Does Profitability and Firm Size Matter in Explaining the Value of Insurance Companies During the Pandemic?

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ABSTRACT

This study aims to determine the effect of company profitability and company size on the value of insurance companies in Indonesia before and during the pandemic. It involves 14 insurance companies listed in the Indonesia Stock Exchange as the research sample. Secondary data related to return on assets as a proxy for profitability, total assets for firm size, and price to book value as a proxy for firm value were documented from companies’ annual reports from 2018 to 2021. Using multiple regression analysis as the primary data analysis, the results of this study indicate that profitability and firm size do not positively affect the value of insurance companies listed on the Indonesia Stock Exchange. This study also reports that the regression model proposed by this study has a stronger predictive value during the pandemic than before.

KEYWORDS

Profitability
Company Size
The Value of the Company

Introduction

Recently, several Indonesian insurance companies, including AJB Bumiputera 1912, Jiwasraya, PT Kresna Life, and Wanaartha Life, faced a few problems (Wareza, 2022). One of which, PT Asuransi Jiwa Kresna or Kresna Life, failed to compensate customers. The Financial Services Authority (OJK) found various violations committed by PT Asuransi Jiwa Kresna/Kresna Life, where they were offering investment benefits, reaching 9.75%. The insurance company was providing investment benefits above the average bank deposit. Because of this violation, the OJK imposed sanctions in the form of Restrictions on Business Activities (PKU) as stated in the OJK letter number S–342/NB.2/2020 per August 3, 2020. Apart from PT Asuransi Jiwa Kresna/Kresna Life, several large insurance companies experienced similar cases, including PT Asuransi Jiwasraya (Persero), PT Asuransi Jiwa Bakrie Life, PT Asuransi Bumi Asih Jaya and Asuransi Jiwa Bumiputera 1912.

Cases like these result in the public’s distrust of insurance companies in Indonesia. This situation, of course, harms the company, thus affecting the growth and continuity of its operations. It is because, by creating an insurance product, insurance companies are responsible for taking on risks in return for the premium paid by the insurers (OJK, 2022).

The negative outlook from the public caused by various problems that occur in insurance companies needs to be anticipated by management through increasing the company’s value. The increasing value of a company may lead to the rising company’s financial performance, which is in line with the main purpose of a company to maximize profits, as suggested by Warren et al. (2017: 2). Besides that, the increasing company’s value also helps the company in maintaining its existence and relevance. The company’s value could be attained from the public trust after serving its business for several years. Without trust, the company will undoubtedly find it difficult to survive until now (Suffah & Riduwan, 2016).
A high company value reflects the level of prosperity in its shareholders. An increased prosperity of shareholders is manifested in a high stock price. Investors certainly will not immediately believe and invest their capital just like that. Investors will invest their funds in companies that have good financial performance. Financial performance shows the results achieved by the company on the management of its resources. Investors will see and study the company's development through financial reports using financial ratios, and identify and evaluate the company's growth and performance to assess the company's ability to return on investment.

Some researchers associate company value with profitability (Komara et al., 2020) because company profitability indicates a company's efficiency. In turn, it will maximize investor welfare. Research conducted by Majid and Budiarti (2018) and Sembiring and Trisnawati (2019) provides empirical evidence that profitability positively affects firm value. In addition to profitability, company size is also considered to affect the company's value. Hakim and Hakim (2018) provide empirical evidence that company size positively affects company value.

However, research conducted by Ussu et al. (2017) provides empirical evidence that insurance company size does not affect firm value, while research conducted by Majid and Budiarti (2018) and Octavus and Adiputra (2020) shows empirical results of a negative effect. Profitability also does not consistently affect the value of insurance companies. Research conducted by Octavus and Adiputra (2020) failed to provide empirical evidence of the effect of profitability on company value. The results of previous research showed that company size and profitability need to be re-examined because some of the results of previous studies provide inconsistent empirical evidence. This study investigates the effect of profitability and company size on the value of insurance companies listed on the Indonesia Stock Exchange.

**Literature review**

**Signaling Theory**

A signal refers to any actions a company takes to guide investors regarding the company's prospects conveyed by management. Accordingly, signaling theory conveys information to users that describe the company's condition (Komara et al., 2020). The information users, including investors, potential investors, and creditors, will respond to information received by the company as a signal given by the company regarding the condition of the company. Financial reports provide a signal that will help the users to understand the company's prospects.

However, for companies to gain the trust of information users, the information provided in financial reports must be complete, relevant, and accurate. Signal theory in this study will relate to profitability and company size, which affect company value. The high value of profitability and company size will provide a good signal about the company's prospects, thus, increasing company value.

**Company Value**

Company value is the price potential buyers or investors are willing to pay if the company is sold. Company value, as reflected in the company's share price formed from the demand and supply mechanism in the capital market, reflects society's assessment of company performance (Octavus & Adiputra, 2020).

