

Unravelling the Impact of Fundamental Analysis on Stock Prices: A Study of Banking Companies Listed on the Indonesia Stock Exchange, 2017-2021

Puspa Dewi Yulianty¹, Ali Mugayat², Anggun Nur'aeni³

Program Studi Manajemen, Universitas Muhammadiyah Cirebon, Indonesia^{1,2,3}

Abstract. This study aims to examine the influence of Debt to Equity Ratio (DER), Price Earning Ratio (PER), and Return On Equity (ROE) on stock prices of banking companies listed on the Bursa Efek Indonesia during the period 2017-2021. The population consists of 6 banking companies consecutively listed on the Infobank15 index during the specified period, totalling 30 financial reports, which were selected using a purposive sampling technique. Secondary data was utilized for analysis. Multiple linear regression analysis was employed as the analytical method. The findings indicate that, partially, Debt to Equity Ratio (DER) has a significant negative influence on the stock prices of banking companies during the period 2017-2021. Price Earning Ratio (PER) has a significant positive influence on stock prices of banking companies during the period 2017-2021. Similarly, return on equity (ROE) has had a significant positive influence on the stock prices of banking companies during the period 2017-2021. Collectively, the Debt to Equity Ratio (DER), Price Earning Ratio (PER), and Return On Equity (ROE) have a significant positive influence on the stock prices of banking companies during the period 2017-2021.

Keywords: Debt to Equity Ratio (DER), Price Earning Ratio (PER), Return On Equity (ROE), Stock Prices

Article History. Received May, 2023. Revised June, 2023. Accepted July, 2023

Corresponding Author: Puspa Dewi Yulianty; email: puspadewi@umc.ac.id

INTRODUCTION

Investors are driven by the dual objective of achieving a low-risk rate of return and maximizing their investment in stock securities. Pursuing this goal, they carefully evaluate the potential for dividends and capital gains, the two primary avenues for realizing (Sharma et al., 2023; Srihari et al., 2024; Yan et al., 2024). This necessitates a strategic approach to selecting stocks that offer promising prospects for growth. To this end, investors engage in thorough analysis to determine the intrinsic value of stocks and assess whether prevailing market prices reflect this value accurately. This involves scrutinizing many factors, ranging from fundamental aspects of the company's financial health to technical indicators and even socio-political dynamics. By understanding and analyzing these variables, investors can gauge the likelihood of stock prices being undervalued or overvalued, thus informing their investment decisions more precisely (Henriques & Sadorsky, 2023; Kantamaneni & Asi, 2023).

Furthermore, investors must remain vigilant in monitoring price movements and staying abreast of changes in the (X. Yang et al., 2023; Zhu et al., 2023). This requires a keen awareness of the factors influencing stock prices, each carrying its weight in shaping market dynamics. Fundamental factors, such as a company's earnings potential and market position, provide insights into its long-term viability and growth prospects. Meanwhile, technical indicators offer valuable signals regarding short-term price movements, helping investors identify opportune moments to buy or sell stocks. Additionally, socio-political factors, such as regulatory changes or geopolitical tensions, can significantly influence market sentiment and stock prices. By comprehensively analyzing and synthesizing information about these diverse determinants, investors can make well-informed decisions to capitalize on investment

opportunities while mitigating risks effectively.

Within the realm of the financial market, investors base their investment decisions on a combination of accessible information and their perception of risk, all while scrutinizing (B. Yang et al., 2023). An array of analytical tools and methodologies are employed to aid in this endeavour, primarily focusing on assessing business trends via financial statement analysis (Thuneibat & Alhalaseh, 2023).

Various techniques within financial statement analysis, such as trend analysis, fundamental analysis, technical analysis, and ratio analysis, hold considerable importance (Mahirun et al., 2023). Professionals and analysts in the realms of finance and risk management extensively scrutinize business trends through financial ratios and their overarching patterns across multiple analyses (Kaur & Sharma, 2023; Sahadudheen & Santhosh Kumar, 2023).

In its evolution, the Indonesia Stock Exchange (BEI) has introduced several indices such as LQ45, IDX30, ISSI, JII, Kompas100, and the Infobank15 index, comprising 15 banking stocks with strong fundamental factors and high trading liquidity. The Infobank15 index was launched and is managed in collaboration with the media company PT Infoartha Pratama (publisher of Infobank magazine). Infobank15 is a reference for investors looking to invest in banking stocks, particularly those with strong fundamentals, large market capitalization, and high trading activity.

