

**HEALTH LEVEL OF BANKING SECTOR LISTED ON THE INDONESIA STOCK EXCHANGE****Friska<sup>1</sup>, Yusnita Octafilia Th. A. Y. I<sup>2\*</sup>**<sup>1&2</sup>Institut Bisnis dan Teknologi Pelita IndonesiaEmail: [yusnita.octafilia@lecturer.pelitaindonesia.ac.id](mailto:yusnita.octafilia@lecturer.pelitaindonesia.ac.id)**ABSTRACT**

This study aims to determine the effect of CAR, NPL, NIM, ROA, LDR and PDN on stock prices and also to analyze the soundness of banks by using the CAMELS method to find out if a bank is healthy. CAR, NPL, NIM, ROA, LDR, PDN and stock prices are measured by looking at the financial statements of companies listed on the Indonesia Stock Exchange (IDX) for the 2009-2018 period. The population in this study were 44 banks listed on the Indonesia Stock Exchange (IDX) for the 2009-2018 period. After selection according to the purposive sampling method in the population, there are 26 banking companies that are used as samples. This study used a quantitative method with a descriptive approach to determine the effect between CAR, NPL, NIM, ROA, LDR and PDN on stock prices, using secondary data and data analysis techniques using multiple regression analysis. Based on the results of the study, CAR, LDR and PDN did not significant effect on stock prices. While NPL, NIM and ROA had significant effect on stock prices in banking companies listed on the Indonesia Stock Exchange (IDX) in 2009-2018. The results of the CAMELS analysis show that banking companies listed on the Indonesia Stock Exchange (IDX) for the 2009-2018 period banks are categorized healthy.

**Keywords:** CAR; NPL; NIM; ROA; LDR; PDN; Healthy Bank; Stock Prices**TINGKAT KESEHATAN SEKTOR PERBANKAN YANG TERDAFTAR DI BURSA EFEK INDONESIA****ABSTRAK**

*Penelitian ini bertujuan untuk mengetahui pengaruh CAR, NPL, NIM, ROA, LDR, dan PDN terhadap harga saham serta menganalisis kesehatan bank dengan menggunakan metode CAMELS untuk mengetahui apakah suatu bank sehat. CAR, NPL, NIM, ROA, LDR, PDN, dan harga saham diukur dengan melihat laporan keuangan perusahaan yang terdaftar di Bursa Efek Indonesia (BEI) untuk periode 2009-2018. Populasi dalam penelitian ini adalah 44 bank yang terdaftar di Bursa Efek Indonesia (BEI) untuk periode 2009-2018. Setelah dilakukan seleksi sesuai dengan metode purposive sampling, terdapat 26 perusahaan perbankan yang dijadikan sampel. Penelitian ini menggunakan metode kuantitatif dengan pendekatan deskriptif untuk mengetahui pengaruh antara CAR, NPL, NIM, ROA, LDR, dan PDN terhadap harga saham, menggunakan data sekunder dan teknik analisis data dengan regresi berganda. Berdasarkan hasil penelitian, CAR, LDR, dan PDN tidak berpengaruh signifikan terhadap harga saham. Sementara itu, NPL, NIM, dan ROA berpengaruh signifikan terhadap harga saham pada perusahaan perbankan yang terdaftar di Bursa Efek Indonesia (BEI) pada periode 2009-2018. Hasil analisis CAMELS menunjukkan bahwa perusahaan perbankan yang terdaftar di Bursa Efek Indonesia (BEI) pada periode 2009-2018 dikategorikan sebagai bank yang sehat.*

**Kata Kunci:** CAR; NPL; NIM; ROA; LDR; PDN; Bank Sehat; Harga Saham

## INTRODUCTION

Investment is a commitment to invest a certain amount of funds or other resources that are carried out at present to obtain profits in the future. One option to invest in financial assets is in the form of the capital market. The capital market is a place and means of meeting between sellers and buyers related to public offering and securities trading activities. In Indonesia, securities trading is carried out by the Indonesia Stock Exchange (IDX). With securities traded in the form of stocks, bonds, mutual funds and other derivative instruments (Indriani & Dewi, 2016).

One of the securities that is most in demand by the public is stocks where shares are a sign of the capital participation of a person or business entity in a company in the form of a Limited Liability Company (PT). Based on the market capitalization of sectoral stock trading in 2018. Each sector experienced different fluctuations where the financial sector was in the highest position, namely 29.47%, while the agriculture sector was in the lowest position, namely 1.57%. This means that the banking sector is one of the most popular sectors for investors. A healthy bank in general is a bank that can carry out its functions well, namely being able to maintain and maintain trust from the public and carrying out its function as an intermediary institution in helping the smooth flow of payment traffic and can be used by the government in carrying out its various policies, especially in monetary policy. To carry out its functions properly, banks must have sufficient capital, maintain the quality of assets properly, be managed as best as possible and operate based on the principle of prudence by the applicable laws and regulations.

For investors, information about the company's performance can be used to see whether they will invest and maintain their investment in the company or look for alternatives to other companies. Similar to the banking industry, financial performance is indispensable in getting adequate performance evaluations. In this case, investors can look at the stock price of a bank, because the stock price is considered a reflection of the performance of a company (Maulana, Salim, & Aisjah, 2015).

The price index of banking stocks listed on the Indonesia Stock Exchange (IDX) fluctuated from 2009-2018. In 2009 the banking stock price index was 301.42, in 2010 the stock price index increased to 466.67, in 2011 the stock price index was 491.78, in 2012 the stock price index was 550.10, then in 2013 the banking stock price index decreased to 540.33, in 2014 the stock price index increased again to 731.64, in 2015 the banking stock price index decreased to 687.04, In 2016 the Banking Stock Price Index tended to increase to 811.89, in 2017 the Banking Stock Price Index was 1,140.84, and in 2018 the Banking Stock Price Index was 1,175.67 which is the highest Banking Stock Price Index. From the data, it can be seen that in the last ten years, the stock price index tends to experience ups and downs from the period 2009-2015, but the most significant increase occurred from 2009 to 2010. Then in the last four years, namely in the 2015-2018 period, the banking stock price index tended to increase from year to year.

