Determinants of Indonesian telecommunications industry’s firm value with dividend policy as the moderating variable

Fakhirah Husain¹*, Masdar Mas’ud², Syamsu Alam³
Universitas Muslim Indonesia, Indonesia¹,²,³
Corresponding e-mail: fakhirahalkaff@gmail.com

ABSTRACT

Purpose — This study attempts to investigate the effect of profitability and capital structure on firm value with dividend policy as a moderating variable.

Method — The populations were all telecommunications companies listed on the Indonesia Stock Exchange (IDX) for 2012 to 2021, totaling 19 companies. Using the purposive sampling technique, three companies were used as a sample with a time series for 10 years. The collected secondary data was then analyzed by multiple regression analysis techniques and Moderated Regression Analysis (MRA) supported by SPSS (Statistical Product and Service Solutions) application tools to confirm the research hypothesis.

Result — The results indicated that profitability has a positive and significant effect on firm value, while capital structure has no significant effect on firm value. Dividend policy was able to moderate the effect of profitability on firm value, but dividend policy was not able to moderate the capital structure on firm value.

Contribution — This research contributes mainly to the firm value literature by strengthening grand theories used in Indonesian telecommunication sectors.

Keywords: profitability, capital structure, firm value, dividend policy, telecommunication sector
INTRODUCTION

It has been a global concern that business competitiveness will intensify and become more complex when entering the post-COVID-19 era (Allmen et al., 2020). In Indonesia, the telecommunications sectors have shown and proven their resilience to maintain their financial performance in stock market. The need for technology, whether for communication or internet use, is a demand that is currently regarded as crucial. Because practically everything the community requires can be found on the internet, the community is currently highly dependent on very sophisticated telecommunications and communications (Kim, 2020). In this context, firm value becomes fundamental to ensure technology business continuity. Brigham & Houston (2018) define firm value as the total value of all physical assets, including operational and non-operational. He further stated that enhancing its value is relevant with share price on the stock market to entice potential investors to invest. The rationale for the interest in exploring telecommunications firms is that they have very high growth rates and can endure in any environment, with the expectation that they will produce corporate value by maximizing earnings and boosting shareholder wealth.

Some researchers frequently use grand theories to explain or represent the aforementioned financial phenomena. First, the agency theory, popularized by Jensen & Meckling (1976), holds that agency relationships are formed when one or more parties hire others to perform a service and assign decision-making authority to the agent. Second, the pecking order theory, proposed by Myers & Majluf (1984) based on the concept that there is no fixed debt-to-equity ratio aim and just a hierarchy of preferred sources of funding for the organization. The order proposed by this idea is retained profits, forest, preferred stock, and then common stock. The order of funding is determined on the level of risk associated with decisions and the costs of funding sources, from least expensive to most costly. Third, Spence (1973) invented signaling theory in his dissertation titled Job Market Signaling. He contends that information asymmetry exists in the labor market, necessitating a signal criteria to boost financial decision-making strength and confidence. This theory is also used to deliver information to shareholders about the company’s management in managing the company, however the information gained by shareholders cannot be assumed to be genuine or untrue because shareholders are still unwilling to accept it (Connelly et al., 2010).

Several prior studies have investigated the aspects that affect firm value in different backgrounds. For instance, profitability has been confirmed to positively affect emiten’s firm value in real estate and consumer goods (Liow,
Likewise, Akhmadi & Januarsi (2021) found that profitability can enhance a firm’s value as its usefulness as a tool for measuring the efficiency of business operational management based on its sales profits and income from investments in Indonesia. Moreover, great number of profitability report can be a tempted news (positive signal) for investors to convinced their investment in stock market. In addition, another predictor is capital structure, which has been shown to play a significant role in the growth of company value (Hirdinis, 2019; Kusumawati & Rosady, 2018; Nurain Al Fatin, 2020). Since capital structure is a comparison between total long-term debt and capital, the use of debt is generally interpreted by outsiders as a company's ability to meet future obligations in the presence of business risks (Brigham & Houston, 2018). Lastly, dividend policy is essential in improving corporate value as it is crucial for shareholders, creditors, and other parties interested in the publicly disclosed information (Sawicki, 2009). The greater the dividend provided to investors, the better the company's performance, and the higher the stock price reflects the company's valuation. Where this dividend policy is a company policy, all or a portion of the profits made in a given period will be dispersed as dividends. At the same time, the remainder will be retained as earnings or reinvested in the company. The bigger the dividends distributed, the greater the company's stock price, which can attract investors to invest in certain companies (Kim et al., 2021).

