THE EFFECT OF DEBT-TO-ASSET RATIO, STOCK PRICE, AND RETURN OF EQUITY ON FIRM VALUE WITH SIZE AS VARIABLE MODERATION (STUDY ON FOOD AND BEVERAGES COMPANIES 2017-2021)

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Abstract: This research aims to explain the effect of debt-to-asset ratio, stock price, and return of equity on firm value with size as variable moderation. The object study is a company food and beverages sector, that has been registered on the IDX for the 2017-2021 period. This study using Multiple Regression Analysis and Moderated Regression Analysis using the SPSS program for processing the data. The results of the study prove that DER, Stock Price, ROE, and Size have an effect on Firm Value. Variables Stock price, ROE, and firm size have a positive effect on firm value. While DER has a negative influence on firm value. Firm size can moderate the DER relationship to Firm Value but cannot moderate the Share Price to Firm Value relationship.

Keywords: DER, Stock Price, ROE, Size, PBV

INTRODUCTION

Firm value is generally related to the level of asset ownership and the potential of the company to attract investors. Firm value is believed to be able to determine the direction and strength of capital for a company's operations in the future. Almost every business entity or company has what is called corporate value. Firm value is generally related to the level of asset ownership and the potential of the company to attract investors. This is believed to be able to determine the direction and strength of capital for a company's operations in the future. Firm value is an indicator of the success managerial to manage his company and optimizing firm value is the main goal of management to give shareholder economics wealth (Jihadi et al., 2021); (Surasmi, Putra, and Yasa, 2022); (Suteja et al., 2023). Having a high stock price will make the company's value also high, and can increase market confidence. Not only on the performance but also on the company's growth in the future. Firm value can be influenced by several factors, related to leverage, profitability, and firm size (Rachmat et al., 2019).

Managers could manage to maximize firm value with external funds called leverage (Zamzamir, Haron, and Othman, 2021). It was explained that if the level of a company's leverage ratio is high, it means that the company will withhold the company's operating profit so that it can be used to pay off the company's debts. Leverage has an impact on the value of the company (Laguir et al., 2018). Leverage can be a proxy for debt ratio, it is a ratio that measures how much the company assets are financed by a creditor (Mukhtasyam, Pagalung, and Arifuddin, 2020).
Stock prices can have an impact on the company's financial performance. Interaction between seller and buyer to form the best price for the stock (Luckieta, Amran, and Alamsyah, 2020). The high stock price indicates that the company can run the company optimally so that it can increase company profits. The stock prices can change up or down in a matter of time so fast linear with profitability (Rusdiyanto et al., 2020). Shareholders get maximum wealth if stock prices rise (Pascareno, 2016).

Profitability can be measured by Return On Equity (Fekadu Agmas, 2020). It is the ratio to find out the amount of return given by the company for every rupiah of capital from the owner. This ratio shows management’s success in maximizing the rate of return to shareholders and indicated that performance improvements increase the stock price (Kalash, 2021).

Firm size is one of the variables that can be considered the firm value (Ispriyahadi and Abdulah, 2021). Company size is also considered a reflection of the total assets of the company. Firm size can be explained by the size of a company based on total assets (Pohan, 2020). Size is one of the variables that can determine the value of a company. Company size is also considered a display of the total assets owned by the company.

**Literature Review and Hypothesis Development**

**Trade Off Theory**

The most important thing is that the higher the debt, the higher the possibility of a company going bankrupt. Where the high debt will have an impact on the higher interest that must be paid so the possibility of not paying the interest is also getting bigger. In this theory, the value of companies with debt will be higher by increasing debt. However, the value starts to fall at a certain level, or in other words, the company will have debt up to a certain debt level, at that level the company’s debt will be at an optimal level. This theory explains that companies tend to use external funding or debt to meet the adequacy of their company’s operational funding. Companies that do not use debt in their capital will pay more taxes than companies that use debt (Wiagustini et al., 2017).

