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Financial ratios' impact on stock prices in indonesian retail companies amid the covid-19 events in 2020–2022

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ABSTRACT

The purpose of this study is to assess the financial ratios of the stock prices of retail companies listed on the Indonesia Stock Exchange between 2020 and 2022 when the COVID-19 pandemic causes economic volatility. The financial ratios in this study include debt-to-equity ratio (DER), return on equity (ROE), and return on assets (ROA). The research methodology used is a quantitative approach using multiple regression analysis. Evaluate the relationship between debt-to-equity ratio (DER), return on equity (ROE), and return on assets (ROA) in stock prices. The second-party data came from the company's audited financial records and was analyzed using SPSS 27. The research findings show that return on assets (ROA) has a positive and significant impact on stock prices. This finding also indicates that companies have been efficient with their assets, which generates profits, which is an important factor in determining stock prices. Return on Equity (ROE) has a positive and significant impact on share price. This is evident from the fact that companies have used efficient asset disposal procedures during the COVID-19 pandemic, resulting in high profits that can contribute to an increase in stock prices. Debt to Equity Ratio (DER) has a significant negative effect on stock prices. It can be seen that companies can optimally manage their finances and silently create favorable financial conditions for the company. This can have an impact on increasing the company's share price. Simultaneously, Return on Equity (ROE), Return on Asset (ROA), and Debt to Equity Ratio (DER) have a significant influence on stock prices. This research can be applied to Return on Equity (ROE), Return on Asset (ROA), and Debt to Equity Ratio (DER) together affect the stock price of retail companies in Indonesia. This information can be useful for investors and financial management for the development of decisions in investment, and it is very important that financial analysis can be used as a guide when developing decisions in investment.

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1. INTRODUCTION

The world experienced an unprecedented crisis in the early months of 2020 because of the COVID-19 pandemic, which started in Wuhan and China and spread rapidly across the globe. According to Fong et al. (2020), this situation prompted countries, including Indonesia, to implement effective mitigation strategies, such as social distancing, business disruptions, and lockdowns. These actions have devastating consequences, impacting humanity and the economy, which plays a crucial role in providing essential goods and services. Retail industry turnover declines, and many stores close, contributing to broader economic problems (Kustiyono et al., 2022; Iswati et al., 2022). Several factors, such as decreased economic activity, decreased household consumption, and decreased investment, contributed to the economic downturn (P. B. Astuti & Mahardhika, 2020).

Between 2020 and 2022, economic volatility increased to the point where it affected the value of down stocks and necessitated government intervention and economic stabilization measures (Hamal & Gautam, 2021; Budiarso et al., 2020). A key component of the financial system, the stock market facilitates the use of financial instruments and supports important economic growth by fostering a sense of cooperation between investors and entities that require financing (Maninder & Pavani, 2020). Several factors, including indicators of financial health such as liquidity, profitability, and solvency ratio, affect stock prices. These factors are highly significant for investors when making investment decisions, particularly during periods of market volatility (Santoso & Meidiaswati, 2022).

During the COVID-19 pandemic, fiscal incentives and debt restructuring policies implemented by the Indonesian government played a crucial role in mitigating the negative impact of DER on stock prices. Companies with high DER, which are generally more vulnerable to economic turmoil due to large debt burdens amid declining revenues, are helped by fiscal incentives that have the potential to improve profitability and cash flow, thereby reducing default risk and increasing attractiveness to investors. Information on tax incentives provides positive signals to the market, especially for high-risk companies. Furthermore, debt restructuring programs alleviate the financial stress of companies with high DER through maturity extension or interest rate reduction, providing financial space to get through difficult times and prevent bankruptcy. While restructuring may bring short-term challenges, the reduction in interest expense, in the long run, has the potential to improve stock performance and valuation. Taken together, these two policies work together to lower investors' risk perception of companies with high DER during the pandemic, thus moderating the negative effect of DER on stock prices.

