Financial Structure and Stock of Infrastructure, Utilities and Transportation Companies

Faizul Mubarok¹*, Deby Ulfarini²

faizul.mubarok@ecampus.ut.ac.id

¹Universitas Terbuka, Jl. Pd. Cabe Raya, Kec. Pamulang, Kota Tangerang Selatan, Banten, Indonesia
²Universitas Islam Negeri Syarif Hidayatullah Jakarta, Jl. Ir H. Juanda, Ciputat Timur, Tangerang Selatan, Banten, Indonesia

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ABSTRACT

This study aims to analyze the factors that affect the stock prices of companies in the infrastructure sector. This study utilizes a panel data regression method conducted from 2015 to 2022, using quarterly reports from seven different companies. According to the findings, four elements have a major impact on the stock price. The return on assets (ROA), price to book value (PBV), and total asset turnover (TATO) have a positive impact on stock prices, while debt to equity ratio (DER) has a negative impact. These findings are consistent with previous research on factors that affect stock prices. Companies should pay close attention to consistency in financial ratio indicators that affect stock prices, as demonstrated by this study. Financial ratio volatility is associated with higher risk and lower investor trust.

Keywords : Company; Performance; Stock; Infrastructure; Ratio

Tujuan utama penelitian ini adalah untuk mengidentifikasi faktor-faktor yang berkontribusi terhadap fluktuasi harga saham. Penelitian ini menggunakan metode regresi data panel yang dilakukan dari tahun 2015 sampai dengan 2022, dengan laporan triwulanan dari tujuh perusahaan yang berbeda. Price to book value (PBV), return on assets (ROA), dan total asset turnover (TATO) memiliki pengaruh positif terhadap harga saham, sedangkan debt to equity ratio (DER) memiliki pengaruh negatif. Temuan ini konsisten dengan penelitian sebelumnya mengenai faktor-faktor yang mempengaruhi harga saham. Perusahaan harus memperhatikan konsistensi indikator rasio keuangan yang mempengaruhi harga saham, seperti yang ditunjukkan oleh penelitian ini. Volatilitas rasio keuangan dikaitkan dengan risiko yang lebih tinggi dan kepercayaan investor yang lebih rendah.

Kata Kunci : Perusahaan; Kinerja; Saham; Infrastruktur; Rasio
INTRODUCTION

If the firm experiences growth but still requires a greater amount of finances although a significant amount of the company's funds have been used up, the only option left is to obtain funds from sources outside the organization. To satisfy the requirement for finances, this can be accomplished, for example, through the issuance of stocks or bonds (Ehlers & Packer, 2017). In contrast, investors who want to put their money to work are searching for investments that will be successful in the years to come. Hence, the capital market functions as a place where investment demand and supply can meet to engage businesses that need financial assistance (Broadstock et al., 2021; Shafron, 2019). In this scenario, the capital market enables businesses to acquire the financing necessary to grow their operations, while also providing investors with the opportunity to profit by investing their money in profitable businesses.

Many people who are interested in making financial investments opt to put their money into stocks because they are one of the most common sorts of investments available on the stock market (Li et al., 2016; Setiawan & Harmasanto, 2019). Investments that have a low risk but also a low return, on the other hand, are considered to be less dangerous (Gründl et al., 2016). As a consequence of this, investors must have a good knowledge of the mechanics that underlie fluctuations in stock prices, and they should exercise extreme caution when making decisions concerning their investments. This can be accomplished by conducting thorough research before making an investment and giving careful thought to the potential dangers posed by unpredictable shifts in stock price (Silwal & Napit, 2019; Thampanya et al., 2020).

To get big profits and minimize the existing risks, investors in the capital market must have sufficient ability to analyze and choose stocks worthy of being chosen as investment vehicles (Lalwani et al., 2019; Ozturkkal, 2015). There are two methods of analysis to detect which stocks are profitable, namely technical analysis and fundamental analysis (Octovian, 2023). Technical analysis looks more at stock price movement data. Investors predict possible future price behaviour from historical data in the past or evaluate trading volume. At the same time, the fundamental analysis estimates the value of shares without using stock price information as a reference in the process of valuing a company's shares, typically making use of financial statements that can be analyzed through financial ratios to see how well the company is performing.