**Signaling Theory**

Signaling theory is the development of a model where the use of debt is used as a signal given by managers to the market. Debt is to serve as a more credible signal. Companies that dare to increase their debt can be recognized as companies that believe in the company’s prospects. Managers hope that investors can catch signals indicating that the company has good prospects, so that debt becomes a signal for future performance (Ispriyahadi and Abdulah, 2021).

**Debt to Equity Ratio (DER) to Firm Value (PBV)**

Companies do not always have sufficient internal funds to meet operational needs and budgets so alternative external funding through debt is the most frequently used by companies. The higher the DER, the greater the company's dependence on external parties and the greater the debt burden and interest costs that must be paid by the company. With large interest costs, the profitability decreases, so the rights of the shareholders also decrease. The Hypothesis can be formulated as follows:

\[ H_1: \text{DER has a negative effect on firm value (PBV)} \]

**Stock Price (SP) to Firm Value (PBV)**

The stock price is an indicator that affects the value of the company. If the stock price is high, the value of the company will also be higher. High stock prices reflect that the company's performance is in good condition, and creates good corporate value as well so that it can affect investors' interest in investing in the company. The hypothesis can be formulated as follows:

\[ H_2: \text{DER has a positive effect on firm value (PBV)} \]

**Return on Equity (ROE) to Firm Value (PBV)**

The higher the ROE, the company will experience an increase in profits. High profits cause the company's share price to rise. An increase in the company's stock price can increase the value of the company. The hypothesis can be formulated as follows:

\[ H_3: \text{ROE has a positive effect on firm value (PBV)} \]
Firm Size Moderates the Relationship between Debt Equity Ratio (DER) and Firm Value (PBV)

Large companies find it easier to get external funding with debt because creditors see that large companies have sufficient assets as debt guarantees. The hypothesis can be formulated as follows:

\[ H_4: \text{Firm size moderates the DER relationship to firm value (PBV)} \]

Firm Size Moderates the Relationship between Stock Price (SP) and Firm Value (PBV)

Large companies have good and high stock prices. The higher the stock price, the higher the profit for shareholders because with increased demand for shares, the value of the company also increases. So that it can affect the increase in company value. The hypothesis can be formulated as follows:

\[ H_5: \text{Firm size moderates the Stock Price relationship to firm value (PBV)} \]

Firm Size Moderates the Relationship between Return on Equity (ROE) and Firm Value (PBV)

The larger the size of the company, the easier it is for the company to enter the capital market and obtain high investment from investors, which can affect the rate of return that the company will receive. The increase in investment results in an increase in the value of the company. The hypothesis can be formulated as follows:

\[ H_6: \text{Firm size moderates ROE relationship to firm value (PBV)} \]

Based on the description above, the theoretical framework can be arranged as follows:

- **Independent Variable**
  - **Leverage** \((X_1)\)
  - **Stock Price** \((X_2)\)
  - **Return on Equity** \((X_3)\)

- **Dependent Variable**
  - **Firm Value** \((Y)\)

- **Moderator Variable**
  - **Firm Size** \((Z)\)

**Research Method**

**Dependent Variable**

**Firm Value** \((Y)\)

Firm value is an indicator of the success managerial to manage his company. Firm value can be proxy with Price Book to Value (PBV), which is a ratio of the market value of a share, is compare the market price per share to the book value per share (Jihadi et al., 2021). Measurement of this ratio is:

\[
PBV = \frac{\text{Market price per share}}{\text{Book Value}}
\]

**Independent Variable**

**Leverage** \((X_1)\)

Maximize firm value with external funding called leverage (Zamzami, Haron, and Othman, 2021). Leverage can be proxy with Debt to Equity Ratio (DER), which is a measure to show how many companies are financed (Sukma, Nurtina and MH Nainggolan, 2022). Measurement of this ratio is:

\[
DER = \frac{\text{Total liabilities}}{\text{Total Equity}}
\]
Stock Price ($X_2$)

Stock Price is about the price of a stock. Interaction between seller and buyer to form the best price for a stock (Luckieta, Amran, and Alamsyah, 2020). Shareholders get maximum wealth if stock prices rise (Pascareno, 2016). Measurement of this ratio is:

$$SP = \ln \text{Closing Price}$$

Profitability ($X_3$)