The stock price of a company can be an illustration of the company's performance in the future. A company's high stock price leads to a high company value, thus increasing prosperity for shareholders. High company value indicates growth in investment and company performance. Company value can be measured in various ways, such as Price Earning Ratio and Price Book Ratio (Judge & Hakim, 2018). Price Book Ratio is a ratio that measures the ratio of stock market prices to the book value of shares (Market Price Per Share/Book Value Per Share).
The Association of Profitability and Company Value

Profitability is a company’s ability to generate profits. It means that a profitable company shows management’s ability to manage the company efficiently (Widiastari & Yasa, 2018). According to Rudangga and Sudiarta (2016), company profitability positively affects its value. It means that the higher the company’s profitability, the higher the company’s value. As company profits increase, investors will be more confident in investing their capital. A highly profitable company may have a high price for its stock.

A study by Majid and Budiarti (2018) shows that profitability, as measured by ROE, positively affects company value. It means that high profits show good company prospects and attract investors to participate in investing in the company. Thus, demand for shares will increase, resulting in high company value. It is in line study conducted by Leman, Suriawinata, and Noormansyah (2020), Octavus and Adiputra (2020), Sembiring and Trisnawati (2019), Widiastari and Yasa (2018), who have presented empirical evidence that the profitability ratio has a positive effect on firm value. Based on the explanation, this study’s first research hypothesis was formulated as follows:

H1. Profitability has a positive effect on firm value.

The Association of Company Size and Company Value

Company size is considered capable of influencing the value of the company. The larger the size or scale of the company, the easier it will be for the company to obtain internal and external funding sources (Rudangga & Sudiarta, 2016). Meanwhile, according to Widiastari and Yasa (2018), company size is a scale that can classify the size of the company seen from total assets, number of sales, share value, and so on.

The company’s size can be seen from the number of assets owned by the company. Company size is one factor that can affect a company’s profit. Companies on a larger scale tend to be more experienced and better prepared to deal with business problems. Indirectly it will increase the company’s ability to earn higher profits because it is supported by large assets so that it can overcome obstacles within the company. Companies with large total assets show that the company has positive cash flow and is considered to have good prospects in the future in increasing the value of a company.

Company size is an illustration of all the assets owned by a company. Based on the research of Hakim and Hakim (2018), company size positively contributes to increasing company value. Increasing company value can be done by expanding the number of assets the company uses. This is also in line with research by Hirdinis (2019), Sembiring and Trisnawati (2019), Rudangga and Sudiarta (2016), and Novari and Lestari (2016). Based on the explanation, this study’s first research hypothesis was formulated as follows:

H2. Company size has a positive effect on firm value.

Research Method

This study involves insurance companies listed on the Indonesian Stock Exchange (IDX), while the sample was chosen from the population using a purposive sampling method. The criteria used for choosing the sample are as follows: (1) Insurance companies listed on the Indonesia Stock Exchange (IDX) from 2018-2021 and (2) Having complete data related to the variables being investigated.

The data used in this research is secondary data. Secondary data is a type of data obtained from third parties or other parties. Data related to financial information were obtained from the Indonesian Stock Exchange website using documentation. The researchers documented the data from the companies annual reports.

In line with the objective of this study, the variables investigated in this study were one dependent variable and two independent variables. Following the research by Octavus and Adiputra (2020), the dependent variable, company value, is proxied by the price-book value (PBV) ratio. This ratio is calculated by comparing the closing market price of the shares at the end of the year with the book value of the shares. The formula for this ratio is:

\[ PBV = \frac{Share\ Price\ Per\ Share}{Book\ Value\ Per\ Share} \]
For the independent variables, there are profitability and company size. Profitability was proxied following research by Majid and Budiarti (2018) using the Return On Equity (ROE) ratio. Higher profits generated by the company will make investors interested in the value of the shares (Majid & Budiarti, 2018). The measurement of this ratio uses profit after tax divided by the company’s total assets. The formula for this ratio is:

$$\text{ROE} = \frac{\text{Profit after tax}}{\text{Equity}}$$

The second independent variable, company size, is proxied following the research of Lumoly et al. (2018) using the company’s total assets. Companies that have large total assets show positive cash flows and good prospects in the long term (Lumoly et al., 2018).

This study uses an associative quantitative approach to describe and determine the relationship between the independent variables in the form of profitability and firm size to the dependent variable, namely firm value. Therefore, multiple regression analysis was applied to test the research hypotheses. However, before conducting regression analysis, the researchers conducted classical assumption at first. The analysis was needed to ensure that the regression model did not violate the classical assumption of regression analysis. The model developed in this study is as follows:

$$\text{PBV} = \alpha + \beta_1 \text{ROE} + \beta_2 \text{SIZE} + \epsilon$$

In addition to regression analysis, this study also applied descriptive statistical analysis to provide data descriptions of the sample companies.