As the banking sector continues to evolve and its presence is expected to endure, it remains a cornerstone of stability and longevity in the financial landscape. With its high market capitalization and liquidity, the banking sector has demonstrated its resilience and achieved commendable performance, positioning itself as one of the most active categories of stocks. Several publicly listed banking stocks on the Indonesia Stock Exchange (BEI) have witnessed rapid increases in share prices. This enduring strength and dynamism within the banking sector further underscore its significance in the market. In line with this trend, the introduction of indices like Infobank15, comprising banking stocks with strong fundamentals and high trading liquidity, serves as a valuable tool for investors seeking to navigate this thriving sector effectively.

Continuing from the previous context of the enduring strength and dynamism of the banking sector, this study aims to delve deeper into understanding the factors that influence stock returns within this sector. Specifically, it seeks to explore the extent of the influence of Return On Equity (ROE) on stock returns of various companies within the stock market during the period 2017-2021. Additionally, it aims to assess the impact of Price Earning Ratio (PER) on stock returns of listed banking companies during the same period, as well as to examine the influence of Debt to Equity Ratio (DER) on their stock returns. Furthermore, the study endeavors to analyze the combined impact of ROE, PER, and DER on the level of stock returns for banking companies listed on the Indonesia Stock Exchange throughout the period of 2017-2021. By examining these factors comprehensively, the research seeks to provide valuable insights into the dynamics of stock returns within the banking sector, contributing to a better understanding of investment strategies and market performance in the given timeframe.

LITERATURE REVIEW

Stock prices hold immense significance for a multitude of stakeholders including investors, corporations, financial institutions, and governments, offering avenues for profitable investment opportunities. Among the prominent sectoral indices, the banking sector index stands out as a crucial metric, commanding substantial trading volume and exerting a profound influence on broader financial market indices. Its performance not only reflects the health of the banking sector but also has ripple effects on the overall economy and financial markets (Razmi & Razmi, 2023; Wei & Zhang, 2023). Stocks, serving as certificates of ownership in

joint-stock companies, serve as a means for companies to raise capital and provide shareholders with the potential for dividends and bonuses. Operating within the intricate web of the stock market, a complex financial system influenced by a myriad of economic and political factors, stock prices undergo constant fluctuations (Loang & Ahmad, 2023; Wisniewski, 2009) .

As a primary avenue for investment, the stock market serves as a vital platform for both institutional and individual investors to allocate their capital. Consequently, companies closely monitor their stock prices, recognizing the direct correlation between market perception and their operational performance. Companies are driven to enhance their efficiency and profitability, aiming to bolster their stock valuations and attract investor interest (Millischer et al., 2023; Smith et al., 2023) . However, predicting stock market price indices remains a formidable challenge, characterized by nonlinearity, volatility, and noise, as emphasized (Balash & Faizliev, 2024; Bittlingmayer, 1998). Despite these challenges, the stock market continues to play a pivotal role in facilitating capital formation and driving economic growth, serving as a barometer of market sentiment and a catalyst for corporate performance improvements.

In academic literature, numerous researchers have explored price indexes across various domains, employing a range of methodologies, including multiple linear regression (MLR), logistic regression (LR), partial least squares (PLS), machine learning (ML), and data mining (DM). Studies utilizing MLR include those by Cogoljevic et al. (2018), Wang et al. (2021), Uras et al. (2020), Peng et al. (2021), Banerjee (2020), Bujosa et al. (2013), Kurek (2014), Fuquene et al. (2015), and Lim and Hooy (2012). LR has been applied by scholars such as Yang et al. (2022) and Xianyaa et al. (2019), while PLS has been utilized in studies by Fitriaty et al. (2018), Kamaliah (2020), Chen et al. (2022), Ma et al. (2019), and Singh and Sharma (2018). Furthermore, ML and DM methodologies have been employed in research by Lim and Hooy (2012), Peng et al. (2021), Banerjee (2020), Billings et al. (2015), Alvarez-Díaz and Gupta (2016), Du (2018), Chu et al. (2022), Lee et al. (2019), and Xianyaa et al. (2019). For instance, Wang et al. (2021) utilized the MLR model to analyze short-term stock price changes in domestic agricultural listed companies, investigating their impact on the stock price index.

