The Effect of Financial Performance on the Stock Prices of Commercial Banks Listed on Indonesia Stock Exchange (IDX) with Intrinsic Value as an Intervening Variable

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Banks can access the capital market through an Initial Public Offering (IPO) to obtain fresh funds for various purposes such as business expansion, increasing capital, or developing new products. BEI statistical data shows that in the financial sector, there are 105 issuers, and 47 of them are issuers operating in the banking industry, which shows a significant dominance of 44.8%. This research examines the discrepancy between theoretical concepts and field reality regarding the influence of financial performance on the stock prices of commercial banks listed on IDX with intrinsic value as an intervening variable. This discrepancy includes the difference between theory and reality in the relationship between several ratios that describe a bank's financial performance and the price of stocks owned, namely Return of Assets; Current Ratio; Debt to Equity Ratio; Non-Performing Loans; Loan to Deposit Ratio or Price to Earnings Ratio which describes intrinsic value. The 47 research samples will be selected purposively by considering commercial banks with complete financial and stock price data from 2020 to 2023. This studyutilizing secondary data obtained from the BEI website. Data collection methods included literature research and documentation.A classical assumption test was conducted to ensure the data met the criteria necessary for the regression results to be valid. The t-test shows that ROA and CR significantly affect PER and stock price, while DER, LDR, and NPL have no significant effect. The F test shows that all five independent variables together affect PER and stock price, with the regression model able to explain more than 92% of stock price fluctuations. Path analysis shows that CR affects stock price through PER, which means that the effect of CR on stock price

is indirect, while the other variables do not show significant indirect effects.
Keywords: ROA, CR, DER, NPL, LDR, Intrinsic Value, Price.

1. Introduction

Capital markets, including Indonesia, are essential in the current global economy. In a narrower context, the capital market is an organized place where securities such as stocks and bonds are traded, also known as a stock exchange. Rustiana and Ramadhani (2022) say that the stock exchange is an organized structure that connects sellers and buyers of stocks, either directly or through their representatives. In Indonesia, one of the stock exchanges known to the public is Indonesia Stock Exchange (BEI), which is very active in facilitating trading in stocks and other financial instruments. BEI acts as a source of financing for development and expansion, which comes from public funds collected for companies or stock issuers.

Its position as a major financial institution that not only provides conventional banking services but is also the main driving force in the capital market through various investment products and financial services means that the financial industry contributes an important role in the capital market ecosystem. Banks conducting Initial Public Offerings (IPO) have access to the capital market to obtain fresh funds, which can be used for various purposes, such as business expansion, raising capital, or developing new products and services. This theory is consistent with the views expressed by Ady (2021), who says that companies going public take advantage of the existence of the capital market to obtain sources of funds or alternative financing.

Banks listed on the capital market also have the opportunity to improve their image and reputation by appearing more transparent and accountable, strengthening their position in the market, and encouraging more sustainable growth. Forty-seven (47) banks, including conventional and Sharia commercial banks, have been registered on the IDX, showing the banking sector's high interest in capital market activities.

Table 1 is Weekly Capital Market Statistics data obtained from the IDX website. It describes the development of stock trading based on industrial sectors in the capital market as of the first week of January 2024. Based on this data, the financial sector makes the largest contribution, 32.58%. In the financial sector, there are one hundred and five (105) issuers, and 47 of them are issuers operating in the banking industry, showing a significant dominance of 44.8%.

Table 1. Development of Sectoral Stock Trading

Sectoral Stock Trading Developments					
Sector	Average for 2024			Market Capitalization	
	Volume (Million)	Value (IDR Billion)	Frequency (Thousand)	Value (Rp)	%
Total Sectoral Index	16.048,32	8.322,60	1.079,64	11.772.291.359.037.400	100,00
IDX Sector Energy	2.876,59	967,49	139,11	1.450.358.517.271.720	12,32
IDX Sector Basic Materials	999,79	1.133,48	131,20	1.722.544.004.363.050	14,63
IDX Sector Industrials	478,89	459,22	46,58	392.860.116.737.573	3,34
IDX Sector Consumer Non-Cyclicals	3.018,11	676,62	183,40	1.173.868.265.871.020	9,97
IDX Sector Consumer Cyclicals	1.753,31	754,12	115,73	413.132.676.003.936	3,51
IDX Sector Healthcare	897,62	298,94	47,63	249.335.563.913.691	2,12
IDX Sector Financials	1.246,83	2.844,01	125,09	3.835.731.505.383.250	32,58
IDX Sector Properties & Real Estate	757,45	129,07	58,41	257.807.018.023.000	2,19
IDX Sector Technology	1.988,42	224,92	43,81	365.326.813.420.675	3,10
IDX Sector Infrastructures	1.340,09	677,39	99,30	1.864.346.165.239.870	15,84
IDX Sector Transportation & Logistic	691,23	157,32	89,37	46.980.712.809.566	0,40

Source: Processed by researchers from the OJK website (2024)

This strength in banking demonstrates the central role of banking institutions as a key driver of Indonesia's economic growth, not only as institutions providing financial services but also as main actors in the capital market. Having a close relationship, the capital market can be utilized for judging a bank's financial performance, which then determines the value of the bank. Generally, the market will respond positively through increased stock prices if the bank's financial performance and value are considered good. This is in line with Manaf's (2023) research, where he says that growth will positively impact a company's financial performance and value in relation to its stock price. The current price of a stock is the price at which a stock (or stock) of a company is bought or sold on the stock exchange (Aspriyadi, 2020). In short, the stock price represents the market value of a company based on supply and demand on the stock exchange, where this stock price reflects the portion of ownership in the company.