**Results and Discussion**

As stated earlier, descriptive statistical analysis was applied to describe the data of the sample companies. Table 1 summarizes the descriptive statistics analysis results.

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Minimal</th>
<th>Maximal</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Size (in a million rupiahs)</td>
<td>179,014</td>
<td>35,275,479</td>
<td>8,276,882</td>
</tr>
<tr>
<td>Profitability</td>
<td>-0.49</td>
<td>0.19</td>
<td>0.05</td>
</tr>
<tr>
<td>Company Value</td>
<td>0.15</td>
<td>9.26</td>
<td>1.45</td>
</tr>
</tbody>
</table>

Source: Secondary Data Processed (2022)

The observed data in this study were 51 data. In the descriptive statistical analysis, company size, as measured by total assets, has a maximum value of IDR 35,275,479,000,000 and a minimum value of IDR 179,014,000,000. The large difference between the minimum and maximum values for company sizes indicates a high variation in the size of insurance companies in Indonesia. The profitability value, as measured by the ROE ratio, shows a minimum value of -0.49, which means the company suffers a loss of 50% of the total equity value. This condition was experienced by PT Bhakti Multi Artha Tbk in 2021. With regard to the company value, which is measured using PBV, the lowest company value of 0.15 was experienced by PT Paninvest Tbk in 2021. PT Paninvest Tbk’s share price is the cheapest stock compared to other insurance companies, reaching an industry average of 1.45 times. PT Bhakti Multi Artha Tbk experienced the highest company value of 9.26 in 2021. In 2021, PT Bhakti Multi Artha Tbk experienced a sizable loss compared to other insurance companies, but on the other hand, the company’s value reached the highest.

Before testing the hypothesis using multiple regression, it is necessary to ensure that the data meet the classical assumptions to avoid bias. The classic assumption tests performed were the normality, multicollinearity, and heteroscedasticity tests. The One Sample Kolmogorov-Smirnov test, Variance Inflation Factor (VIF), and Glejser test were applied to test the assumptions of normality, multicollinearity, and heteroscedasticity, respectively. Table 2 presents the result of the Kolmogorov-Smirnov test, while Table 3 presents the multicollinearity and heteroscedasticity test results.

Table 2. Normality Test Result
The normality test results show a statistical value of 0.099 and a significance value of 0.200. These results indicate that the residual data is normally distributed (Table 2).

Table 3. Multicollinearity and Heteroscedasticity Test Result

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Multicollinearity Test</th>
<th>Heteroscedasticity Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
<td>VIF</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.967</td>
<td>1.034</td>
</tr>
<tr>
<td>Company Size</td>
<td>0.967</td>
<td>1.034</td>
</tr>
</tbody>
</table>

The multicollinearity test results show a tolerance value above 0.1 and a VIF value below 10. These results indicate that there is no multicollinearity or there is no linear correlation between the independent variables. The significance value of F resulting from the Glejser test is above 5%. It means that heteroscedasticity does not occur. It means that there is no variance from the residual data.

The equation of this research model is:

\[ Y = 7.226 - 3.155 \text{ROE} - 0.252 \text{SIZE} + e \]

Based on this research model, it can be seen that the relationship between profitability and firm size is inverse to firm value. That is, if the profitability and size of the company increase, then the value of the company will decrease.

The Adjusted R-Square value is 0.292, which means that variations in changes in the ups and downs of firm value can be explained by ROE and company size of 29.2%, while the remaining 70.8% is explained by other variables not examined in this study. The F test value shows a significance of 0.000, which means it is lower than 0.05. It indicates that at least one of the independent variables in this study influences the dependent variable.

Table 4. Regression Test Result

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Statistik Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.226</td>
<td>3.684</td>
</tr>
<tr>
<td>Profitability (ROE)</td>
<td>-3.155</td>
<td>-2.457</td>
</tr>
<tr>
<td>Company Size (SIZE)</td>
<td>-0.252</td>
<td>-3.657</td>
</tr>
<tr>
<td>F Test</td>
<td>11.727</td>
<td></td>
</tr>
</tbody>
</table>

The ROE t-statistic value is -2.457, and the significance value is 0.018. Even though the significance value is below 0.05, which means that it has a statistically significant effect, the variable coefficient value is negative, which means it has a different direction from the dependent variable. It means that the first hypothesis of this study is not supported. Thus, profitability does not have a positive effect on firm value.

The results of this study indicate that profitability has no positive effect on firm value in insurance companies. This study's results align with several previous studies conducted by Pramestie and Atahau (2021), which have provided empirical evidence that profitability does not affect firm value.

Investors do not consider company profitability as one of the considerations to determine company value. Due to the relatively small profitability of insurance companies, investors consider other factors to make investment decisions in insurance companies (Pramestie & Atahau, 2021).

