The Mediating Effect of Company Performance on the Relationship Between Capital Structure and Firm Value in Food and Beverage Industry

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Abstract: In determining investment decisions, investors need to consider firm value which will describe the welfare that the company is able to provide. The purpose of this research is to prove whether firm performance mediates the effect of capital structure on fluctuations in firm value. The analytical technique used is linear regression analysis and Sobel test with the research sample being 18 food and beverage sub-sector companies listed on the Indonesia Stock Exchange (IDX) in 2016-2020. The results of this study indicate that the capital structure has a negative effect on changes in firm value and firm performance. Changes in company value are not partially affected by company performance. Simultaneously capital structure and company performance have a significant effect on firm value. The results of the study prove that the effect of capital structure on firm value is not mediated by firm performance.

Keywords: capital structure; company performance; firm value; stock price

Introduction

The capital market is the place where stock investment transactions occur, of which 740 emiten have registered their share ownership on the Indonesia Stock Exchange. Each company will compete with each other to attract public investment. The company's performance is expected to increase with the addition of funds from the issuance of shares, these funds are expected to be managed properly to generate profits and provide returns for investors. This research needs to be conducted to know how well the company's performance has a mediating effect on the correlation between capital structure and firm value within the food and beverage companies.

Based on figure 1, the volume of buying and selling shares for the period 2018-2020 tends to increase by 0.89% in 2019 and increase again by 7.57% in 2020. However, it is different for companies in the consumer goods sector, which from 2018 to 2020 continued to increase. decrease. In 2019, the share of trade volume in the consumption
goods sector decreased by 19.23% and in 2020 it fell again by 33.06%. A total of 39.21% share of trade volume in the consumer goods sector was supported by the F&B subsector (Indonesia Stock Exchange, 2020).

The trading volume of capital market shares is influenced by the investment interest of investors in a company. In making investment decisions, investors are interested in paying attention to the value of each company as an important key factor. Firm value is able to show the welfare provided by the company to investors which can be reflected in the stock price (Husnan, 2001). When viewed from the stock price trend of F&B companies in 2016-2020, it shows a tendency to increase, but in 2020 the stock price decreased by 8.26% (Indonesia Stock Exchange, 2020). In addition, if we look at the export value, in 2020 the export volume of the food and beverage industry decreased by 6.42% or around 2.7 million tons (KataData, 2021).

Firm value can be used as an important indicator in assessing and evaluating company growth, because firm value is an important basis for the company’s achievement from an increase or decrease in stock prices (Ovami & Nasution, 2020). The value from each company is shown by Price to Book Value (PBV), because PBV can assess the company’s potential to optimize invested capital. According to Husnan & Pudjiastuti (2004), the bigger the PBV ratio, is better for the company to develop. Price Book Value can compare the market value as seen from the stock price with the nominal value of the shares. Main difference between the market and the nominal value will show the true firm value in the perspective of investors. The book value share of the company is relatively stable and can be compared between various similar companies so that it can be a signal for investors about firm value (Yuliyanti, 2019).

Fluctuations in firm value are formed due to several factors, one of which is the capital structure. The financial condition of a company is directly affected by the proportion of debt and capital determined by managerial, because all operational activities cannot be separated from funding needs. The capital structure is able to maximize profits by minimizing the business cost so that the company is able to maintain business continuity (Brigham & Houston, 2014). The trade-off theory provides the view that the optimization of firm value can be done with high capital structure, as long as the company can balance the risk and return.

The capital structure also has a major role in achieving company result which will be used by management as a consideration in making policies in the future. This is the composition of the company’s finance from debt, it can also be related to the leverage ratio. So that debt becomes a complex capital structure because the company’s funding also comes from external loans which will be a strategy to improve company performance (Sutriningsih et al., 2019). Decisions to change capital structure will affect the money flow which has an impact on company performance.

Company performance will show the effectiveness of creating profits that can be achieved by the company from the management of its assets, where assets are the result of company funding or the composition of debt and capital (Adya & Sampurno, 2011). The increase in profits will increase the level of trust that investors have in companies that are considered to have good prospects. Based on signaling theory, if there is an increase in profits, the response given by investors will be positive, resulting in an increase in firm value. According to information asymmetry theory, companies that have good prospects will choose to get new capital or funding using debt rather than issuing new shares. DER can show the amount of debt used for company activities (Adita & Mawardi, 2018).