Ivanovski et al. (2023) conducted a predictive analysis of six daily closing price series encompassing Bitcoin, Litecoin, and Ethereum cryptocurrencies (Ivanovski & Hailemariam, 2023). Utilizing historical price and volume data, they employed a range of methodologies, including simple linear regression for univariate series forecasting based solely on closing prices, multiple linear regression for multivariate series integrating both price and volume data, and two artificial neural network methods: multilayer perceptron and long short-term memory. Similarly, Kurek (2014) conducted a similar predictive study, investigating the informational content of equity block trade transactions among companies listed on the WIG20 index of the Stock Exchange in Poland. This inquiry adopted two distinct approaches: simple linear regression and multivariate adaptive regression splines. Findings from these investigations suggest that equity block trade transactions provide significant signals for investors operating within the stock exchange realm, with notably abnormal positive or negative returns ensuring the execution of such transactions, particularly when the transaction price exceeds the closing price observed two days before execution.

Existing literature lacks comprehensive research comparing index prices across various crisis periods. While one study examined the effects of factors such as the consumer price index, monetary aggregates, discount rate, and exchange rate on inflation (Cogoljevic et al., 2018), another focused on identifying lead indicators for the Spanish economy during the 2008 crisis, utilizing metrics like the construction production index, industrial production index, fuel consumption, availability of goods, and the consumer confidence index (Bujosa et al., 2013). Additionally, a separate study employed past stock market data from companies

such as Bank of America Corporation (BAC), Exxon Mobil Corporation (XOM), S&P500 Index (INX), Microsoft Corporation (MSFT), Dow Jones Industrial Average (DJIA INDEX), CarMax, Inc. (KMX), Tata Steel Limited (TATASTEEL), and HCL Technologies Ltd. (HCLTECH) to forecast stock movement direction through machine learning techniques (Benali & Karima, 2024; Henriques & Sadorsky, 2023).

This study seeks to address the following research question: "Does Debt to Equity Ratio (DER), Price Earning Ratio (PER), and Return On Equity (ROE) have an influence on Stock Prices in banking companies listed on the Indonesia Stock Exchange during the period 2017-2021?" To achieve this objective, the population utilized in this research corresponds to a sample comprising 6 consecutive banking companies listed on the Infobank15 index from 2017-2021, encompassing 30 financial reports. The analytical method employed is multiple linear regression using SPSS 22.

METHOD

This research is descriptive quantitative research that looks at the facts in the field (Attanasio et al., 2020; Luo, 2022). The population used in this research is the same as the sample of 6 banking companies listed on the Infobank15 index consecutively during the 2017-2021 period with 30 financial reports. The sample was determined using a purposive sampling technique, namely a method based on judgment (judgment sampling), a type of non-random sample selection whose information is obtained using certain considerations so that 6 companies are obtained as samples. The data collection technique in this research uses secondary data in the form of annual financial reports. This data is accessed from company financial data published by the Indonesia Stock Exchange via www.idx.co.id and the company website. The data analysis technique used in this research is multiple linear regression analysis.

RESULTS

This analysis aims to provide an overview of the financial performance of 30 companies based on several financial ratios, namely DER, PER, ROE, and Stock Price. The data used is the latest quarterly data from each company. This analysis will discuss the distribution of the values of the four ratios, the comparison of the mean and standard deviation, and the general conclusion about the financial performance of the companies. It is important to note that this analysis is based only on the available data and does not consider other factors that may affect the companies' performance.

From the 30 companies sampled, the average DER indicates a moderate level of debt, the PER indicates a high valuation, the ROE indicates a fair return on equity, and the stock price is quite high. There is a considerable variation in the values between the variables. It is necessary to consider other factors and data visualization for a more complete analysis.

Table 1. Descriptive Statistics

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Standar Dev.</i>
DER	30	3.21	10.54	5.913 9	1.94425
PER	30	6.46	35.09	16.08 75	7.78032
ROE	30	2.94	17.75	12.22 70	4.13277
Stock Price	30	770	33850	7743. 50	9025.777
Valid N (listwise)	30				

Source: Source: SPSS 22 data processing output

Based on the table 1 it can be seen that:

1. The stock price variable (Y) has an average (mean) value of 7743.50,- with the lowest (minimum) price of 770 and the highest (maximum) price of 33850,- while the standard deviation is 9025.777.
2. The DER variable (X1) has an average (mean) value of 5.9139,- with the lowest (minimum) value of 3.21 and the highest (maximum) value of 10.54,- while the standard deviation is 1.94425.
3. The variable PER (X2) has an average (mean) value of 16.0875,- with the lowest (minimum) value of 6.46 and the highest (maximum) value of 35.09,- while the standard deviation is 7.78032.
4. The DER variable (X3) has an average (mean) value of 12.2270,- with the lowest (minimum) value of 2.94 and the highest (maximum) value of 17.75,- while the standard deviation is 4.13277.

