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Fundamental Analysis of Stock Price Changes in Pharmaceutical Subsector Companies Listed on the Indonesia Stock Exchange for the Period 2016 – 2020

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ABSTRACT

The aim of this research is to analyse the impact of Return On Assets (ROA), Return On Equity (ROE), and Earnings Per Share (EPS) on the stock prices of pharmaceutical companies listed on the Indonesia Stock Exchange. This study employs a quantitative approach. The data used are secondary data in the form of company financial reports obtained from the Indonesia Stock Exchange (IDX). The sample selection in this study used purposive sampling, which involves selecting samples based on specific criteria. The data analysis method applied is multiple linear regression analysis. The results of this study indicate that the independent variable ROE positively correlates with stock price prediction, as evidenced by a calculated t-value of 5.721, which is greater than the critical t-value of 2.02619. EPS also positively correlates with stock price prediction, with a calculated t-value of 2.004, which is slightly less than the critical t-value of 2.02619. However, the ROA variable negatively correlates with stock price prediction, with a calculated t-value of -4.273, which is less than the critical t-value of 2.02619. Return On Assets (ROA), Return On Equity (ROE), and Earnings Per Share (EPS) collectively have a significant impact on stock prices. From the regression coefficient test, it is concluded that 56% of the stock price can be explained by the independent variables. This study illustrates that the pharmaceutical subsector companies listed on the Indonesia Stock Exchange rely more on a strong capital structure to improve financial performance, with a focus on increasing stock prices.

Keywords: *Earning per Share, Return on Asset, Stock Price, Return on Equity*

1. Introduction

Growth is one of the primary concerns for companies in ensuring their continued existence. Companies are required to create a competitive environment that enables them to grow and develop sustainably. One of the strategies companies use to achieve growth is by strengthening their capital structure through the capital market. The capital market in Indonesia has experienced rapid growth, as evidenced by the high level of public trust in investing in the market (Gerald et al., 2017). The need for companies to foster competitiveness, coupled with the public's investment activity, makes the capital market a fundamental necessity for both companies and investors in maintaining their sustainability. The capital market also serves as an indicator of a country's economic growth. The state of a capital market is linearly related to the nation's economy. If a country experiences an increase in capital market investments, it indicates economic development. Conversely, when the capital market is sluggish, it reflects a downturn in the national economy (Fajri & Fenty, 2020). Information available in the capital market serves as a guide for investors in making investment decisions.

Since early 2020, the world has been impacted by the rapidly spreading coronavirus, which has had global consequences. This virus attacks the respiratory system and can lead to death. The spread of COVID-19 led to changes in trade income in 2020. Globally, the pandemic has had a negative impact on Indonesia's economy, leading to an increase in deaths, unemployment, and poverty. The implementation of lockdown measures hindered business activities in Indonesia, resulting in layoffs, restrictions on public transportation, and the disruption of company operations (Desi Nurul et al., 2020). The pandemic has affected investor decisions when analysing stock market portfolios due to declining performance (Collins et al., 2020).

The Indonesian business sector has felt the impact of the COVID-19 pandemic through a downturn in economic activity. According to a report from the Central Bureau of Statistics (BPS) cited by Kompas.com, Indonesia's economic growth in the second quarter of August 2020 was minus 5.32 percent, down from 2.97 percent in the first quarter of 2020 as reported by BPS. Despite the decline in Indonesia's economy during the pandemic, several business sectors have benefited. As cited by cnbcindonesia.com, sectors such as basic industries and chemicals grew by 4.8%, infrastructure, utilities, and transportation by 2.34%, and manufacturing by 2.29%. The COVID-19 pandemic has not only had negative effects on various business sectors but has also provided opportunities for growth in others. According to a survey conducted by the Central Bureau of Statistics (BPS) on 34,559 business actors, 82.55% reported a decrease in income, while 14.78% experienced an increase (Kompas.com).

Share prices are generally influenced by a company's profitability, with profitability ratios used as a measure of returns and the company's effectiveness in generating profits (Fajri & Fenty, 2020). Profitability is a performance ratio that indicates a company's ability to generate profits over a certain period. Companies with high profitability demonstrate strong performance, which positively influences the company's perceived value among investors (I Ketut Suardana et al., 2020). In this study, the level of a company's profitability is measured by three aspects: ROA (Return On Assets), ROE (Return On Equity), and EPS (Earnings Per Share).

Return On Assets (ROA) is one of the profitability ratios used to assess the extent of a company's performance by examining the use of its total assets in generating profits. The higher the ROA, the better, as it indicates the company is efficiently utilising its assets to generate profits, which can lead to an increase in share prices (Derliana M. Manik, 2021).

Return On Equity (ROE) is another profitability ratio that measures a company's ability to generate profits from the equity invested by the owners (Annisa Azizah et al., 2021). ROE is also a traditional performance indicator that does not account for the cost of capital. As part of profitability, ROE represents the company's performance through post-tax profits using the owners' equity (Septi Nur Imani, 2021). Research by Irma Ismawati et al. (2021) supports the notion that return on equity influences share prices. This is further supported by data analysis showing that out of 35 samples (seven companies over five years), 12 samples exhibited discrepancies between theory and reality. Earnings Per Share (EPS) is a measure of a company's ability to generate earnings per share for shareholders. The higher the company's earnings, the higher the dividends paid (Badzlina Balqis, 2021).