Previous research by Hirdinis (2019) gives the result that firm value is positively and significantly affected by capital structure. However, these results contradict the research by Diana Permatasari dan Azizah (2018) that changes in capital structure do not contribute to fluctuations in firm value. Furthermore, research from Kristianti (2018) increasing
company performance is positively and significantly influenced by capital structure, but research by Komara et al. (2016) shows a negative value of capital structure on company performance. Based on research Suranto et al. (2017), firm value fluctuation is influenced by company performance, besides that firm performance and capital structure can affect firm value simultaneously. From the research of Miftahulani dan Andayani (2018), company performance has a mediate effect to the capital structure on changes in firm value.

**Theoretical Foundation**

**Firm Value**

Firm value is a measure of welfare that the company can provide to shareholders. Firm value can be explained as the perception given by investors to the company described in the stock price (Laksitaputri, 2012). According to Meidiawati dan Mildawati (2016), firm value is formed by firm size, profitability, dividend policy, company growth, and capital structure. Firm value in this research is defined by PBV, the PBV ratio will show a potential trend in stock prices and provide a view of whether the stock price is undervalued or overvalued between companies in the same sector. (Beliani & Budiantara, 2015).

**Capital Structure**

In making funding decisions, management should consider all the benefits and costs that will be received from the selected funding source. Setiawati et al. (2015) defines this as determining the composition of debt and internal capital in its use for company operations. Capital structure is delegated by debt to equity ratio, a measurement indicator to find out how much own capital can pay off the company's total liabilities or debts (Sudaryanti & Sahroni, 2016). Thus, showing the size of the firm's debt which has an effect on the costs to be borne by the enterprise. This structure becomes optimal if the composition of funding can minimize the cost of capital, so as to optimize firm value (Andayani & Suardana, 2018).

**Modigliani-Miller Theory**

Franco Modigliani and Merton Miller give the opinion that in conditions of perfect market, there is no influence between funding decisions on the formation of firm value because it only depends on future earnings and business risk as measured by the standard deviation of EBIT. (Modigliani & Miller, 1958). However, Modigliani & Miller changed their assumptions because no company operations were tax-free in 1963. Modigliani dan Miller (1963) states that the use of debt will encourage tax savings so that the firm value will be maximized.

**Agency Theory**

Agency relationship is a contract that delegates authority over the principal to agents representing them in decision-making (Jensen & Meckling, 1976). If management takes a bigger risk project with a higher rate of return, the company will increase the amount of debt above the creditor's estimate, thereby increasing financial risk and having the impact of lowering firm value. Thus, it can be summarized that firm value will decrease when the company has high debt.

**Pecking Order Theory**

Myers & Majluf (1976) sparked the pecking-order theory with the view of company management avoids external funding that can make companies subject to capital markets and funding decisions are not directed at maximizing shareholder wealth. Pecking order views profitability and debt ratio has a negative connection, which indicating if the company can make profits increase, the company is able to fill operational needs with internal funding and reduce the amount of debt.

**Company Performance**

Sudiyatno (2010) defines company performance as the result of company policies in evaluating the achievement of company goals which are to increase company value and provide welfare for shareholders. The company’s performance will show the management’s ability in the enterprise's operations to make a return. Company
performance is measured by ROA which provides a comparison of net profit from the company's operations with total assets which will show the efficiency of assets in creating profits. ROA was chosen because it is able to show the effectiveness from operations within the company with good asset management, in which the assets are the result of debt and equity funding. A positive ROA indicates that the company's operations are able to create profit (Ardianingsih & Ardiyani, 2010).

**Signalling Theory**

Financial information provides information, records, and views on the state of the company including developments from the past, current conditions, and the survival of the company (Novalia dan Nindito, 2016). If the signal given by the company is considered to have positive development prospects, it will increase the attractiveness to invest. Increasing the performance can be a positive signal that will maximize the value.

**Capital Structure on Firm Value**

Husnan & Pudjiastuti (2004) explains capital structure as the proportion between the use of debt and internal capital in covering operational costs in financial structure. trade-off theory gives the view that increasing the use of debt can optimize firm value, because there are tax savings benefits. So that the capital structure with a larger DER indicator supports an increase in firm value through stock prices. changes in firm value are affected by the structure, in line with research Hirdinis (2019).