Classic assumption test

Normality test

The normality test was carried out using a one-sample Cosmograph-Smirnov analysis. The critical limit for the normality test is if $Asymp.Sig (2-tailed) > \alpha (\alpha = 5\% = 0.05)$.

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		30
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	5524.51169041
Most Extreme Differences	Absolute	.142
	Positive	.142
	Negative	-.102
Test Statistic		.142
Asymp. Sig. (2-tailed)		.126 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: SPSS 22 data processing output

Based on the results of the Cosmograph-Smirnov test in the table above, the normality test shows an $Asymp. Sig (2-tailed)$ value of 0.126, which means $Sig (0.126) > \alpha (0.05)$. This shows that the distribution of the data obtained is normal. This means that this analysis's classical assumption test for testing data normality is fulfilled or meets the requirements.

Autocorrelation Test

Basic decision-making in the Durbin-Watson autocorrelation test:

- 1) There is autocorrelation if d (Durbin-Watson) is smaller than dL or greater than 4-dL.
- 2) If d (Durbin-Watson) lies between dU and 4-dU, there is no autocorrelation.
- 3) If d (Durbin-Watson) lies between dL and dU or between 4-dU and 4-dL, it does not produce a definite conclusion.

Table 3. Autocorrelation Test Results

Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.791 ^a	.625	.582	5834.535	1.517
a. Predictors: (Constant), ROE, PER, DER					
b. Dependent Variable: Stock Price					

Source: SPSS 22 data processing output

Based on the table above, it is known that the Durbin-Watson (d) value is 1.517. Next, this value will be compared with the Durbin-Watson table value at a significance of 5%. It was found that the dL value was 1.214, and the dU was 1.650. The Durbin-Watson (d) value of 1.517 is located between the dL and dU values , so it does not produce a definite conclusion. This can be overcome by using the run test.

Autocorrelation test using Run Test

Table 4. Test Results

	Unstandardized Residual
Test Value ^a	321.03714
Cases < Test Value	15
Cases >= Test Value	15
Total Cases	30
Number of Runs	11
Z	-1.672
Asymp. Sig. (2-tailed)	.094
a. Median	

Source: SPSS 22 data processing output

The Basis for decision-making in Test Run Tests

1. If the Asymp.The Sig (2-tailed) value is smaller than 0.05, and then there are symptoms of autocorrelation
2. If the Asymp.The Sig (2-tailed) value is greater than 0.05, and then there are no symptoms of autocorrelation
3. Based on the results above, the Asymp is known. The Sig (2-tailed) value of 0.094 is greater than 0.05, so it can be concluded that there are no symptoms of autocorrelation. Thus, the autocorrelation problem that cannot be resolved with DurbinWatson can be resolved with the run test so that the linear regression analysis can be continued.

Heteroscedasticity Test

Heteroscedasticity test using Scatterplot

Scatterplot Test

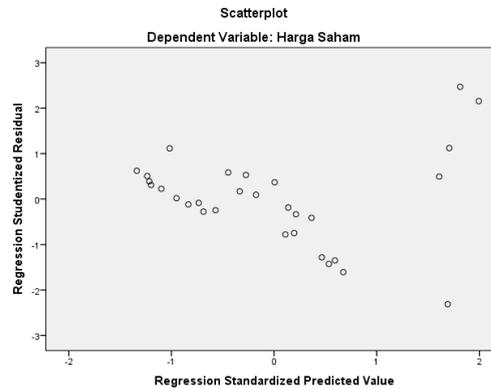


Figure 2. Scatterplot Heteroscedasticity Test Results
Source: SPSS 22 data processing output

Based on the scatterplot output results above, it is known that:

1. Data points spread above and below or around zero.
2. The dots do not collect only at the top or bottom.
3. The distribution of data points does not form a wavy pattern that widens, then narrows and widens again.
4. The distribution of data points is not patterned.
5. Thus, it can be concluded that there are no symptoms of heteroscedasticity so that the regression model can be fulfilled.

