THE DETERMINANTS OF FIRM VALUE

Luh Ketut Kumari Chandra Warsiki¹, Sofia Prima Dewi¹*

¹Faculty of Economics and Business, Universitas Tarumanagara, Jakarta - Indonesia
*Email: sofiad@fe.untar.ac.id

Submitted: 30-03-2023, Revised: 19-05-2023, Accepted: 03-07-2023

ABSTRACT
This research aims to obtain empirical evidence about the impact of leverage, profitability, firm size, and dividend policy toward the firm value of non-cyclical firms which is listed on the Indonesia Stock Exchange from period of 2018-2020. Using purposive sampling method, the sample in this study were 21 non-cyclical companies. The multiple linear regression model is used in this research and processing data with E-views 12 SV. In this research, firm value as dependent variable measures with a Price to Book Value. The result concludes that dividend policy and profitability impact positively toward firm value, firm size has no impact toward firm value with negative direction, and leverage has no impact toward firm value with positive direction.

Keywords: leverage, profitability, firm size, dividend policy, firm value

1. INTRODUCTION
Currently, the economic situation is starting to improve, which is characterized by the emergence of various companies in various industrial sectors. The existence of competition between companies causes the management of these companies to strive to improve performance in order to achieve common goals. The company's objectives do not only focus on making profits but also focus on how the company can survive in the industry in the long term. How to survive in the long term is how company management can increase firm value so that it can attract investors to invest in the company. Firm value is an important thing in surviving in the industry because outsiders, namely investors, will pay more attention to companies that have high firm value so that they provide a sense of security in investing in the company.

This research replicates Radja and Artini [1] who examined the effects of firm size, profitability, and leverage toward firm value. This research has several differences with previous research, namely (1) This study uses non-cyclical companies listed on the Indonesia Stock Exchange while the companies used in Radja and Artini's [1] research are manufacturing companies in the consumer goods sector listed on the Indonesia Stock Exchange, (2) This research uses the 2018-2020 period while Radja and Artini's [1] research period is from 2017-2019, and (3) There are additional variables, namely dividend policy from Putra and Lestari [2]. Based on the description above, it is necessary to analyze again the effect of leverage, firm size, profitability, and dividend policy toward firm value. The aims of this research are to obtain empirical evidence about (1) firm size affect firm’s value, (2) leverage affects firm’s value, and (3) profitability affects firm’s value, and (4) dividend policy affects firm’s value.
2. LITERATURE REVIEW

Signalling Theory

Radja and Artini [1] explain the signal theory as a theory that involves two parties, namely insiders such as company management who provide signals and outsiders such as investors who act as parties receiving signals. According to Farida, Roziq, and Wardayanti [3] signal theory emphasizes that information issued by companies about investment decisions from parties outside the company is very important.

This information usually appears in the form of financial reports annually, which contain information about the records, company's overview, and financial condition. It may also reflect the company performance. The integrity of the information contained in the financial statements that reflect the company's value is a good signal that may influence the opinions of creditors, investor, or other interested parties. After investors received the information, they will first interpret and analyze the information, so that the information provided can be decided as good news or bad news.

Firm Value

According to Suwardika and Mustanda [4] firm value is the share price that investors are willing to pay when buying the company. In this research, firm value is calculated by the price to book value ratio, which is the price per share dividing with the book value per share.

Firm Size

According to Suffah and Riduwan [5] firm size is the size of a company which can be view from the total assets owned by the company, which are used in the company's operating activities. In this study, firm size is proxied by the logarithmic value of the company's total assets, commonly known as Ln total assets.

Leverage

According to Salma and Riska (2019) leverage is a ratio used to measure the extent to which the company's assets are financed by debt or in other words how much debt the company uses to finance its business activities compared to using its own capital. In this study, leverage is proxied using the debt to asset ratio (DAR), which compares total debt to the total assets owned by the company.