H1: Capital structure affects firm value

**Capital Structure on Company Performance**

Enterprise’ performance shows the capacity of management in operational activities to create returns for shareholders. Brigham & Houston (2014) states that based on the trade-off theory, debt could reduce tax burden. So, the existence of debt can increase profitability as one of the indicators of performance appraisal. This supports research by Kristianti (2018) which shows that company performance is influenced by the composition of the capital structure determined by management.

H2: Capital structure affects the company’s performance

**Company Performance on Firm Value**

Financial condition of the company can be assessed by measuring financial ratios. Profitability is one of the important ratios for investors to assess the company’s potential. Signal theory assumes if the business is able to create higher profits, it will create a good sign for investors because it is considered capable of providing high returns. This influence supports the research by Suranto et al. (2017) gives the implication that company performance contributes to fluctuations in firm value. If the profit is higher, the higher the firm value.

H3: Company’s performance affects firm value

**Capital Structure and Company Performance on Firm Value**

Meidiawati & Mildawati (2016) in his research explains that there are several determinants of firm value, two of which are capital structure and profitability that can be used as benchmarks for evaluating company performance. Optimal capital structure will reduce the cost of using debt and maximize firm value. While the performance of the company as a proxy for ROA shows capabilities of the company to create profits, which high profits will increase returns and create high company value as well. If the capital structure and company performance is higher, the higher the firm value.

H4: Capital structure and company performance affect firm value

**Capital Structure on Firm Value through Company Performance**

Sudiyatno (2010) defines company performance as the result of company policies in evaluating the achievement of company goals which are to increase company value and provide welfare for shareholders. Improving company performance requires an optimal capital structure so as to increase
The Mediating Effect of Company Performance

profitability and optimize value. The capital structure that is achieved optimally is being method, which was done by studying documents to get information.

Table 1. Operational Definitions and Research Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definitions</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Value</td>
<td>The perception that investors give to the company described in the stock price (Laksitaputri, 2012).</td>
<td>PBV = Stock Price / Book Value</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>Comparison of debt and capital in its use for company operations (Setiawati et. al., 2015).</td>
<td>DER = Total Liability / Total Equity</td>
</tr>
<tr>
<td>Company Performance</td>
<td>The results of company policies in assessing and evaluating the achievement of company goals (Sudiyatno, 2010).</td>
<td>ROA = Net Profit / Total Asset</td>
</tr>
</tbody>
</table>

H5: Effect of capital structure on firm value can be mediated by company performance.

Figure 2. Research Framework

Research Method

Population and Research Sample
The population of this research is all food and beverage companies with a total of 32 companies that have been listed on the Indonesia Stock Exchange in 2016-2020. This research uses a purposive sampling method to determine the sample with 2 criteria, namely food and beverage companies listed on the Indonesia Stock Exchange before 2016 and announcing financial statements from 2016 to 2020 consecutively. Thus, 18 companies were obtained as research samples.

Data Collection
Secondary data used in this research sourced from the company’s financial statements and annual reports that have been published on the Indonesia Stock Exchange during the five-year research period. Data was collected by using the documentation study

Operational Definitions and Research Variables
Firm value in this study is used as the dependent variable, the independent variable uses capital structure variable, and company performance is used as an intervening variable that provides a mediating effect. The operational definition of research is described in Table 1.

Analysis Techniques
Regression analysis technique was used to test the effect of independent variables on the dependent variable in this research. Meanwhile, to test the mediation ability of the company performance, this research uses the Sobel test. Descriptive analysis and classical assumption test were conducted before hypothesis testing. Hypothesis testing was carried out with a significance level of 5% (p <0.05), data processed with IBM SPSS version 25 software. Meanwhile, to testing the mediation effect, the Sobel test was carried out via https://quantpsy.org/sobel with the basic formula:

\[ S_{ab} = \sqrt{b^2s_a^2 + a^2s_b^2 + s_a^2s_b^2} \]

Information:
- \(a\) = the coefficient of influence of the independent variable on the mediating variable;
- \(b\) = the coefficient of the influence of the mediating variable on the dependent variable with the independent variable;
- \(S_a\) = standard error from \(a\);
- \(S_b\) = standard error from \(b\)

The calculated t-value will be compared with the t-table value obtained at 1.665, if the t-count value is >1.665 then there is an influence between variables. Meanwhile, the
calculated F value in the multiple regression test will be compared with the F table value of 3.115, if the calculated F value is > 3.115 then there is a simultaneous effect.

