Determinants of Firm Value: A Study on Telecommunication Companies in Indonesia

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Abstract

This study was conducted to determine the effect of Return on Assets, Debt to Equity Ratio, Current Ratio, Total Assets Turnover and Company Size on Price to Book Value as a proxy for Firm Value in Telecommunication Companies Listed on the Indonesia Stock Exchange for the 2012-2017. The research method used is quantitative. The population in this study were all telecommunications sector companies listed on the Indonesia Stock Exchange in 2012-2017 (5 companies, 30 data). Samples were taken using the census technique. The data analysis technique used multiple linear regression. The results of the research that have been carried out show that: (1) Return on Assets, Current Ratio and Company Size have no effect on Price to Book Value of Telecommunication Companies Listed on the Indonesia Stock Exchange for the 2012-2017 period; (2) Debt to Equity Ratio and Total Asset Turnover have a positive effect on Price to Book Value of Telecommunication Companies Listed on the Indonesia Stock Exchange for the 2012-2017.

Keywords: Current Ratio; Debt to Equity Ratio; Price to Book Value; Return on Assets; Total Assets Turnover

1. Introduction

Profit-oriented companies will generally focus their activities on increasing the value of the company until it reaches the maximum because profit is a measure of the company's success (Fuad et al, 2006:23). The value of the company can be measured by investors/potential investors by using Price to Book Value (PBV) to identify which shares are priced fairly, undervalued, and overvalued.

Internal factors such as financial performance can be information for investors as a signal that can affect Company Value. Signaling theory is one of the tools to determine the influence of good or bad Profitability (Return on Assets), Liquidity (Current Ratio), Solvency (Debt to Equity...
According to Signaling theory, the size of the financial ratio value will affect the value of the company. Profitability Ratio (Return on Assets) shows the company's ability to generate past profits and then predict the future from company assets, the higher the value, the higher the company value (Price to Book Value) because the company is considered capable of managing assets to generate profits. The Solvency Ratio (Debt to Equity Ratio) is used to measure the proportion of debt to capital, when a company has a Debt to Equity Ratio according to the provisions, the greater the possibility of the company to be able to pay off obligations, this can encourage investors/potential investors to invest heavily. will have an impact on increasing the value of the company (Price to Book Value).

Liquidity Ratio (Current Ratio) is used to determine the extent to which the company's current assets are used to pay off current debts (liabilities) that will be due/soon to be paid. When a company has a high Current Ratio, this is a positive signal that can encourage investors to request shares, when the demand for shares increases, the Company Value (Price to Book Value) will also increase. Activity Ratio (Total Assets Turnover) is used to measure the effectiveness of the company's total assets in generating sales. A high Total Assets Turnover indicates the company has total assets that have been utilized optimally to create sales.

This is a positive signal that can encourage investors to request shares, when the demand for shares increases, the Company Value (Price to Book Value) will also increase. Outside of the financial ratios in Signaling theory, the size of a company has an influence on share returns. The larger the size of a company is a positive signal that can encourage investors to demand shares that are directly proportional to the value of the company (Price to Book Value) because it provides greater confidence for investors. Large companies have large resources, so they are relatively more resistant to economic turmoil and are not easily bankrupt.

A lot of research on the factors affecting the value of the company have been done. However, there are differences in the research results. The research by Astutik (2017) and Lindirani (2018) shows that the Debt to Equity Ratio has an effect on firm value, while Prajanto & Pratiwi (2018), Nur'aidawati (2018), Kahfi et al (2018), and Tauke et al (2017) in their research show the Debt to Equity Ratio has no effect on firm value. Research from Kahfi et al (2018) shows that Current Ratio has an effect
on firm value, while research by Astutik (2017) and Nur'aidawati (2018) shows that Current Ratio has no effect on firm value. Research by Mariyana (2018), Nur'aidawati (2018) and Kahfi et al (2018) shows that Total Assets Turnover has an effect on firm value, while research conducted by Astutik (2017) shows that Total Asset Turnover has no effect on firm value. Research from Herawati (2017), Astutik (2017), Nur'aidawati (2018) and Tauke et al (2017) shows that Return on Assets has an effect on firm value, while Lindirani's research (2018) shows that Return on Assets has no effect on firm value. Research from Khoiriyah (2018) shows that firm size has an effect on firm value, while research from Herawati (2017) and (Elviana & HR, 2020) shows firm size has no effect on firm value.