Profitability

Sondakh [7] states profitability is an indicator of the performance carried out by management in managing the company's assets as indicated by the profit generated. In this research, profitability is calculated by net profit after tax dividing with total assets or the return on assets ratio (ROA).

Dividend Policy

According to Senata [8] dividend policy is a policy where the company is able to determine the proportion of profit received by the company to be paid to investors or kept as retained
earnings. In this research, dividend policy is measured by the dividend payout ratio (DPR), which is dividends per share dividing with earnings per share.

Prior Research

Research conducted by Suwardika and Mustanda [4] concludes that firm size has no impact on firm value with negative direction. It is also in accordance with research conducted by Natanael and Suhendah [9] where firm size is considered less relevant to determining firm value for investors. On the other hand, the results of the study contradict the results of research conducted by Putra and Lestari [2], Sembiring and Trisnawati [10], Novari and Lestari [11], Radja and Artini [1], Sondakh [7], and Etikasari and Maryanti [12]. This research concludes that firm size impact positively on value of the firm. The results of this study are inconsistent with Jaya [13] who concludes that firm size has no positive impact on firm value.

Research conducted by Natanael and Suhendah [9] states that leverage has no positive impact on firm value. This research is inconsistent with research conducted by Dwipayana and Suaryana [14], Andriani [15], Radja and Artini [1], and Etikasari and Maryanti [12] which state that leverage has a positive impact on firm value. This research is also inconsistent with research conducted by Petrus [16] which states that leverage has a negative impact on firm value. The research results are also inconsistent with research conducted by Sitepu et al. [17] which states that leverage has no negative impact on firm value.

Research conducted by Dwipayana and Suaryana [14], Hidayah and Widyawati [18], Novari and Lestari [11], Putra and Lestari [2], Suwardika and Mustanda [4], Sari and Baskara [19], Jaya [13], Markonah et al. [20], and Radja and Artini [1] conclude that profitability impact on firm value with positive direction. The results of this study contradict research conducted by Petrus [16] and Sondakh [7] which concludes that profitability has no impact on firm value with positive direction. The results of this research are also inconsistent with Natanael and Suhendah [9] who state that profitability impact negatively on firm value.

Research conducted by Dwipayana and Suaryana [14], Putra and Lestari [2], and Senata [8] states that dividend policy impact positively on firm’s value. Research conducted by Ramadhan et al. [21] concludes that dividend policy has no impact on firm value with positive direction. Research conducted by Palupi and Hendiarto [22], Sondakh [7], and Etikasari and Maryanti [12] concludes that dividend policy has a negative impact toward firm value. The results are also inconsistent with research conducted by Anita and Yulianto [23], and Hidayah and Widyawati [18] which concludes dividend policy has no impact on firm’s value with negative direction.

Hypothesis Development

The Impact of Firm Size on Firm Value

Firm size is a scale that classifies the size of a company which can be seen from the measurement of total assets owned by the company for business operations. Most investors invest in a company by looking at how big the company is. Firm size is proxied by how much total assets are owned. This shows that large companies that are well-established will have excess sources of funds in financing their investments in order to obtain higher profits.
Therefore, if the firm size is larger, then the firm value is higher. Based on the outline above, hypothesis one proposed in this research is:

**H1**: Firm size impact positively on firm value.

### The Impact of Leverage on Firm Value

Leverage is a ratio that describes how far the company's assets are financed with debt for the continuity of the company's business. If the leverage is higher, then the amount of company capital that will be used as investment capital is greater. This indicates that the company is signaling to investors that the company has established assets and capital so as to increase the confidence of investors. This will also increase the value of the company in the eyes of investors. Based on the outline above, the second hypothesis proposed in this research is:

**H2**: Leverage impact positively on firm value.

### The Impact of Profitability on Firm Value

Profitability is a ratio that explains the company's performance to generate profits in a certain period of business activities carried out by the company. The higher company’s profitability, the investor's interest in investing in the company which can increase the company's value is higher. Based on the outline above, the third hypothesis proposed in this research is:

**H3**: Profitability impact positively on firm value.

### The Impact of Dividend Policy on Firm Value

Dividend policy is a company management policy that proportions the company's profit whether it will be paid to shareholders or retained in the form of retained earnings which are used as investments in the future. The greater the dividends distributed to shareholders, it can be concluded that the better the company's performance because of the high profits of the company. Investors assessment of the company will also be better so that the company's value increases, which is reflected in the level of the company's stock price. Based on the outline above, hypothesis four proposed in this research is:

**H4**: Dividend policy impact positively on firm value.

The model in this study based on the explanation above is:

![Research Model Diagram](image-url)

**Figure 1.** Research Model
3. RESEARCH METHODS

Population and Sample

This study uses a population of all non-cyclical companies listed on the Indonesia Stock Exchange for the 2018-2020 period. In this research, the technique that used for selecting the sample is purposive sampling. The criteria for selecting the sample used are: (a) The company presents financial statement at the end of December 31, (b) The company always gain a profit, and (c) The company made dividend payments during 2018-2020. Based on these criteria, a sample of 27 companies was obtained with 6 companies as outlier. Total of sample in this research are 21 companies with a research period from 2018 to 2020, 63 data were obtained.

Data Collection Technique

The data is collected from the financial statements of non-cyclical companies listed on the Indonesia Stock Exchange for the 2018-2020 period. The collected data in this research processed using EViews 12 SV software.

Variable Operations

The dependent variable in this study is firm value, and the independent variables are firm size, leverage, profitability, and dividend policy. According to Radja and Artini [1] research, firm value proxied by price to book value ratio (PBV) is measured using the formula:

\[
PBV = \frac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share}
\]

According to Radja and Artini [1] research, firm size is measured using the formula:

\[
SIZE = \ln(Total\ Assets)
\]

According to Radja and Artini [1] research, leverage proxied by debt to assets ratio (DAR) is measured using the formula:

\[
DAR = \frac{Total\ of\ Debt}{Total\ of\ Assets}
\]

According to Radja and Artini [1] research, profitability proxied by return on asset (ROA) is measured using the formula:

\[
ROA = \frac{Net\ Profit\ After\ Tax}{Total\ assets}
\]

According to Putra and Lestari [2] research, dividend policy proxied by dividend payout ratio (DPR) is measured using the formula:

\[
DPR = \frac{Dividend\ per\ Share}{Earnings\ per\ Share}
\]
4. RESULTS AND DISCUSSION

Descriptive Statistics

Based on the criteria described previously, a sample of 27 companies was obtained with 6 companies outlier. Total of sample in this research are 21 companies with a research period from 2018 to 2020, 63 data were obtained. The results of the statistic descriptive test for each variable are shown in the following table (Table 1):

<table>
<thead>
<tr>
<th></th>
<th>PBV</th>
<th>SIZE</th>
<th>DAR</th>
<th>ROA</th>
<th>DPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1.557143</td>
<td>29.26032</td>
<td>0.410635</td>
<td>0.074921</td>
<td>0.336032</td>
</tr>
<tr>
<td>Max.</td>
<td>4.180000</td>
<td>32.73000</td>
<td>0.780000</td>
<td>0.290000</td>
<td>0.980000</td>
</tr>
<tr>
<td>Mini.</td>
<td>0.330000</td>
<td>27.07000</td>
<td>0.120000</td>
<td>0.010000</td>
<td>0.090000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.985206</td>
<td>1.418604</td>
<td>0.192126</td>
<td>0.056193</td>
<td>0.193145</td>
</tr>
<tr>
<td>Observations</td>
<td>63</td>
<td>63</td>
<td>63</td>
<td>63</td>
<td>63</td>
</tr>
</tbody>
</table>