Fundamental factors (internal and basic), technical factors (a combination of external factors related to market supply and demand) and market sentiment (subjective, biased and irrational) influence stock prices. Although market sentiment is often overlooked in previous research, it plays an essential role. Stock returns indicate performance that impacts economic rewards for stockholders while also contributing to the development of industry and the country. Thus, research on stock returns is very relevant (Surjandari et al., 2020).

Investing refers to allocating money or resources with the goal of generating returns or profits over a period of time (Alamsyah et al, 2018). Japaruddin et al. (2023) mentioned that investors see stock prices as an indicator of the potential returns they can get from investment, so stock prices play an important role in influencing investment decisions in the capital market; therefore, an analysis is certainly needed to ensure whether the price of a stock is reasonable and has the potential to bring profits to investors, as what's been said by Azzahra et al (2021) that investors would choose companies that benefit them. According to Namashuda et al, (2024), fundamental analysis is a process that can be used to identify whether a stock is below or above its normal price at a certain time. In other research, according to Sadikin and Agustina (2023), fundamental analysis aims to evaluate the intrinsic value of a stock based on the company's financial performance and business conditions. Thus, it can be said that through fundamental analysis, investors can assess and determine whether a stock is under a fair price (undervalued), in line with a fair price (correctly valued) or above a fair price (overvalued) based on a more accurate and in-depth evaluation on financial statement.

Financial performance is one of the first things that attracts investors before they make an investment since, as a company's value increases, its stock price will also increase (Fitriyana et al (2020). Financial performance itself can be evaluated through financial reports held by the company or related business entity, which is reflected in the information contained in the balance sheet, profit and loss report, and cash flow report, as well as other factors that also support strengthening the assessment of financial performance (Putri & Iradianty, 2020). Financial reports aim to deliver information about the organization that can be linked to a variety of other facts, such as company risks, economic conditions, and industry, and provide a clearer picture of prospects (Aulia, 2022).

According to previous expert opinions, to find out if a stock price is undervalued, correctly valued or overvalued, it is necessary to conduct a fundamental analysis by comparing the intrinsic value with the market value or stock price. Intrinsic value is an estimate of a stock's

true value or fair value, which reflects the true value that a stock should have, regardless of its price in the current market. Stock prices in the capital market do not always indicate the true intrinsic value (Ain & Fadila, 2023). If a stock's intrinsic value is lower than its market value, it is considered undervalued. Conversely, stock will rise if the intrinsic value is higher than the market price. A stock is considered to be worth more if its intrinsic value and market price differ. According to Rita (2024), fundamental analysis in assessing intrinsic value can use the price-earnings ratio or PER approach. "The earnings price ratio (PER) is a ratio that shows the comparison between stock price and net income for each outstanding stock." (Saputra, 2022).

The relationship between PER and stock prices is very close, where PER gives an idea of how expensive or cheap a stock is compared to the profits the company can generate, which can then shape stock prices (Ganefi et al., 2023). Ustman et al. (2021) say that an increase in the PER suggests an increase in the company's financial performance, which will effect stock prices. Based on this, it can be said that good financial performance will increase PER, which can encourage investors to invest, ultimately increasing stock prices. Specifically, the addition of PER as an intervening variable in the title of this study shows the importance of understanding not only the direct influence of financial performance on stock prices but also how intrinsic value is a moderating factor and can influence this relationship.

Financial performance demonstrates a company's capability to efficiently manage its operations and generate profits, with strong profitability signaling promising prospects for investors. This positive performance can attract investor interest, leading to increased demand for the company's stocks in the capital market, which in turn influences stock prices (Muthmainnah, 2023). In general, performance is a measure of the achievement of results or output resulting from a series of activities or processes. In the field of accounting and finance, "financial performance" refers to an overview of a company's financial condition within a specific period (Sudirman et al., 2023). Briefly said, a company's financial performance serves as a visual representation of all aspects of its financial situation, analyzed through various financial analysis tools to assess its strengths and weaknesses. This evaluation provides insight into the company's operational efficiency and effectiveness over a specific period, reflecting its overall performance (Yusrany et al., 2022).

Some elements that are generally considered by investors in bank financial statements are related to the level of profitability, liquidity and solvency, which are reflected through each financial ratio, such as "Return of Assets or ROA, Current Ratio or CR, Debt to Equity Ratio or DER, Non Performing Loan or NPL and Loan to Deposit Ratio or LDR".ROA is an important indicator to assess a company's efficiency in utilizing its assets.Khasanah and Surwati (2022) conclude that ROA affects bank stock prices, while the findings of Wijayani et al. (2022) conclude that ROA does not affect bank stock prices. CR is a tool used to assess a company's ability to pay short-term liabilities that are due by using assets that are easily liquidated in a short time, such as cash, accounts receivable and inventory. Companies with high CR are considered better able to overcome their short-term obligations. The findings of Sayed et al. (2022) concluded that CR affected bank stock prices, while in their research, Sulistyani and Harianja (2022) concluded that CR does not affect bank stock prices. DER evaluates the extent to which a company relies on debt to fund its operations relative to its equity. The research results of Paramayoga and Fariantin (2023) concluded that DER affected bank stock prices. In contrast, a year earlier, Wicaksana et al. (2022) in their research

concluded that DER did not affect bank stock prices.

