The Influence of Capital Structure and Idiosyncratic Risk on Company Value With Industry Type As Moderating on Energy Companies

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ABSTRACT

The purpose of this study is to test and prove empirically the effect of capital structure and idiosyncratic risk, type of industry on the value of the Indonesian stock exchange sector. In addition, the purpose of this study is to empirically test and prove the type of industry to strengthen the effect of capital structure on the value of the Indonesian stock exchange sector. The population in this study are energy sector companies listed on the Indonesia Stock Exchange for 74 years 2016-2020. The sampling technique used purposive sampling method. Based on this technique, the number of samples used in this study were 53 companies. The data analysis technique used in this study is multiple linear regression analysis with a moderating effect. The results of this study indicate that capital structure and idiosyncratic risk are not significant to the value of companies in the Indonesian stock exchange sector. The type of industry has a significant positive effect on the value of companies in the Indonesian stock exchange sector. The variable type of industry strengthens the positive influence of capital structure and idiosyncratic risk on the value of companies in the Indonesian stock exchange sector. For the control variable, ROA is not significant to firm value, while for CR it is significant positive to firm value. The variable value of the firm is influenced by variables of Capital Structure, idiosyncratic risk, Type of Industry, Profitability, and Liquidity of 9.6%. Meanwhile, 90.4% was influenced by other variables that were not included in this research model.

1. INTRODUCTION

The Indonesia Stock Exchange (IDX) is a place that brings issuers and investors together in conducting stock transactions. The Indonesian Stock Exchange is also an entity resulting from the merger between the Jakarta Stock Exchange and the Surabaya Stock Exchange and started its activities on January 1, 2007. In carrying out its activities, securities companies must be able to increase the value of their companies. Of course this company must be able to survive and be able to compete.
The following provides information on the comparison of the stock price index with the sectoral stock price index of the Indonesian stock exchange for the last 3 years, namely:

**Figure 1. Stock Price Index**

Based on the graph shows that the comparison between the composite stock price index and the stock price index of all sectors on the Indonesian stock exchange during 2018 to 2020 can be explained that there is a gap in conditions, where these conditions can show data between the composite stock price index and the entire stock price index, sectoral. The condition of the composite stock price index fluctuated for 3 periods 2018-2019. In 2019-2020 the composite stock price index experienced a decline in share value. This has an impact on all existing sectoral stock price indexes. However, this condition has no impact on the mining sector. Where the mining sector actually experienced an increase in the value of shares in that period. So that the mining sector is one of the reasons why this sector was chosen to be the object of research. In addition, the mining sector is one sector that has a contribution to economic growth and as a provider of energy.

The value of the company is used as a proxy for price book value which is to show the company's ability to maintain the company's financial performance. The following is a comparison of the index of the mining stock sector with one of the other sectors. Where in this research is compared with the consumer goods industrial sector, namely:

**Figure 2. Consumer Goods**

Source: Indonesia Directory Exchange, 2021
Based on the graph, it can be shown that the two sectors experienced changes in the direction of the company's value in 2020, where the mining sector in 2020 experienced an increase, in fact the consumer goods industry experienced a decline. Stock price is one form of company value proxy. The gap between the JCI and IHS conditions can be caused by several factors including the company's capital structure factor (Mudjijah, et., al, 2019), (Fajriana, 2016) and (Oktaviani, et., al; 2019), (Oktrima, 2017) and idiosyncratic risk ((Werner, 2013), (Zhang et, al, 2016), Fransisc, 2018), (Darmawan; 2018) and (Muhardi; 2013)) industrial type (Utami & Darmawan, 2018) and Berggrun, et. Al (2016)), profitability (Susilawati, 2012), (Murwaningsari and Firlano, 2006) and Egam et al., (2017) and the level of company liquidity (Pratama & Erawati, 2016) and (Octaviani & Komalasari, 2017))

The capital structure factor is measured by the Debt Equity Ratio (DER) proxy. The DER factor is very important for companies to maintain stability in maintaining debt by using their capital for productivity and financial performance of the company. The higher the company's capital structure, the more risky the company's financial performance is. In theory, DER has a negative relationship to firm value. Several studies on the effect of the debt equity ratio on firm value were conducted by (Mudjijah, et., al, 2019) whose research results stated that DER was significantly positive on firm value. Research by (Fajriana, 2016) DER is significantly negative on firm value. Research by Oktaviani, et., al, 2019) and (Oktrima, 2017) is not significant to firm value.