The primary financial ratios examined in this study are Return on Equity (ROE), Return on Asset (ROA), and Debt to Equity Ratio (DER) about the stock price of Indonesian companies listed on the Bursa Efek Indonesia (BEI) between 2020 and 2022. The selection of ROA, ROE, and DER as the main representations of the financial performance of retail companies during the economic crisis is based on their ability to reflect vital aspects of financial conditions in difficult situations. ROA is important because it measures a company's effectiveness in generating profits from its assets, which becomes a crucial resilience indicator when sales decline or costs increase. ROE, on the other hand, reflects the return on shareholders' investment, which investors pay close attention to during a crisis to evaluate management's efficiency in generating profits from owners' capital. Lastly, DER gives an idea of the level of debt and solvency risk, which is a major concern during a crisis as companies with high debt are more vulnerable to financial stress. The combination of these three ratios provides a holistic view of profitability, asset efficiency, return to shareholders, and financial risk, making it

a relevant representation of financial performance for retail companies during times of economic crisis.

2. RESEARCH METHOD

2.1 Types of research

This study uses an exploratory design with a quantitative approach to assess the relationship between the variables. The purpose of explanatory research is to clarify how various variables interact and affect each other.

2.2 Population and Sample

The population of this study is the ritel companies listed in BEI for the 2020–2022 period. The purpose of purposive sampling is to choose companies that meet specific criteria so that a sample of at least 14 companies is selected from a total of 32 companies.

2.3 Data collection

This study makes use of secondary data derived from the audited financial statements of the retail industry. Currency data covering the years 2020–2022 provides a thorough analysis of the impact of exchange rate fluctuations on stock prices.

2.4 Data analysis

Multiple regression analysis is used to analyze data and ascertain how stock prices are impacted by the debt-to-equity ratio (DER), return on equity (ROE), and return on assets (ROA). The regression model evaluates these factors' combined and individual effects. The following steps are part of the analysis: (a) Characteristic Statistics: to enumerate the fundamental characteristics of the data. (b) Analysis of Regression to ascertain how the independent variables Debt to Equity Ratio (DER), Return on Equity (ROE), and Return on Asset (ROA) relate to the dependent variable (stock price). (c) Hypothesis Testing: Determining the significance of the regression coefficient using the t-test and F-test. And the R^2 test for important variables at the same time.

3. RESULTS AND DISCUSSIONS

3.1 Descriptive Statistics

The stock price variable yields an average value of IDR 1,556.14, a standard deviation of IDR 1,510.29, and a minimum value of IDR 104 to a maximum value of IDR 6,000. Values for the Return on Assets (ROA) variable range from a minimum of 0.04 to a maximum of 32.70, with an average of 6.50 and a standard deviation of 6.74. Values for the Return on Equity (ROE) variable range from a minimum of 0.75 to a maximum of 13.05, with an average of 3.50 and a standard deviation of 3.45. The debt-to-equity ratio (DER) variable produces an average value of 1.32, a standard deviation of 0.95, and a minimum value of 0.14 with a maximum value of 3.24.

3.2 Classical Assumption Test

Regression analysis depends on the residuals having a normal distribution, which is what the normality test seeks to verify. The data did not follow a normal distribution, as indicated by the Kolmogorov-Smirnov (KS) test's significance value (Asymp. Sig. 2-tailed) of 0.002 (significance value <0.05). The square root method (SQRT(x)) was used to convert the data to achieve normalcy. Following the transformation, the data met the normalcy criteria, as indicated by the significant value of 0.054 obtained from the KS test on the modified data.

To detect multicollinearity, the Variance Inflation Factor (VIF) and Tolerance are measured. The results of data transformation indicate that all VIF values are below 10,000, and tolerance values are more than 0. The lack of multicollinearity between independent variables means that the data is suitable for regression analysis.

Heteroscedasticity test using the Glejser method and ScatterPlot analysis. Data points are haphazardly distributed above and below the zero line in a scatter plot, which displays no signs of heteroscedasticity. Additionally, the Glejser test demonstrates that all independent variables have significance values greater than 0.05, indicating that the regression model is heteroscedastic.

The Durbin-Watson (DW) test is used to perform the autocorrelation test. Autocorrelation in the data is indicated by the initial DW value of 1.260. To get around this, the Durbin Two-Step Method is used, yielding a DW value of 0.970 that nevertheless shows autocorrelation. In the following stage, all variables are transformed, and the Rho value is estimated using the Durbin-Watson D technique. With a DW value of 1.950 in the range of 1.6617 to 2.3383, the final result reveals that there is neither positive nor negative autocorrelation, indicating that the regression model is appropriate for usage.