This study makes use of fundamental analysis since the fundamental approach has the potential to provide information financial performance the profits that are made by the company. A fundamental examination is reflected in the financial ratio, which is a measure. Profitability, liquidity, solvency, activity, and market value are just a few of the areas where a variety of measures can be applied to evaluate a company's financial health (Olson & Zoubi, 2017; Salman & Nawaz, 2018).

In addition to financial ratios, the size of the company is another aspect that is taken into consideration when evaluating the performance of the firm and attempting to forecast the price of the company's shares. Therefore, for businesses to be successful in attracting investors, they need to be able to demonstrate strong financial performance. Investors' demand for a company's stock rises in tandem with expectations of future growth, so a rising stock price is a direct result of rising investor confidence.

In 2017, the number of funds allocated increased by 41.1% to a total of 379.7 trillion rupiahs. The budget for the nation’s infrastructure saw another increase in 2018, this time of 3.8%, bringing it to a total of 394 trillion rupiahs. The following years will see increases of 1.4%, 399.7 trillion rupiahs, and 5.9%, respectively, bringing it to a total of 423.3 trillion rupiahs. Thus, the capital market positively affects the stock price
fluctuations of a wide variety of regional businesses. This will allow the infrastructure, utility, and transportation sectors in Indonesia to maintain their stock market value.

A financial ratio is a metric used to compare two different financial metrics over the same time frame, providing insight into how well a business is doing. Insight into a company's current and potential economic success can be gained by analyzing these ratios (Kariyawasam, 2019). One of the stages in the research process in financial ratios is the interpretation stage of financial statements, which includes financial ratios. Mubarok & Sutrieni (2020) perform an analysis of volatility and make price projections for stocks. Company size, return on equity, debt to equity ratio, and total assets turnover are only a few of the variables that Yusuf (2020) analyzes in terms of their effect on the stock price for companies in the transportation subsector that are traded on the Indonesia Stock Exchange.

The authors of the aforementioned study, Sari et al. (2019), investigate how return on assets, inflation, and currency rate all affect stock prices. Wardana & Fikri (2019) investigate the impact that property and real estate businesses’ stock prices have had on their respective financial performances. Sun & Hong (2021) research investigates the elements that influence the price of a stock. Izzah & Akbar (2022) investigate the impact of both internal and external fundamental factors on the price of LQ-45 shares.

The price-book value, debt-to-equity ratio, current ratio, and stock prices were just some of the indicators that Hasanah & Sulistiyono (2021) looked at to determine the effect on the transportation sector. Rianisari et al. (2018) investigated the impact on the food and beverage industry sector of liquidity, leverage, profitability, and stock prices. Chandra & Osesoga (2021), investigate the stock price of construction companies. The effect of a firm’s financial success on the value of its food and beverage operations is investigated by Junaeni (2017). Rimbani (2016) investigates the effect of several financial ratios on the shares of various real estate and property enterprises. Juwita & Pratama (2022) discusses the ratio of liquidity, solvency, profitability, and stock prices.

This research employs fundamental analysis, which is a technique used in the investment industry to assess the value of a company by analyzing the fundamental factors that affect this value, such as the company's financial performance, industrial structure, economic conditions, and other factors that influence market prices. This research contributes to the existing body of knowledge by expanding the list of significant fundamental analytical criteria. In addition to classic criteria such as profitability, solvency, and liquidity, this study investigates additional factors including total asset turnover, price-to-book value ratio, and business size.

By investigating topics that were not previously taken into account, the objective of this study is to acquire a more in-depth comprehension of the factors that influence the share prices of companies operating in the infrastructure sector. This research is carried out by enhancing our grasp of the aforementioned aspects through the application of recent data as well as quarterly financial reports to guarantee the reliability of the findings obtained from the research. It is anticipated that this research will contribute to our understanding of the relationship between certain factors and the share prices of companies operating in the infrastructure sector. This understanding is intended to assist investors and decision-makers in making better investment decisions.

Companies can profit from this study because it will serve as an example and guide on how to maximize financial success through stock price fixing. The study’s findings can serve as a guide for businesses as they work to strengthen their financial plans and promote corporate growth by maximizing stock prices. For the benefit of academics, it provides an opportunity to contribute knowledge and enrich research on financial
performance. The public gives an overview to pique people's curiosity and persuade them to buy shares of companies involved in the infrastructure sectors.

