The Effect of Debt Policy, Provitability, and Investment Decisions on Firm Value using Dividend Policy as a Moderating Variable on Pharmaceutical Sub-Sector Companies in the Indonesian Stock Exchange

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Abstract:- This study aims to determine the effect of debt policy, profitability, and investment decision on firm value using dividend policy as a moderating variable on pharmaceutical sub-sector companies in the Indonesian stock exchange during 2015 – 2020. Purposive sampling was utilized to select the samples, which included 6 out of 10 companies based on the inclusion criteria. The data were analyzed by applying multiple linear and moderated regression analyses assisted by SPSS version 21. The result of the hypothesis test demonstrated that the debt policy negatively and significantly affected firm value. Conversely, profitability and investment decision positively and insignificantly affected firm value. Also, the dividend policy cannot significantly moderate the effect of investment decisions on firm value even though it is capable of moderating the effect of debt policy and profitability on firm value.

Keywords:- Non-Cash Payments, Inflation, and Money Circulation.

I. INTRODUCTION

Shareholder wealth have a relationship a high firm value since maximum shareholder wealth can be achieved through the maximization of firm value. Therefore, if the firm value increases, it will be followed by the increase of the shareholder wealth. According to Walker in Hardiningsih (2009), the firm value is depicted in its share price. Hermuningsih and Wardani in Setiani (2013) stated that firm value emerges as the perceptions shown by an investor of a company, in which it is frequently linked to stock prices. Additionally, the stock market price provides a central assessment of all market participants and serves as an indicator of a company's management performance, which is important for both managers and investors. Similarly, firm value serves as a benchmark for managers to measure their work performance. The ability of the manager to increase the firm's value shows good business performance. Furthermore, such a manager has indirectly achieved one of the company's goals increasing shareholder wealth. An increase in firm value raises the positive perception of the company among investors, which can increase the stock prices since investors are more likely to invest. Firm value can be optimized by taking into account the determinant factors, such as debt policy, profitability, and investment decisions.

The debt policy of a business determines the extent to which it uses debt financing. According to Sukirni (2012), firm value was significantly affected by the debt policy. However, Sofyaningsih and Hardiningsih (2011), as well as Noviana (2016), discovered that it had no effect on firm value. Profitability is explained as a tool which is utilized for the measurement of the capability owned by a company in terms of gaining profit. Furthermore, it is a measure of the managerial effectiveness of a company (Wiagustini, 2010). In this study, profitability is explained as ROA (Return on Assets). As conveyed by Putra and Lestari (2016), Noviana (2016), Sabrin et al. (2016), Sucuahi and Cambarihan (2016), and Jayaningrat et al. (2017), profitability significantly affected firm value, but Shelly (2015) discovered the opposite.

Investment decisions emerge as a part of crucial factors affecting firm value since they involve decisions about the allocation of funds (Efni, et al., 2012). According to previous studies by Kusumanigrum and Shiddiq (2013), Aprianto and Arifah (2014), Suroto (2016), Noviana (2016), and Pasaribu (2016), firm value was affected by investment decisions. However, Setiani (2013) and Juwinta (2018) showed that investment decisions did not give any effects on firm value. Additionally, this study examined the moderating effect of dividend policy on the relationship between debt policy, profitability, and investment decisions on firm value. Dividend policy signifies the amount of the profit which is currently gained in which it will subsequently be distributed as a dividend; it will not be reinvested in the company. As asserted by (Wijaya, et al., 2010), Kusumanigrum and Shiddiq (2013), Senda (2013), Putra and Lestari (2016), Sriwahyun on and Wihandaru (2016), and Jayaningrat, Wahyudi and Sujana (2017), dividend policy significantly affected firm value. Meanwhile, it demonstrated no effects on firm value by Hardiningsih (2009), Sukirni (2012), Aprianto and Arifah (2014), Suroto (2016), Noviana (2016), Anita and Arief (2016), and Pasaribu (2016).
According to the review of the previous studies, there was a gap in the form of inconsistent results since only a subset of the determinants listed above were significant. Therefore, this study aimed to examine “the effect of debt policy, profitability, and investment decisions on firm value using pharmaceutical sub-sector companies” as the object of focus.

II. METHODS

A. Study Location and Design

This study was quantitative with a descriptive approach and was conducted between September and October 2021 by accessing the official website of the Indonesian Stock Exchange (IDX) at www.idx.co.id.

B. Population and Sample

The population of this study comprised ten pharmaceutical sub-sector companies listed on the IDX between 2015 and 2020. Purposive sampling was subsequently utilized to obtain the samples, which composed of seven pharmaceutical sub-sector companies based on the inclusion criteria of this study.