Despite their positive interrelationship between the constructs, there are still some contradiective result based on the prior studies review (Aldi, Erlina, & Amalia, 2020; Endri & Fathony, 2020; Harahap, Septiani, & Endri, 2020; Hirdinis, 2019; Machmuddah, Sari, & Utomo, 2020). The argumentation of previous studies above lead this study to identify the empirical gaps (Miles, 2017). Therefore, based on the preceding explanation, this research aims to investigate the effect of profitability and capital structure on firm value, using dividend policy as a moderating variable. In addition, despite these variables often being found in the financial literature, the extension of dividend policy as a moderator is still untapped in Indonesia. This study would provide the most novel evidence of post-COVID-19 in Indonesia, which has recently emerged as a central financial management theory. Hence, the current study examines and quantitatively tests the interrelationships between profitability, capital structure and firm value, with dividend policy as a moderating construct. The result would significantly contribute to the knowledge of the firm value determinant.
METHOD

Research design

This study employs a positivistic quantitative methodology to test hypotheses by measuring variables with descriptive statistical methods. The quantitative approach is a framework or paradigm used to investigate certain populations and samples to evaluate predetermined hypotheses (Newman, 2014). Quantitative data consisting of financial information and calculable with a unit of account are utilized in this investigation. This study uses secondary data that the organization has formally published as its source of information.

Sample and population

This study focuses on 19 emittens registered on the Indonesia Stock Exchange (IDX) in the telecoms sector between 2012 and 2021. This study's sample strategy employs nonprobability sampling using a technique for purposeful sampling based on specific considerations or criteria (Newman, 2014). PT. Telkom Indonesia (Persero) Tbk., with the stock code TLKM, PT. XL Axiata Tbk., with the stock code EXCL, and PT. Indosat Tbk., with the stock code ISAT, are the three firms that match the sampling criteria outlined in the preceding section. The timeframe of this study is a 10-year time series, hence the unit of analysis is 30. Table 1 outlines the criteria that were utilized to screen the sample.

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of telecommunications companies listed on the IDX in the 2012-2021 period</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td><strong>Sample Reduction Criterion 1:</strong> The telecommunications company is not a company that focuses on the cellular telecommunications sector</td>
<td>(15)</td>
</tr>
<tr>
<td>3</td>
<td><strong>Sampling Reduction Criterion 2:</strong> Telecommunications companies that experience losses during the 2012-2021 period</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td><strong>Total unit sample</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Source:</strong> Indonesian Stock Exchange (2022)</td>
<td>3</td>
</tr>
</tbody>
</table>

Data collection

This study collected data through literature review by examining accurate references in books, national journals, and websites associated with the topic. This study also employs the documentation technique by gathering data from firm papers, such as annual reports, that directly influence the problem's subject.
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Downloading annual reports from the websites of the Indonesia Stock Exchange and Issuer Kontan is the way to get the information.

Data analysis

The data will be evaluated and tested using path analysis, supported by SPSS version 25. Next, descriptive statistics are presented for gathering, summarizing, and presenting data in a way that is informative, beneficial, and arranged in a format suitable for analysis. The classical assumption test is required to ensure that variables in research are feasible (Jung, 2019). Before evaluating the hypothesis, it is required to establish the validity of the multiple linear regression analysis results. First, the connection between the independent factors and the dependent variable is examined using multiple regression analysis. The second stage evaluates the moderating variable using Moderation Regression Analysis (MRA).

Hypotheses development

Profitability

Profitability positively affects company value since it demonstrates a company's potential to make net profit, which can raise company value (Hertina et al. (2019). Jemani & Erawati (2020) found that profitability has a positive and significant impact on company value, this demonstrates that company profitability data provides operating profit and demonstrates that companies can offer advantageous benefits to increase their capital and finance their operations. Sukarya & Baskara (2018) proved that profitability has a considerable positive effect on firm value, are consistent with those of (Atmikasari et al., 2020), indicating that profitability affects firm value. According to Aldi et al (2020), profitability has a positive and significant effect on firm value because profitability is the most important indicator for companies; the higher the profitability ratio, the more profit can be distributed to shareholders as dividends. According to Nofika & Nurhayati (2022), profitability has a positive and considerable effect on the value of a company. Hence, great profitability is excellent news for investors and sends a positive signal that encourages many investors to participate. This is in line with research from Akhmadi & Januarsi (2021) which found that profitability is a positive factor that enhances a firm's value. Based on the premises as mentioned earlier, it can be concluded that profitability affects firm value, because a company with a high level of profitability will cause the company's value to continue to rise in the eyes of the
public and send a positive signal to investors about the company's investment potential. Therefore, the hypothesis is stated as follows:

\[ H1: \text{Profitability has a positive and significant impact on firm value} \]