LDR is a ratio that assesses the extent to which a bank uses the funds it receives from customers as a source of financing to provide credit to other borrowers. In their research, Permana et al. (2022) concluded that LDR affected bank stock prices, while Purnamasari and Sitorus (2023) concluded that LDR did not affect bank stock prices. NPL describes a loan that needs to borrower does not pay according to the agreed repayment schedule. Megilatul et al. (2022) conclude that this ratio affects bank stock prices; however, according to Pangesti and Miftah (2022), the NPL ratio does not affect bank stock prices. In connection with some of these financial ratios, a brief analysis of the financial reports of several banks has been carried out, and a situation has been found where there is a discrepancy between theoretical concepts and the reality that occurs in the field.
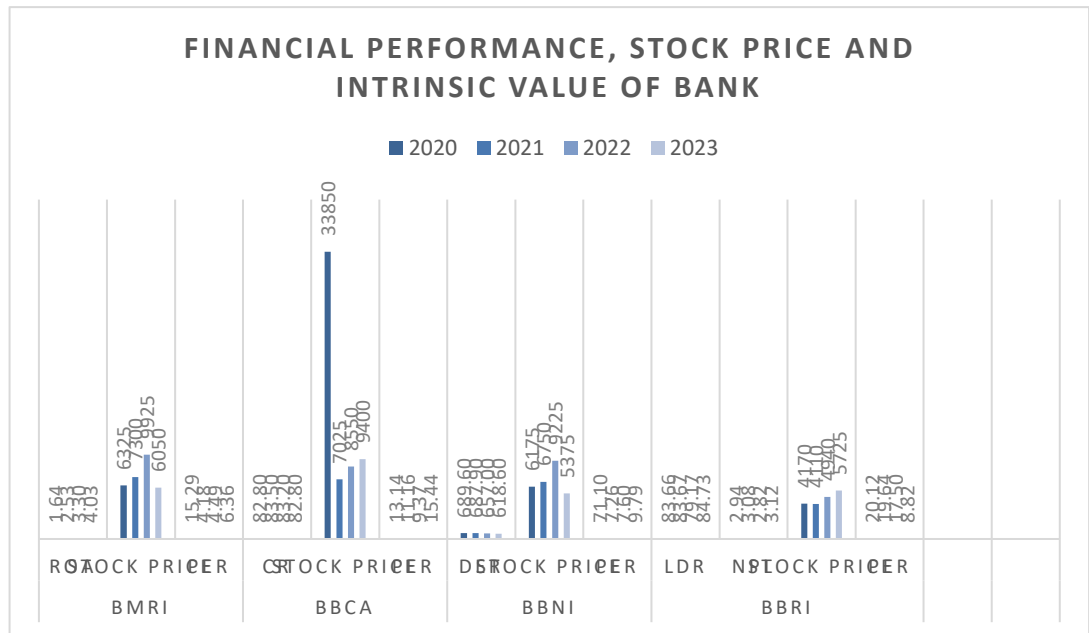

Figure 1. Data on Financial Performance, Stock Prices & Intrinsic Value of Banks

Source: Researcher's Process (2024)

Savitri & Pinem (2022) argue that rising profits attract investors to invest in the company's stocks. Thus, that stock prices also rise while in reality, for example, in Figure 1, it can be seen that Bank Mandiri's profits in 2020 and 2022 are reflected in ROA was 1.64% and 3.30%, followed by a closing stock price of IDR 6,325 and IDR 9,925, while in 2023 the ROA owned increased to 4.03%. However, that year, Bank Mandiri experienced a decline in stock price to IDR 6,050. In 2020, the PER owned by Bank Mandiri was higher than the PER in 2023, namely 15.29, but the price of the stocks owned was higher, namely IDR 6,325. This is not in accordance with the theory that PER can reflect a company's stock price, where a low PER tends to attract investor interest and increase stock prices and vice versa (Tannia & Suharti, 2020).

Other discrepancies also occur about the CR theory, where Fadlilah et al. (2023) argue that a

low CR will decrease the market price of the company's stocks in question. However, in reality, for example, BCA has a low CR, namely 82.8% in 2020 and 2023; however, this was followed by high stock prices, IDR 33,850 and IDR 9,400, respectively, in those years. In contrast, in 2021, BCA had the highest CR percentage, 83.50%, followed by the lowest stock price, IDR 7,025. Even in 2023, BCA's PER is higher than the PER in 2021 and 2022, namely 15.44, but its stock price is higher than the stock price in both years. The next discrepancy is related to DER, where Dewi & Suwarno (2022), in their research, said that the higher the DER value, the lower the company's stock price.

Different from the existing reality, where, for example, BNI's DER has been consecutive since 2020; 2021 and 2022 is 689.60%, 687.90 and 657% but followed by the highest stock price, namely IDR 6,175; IDR 6,750 and IDR 9,225, while in 2023 BNI's DER will fall to 618.6% but the stock price will also fall to IDR 5,375. BNI's PER in 2022 increased to 7.60, followed by a stock price of IDR 9,225, while the PER in 2021, which was lower, namely 7.26, was followed by a lower stock price. Furthermore, BRI's financial report shows that this bank had a high LDR in 2020, 2021, and 2023, namely 83.66%, respectively, 83.67%, and 84.73%. This condition is accompanied by a high NPL percentage, namely 2.94%, 3.08%, and 3.12% in that year.

This means that in 2020, 2021, and 2023, BRI allocated even more third-party funds to be channeled through credit or loans, but an increase in the number of non-performing loans accompanied this. Normally, when the LDR rises, stock prices increase; when the NPL rises, the stock price automatically falls by itself (Amala & Fisabilillah, 2021). However, in the case of BRI, the increase in LDR, which is followed by an increase in NPL, is followed by an increase in the stock price of IDR 4,170 in 2020 and IDR 4,110 in 2021 to IDR 5,725 in 2023. Simultaneously, other discrepancies also occurred, where BRI's PER in 2020 was valued at 20.12 but was followed by a higher stock price, namely IDR 4,170, compared to in 2021, which has a PER of 19.64 and a stock price of IDR 4,110.

Based on the backdrop described above, the study entitled "The Effect of Financial Performance on the Stock Prices of Commercial Banks Listed on Indonesia Stock Exchange (IDX) with Intrinsic Value as an Intervening Variable" is essential to carry out in connection with the discrepancy between theoretical concepts and the reality that occurs in field, where this research can provide an in-depth understanding of how the financial performance of commercial banks directly influences stock prices in the Indonesian capital market, by considering intrinsic value as an intervening variable. In the context of a dynamic economy and complex capital markets, this understanding provides investors and market analysts with insight into the factors that influence bank stock valuations and provides strategic insight for bank management to improve its financial performance in a way that can increase value of the company as a whole.

