CAPITAL STRUCTURE AND ITS EFFECTS ON FIRM VALUE WITH FINANCIAL PERFORMANCE AS INTERVENCING VARIABLE IN 2014-2018 (CASE ON MANUFACTURING COMPANIES SPECIALIZING ON CHEMISTRY INDUSTRY)

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KeyWords
Capital structure, debt to assets ratio, debt to equity ratio, financial performance, firm value, liabilities, manufacturing companies, price book value, profitability

ABSTRACT
This study aims to determine the effect of capital structure on firm value through financial performance studied in the manufacturing companies in the chemical industry sub-sector for the period 2014-2018. This research is a quantitative descriptive study with the population of all chemical industry sub-sector manufacturing companies listed on the Indonesia Stock Exchange. The independent variable of this study is capital structure measured using DAR and DER indicators while the dependent variable is the firm value measured by PBV, financial performance as an intervening variable measured by ROA and ROE. Data will be analyzed descriptively and analyzed using structural equation modeling (SEM). The results of this study are that there is no significant effect between capital structure on financial performance, while the effect of capital structure on firm value has a significant positive relationship. But if the effect of capital structure on firm value is mediated by financial performance, then there is no significant effect.
Introduction

In managing a business, we need company capital, which can be sourced from external parties or from our own equity. The strategy in determining capital structure is very important because if we use excessive debt but it is not proportional to the profit it will trouble the company later. Capital structure is the total proportion of capital that is permanent and long-term as indicated by debt to external parties and equity (Horne, 2013). External parties are banks, investors in the capital market, suppliers of raw materials, and individuals.

Companies going public who want to increase their capital for business development, they can get funding from the public through the capital market. The company (the issuer) will sell part of its shares to the public, of course, investors who invest in the company will get a profit share if the company makes a profit. The price per share for each company is different, the higher the stock price, the higher the firm value for investors. According to Sartono (2010) firm value is the price that investors are willing to pay if a company is sold. If the company offers shares to the public then the firm value will be reflected in the share price. So with an increase in stock prices makes the firm value high. Capital structure shows the use of debt to finance its investment, then by only looking at the company's capital structure, investors can know the scale between risks and return (Riyanto, 2012).

To find out the level of security in investing in a company, investors can see the company's financial performance several previous periods. According to Sucipto (2003) financial performance is the determination of certain measures that can assess the success of an organization or company in earning profits. Financial performance can be observed from its profitability ratio measured by two indicators, namely return on assets (ROA), and return on equity (ROE). The condition of financial performance which tends to rise will make the value of the company also increase, because it makes a sense of security and benefits for investors so that they feel worthy to pay more investing in that company. Maximizing the value of the company and increasing profits are the company's goals, to realize that of course the management requires a precise strategy in managing funding.

According to signaling theory, high profitability will shows a good prospect of the company so that investors will respond positively and makes the firm value increases. The proper and efficient use of debt will increase the company's profitability, and an increase in profitability will be a positive signal to interested parties that the value of the company has increased (Febrianti, 2012).

There are several previous studies that have discussed capital structure, financial performance, and firm value. The first is research conducted by Diannisa (2019) about the effect of capital structure and financial performance on firm value, case studies on agribusiness companies in Indonesia. The result is that capital structure and financial performance have a significant positive effect on firm value. Furthermore, research from Sari (2016) on banking companies on the Indonesia Stock Exchange. The result is that there is simultaneously a significant effect between DER and ROA on PBV. Suranto (2017) also examines these variables and the result is that capital structure has no significant effect on firm value, but simultaneously capital structure and financial performance have a significant effect on firm value. Finally, a study by Kodongo (2014) whose results show that capital structure has a significant negative effect on financial performance, while capital structure has no effect on firm value as measured by Tobin's Q.

Based on the previous researches above, inconsistencies occur in the results of the analysis, therefore it is necessary to do another research by researchers and later will be linked to the opinions of experts. The aims to be achieved are to find out whether capital structure influences financial performance, whether capital structure influences firm value, and whether capital structure influences firm value through financial performance.

Methods

Study site and research design

This research is an empirical study in 2019 which the location of the research carried out in manufacturing companies. Data obtained through the official website of the Indonesia Stock Exchange. The research designs that will be carried out are to first determine the research sample, after that download the financial statements of each company and then calculate the ratios according to the indicator criteria used. These ratio data are then processed to make conclusions from research. The variable consisted of independent variable (X) is capital structure proxied with debt to assets ratio (DAR) and debt to equity ratio (DER). Its dependent variable (Y) is firm value that measured by price book to value (PBV), and it will be mediated by company’s financial performance (Z), measured by return on assets (ROA) and return on equity (ROE).

Population and Sample

The population in this study are all manufacturing companies listed on the Indonesia Stock Exchange sub-sector of the chemical industry. Determination of the sample using a purposive sampling technique, so that there are eight companies as sample with an observation period of the last five years (2014-2018).