Table 1. Multiple Linear Regression Test Results Table

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	16.707	13.103		1.163	.114
TRANSFORM_x1	7.082	4.599	.018	3.433	0.002
TRANSFORM_x2	.703	1.425	.417	.143	0.047
TRANSFORM_x3	-2.104	5.542	.046	-2.06	0.041

3.3 Multiple Linear Regression Test

The following formula yields the study's multiple linear regression model:

$$Y = 16{,}707 + 7{,}082\ ROA + 0{,}703\ ROE - 2{,}104\ DER + \varepsilon i$$

The constant coefficient in regression analysis is 16,707, which represents the value of the dependent variable, which is the stock price when all independent variables (ROA, ROE, and DER) are zero. In other words, if ROA, ROE, and DER are all zero, the stock price will be 16.707 units, which is the baseline level without any influence from independent variables.

A regression coefficient of +7,082 for the Return on Assets (ROA) variable indicates a strong correlation between ROA and the stock price. In a specific sense, if ROA is at a certain level, the price of stocks is expected to rise to 7.082 while all other variables are held constant. In contrast, a decline in ROA will result in a decline in the price of turun stock during the same period.

A positive correlation between ROE and the stock price is indicated by the variable Return on Equity (ROE), which has a regression coefficient of about +0.703. For this reason, if the ROE is at a single level, the stock price is expected to be at a level of 0.703 per unit, with other factors remaining constant. Moreover, if ROE declines, the price of stocks will fall by about 0.703 units for every unit of ROE decline.

Debt-to-Equity Ratio (DER) is a variable with a regression coefficient of -2,104, which indicates a negative correlation between DER and stock prices. Accordingly, if the DER drops by one unit, the stock price is predicted to drop by 2,104 units, assuming that the other variables remain unchanged. Conversely, the DER's decline will result in a similar share price rise.

3.4 Hypothesis Testing

Using the formula df = n-k, where n (number of observations) = 42 and k (number of variables, including dependent and independent) = 3, the t-test is performed with a confidence level of 0.05, and the t-table value is measured. The t-table value is 2.02439 with α = 0.05, resulting in df = 39. Demonstrating that: (a) The significant value is less than 0.05 (0.002 <0.05), and the t-calculated value for ROA of 3.433 is higher than the t-table value of 2.02439 (3.433> 2.02439). It is evident from this that ROA significantly boosts stock prices. Stock prices rise in tandem with every unit increase in ROA, presuming all other factors stay the same. (b) The significant value for ROE is less than 0.05 (0.047 < 0.05), and the t-count value of 0.143 is less than the t-table value of 2.02439 (0.143 < 2.02439). Consequently, stock prices are significantly positively impacted by ROE. (c) The significance value of DER is higher than 0.05 (0.041 < 0.05), and the t-count value of -0.206 is less than the t-table value of 2.02439 (-0.206 < 2.02439). As a result, stock values are significantly impacted negatively by DER outcomes.

The F-test provides information about the model's overall effectiveness by evaluating the significance of the independent variable's correlation with the dependent variable. The calculated F test results show that there are approximately 9,603 (df) N1=3 and N2 = 39, and the F table is around 2,85. Because the F-value is larger than the F-tabel (9,603 > 2,85) and the significance level is smaller than 0.05 (0,002 < 0,05), it can be concluded that independent variables (ROA, ROE, and DER) together have a significant impact on the performance of financial, resulting in a long-term dampening of the stock price.

The degree to which the independent variables can account for the variability of the dependent variable (stock price) is shown by the coefficient of determination (R^2). The value of R2 is 0.256. This suggests that ROA, ROE, and DER account for about 25.6% of the variation in stock prices. There are other significant factors outside the current analysis framework, though, as evidenced by the fact that 74.4% of the variance in stock prices is due to factors not included in this regression model.

Managing ROA in retail companies is critical for the long-term viability of the company's operational activities, this is done by maximizing efficiency and optimizing asset utilization to ensure that capital is used effectively to achieve the company's goals and sustainable growth. ROE management in retail companies can also be seen in the use of company debt for productive activities aimed at optimizing profit acquisition and achieving long-term business growth goals.

3.5 The Influence of Return on Asset (ROA) on Stock Prices

The study's findings indicate that Return on Assets (ROA) has a positive and significant impact on the stock price of the company Ritel. This indicates that ROA is a crucial factor for investors when evaluating a company's value and stock price. Effective use of assets to generate profits might lead to a decline in stock prices since investors prefer companies with high ROA because of the assets' effective use and profitability, which is crucial for growth and stability. This is in line with other research conducted (Tanjungsari & Djazuli, 2016; Devy & Manunggal, 2023; Noersyahbani, 2022) which also highlights the significant impact of ROA on the price of stocks in the food and beverage sectors.