**Results and Discussions**

The study used cross section data in the 2016-2020 research period with a research sample of 18 food and beverage companies, so that 90 data were obtained to be observed, the results of descriptive analysis are shown in Table 2.

Based on Table 2, from 90 data on 18 companies it can be seen that the firm value as measured by PBV has an average value is 0.8941 with a standard deviation is 0.75924, the lowest value of the firm value variable at -2.13 and the highest value is 2.68. Then, on the capital structure as proxied by the DER indicator, the average value at 4.7973 with a standard deviation is 8.00393 and has the lowest value at -0.33 and the highest value is 42.80. Meanwhile, the company performance variable as measured by the ROA indicator, obtained an average value is 9.1811 with a standard deviation is 13.41446 which has the highest value at 60.72 and the lowest value at -12.10.

**Table 2. Descriptive Statistics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviasi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Value</td>
<td>90</td>
<td>-2.13</td>
<td>2.68</td>
<td>.8941</td>
<td>.75924</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>90</td>
<td>-0.33</td>
<td>42.80</td>
<td>4.7973</td>
<td>8.00393</td>
</tr>
<tr>
<td>Company Performance</td>
<td>90</td>
<td>-12.10</td>
<td>60.72</td>
<td>9.1811</td>
<td>13.41446</td>
</tr>
</tbody>
</table>

In the classical assumption test, initially the data was not normally distributed, then the researchers removed 11 outlier data that were considered deviant so that the results obtained were 79 processed data. After removing the outlier data, the Asymp value. Sig 0.063 > 0.05 which indicates the data is normally distributed. Then, in the linearity test, all relationships between variables have a linearity value <0.05, which indicates that there is a linear relationship. The multicollinearity test showed that all independent variables had a tolerance value is 0.672 > 0.10 and the VIF value was at 1.488 < 10, so there was no multicollinearity. The heteroscedasticity test showed that there was no heteroscedasticity with a sig value > 0.05.

Based on Table 3, the capital structure variable has a negative effect on changes in firm value as shown by a significance value is 0.008 < 0.05 and the t value is -2.721 > 1.665. Negative and significant influence is also given by the capital structure variable on the company performance shown by the value of t-count -4.624 > 1.665. The result of the regression analysis proves that fluctuations in firm value are not influenced by company performance, with the sig value being obtained at 0.176 > 0.05 and the t-count value is 1.366 <1.665. Meanwhile, the capital structure and company performance are able to simultaneously affect the firm value with the sig value being at 0.030 < 0.05 and the F count at 3.667 > 3.115.

In testing the mediating ability of company performance on the effect of capital structure on fluctuations in firm value uses the Sobel test, where the number required is the value of the coefficient and the Standard Error obtained through the results of regression analysis. The Sobel test framework is shown in Figure 3, then the Sobel test is carried out using the [https://quantpsy.org](https://quantpsy.org) site. The results of the Sobel test obtained that the t-count is at -1.293 <1.665 and the p -value is at 0.196>0.05, from these results indicate that the effect of capital structure on firm value fluctuations cannot be mediated by company performance.

**The Effect of Capital Structure on Firm Value**

There is a negative effect given by the capital structure on the value of food and beverage companies. The results of the study contradict the Modigliani-Miller theory with...
taxes, which this theory ignores agency costs and financial risk. Possible to avoid external funding if company profits increase (Myers & Majluf, 1976). The

### Table 3. Regression Analysis Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Firm Value</th>
<th>Company Performance</th>
<th>Simultaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>Sig</td>
<td>t-test</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>-0.850</td>
<td>0.008</td>
<td>-2.721</td>
</tr>
<tr>
<td>Company Performance</td>
<td>0.035</td>
<td>0.176</td>
<td>1.366</td>
</tr>
<tr>
<td>Sig F</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS version 25 (2021) data processing

Research results support the agency theory which states that an increase in debt can cause firm value to decrease because it can be a big risk that threatens the development of the company (Jensen & Meckling, 1976). The research results obtained do not fully support the research by Hirdinis (2019) that changes in firm value are positively and significantly affected by the capital structure. The result shows that investors do not only use technical analysis by looking at historical stock prices in making investment decisions, but also perform fundamental analysis by looking at the company’s funding structure. The composition of debt that exceeds its own capital will cause the company to have a large burden and risk, so that it can reduce investor’s trust.