The assessment of bank health level has been regulated by Bank Indonesia Regulation No. 6/10/PBI/2004 dated April 12, 2004, and Circular Letter No. 6/23/DPNP/2004 dated May 31, 2004, concerning the system of assessing the health level of commercial banks. This regulation states that the assessment of the health level of a bank can be carried out through quantitative assessment and qualitative assessment of various factors that affect the condition or performance of a bank (Dewi, 2009).

The assessment of the bank's health level is carried out so that it is not detrimental and can ensure the safety of customer funds and investors who have deposited their funds in the bank. This evaluation is carried out to find out the overall health of a bank so that the bank can carry out its functions properly, maintain and maintain trust from the public and debtors, help smooth payment traffic and assist the government in implementing monetary policy. With the evaluation of the bank's health level, the bank can cover risks that may arise such as capital risk, bad loans, operations, interest and liquidity (Rosita, Muharam, & Haryanto, 2014).

Similar previous studies on the effect of financial ratios (CAMELS) on banking stock prices in Indonesia have shown mixed results. The results of the research conducted by Nengsih (2009) show that the ratio of CAR, ROA, NIM, BOPO, NPL and PDN affects the stock price. Research conducted by Watung & Ilat (2016) shows that the ratio of ROA, NPM and EPS has a significant effect on stock prices.

Research conducted by Takarini & Putra (2013) shows that the CAR ratio has an effect on stock price changes, but the NPM, ROA and LDR ratios have no effect on stock price changes. Research conducted by Ishak (2010) concluded that the ratio of CAR and LDR did not have a significant effect on the stock price, while the ratio of NPL and ROA had a significant effect on the stock price. Research conducted by Purwasih (2010) states that the ratio of RORA and ROA has a significant effect on changes in stock prices, while the ratio of CAR, NPM and LDR has a significant effect on changes in stock prices. Research conducted by Purnamasari, Nuraina, & Astuti (2017) concluded that CAR has a significant negative effect on stock prices, the LDR ratio does not have a significant effect on stock prices and the ROA ratio has a significant positive effect on stock prices.

The objectives of this study are to analyze the effect of Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Net Interest Margin (NIM), Return On Assets (ROA), Loan Deposit Ratio (LDR), Net Foreign Exchange Position (PDN) on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) for the period 2009-2018.

## LITERATURE REVIEW

### Stock Price

The share price is the value of a stock that reflects the performance of a company's management of the wealth of the company that issued the shares. The stock price is determined at the time when the stock market is ongoing based on the demand and supply that occurs in the secondary market for the stock in question. The price of a stock can be affected by the higher and lower the number of investors who buy or sell the stock (Takarini & Putra, 2013).

### Bank

A bank is an institution that has the authority in terms of collecting funds from the community and distributing them back to the community. In addition, banks are intermediaries for payment traffic and money circulation (Anggraeni, 2011).

Hakim (2013) argued that in terms of its function, banks are clarified into 3 types, namely: (1) The Central Bank is a financial institution that is responsible for monetary policy and creates a stable level of economic activity in Indonesia. The central bank has full authority over the regulation and supervision of the activities of financial institutions in Indonesia. (2) A Commercial Bank is a bank that conducts business activities conventionally and/or based on Sharia principles which in its activities provide services in payment traffic. (3) People's Credit Bank (BPR) is a bank that conducts business conventionally and/or based on Sharia principles in activities that do not provide services in payment traffic.

In terms of how to determine the price of both the selling price and the purchase price, banks are clarified into 2 types, namely: (1) Conventional Banks are banks that in their fundraising and fund distribution activities always seek profits by providing or imposing rewards in the form of interest or a certain percentage of rewards and determining prices to their customers. (2) Islamic banks are banks that in their operational activities refer to the principles of Islamic law sourced from the Qur'an and Hadith. In its activities, both the collection of funds and the distribution of funds give or impose rewards based on Sharia principles, namely buying and selling and profit sharing. In terms of status, in practice banks are divided into two types, namely: (1) Foreign Exchange Bank is a bank that can carry out transactions with the state family or those related to foreign eyes as a whole. Such as overseas transfers, overseas collection, travellers' cheques, bookkeeping, letters of credit payments and other transactions. (2) A Non-Foreign Exchange Bank is a bank that cannot conduct foreign transactions because it still does not have a license as a foreign exchange bank. Where transactions that can be made are still within the borders of the country.

The function of a bank according to Anggraeni (2011) is as follows: (1) Agent of Trust is a bank is a financial institution that has the main basis of banking activities is trust, both in terms of fund collection and fund distribution. The public will be willing to deposit their funds in the bank if it is based on an element of trust. (2) An agent of Development is a bank that carries out community economic activities including the monetary sector and the real sector, which cannot be separated. The two interact with each other and influence each other. Banks as collectors and distributors of funds are indispensable for the smooth running of economic activities in the real sector. The bank's activities allow the public to invest, distribute and consume goods and services related to money, for the smooth running of investment, distribution and consumption activities are none other than community economic development activities. (3) An agent of Service is a bank whose activities are apart from collecting and distributing funds, banks also provide various types of service offerings to the public. The services offered by banks can include remittances, custody services, guarantee services and bill settlement services.

### Bank Health Level Assessment

According to Bank Indonesia Circular Number: 6/23/DPNP dated May 31, 2004, the assessment of a bank's health level is a qualitative assessment of various aspects that affect the condition or performance of a bank through an assessment of aspects of capital, asset quality, management, profitability, liquidity and market risk. The assessment of the health level of commercial banks on the CAMELS factor is explained by the composite rating (PK) of the bank's health level with the following categories (Yulianto & Sulistyowati, 2011): (1) Composite Rating 1 (PK-1) of banks is classified as "Very Healthy" and can overcome the negative influence of economic conditions and the financial industry. (2) The bank's Composite Rating 2 (PK-2) is classified as "Healthy" and can overcome the negative influence of economic conditions and the financial industry, but the bank still has minor weaknesses that can be immediately overcome by routine actions. (3) The bank's Composite Rating 3 (PK-3) is classified as "Quite Healthy" but there are weaknesses that can cause its composite rating to deteriorate if the bank does not immediately take corrective action. (4) Composite Rating 4 (PK-4) of banks is classified as "Less Healthy" and is very sensitive to the negative influence of economic conditions and the financial industry or banks have financial weaknesses that serious or a combination of several unsatisfactory factors, if effective corrective action is not taken, it will have the potential to experience difficulties that endanger the continuity of its business. (5) The bank's Composite Rating of 5 (PK-5) is classified as "Unhealthy" and is very sensitive to the negative influence of the economy and the financial industry and experiences difficulties that endanger its business continuity.

