related to company performance. Information can function as a signal for investors to make decisions (Aprianto, 2023). This theory helps investors to make accurate and
appropriate decisions by looking at the condition of the company. The existence of signal theory in this research strengthens the relationship between liquidity and company share prices (Dewi, 2016). Through this theory, companies are able to measure the extent to which information can be disclosed by outside parties. So signal theory allows companies to report more information, including information about how the company makes profits (Effendi, 2017).

**Stock price**

The share price is the price set for each share of a company that can be bought and sold on the capital market (Hariyanto et.al., 2020). Share prices reflect the market value of asset ownership and income of a company. The high share price of a company can increase investor confidence in the company’s performance and the company’s long-term prospects (Damarani et.al., 2024).

**Debt Equity Ratio (DER)**

Debt Equity Ratio (DER) is a ratio that measures the proportion of debt to company capital, which shows how much liabilities are compared to capital. A high DER value indicates a high risk in debt repayment, which can affect the company’s share price (Astuti & Setiawati 2024). This shows that the higher the DER, the lower the share price. If there is a decline in share prices, it will be a bad signal for investors which will result in investors being less interested in buying shares (Fathurrahman, 2023).

**Return on Assets (ROA)**

Return on Assets (ROA) is the ability of assets owned by a company to generate profits (Tandelilin, 2010). If the ROA is higher, this will result in the company being more effective in utilizing its assets so that the company’s performance will also be more effective (Fathurrahman, 2023). Based on signal theory, it is likely that the company will provide profits due to an increase in company profits. This causes investors to have a high attraction to the company and the price of the shares owned by the company.

**Trading Volume**

For investors, share trading volume is very important because it can review the condition of shares being bought and sold on the market (Suaryana, 2016). The information obtained by market players will result in volume and volatility having a positive relationship. If investors do not receive information regarding shares, investors will save their shares and this will result in trading volume so that volatility will decrease. On the other hand, volatility will increase if many investors sell their shares, resulting in an increase in trading volume (Wati & Puspitaningtyas, 2023).

**Company Size**

The size of the company which increases every year which can be seen from the total number of assets will be a consideration for an investor to invest, and vice versa for the size of the company whose growth tends to be unstable.
or even decrease will make investors consider it more before making an investment (Arifin & Agustami, 2017). A company with a higher and larger economic scale is considered capable of surviving for a long time. Most investors prefer to invest their capital in companies that have a higher economic scale because investors think that these companies can return their capital and investors will also get high profits (Siregar & Nurmala, 2019)

**The Effect of Debt to Equity Ratio (DER) on Stock Prices**

*Debt to Equity Ratio* (DER) shows a financial ratio that can compare the amount of a company’s debt with the capital it has (Christina et al., 2021). If the debt to capital ratio is smaller, the security from outside parties will be better. This shows that the higher the DER, the lower the share price. If there is a decline in share prices, it will be a bad signal for investors which will result in investors being less interested in buying shares (Fathurrahman, 2023). This is also reinforced using signal theory which explains that companies will provide information or signals to outside parties, especially investors, regarding the company's current conditions. According to Fathurrahman (2023), Hasanuh (2023), Siddiq et al., (2023) that the Debt to Equity Ratio (DER) has a negative effect on stock prices.

**H1: Debt to Equity Ratio (DER) has a negative influence on stock prices**

**The Effect of Return on Assets (ROA) on Share Prices**

*Return on Assets* (ROA) is the ability of assets owned by a company to generate profits (Tandelilin, 2010). If the ROA is higher, this will result in the company being more effective in utilizing its assets so that the company’s performance will also be more effective (Fathurrahman, 2023). Based on signal theory, it is likely that the company will provide profits due to an increase in company profits. This causes investors to have a high attraction to the company and the price of the shares owned by the company. From the explanation above, it can be concluded that ROA has a positive influence on the company’s share price. According to Indriani (2023), Asykarulloh et al., (2023), Fathurrahman, (2023) states that Return on Assets (ROA) has a positive effect on share prices.