**Capital structure**

According to research conducted by Riki et al (2022), a company's capital structure has a favorable and considerable impact on its value. This indicates corporations prefer to utilize debt as company capital when conducting operations. This trade-off hypothesis demonstrates that a corporation must be capable of balancing the risks and rewards it encounters to maximize its worth. This is done because achieving an optimal capital structure is a firm objective. Krisnando & Novitasari (2021) research demonstrates that capital structure has a positive and statistically significant effect on firm value; the higher the value of debt and the greater the usage of long-term debt to finance assets, the higher the value of the company. Capital structure refers to a firm's funding structure derived from the amount of debt and its own capital. Companies with significant debt benefit from tax savings on interest payments, which increase the company's value. According to the findings of Kusumawati & Rosady (2018), a company's capital structure has a positive and considerable impact on its value. According to previous research reviews, the capital structure can be described as a combination of debt and own capital to fund company activities. This is in line with research from Hirdinis (2019) and Hermuningsih (2013) which found that capital structure has a significant positive effect on firm value. Companies must be able to balance the risks and returns that will be faced in the future so that company goals can be achieved, namely, optimizing the size of the structure capital in the company. As a result, the hypothesis is as follows:

\[ H2: \text{Capital structure has a positive and significant impact on firm value} \]

**Dividend policy, profitability, and firm value**

The results of the moderation test conducted by Aldi et al (2020) indicated that dividend policy can moderate and strengthen the effect of profitability on firm value. Since high profitability and an optimal dividend policy can reflect good company prospects, this is a positive signal for shareholders, which can increase stock prices and company value. According to research by Oktaviani & Mulya (2018), a dividend policy can mitigate the influence of profitability on firm value, and the ability of a company to pay dividends is highly correlated with its profitability. According to research conducted by Suliantawan & Purnawati
(2020), a dividend policy can moderate firm value by strengthening the effect of profitability. In accordance with the “bird in the hand” theory, investors prefer the rate of return in the form of dividends distributed by companies because company profitability is high. According to the findings of Aldi et al., (2020), a dividend policy can mitigate the impact of profitability on company value. It is assumed that dividend policy could limit the influence of profitability on firm value. The bigger the profit produced by a company, the more dividends shareholders will get, and the company’s value in the eyes of investors will also increase. Given the premises above, the third hypothesis is as follows:

\[ H3a: \text{Dividend policy moderate the impact of profitability on firm value} \]

Dividend policy, capital structure, and firm value

Dividend policy can moderate the effect when a company's high capital structure can affect the size of the company in distributing dividend. The smaller the amount of dividends distributed, the greater the decline in company value from investors perspective (Riki et al., 2022). Oktaviani & Mulya (2018) state that companies use debt to maintain cash flow. With this, it can attract investors to invest in the company and increase the value of company (Lutfi & Yudiana, 2021). Based on the explanation of the premise above, capital structure is related to the business long term expenditure as measured by the ration of long term debt to equity and that as the capital structure increases it will generate large profits. Based on arguments above, it is suspected that:

\[ H3b: \text{Dividend policy moderate the impact of capital structure on firm value} \]

RESULT AND DISCUSSION

Descriptive statistics

Table 2 below displays the outcomes of descriptive data computed with the SPSS 25 statistical tool.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability (X1)</td>
<td>30</td>
<td>-1.81</td>
<td>.67</td>
<td>.0457</td>
<td>.39574</td>
</tr>
<tr>
<td>Capital structure (X2)</td>
<td>30</td>
<td>.65</td>
<td>5.15</td>
<td>2.0433</td>
<td>1.18756</td>
</tr>
<tr>
<td>Dividend policy (Z)</td>
<td>30</td>
<td>-.17</td>
<td>1.41</td>
<td>.3670</td>
<td>.41355</td>
</tr>
<tr>
<td>Firm value (Y)</td>
<td>30</td>
<td>-1216.67</td>
<td>84.57</td>
<td>-22.39807</td>
<td>227.39023</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Output SPSS (2022)
Normality test

The normality test aims to determine if a dependent variable, an independent variable, or both are regularly distributed. First, One Sample Kolmogrov-Smirnov (K-S) is tested. The significance threshold is above 0.05 or 5%, suggesting that the residual data are regularly distributed (Sekaran & Bougie, 2017). Second, The autocorrelation was evaluated with the Durbin-Watson criterion and found no issue (Sekaran & Bougie, 2017). Third, multicollinearity test with Tolerance and VIF (Variance Inflation Factor) values (Newman, 2014) proved that all values exceeded the minimum threshold, confirming no multicollinearity between the independent variables. Last, it was found that the regression model was free of heteroscedasticity issue as well. The overview of the normality test is provided in Table 3.