### CAMELS Method

Following Bank Indonesia Circular Letter Number: 6/23/DPNP dated May 31, 2004, in assessing the health level of banks, the CAMELS method can be used, which is described as follows:

#### Capital

Valuation is based on the capital owned by a bank. One of the assessments using the Capital Adequacy Ratio (CAR) is an assessment of the adequacy of bank capital in maintaining sufficient capital and the ability of bank management to identify, measure, supervise and control risks that will arise that can affect the size of the bank's capital (Wismaryanto, 2013). This ratio can be formulated as follows:

$$CAR = \frac{\text{Total Modal}}{\text{Total Aktiva Tertimbang Menurut Resiko (ATMR)}} \times 100\%$$

#### Asset Quality

Asset quality assessment is an assessment of the bank's asset condition and the adequacy of credit risk management. The credit referred to in this case is a non-performing loan, the criteria for assessing the bank's health level on asset quality can be calculated using the Non-Performing Loan (NPL) ratio as follows (Setiawan & Roestiono, 2014):

$$NPL = \frac{\text{Kredit Bermasalah}}{\text{Total Kredit}} \times 100\%$$

#### Management

To assess the quality of management in a bank, the Net Interest Margin (NIM) ratio can be used. Net Interest Margin (NIM) is used to measure the ability of bank management to manage productive assets to obtain net interest income. The NIM ratio can be formulated as follows (Pelealu, Karamoy, & Tony, 2015):

$$NIM = \frac{\text{Pendapatan Bunga Bersih}}{\text{Rata - rata Aktiva Produktif}} \times 100\%$$

#### Earnings

Profitability is the ability of a bank to earn profits through all the capabilities and resources available in the bank. The profitability of a bank can be measured by the Return on Assets (ROA) ratio, the ROA ratio shows how much net profit the company earns when measured from the value of its assets (Setiawan & Roestiono, 2014). Return on Assets (ROA) can be formulated as follows:

$$ROA = \frac{\text{Laba bersih Setelah Pajak}}{\text{Total Aset}} \times 100\%$$

#### Liquidity

Liquidity is an analysis conducted on banks in fulfilling short-term obligations or obligations that have matured. The liquidity component of banks can be measured based on the *Loan Deposit Ratio* (LDR) (Kusumawati, 2013). The formula to calculate the amount of *Loan Deposit Ratio* (LDR) is as follows:

$$LDR = \frac{\text{Total Kredit}}{\text{Total Dana Pihak Ketiga}} \times 100\%$$

#### Sensitivity To Market

Market risk sensitivity is to measure the ability of a bank's capital to offset risks arising from exchange rate changes. To measure market risk sensitivity, the Net Foreign Exchange Position (PDN) ratio with the standard set by Bank Indonesia is 20% of GDP can be formulated as follows (Muttaqin, Kamaludin, & Prabawa, 2012):

$$PDN = \frac{\text{Aset Valuta Asing} - \text{Liabilitas Valuta Asing}}{\text{Total Modal}} \times 100\%$$

### Framework of Study

Based on the theoretical foundation, previous research and the influence between variables from several studies, as the basis for formulating a hypothesis, the framework of thought that will be used in this study is about the influence of capital, asset quality, management, profitability, liquidity and market risk sensitivity on the assessment of the bank's health level. The framework of the relationship between variables is shown in Figure 1.

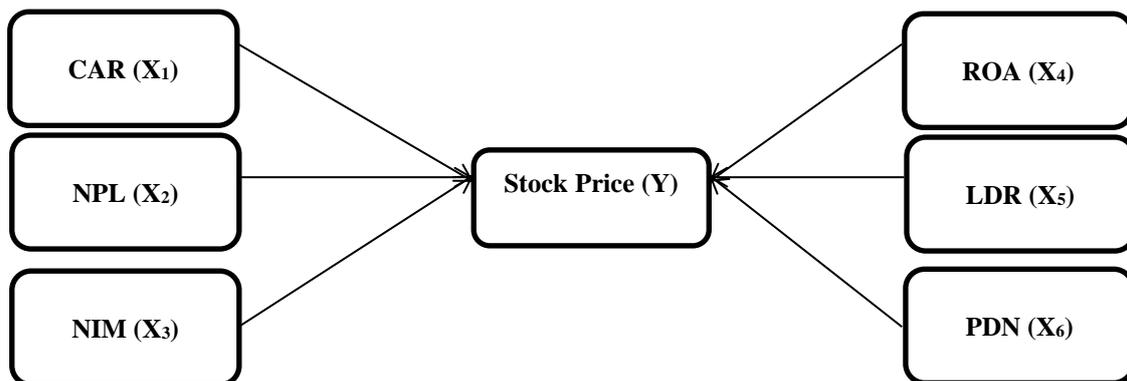


Figure 1. Framework of Study

### Previous Research

Penelitian Wismaryanto (2013) yang berjudul Pengaruh NPL, LDR, ROA, ROE, NIM, BOPO, Dan CAR Terhadap Harga Saham Pada Sub Sektor Perbankan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2008-2012 dengan populasi dalam penelitian ini adalah seluruh bank umum yang terdaftar di Bursa Efek Indonesia (BEI) pada periode tahun 2008 sampai dengan tahun 2012 dan teknik pengambilan sampel yang dipergunakan adalah *Purposive Sampling* yaitu penentuan sampel dengan menggunakan pertimbangan atau kriteria tertentu serta teknik analisis data yang digunakan adalah analisis regresi linier berganda menunjukkan hasil penelitian adalah NPL, ROA dan CAR tidak berpengaruh signifikan terhadap harga saham, LDR dan BOPO berpengaruh negatif dan signifikan terhadap harga saham, NIM berpengaruh positif dan signifikan terhadap harga saham.