Regarding the value of the company, it is interesting to study companies engaged in the telecommunications sector, because telecommunications itself is not a common thing for all circles, it has even become a necessity for the Indonesian people. Telecommunication is an important sector that supports Indonesia's economic growth. Not only for communicating, the internet is even used to buy goods, order transportation, do business and work.

Based on the above background and previous research showing inconsistent results, the researchers are then interested in conducting further research. This study replicates the research that has been carried out by Nur'aidawati (2018) by adding an independent variable, namely the Firm Size variable on the advice of previous research. Other than the addition of variables, the difference between this study and previous studies lies in the period of the study. The research sample period in Nur'aidawati's research (2018) is in the 2011-2015 period, while the sample period in this study uses the 2012-2017 period. The object of this research is a telecommunication company listed on the Indonesia Stock Exchange. Therefore, the researchers conducted a study entitled The Effect of Return on Assets, Debt to Equity Ratio, Current Ratio, Total Assets Turnover and Company Size on Price to Book Value of Telecommunication Companies Listed on the Indonesia Stock Exchange for the 2012-2017 period.

2. Literature Review

Signal Theory

According to Sulistyanto (2008:65) signaling theory is used to explain that basically financial statements are used by companies to give positive or
negative signals to users. Signal theory provides freedom for investors to know the policies to be taken which will certainly have an impact on the value of the company. (Rahayu et al, 2018:8).

**Capital Market**

According to Zulfikar (2016: 5), the capital market is an organized financial system that brings together those who offer and need funds and assets with a maturity of more than one year, either directly or through intermediaries. The capital market is described as a meeting place between supply and demand for securities.

**Financial Statements**

Financial statements are reports that contain financial information of an organization. The financial statements issued by the company are the result of the accounting process which is intended as a means of communicating financial information, especially to external parties. The financial statements also show the results of management's accountability for the use of the resources entrusted to them. Arfan et al (2016).

**Firm Value**

Company -value is an investor's perception of the company's level of success, which is often associated with stock prices (Hery, 2016: 3). The value of the company in this study uses the ratio of market value/book value or Price to Book Value (PBV) because this ratio shows the value of the company from what has been or is being invested by the owner of the company.

**Profitability Ratio**

Profitability ratios can be used as a benchmark or a description of the effectiveness of management performance in terms of profits compared to the company's sales and investment results. In this study the Profitability Ratio is calculated using Return on Assets because this ratio is able to show the success of the company in generating profits on the assets owned by the company (Ikhsan et al, 2016:80).

**Solvency Ratio**

The solvency ratio is the ratio used to measure the extent to which the company's assets are financed with debt. In a broad sense, the solvency ratio is used to measure the company's ability to meet all of its obligations, both short-term and long-term (Hery, 2017b: 295). Solvency measurement
in this study uses the Debt to Equity Ratio (DER) to find out how much of each rupiah of capital is used as debt security.

**Liquidity Ratio**

According to Sugiono (2009:68) Liquidity Ratio aims to measure the company's ability to meet its short-term obligations. Liquidity in this study is measured using the Current Ratio to determine the extent to which the company's current assets are used to pay off current debts that will be due/soon to be paid.

**Activity Ratio**

Activity Ratio is a ratio used to measure the effectiveness of the company in using its assets, including to measure the level of efficiency of the company in utilizing existing resources (Hery, 2016:178). Activity measurement in this study uses Total Assets Turnover, which is a ratio to measure the effectiveness of the company's total assets in generating sales.