Multicollinearity Test

Table 5. Multicollinearity Test Results

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	DER	.913	1.096
	PER	.942	1.061
	ROE	.931	1.074

a. Dependent Variable: Stock Price

Source: SPSS 22 data processing output

The table above shows that the VIF value for each independent variable is smaller than 10 and greater than 1 (between 1 – 10), so it can be concluded that multicollinearity does not occur. This means that this test is fulfilled with the VIF values of variables X1 (1.096), X2 (1.061), and X3 (1.074).

Multiple Linear Regression Analysis Test

Table 6. Multiple Linear Regression Test Results

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	-5133.383	4985.382		-1.030	.313

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
DER	-1478.874	583.311	-.319	-2.535	.018
PER	603.836	143.457	.521	4.209	.000
ROE	973.966	271.744	.446	3.584	.001

a. Dependent Variable: Stock Price
Source: SPSS 22 data processing output

The table above shows whether or not the DER, PER, and ROE variables partially (individually) influence the stock price variable. Based on the table above, the constant value a = -5133.383 is obtained, and the regression coefficient (bi) of each independent variable is obtained for b1 = -1478.874, b2 = 603.836 and b3 = 973.966. Based on this data, the equation for the multiple linear regression analysis model is as follows:

$$Y = -5133,383 - 1478,874 X_1 + 603,836 X_2 + 973,966 X_3$$

The regression equation above can be explained as follows:

1. The constant value (a) is -5133.383, which means that if DER, PER, ROE are 0, then the share price is -5133.383.
2. The regression coefficient value of the variable X1 DER (Debt to Equity Ratio) is -1478.874, meaning that if X1 increases by one unit, the share price will decrease by 1478.874, if other variables are considered constant.
3. The regression coefficient value of the variable X2 PER (Price Earning Ratio) is 603.836, meaning that if
4. The regression coefficient value for the X3 ROE (Return On Equity) variable is 973.966, meaning that if

Hypothesis testing

t-test

The t-test is used to partially test (each) the independent variable against the dependent variable. Basis for making t-test decisions based on significance value (Sig.)

- 1) If the Sig value < probability 0.05, then there is an influence of the independent variable (X) on the dependent variable (Y), or the hypothesis is accepted
- 2) If the Sig value > probability 0.05, then there is no influence of the independent variable (X) on the dependent variable (Y), or the hypothesis is rejected

Based on a comparison of the calculated t value with the t table

- 1) If the calculated t value > t table, then there is an influence of the independent variable (X) on the dependent variable (Y), and the hypothesis is accepted
- 2) If the calculated t value < t table, then there is no influence of the independent variable (X) on the dependent variable (Y), and the hypothesis is rejected

The formula for finding t table: $t \text{ table} = (a/2; n-k-1)$, which results in $t \text{ table} = (0.025; 26)$. The t table value for a probability of 0.05 at $n = 30$ degrees of freedom is 2.056.

Table 7. T-test results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5133.383	4985.382		-1.030	.313
	DER	-1478.874	583.311	-.319	-2.535	.018
	PER	603.836	143.457	.521	4.209	.000
	ROE	973.966	271.744	.446	3.584	.001

a. Dependent Variable: Stock Price
 Source: SPSS 22 data processing output

1. The influence of DER (Debt to Equity Ratio) on share prices

The results of the t-test calculation obtained a calculated t value of DER of 2.535 with a t table value of 2.056. So t count (2.535) > t table (2.056), with a significant value of 0.018 < 0.05. Because the DER value has a negative sign (-2.535), DER (Debt to Equity Ratio) negatively and significantly affects stock prices.

2. The effect of PER (Price Earning Ratio) on share prices

The results of the t-test calculations obtained a PER-calculated t-value of 4.209 with a t-table value of 2.056. So t count (4.209) > t table (2.056), with a significant value of 0.000 < 0.05. So, this means that PER (Price Earning Ratio) positively and significantly affects share prices.

3. Effect of ROE (Return On Equity) on Stock Price

The t-test calculations showed that the ROE t value was 3.584 with a t-table value of 2.056. So, t count (3.584) > t table (2.056), with a significant value of 0.001 < 0.05. So, this means that ROE (Return On Equity) positively and significantly affects share prices.

F test

The F test is used to test simultaneously (together) the independent variable against the dependent variable.