Penelitian Purnamasari, Nuraini & Astuti (2017) berjudul Pengaruh Capital Adequacy Ratio, Loan To Deposit Ratio Dan Return On Asset Terhadap Harga Saham Perusahaan Perbankan dengan populasi dalam penelitian ini adalah seluruh bank yang tercatat di BEI Periode 2013-2015 dan sampel yang digunakan dalam penelitian ini adalah *purposive sampling* serta teknik analisis pada penelitian ini menggunakan statistik deskriptif menunjukkan hasil penelitian adalah CAR berpengaruh negatif dan signifikan terhadap harga saham, LDR tidak berpengaruh signifikan terhadap harga saham, ROA berpengaruh positif dan signifikan terhadap harga saham

Penelitian Takarini & Putra (2013) berjudul Dampak Tingkat Kesehatan Bank Terhadap Perubahan Harga Saham Pada Perusahaan Perbankan Yang Go Public Di Bursa Efek Indonesia (BEI) dengan populasi yang digunakan dalam penelitian adalah seluruh bank yang terdaftar di Bursa Efek Indonesia (BEI) dan teknik pengambilan sampel yang digunakan adalah *purposive sampling* serta teknik analisis data yang digunakan adalah teknik analisis regresi linear berganda menunjukkan hasil penelitian adalah CAR berpengaruh terhadap perubahan harga saham sedangkan NPM, ROA dan LDR tidak berpengaruh terhadap perubahan harga saham.

Penelitian Ishak (2010) berjudul Pengaruh Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Return On Assets (ROA) Dan Loan To Deposit Ratio (LDR) Terhadap Harga Saham Pada Sektor Perbankan Periode 2003-2008 dengan populasi dalam penelitian ini adalah semua perbankan yang yang terdaftar di Bursa Efek Indonesia periode 2003-2008 dan teknik pengambilan sampel yang digunakan adalah *purposive sampling* serta teknik analisis yang digunakan adalah analisis regresi linear berganda menunjukkan hasil penelitian adalah CAR dan LDR tidak berpengaruh signifikan terhadap harga saham, sedangkan NPL dan ROA berpengaruh signifikan terhadap harga saham.

Penelitian Nengsih (2009) berjudul Pengaruh Tingkat Kesehatan Bank Terhadap Harga Saham (Studi Empiris Perusahaan Perbankan Yang Go Public Di Bursa Efek Indonesia) dengan populasi dalam penelitian ini adalah perusahaan perbankan yang terdaftar di Bursa Efek Indonesia (BEI) dari tahun 2004-2006 dan teknik pengambilan sampel yang digunakan adalah *purposive sampling* serta teknik analisis data yang digunakan adalah

teknik analisis regresi linear berganda menunjukkan hasil penelitian adalah CAR, ROA, NIM, BOPO, NPL dan PDN berpengaruh terhadap harga saham perbankan.

## RESEARCH METHODS

### Population and Sample

Population is a generalization area consisting of subjects or objects that have certain qualities and characteristics that are determined by the researcher to be studied and then certain conclusions are drawn (Hakim, 2013). The population used in this study is all banking companies, namely 44 banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2009-2018. The sample is part of the number and characteristics possessed by the population (Hakim, 2013). The selection of research samples was carried out using *the purposive sampling* method. Sugiyono (2010:218) argues that *purposive sampling* is a data sampling technique with certain considerations. The sample used in this study must meet the following criteria: (1) Banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2009-2018, (2) The banking company publishes and publishes complete financial statements during the period 2009-2018, (3) It is not a type of Islamic bank. From these criteria, a selection of samples can be arranged which can be seen in Table 1.

**Table 1. Research Sample**

Description	Amount
Banking companies listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.	44
Banking companies listed after 2009	(14)
Sharia banks	(3)
Banking companies that conduct mergers or acquisitions	(1)
Number of research samples	26

Source: Processed data, 2024

**Table 2. Variable Operations**

Variable	Definition	Formula	Scale
<i>Capital Adequacy Ratio</i> (CAR) (X1)	Capital adequacy shows the bank's ability to maintain capital and management's ability to identify, measure, supervise and any risk arising that affects the amount of capital (Yulianto & Sulistyowati, 2011).	$CAR = \frac{\text{Total Capital}}{\text{Total ATMR}} \times 100\%$	Ratio
<i>Non-Performing Loan</i> (NPL) (X2)	Ratio that compares the total non-performing loans with the total loans given (Setiawan & Roestiono, 2014).	$NPL = \frac{\text{Non - Performing Loan}}{\text{Total Credit}} \times 100\%$	Ratio
<i>Net Interest Margin</i> (NIM) (X3)	The ratio measures the bank's ability to manage its productive assets to generate net income (Pealeu, Karamony & Tony, 2015).	$NIM = \frac{\text{Net Interest Income}}{\text{Average of Productive Assets}} \times 100\%$	Ratio
<i>Return On Assets</i> (ROA) (X4)	Measure the company's ability to generate profits from total assets owned (Setiawan & Roestiono, 2014).	$ROA = \frac{\text{Profit After Tax}}{\text{Total Assets}} \times 100\%$	Ratio
<i>Loan Deposit Ratio</i> (LDR) (X5)	Ratio measures the ability of banks to meet the repayment of deposits that have matured to their customers and can meet the proposed credit capital without suspension (Kusumawati, 2013).	$LDR = \frac{\text{Total Credit}}{\text{Total Third - Party Fund}} \times 100\%$	Ratio
Posisi Devisa Neto (PDN) (X6)	Measure the ability of a bank's capital to cover risks arising from exchange rate changes (Muttaqin, Kamaludin & Prabawa, 2012).	$PDN = \frac{\text{Foreign Exchange - Currency Liabilities}}{\text{Total Capital}} \times 100\%$	Ratio
Harga Saham (Y)	The selling price of each share of the banking sector (Anisma, 2012).	Closing stock price or the end of each period	Ratio

Source: Processed data, 2024

### Types and Data Sources

The data used in this study is secondary data. Secondary data is what is received by researchers indirectly. The data source used in this study was obtained from the annual financial statements of banks published on the *websites* [www.idx.co.id](http://www.idx.co.id) and [www.seputarforex.com](http://www.seputarforex.com).

### Data Collection Techniques

The data collection technique in this study is *purposive sampling*. *Purposive sampling* is a technique for determining samples based on certain criteria and considerations. The criteria in this study are banks listed on the Indonesia Stock Exchange (IDX) during the period 2009-2018.