The minimum and maximum value of firm value or PBV respectively is 0.330000 and 4.180000. The mean and standard deviation value of PBV respectively is 1.557143 and 0.985206. The mean value of firm value is greater than the standard deviation value. it concludes that the distribution of firm value data is small. Firm size (SIZE) has a minimum value of 27.07000 and a maximum value of 32.73000. The mean and standard deviation value of SIZE respectively is 29.26032 and 1.418604. The mean value of firm size is greater than standard deviation value. it concludes that the distribution of firm size data is small. Leverage (DAR) has a minimum value of 0.120000 and a maximum value of 0.780000. The mean and standard deviation value of DAR respectively is 0.410635 and 0.192126. The mean value of leverage is greater than the standard deviation value. it concludes that the distribution of firm size data is small. Profitability (ROA) has a minimum value of 0.010000 and a maximum value of 0.290000. The mean and standard deviation value of ROA respectively is 0.074921 and 0.056193. The mean value of profitability is greater than standard deviation value. it concludes that the distribution of firm size data is small. Dividend policy (DPR) has a minimum value of 0.090000 and a maximum value of 0.980000. The mean and standard deviation value of DPR respectively is 0.336032 and 0.193145. The mean value of profitability is greater than the standard deviation value, it concludes that the distribution of dividend policy data is small.

Chow Test

The Chow test result is shown in Table 2:

<table>
<thead>
<tr>
<th>Impact Test</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>0.0000</td>
</tr>
</tbody>
</table>
The probability of cross-section F from the results of the Chow test is 0.0000. This value is smaller than 0.05 so that the model chosen is fixed impact model.

**Hausman Test**

The Hausman test result is shown in Table 3:

**Table 3. The Result of Hausman Test**

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-Section Random</td>
<td>0.7259</td>
</tr>
</tbody>
</table>

The probability of cross-section random from the results of the Hausman test is 0.7259. This value is greater than 0.05 so that the model chosen is random impact model.

**Lagrange Multiplier Test**

The Lagrange Multiplier test result is shown in the following table (Table 4):

**Table 4. The Result of Lagrange Multiplier Test**

<table>
<thead>
<tr>
<th>Cross-section</th>
<th>Test Hypothesis Time</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Pagan</td>
<td>48.34820 (0.0000)</td>
<td>1.564804 (0.0000)</td>
</tr>
</tbody>
</table>

The probability value (Prob.) of Breusch-Pagan from the results of the Lagrange Multiplier test is 0.0000 greater than 0.05 so that the model chosen is the random impact model.

**Random Impact Model**

The random impact model test result is shown in Table 5:

**Table 5. Random Impact Model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>6.256111</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.193174</td>
</tr>
<tr>
<td>DAR</td>
<td>0.787687</td>
</tr>
<tr>
<td>ROA</td>
<td>5.846995</td>
</tr>
<tr>
<td>DPR</td>
<td>0.567429</td>
</tr>
</tbody>
</table>

**Adjusted R squared**

The Adjusted R-squared test result is shown in Table 6:
Table 6. The Result of Adjusted R-squared

<table>
<thead>
<tr>
<th>Equation</th>
<th>Adjusted R-squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.125910</td>
</tr>
</tbody>
</table>

The value from the results of the Adjusted R-squared test is 0.125910, it concludes that leverage, profitability, firm size, and dividend policy are only able to explain the variation of firm value of 12.5910%. The remains 87.4090% is influenced by other variable that not included in the research.

Hypothesis Test Result

The hypothesis testing results are shown in Table 7:

Table 7. The Result of Hypothesis Tests

<table>
<thead>
<tr>
<th>Description</th>
<th>Coefficient</th>
<th>Prob.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE ➔ PBV</td>
<td>-0.193174</td>
<td>0.2046</td>
<td>H₁ was not accepted</td>
</tr>
<tr>
<td>DAR ➔ PBV</td>
<td>0.787687</td>
<td>0.2997</td>
<td>H₂ was not accepted</td>
</tr>
<tr>
<td>ROA ➔ PBV</td>
<td>5.846995</td>
<td>0.0027</td>
<td>H₃ was accepted</td>
</tr>
<tr>
<td>DPR ➔ PBV</td>
<td>0.567429</td>
<td>0.0485</td>
<td>H₄ was accepted</td>
</tr>
</tbody>
</table>

The regression coefficient of firm size (SIZE) on firm value (PBV) is negative at -0.193174. The probability of p-value is 0.2046. This value is greater than 0.05, it concludes that firm size has no impact on firm value with negative direction, that means H₁ was not accepted.