C. Data Collection Method

The data was collected using the archiving technique, which was carried out by collecting available or documented data in the form of the annual financial reports of pharmaceutical sub-sector companies listed on the IDX between 2015 and 2020. Furthermore, the annual financial reports were accessible on the Indonesian Capital Market Directory (ICMD) and the IDX Statistics through the website www.idx.co.id.

D. Data Analysis

Multiple linear regression and moderated regression analyses assisted by SPSS version 21 were applied to analyze the data.

III. RESULTS

A. Descriptive Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Const</td>
<td>2.726</td>
<td>.857</td>
<td>3.183</td>
<td>.003</td>
</tr>
<tr>
<td>DER</td>
<td>-1.504</td>
<td>1.092</td>
<td>-1.378</td>
<td>.178</td>
</tr>
<tr>
<td>ROA</td>
<td>1.504</td>
<td>.927</td>
<td>2.05</td>
<td>.044</td>
</tr>
<tr>
<td>TAG</td>
<td>2.344</td>
<td>.328</td>
<td>1.847</td>
<td>.067</td>
</tr>
<tr>
<td>DPR</td>
<td>0.896</td>
<td>1.639</td>
<td>.108</td>
<td>.547</td>
</tr>
</tbody>
</table>

Table 2: T-Test Results of Model 1

Source: SPSS Output, 2021

According to the table above, the linear regression equation is as follows: \( PBV = 2.726 - 1.504 \times DER + 2.738 \times ROA + 3.484 \times TAG + 0.896 \times DPR \).

As denoted by the above equation, several implications can be deduced as follows:

- The constant value of 2.726 indicates that the firm value will also be 2.726 if there is no change in the debt policy (DER), profitability (ROA), investment decision (TAG) and dividend policy (DPR).
- The coefficient of debt policy (DER) was -1.504, indicating that the debt policy (DER) negatively affected the firm value. However, an increase in debt will lessen the firm value by 1.504.
- The coefficient of profitability (ROA) was 2.738, implying that ROA positively affected firm value. However, a higher ROA will increase the firm value by 2.738.
- The coefficient of the investment decision (TAG) was 3.484, signifying that TAG positively affected firm value. However, a better TAG will increase the firm value by 3.484.
- The coefficient of the dividend policy (DPR) comprised 0.896, demonstrating that the DPR positively affected firm value. However, a greater dividend policy (DPR) will increase the firm value by 0.896.

As denoted by the table above, the significance value of each variable is also known. The significance test of each variable in this study is described as follows.

- The effect of profitability (ROA) on firm value (PBV)

According to the t-test table above, the Sig of debt policy (DER) was 0.178, which was greater than the degree of error (\( \alpha = 0.05 \)). Furthermore, this shows that debt policy (DER) has no significant effect on firm value (PBV). Therefore, the first hypothesis (H1) should be rejected.

- The effect of profitability (ROA) on firm value (PBV)

According to the t-test table above, the Sig of profitability (ROA) was 0.315, which was greater than the degree of error (\( \alpha = 0.05 \)). Furthermore, this means that...
profitability (ROA) had no significant effect on firm value (PBV). Therefore, the second hypothesis (H2) should be rejected.

• The effect of investment decision (TAG) on firm value (PBV)

According to the t-test table above, the Sig of investment decision (TAG) was 0.147, which was greater than the degree of error (α=0.05) (0.147>0.05). Furthermore, this demonstrates that investment decision (TAG) had no significant effect on firm value (PBV). Therefore, the third hypothesis (H3) should be rejected.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-3.265</td>
<td>1.265</td>
<td>-2.580</td>
<td>0.015</td>
</tr>
<tr>
<td>DER</td>
<td>7.775</td>
<td>1.883</td>
<td>4.129</td>
<td>0.000</td>
</tr>
<tr>
<td>ROA</td>
<td>20.284</td>
<td>3.768</td>
<td>5.583</td>
<td>0.000</td>
</tr>
<tr>
<td>TAG</td>
<td>.330</td>
<td>1.789</td>
<td>0.031</td>
<td>.855</td>
</tr>
<tr>
<td>DPR</td>
<td>11.571</td>
<td>2.296</td>
<td>5.041</td>
<td>0.000</td>
</tr>
<tr>
<td>DER DPR</td>
<td>-23.874</td>
<td>4.399</td>
<td>-5.427</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 3: T-Test Results of Model 2