The rationale for testing ROA and ROE against share prices lies in the fact that these metrics are always published in company financial reports and are commonly used by investors to evaluate the returns on their investments (Tampubolon et al., 2023b). Additionally, ROA and ROE are visible metrics that represent the returns from all company activities, making them important considerations for investors. EPS is chosen because it indicates how much profit investors earn per share owned (Tampubolon et al., 2023a). Therefore, these three variables are assumed to be critical in examining their impact on share prices (Tampubolon et al., 2023a).

The pharmaceutical industry is a manufacturing sector comprising 10 listed companies on the IDX, which have seen an increase in sales in recent years. The pharmaceutical and medical device sectors have been classified as high-demand sectors during the COVID-19 pandemic, as pharmaceutical companies are among those with high market demand. Based on collected data, several pharmaceutical companies have experienced business growth. For instance, PT. Kalbe Farma Tbk reported a 3.8% increase in sales, reaching IDR 11.60 trillion in the first semester of 2020, compared to IDR 11.17 trillion in the same period last year, with net profits rising by 10.3% from IDR 1.25 trillion to IDR 1.38 trillion. Similarly, Sido Muncul, Tbk, a company in the pharmaceutical and herbal medicine sector, recorded an increase in sales at the end of December 2020, reaching IDR 3.335 trillion, up from IDR 3.067 trillion in the same period in 2019.

Pharmaceutical companies listed on the IDX have experienced increased sales in recent years. The pharmaceutical and medical device sectors have gained significant interest during the COVID-19 pandemic due to high market demand. Based on gathered information, several pharmaceutical companies have shown business growth, such as PT. Kalbe Farma Tbk, which reported a 3.8% increase in sales to IDR 11.60 trillion in the first half of 2020 compared to IDR 11.17 trillion in the same period last year, with net profits rising by 10.3% to IDR 1.38 trillion from IDR 1.25 trillion. Sido Muncul, Tbk, in the pharmaceutical and herbal medicine sector, also reported revenue growth to IDR 3.335 trillion by the end of December 2020, up from IDR 3.067 trillion in the same period in 2019. Sido Muncul also reported a net profit increase to IDR 934.01 billion, compared to IDR 807.68 billion, indicating profit growth for the company.

From the profit growth of several pharmaceutical subsector companies during the pandemic period from 2019 to 2020, the majority experienced profit growth compared to the previous period. Based on this analysis, the researcher is interested in conducting a study on pharmaceutical subsector companies listed on the IDX for the period 2016 to 2020, with the aim of understanding the impact of profitability on changes in share prices.

2. Method, Data, and Analysis

Method

The study's population and sample consist of 10 pharmaceutical subsector companies listed on the Indonesia Stock Exchange (IDX) that have actively reported their financial statements from 2016 to 2020. This research employs quantitative data, relying on secondary sources obtained from the financial statements of these companies. Data collection was carried out using a documentation method, focusing on the financial statements of the pharmaceutical subsector companies for the specified period. From the 10 companies that met the sample criteria, a total of 50 data points were gathered, covering five years of observations. To analyse the relationship between the independent and dependent variables, the study utilised multiple linear regression analysis.

Hypotheses Development

The study hypothesises that Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS) all positively influence stock prices. ROA measures how effectively a company uses its assets to generate profit, with a higher ROA reflecting greater efficiency and profitability, which tends to boost investor confidence and drive up stock prices. Similarly, ROE indicates how well a company uses shareholders' equity to produce profits; a higher ROE suggests strong financial performance and management, leading to increased investor interest and higher stock prices. Lastly, EPS represents the portion of profit allocated to each share; higher EPS signals better profitability and potential for future dividends, making the stock more attractive and likely to increase in price. Thus, it is hypothesised that each of these financial metrics positively impacts stock prices.

H^1 : ROA Positively Influences Stock Prices
H^2 : ROE Positively Influences Stock Prices
H^3 : EPS Positively Influences Stock Prices

3. Results

Clasical Asumptions

Normality test

Results of the One-Sample Kolmogorov-Smirnov Test for normality. The significance value is 0.200, which is greater than 0.05, indicating that the residuals from the regression model are normally distributed. This suggests that the data fit the assumptions required for parametric testing.

Multicolinearity

Table 1. Multicolinearity

Variable	Tolerance	VIF	Decision
ROA	0.262	3.82	No multicollinearity
ROE	0.259	3.86	No multicollinearity
EPS	0.764	1.31	No multicollinearity

Source: Data Processing

The VIF values are all below 10, and the tolerance values are above 0.1, indicating that multicollinearity is not a problem among the independent variables.