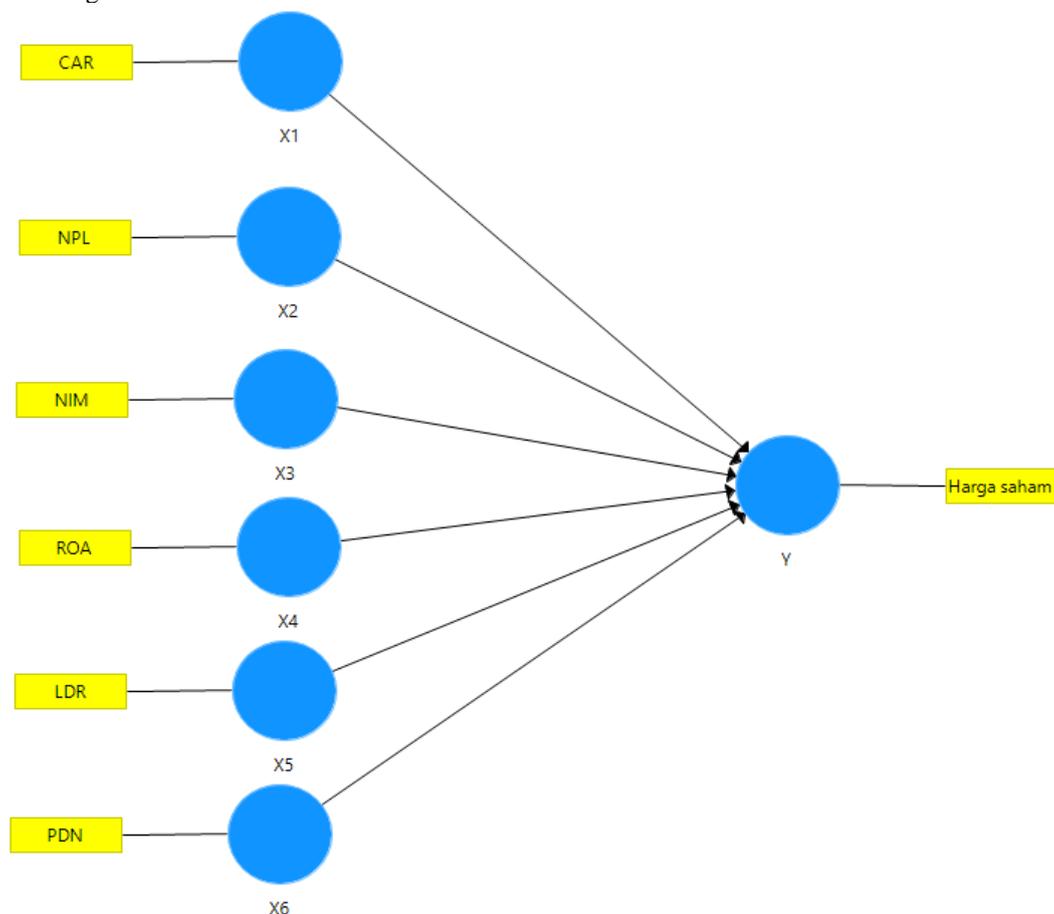
### Operational Research Variables

The operational of research variables is the completion of the theoretical understanding of variables related to the title so that these variables can be observed and measured. The variables used in this study can be seen in Table 2.

## RESEARCH RESULTS AND DISCUSSION

### Hypothesis Test Procedure

This study uses unidimensional constructs with formative indicators. Unidimensional constructs are constructs that are formed directly from variable manifests with the direction of indicators that can be formative or reflective, while constructs with formative indicators assume that each indicator defines and explains the dominant characteristics of its construct (Ghozali, 2011). Based on the explanation above, the model in this study can be described in Figure 2.



Source: Processed data, 2024

Figure 2. Research Model

### Multicollinearity Test

The multicollinearity test aims to test whether a strong correlation between independent variables is found in the regression model. A good regression model should not have correlations between independent variables. To test whether there are symptoms of multicollinearity, it can be seen from the *Variance Inflation Factor* (VIF) and *Tolerance Value*. If the *Variance Inflation Factor* (VIF) value  $> 10$  or the *Tolerance Value* value  $< 0.1$ , there are

symptoms of multicollinearity. If the Variance Inflation Factor (VIF) value is < 10 or the Tolerance Value value is > 0.1, then the data is free from the symptoms of multicollinearity (Ghozali, 2011).

**Table 3. Multicollinearity Test Results**

	Variance Inflation Factor (VIF)	Description
CAR	1.024	No multicollinearity
NPL	2.058	No multicollinearity
NIM	1.275	No multicollinearity
ROA	2.073	No multicollinearity
LDR	1.037	No multicollinearity
PDN	1.335	No multicollinearity

Source: Processed data, 2024

Table 3 shows that the variables *Capital Adequacy Ratio (CAR)*, *Non-Performing Loan (NPL)*, *Net Interest Margin (NIM)*, *Return on Assets (ROA)*, *Loan Deposit Ratio (LDR)* and *Net Foreign Exchange Position (PDN)* have a Variance Inflation Factor (VIF) value of less than 10. Therefore, it can be concluded that there is no symptom of multicollinearity in the independent variable.

**Multiple Linear Regression Analysis**

Multiple linear regression analysis was used to determine the influence of independent variables (X) on dependent variables (Y). In this study, multiple linear regression analysis was used to determine how much the influence of *Capital Adequacy Ratio (CAR)*, *Non-Performing Loan (NPL)*, *Net Interest Margin (NIM)*, *Return on Assets (ROA)*, *Loan Deposit Ratio (LDR)* and *Net Foreign Exchange Position (PDN)* on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) for the 2009-2018 period.