Technical Analysis

Data analysis technique used are statistical analysis and analysis with structural equation modeling (SEM) method which is processed using Smart PLS 3.1 application. Before conducting a regression, first of all the data must be tested for the validity level of the indicator in explaining the construct variables using convergent validity test and discriminant validity test. After that the consistency and reliability test is performed again using the reliability test. If the data is declared valid and consistent, then the regression relationship between variables is measured. The criteria if there is a significant effect, the conditions are p-values <0.05 and t-values > t-tables. Based on the structural equation modeling PLS assumptions, the index that can be used to test the validity and reliability of model are shown in table 1.
Tabel 1 Goodness of Fit Measure

<table>
<thead>
<tr>
<th>Goodness of Fit Measure</th>
<th>Critical Value (Cut of Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading factor</td>
<td>&gt;0,7</td>
</tr>
<tr>
<td>AVE</td>
<td>≥ 0,5</td>
</tr>
<tr>
<td>Cross loading factor</td>
<td>Higher for own variable</td>
</tr>
<tr>
<td>Composite reliability</td>
<td>&gt; 0,7</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>&gt; 0,7</td>
</tr>
</tbody>
</table>

Source: Ghozali (2015)

**Result and Discussion**

Tabel 2 Goodness of fit testing index

<table>
<thead>
<tr>
<th>Goodness of Fit Measure</th>
<th>Critical Value (Cut of Value)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading factor</td>
<td>&gt;0,7</td>
<td>0,9</td>
</tr>
<tr>
<td>AVE</td>
<td>≥ 0,5</td>
<td>0,9</td>
</tr>
<tr>
<td>Cross loading factor</td>
<td>Higher for own variable</td>
<td>Higher</td>
</tr>
<tr>
<td>Composite reliability</td>
<td>&gt; 0,7</td>
<td>0,9</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>&gt; 0,7</td>
<td>0,9</td>
</tr>
</tbody>
</table>

Goodness of fit test result can be seen in table 2 which loading factor for each indikator is up to 0,9 and the AVE score for each variable is 0,9 too, so the indicator is valid and can explain its construct variable. Cross loading factor for each indicator that measures its own variable shows higher value than for the other variable, so it means each construct variable can measure its own block better than the other block. Composite reliability and cronbach’s alpha show 0,9 higher than 0,7 so it means the data is reliable and can measure the variables. The estimated goodness of fit structural model have been fullfill, for the next step is analyse more clearly the effect of capital structure on firm value mediated by financial performance. Tabel 3 below is for testing hypothesis.

Tabel 3 Hypothesis testing result

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient beta</th>
<th>T-Statistic</th>
<th>P Values</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>X -&gt; Y</td>
<td>0,22</td>
<td>2,29</td>
<td>0,02</td>
<td>Accepted</td>
</tr>
<tr>
<td>X -&gt; Z</td>
<td>-0,13</td>
<td>1,00</td>
<td>0,32</td>
<td>Rejected</td>
</tr>
<tr>
<td>X -&gt; Z -&gt; Y</td>
<td>-0,05</td>
<td>0,72</td>
<td>0,47</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

The results of statistical calculation using Smart PLS it is known that capital structure has positive significant effect on firm value. This can be seen from value of T-statistic > 2,026 and p values is 0,02 < 0,05, then coefficient beta is 0,22 that means an increase in capital structure of 0,01 times will make the firm value also increase to 0,22 times, so the first hypothesis is accepted. The capital structure doesn’t have significant effect on financial performance, this is indicated by the value of t-statistic < 0,02 and p values is more than 0,05, so the second hypothesis is rejected. Furthermore, if the relationship between capital structure and firm value is mediated by financial performance, it doesn’t have significant effect, so the third hypothesis is rejected.

The effect of capital structure on financial performance

Capital structure doesn’t have significant effect on financial performance, it means every increase or decrease that occurs in profitability is not caused due changes in proportion of the capital structure, changes in profitability are more influenced by other factor outside this study. According to Hamidy (2015) that if the benefits come from debts are greater than the cost from the debt, an increase in debt will increase net income. In this study, debt cannot increase profitability, meaning that the benefits of debt less than its cost. Perhaps, the capital structure was not efficient and didn’t managed well so the profits did not increase.

This study is not consistent to study Salim (2012). He used short term debt ratio (STD), long term debt ratio (LTD), and total debt (TD) as indicator of capital structure, and for indicator of firm performance he used ROA and ROE. The result was, capital structure had negatively significant effect to firm performance.
The effect of capital structure on firm value

The result for the second hypothesis is that the capital structure has positively significant effect on firm value, it means that an increase in debt will make the firm value increase too, otherwise if it decrease then the firm value will decrease too. It proves Brigham’s opinion (2011) that the use of large debt will increase operating income which is likely to raise share prices. A company with its capital structure using debt is larger than equity, it could mean that many external parties are brave to lend some funds to the company.

The results of this study are consistent with research conducted by Lawal (2014) about the effect of capital structure on the firm value in the banking industry in Nigeria. The study used ordinary least square (OLS) as analysis method and the results of the study say there is a positively significant effect between capital structure and the firm value. According to the coefficient value, the impact of debt can increase the firm value to 155%, while the equity only gave effect 23.4% to the firm value.

The effect of capital structure on firm value through financial performance

The result of this study for third hypothesis is that there is no significant effect between capital structure on firm value if mediated by firm performance. Brigham’s (2011) said that the use of large debt will increase operating income which is likely to raise share prices, that theory is not prove in this relationship, it is because capital structure did not have significant effect on financial firm. The result is consistent with Hamidy (2015) in property and real estate company. Capital structure is measured by DER, profitability is measured by ROE, while the firm value’s indicator is PBV. The results are DER has significant effect on ROE, and so does DER on firm value. So that is why ROE can mediate the effect of DER on PBV, it has significant effect.

Conclusion

1. Capital structure doesn’t have significant effect on firm value on manufacturing companies in 2014-2018. High debt can’t make profitability increase or decrease, in this case there are companies that have high debt and high profitability, but some of them have high debt but their profitability is low. That result make the first hypothesis is rejected
2. Capital structure has positively significant effect on firm value directly, the second hypothesis is accepted. It means investor trust the companies because they have much fund to be used for developing their business.
3. Capital structure doesn’t have significant effect on firm value through financial performance. The third hypothesis is rejected. It is because capital structure didn’t have any effect on financial performance so it can’t be mediated to firm value

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References