2. Research Methodology

A quantitative study using an associative approach can effectively investigate the relationship between two or more variables, aiming to understand how these variables are related. It is a structured investigation process that gathers measurable data, analyzed through statistical,

mathematical, or computational methods to examine a particular phenomenon (Priadana & Sunarsi, 2021). The population determined in this research is 47 commercial banks listed on the IDX because the banking sector is quite dominant in the capital market ecosystem. Based on the Capital Market Weekly Statistics data on the IDX website, it can be seen that the financial sector has the largest contribution, namely 32.58%. In the financial sector, there are 105 issuers, and 47 are issuers operating in the banking industry, which shows a significant dominance of 44.8%. This dominance reflects that commercial banks play a key role in the capital market ecosystem, so research focusing on commercial banks will provide relevant and significant insights.

This study used a purposive sampling strategy to determine samples with certain considerations (Sugiyono, 2013). The purposive sampling technique allows researchers to select subjects based on certain characteristics that are relevant to the research objectives; therefore, in this research, a sample was determined with specific characteristics, namely as follows:

1)   Commercial banks that have been consistently listed on the IDX from 2020 to 2023 and have never experienced delisting.

2)   Commercial banks that have complete closing price data as of December 2020 to 2023.

3)   Commercial banks that consistently publish annual financial reports from 2020 to 2023.

4)   Commercial banks that have complete financial data in annual financial reports from 2020 to 2023.

By referring to the predetermined criteria, a table can be prepared to determine the sample used in this study, as follows:

Table 2. Criteria for Selecting Samples

No	Description	Total
1)	IDX Registered Commercial Banks	47
1)	Commercial banks not consistently registered with the IDX from 2020 to 2023 have experienced delisting.	(-) 2
2)	Commercial banks that do not have complete closing price data as of December 2020- 2023.	
3)	Commercial banks that do not consistently publish annual financial reports from 2020 to 2023.	(-) 1
4)	Commercial banks with incomplete financial information in the yearly reports they filed from 2020 to 2023.	(-) 2
	Final Sample Size	42
	Total Observation Data × 4 Years	168

Source: Researcher's Process (2024)

The official website of the IDX, www.idx.co.id, provides various data related to the capital market. Researchers use this data as the basis for analysis, as secondary data is usually highly reliable and more accessible than primary data.The techniques used to collect data in this

research are literature research and documentation. In this quantitative research, the data analysis methods used are financial ratio analysis and regression analysis. Based on the analysis and information previously described, the researcher then formulates the hypothesis to be tested, which is as follows:

H1: ROA has a direct and significant effect on PER

H2: CR has a direct and significant effect on PER

H3: DER has a direct and significant effect on PER

H4: LDR has a direct and significant effect on PER

H5: NPL has a direct and significant effect on PER

H6: ROA has a direct and significant effect on stock prices

H7: CR has a direct and significant effect on stock prices

H8: DER has a direct and significant effect on stock prices

H9: LDR has a direct and significant effect on stock prices

H10: NPL has a direct and significant effect on stock prices

H11: PER has a direct and significant effect on stock prices

H12: ROA has an indirect and significant effect on stock prices through PER.

H13: CR has an indirect and significant effect on stock prices through PER.

H14: DER has an indirect and significant effect on prices through PER.

H15: LDR has an indirect and significant effect on stock prices through PER.

H16: NPL has an indirect and significant effect on prices through PER.

H17: ROA, CR, DER, LDR, and NPL simultaneously influence stock prices.

3.   Results and Discussion

3.1 Classic Assumption Test

It is essential to test classical assumptions in research to ensure that the regression model provides accurate, unbiased, and consistent estimates. Thus, the analysis results can be relied upon when concluding. The classical assumption test in this research was carried out on equation model 1 and equation model 2, which are described as follows:

3.1.1 Normality Test

Normality testing is useful to ensure that residuals or prediction errors from the regression model are normally distributed. This test normally distributes data if the probability value is > 0.05 or the Jarque-Bera value is < Chi-Square.
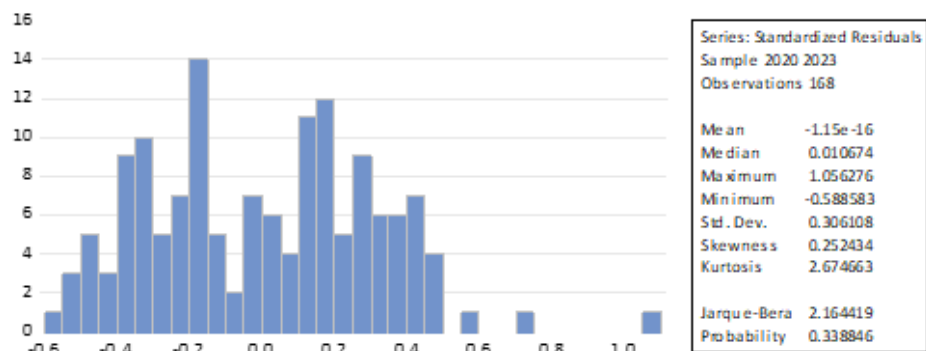
Figure 2. Normality Test Results for Model Equation 1

Source: Researcher's Process (2024)