The t-statistic value of SIZE is -3.657 and a significance value of 0.001. Even though the significance value is below 0.05, which means that it has a statistically significant effect, the variable coefficient value is
negative, which means it has a different direction from the dependent variable. It means that the second hypothesis of this study is not supported and that company size does not positively affect firm value.

The results of this study indicate that the size of the insurance company has no positive effect on firm value. This result is not in line with the signal theory. Investors do not view the size of an insurance company as a guarantee about their investment prospects. This study’s results align with the results of research conducted by Junitania and Prajito (2019), Noviana and Nelliyan (2017), and Sulaksono and Sandra (2022), which state that company size does not affect firm value.

Furthermore, this study analyzes more deeply the possibility that the pandemic has an impact on the financial performance of Indonesian companies. Several previous studies have provided empirical evidence that the Covid-19 pandemic has had an impact on various aspects of life worldwide, including the declining performance of Indonesian companies (Hasan et al., 2022; Hidayat, 2021) and particularly in the financial sector (Asmirawati & Kurniati, 2021; Kusuma & Widiarto, 2022). Therefore, this study analyzes the financial data of insurance companies in 2018-2019 for the pre-pandemic period and 2020-2021 for the pandemic period. The results of the analysis test are shown in Tables 5 and 6.

**Table 5. Regression Test Results for 2018-2019 Data**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Statistic value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.388</td>
<td>2.489</td>
</tr>
<tr>
<td>Profitability (ROE)</td>
<td>-2.927</td>
<td>-2.391</td>
</tr>
<tr>
<td>Company Size (SIZE)</td>
<td>-0.253</td>
<td>-0.756</td>
</tr>
<tr>
<td>F Test</td>
<td>3.798</td>
<td></td>
</tr>
<tr>
<td>Adj. R²</td>
<td></td>
<td>0.189</td>
</tr>
</tbody>
</table>

Source: Secondary Data Processed (2022)

Data analysis for 2018-2019 shows an Adjusted R-Square value of 0.189, which means that ROE and company size can explain 18.9% of the variance of company value. The F test value shows a significance of 0.038 which means it is lower than 0.05. This shows that at least one of the independent variables has an effect on firm value. The t-statistic value of SIZE is -0.253, and the significance value is 0.026. This means that company size has no positive effect on firm value. For the ROE variable, the t-statistic value is -2.927, and the significance value is 0.458. This means that profitability has no effect on firm value.

**Table 6. Regression Test Results for 2020-2021 Data**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Statistic value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.624</td>
<td>2.047</td>
</tr>
<tr>
<td>Profitability (ROE)</td>
<td>-3.584</td>
<td>-2.476</td>
</tr>
<tr>
<td>Company Size (SIZE)</td>
<td>-0.201</td>
<td>-2.082</td>
</tr>
<tr>
<td>F Test</td>
<td>6.890</td>
<td></td>
</tr>
<tr>
<td>Adj. R²</td>
<td></td>
<td>0.304</td>
</tr>
</tbody>
</table>

Source: Secondary Data Processed (2022)

Data analysis for 2020-2021 shows an Adjusted R-Square value of 0.304, meaning that ROE and company size can explain 30.4% of the company value variance. The F test value shows a significance of 0.004, which means it is lower than 0.05. This shows that at least one of the independent variables has an effect on firm value. For the company size variable, the t-statistic value is -0.201, and the significance value is 0.048. This means that company size has no positive effect on firm value. For the ROE variable, the t-statistic value is -3.584, and the significance value is 0.02. This means that profitability has no positive effect on firm value.

Analysis of both the pre-pandemic period and during the pandemic period for insurance company data shows that there are differences in results. It can be seen from the value of adjusted $R^2$. During the pandemic, the ROE variable and company size could explain the company’s value of 30.4%, higher than before the pandemic, which was 18.9%. In addition, during the pre-pandemic period, the ROE variable had no effect.
on firm value. It means that investors do not consider profitability to determine stock prices so that it is reflected in the value of the company. During the pandemic, profitability became one of the variables that influenced the variance of firm value. Contradicting to signaling theory, profitability had a negative impact on a firm’s value.

Conclusion

The results of this study indicate that profitability and company size do not positively affect firm value in the insurance industry listed on the Indonesia Stock Exchange. This study has not been successful in providing empirical evidence that the profitability and size of insurance companies are signals used by management to inform investors about a company’s ability to increase firm value. Investors value companies using factors other than profitability and company size.

This study has not successfully supported the signal theory to explain the effect of profitability and firm size on firm value proxied by the PBV ratio. For this reason, future research is expected to improve this research using different firm value measurements, such as Tobin’s q as a proxy for firm value. In addition, future research can use other factors as drivers of firm value in the insurance industry.

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