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Cut-off</th>
<th>Value</th>
<th>Decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One Sample Kolmogrov-Smirnov (K-S)</td>
<td>P value &gt; 0.05</td>
<td>0.162</td>
<td>Data normal</td>
</tr>
<tr>
<td>2</td>
<td>Autocorrelation (Durbin-Watson)</td>
<td>dU &lt; DW &lt; 4-dU</td>
<td>1.722</td>
<td>No autocorrelation</td>
</tr>
<tr>
<td>3</td>
<td>Multicollinearity (Tolerance and VIF)</td>
<td>Tolerance &gt; 0.10 VIF &lt; 10</td>
<td></td>
<td>No multicollinearity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tolerance = 0.922</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VIF = 1.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Heteroscedasticity (Glesjer test)</td>
<td>P value &gt; 0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>X1 = 0.193</td>
<td></td>
<td>No heteroscedasticity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X2 = 0.085</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS output (2022)

Coefficient determination (R^2)

The test for the coefficient of determination measures the model's capacity to explain the variation in the dependent variable. According to the test, the adjusted R-square value is 0.774, or 77.4%, means that profitability and capital structure explain 77.4% of firm value, while variables outside the scope of this study predict the remaining 22.6%.
Hypotheses testing

Figure 1. Results of hypotheses testing (Sig *** < 0.000; ns: not significant)

Table 4. Path analysis with Moderated Regression Analysis (MRA)

<table>
<thead>
<tr>
<th>H</th>
<th>Direct Effect</th>
<th>Unst. B</th>
<th>Std. Error</th>
<th>Std. Coefficient</th>
<th>T-stat</th>
<th>P-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>X1 → Y</td>
<td>513.349</td>
<td>52.848</td>
<td>.894</td>
<td>9.725</td>
<td>.000</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H2</td>
<td>X2 → Y</td>
<td>-4.290</td>
<td>17.611</td>
<td>-.022</td>
<td>-.244</td>
<td>.809</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3a</td>
<td>X1*Z → Y</td>
<td>433.056</td>
<td>102.513</td>
<td>.343</td>
<td>4.224</td>
<td>.000</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H3b</td>
<td>X2*Z → Y</td>
<td>62.463</td>
<td>80.950</td>
<td>.374</td>
<td>.772</td>
<td>.447</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Note: X1: Profitability; X2: Capital structure; Y= Firm value; Z= Dividend policy
Significance at: P-value p < 0.01, p < 0.05 and T-statistics > T-table (2,051): *Interaction effect of moderating variables

Based on the SPSS testing, the formula of mutiple regression can be stated as follows: \( Y = 513.349 + 0.894X1 - 0.022X2 + e \). The hypothesis results is narrated in the following paragraph.

The coefficient of profitability’s influence on firm value is 0.894. The positive coefficient indicates that for each 1% improvement in profitability, the firm’s value will increase by 0.894. In addition, the data demonstrate a T-statistic of 9.725 and a P-value of 0.000. Because T-statistics is greater than T-table (9.725 > 1.703) and the significance is smaller than 0.05 (0.000 > 0.05), it may be argued that profitability has a positive and statistically significant impact on company value. Thus, H1 is accepted. The coefficient of the capital structure's influence on
business value is 0.022. The negative coefficient means that the firm's value will decline by 0.022% for every 1% increase in capital structure, and vice versa. In addition, the results demonstrate a T-statistic of -0.244 and a P-value of 0.809. Because T-statistic is greater than T-table (-0.244 < 1.703) and significance is greater than 0.05 (0.809 > 0.05), it may be stated that capital structure has a negative and insignificant effect on company value. Therefore, H2 is rejected.

Coefficient of dividend policy for the profitability and company value is 0.343. In other words, a dividend policy can improve the connection between capital structure and business value. The T-statistic value is 4.224, and the P-value is 0.000. Because T-statistics is greater than T-table (4.224 > 1.703) and the significance is less than 0.05 (0.00 < 0.05), it is possible to conclude that dividend policy can significantly increase (act as a pure moderator) the association between profitability and firm value. Thus, H3a is accepted. In addition, the coefficient of dividend policy between capital structure and business value is 0.374. It means that a dividend policy can improve the connection between capital structure and business value. The results, however, indicated that the T-statistic value is less than T-table (0.772 < 2.051) and the significance is greater than 0.05 (0.447 > 0.05), indicating that dividend policy can increase the association between profitability and company value, but not significantly. Thus, H3b is rejected.