Profitability can be measured by Return On Equity (Fekadu Agmas, 2020). It is determined as the ratio of earnings after tax to average total equity (Rahman and Howlader, 2022). ROE is the independent variable ($X_3$) for this research. Measurement of this ratio is:

$$ROE = \frac{EAT}{Total\ Equity}$$

Moderate Variable

Firm Size ($Z$)

Firm size is one of the variables that can be considered the firm value (Ispriyahadi and Abdulah, 2021). It takes the natural logarithm of the book value of total assets (Rahman and Howlader, 2022). Firm Size is a moderate variable ($Z$) for this research. Measurement of this ratio is:

$$SIZE = \ln Total\ Assets$$

Population and Sample

The population in this study is 20 Food and Beverages that have been registered on the IDX for the 2017-2021 period. By using the purposive sampling method obtained from the website official IDX. Criteria samples are companies that provide complete financial reports according to the required variables. So obtained 20 companies that match the criteria.

Findings And Discussion

Table 1. Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-1.671</td>
</tr>
<tr>
<td></td>
<td>DER</td>
<td>-0.014</td>
</tr>
<tr>
<td></td>
<td>STOCKPRICE</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>ROE</td>
<td>.201</td>
</tr>
<tr>
<td></td>
<td>Ln_SIZE</td>
<td>.455</td>
</tr>
</tbody>
</table>

Based on Table 1. explained that:

1) Constant (score absolute Y) as big -1.671. If the variable is independent and permanent or nothing is changed so firm value is worth -1.671

2) DER regression coefficient has a value of -0.014. If the other independent variables are fixed and the DER increase of 1 unit means that the value of the firm will decrease as much as 0.014

3) STOCKPRICE regression coefficient is 0.000. If the other independent variables are fixed and DER finds an increase of 1 unit the value of the firm will find an of as much as 0.000

4) The regression coefficient ROE is 0.201 which means that if the other independent variables are fixed and the ROE finds an increase of 1 unit means the firm value will find an increase of as much 0.201

5) The regression coefficient of Size is 0.455 if the other independent variables are constant and Size gets an increase of 1 unit, meaning the firm value will get increase as much as 0.455
Based on Table 2, explained that Moderation regression coefficient 1 has a value of 0.005 if the other independent variables are fixed and Moderation 1 gets an increase of 1 unit, meaning the firm value will get increase as much as 0.005.

Based on Table 3, explained that Moderation regression coefficient 2 has a value of -0.001 means if the other independent variables are fixed and Moderation 2 gets an increase of 1 unit, meaning the firm value will get decline as much as 0.001.

Based on Table 4, explained that Moderation regression coefficient 3 has a value of 0.035, meaning that if the other independent variables are fixed and Moderation 3 finds an increase of 1 unit, meaning that the firm value also increases increase as much as 0.035.

Based on Table 5, the determination is shown in Adjusted R Square worth 0.674 So it can be interpreted that all the independent variables consisting of DER, ROA, and stock prices can explain the company value of 67.4%.
Based on Table 6, the moderation Determination Coefficient of 1 is shown in Adjusted $R^2$ with a score of 0.393. This means that the variables DER, SIZE, and Moderation 1 can explain firm value as 39.3%.

Based on Table 7, Moderation Coefficient Determination 2 showed an adjusted $R^2$ with a score of 0.169. So it can be interpreted that the variables STOCKPRICE, SIZE, and Moderation 2 can explain Firm Value as 16.9%.

Based on Table 8, the moderation Determination Coefficient of 3 is shown in Adjusted $R^2$ with a score of 0.433. Meaning variable ROE, SIZE, and Moderation 3 are capable of explaining Company Values as big 43.3%.

Based on the T-Test table, the results are intended to see the impact of individual variable independent as well as moderation in the explained variation variable bound. Following explanation regarding with results of Test Q in the study:

1) DER to Firm Value
   From the calculation, a significant value is obtained with a value of 0.000 < 0.05 and Unstandardized B has a value of -0.021 so the conclusion is that DER has a significant negative effect on the value of the company, meaning the first hypothesis is rejected.