**Company Size**

According to Sawir (2004:101) Firm size is stated as a determinant of financial structure in almost every study and for a number of different reasons. First, the size of the company can determine the level of ease of the company in obtaining funds from the capital market. Basically, Company Size is divided into 3 categories, namely large companies (large firms), medium companies (medium firms), and small companies (small firms).

**Relationship of Independent Variables to Dependent Variables**

According to Arfan et al (2016), a high profitability value indicates the company is in a favorable condition. This provides a positive signal that can encourage investors to demand company shares. When there is an increase in demand for shares, the value of the shares valued by the market is higher than the book value, this also results in an increase in the firm value (Price to Book Value).

According to Hery (2016:169) the Debt to Equity Ratio is one of the ratios to measure the company's solvency used to measure how big the proportion of debt to capital is. The value of the Debt to Equity Ratio should be low, this illustrates that the company's debt burden is not too heavy, but it should also be remembered that this provision may vary depending on each type of industry. Thus, the lower the ratio, the higher the company's solvency. The low value of the Debt to Equity Ratio is a
good signal that increases investor confidence so that it has an impact on increasing demand for shares. When there is an increase in demand for shares, the value of the shares valued by the market is higher than the book value, this also results in an increase in the Firm Value (Price to Book Value).

According to Sugiono & Untung (2008:61) Current Ratio is used to determine the extent to which the company's current assets are used to pay off current debts that will be due/soon to be paid. High Liquidity Value is a positive signal that can encourage investors to request shares, because the company is considered capable of paying off its short-term obligations, this also results in an increase in Firm Value.

According to Hery (2016:178) the higher the Activity Ratio (Total Assets Turnover) of a company, the faster the turnover of resources, which reflects the company's effectiveness in managing it. This gives a positive signal because it is considered to guarantee returns from the portfolio, thereby increasing investor confidence which will have an impact on increasing demand for shares. When there is an increase in demand for shares, the value of the shares valued by the market is higher than the book value, this also results in an increase in the Firm Value (Price to Book Value).

According to Subroto (2014: 47) large companies have large resources, so they are relatively more resistant to economic turmoil and are not easily bankrupt. This is considered to provide greater confidence for investors, resulting in increased demand for shares. When there is an increase in demand for shares, the value of the shares valued by the market is higher than the book value, this also results in an increase in the Firm Value (Price to Book Value).

3. Framework and Hypotheses

Framework

This research model is based on various empirical studies that have been carried out, including:

2. Effect of Debt to Equity Ratio on Price to Book Value (Kahfi et al., 2018; Prajanto & Pratiwi, 2018; Nur'aidawati, 2018; Tauke et al., 2017; Lindirani, 2018).
5. The Effect of Firm Size on Price to Book Value (Herawati, 2017; Khoiriyah, 2018; Elviana & HR, 2020).

Based on the various empirical studies above, the research model or framework in this case is structured as shown in Figure 1:

![Research Framework Diagram](image)

**Figure 1. Research framework**

**Hypothesis**

Based on the description and framework above, the hypotheses in this study are:


H2: Debt to Equity Ratio has an effect on Price to Book Value of Telecommunication Companies Listed on the Indonesia Stock Exchange for the period 2012-2017.


4. Research Methods

The type of this research is quantitative with a population of telecommunication companies listed on the Indonesia Stock Exchange in 2012-2017. Sampling using a census. The data analysis technique used in this research is multiple regression analysis. First, statistical and classical assumption tests were carried out before multiple regression analysis was carried out.