Stock market values are influenced by a variety of factors, as hypothesized in H₁ to H₆. H₁ suggests that the current ratio plays a role in shaping stock market values, while H₂ states that the stock market reflects the scale of a company. Furthermore, H₃ asserts that stock prices are influenced by the price-to-book ratio, and H₄ suggests that the return on assets can impact the prices of publicly traded companies. Additionally, H₅ indicates that stock prices are responsive to changes in the debt-to-equity ratio. Finally, H₆ posits that the market value of a company's assets directly affects its stock price. These hypotheses collectively demonstrate that stock market values are influenced by various financial ratios and indicators, reflecting both the financial health and market perception of companies.

RESEARCH METHOD

The research data source is derived from the financial statements of seven firms in the infrastructure, utilities, and transportation sectors, with quarterly data from 2015 through 2022. This study's sample includes Bali Towerindo Sentra, Tbk (BALI), Citra Marga Nusaphala Persada, Tbk (CMNP), Inti Bangun Sejahtera, Tbk (IBST), Perusahaan Gas Negara, Tbk (PGAS), Tower Bersama Infrastructure, Tbk (TBIG), Telkom Indonesia (Persero), Tbk (TLKM), and Sarana Menara Nusantara, Tbk (TOWR). The current ratio (CUR), debt to equity ratio (DER), firm size (FSIZ), total assets turnover (TATO), return on assets (ROA), stock prices (PRISTOCK), and price to book value (PRBOOK) are all used in this study.

\[ PRISTOCK_{it} = \alpha + \beta_1CUR_{it} + \beta_2FSIZ_{it} + \beta_3PRBOOK_{it} + \beta_4ROA_{it} + \beta_5DER_{it} + \beta_6TATO_{it} + e \] (1)

The Current Ratio (CUR) is a liquidity ratio used to evaluate a company's short-term debts relative to its current assets. The total assets listed in a company's financial filings are used by the Firm Size (FSIZ) metric to determine the size of the business. When evaluating a stock, PRBOOK is used to contrast its current market price with its book value. The ratio of a company's profits or losses to the value of all its assets is called its return on assets (ROA). The Debt to Equity Ratio (DER) is a valuation metric that indicates the proportion of debt to total equity. The total assets turned over (TATO) ratio measures how well an organization is utilizing its entire assets. It would be ideal if ownership of the assets could be transferred as promptly as feasible.

\[ CUR = \frac{\text{Current Assets}}{\text{Current Liabilities}} \] (2)

\[ PRBOOK = \frac{\text{Share Market Price per Share}}{\text{Book Value per Share}} \] (3)

\[ ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \] (4)

\[ DER = \frac{\text{Total Debt}}{\text{Total Equity}} \] (5)

\[ TATO = \frac{\text{Sales}}{\text{Total Assets}} \] (6)
The Chow test is one of the many tests that are included in the panel data technique. This approach also contains some other tests. The purpose of these tests is to establish which model provides the most reliable results. By applying this test, it will be established whether or not the model with fixed effects or common effects is better suited for the task of estimating panel data. If it is found that the model with common effects is more suitable, then the test will be considered successful. One can determine which model, the one with the fixed effect or the one with the random impact, is more applicable to real-world situations by employing the Hausman test. After the most accurate model has been obtained, the data should be free of heteroscedasticity, multicollinearity, and autocorrelation. Additionally, normally distributed data should be eliminated.

RESULTS AND DISCUSSION

Table 1. explains the results of the Chow test. In this study, a Chow test was conducted to determine the most appropriate model to use between the common effect model and the fixed effect model. The Chow test is conducted to compare the coefficients between time and between groups in the panel regression model, which helps determine which model is most appropriate to use. According to the Chow test, the fixed effect model is appropriate because the probability value obtained is less than 5% (see Table 1). This means that the influence of the factors studied on the stock price of infrastructure companies tends to be specific to each company and is not influenced by general external factors.