2) Stock Price to Firm Value
   From the calculation, it is obtained that the significant value is 0.002 < 0.05 and Unstandardized B is worth 0.000 so the conclusion Stock Price has a significant positive impact on a company, which means the second hypothesis is received.
3) ROE to Firm Value

From the calculation, the significant value is 0.000 < 0.05 and Unstandardized B is worth 0.000 so in conclusion, ROE has a significant positive impact on the value of the Firm, which means the third hypothesis received.

4) Size to Firm Value

From the calculation, it is obtained that the significant value is 0.001 < 0.05 and Unstandardized B has a value of 0.455 so it can be concluded that Size has a significant positive impact on the value of the firm, which means the fourth hypothesis is received.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.944</td>
<td>1.397</td>
</tr>
<tr>
<td>DER</td>
<td>-.049</td>
<td>.026</td>
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<tr>
<td>Ln_SIZE</td>
<td>.497</td>
<td>.199</td>
</tr>
<tr>
<td>MODERATION1</td>
<td>.001</td>
<td>.003</td>
</tr>
</tbody>
</table>

Based on Table 10 explained that a significant value is obtained with a value of 0.004 < 0.05 and Unstandardized B has a value of 0.001 so it can be concluded that Size can moderate the effect of DER on the value of the firm, meaning the fifth hypothesis is received.

<table>
<thead>
<tr>
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<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.144</td>
<td>2.177</td>
</tr>
<tr>
<td>STOCK PRICE</td>
<td>-.005</td>
<td>.033</td>
</tr>
<tr>
<td>Ln_SIZE</td>
<td>.351</td>
<td>.176</td>
</tr>
<tr>
<td>MODERATION2</td>
<td>-.001</td>
<td>.002</td>
</tr>
</tbody>
</table>

Based on Table 11 explained the significant value is 0.771 > 0.05 and the Unstandardized B value is -.001 so the conclusion Size cannot moderate influence Stock Price to Firm Value, meaning the sixth hypothesis is rejected.

<table>
<thead>
<tr>
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<th>Standardized Coefficients</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.162</td>
<td>1.213</td>
</tr>
<tr>
<td>ROE</td>
<td>-.156</td>
<td>.195</td>
</tr>
<tr>
<td>Ln_SIZE</td>
<td>-.023</td>
<td>.177</td>
</tr>
<tr>
<td>MODERATION3</td>
<td>.034</td>
<td>.027</td>
</tr>
</tbody>
</table>

Based on Table 12 explained the significant value is 0.118 > 0.05 and the Unstandardized B value of 0.034 so in conclusion, the stock price cannot moderate the effect of ROE on Firm Value, which means the seventh hypothesis is rejected.

CONCLUSION

The results of the study prove that DER, Stock Price, ROE, and Size affect Firm Value.
Variables Stock price, ROE, and firm size have a positive effect on firm value. While DER has a negative influence on firm value. Firm size can moderate the DER relationship to Firm Value but cannot moderate the Share Price to Firm Value relationship.

Limitation
This research also has several useful limitations that can be developed by further researchers, the small number of samples and this research acquisition of data is secondary so it is very dependent on reports of company finances listed on the IDX. In this study, stock prices do not consider the economic indicator variables that will affect stock prices such as currency exchange rates, interest rates, and inflation. So that the financial information is still general in nature.

Suggestion.
Based on the results of the research, the researchers provide suggestions for companies and investors should pay more attention to the value of ROE, Stock Price, and Size as if gets higher ROE, Stocks Price, and Firm Size, the Firm Value is also high. The next researcher should use other variables as moderating variables in moderating DER, Stock Price, and ROE to Firm Value. Besides that, for researcher which interested take an theme should increase the number of samples, extend the observation period, add other independent variables such as NPM, ROA, PER, MBV, and EPS, and research other research objects such as sector manufacturing, tourism, transportation, and another sector.

REFERENCES