The regression coefficient of leverage (DAR) on firm value (PBV) is positive at 0.787687. The probability of p-value is 0.2997 greater than 0.05. This result concludes that leverage has no impact toward firm value with positive direction, that means H₂ was not accepted.

The regression coefficient of profitability (ROA) on firm value (PBV) is positive at 5.846995. The p-value is 0.0027. This value is smaller than 0.05, it concludes that profitability has a positive impact toward firm value, that means H₃ was accepted.

The regression coefficient of dividend policy (DPR) on firm value (PBV) is positive at 0.567429. The p-value is 0.0485. This value is smaller than 0.05, it concludes that dividend policy impact positively toward firm value, that means H₄ was accepted.

Discussion

The Impact of Firm Size on Firm Value

Firm size does not have a negative influence on firm value. Most investors invest in a company by looking at how big the company is. The research results were consistent with research conducted by Suwardika and Mustanda [4], where firm size has no impact on firm’s value with negative direction. This is because the size of a company will not affect investors to invest in the company. The size of the company proxied by Ln total assets in fact has little impact on increasing the value of a company in the eyes of investors. It is also in accordance...
with research conducted by Natanael and Suhendah [9] where firm size is considered less relevant to determine the value of the company in the eyes of investors. Foreign and local investors will be more reviewing the overall financial aspects of the company as reflected in the financial statements than just looking at the total assets owned by the company.

The research result contradict research conducted by Novari and Lestari [11], Putra and Lestari [2], Sembiring and Trisnawati [10], Radja and Artini [1], Sondakh [7], and Etkasari and Maryanti [12]. The research concludes that firm size has a positive impact on firm value. If the size of a company is bigger then the growth of the company is better. This will be a good signal for investors to dare to invest in the company.

The research results are inconsistent with Jaya [13] who concludes that firm size has no positive impact toward firm value. This study shows that large companies will not necessarily easily access the capital market because the management of large companies will be more careful when making every policy for the company.

**The Impact of Leverage on Firm Value**

This study states that leverage does not have a positive influence on firm value. Debt to asset ratio is calculated by dividing total debt and total assets. In other words, how much the company's debt impacts asset management or how much of the company's assets are financed by debt. This research is consistent with research conducted by Natanael and Suhendah [9] where leverage has no positive impact on firm value. According to this study, corporate financing originating from debt can be a boomerang for the company concerned if not monitored properly. This can happen because according to assumptions from outsiders, a capital structure consisting of debt can threaten the stability of the company. Leverage has no impact on firm value because asset financing originating from debt cannot be used as the main reference for whether the company's value is good because the existence of debt in the company can actually be a threat to the company.

This research is inconsistent with research conducted by Dwipayana and Suaryana [14]. The study states that the higher the leverage, the greater the amount of company capital that will be used as investment capital. This indicates that the company is signaling to investors that the company has established assets and capital so as to increase the confidence of investors. This will also increase the value of the company in the eyes of investors. There are several other studies conducted by Andriani [15], Radja and Artini [1], and Etkasari and Maryanti [12] which also state the same thing, namely leverage has a positive influence on firm value.

Research conducted by Petrus [16] is also inconsistent with this study, where the results of leverage impact negatively toward firm value. This indicates that when the leverage ratio in the company is high, the risk of default signals to investors not to invest in the company.

The research results are also inconsistent with research conducted by Sitepu et al. [17] which concludes that leverage has no negative impact on firm’s value. This study shows that the size of a company's leverage ratio has no impact on investors' assessment of a company.