Table 8. F Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1477388454.392	3	492462818.131	14.466	.000 ^b
	Residual	885086653.108	26	34041794.350		
	Total	2362475107.500	29			

a. Dependent Variable: Stock Price

b. Predictors: (Constant), ROE, PER, DER

Source: SPSS 22 data processing output

The F table value is searched using the formula F table = (k; n-k) at 5% or 0.05 significance. So, the F table value is 2.99. Based on the results above, it is known that the calculated F is 14.466. Because the calculated F value (14.466) > F table (2.99) with a significant value of 0.000 < 0.05. So, it means that the hypothesis is accepted or DER (Debt to Equity Ratio), PER (Price Earning Ratio), and ROE (Return On Equity) simultaneously have a positive and significant effect on stock prices.

Coefficient of Determination (R²)

Table 9. Coefficient of Determination Test Results

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.791 ^a	.625	.582	5834.535	1.517
a. Predictors: (Constant), ROE, PER, DER					
b. Dependent Variable: Stock Price					

Based on the results above, it is known that the adjusted R square value is 0.582. The value of the coefficient of determination (Adjusted R Square) is 0.582 or equal to 58.2%. This figure means that the DER (Debt to Equity Ratio), PER (Price Earning Ratio), and ROE (Return On Equity) variables simultaneously influence the Share Price variable by 58.2%. Meanwhile, the remaining 41.8% was influenced by other variables not examined in this research.

The results of multiple linear regression testing to measure the influence of the DER, PER, and ROE ratio variables partially and simultaneously on share prices in banking sub-sector companies are as follows:

1. Effect of Debt to Equity Ratio (DER) on Stock Price

The results of testing the effect of DER on stock prices produce a significance of the DER variable of $0.018 < 0.05$, meaning that the DER variable has a significant effect on stock prices. In the DER variable, the count value is -2.535, meaning that partially DER (Debt to Equity Ratio) has a negative and significant effect on stock prices. The negative direction indicates that if DER is increased, the stock price will decrease; otherwise, if DER is reduced, the stock price will increase.

DER is the ratio of debt and total equity. DER negatively impacts companies that use more debt in their operational activities. The higher the company's debt will reduce the return earned by investors. Companies with high DER will pay small dividends; on the other hand, companies with low DER will pay high dividends because the company must use income to pay debts. Investors do not favor this condition because the dividends earned by investors will decrease. The greater the DER, the greater the risk borne by investors and the lower the company's ability to pay dividends. So, the decrease and increase in the DER ratio will affect the stock price. This study's results align with the research of Christina et al. (2021) and Dewi and Rangkuti (2020), which state that DER affects Stock Prices.

2. Effect of Price Earning Ratio (PER) on Stock Price

The research shows that the Price Earning Ratio (PER) partially has a positive and significant effect on the Share Price of banks listed on the infobank15 index. This can be seen in the value of t count ($4.209 > t$ table (2.056), with a significant value of $0.000 < 0.05$).

PER is the ratio between the share price and earnings per share. PER indicates the amount of funds spent by investors to obtain profits. The results of this study indicate that investors pay attention to PER when investing in companies so that the stock price will increase. The higher the PER, the higher the share price. This study's results align with the research of Zaimsyah et al. (2019) and Wijaya and Putri (2021), which state that PER affects Stock Prices.

3. Effect of Return On Equity (ROE) on Stock Price

The research shows that Return On Equity (ROE) partially has a positive and significant effect on the Share Price of banks listed on the infobank15 index. This can be seen in the value of t count (3.584) > t table (2.056), with a significant value of 0.001 < 0.05.

ROE measures the company's ability to generate income based on certain capital. An increase in ROE indicates an increase in management performance in managing existing financial resources to generate profits. The higher ROE means the more efficient the use of own capital by company management to generate profits for shareholders, which means that the efficiency of using capital to generate profits for shareholders is high. With the increase in net profit, the ROE value will increase; this is a positive sentiment for investors, so investors are interested in buying shares and will increase the share price. This study's results align with the research of Nurliandini et al. (2021), which states that ROE affects Stock Prices.

4. Effect of Debt to Equity Ratio (DER), Price Earning Ratio (PER), and Return On Equity (ROE) on Stock Price

The results of the simultaneous significance test using the F test obtained the value of F count (14.466) > F table (2.99) with a significant value of 0.000 < 0.05. This means that the DER, PER, and ROE variables simultaneously positively and significantly affect the Stock Price. The results of this study are in line with the research of Christina et al. (2021), Dewi and Rangkuti (2020), Zaimsyah et al. (2019), Wijaya and Putri (2021) and Nurliandini et al. (2021).