**Table 4. Multiple Linear Regression Result**

	Original Sample (O)
CAR	0.072
NPL	0.160
NIM	0.162
ROA	0.431
LDR	-0.055
PDN	-0.106

Source: Processed data, 2024

From Table 4, the multiple linear regression equation is obtained as follows:

$$Y_{\text{stock price}} = 0.072_{\text{CAR}} + 0.160_{\text{NPL}} + 0.162_{\text{NIM}} + 0.431_{\text{ROA}} - 0.055_{\text{LDR}} - 0.106_{\text{PDN}} + \epsilon$$

- Description: Y = Stock Price  
 X1 = *Capital Adequacy Ratio (CAR)*  
 X2 = *Non-Performing Loan (NPL)*  
 X3 = *Net Interest Margin (NIM)*  
 X4 = *Return On Assets (ROA)*  
 X5 = *Loan Deposit Ratio (LDR)*  
 X6 = *Net Foreign Exchange (PDN)*

The regression coefficient of the *Capital Adequacy Ratio (CAR)* variable is 0.072. This means that if the *Capital Adequacy Ratio (CAR)* increases, it will increase the stock price by 0.072 assuming that other variables remain constant. On the other hand, if there is a decrease in the *Capital Adequacy Ratio (CAR)*, it will result in a decrease in the share price by 0.072. The coefficient of positive value means that the variable has a positive relationship with the dependent variable, where in this study the *Capital Adequacy Ratio (CAR)* variable is one of

the independent variables and the stock price is the dependent variable. So, the more the *Capital Adequacy Ratio* (CAR) increases, the more the stock price will increase as well.

The regression coefficient of the *Non-Performing Loan* (NPL) variable is 0.160. This means that if *Non-Performing Loans* (NPLs) increase, the stock price will increase by 0.160 assuming that other variables remain constant. On the other hand, if there is a decrease in *Non-Performing Loans* (NPL), it will result in a decrease in the share price by 0.160. The coefficient of positive value means that the variable has a positive relationship with the dependent variable, whereas in this study the *Non-Performing Loan* (NPL) variable is one of the independent variables and the stock price is the dependent variable. So, the more *Non-Performing Loans* (NPLs) increase, the more the stock price will increase as well.

The regression coefficient of the *Net Interest Margin* (NIM) variable is 0.162. This means that if the *Net Interest Margin* (NIM) increases, it will increase the stock price by 0.162 assuming that other variables remain constant. On the other hand, if there is a decrease in *Net Interest Margin* (NIM), it will result in a decrease in the share price by 0.162. The coefficient of positive value means that the variable has a positive relationship with the dependent variable, where in this study the *Net Interest Margin* (NIM) variable is one of the independent variables and the stock price is the dependent variable. So, the more the *Net Interest Margin* (NIM) increases, the more the stock price will increase as well.

The regression coefficient of the *Return on Assets* (ROA) variable is 0.431. This means that if the *Return on Assets* (ROA) increases, it will increase the stock price by 0.431 assuming that other variables remain constant. On the other hand, if there is a decrease in *Return on Assets* (ROA), it will result in a decrease in the share price by 0.431. The coefficient of positive value means that the variable has a positive relationship with the dependent variable, where in this study the *Return on Assets* (ROA) variable is one of the independent variables and the stock price is the dependent variable. So, the more the *Return on Assets* (ROA) increases, the stock price will increase as well.

The regression coefficient of the *Loan Deposit Ratio* (LDR) variable is -0.055. This means that if the *Loan Deposit Ratio* (LDR) increases, it will decrease the stock price by 0.055 assuming that other variables remain constant. On the other hand, if there is a decrease in the *Loan Deposit Ratio* (LDR), it will result in an increase in the share price by 0.055. A negative coefficient means that the variable has a negative relationship with the dependent variable, where in this study the *Loan Deposit Ratio* (LDR) variable is one of the independent variables and the stock price is the dependent variable. So, the more the *Loan Deposit Ratio* (LDR) increases, the lower the stock price will be.

The variable regression coefficient of *Net Foreign Exchange Position* (PDN) is -0.106. This means that if the *Net Foreign Exchange Position* (PDN) increases, it will reduce the stock price by 0.106 assuming that other variables remain constant. On the other hand, if there is a decrease in the *Net Foreign Exchange Position* (PDN), it will increase the share price by 0.106. The coefficient of negative value means that the variable has a negative relationship with the dependent variable, where in this study the *Net Foreign Exchange Position* (PDN) variable is one of the independent variables and the stock price is the dependent variable. So, the more the *Net Foreign Exchange Position* (PDN) increases, the lower the stock price will be.

### Coefficient of Determination Test ( $R^2$ )

The determination coefficient ( $R^2$ ) test is used to measure how far the independent variables used in the regression equation are capable of explaining dependent variables, the magnitude of the relationship between the variable *Capital Adequacy Ratio* (CAR), *Non-Performing Loan* (NPL), *Net Interest Margin* (NIM), *Return on Assets* (ROA), *Loan Deposit Ratio* (LDR) and *Net Foreign Exchange Position* (PDN) against the stock price can be calculated as a determination coefficient.

**Table 5. Result of the Coefficient of Determination Test ( $R^2$ )**

	R Square	R Square Adjusted
Stock Price (Y)	0.207	0.188

Source: Processed data, 2024

In Table 5, we can see an Adjusted R Square of 0.188 or 18.8%. This shows that 18.8% of the stock price can be explained or influenced by the variables *Capital Adequacy Ratio* (CAR), *Non-Performing Loan* (NPL), *Net Interest Margin* (NIM), *Return on Assets* (ROA), *Loan Deposit Ratio* (LDR) and *Net Foreign Exchange Position* (PDN). In other words, from 2009 to 2018, the variables *Capital Adequacy Ratio* (CAR), *Non-Performing Loan* (NPL), *Net Interest Margin* (NIM), *Return on Assets* (ROA), *Loan Deposit Ratio* (LDR) and *Net Foreign Exchange Position* (PDN) are factors that can influence investors in making decisions to invest in the banking sector. While the remaining 81.2% was influenced by other factors that were not disclosed in this study.

### Hypothesis Test (T-test)

The hypothesis test (t-test) aims to find out how far the independent variable affects the dependent variable partially. This test can be done by comparing the calculated t-value with the t-value of the table on each variable or by using the degree of confidence/significance level ( $\alpha$ ) (Ghozali, 2011).