### The Effect of Capital Structure on Company Performance

In food and beverage companies, company performance fluctuations are negatively affected by capital structure. The results obtained support the pecking-order theory which triggers a negative influence between capital structure on company performance, management will try as much as possible to avoid external funding if company profits increase (Myers & Majluf, 1976). The results of the study do not fully support the research of Kristianti (2018), but support the research by Komara et al. (2016) who shown achievement of company performance is negatively and significantly affected by capital structure, with the assumption that additional debt will increase interest expense and reduce income. The use of debt generally provides a tax benefit on interest payments. However, too much debt, namely when unbalanced the interest expense with the rate of return, can be a risk for the company causing losses and lowering the company’s performance.

### The Effect of Company Performance on Firm Value

This research shows that in food and beverage companies, fluctuations in company value are not influenced by company performance. The results contradicted research by Suranto et al. (2017) which explains a positive influence between company performance on firm value. Meanwhile, this research does not support the signal theory which states that an increase in profit gives a positive signal that can maximize investor trust. From this research, it can be proven that profit is not the only factor that affects company performance.
concern of investors, but there are other factors to see the value of the company. This result also supported because food and beverage companies are included in the type of fast-moving company with fast product turnover. In general, investors will view good stock performance as showing good company performance because good stock performance describes a company that performs well and is able to provide high returns. However, based on this research, the increase in firm value is not necessarily in line with company performance fluctuations. This is because the increase in performance is not always due to an increase in profit, but can be caused by a decrease in assets.

The Effect of Capital Structure and Company Performance on Firm Value

From research conducted on food and beverage companies, simultaneously firm value is influenced by company performance and capital structure. Basically, capital structure is the key to determining the composition of managed funds for the company's operations to create high profits and returns for investors. Company performance is the result of implementing management policies and evaluation tools for achieving company goals in an effort to increase company value (Sudiyatno, 2010). Researchers obtained results that support previous research by Suranto et al. (2017) explains that the formation of firm value is influenced by the company performance and capital structure simultaneously with the object of the banking company.

The Mediation Effect of Company Performance

This research proves that in food and beverage companies, the effect of capital structure on firm value cannot be mediated by company performance. Results obtained are contrary to previous research by Miftahulami & Andayani (2018) which gives the result that the effect of capital structure on firm value can be mediated by company performance. In the context of research on food and beverage companies, fluctuations in firm value are not affected by company performance. Meanwhile, capital structure is the key to improving company performance and firm value. Maximizing the performance and value of the company can be done by reducing debt in the composition of the capital structure. In addition, the results of the regression test show that the dominant influence on firm value fluctuations is owned by the capital structure, which exceeds the influence given by the company's performance.

Investors will view companies that have a high DER ratio as risky and are considered to have unhealthy financial performance, because the internal capital is not able to cover all the debts so that there will be a risk of bad credit and bankruptcy. This research shows that in food and beverage companies, good stock performance does not necessarily describe good company performance. Thus, showing that the signal given by the company with an increase in company performance is not always noticed by investors, because the company's financial condition as indicated by the capital structure is more important to assess the company's prospects.

Conclusions

This research proves that in the F&B companies that are listed on the IDX, firm value fluctuations are significantly affected by capital structure. Partially, changes in company performance are negatively affected by capital structure. Then, changes in firm value are not affected by company performance. Simultaneously, the movement of F&B firm value is influenced by the company performance and capital structure. Meanwhile, the performance is not able to provide a mediating effect on the impact of capital structure on fluctuations in stock.

Researchers give advice to food and beverage companies that want to increase the value can be thoughtful to determining the composition of the capital structure by minimizing the use of debt. For investors, researchers suggest that before investing, investors can analyze the fundamentals, especially the composition of the capital structure. For further research that will raise the topic of research on firm value, it can use
The mediating effect of company performance and other factors can be studied to understand how different objects or expand the scope of the sample so that the findings are more varied and can be considered as investment material for investors.

The limitation in this study is that the researcher only uses internal factors that affect firm value as research variables, so they are not able to explain the indicators that shape the movement of company value in the F&B from various perspectives, both internal and external to the company.

References