The results of the Normality Test in Model Equation 1 indicate a probability value of 0.338846, which is greater than 0.05. Therefore, it can be concluded that the data follows a normal distribution. Additionally, the histogram of the residual data reveals a shape that closely resembles a normal curve (bell curve), although there are slight deviations in the tail of the distribution. This deviation is indicated by a skewness value of 0.252434 and a kurtosis value of 2.674663. A positive skewness value indicates a slight tendency for the data to be skewed towards larger values. In contrast, a kurtosis value of greater than 3 indicates that the peak of the distribution is slightly sharper compared to a standard normal distribution.
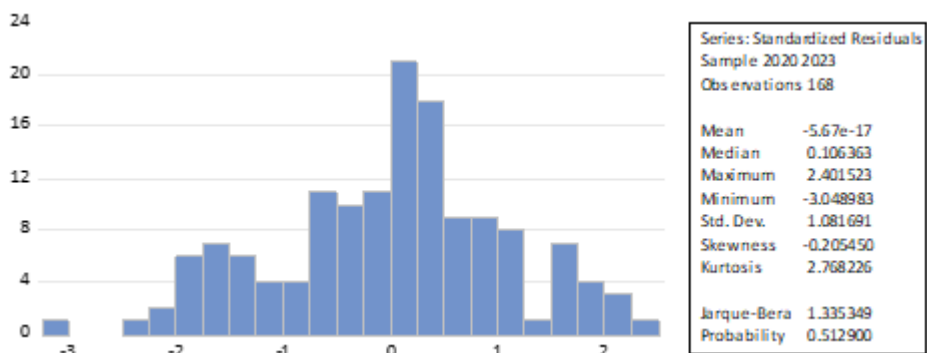

Figure 3. Normality Test Results for Model Equation 2

Source: Researcher's Process (2024)

The results of the Normality Test in Model Equation 2 show a probability value of 0.512900, which is greater than 0.05, indicating that the data is normally distributed. Similar to the Normality Test in Model Equation 1, the histogram of the residual data also displays a distribution shape that closely resembles a normal curve (bell curve), and there are slight deviations at the tail of the distribution. This deviation is indicated by a skewness value of -0.205450 and a kurtosis value of 2.768226.

3.1.2 Multicollinearity Test

Multicollinearity is a phenomenon that arises when independent variables in a regression

model have high correlations, making it difficult to determine how each variable contributes to dependent variable changes. To detect multicollinearity, tests with measuring tools such as "Variance Inflation Factor (VIF) and tolerance" are used. If the VIF values for all independent variables are less than 10, it indicates that there is no significant multicollinearity problem in the regression model, which means the relationship between the independent variables does not interfere with the regression analysis.

Table 3. Multicollinearity Test of Model Equation 1

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	322065.2	14.22766	NA
X1	37173436	1.058624	1.039720
X2	46.65714	1.801502	1.201205
X3	3386.406	5.240276	1.282620
X4	99944.86	5.077020	1.252447
X5	63232429	3.343739	1.034838

Source: Researcher's Process (2024)

Table 4.9 Multicollinearity Test of Model Equation 2

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	233861.8	14.32251	NA
X1	26829402	1.059229	1.040314
X2	33.83612	1.811204	1.207674
X3	2450.112	5.256192	1.286515
X4	72095.67	5.077240	1.252502
X5	45935900	3.367556	1.042209
Z	0.004453	1.031374	1.019103

Source: Researcher's Process (2024)

The multicollinearity test results for Equation Model 1 show that the ROA variable has a VIF value of 1.039720, CR 1.201205, DER 1.282620, LDR 1.252447, and NPL 1.034838. All of these VIF values are less than 10, which indicates that there is no multicollinearity in the research data. Similar results were also found in Equation Model 2, where the VIF values for ROA were 1.040314, CR 1.207674, DER 1.286515, LDR 1.252502, NPL 1.042209, and PER 1.019103. Since all VIF values are below 10, based on the results of the study, it can be said that all independent variables in this research do not correlate with one another. In this way, the relationship between each variable and the dependent variable may be seen more clearly.

3.1.3 Heteroscedasticity Test

Heteroscedasticity can cause regression results to be biased or unreliable. The heteroscedasticity test is used to detect this problem. If the probability value (p-value) of Obs*R-Squared is greater than 0.05, the model has residuals with consistent variance

(homoscedasticity).

Table 4. Heteroscedasticity Test Results for Model Equation 1

F-statistic	1.314679	Prob. F(5,162)	0.2603
Obs*R-squared	6.551037	Prob. Chi-Square(5)	0.2562
Scaled explained SS	16.73689	Prob. Chi-Square(5)	0.0050

Source: Researcher's Process (2024)

Table 5. Heteroscedasticity Test Results for Model Equation 2

F-statistic	4.168344	Prob. F(6,161)	0.0006
Obs*R-squared	22.58852	Prob. Chi-Square(6)	0.0009
Scaled explained SS	25.10754	Prob. Chi-Square(6)	0.0003

Source: Researcher's Process (2024)

In testing heteroscedasticity using the Glejser Test, the regression model for variable Z shows that there is no heteroscedasticity problem, because the probability value of F (0.2603) is greater than 0.05. This means that the residual variance remains consistent across different values of the independent variable, indicating that the regression model for variable Z is reliable. In contrast, for variable Y, the test showed a heteroscedasticity problem, with an F probability value (0.0006) that is smaller than 0.05. This suggests that the residual variance fluctuates depending on the value of the independent variable, indicating inconsistency in the regression model for variable Y. The Obs*R-squared value for variable Y is 22.58852 with a Chi-Square probability (0.0009), which is also smaller than 0.05, further corroborating the indication of heteroscedasticity. This problem can be caused by several factors, such as important variables not included in the model, fluctuations in measurement, or non-linear relationships between variables that need to be identified and corrected to make the regression model more stable and accurate.

3.2 Panel Data Regression Analysis

Panel data regression analysis is used to understand complex relationships where independent variables affect intervening variables, which in turn affect the dependent variable. In addition, this analysis also evaluates how the two variables together affect the dependent variable. Therefore, two-equation models are needed in this analysis. Model Equation 1 uses the Random Effect Model, which has previously been selected through the "Chow Test, Hausman Test, and Lagrange Multiplier Test".