Discussions

The study's findings indicate that profitability has a positive and statistically significant effect on the valuation of IDX-listed telecommunications companies. This is consistent with the prior findings (Akhmadi & Januarsi, 2021; Liow, 2010) and strengthens the signaling theories. This is reasonable as data descriptive show that telecommunications company's earnings are quite stable, despite occasional declines. Furthermore, investors are also very interested in Indonesia telecommunications firms because of their extremely high growth, confirming its business high values. Suppose management can increase and optimize profits per the desires of the company's owner. In that case, good company prospects will increase the demand for shares, thereby increasing the company's value in the eyes of both investors and the market. Alternatively, profitability ratios contribute to establishing company value in telecommunications enterprises. This is because the degree of profit achieved by the company will affect the company's value by increasing profitability or net income, which will be followed by an increase in stock prices that investors will view as positive.
The outcomes of this study reveal that capital structure has a negative and considerable impact on the value of IDX-listed telecommunications companies. This contradicts previous research in this study (Hirdinis, 2019; Kusumawati & Rosady, 2018). In this study, the capital structure did not have a positive and statistically significant effect on firm value since the telecommunication sectors has reportedly added debt due to a lack of internal money. Huge enterprises that intended to expand by adding debt could not raise their firm worth. In addition, when a telecommunication company uses debt in its capital structure, it can diminish the company's value since. From an investor's perspective, excessive debt makes it difficult for a company to pay off its loans. Moreover, continuously increasing debt can generate a risk of bankruptcy for the firm, which will negatively influence the company's value in the eyes of investors. Due to the anxiety that investors experience when investing in a company with a large level of debt, they also demand a return on their investment in the firm's shares, so the company will choose a company with an optimal capital structure where debt and own capital are efficiently managed. To prevent this, the Indonesian telecommunication companies should balance costs with the earned profits.

The results indicate that the dividend policy can mitigate the impact of profitability on the market value of IDX-listed telecommunications businesses. The current findings are consistent with those of Aldi et al (2020), and Oktaviani & Mulya (2018). High profitability and an ideal dividend policy will represent a company's positive prospects, indicating to investors that the company is a solid investment. This can improve stock prices and the value of the company. In contrast, dividend policy cannot considerably modify the relationship between capital structure and the market value of IDX-listed telecommunications companies. This is conceivable due to the fact that when a telecommunications business utilizes a capital structure with high restrictions, dividend payments to investors will be limited since the company will retain earnings. The retained earnings will be used by the company as a reserve to cover debt and pay the company's obligations. Investors hope to receive the maximum dividend in proportion to their investment in the company, however, if the dividends distributed are not optimal, this will have a negative impact on the company's performance which is deemed suboptimal. The company should be able to increase its value by optimizing its use of debt in order to obtain an optimal capital structure so as not to achieve extreme leverage or excessive leverage. It is because when the external funds used have increased continuously and the business conditions are not favorable, the risk will increase. In the view of investors, the firm value will be considered as unfavorable due to its high bankruptcy risk or financial instability.
CONCLUSION

This study aims to investigate the impact of profitability and capital structure determinants on company value, with dividend policy serving as a moderating variable. According to the investigation results, profitability has a positive and considerable effect on the value of a company. Contrarily, the capital structure has no significant positive effect on firm value. The dividend policy variable can bolster its impact by moderating the influence of profitability on firm value. In contrast, the dividend policy variable cannot mitigate the influence of capital structure on firm value. As a practical implication, it is anticipated that investors will profit from this research when making investment decisions for a company. In addition, investors can observe the status of profitability, capital structure, company valuation, and dividend policy in the results of this study to invest in telecoms firms according to their preferences. It is anticipated that this research will serve as a reference for firms that satisfy the criteria so that companies can continue to enhance their performance through various evaluations and innovations to attract investors, particularly telecommunications companies.

Despite this study’s contributions, it still has several limitations that can inspire future studies. First, the current background only focused on Indonesia telecommunication sectors with small samples. To widen the generalization, the next study should explore another potential background such as technology-based company. Second, this study focuses solely on specific combined variables. Hence, future research should be able to incorporate more constructs to enrich theories such as ownership structure, corporate social responsibility (CSR), or financial resilience.
REFERENCES