**Table 6. Result of Hypothesis Test (T-test)**

	Original Sample (O)	T Statistics ( O/STDEV )	P Values	Description
CAR	0.072	1.438	0.151	No influence
NPL	0.160	1.826	0.068	Significant influence
NIM	0.162	2.697	0.007	Significant influence
ROA	0.431	5.254	0.000	Significant influence
LDR	-0.055	1.382	0.168	No influence
PDN	-0.106	1.507	0.132	No influence

Processed data, 2024

#### First Hypothesis (H1)

Based on the results of the tests in Table 4 and Table 6 that have been presented above, it can be seen that the value of the *Capital Adequacy Ratio* (CAR) variable coefficient is 0.072 with a significance value of  $0.151 > 0.05$  which means that  $H_0$  is accepted and  $H_1$  is rejected. The calculated t-value is smaller than the t-value of the table ( $1,438 < 1,969$ ) which means that the *Capital Adequacy Ratio* (CAR) does not affect the stock price. This shows that the first hypothesis in this study was rejected. Where the *Capital Adequacy Ratio* (CAR) does not have a significant influence on the stock price of the banking sector from 2009 to 2018.

#### Second Hypothesis (H2)

Based on the results of the tests in Table 4 and Table 6 that have been presented above, it can be seen that the value of the variable coefficient of *Non-Performing Loan* (NPL) is 0.160 with a significance value of  $0.068 < 0.1$  which means that  $H_0$  is rejected and  $H_2$  is accepted. The calculated t-value is smaller than the t-value of the table ( $1,826 > 1,651$ ) which means that *Non-Performing Loans* (NPLs) influence the stock price. This shows that the second hypothesis in this study is accepted. Where *Non-Performing Loans* (NPLs) have a significant influence on the stock price of the banking sector from 2009 to 2018.

#### Third Hypothesis (H3)

Based on the results of the tests in Table 4 and Table 6 that have been presented above, it can be seen that the value of the *Net Interest Margin* (NIM) variable coefficient is 0.162 with a significance value of  $0.007 < 0.05$  which means that  $H_0$  is rejected and  $H_3$  is accepted. The calculated t-value is greater than the t-value of the table ( $2,697 > 1,969$ ) which means that the *Net Interest Margin* (NIM) influences the stock price. This shows that the third hypothesis in this study is accepted. Where *Net Interest Margin* (NIM) has a significant influence on the stock price of the banking sector for the period 2009-2018.

#### Fourth Hypothesis (H4)

Based on the results of the tests in Table 4 and Table 6 that have been presented above, it can be seen that the value of the variable coefficient of *Return on Assets* (ROA) is 0.431 with a significance value of  $0.000 < 0.05$  which means that  $H_0$  is rejected and  $H_4$  is accepted. The calculated t-value is greater than the t-value of the table ( $5,254 > 1,969$ ) which means that *Return on Assets* (ROA) influences the stock price. This shows that the fourth hypothesis in this study is accepted. Where *Return on Assets* (ROA) has a significant influence on the stock price of the banking sector from 2009 to 2018.

#### Fourth Hypothesis (H4)

Based on the results of the tests in Table 4 and Table 6 that have been presented above, it can be seen that the value of the variable coefficient of the *Loan Deposit Ratio* (LDR) is -0.055 with a significance value of  $0.168 > 0.05$  which means that  $H_0$  is accepted and  $H_5$  is rejected. The calculated t-value is smaller than the t-value of the table ( $1,382 < 1,969$ ) which means that the *Loan Deposit Ratio* (LDR) does not influence the stock price. This shows that the fifth hypothesis in this study is rejected. Where the *Loan Deposit Ratio* (LDR) does not have a significant influence on the stock price of the banking sector from 2009 to 2018.

### **Sixth Hypothesis (H6)**

Based on the results of the tests in Table 4 and Table 6 that have been presented above, it can be seen that the value of the variable coefficient of the Net Division Position (PDN) is -0.106 with a significance value of  $0.132 > 0.05$  which means that  $H_0$  is accepted and  $H_6$  is rejected. The calculated t-value is smaller than the t-value of the table ( $1,507 < 1,969$ ) which means that the Net Foreign Exchange Position (PDN) does not influence the stock price. This suggests that the sixth hypothesis in this study was rejected. Where the Net Foreign Exchange Position (PDN) does not have a significant influence on the stock price of the banking sector from 2009 to 2018.

### **Discussion**

#### **Effect of Capital Adequacy Ratio (CAR) on Stock Price**

The test results in Table 4 and Table 6 show that CAR has a positive influence on stock prices, where every increase in CAR will increase the stock price and vice versa. However, the CAR variable does not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

The results of this study are in line with research conducted by Purwasih (2010) which found that CAR does not have a significant effect on stock prices. However, it is different from the results of research conducted by Nengsih (2009) and Butarbutar (2014) which found that CAR has a significant influence on stock prices.

Where the CAR variable has a positive and insignificant influence on stock prices, it can be caused because the proportion of self-capital formation in banking companies comes from complementary capital, such as borrowed capital and subordinated loans. In this case, it means that it must be balanced with the bank's ability to pay its debts.

Based on descriptive analysis, it can be seen that the average CAR value in this study is 17.94% which shows that the higher the CAR ratio value, the healthier the bank will be and can affect the assessment of the health level of banks listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018, based on the assessment of the CAR ratio is ranked 1, namely with the category as a "Healthy" bank. However, the high value of the CAR ratio did not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

#### **The Effect of Non-Performing Loans (NPLs) on Stock Prices**

The test results in Table 4 and Table 6 show that NPLs have a positive influence on stock prices, where every increase in NPLs will increase stock prices and vice versa. However, the NPL variable had a significant effect on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

The results of this study are in line with research conducted by Ishak (2010) which found that NPLs have a significant influence on stock prices. However, it is different from the results of research conducted by Wismaryanto (2013) and Butarbutar (2014) which found that NPLs do not have a significant effect on stock prices.

Where the NPL variable has a significant influence on the stock price. This can be attributed to the difference in the research period of each researcher.

Based on descriptive analysis, it can be seen that the average NPL value in this study is 3.38% which shows that the lower the NPL ratio, the healthier the bank will be and can affect the assessment of the health level of banks listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018, based on the assessment of the NPL ratio is ranked 2nd, namely with the category as a "Healthy" bank. The lower NPL ratio value will affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

#### **The Effect of Net Interest Margin (NIM) on Stock Prices**

The test results in Table 4 and Table 6 show that NIM has a positive influence on the stock price, where every increase in NIM will increase the stock price and vice versa. However, the NIM variable has a significant effect on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

The results of this study are in line with research conducted by Wismaryanto (2013) & Butarbutar (2014) which found that NIM has a significant effect on stock prices.