Source: SPSS Output, 2021

According to the table above, the regression coefficient of the relationship between debt policy and dividend policy (DER_DPR) was negative with a value of -23.874, indicating that the dividend policy maintains the position of debt policy as an inhibiting factor for firm value. Meanwhile, it was demonstrated that the Sig of the relationship between debt policy and dividend policy (DER_DPR) comprised 0.000, denoting that it was lower than the degree of error (α=0.05) (0.000<0.05). Furthermore, this shows that the dividend policy (DPR) plays a role in strengthening the effect of DER on PBV. Hence, the fourth hypothesis (H4) in this study should be accepted.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-1.904</td>
<td>1.359</td>
<td>-1.401</td>
<td>.171</td>
</tr>
<tr>
<td>DER</td>
<td>1.084</td>
<td>1.108</td>
<td>.219</td>
<td>.978</td>
</tr>
<tr>
<td>ROA</td>
<td>41.790</td>
<td>10.048</td>
<td>3.127</td>
<td>.000</td>
</tr>
<tr>
<td>TAG</td>
<td>2.593</td>
<td>1.940</td>
<td>.244</td>
<td>1.337</td>
</tr>
<tr>
<td>DPR</td>
<td>4.836</td>
<td>1.671</td>
<td>.585</td>
<td>2.893</td>
</tr>
<tr>
<td>ROA DPR</td>
<td>43.704</td>
<td>10.971</td>
<td>-3.316</td>
<td>3.904</td>
</tr>
</tbody>
</table>

Table 4: T-Test Results of Model 3

Source: SPSS Output, 2021

According to the table above, which shows the regression coefficient in model 3, the regression coefficient of the relationship between profitability and dividend policy (ROA_DPR) was negative (-43,704). Furthermore, this represents that the dividend policy alters profitability from being a supporting factor to a constraining factor for firm value. Meanwhile, it was demonstrated that the Sig. value of the relationship between profitability and dividend policy (ROA_DPR) comprised 0.000, denoting that this value was lower than the degree of error (0.000<0.05). It exhibits that DPR plays a role in strengthening the effect of ROA on PBV. Therefore, the fifth hypothesis (H5) in this study was accepted.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.197</td>
<td>.894</td>
<td>2.458</td>
<td>0.020</td>
</tr>
<tr>
<td>DER</td>
<td>-1.700</td>
<td>1.070</td>
<td>-1.589</td>
<td>.123</td>
</tr>
<tr>
<td>ROA</td>
<td>8.310</td>
<td>4.283</td>
<td>.622</td>
<td>1.940</td>
</tr>
<tr>
<td>TAG</td>
<td>8.922</td>
<td>4.023</td>
<td>.840</td>
<td>2.218</td>
</tr>
<tr>
<td>DPR</td>
<td>1.208</td>
<td>1.607</td>
<td>.146</td>
<td>.752</td>
</tr>
<tr>
<td>ROA DPR</td>
<td>15.610</td>
<td>9.511</td>
<td>-1.641</td>
<td>.111</td>
</tr>
</tbody>
</table>

Table 5: T-Test Results of Model 4

Source: SPSS Output, 2021

According to the table above, which shows the regression coefficient in model 4, it can be viewed that the regression coefficient of the relationship between investment decisions and dividend policy (TAG_DPR) was negative (-15,610). Furthermore, this indicates that the dividend policy alters the position of investment decisions from being a supporting factor to being a constraining factor for firm value. Meanwhile, it is demonstrated that the Sig. value of the relationship between investment decisions and dividend policy (TAG_DPR) comprised 0.111, denoting that it was lower than the degree of error (0.111>0.05). Additionally, this implies that dividend policy (DPR) has no role in strengthening the TAG effect on PBV. Therefore, the fifth hypothesis (H5) proposed in this study should be rejected.

IV. DISCUSSION

A. The Effect of Debt Policy on Firm Value

The results indicated that debt policy negatively affected firm value, demonstrating that it owned the opposite effect on firm value. Furthermore, it is a limiting factor for firm value since pharmaceutical sub-sector companies with large debts are at risk, leading to a decreased firm value. Also, debt policy did not give any significant effects on firm value. Hence, debt policy is not perceived as a determinant of a change in firm value, even though this study identifies debt policy as a factor that inhibits firm value.

This study is concurrent with the capital structure theory (MM theory) by Miller and Modigliani (Suta, et al, 2016), which states that there is no relationship between funding and investment. Furthermore, this demonstrated that debt has no effect on investment, whether it is used or not. Market participants do not consider the debt incurred by a company as the most important factor in assessing the value of a company. These results are corresponded with previous studies by Sofyaningsih and Hardiningisih (2011) and Noviana (2016), which discovered that debt policy did not affect firm value.