This shows the ability of DER, PER, and ROE to be used to analyze stock prices. Based on the coefficient of determination (R²) test with an adjusted R square value of 0.582 or equal to 58.2%. This figure means that the DER (Debt to Equity Ratio), PER (Price Earning Ratio) and ROE (Return On Equity) variables simultaneously have a positive and significant effect on the Share Price variable by 58.2%. While the remaining 41.8% is influenced by other variables not examined in this study.

CONCLUSION

This study examined the relationship between financial health and investor perception in the Indonesian banking sector. Researchers analyzed data from companies listed on the Indonesia Stock Exchange (IDX) between 2017 and 2021, focusing on three key ratios: Debt-to-Equity Ratio (DER), Price-to-Earnings Ratio (PER), and Return on Equity (ROE). The findings reveal a clear connection between these ratios and stock prices:

- **Debt and Valuation:** A negative and significant correlation exists between DER and stock prices. This indicates that higher debt levels (reflected by a higher DER) tend to lower stock prices. Investors perceive companies with substantial debt as riskier, resulting in a decrease in demand for their shares. Conversely, PER exhibits a positive and significant association with stock prices. Companies with higher PERs, signifying a higher valuation than their earnings, typically have higher stock prices. This aligns with the concept that investors are willing to pay more for companies with stronger earnings potential.
- **Profitability and Investor Attraction:** ROE demonstrates a positive and significant effect on stock prices. Banking companies with higher ROEs, indicating a greater return on their shareholders' investment, generally have higher stock prices. Investors are likely attracted to companies that generate a strong return on their equity.

Combined Influence on Stock Prices

The study further explored the combined impact of these three ratios on stock prices. The results indicated that when considered together, DER, PER, and ROE positively and significantly affect stock prices. This suggests that a combination of moderate debt levels, strong earnings

performance (reflected by PER), and high return on equity contribute to a more favorable perception by investors, ultimately leading to higher stock prices for banking companies in the Indonesian market.

In conclusion, this research highlights the importance of financial health for Indonesian banking institutions. Banks can enhance their value and attract investors by effectively managing debt levels, maintaining profitability, and delivering a high return on investment. This ultimately strengthens their financial position and competitiveness within the market.

REFERENCES

- Attanasio, G., Cagliero, L., & Baralis, E. (2020). Leveraging the explainability of associative classifiers to support quantitative stock trading. *Proceedings of the 6th International Workshop on Data Science for Macro-Modeling, DSMM 2020 - In Conjunction with the ACM SIGMOD/PODS Conference*. <https://doi.org/10.1145/3401832.3402679>
- Balash, V., & Faizliev, A. (2024). Volatility spillovers across Russian oil and gas sector. Evidence of the impact of global markets and extraordinary events. *Energy Economics*, 129. <https://doi.org/10.1016/j.eneco.2023.107202>
- Benali, M., & Karima, L. (2024). Modelling Stock Prices of Energy Sector using Supervised Machine Learning Techniques. *International Journal of Energy Economics and Policy*, 14(2), 594–602. <https://doi.org/10.32479/ijeep.15553>
- Bittlingmayer, G. (1998). Output, stock volatility, and political uncertainty in a natural experiment: Germany, 1880-1940. *Journal of Finance*, 53(6), 2243–2257. <https://doi.org/10.1111/0022-1082.00090>
- Henriques, I., & Sadorsky, P. (2023). Forecasting rare earth stock prices with machine learning. *Resources Policy*, 86. <https://doi.org/10.1016/j.resourpol.2023.104248>
- Ivanovski, K., & Hailemariam, A. (2023). Forecasting the stock-cryptocurrency relationship: Evidence from a dynamic GAS model. *International Review of Economics and Finance*, 86, 97–111. <https://doi.org/10.1016/j.iref.2023.03.008>
- Kantamaneni, H. D., & Asi, V. R. (2023). Market Efficiency of Commodity Derivatives with Reference to Nonagricultural Commodities. *Asia-Pacific Financial Markets*, 30(1), 247–258. <https://doi.org/10.1007/s10690-023-09400-3>
- Kaur, R., & Sharma, A. (2023). Prediction of stock prices of blue-chip companies using machine learning algorithms. *International Journal of Business Intelligence and Data Mining*, 23(4), 375–395. <https://doi.org/10.1504/IJBIDM.2023.134316>
- Loang, O. K., & Ahmad, Z. (2023). Economic and political factors on herding in Islamic GCC stock markets during COVID-19 pandemic. *International Journal of Islamic and Middle Eastern Finance and Management*, 16(4), 819–834. <https://doi.org/10.1108/IMEFM-01-2022-0019>
- Luo, Z. (2022). Stock Price Prediction Based on Time Series Model. *Proceedings - 2022 6th Annual International Conference on Data Science and Business Analytics, ICDSBA 2022*, 202–205. <https://doi.org/10.1109/ICDSBA57203.2022.00100>
- Mahirun, M., Jannati, A., Kushermanto, A., & Prasetiani, T. R. (2023). Impact of dividend policy on stock prices. *Acta Logistica*, 10(2), 199–208. <https://doi.org/10.22306/al.v10i2.375>
- Millischer, L., Evdokimova, T., & Fernandez, O. (2023). The carrot and the stock: In search of stock-market incentives for decarbonization. *Energy Economics*, 120. <https://doi.org/10.1016/j.eneco.2023.106615>
- Razmi, S. F., & Razmi, S. M. J. (2023). The role of stock markets in the US, Europe, and China on oil prices before and after the COVID-19 announcement. *Resources Policy*, 81. <https://doi.org/10.1016/j.resourpol.2023.103386>
- Sahadudheen, I., & Santhosh Kumar, P. K. (2023). On the Time-varying Correlations and Hedging Effectiveness: An Analysis of Crude Oil, Gold, and Stock Market. *International*