Table 1. Chow Test Results

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>41.776</td>
<td>(6,204)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>173.908</td>
<td>6</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Processed data, 2023

The Hausman test is a test conducted after the Chow test to evaluate the fit of the model to determine whether a fixed-effects or random-effects model is more suitable for analyzing the resulting data (see Table 2.). According to the findings of the Hausman test, the analysis of this data should be performed using a model with fixed effects. To put it another way, when utilizing a model with random effects, there is an extremely slim chance that the null hypothesis would be proven correct. As a consequence of this, the application of the fixed effects model is recommended for use in this investigation. In other words, the fixed effects model is considered more suitable for use in this regression analysis as it can explain the variation in the data more effectively than the random effects model.

Table 2. Hausman Test Results

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>250.656</td>
<td>6</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Processed data, 2023

Following the selection of a model according to the accuracy of its forecasting abilities, the following stage is to evaluate the traditional assumptions. The objective of this test is to determine whether or not the regression equation generates estimates that are accurate, consistent, and uninfluenced by outside factors. If the probability value of the
Jarque-Bera test is more than 5%, as indicated by the results of the normality test, it is possible to conclude that the data that were examined for this study are from a normally distributed distribution (see Table 3).

After confirming that the data are normally distributed, the next step is to carry out a test for multicollinearity, which examines the degree to which the independent variables are related to one another. The Variance Inflation Factor (VIF) is the value that is referred to when discussing the multicollinearity test. If the value of the VIF is ten or less, then the model does not exhibit any signs of multicollinearity. According to the findings of the test for multicollinearity, all of the VIF values are less than ten, which indicates that the regression model does not contain any instances of multicollinearity (see Table 3).

Lagrange multiplier analysis was used to check for autocorrelation. To ascertain whether or not the t and t-1 periods are correlated, the autocorrelation test is performed. The autocorrelation test assumes that the residuals are independent of one another. If the probability is more than 5% and there is no correlation between the residual observations, then the model does not have autocorrelation. With a probability of 0.000, an autocorrelation test using the Lagrange multiplier yields a value of 177.3911. An approximate probability of less than 5% is indicated by these findings (see Table 3).

### Table 3. Residual Analysis

<table>
<thead>
<tr>
<th>Test</th>
<th>Parameter</th>
<th>Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heteroskedasticity</td>
<td>Breusch-Pagan</td>
<td>28.2431</td>
<td>0.0001</td>
</tr>
<tr>
<td>Autocorrelation</td>
<td>Lagrange Multiplier</td>
<td>177.3911</td>
<td>0.0000</td>
</tr>
<tr>
<td>Normality</td>
<td>Jarque-Bera</td>
<td>5.0678</td>
<td>0.0793</td>
</tr>
<tr>
<td>Multicollinearity</td>
<td>Variance Inflation Factor</td>
<td>CUR</td>
<td>1.2833</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FSIZ</td>
<td>1.7463</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PRBOOK</td>
<td>3.8941</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ROA</td>
<td>2.5515</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DER</td>
<td>3.4704</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TATO</td>
<td>3.4387</td>
</tr>
</tbody>
</table>

Source: Processed data, 2023

The traditional assumption tests of multicollinearity and heteroscedasticity are extremely crucial to carry out in the context of panel data regression. However, this does not imply that testing for normality is skipped if a model with a common effect or a fixed effect is chosen. Heteroscedasticity, according to Gujarati (2004), is the most pressing issue in panel data regression since the nature of panel data is unquestionably cross-sectional, in contrast to the nature of time series, which, while it does exist, is not nearly as dominant (this reason does not need autocorrelation). Because of this, the Generalized Least Squares (GLS) method can be used in conjunction with several other techniques to combat heteroscedasticity. The Generalized Least Squares Cross-Section Weights approach is utilized in this research project's fixed effect model.

Table 1. describes the results of the fixed effect model test. Prices of stocks are unaffected by changes in the variable current ratio (CUR). A strong current ratio is an indicator of a company's ability to meet its immediate financial commitments from its available resources. There is a guarantee that the company can pay off short-term debt, which can affect investors' interest in the company because it will result in higher offers for company shares, and stock prices will increase. The current ratio can affect investors' interest in the company because of this guarantee. No impact can be attributed to the firm Size (FSIZ) variable on stock prices Generally speaking, investors and analysts view companies with a high total asset value as promising enterprises that may ultimately
benefit their financial investments. Therefore, the chances of these shares surviving on the capital market improve, and their price will rise if many investors are interested in purchasing them (Jang & Ahn, 2021; Merkle & Sextroh, 2021).