The variables that became observations in this study were defined as in Table 1:

Table 1. Definition of operational variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td>Price to Book Value</td>
</tr>
<tr>
<td></td>
<td>PBV = Market Price Per Share/Book Value Per Share</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Return on Assets</td>
</tr>
<tr>
<td></td>
<td>ROA = Net Profit/Total Assets</td>
</tr>
<tr>
<td></td>
<td>Debt to Equity Ratio</td>
</tr>
<tr>
<td></td>
<td>DER = Total Debt/Total Capital</td>
</tr>
<tr>
<td></td>
<td>Current Ratio</td>
</tr>
<tr>
<td></td>
<td>CR = Current Assets/Current Liabilities</td>
</tr>
<tr>
<td></td>
<td>Total Assets Turnover</td>
</tr>
<tr>
<td></td>
<td>TATO = Sales/Average Total Assets</td>
</tr>
<tr>
<td></td>
<td>Firm Size</td>
</tr>
<tr>
<td></td>
<td>Company Size = Ln(Total Assets)</td>
</tr>
</tbody>
</table>

Source: Processed by the authors

5. Results and Discussion

Descriptive Analysis

Descriptive statistics in research are basically a process of transforming research data in tabulated form so that they are easy to understand and interpret. A standard deviation value that is greater than the average value means that each sample company does not have nearly the same magnitude between each company sample. The meaning of the standard deviation itself is that the large standard deviation shows that the sample values do not cluster around the calculated mean value.

Data Normality Test

The normality test of the data was carried out to see whether in the regression model, the dependent variable and the independent variable had a normal distribution or not. A good regression model is to have a normal or close to normal data distribution. The normality test of the data in this study used the Kolmogorov Smirnov test. It is known that Kolmogorov Smirnov's value is 0.8240 and the significance value (Asymp. Sig. (2-tailed)) is 0.4890, which is greater than 0.05, which means the residual
value is normally distributed or meets the classical assumption of normality.

**Multicollinearity Test**

The multicollinearity test was used to determine whether there was a strong correlation between the independent variables included in the model formation. The test results in this study show that the VIF value of Return on Assets, Debt to Equity Ratio, Current Ratio, Total Assets Turnover and company size is below 10 and the tolerance value is above 0.10 indicating that there is no multicollinearity symptom so that the multicollinearity test in this study fulfilled.

The results section should state the findings of the research arranged in a logical sequence without bias or interpretation. A part describing results is particularly necessary if the paper includes data generated from the current study. The purpose of the discussion is to interpret and describe the significance of the findings in light of what was already known about the research problem being investigated and to explain any new understanding or insights about the issue after the study being taken the findings into consideration. The discussion will always connect to the introduction by way of the research questions or hypotheses and the literature reviewed, but it does not merely repeat or rearrange the introduction; the discussion should always explain how the current study has moved the reader's understanding of the research problem forward from where it mentioned at the end of the introduction. Results and discussions may include sub-title and sub-sub titles.

**Autocorrelation Test**

The autocorrelation test is used to test whether in a linear regression model there is a correlation between the confounding error in period t and the error in period t1 (previous). In this study, the value of Asymp.Sig is seen. (2-tailed) is 0.094 and this value is greater than 0.05, so it can be concluded that there is no autocorrelation symptom. The autocorrelation test in this study is fulfilled.

**Heteroscedasticity Test**

Heteroscedasticity test is used to test whether in the linear regression model the confounding error (e) has the same variance or not from one observation to another. The results of the heteroscedasticity test with the glejtser test showed that the significance value of all independent variables
was above 0.05. It can be concluded that there are no symptoms of heteroscedasticity.