Table 6 Panel Data Regression Analysis Model Equation 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.520169	0.111233	13.66651	0.0000
X1	-17.88580	2.988337	-5.985202	0.0000
X2	0.002289	0.001053	2.172793	0.0315
X3	-0.049593	0.012196	-4.066304	0.0001
X4	0.050837	0.061083	0.832253	0.4067
X5	-0.234492	1.549987	-0.151287	0.8800

Source: Researcher's Process (2024)

Where Equation 1:

"$Z_{it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 X_{2it} + \alpha_3 X_{3it} + \alpha_4 X_{4it} + \alpha_5 X_{5it} + \varepsilon_{1it}$

$PER = 1.520169 - 17.88580 X_1 + 0.002289 X_2 - 0.049593 X_3 + 0.050837 X_4 - 0.234492$"

Based on Model Equation 1 above, it can be seen that the constant value is 1.520169, which indicates that when all independent variables have a value of 0, then the value of the intervening variable Z or PER is estimated at 1.520169. This is a starting point for understanding how other independent variables affect PER. The regression coefficient for the variable the X2 or CR coefficient of 0.002289 shows a very small positive relationship, where increasing CR slightly increases PER, reflecting that better liquidity slightly increases market valuation.

The variable X4 or LDR with a coefficient of 0.050837 shows that the more savings are channeled into loans, the PER will also increase. However, not significantly, which can be interpreted as better operational efficiency. Finally, the variable X5 or NPL has a coefficient of -0.234492, indicating that an increase in NPL significantly reduces PER, which reflects that higher credit risk reduces the market assessment of banking companies. Overall, the Random Effect Model shows how various aspects of financial performance and risk can influence the market's assessment of a company, with some variables showing stronger and more significant relationships than others.

Table 7. Panel Data Regression Analysis Model Equation 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.488209	0.369891	12.13388	0.0000
X1	43.17995	7.434776	5.807835	0.0000
X2	0.002362	0.002245	1.052360	0.2952
X3	0.010795	0.035001	0.308417	0.7584
X4	-0.021610	0.140226	-0.154108	0.8778
X5	-3.885286	3.587506	-1.083005	0.2815
Z	1.427986	0.185355	7.704069	0.0000

Source: Researcher's Process (2024)

Where Equation 2:

"$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \varepsilon_{2it}$

Stock Price = $4.488209 + 43.17995 X_1 + 0.002362 X_2 + 0.010795 X_3 - 0.021610 X_4 - 3.885286 X_5 + 1.427986 Z$"

Based on the Fixed Effect Model used to analyze Model Equation 2, it can be seen that the constant value of 4.488209 indicates that when all independent variables have a value of 0, it is estimated that the stock price will be 4.488209, which provides an understanding of the influence of other variables on stock prices. The regression coefficient for the X2 or CR coefficient of 0.002362 shows a very small positive relationship where if there is an increase in CR, it will also increase stock prices. This reflects that better liquidity will improve market valuation.

On the other hand, Variable X4 or LDR has a coefficient of -0.021610, which shows that an increase in LDR can reduce stock prices. This also indicates that excessive savings channeled into loans can be seen as a risk by investors. Variable X5 or NPL, with a coefficient of - 3.885286, shows a strong negative relationship, where an increase in NPL significantly reduces stock prices. This possibly indicates that credit risk is higher, reducing the market's assessment of banking companies.

Lastly, the variable Z or PER has a coefficient of 1.427986, indicating that an increase in PER will increase stock prices by 1.427986. This indicates that the market values earnings growth against stock prices. Overall, this model shows how various financial indicators can influence stock prices, with some variables showing a stronger and more significant impact than others.

3.3 Hypothesis Testing

3.3.1 T-Test

T-test is a statistical test used to determine whether there is a significant difference between the results of two groups or to determine the impact of an independent variable on a dependent variable in a regression model. This test compares the mean value with the null hypothesis (H_0) and measures how much difference there is between the tested groups in the sample, taking into account the variability of the data. If the t-count value is greater than the t-table or smaller in the case of a negative), then the null hypothesis is rejected, indicating that there is a significant effect or difference. The t table value in this research is 1.97472, which was obtained using the formula t table = n – k, where n is observation data and k is the number of independent variables or intervening variables (Indriani et al, 2023). This research analyzed 42 commercial banks over 4 periods (2020 to 2023) so that the total observation data obtained was 42×4 = 168 (n). This research has five independent variables, namely ROA, CR, DER, LDR, and NPL, and 1 intervening variable, namely PER, so the total k is 6. The formula t table = n - k, and then t table = 168 - 6, which results in 162. The significance level (α) determined is 0.05 or indicates a confidence level of 95%. To find the t table value, we need to refer to the t distribution table. With a t table of 162 and α = 0.05 (two sides), you will find a t table value of around 1.97472.