**H2: Return on Assets (ROA) has a positive influence on stock prices**

**Effect of Trading Volume on stock prices**

Information obtained by market players which will later influence the volume of share price volatility is also called trading volume (Wati, 2023). The information obtained by market players will result in volume and volatility having a positive relationship. For investors, share trading volume is very important because it can review the condition of shares being bought and sold on the market (Suaryana, 2016). This is also reinforced by the Signal Theory which explains that companies will provide information or signals to external parties, especially investors, regarding the company’s current conditions. If investors do not receive information regarding shares, investors will save their shares and this will result in trading volume so that volatility will decrease. On
the other hand, volatility will increase if many investors sell their shares, resulting in an increase in trading volume. According to Wati (2023), Silaban (2023) states that trading volume has a positive effect on stock prices. 

**H3: Trading volume has a positive effect on stock prices**

**METHODOLOGY**

The sample used is Energy sector companies in 2019 - 2022 which are listed on the Indonesian Stock Exchange. Company data collection is sought by accessing www.idx.co.id and www.finance.yahoo.com as well as the official website of each company. Sampling used a purposive sampling method with the criteria that the company was registered on the IDX in 2019-2022 and had complete financial reports so that 30 companies were obtained that met the criteria and obtained 89 data samples used in this research.

In this research, the method used to test the hypothesis is multiple regression analysis.

\[ HS = a + \beta_1DER + \beta_2ROA + \beta_3VOL + \beta_4SIZE + e \]

Information:
- \( Y \) = Share Price
- \( a \) = Constant
- \( \beta \) = Regression Coefficient
- \( X_1 \) = Debt Equity Ratio (DER)
- \( X_2 \) = Return on Assets (ROA)
- \( X_3 \) = Trading Volume
- \( X_4 \) = Company Size
- \( e \) = Resid Value

**RESULTS AND DISCUSSION**

*Descriptive Statistical Analysis*

The purpose of descriptive statistical analysis is to describe the subject matter being studied. In determining this analysis, you can pay attention to the min, max, mean and standard deviation values.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DER</td>
<td>89</td>
<td>0</td>
<td>4.8</td>
<td>1.2</td>
<td>1.971</td>
</tr>
<tr>
<td>ROA</td>
<td>89</td>
<td>-2</td>
<td>29.9</td>
<td>6</td>
<td>87.03</td>
</tr>
<tr>
<td>VOLDAG</td>
<td>89</td>
<td>9.7</td>
<td>23.5</td>
<td>17.9</td>
<td>30.10</td>
</tr>
<tr>
<td>PRICE</td>
<td>89</td>
<td>2.2</td>
<td>10.6</td>
<td>6.6</td>
<td>15.55</td>
</tr>
<tr>
<td>SIZE</td>
<td>89</td>
<td>17.9</td>
<td>29.8</td>
<td>20.6</td>
<td>17.79</td>
</tr>
</tbody>
</table>
Multiple Linear Regression Analysis

The purpose of multiple linear regression testing is to determine the direct link between the independent variable and the dependent variable. The following is a table of test results that have been carried out.

Table 3. Multiple Linear Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant) 6.278</td>
<td>1.861</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DER -0.402</td>
<td>0.164</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ROA -0.038</td>
<td>0.018</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VOLDAG -0.103</td>
<td>0.055</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SIZE 0.143</td>
<td>0.093</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processed in 2024

According to table 3, a regression equation is obtained which shows the following results: Share price = 6.278 - 0.402 DER - 0.038 ROA - 0.103 VOLDAG + 0.143 SIZE

Coefficient of Determination Test

Table 4. R2 test

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.403a</td>
<td>.163</td>
<td>.123</td>
</tr>
</tbody>
</table>

Source: Data processed in 2024

According to table 4, the value obtained is that the adjusted R Square shows a result of 0.123. These results mean that the stock price variable can be described and explained by the independent variables, especially DER, ROA, Trading Volume and SIZE with a quantity of 12.3%. The remaining 87.7% is influenced by equations or other variables found in different studies.

F test

Table 5. F test

<table>
<thead>
<tr>
<th>Model</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4,081</td>
<td>.005b</td>
</tr>
<tr>
<td>Residual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processed in 2024
In accordance with table 5, the f value obtained shows a result of 4.081 and a significance of 0.005. This concludes that 0.005 < 0.05 is assumed to mean that the regression model is suitable for research. The following conditions mean that simultaneously the debt equity ratio, return on assets, trading volume and company size have an influence on share prices.