Idiosyncratic Risk factors have an important role for companies to face their own risks related to the company's internal. If the Idiosyncratic Risk is higher, the company's risk will be higher so that it will reduce the value of the company. In theory, Idiosyncratic Risk has a negative relationship to firm value. Several studies examine the effect of Idiosyncratic Risk on firm value. Research conducted by (Werner, 2013) and (Zhang et al, 2016) the results of his research state that Idiosyncratic Risk is significantly positive on firm value. Research conducted by (Fransisca, 2018), (Darmawan; 2018) and (Muhardi; 2013) the results of his research stated that Idiosyncratic Risk was significantly negative on firm value.

Industry type factor is measured by high profile industry. If the company has a high type of industry, the value of the company will increase. Conversely, if the company has a low type of industry, the value of the company will decrease. In theory, it is explained that the type of industry has a positive relationship to firm value. Several studies on the effect of industry type on firm value. Research conducted by (Utami & Darmawan, 2018) the results of his research state that a high type of industry can increase the value of the company. Research conducted by (Berggrun, et. Al, 2016) states that the type of company industry does not have a significant impact on firm value.

This study will be controlled by two other financial variables, namely profitability and company liquidity. Where this control variable also has an important role in increasing the value of the company. Where the higher the profitability of the company and the level of company liquidity, the value of the company will increase.

The significance of this research is based on previous research that examines the influence between the variables of the firm's capital structure and idiosyncratic risk on firm value. This research is given the moderating effect of industry type variables to strengthen or weaken the influence of the firm's capital structure and idiosyncratic risk on firm value. This is different from previous research studies.

2. LITERATURE REVIEW

Firm Value

(Bringham and Daves, 2014) explains that firm value is the market value of a company that can prosper shareholders if the value of the company increases. To increase the value of the company, it can be achieved by prospering the shareholders and shareholders of the company. Measurement of firm value can be proxied by the price book value (PBV). If the PBV value is greater, the value of the company will increase. PBV shows the price of shares traded low or high below the company's book value. PBV is a comparison of the current share
price with the book value per share. So that the PBV value can be shown by the formula (Ang (1997):

\[
\text{Price Book Value} = \frac{\text{Current stock price}}{\text{Book Value per share}}
\]

**Capital structure**

The capital structure in this research is proxied in the form of Debt equity ratio or better known as DER. A high Debt to Equity Ratio can pose a risk to the company's financial performance. But when the DER value is too low it is also not good for the company. So the company must maintain the DER value properly in accordance with existing standards. DER reflects the capital ratio by utilizing debt or loans with the aim of being used as company capital financing. Debt can be done by issuing shares on the capital market or by borrowing from the bank.

Kasmir (2016) states that the capital structure is the company's ability to pay debts using its capital. Or DER can be searched by comparing the total debt consisting of current debt and total equity. Meanwhile (Harahap, 2013) states that the debt equity ratio can be described by the capital owned by the company can guarantee to pay foreign debts.