Table 4. Fixed Effect Model Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUR</td>
<td>0.012867</td>
<td>0.014108</td>
<td>0.912053</td>
<td>0.3628</td>
</tr>
<tr>
<td>FSIZ</td>
<td>4.538098</td>
<td>3.647986</td>
<td>1.244001</td>
<td>0.2149</td>
</tr>
<tr>
<td>PRBOOK</td>
<td>0.077228</td>
<td>0.009040</td>
<td>8.543218</td>
<td>0.0000*</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.013221</td>
<td>0.006087</td>
<td>-2.172159</td>
<td>0.0310*</td>
</tr>
<tr>
<td>DER</td>
<td>-0.051561</td>
<td>0.012580</td>
<td>-4.098742</td>
<td>0.0001*</td>
</tr>
<tr>
<td>TATO</td>
<td>0.291426</td>
<td>0.139114</td>
<td>2.094876</td>
<td>0.0374*</td>
</tr>
<tr>
<td>C</td>
<td>1.790139</td>
<td>1.142770</td>
<td>1.566490</td>
<td>0.1188</td>
</tr>
</tbody>
</table>

Source: Processed data, 2023
*significant at 5%

The price-to-book value (PRBOOK) ratio has a significant impact on the companies that trade on the stock market. This is because the ratio represents the degree to which investors are optimistic regarding the future financial prospects of a firm concerning its book value. The level of investor optimism about the company's future is reflected in the price to book value, thus affecting the company's share price. The higher the price-to-book value ratio is, the more hopeful investors are, and the more likely they are to buy shares of the firm, which in turn affects the price of the company's shares on the stock market. The price at which buyers are willing to purchase the company's stock reflects the confidence of buyers. When the ratio of price to book value is lower, investors appear less optimistic about a company's prospects. For this reason, investors must focus on this specific factor. Yet, if the price of a business's shares is going up while its price-to-book value ratio is also going up, it is an indication that investors are positive on the firm's prospects, which in turn drives up the price of the shares. This is because investors believe the company will continue to do well.

The return on assets (ROA), which can have a considerable influence on the price of a company's shares and may be a factor that varies from business to business, is an essential component. The Return on Assets (ROA) is a critical indicator for investors when calculating Return on Investment. For investors, a company's stock price can rise in response to signs of strong profitability, which reflects the efficiency with which it turns its resources into cash (Law et al., 2020). Another key financial statistic that has a big effect on stock prices is the debt-to-equity ratio (DER). When the DER is low, investors are more assured that the company can meet its debt commitments using cash flow from operations or revenues from the sale of equity securities.

The prospect of investing in this opportunity is likely to attract investors, thereby leading to an upswing in stock prices. If a company is capable of effectively managing its assets and the funds available for its operations, it will pique the interest of investors who wish to invest in its stocks (Sun & Hong, 2021). A rise in desirability translates to an increase in the company's share price in the capital market.

CONCLUSION

The purpose of this study is to investigate how financial ratios have an impact on the stock prices of businesses that are involved in the provision of infrastructure, utilities, and transportation services. According to the findings of the study, several significant
elements have a significant impact on how stock values are determined. A few examples of these factors include the ratio of the price to the book value of the company's assets, the debt-to-equity ratio, the return on assets, and the total asset turnover.

RECOMMENDATION

This study shows that investors can use financial ratios like the price-to-book value ratio, the debt-to-equity ratio, the return on assets ratio, and the total asset turnover ratio to figure out how much a company's shares are worth. Investors can identify organizations with strong financial performance and larger development potential by paying attention to certain financial ratios. This study also shows that companies in infrastructure, utilities, and transportation services need to use their costs effectively and efficiently if they want to improve their financial performance and stock price.

This can be done by spending money more wisely, like by making the right investments at the right time, lowering operational costs, and raising productivity. The stock prices of companies involved in infrastructure can be affected by a variety of other factors, which could be the subject of future research. For instance, studies can be conducted to investigate the factors such as interest rates, inflation, and economic growth that have an impact on the stock values of businesses operating in this sector.

REFERENCES