Companies with high ROA are more likely to draw in capital from the market because of the possibility of higher investment returns, which indicates great business success, claim (Bodie et al., 2022). Strong management and operational performance are indicated by a high ROA, which shows an efficient conversion of investment into net income. This is particularly crucial in difficult economic times, like the COVID-19 epidemic, when investors give preference to businesses with solid asset management and financial results (Widyadhana et al., 2022; Zhang, 2023). The significance of ROA in

times of economic crisis is further (Markonah & Cahaya, 2023) and research on the Palestinian market, which emphasizes its function in evaluating a company's stability and growth potential (Asa'd et al., 2022).

3.6 The Influence of Return on Equity (ROE) on Stock Prices

According to the study's findings, retail companies' stock prices are significantly positively impacted by return on equity (ROE). This demonstrates that during the COVID-19 epidemic, retail businesses may effectively conduct their operational activities. The effectiveness of retail companies' operations can directly impact the value of the company's stock price and help to ensure that their operations are sustainable. According to a study by Astuti & Sari (2018) and Dewi & Rahyuda (2020) return on equity (ROE) significantly influences stock prices. This finding is consistent with their findings.

3.7 The Influence of Debt-to-Equity Ratio (DER) on Stock Prices

The research discovered that when examined separately, the Debt-to-Equity Ratio (DER) significantly lowers the stock price of retail businesses. This indicates that other elements, such as revenue growth or operational strategy, have a greater impact on investors' assessments of stock values than the amount of debt outstanding by the company. This finding supports studies by (Miftahuddin & Mahardhika, 2019; Noersyahbani, 2022; Nuraeni et al., 2021; Mustaffa & Syabani, 2021) found a significant impact of the debt-to-equity ratio on stock prices in the retail industry.
Bodie et al., (2022) state that a low debt-to-equity ratio denotes minimal debt, which lowers financial risk because the business can still use its equity to regulate its financial obligations to third parties. The ability of the business to make enough money to pay its debts is made possible by the decreased risk. However the hazards of low DER might have been lessened by the COVID-19 pandemic's strategic use of debt, such as by utilizing government incentives or low interest rates (Sopha et al., 2022). Retail businesses that have low DER perform better because they can run more effectively. Retail companies' stock prices may be impacted by this (Burt & Maglaras, 2022).

3.8 The Simultaneous Effect of ROA, ROE, and DER on Stock Prices

According to our analysis, the stock price of retail enterprises is significantly impacted by the factors of Return on Equity (ROE), Return on Assets (ROA), and Debt to Equity Ratio (DER). According to the coefficient of determination, the variability of ROA, ROE, and DER accounts for 25.6% of the variation in stock prices. Stock prices are significantly impacted when ROA, ROE, and DER variables are combined. This result is in line with studies by (Noersyahbani, 2022), which show how these factors work together to affect stock prices across a range of industries.

A thorough understanding of a company's financial health can be obtained by combining various financial measurements and identifying relationships that might not be visible when looking at each component independently. DER indicates financial leverage, ROE displays a company's profitability and efficiency ratios, and ROA represents profitability. This integrated method offers a comprehensive evaluation of a company's profitability, efficiency, and leverage, which is crucial during the economic uncertainty brought on by the pandemic and aids investors in making well-informed decisions (Sudana & Arlindania, 2011)

4. CONCLUSION

Based on the findings of this study's analysis and discussion, we can draw the following conclusions: ROA has a significant impact on the stock price of retail companies, as evidenced by the company's increasingly successful performance in increasing profits.

Seeing these conditions can encourage investors to buy and sell shares in retail companies because they see the company's good profits. The ROE ratio has a significant impact on the stock price of retail companies, as evidenced by the company's increasing ROE. High ROE causes stock market prices to rise, indicating an increase in returns for shareholder investors. High DER has a significant impact on stock prices, as evidenced by the increasing company debt, which is being used to fund operational activities and company expansion, thereby affecting profit optimization. This influences the stock price obtained by investors or attracts additional investors to invest in retail companies. Retail businesses prioritize operational efficiency. The debt-to-equity ratio (DER), return on equity (ROE) and return on assets (ROA) all account for 25.6% of the stock price, which is a significant amount.

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