Research on the effect of the debt equity ratio on firm value was conducted by (Mudijjah, et., al, 2019) the results of his research stated that DER was significantly positive on firm value. Research by (Fajriana, 2016) DER is significantly negative on firm value. Research by Oktaviani, et., al, 2019) and (Oktrima, 2017) is not significant to firm value

Based on the statement, it can be shown that the capital structure formula in the form of DER is:

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

Source : Ross et al., 2010

**Idiosyncratic Risk**

Opinion (Lestari, 2016) states that Idiosyncratic risk or also called unsystematic risk. Indisyncratic risk is a risk that arises due to an event such as absenteeism of company employees so that it affects the company's operational activities, leaders who are not open so that it can reduce investor confidence in investing decisions in the company. Meanwhile, the opinion (Merton, 1987) states that the non-systematic risk of the expected share value has a positive impact if the investor is not able to diversify his portfolio.

Likewise with research conducted by Zhang et al (2016) which states that the Idiosyncratic Risk factor has a positive and significant influence on firm value. However, unlike the research conducted by Darmawan (2018) and Muhardi (2013), the higher Idiosyncratic Risk, the lower the firm value. Both results are contradicted by the results of research conducted by Berggrun, et. Al (2016) where the results of his research stated that there was no significant relationship or influence between Idiosyncratic Risk and an increase or decrease in firm value.

To find Idiosyncratic Risk, in this study using the CAPM model, namely:

\[
R_{i,t} = \alpha_{i,t} + \beta_{i,t} \cdot (R_{m,t} - R_{f,t}) + \varepsilon_{i,t}
\]

Information :

- \(R_{i,t}\) = Individual stock yield
- \(\alpha_{i,t}\) = Stock constant i at time t
- \(\beta_{i,t}\) = stock beta coefficient i at time t
- \(R_{m,t}\) = Market yield rate
- \(R_{f,t}\) = Risk-free rate of return
- \(\varepsilon_{i,t}\) = error term
The equation results obtained describe the level of other factors obtained, so that the value of non-systematic factors is measured by IVOL. The IVOL value is obtained from the root of the variance, so it can be formulated:

$$IVOL_{i,t} = \sqrt{\text{var}(\epsilon_{i,t})}$$

Source: (Berggrun, et. Al, 2016)

Industry Type

Opinion (Robert (Utomo, 2000) states that companies that are classified as high profile are companies that have a high level of sensitivity to the environment and a high level of competition. If the company has a high type of industry, the value of the company will increase. Conversely, if the company has an industry type low, the value of the company will decrease. In theory, it is explained that the type of industry has a positive relationship to the value of the company. Several studies on the effect of industry type on the value of the company. Research conducted by (Utami & Darmawan, 2018) the results of his research state that the type of industry a high company value can increase the value of the company. Research conducted by (Berggrun, et. Al, 2016) states that the type of company industry does not have a significant impact on the value of the company. To measure the type of industry can be measured by giving a score of 1 for companies with high h profile. score 0 for low profile firms (Rupley et al. (2012)

Profitability Ratio

Profitability is proxied in terms of ROA. Profitability is the company's ability to generate profits using its assets. The greater the profitability of the company, the higher the company's financial performance so that it will also have an impact on increasing the value of the company's shares. Opinion (Harahap, 2013) states that ROA is the company's ability to earn net profit from the total assets owned by the company. The lower the roa value means the company's financial performance is decreasing. So that it has an impact on the lack of investors in investment decisions in the company. So the company really needs to maintain the stability of the profits obtained.

Several studies on the effect of profitability (ROA) on firm value. This research was conducted by (Susilawati, 2012), (Murwaningsari and Firlano, 2006) whose research results state that high ROA can increase firm value. Research conducted by (Egam et al., 2017) states that ROA does not have a significant effect on firm value.

Liquidity Ratio

The company's liquidity level can be proxied in the form of Current Ratio. In the opinion of (Kasimir, 2016) states that the current ratio is to calculate the level of the company's ability to pay off its current debts that are due. The higher the value of the current ratio in a company means the better and the smaller the failure rate in paying its short-term debt. If the current ratio is too high, it will result in a lot of idle cash. A good current value should not be too high and should not be too low. Must comply with established standards.