**Multiple Linear Regression Analysis**

Regression analysis is a study of the dependence of the dependent variable (bound) with one or more independent variables, with the aim of estimating and/or predicting the population mean or the mean value of the dependent variable based on the known value of the independent variable. Based on the test results obtained multiple linear regression equation as follows:

\[ Y = 25.13 + 0.008X_1 + 0.616X_2 + 0.692X_3 + 8.249X_4 - 0.894X_5 + e \]

1. Constant value of 25.13 means that if all independent variables are zero (0), then the Y variable is positive 25.13.
2. The coefficient of Return on Assets (X1) is positive (0.008), so if there is an increase in the value of Return on Assets by 1, it will increase the Price to Book Value of 0.008.
3. The coefficient of Debt to Equity Ratio (X2) is positive (0.616), so if there is an increase in the value of the Debt to Equity Ratio of 1, it will increase the Price to Book Value of 0.616.
4. The coefficient of Current Ratio (X3) is positive (0.692), so if there is an increase in the value of the Current Ratio of 1, it will increase the Price to Book Value of 0.692.
5. The coefficient of Total Assets Turnover (X4) is positive (8.249), so if there is an increase in the value of Total Assets Turnover by 1, the Price to Book Value will increase by 8.249.
6. The coefficient of Firm Size (X5), is negative (0.894), so if there is an increase in Firm Size value by 1, it will reduce Price to Book Value by 0.894.

**Model Feasibility Test**

The coefficient of determination (R2) measures how far the model's ability to explain the variation of the dependent variable. The value of the coefficient of determination is between zero and 1. Based on the test results of this study, the Adjusted R Square value of 0.95 indicates that the variance of the independent variables Return on Assets, Debt to Equity Ratio, Current Ratio, Total Assets Turnover, Company Size has an effect on the variance of the dependent variable. Price to Book Value is 96%, while the remaining 4% is influenced by other factors not explained in this model. In addition, the value of the coefficient of determination is greater
than 0.5, which is 0.97 so that it can show that the independent variable explains the dependent variable well and strongly.

**Hypothesis testing**

Testing the hypothesis of this study using the t statistical test. This test is one of the tests used to determine whether or not there is a significant difference (Wahdah, 2016:69). The results of the regression analysis test are known to have the significance value of tc as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>T table</th>
<th>T count</th>
<th>Sig.</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets</td>
<td>1.710</td>
<td>0.013</td>
<td>.989</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Debt to Equity Ratio</td>
<td>1.710</td>
<td>26.226</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>1.710</td>
<td>0.428</td>
<td>.673</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Total Assets Turnover</td>
<td>1.710</td>
<td>3.137</td>
<td>.004</td>
<td>Significant</td>
</tr>
<tr>
<td>Firm Size</td>
<td>1.710</td>
<td>-1.458</td>
<td>.158</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PBV
Source: processed with SPSS 21

1. **Effect of Return on Assets on Price to Book Value**
   Based on the results of the t test in table 2, it is known that the significance value is 0.98 > 0.05. Then the value of tc < ttable or with a value of 0.013 < 1.710. Therefore, it can be said that partially the Return On Assets variable has no effect on Price to Book Value. The analysis above can be concluded that the Return on Assets calculated by the ratio of net income divided by total assets has no effect on the high or low firm value. Asset investment made by the company has no effect on the profits generated by the company, this condition results in the company's inability to increase company value. According to Lindirani (2018) the factor that causes Return on Assets does not affect the Stock Price which is an indicator of Price to Book Value the trend that occurs is fluctuating, this can happen because the net profit generated is not proportional to the number of assets.

2. **Effect of Debt to Equity Ratio on Price to Book Value**
   Based on the results of the t test in table 2, it can be seen that the t value and the significance value of the Debt to Equity Ratio are tc > ttable, 1.710 and the significance value is 0.000 less than 0.05. Therefore, it can be said that partially the Debt to Equity Ratio variable has a positive and significant effect on Price to Book Value. Viewed from the perspective of potential investors in this study, a high
Debt to Equity Ratio value is perceived as a positive signal from the company because it is considered to be growing rapidly and has the potential to generate high profits, thus requiring additional funds from external sources. This condition increases the demand for company shares which has an impact on increasing share prices, and is followed by an increase in Company Value.