Table 8. T-Test Results for Model Equation 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.520169	0.111233	13.66651	0.0000
X1	-17.88580	2.988337	-5.985202	0.0000
X2	0.002289	0.001053	2.172793	0.0315
X3	-0.049593	0.012196	-4.066304	0.0001
X4	0.050837	0.061083	0.832253	0.4067
X5	-0.234492	1.549987	-0.151287	0.8800

Source: Researcher's Process (2024)

The results of the t-test in Table 8 show the influence of each independent variable on PER, where for ROA, the calculated t value obtained is -5.985202, whose value is > t table -1.97472, so it can be said that ROA does not have a significant influence on PER partially. Second, the

calculated t value for CR is 2.172793, which is also > t table 1.97472, indicating that CR has a partial positive effect on PER. Furthermore, DER shows a calculated t value of -4.066304, which is > t table -1.97472, so it can be concluded that DER has no partial effect on PER. Then, for LDR, the calculated t value obtained is 0.832253 < t table 1.97472, which shows that LDR has no partial impact on PER. Finally, NPL has a calculated t value of -0.151287, which is also < t table -1.97472, but this result shows that NPL partially affects PER. Furthermore, the results of the t-test in Model Equation 2 can be seen in Table 4.15 below:

Table 9. T-Test Results for Model Equation 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.488209	0.369891	12.13388	0.0000
X1	43.17995	7.434776	5.807835	0.0000
X2	0.002362	0.002245	1.052360	0.2952
X3	0.010795	0.035001	0.308417	0.7584
X4	-0.021610	0.140226	-0.154108	0.8778
X5	-3.885286	3.587506	-1.083005	0.2815
Z	1.427986	0.185355	7.704069	0.0000

Source: Researcher's Process (2024)

The analysis results shown in Table 9 reveal the influence of independent and intervening variables on stock prices. ROA has a calculated t value of 5.807835, which is greater than the t table of 1.97472, indicating that ROA has a partially significant effect on stock prices. On the other hand, CR shows a t value of 1.052360, which is smaller than the t table of 1.97472, indicating that CR has no partial effect on stock prices. Similarly, DER has a t value of 0.308417, which is smaller than the t table of 1.97472, so it can be concluded that DER has no partial effect on stock prices. For LDR, the calculated t value obtained is -0.154108, which is smaller than the t table of 1.97472, indicating that LDR has a partial effect on stock prices. NPL also shows a calculated t value of -1.083005, which is smaller than the t table of 1.97472, so NPL has a partial effect on stock prices. Finally, PER has a t value of 7.704069, which is greater than the t table of 1.97472, indicating that PER also partially affects stock prices. Thus, this t test provides a clear picture of the effect of each variable on each other, both in Equation Model 1 and Equation Model 2.

3.3.2 F-Test

The F-test is employed to assess the simultaneous effect of independent variables on the dependent variable (H17). The test results are said to be influential when F count > F table. According to Indriani et al (2023), the F table is obtained using the formula df = n - k, where n is the number of observation data and k is the number of independent variables so that the number of observation data in this research is 168 minus 5 independent variables, the result is 163. Next we need to refer to the F distribution table and obtain an F table value for Model Equation 1 of 2,270 and an F table for Model Equation 2 of 2,150.

Table 10. F Test Results for Model Equation 1

R-squared	0.317796	Mean dependent var	0.492150
Adjusted R-squared	0.293078	S.D. dependent var	0.265127
S.E. of regression	0.210441	Sum squared resid	6.111391
F-statistic	12.85710	Durbin-Watson stat	1.525599
Prob(F-statistic)	0.000000		

Source: Researcher's Process (2024)

Table 11. F Test Results for Model Equation 2

R-squared	0.948400	Mean dependent var	6.569320
Adjusted R-squared	0.923929	S.D. dependent var	1.409807
S.E. of regression	0.388837	Akaike info criterion	1.206365
Sum squared resid	14.66588	Schwarz criterion	2.175679
Log likelihood	-39.85828	Hannan-Quinn criter.	1.600239
F-statistic	38.75721	Durbin-Watson stat	1.871232
Prob(F-statistic)	0.000000		

Source: Researcher's Process (2024)

The F test results for Equation Model 1 show the calculated F value of 12.857, which is greater than the F table of 2.270. This indicates that variables such as "ROA, CR, DER, LDR, and NPL" have a simultaneous influence on PER. Furthermore, for Equation Model 2, the F test results show a calculated F value of 38.757, which is greater than the F table of 2.150. This means that variables such as "ROA, CR, DER, LDR, and NPL" also have a simultaneous influence on stock prices.

3.3.3 Coefficient of Determination Test (R Square)

The coefficient of determination test is a statistical tool used in prediction models or hypothesis testing to assess how well the model can predict or explain the observed results. This reduces the proportion of overall variation in results that can be explained by the used model. The higher the koefisien determinasi, the better the model is in applying or explaining the data. The results of this test in the study are shown in Tables 12 and 13 below.

Table 12. R Square Test Results for Model Equation 1

R-squared	0.317796	Mean dependent var	0.492150
Adjusted R-squared	0.293078	S.D. dependent var	0.265127
S.E. of regression	0.210441	Sum squared resid	6.111391
F-statistic	12.85710	Durbin-Watson stat	1.525599
Prob(F-statistic)	0.000000		

Source: Researcher's Process (2024)

Table 13. R Square Test Results for Model Equation 2

R-squared	0.948400	Mean dependent var	6.569320
Adjusted R-squared	0.923929	S.D. dependent var	1.409807
S.E. of regression	0.388837	Akaike info criterion	1.206365
Sum squared resid	14.66588	Schwarz criterion	2.175679
Log likelihood	-39.85828	Hannan-Quinn criter.	1.600239
F-statistic	38.75721	Durbin-Watson stat	1.871232
Prob(F-statistic)	0.000000		

Source: Researcher's Process (2024)

In Model Equation 1, the R Square value obtained is 0.317796, meaning that only 31.7% of PER variability can be explained by the combination of ROA, CR, DER, LDR, and NPL variables, while the rest is influenced by other factors. In contrast, in Model Equation 2, the higher R Square value of 0.923929, which is 92.3%, indicates that this model is more effective in explaining the effect of these variables on stock prices. However, the 7.7% change in the stock price is still mostly caused by other factors that are not included in this model.

3.4 Path Analysis

Path Analysis tests the inherent cause-and-effect relationship between variables in a research. This provides deeper insight into the dynamics of the variables under research and helps explain the processes behind the observed phenomena. Path Analysis is used to understand whether the independent variable indirectly affects the dependent variable through intervening variables (H12; H13; H14; H15; H16).