Several studies on the current ratio to firm value. This research was conducted by (Pratama & Erawati, 2016) stating that a high current ratio can increase the value of the company. Research conducted by (Octaviani & Komalasari, 2017) states that the existing current ratio does not have a significant effect on firm value.

The hypothesis in this study is used to predict the interim outcome before conducting the study. The hypothesis in this study was made based on the theory and previous research journals. The hypotheses made in this study are as follows:

Hypothesis 1  :  Capital structure has a negative effect on company value in the energy sector of the Indonesian Stock Exchange.

Hypothesis 2  :  Idiosyncratic risk has a negative effect on company value in the energy sector of the Indonesian Stock Exchange.

Hypothesis 3  :  The type of industry has a positive effect on the value of the energy sector company on the Indonesian Stock Exchange.
Hypothesis 4: The type of industry strengthens the negative effect of capital structure on firm value in the energy sector of the Indonesian Stock Exchange.

Hypothesis 5: The type of industry strengthens the negative effect of idiosyncratic risk on the value of the energy sector company on the Indonesian Stock Exchange.

3. RESEARCH METHOD

Conceptual Framework
The conceptual framework in this research can be shown in the following figure:

![Conceptual Framework](image)

Source: Collected Research Journal, 2022

Figure 3: Conceptual Framework

Population and Sample
The population in this study were 74 energy sector companies listed on the Indonesia Stock Exchange during 2016-2020. The sampling technique used purposive sampling method. The sampling criteria are energy sector companies that have just joined in the 2016-2020 research period. Based on these criteria, the number of samples determined in this study amounted to 53 companies in the energy sector.

Operational Variables and Measurement

<table>
<thead>
<tr>
<th>Variabel Penelitian</th>
<th>Pengukuran</th>
<th>Source</th>
<th>Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Value (NP)</td>
<td>_pbv = Current Stock Price Book Value per Share</td>
<td>Ang (1997)</td>
<td>Ratio</td>
</tr>
<tr>
<td>Capital Structure (SM)</td>
<td>_der = Total Debt Total Equity</td>
<td>Ross et al., 2010</td>
<td>Ratio</td>
</tr>
<tr>
<td>Idiosyncratic Risk (IR)</td>
<td>_ri,t = αi,t + β1i,t (Rm,t − Rf,t) + β2i,t + εi,t</td>
<td>Berggrun, et. Al (2016)</td>
<td>Ratio</td>
</tr>
<tr>
<td>Industry Type (TI)</td>
<td>score 1 for high profile companies. score 0 for low profile companies</td>
<td>Rupley et al. (2012)</td>
<td>Ratio</td>
</tr>
</tbody>
</table>
Profitability (ROA) 
\[ ROA = \frac{\text{Earning After tax}}{\text{Total Asset}} \times 100\% \] (Kasimir, 2016) 

Liquidity (CR) 
\[ CR = \frac{\text{Current Asset}}{\text{Current Liability}} \times 100\% \] (Kasimir, 2016)

Data collection is carried out by downloading the 2016-2020 annual report for the energy sector of the Indonesia Stock Exchange company, www.idx.co.id or the company's official website.

Data analysis was carried out after the sample companies were collected, namely by collecting the financial statements of energy sector companies for 2016-2020. The data analysis method used in this research is descriptive analysis method and multiple linear regression analysis method with moderating effect. The software used in data processing in this study is SPSS version 21 software. The data analysis in this study is described as follows: descriptive analysis, classic assumption test, model feasibility test and using multiple linear regression analysis with moderating effect.