Where the NIM variable has a positive and significant influence on the stock price, it can be caused because NIM is the main source of bank income as explained in the theoretical review. So, it is very rational if NIM affects the profit of a bank which then affects the stock price of a bank.

Based on descriptive analysis, it can be seen that the average NIM value in this study is 6% which shows that the higher the NIM ratio value, the healthier the bank will be and will affect the assessment of the health level of banks listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018, based on the assessment of the NIM ratio is ranked 1st, namely with the category as a "Very Healthy" bank. The higher NIM ratio value will affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

### **The Effect of Return on Assets (ROA) on Stock Price**

The test results in Table 4 and Table 6 show that ROA has a positive influence on the stock price, where every increase in ROA will increase the stock price and vice versa. However, the ROA variable had a significant effect on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

The results of this study are in line with research conducted by Nengsih (2009) and Purnamasari, Nuraini & Astuti (2017) which found that ROA has a significant effect on stock prices. However, it is different from the results of research conducted by Indiyah (2013) and Wismaryanto (2013) which found that ROA does not have a significant effect on stock prices.

Where the ROA variable has a positive and significant influence on the stock price, it can be explained because if a company has a high ROA, the company can generate high profits as well. With high profits, the dividends that will be distributed to investors will be greater and have an impact on investors' positive perceptions in assessing the company.

Based on descriptive analysis, it can be seen that the average ROA value in this study is 1.48% which shows that the higher the ROA ratio value, the healthier the bank will be and will affect the assessment of the health level of banks listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018, based on the ROA ratio assessment is ranked 2nd, namely with the category as a "Healthy" bank. The higher ROA ratio value will affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

### **The Effect of Loan Deposit Ratio (LDR) on Stock Prices**

The test results in Table 4 and Table 6 show that LDR has a negative influence on the stock price, where every increase in LDR will decrease the stock price and vice versa. However, the LDR variable does not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

The results of this study are in line with research conducted by Ishak (2010) which found that LDR does not have a significant effect on stock prices. However, it is different from research conducted by Purnamasari, Nuraini & Astuti (2017) and Indiyah (2013) which found that LDR has a significant influence on stock prices.

Where the LDR variable has a negative and insignificant influence on the stock price, it can be caused because the loans disbursed by banks do not contribute much to profits. This indicates that there are still banks that do not optimize third-party funds, but on the other hand, there are still banks that are excessive in providing credit.

Based on descriptive analysis, it can be seen that the average LDR value in this study is 82.99% which shows that the lower the LDR ratio value, the healthier the bank will be and will affect the assessment of the health level of banks listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018, based on the LDR ratio is ranked 2nd, namely with the category as a "Healthy" bank. However, the low LDR ratio value did not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

### **The Effect of Loan Deposit Ratio (LDR) on Stock Prices**

The test results in Table 4 and Table 6 show that PDN has a negative influence on the stock price, where every increase in PDN will decrease the stock price and vice versa. However, the PDN variable does not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

The results of this study are contrary to the results of research conducted by Nengsih (2009) which found that PDN affects stock prices.

Where the PDN variable has a negative and insignificant influence on stock prices. This can be due to the higher the value of this ratio, the lower the bank's ability to manage risk due to fluctuations in foreign exchange rates. And it can also be caused by the difference in the research period for each researcher.

Based on descriptive analysis, it can be seen that the average value of PDN in this study is 2.8% which shows that the smaller or no violation of the PDN ratio, the healthier the bank will be and can affect the assessment of the health level of banks listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018, based on the assessment of the PDN ratio is ranked 3rd, namely with the category as a "Fairly Healthy" bank. However, the small value of the PDN ratio did not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

### **The Effect of the CAMELS Ratio on Stock Price**

Based on the results of the test, it is known that 18.8% of the change in the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018 can be explained by the Camels Ratio (CAR, NPL, NIM, ROA, LDR and PDN), while the remaining 81.2% is explained by other variables or factors outside the regression equation model. The results of this study are in line with the research conducted by Purwasih (2010) which found that there are other variables outside the research that affect stock prices.

The results of this study show that in making investment decisions, investors consider the rate of change in stock prices, the rate of return to be obtained, the ability of liquid instruments to the company's liabilities or current debts and the level of receivables turnover will affect the level of achievement of the company's profits.

To make a profit, the company can do several things such as minimizing the risk of receivables or minimizing uncollectible receivables, including reducing the number of credit sales from the total sales, shortening the credit payment deadline, minimizing the volume of credit sales and actively collecting receivables. So that it will attract investors to buy the company's shares. In addition, banks that have a reputation for healthy performance and profitability that tend to increase will improve increasingly enthusiastic market conditions.

## CONCLUSION

Based on data analysis and discussion, it can be concluded as follows: The results of the hypothesis test partially show that: (1) *Capital Adequacy Ratio* (CAR) does not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018. (2) *Non-Performing Loans* (NPLs) have a significant effect on the stock prices of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018. (3) *Net Interest Margin* (NIM) has a significant effect on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018. (4) *Return on Assets* (ROA) had a significant effect on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018. (5) *Loan Deposit Ratio* (LDR) does not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018. (6) The Net Foreign Exchange (PDN) position does not affect the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018.

The assessment of the health level of banks listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018 based on the CAMELS method is in a composite rating of 2 (PK-2), namely banks are classified in the category of "Healthy" banks and can overcome the negative influence of economic conditions and the financial industry, but banks still have minor weaknesses that can be immediately overcome by routine actions.

The magnitude of the influence of CAR, NPL, NIM, ROA, LDR and PDN on the stock price of the banking sector listed on the Indonesia Stock Exchange (IDX) from 2009 to 2018 was 18.8%, while the remaining 81.2% was influenced by other variables outside the study.

Based on the results of the research that has been carried out, several suggestions can be given, namely as follows: (1) For banks, it is expected to improve the company's performance, be able to maintain the health of the bank and comply with all regulations that have been set or issued by Bank Indonesia (BI). (2) For investors, it is expected to always be active in obtaining banking information from the company's performance, namely information on the value of the *Non-Performing Loan* (NPL) ratio, *Net Interest Margin* (NIM) and *Return on Assets* (ROA) to support the right decision-making in investing. (3) For future research, it is hoped that it will be able to add variables or other factors that affect the stock price of the banking sector to obtain more accurate results.

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