**The Impact of Profitability on Firm Value**

Profitability has a positive influence on firm value. The higher the profitability of a company, the higher the investor's interest in investing in the company which can increase the
company's value. The research is consistent with several previous studies conducted by Dwipayana and Suaryawan (2016), Hidayah and Widyawati [180, Novari and Lestari [11], Putra and Lestari [2], Suwardika and Mustanda [4], Sari and Baskara [19], Jaya [13], Markonah et al. [20], and Radja and Artini [1]. The research concludes that profitability has a positive impact toward firm value. The greater the profitability, the more efficient the use of company assets or in other words, the same amount can generate large profits. With a high level of profit, the level of investor confidence will increase. This certainly has a positive impact on increasing the value of the company. Profitability also signals investors to invest in the company.

Therefore, profitability is proven to have a positive impact toward firm’s value. However, the research results contradict research conducted by Petrus [16] and Sondakh [7]. Based on the research conducted, profitability has no positive impact on firm value. This is because the company's management does not have qualified performance to have the ability to use its assets properly so that the net profit owned by the company will be smaller while the assets owned are actually very large.

The results of this study are also inconsistent with Natanael and Suhendah [9] who state that profitability impact negatively on firm value. This negative impact occurs because company management uses profits for investment activities that are not profitable for the company and this is known by investors so that investors are reluctant to invest in the company.

The Impact of Dividend Policy on Firm Value

This study found that dividend policy has a positive influence on firm value. This is consistent with previous research conducted by Dwipayana and Suaryawan [14], Putra and Lestari [2], and Senata [8] who also stated the same thing. The study states that when the company distributes dividends to its shareholders, it means that the company pays attention to the welfare of investors so that investors will benefit according to the shares invested. This will certainly improve the relationship between investors and company management so that the company's value will increase. According to Senata [8] the market price of a company's shares on the stock exchange can be considered a reflection of the real value of the company's assets.

This research is inconsistent with research conducted by Ramadhan et al. [21]. According to Ramadhan et al. [21] the amount of dividends does not affect the welfare of company shareholders.

There is also previous research which states that dividend policy impact negatively on firm value. The research was conducted by Palupi and Hendiarto [22], Sondakh [7], and Etikasari and Maryanti [12]. According to these studies, the higher the dividend distributed to shareholders, the lower the value of the company. This is because, when the company decides to distribute dividends to its shareholders, it will reduce the retained earnings owned by the company so that it will limit the company in moving and investing in company assets which can cause a accepted decrease in firm value.

The research results are also inconsistent with previous research conducted by Anita and Yulianto [23] and Hidayah and Widyawati [18]. According to these studies, dividend policy has no impact on firm’s value with negative direction. The research states that the increase in dividend value is not always followed by an increase in firm’s value. This is because the
increase in firm value depends on the company's ability to generate profits from the assets it owns. Most shareholders also only want to take advantage in the short term by obtaining capital gains.

5. CLOSING

Conclusions

This study aims to obtain empirical evidence about the positive impact of firm size on firm value, the positive impact of leverage on firm value, the positive impact of profitability on firm value, and the positive impact of dividend policy on firm value. The results of this study indicate that firm size has no negative impact on firm value, leverage has no positive impact on firm value, profitability has a positive impact on firm value, and dividend policy has a positive impact on firm value.

Limitation

The research limitations are that the independent variables used to explain firm value in this study are only four variables, the research period used is only three years, namely 2018-2020, and the research sample used is only companies in the non-cyclical sector listed on the Indonesia Stock Exchange. For further research, we recommend adding other independent variables such as capital structure and company growth, using a longer research period so that the research results become more relevant to actual conditions, and expanding the company sector to be used as a research sample.

Implication

The research implication is to help provide new information and develop readers' insights regarding the value of the company as reflected in the company's stock price and to be able to become a reference or material consideration for further research related to firm value. This study is also expected to provide information regarding what factors affect the company's value so that it can help company management to improve the company's performance which will be reflected in the company's stock price.

REFERENCES