4. RESULTS

Descriptive Analysis

Table 2: Descriptive Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Value</td>
<td>0.6745</td>
<td>0.40988</td>
<td>265</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>1.1303</td>
<td>1.36138</td>
<td>265</td>
</tr>
<tr>
<td>Idiosyncratic_Risk</td>
<td>6.3758</td>
<td>1.71182</td>
<td>265</td>
</tr>
<tr>
<td>Type Industry</td>
<td>0.5887</td>
<td>0.49300</td>
<td>265</td>
</tr>
<tr>
<td>Capital Structure*Type Industry</td>
<td>0.7526</td>
<td>1.31389</td>
<td>265</td>
</tr>
<tr>
<td>Idiosyncratic.Risk*Type Industry</td>
<td>3.7025</td>
<td>3.31702</td>
<td>265</td>
</tr>
<tr>
<td>Profitabilitas</td>
<td>0.0363</td>
<td>0.09286</td>
<td>265</td>
</tr>
<tr>
<td>Likuiditas</td>
<td>2.2752</td>
<td>2.39914</td>
<td>265</td>
</tr>
</tbody>
</table>

Source: SPSS Data Processing, 2022

Based on table 2 shows that the firm value (PBV) of the total data of 265 issuers has an average value of 0.6745 with a standard deviation of 0.40988. The capital structure variable that is proxied by DER has a total data of 265 issuers having an average value of 1.1303 with a standard deviation of 1.36138. Idiosyncratic Risk of 265 issuers has an average value of 6.3758 and a standard deviation of 1.71182. The industrial type variable from 265 issuers has an average value of 0.5887 with a standard deviation of 0.49300. The profitability variable from the amount of data 265 has an average ROA of 0.0363 and a standard deviation of 0.09286. The company's liquidity variable from the number of issuers 265 has an average of 2.2752 and the standard deviation value is 2.39914. From these results it can be concluded that with an average value greater than the standard deviation, it can be indicated that the data used does not have data deviation. So that the data used can be said to be good data for research.

For data normality test, Multicollinearity test, and heteroscedasticity test can be said to be good data for research. This means that the results of this test have met the expected regression assumptions.

Table 3: Analysis of the Coefficient of Determination (R2)

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Adjusted R Square</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity, Idiosyncratic_Risk, Industrial_Type, Capital_Structure, Profitability,</td>
<td>0.096 or 9.6%</td>
<td>The influence of the independent variable is weak</td>
</tr>
</tbody>
</table>
Based on table 6 or the results of the coefficient of determination test, it shows that the variable value of the company is influenced by the variables of Capital Structure, idiosyncratic risk, Type of Industry, Profitability, and Liquidity of 9.6%. While 90.4% is influenced by other variables that are not included in this research model. This result can be interpreted that the independent variable used is a weak variable in predicting the dependent variable.

**Multiple Regression Analysis**

The results of multiple linear regression testing with a moderating effect in this study can be seen as follows:

\[ NP = \alpha + \beta_1 SM + \beta_2 IR + \beta_3 TI + \beta_4 SM^*TI + \beta_5 IR^*TI + \beta_6 ROA + \beta_7 CR + e \]

\[ Y = 0.533 - 0.026 SM + 0.016 IR - 0.663 IR + 0.108 SM^*TI + 0.091 IR^*TI - 0.200 ROA + 0.022 CR \]

**Table 4: Multiple Regression Analysis Test Analysis**

<table>
<thead>
<tr>
<th>Model</th>
<th>Hypothesis</th>
<th>Unstandardized Coefficients (β)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>0.533</td>
<td>0.000</td>
</tr>
<tr>
<td>Capital Structure (DER)</td>
<td>-</td>
<td>-0.026</td>
<td>0.458</td>
</tr>
<tr>
<td>Idiosyncratic Risk</td>
<td>-</td>
<td>0.016</td>
<td>0.439</td>
</tr>
<tr>
<td>Type Industry</td>
<td>+</td>
<td>-0.663</td>
<td>0.001***</td>
</tr>
<tr>
<td>Capital Structure*Type Industry</td>
<td>-</td>
<td>0.108</td>
<td>0.010***</td>
</tr>
<tr>
<td>Idiosyncratic Risk*Type Industry</td>
<td>-</td>
<td>0.091</td>
<td>0.002***</td>
</tr>
<tr>
<td>Profitabilitas (ROA)</td>
<td>+</td>
<td>-0.200</td>
<td>0.505</td>
</tr>
<tr>
<td>Likuiditas (CR)</td>
<td>+</td>
<td>0.022</td>
<td>0.050**</td>
</tr>
</tbody>
</table>