3. Effect of Current Ratio on Price to Book Value
   Based on the results of the t test in table 2, it is known that the significance value is 0.67 > 0.05. Then the value of tcount < ttable or with a value of 0.428 < 1.710. Therefore, it can be said that partially the Current Ratio variable has no effect on Price to Book Value. The Current Ratio cannot be used as an indicator for making investment decisions where this ratio is able to describe the company's current assets that are used to pay off current debts (liabilities) that will fall (Sugiono & Untung, 2008: 61). A high Current Ratio seen from the creditor's perspective is considered good, but for investors/potential investors it has no influence because the considerations taken in investing are business activities so that the Current Ratio cannot be a reference for measuring Price to Book Value.

4. Effect of Total Assets Turnover on Price to Book Value
   Based on the results of the t-test in table 2, it can be seen that the t-value and the significance value of Total Assets Turnover are respectively tcount 3.137 > t-table, 1.710 and a significance value of 0.04 less than 0.05. Therefore, it can be said that partially the Total Assets Turnover variable has a positive and significant effect on Price to Book Value. In this study, companies that have a high Total Assets Turnover value will also have a high Price to Book Value, and vice versa. Total Assets Turnover is a ratio used to measure the effectiveness of the company's total assets in generating sales (Hery 2016:178). The higher the asset turnover, the lower the total excess assets that have not been used optimally to create sales. This is considered a positive signal for investors/potential investors because the company is considered effective in managing its assets. This condition increases the demand for company shares which has an impact on the increase in Price to Book Value.

5. Effect of Firm Size on Price to Book Value
   Based on the results of the t test in table 2, it is known that the significance value is 1.58 > 0.05. Then the value of tcount < ttable or with a value of -1.458 < 1.710. Therefore, it can be said that partially the Firm Size variable has no effect on Price to Book Value.
It can be concluded that Company Size, which is described by the total assets owned by the company each year, cannot be one of the indicators that can be considered by potential investors/investors in making decisions which will have an impact on the Price to Book Value of a company. According to Herawati (2017), companies that have large total assets are not necessarily able to provide confidence to investors in managing the company in order to increase the value of the company. The size of the company’s size is seen from the total assets owned by the company. Companies that have large total assets due to the dominance of the receivables and inventory components may not necessarily be able to pay dividends because of the accumulation of assets. The company maintains profits rather than distributing dividends which will affect the interest of investors/potential investors to invest, this affects the demand for company shares which also has an impact on stock prices which is an indicator of Price to Book Value.

6. Conclusions

Based on the results of research and discussions that have been carried out, the researchers draw the following conclusions:

1. Testing of Return on Assets on Price to Book Value conducted in this study proves that statistically, Return on Assets does not have a significant effect on Price to Book Value.

2. Testing of Debt to Equity Ratio on Price to Book Value conducted in this study proves that statistically, Debt to Equity Ratio has a significant effect on Price to Book Value.

3. Testing of Current Ratio on Price to Book Value conducted in this study proves that statistically, the Current Ratio has no significant effect on Price to Book Value.

4. Testing of Total Assets Turnover on Price to Book Value conducted in this study proves that statistically, Total Assets Turnover has a significant effect on Price to Book Value.

5. Testing of Firm Size on Price to Book Value conducted in this study proves that statistically, Company Size does not have a significant effect on Price to Book Value.

It is suggested that investors or potential investors should not only pay attention to the Return on Assets, Current Ratio, and Company Size in estimating the Price to Book Value of the investments that investors will do, but also to the Debt to Equity Ratio and Total Assets Turnover. Besides, future researchers are expected to include variables other than
those used in this study, increase the number of samples, and take a longer observation period in order to obtain more convincing research results.

Reference


Nur’aidawati, S. (2018). Pengaruh Current Ratio (CR), Total Asset Turnover (TATO), Debt to Equity Ratio (DER) dan Return on Asset (ROA) terhadap Harga Saham dan Dampaknya pada Nilai Perusahaan (Studi Kasus pada Sepuluh Bank Terbesar yang