**t test**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>6.278</td>
<td>3.37</td>
</tr>
<tr>
<td>DER</td>
<td>-.402</td>
<td>-2.44</td>
</tr>
<tr>
<td>ROA</td>
<td>-.038</td>
<td>-2.11</td>
</tr>
<tr>
<td>VOLDAG</td>
<td>-.103</td>
<td>-1.87</td>
</tr>
<tr>
<td>SIZE</td>
<td>.143</td>
<td>1.54</td>
</tr>
</tbody>
</table>

Source: Data processed in 2024

In accordance with table 6, the resulting regression coefficient, t value, and significant value from the tests that have been carried out are as follows:
1. The DER t value is -2.44 and the DER significance value is 0.017 <0.05, meaning that the debt equity ratio has a negative influence on stock prices.
2. The ROA t value is -2.11 and the ROA significance value is 0.037 <0.05, meaning that return on assets has a negative influence on stock prices.
3. The t value of Trading Volume is -1.87 and the significance value is 0.064 > 0.05, meaning that trading volume has no effect on stock prices.
4. The t value of Company Size is 1.54 and the significance value is 0.126 > 0.05, meaning that company size has no effect on share prices.

**The Effect of Debt Equity Ratio on Stock Prices**

In accordance with table 6, the DER t value is -2.44 and the DER significance value is 0.017 <0.05, meaning that the debt equity ratio has a negative influence on stock prices, so the first hypothesis is accepted. This reflects the company’s ability to pay off its debt. An increase in DER can cause a decrease in share prices because the company's income is used to pay the company's debt (Astuti & Setiawati, 2024). This is because a high DER value indicates a negative response from the market because most of the company's operations are financed by funds from external parties or debt (Solekah & Erdkhadifa, 2023). This research is in line with research Fathurrahman, (2023) which states that DER has a negative influence on stock prices.

**The Effect of Return On Assets on Share Prices**

In accordance with table 6, the ROA t value is -2.11 and the ROA significance value is 0.037 <0.05, meaning that return on assets has a negative
influence on stock prices, so the second hypothesis is rejected. The return on assets (ROA) ratio looks at the extent to which investments

**The Effect of Trading Volume on Stock Prices**

In accordance with table 6, the Trading Volume t value is -1.87 and the DER significance value is 0.064 > 0.05, meaning that trading volume has no influence on stock prices, so the third hypothesis is rejected. This is because some investors view that share price movements are not determined by supply and demand in the market, but share prices are influenced by phenomena that occur in the market and other factors to move share prices (Ardiansyah et al., 2023). This research is also in line with Wahyullah et al., (2023) which states that trading volume has no influence on stock prices.

**The Effect of Company Size on Share Prices**

In accordance with table 6, the SIZE t value is 1.54 and the SIZE significance value is 0.126 > 0.05, meaning that company size as a control variable has no influence on share prices. The size of the company does not affect the share price. This is because company size is not a determining factor in the rise and fall of share prices, while investors consider company size not to be a benchmark for share fluctuations. This is confirmed by research from (Harnita et al., 2024) which states that company size has no effect on share prices.

**CONCLUSIONS AND RECOMMENDATIONS**

The conclusion from the results of this research in the energy sector on the Indonesia Stock Exchange (BEI) in the 2019-2022 period is that the debt equity ratio variable has a negative and significant influence on shares, the return on assets variable has a negative and significant influence on share prices, the trading volume variable has no influence on share prices. Then the control variable, namely company size, has no effect on share prices.

It is recommended that further research add fundamental variables, both from profitability and company leverage, and also add technical variables that are useful to further strengthen investors in making decisions related to purchasing shares in a company.

**FURTHER STUDY**

In writing this article the researcher realizes that there are still many shortcomings in terms of language, writing, and form of presentation considering the limited knowledge and abilities of the researchers themselves. Therefore, for the perfection of the article, the researcher expects constructive criticism and suggestions from various parties.

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