Table 14. Path Analysis (ROA)

Input:		Test statistic:		Std. Error:	p-value:
a	-17.88580	Sobel test:	-4.72646661	5.40375594	0.00000228
b	1.427986	Aroian test:	-4.70183022	5.43207023	0.00000258
s_a	2.988337	Goodman test:	-4.75149436	5.3752925	0.00000202
s_b	0.185355	Reset all		Calculate	

Source: Researcher's Process (2024)

H12: ROA indirectly and significantly affects stock prices through PER. The results of Path Analysis show that the calculated t value obtained is -4.72646661, which < t table is 1.97472. The study's findings indicate that PER does not significantly mediate the relationship between ROA and saham price. In other words, PER, as an intervening variable, does not significantly alter the impact of ROA on the stock price.

Table 15. Path Analysis (CR)

Input:		Test statistic:		Std. Error:	p-value:
a	0.002289	Sobel test:	2.09210242	0.00156238	0.03642935
b	1.427986	Aroian test:	2.07596636	0.00157452	0.03789706
s_a	0.001053	Goodman test:	2.10862069	0.00155014	0.03497734
s_b	0.185355	Reset all		Calculate	

Source: Researcher's Process (2024)

H13: CR indirectly and significantly affects stock prices through PER. The Path Analysis results show that the calculated t value obtained is 2.09210242, which is > t table of 1.97472. Thus, it can be concluded that PER significantly indirectly influences the relationship between CR and stock prices. These results also support the assumption that PER is an intervening variable influencing how CR impacts stock prices.

Table 16. Path Analysis (DER)

Input:		Test statistic:		Std. Error:	p-value:
a	-0.049593	Sobel test:	-3.59614497	0.01969278	0.00032297
b	1.427986	Aroian test:	-3.57268271	0.01982211	0.00035334
s_a	0.012196	Goodman test:	-3.62007563	0.01956261	0.00029452
s_b	0.185355	Reset all		Calculate	

Source: Researcher's Process (2024)

H14: DER has an indirect and significant effect on prices through PER. The Path Analysis results show that the calculated t value obtained is -3.59614497 > t table -1.97472. Thus, it is concluded that PER has no significant indirect effect on the relationship between DER and stock prices. This means that even though PER acts as an intervening variable, the influence of DER on stock prices is not significantly influenced by PER.

Table 17. Path Analysis (LDR)

Input:		Test statistic:		Std. Error:	p-value:
a	0.050837	Sobel test:	0.82744678	0.08773316	0.40798388
b	1.427986	Aroian test:	0.82064146	0.08846071	0.41185052
s_a	0.061083	Goodman test:	0.83442425	0.08699954	0.40404196
s_b	0.185355	Reset all		Calculate	

Source: Researcher's Process (2024)

H15: LDR indirectly and significantly affects stock prices through PER. The Path Analysis results show that the calculated t value obtained is 0.82744678, < t table of 1.97472. Accordingly, it can be said that PER does not have a significant and long-lasting impact on the relationship between LDR and stock prices. Even though PER serves as an intervening variable, the impact of LDR on the stock price is not significantly impacted by PER.

Table 18. Path Analysis (NPL)

Input:		Test statistic:		Std. Error:	p-value:
a	-0.234492	Sobel test:	-0.15125727	2.21378645	0.87977277
b	1.427986	Aroian test:	-0.1499994	2.23235089	0.88076509
s_a	1.549987	Goodman test:	-0.15254732	2.19506501	0.87875527
s_b	0.185355	Reset all		Calculate	

Source: Researcher's Process (2024)

H16: NPL has an indirect and significant effect on prices through PER. The Path Analysis results show that the calculated t value obtained is -0.15125727, which is far < t table -1.97472. This indicates that PER does not significantly influence the relationship between NPL and stock prices. In other words, even though PER acts as an intervening variable, the effect of NPL on stock prices is not significantly influenced by PER.

4.   Conclusion

From the research findings discussed in the previous chapter, several conclusions can be made, namely:

1.   The t-test results indicate that ROA and CR have a direct and significant impact on PER, while DER, LDR, and NPL do not show a notable effect. Additionally, ROA is found to significantly influence stock prices, while CR, DER, and LDR do not demonstrate a significant impact. These findings strongly support hypotheses H1 and H2, but fail to validate H3, H4, H5, H7, H8, and H9. Furthermore, NPL does not significantly affect the stock price; this indicates that not all independent variables affect dependent variables in the same way.

2.   The F-test results in Model Equation 1 show that ROA, CR, DER, LDR, and NPL collectively influence PER. Similarly, the F-test results in Model Equation 2 reveal that these five independent variables have a simultaneous effect on stock prices. The Determination Coefficient Test indicates that in Model Equation 1, these variables account for 31.7% of the variation in PER, with the remaining 68.3% influenced by other factors. In Model Equation 2, the 92.3% of R Square indicates that the variables in question together explain 92.3% of the variation in stock prices, with 7.7% being caused by other variables not included in the model. These findings support H17, which asserts that ROA, CR, DER, LDR, and NPL have a simultaneous impact on stock prices.

3.   Based on the Path Analysis that is conducted, it can be concluded that the effects of the independent variable on the stock price through PER provide a variety of results.. The results of the analysis for H12 indicate that ROA does not have a significant and long-lasting impact on the price of stocks through PER. Conversely, CR indicates a non-significant impact on the stock price through PER, with H13 being cited as evidence. Regarding H14, the results reveal that DER does not have an indirect impact on stock prices via PER. Additionally, LDR has no discernible impact on the price of stocks through PER, which results a decline in H15. Finally, it is shows that NPL does not have a significant and long-lasting impact on the price of stocks through PER, which results a decline in H16.

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