Autocorelation

The durbin Watson statistic is 1,369. The Durbin-Watson value falls between the lower bound (du) of 1.3384 and the upper bound (4-du) of 2.3411, indicating that there is no autocorrelation in the residuals of the regression model.

Heteroskedasticity

Table 2. Heteroskedasticity

Variable	T	Sig	
ROA	-1.289	0.206	No heteroskedasticity
ROE	2.346	0.124	No heteroskedasticity
EPS	-0.759	0.453	No heteroskedasticity

Source: Data Processing

All significance values are greater than 0.05, indicating that there is no evidence of heteroskedasticity in the model. This means that the variance of the residuals is consistent across different levels of the independent variables

T test multiple regression

Here are the results of the multiple linear regression analysis in this study

Table 3. T test multiple regression

Variable	B	Sig.	Hypothesis Decision
ROA	-0.933	0	Hypothesis rejected
ROE	1.457	0	Hypothesis accepted
EPS	0.247	0.052	Hypothesis accepted

Source: Data Processing

The t-test was employed to assess the impact of each independent variable on the dependent variable and to determine whether each independent variable has a significant individual effect. According to the regression analysis, the significance level for ROA (X1) is 0.000, which is below the 0.05 threshold, suggesting that ROA does not significantly influence stock prices. Consequently, the hypothesis that ROA positively affects stock prices is rejected. Conversely, the significance level for ROE (X2) is also 0.000, indicating a significant impact on stock prices. Thus, the hypothesis that ROE has a positive effect on stock prices is accepted. For EPS (X3), the significance level is 0.052, slightly above the 0.05 threshold, indicating a marginal significance in its effect on stock prices. Therefore, the hypothesis that EPS positively influences stock prices is accepted, albeit with marginal significance.

4. Discussion

Effect of ROA on Stock Prices

The analysis shows that the t-statistic for ROA (X1) is -4.273, which is significantly less than the critical value of 2.02619, with a significance level of 0.000, indicating that ROA does not significantly affect stock prices. The negative regression coefficient of -0.933 suggests that an increase in ROA correlates with a decrease in stock prices by 0.933, or 93.3%, while keeping other variables constant. This result implies that higher ROA does not necessarily lead to higher stock prices for pharmaceutical companies listed on the IDX. This could be attributed to the fact that a high ROA might not always reflect improvements in shareholder value or may be overshadowed by other factors affecting stock prices, such as market conditions or investor sentiment. According to Elis Darnita (2014), a high ROA alone does not guarantee an increase in stock prices, as investor perception and external economic factors play significant roles. This contrasts with findings from Rafida Khairani et al. (2021), which indicated a positive relationship between ROA and stock prices. This discrepancy highlights the importance of considering broader market dynamics and company-specific factors when interpreting the relationship between ROA and stock prices.

Effect of ROE on Stock Prices

The t-statistic for ROE (X2) is 5.721, which significantly exceeds the critical value of 2.02619, and the significance level is 0.000, indicating a strong impact on stock prices. The positive regression coefficient of 1.457 suggests that an increase in ROE positively affects stock prices. This result supports the acceptance of the second hypothesis (H2). A higher ROE signals effective use of shareholders' equity to generate profits, which is generally perceived positively by investors. This positive perception drives demand for the company's stock, thereby increasing its price. This finding aligns with the expectations that strong financial performance, as indicated by ROE, attracts investors and boosts stock valuations. Companies with higher ROE are seen as more efficiently managed and financially healthy, which enhances investor confidence and contributes to higher stock prices.

Effect of EPS on Stock Prices

The analysis shows that the t-statistic for EPS (X3) is 2.004, which is slightly below the critical value of 2.02619, with a significance level of 0.052, just above the 0.05 threshold. Despite the positive regression coefficient of 0.247, the result suggests that EPS does not have a statistically significant impact on stock prices. The near-threshold significance level indicates that while there is a positive relationship between EPS and stock prices, this effect is not strong enough to be statistically significant. This may be due to other factors influencing stock prices, such as broader market trends or company-specific issues that overshadow the impact of EPS. Investors might prioritize other financial metrics or qualitative factors over EPS when making investment decisions. This result suggests that while EPS can provide insights into a company's profitability,

it alone may not be a strong determinant of stock price movements. Further research could explore additional factors or combined metrics to better understand their collective impact on stock prices.

5. Conclusion

Conclusion

The research findings indicate that Return on Assets (ROA) does not have a significant positive effect on the stock prices of pharmaceutical companies listed on the IDX from 2016 to 2020. Despite ROA reflecting the efficiency of asset utilisation, no significant relationship was observed between ROA and stock prices during this period. Conversely, both Return on Equity (ROE) and Earnings Per Share (EPS) were found to have a positive and significant impact on stock prices. ROE, which measures a company's ability to generate profit from shareholder equity, directly influences stock prices, while EPS, reflecting profit per share, enhances investment attractiveness. It was also found that, collectively, ROA, ROE, and EPS influence stock prices in the pharmaceutical sector listed on the IDX, demonstrating that although ROA does not have an individual impact, the combined effect of these three factors is significant.

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