Jika: <0.01***, 0.05**, 0.10*

Source: SPSS Data Processing, 2022

Based on table 7 or the regression model equation shows that (1) a constant of 0.533 can be interpreted that by assuming other factors are fixed or zero, the firm value is 0.533. (2) the capital structure variable has a negative effect of 0.026. Idiosyncratic Risk variable has a positive effect of 0.016. (3) the industry type variable has a negative effect of 0.663. (4) the industrial type variable strengthens the positive effect of capital structure on firm value by 0.108. (5) the industrial type variable strengthens the positive effect of Idiosyncratic Risk on the firm value of 0.091. (6) Profitability has a negative effect on firm value of 0.200. (7) Liquidity has a positive effect on firm value of 0.022.

**Discussion**

Based on table 6 or can be discussed, namely (1) capital structure is not significant to firm value. These results are supported by the results of research conducted by Research conducted by Oktaviani, et., al, 2019) and (Oktrima, 2017) not significant to firm value. But contrary to the results of the study (Mudijjah, et., al, 2019) the results of his research stated that DER was significantly positive on firm value. Research by (Fajriana, 2016) DER is significantly negative on firm value. (2) Idiosyncratic Risk has a positive and significant effect on firm value. These results are in line with research conducted by (Werner, 2013) and (Zhang et al, 2016) whose research results state that Idiosyncratic Risk is significantly positive on firm value. But in contrast to the research conducted by (Fransisca, 2018), (Darmawan; 2018) and (Muhardi; 2013) the results of his research stated that Idiosyncratic Risk was significantly negative on firm value. (3) The type of industry has a negative and significant effect on firm value. This result is different from the results of research conducted by (Utami & Darmawan, 2018) whose research results state that a high type of industry can increase the value of the
company. The results of the study are also different from research conducted by (Berggrun, et. Al, 2016) which states that the type of company industry does not have a significant impact on the value of the company. (4) The type of industry strengthens the positive and significant effect of capital structure on firm value. (5) The type of industry strengthens the positive and significant effect of Idiosyncratic Risk on firm value. (6) profitability is not significant to firm value. This result is the same as the results of research conducted by (Egam, al, 2017) in his research stating that ROA is not significant to firm value. However, similar to the research conducted by (Susilawati, 2012), (Murwaningsari and Firlano, 2006) stated that ROA was significantly positive on firm value. (7) Liquidity is significantly positive on firm value. This result is the same as the research conducted by (Pratama & Erawati, 2016) which states that the current ratio is significantly positive on firm value. But it is not the same as the research conducted by (Octaviani & Komalasari, 2017) the results of his research state that the current ratio is not significant to the value of the company.

5. CONCLUSION

Based on the results of the study, it can be concluded that the capital structure has a negative and insignificant effect on firm value. Idiosyncratic Risk has a positive and significant effect on firm value. Industry type has a negative and significant effect on firm value. The type of industry strengthens the positive effect of capital structure on firm value. The type of industry strengthens the positive influence of Idiosyncratic Risk on firm value. Profitability is not significant to firm value. Liquidity is significantly positive on firm value. Suggestions for companies to increase company value are expected to consider industry type factors. Because the results of this study indicate that the type of industry can strengthen the negative effect of capital structure and idiosyncratic risk on firm value. It is recommended that further researchers are expected to add other variables that can affect the effect of firm value.

LIMITATION

Firm value is influenced by the variables of Capital Structure, idiosyncratic risk, Industry Type, Profitability, and Liquidity only 9.6%. While 90.4% is influenced by other variables that are not included in this research model which is more dominant. So it is necessary to add other factors such as other financial ratios and macroeconomic factors that can increase the value of the company.

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