- Journal of Energy Economics and Policy*, 13(6), 353–363. <https://doi.org/10.32479/ijeeep.14580>
- Sharma, C., Singh, A., & Yadav, R. (2023). Market Warnings: Learning from the Short-Term Impact of COVID-19 on Stock Market Constituents. *Indian Journal of Finance*, 17(4), 45–57. <https://doi.org/10.17010/ijf/2023/v17i4/170094>
- Smith, K. T., Smith, L. M., Burger, M., & Boyle, E. S. (2023). Cyber terrorism cases and stock market valuation effects. *Information and Computer Security*, 31(4), 385–403. <https://doi.org/10.1108/ICS-09-2022-0147>
- Srihari, G., Kusuma, T., Chetanraj, D. B., Kumar, S. J. P., & Aluvala, R. (2024). “Predictive modeling of return volatility in sustainable investments: An in-depth analysis of ARIMA, GARCH, and ARCH techniques.” *Investment Management and Financial Innovations*, 21(1), 213–228. [https://doi.org/10.21511/imfi.21\(1\).2024.17](https://doi.org/10.21511/imfi.21(1).2024.17)
- Thuneibat, N., & Alhalaseh, R. H. (2023). AUDITING QUALITY BETWEEN SHARE PRICE AND LIQUIDITY REGARDING INVESTOR’S DECISION. *Journal of Governance and Regulation*, 12(1), 22–32. <https://doi.org/10.22495/jgrv12i1art2>
- Wei, C., & Zhang, L. (2023). Trust in Financial Markets: Evidence from Reactions to Earnings News. *Management Science*, 69(10), 6393–6415. <https://doi.org/10.1287/mnsc.2022.4569>
- Wisniewski, T. P. (2009). Can political factors explain the behaviour of stock prices beyond the standard present value models? *Applied Financial Economics*, 19(23), 1873–1884. <https://doi.org/10.1080/09603100903166189>
- Yan, Y., Zhang, C., Li, X., & Zhang, B. (2024). A framework for stock selection via concept-oriented attention representation in hypergraph neural network. *Knowledge-Based Systems*, 284. <https://doi.org/10.1016/j.knosys.2023.111326>
- Yang, B., Liang, T., Xiong, J., & Zhong, C. (2023). Deep reinforcement learning based on transformer and U-Net framework for stock trading. *Knowledge-Based Systems*, 262. <https://doi.org/10.1016/j.knosys.2022.110211>
- Yang, X., Zhu, J., Xie, H., & Zhang, J. (2023). Liquidity spillover from carbon emission trading markets to stock markets in China. *Investment Management and Financial Innovations*, 20(4), 226–241. [https://doi.org/10.21511/imfi.20\(4\).2023.19](https://doi.org/10.21511/imfi.20(4).2023.19)
- Zhu, M., Zhang, H., Xing, W., Zhou, X., Wang, L., & Sun, H. (2023). Research on price transmission in Chinese mining stock market: Based on industry. *Resources Policy*, 83. <https://doi.org/10.1016/j.resourpol.2023.103727>

www.idx.co.id

www.spssindonesia.com