B. The Effect of Profitability on Firm Value

The results revealed that profitability significantly affected firm value, demonstrating that it gave a direct effect on firm value. Furthermore, it is a supporting factor of firm value based on the signal theory. It was further demonstrated that profitability did not give any significant effects on firm value. Therefore, it is not a determinant of firm value even
though it was a supporting factor of firm value in this study. This occurs because the company's policy tended to retain the profits rather than distribute them to shareholders when profits increased. Additionally, this was observed in one of the sample companies, PT. Pyridam Farma (PYFA), where the dividends were not distributed during four of the six years of the observation period. Subsequently, this discouraged the investors, it negatively affected firm value. Those results were concurrent with previous studies by Shelly (2015), which found that profitability did not affect firm value.

C. The Effect of Investment Decision on Firm Value

The results demonstrated that investment decisions positively and directly affected firm value. Furthermore, it is a supporting factor of firm value based on the signal theory, implying that investment spending provides a positive signal regarding the future growth of a company. However, previous studies have shown that investment decisions did not give any significant effects on firm value. Therefore, it is not a determining factor of firm value, even though it is a supporting factor of firm value in this study due to the small scale investments in the pharmaceutical sub-sector companies. Also, the amount of capital invested in an asset has a negligible effect on the firm’s value. The results support previous studies by Setiani (2013) and Juwinta (2018) demonstrating firm value was not affected by investment decisions.

D. Dividend Policy as Moderating Variable on the Effect of Debt Policy on Firm Value

According to the regression coefficient in model 2, the relationship between debt and dividend policies was negative. Meanwhile, the significance test showed that the relationship between debt policy and dividend policy significantly affected firm value. Additionally, this result shows that dividend policy moderated debt policy due to having a significant effect upon firm value when dividend policy was combined with debt policy, which did not affect firm value initially.

The pharmaceutical sub-sector companies in debt are at risk when the debts incurred are not utilized and managed optimally, which can send a negative signal to investors and discourage the issuance of new shares. Subsequently, this can cause an irregular payment of dividends to investors in small portions, which decreases the firm value. Therefore, the pharmaceutical sub-sector companies are expectantly capable of improving their debt and dividend policies. The results attained in this study are congruent with the earlier study accomplished by Apsarih (2018), finding that dividend policy could moderate the effect of the debt policy on firm value.

E. Dividend Policy as a Modulating Variable in the Effect of Profitability on Firm Value

The results demonstrated that the dividend policy moderated profitability as a supporting factor to a constraining factor for firm value. Also, it was discovered that the relationship between profitability and dividend policy significantly affected firm value. Dividend policy moderated profitability due to having a significant effect on firm value when dividend policy was combined with profitability, which did not affect firm value initially. Investors will be discouraged when the dividend policy provides a small portion of profits to shareholders despite the good performance of the pharmaceutical sub-sector companies. Good profitability is a positive signal that can become negative or insignificant when it is not accompanied by a good dividend policy. Therefore, the market participants prioritize the distribution of dividends over profitability. These results synchronized with previous studies accomplished by Widyasari, et al (2018) discovering that the effect of profitability on firm value could be moderated by dividend policy.

F. Dividend Policy as a Modulating Variable in the Effect of Investment Decisions on Firm Value

The results demonstrated that the regression coefficient of the relationship between investment decisions and dividend policy was negative. Furthermore, this shows that the dividend policy moderated the investment decisions as a supporting factor to a constraining factor for firm value. Therefore, the combination of investment decisions with dividend policy did not give any significant effects on firm value.

The result was based on moderation by homologation moderation, where investment decisions did not give any significant effects on firm value, no matter dividend policy was utilized.

Future uncertainty is a factor considered by stock market participants when a company makes an investment decision. Investment uncertainty can arise due to technological advancements, changes in socio-economic conditions, factors associated with climate change, and government policies. Also, stock market participants may become discouraged when a significant portion of the profits are not distributed as dividends to the owners of the company, even when the investment succeeds. These results correspond with previous studies accomplished by Auditama (2019), demonstrating that dividend policy was not capable of moderating the effects of debt policy on firm value.

V. CONCLUSIONS AND SUGGESTIONS

According to the results in the previous chapter, the conclusions of this study are (1) the debt policy negatively and significantly affects firm value; (2) profitability positively and insignificantly affects firm value; (3) investment decisions positively and insignificantly affect firm value; (4) dividend policy is capable of moderating the debt policy effect on firm value; (5) dividend policy is capable of moderating the profitability effect on firm value; and (6) dividend policy was not capable of moderating the effect of investment decisions on firm value. Therefore, the suggestions implied from this study include (1) An improved evaluation of the debt policies by the pharmaceutical sub-sector companies. (2) Profitability enhancements by pharmaceutical subsector companies and an evaluation of profit sharing through dividends and retained earnings; (3) Evaluation of the investment decisions by pharmaceutical sub-sector companies since investments are inherently good but carry the risk of uncertainty; and (4) Evaluation of the dividend policy of pharmaceutical sub-sector companies.
REFERENCES


