

The Role of Financial Performance of Indonesia's Banking Firms in Influencing the Rate of Stock Return

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Abstract: This study aims to evaluate the direct and indirect influence of the role of the financial performance of banking companies in Indonesia in influencing the level of stock returns. The financial performance in this study is Non Performing Loans (NPL), Capital Adequacy Ratio (CAR), Loan to Deposit(LDR), Net Interest Margin (NIM), Operating Efficiency Ratio (OER), and Return On Assets (ROA) as an intervening variable. The research was conducted at commercial banks listed on the Indonesia Stock Exchange for the period 2014-2018. Sampling was taken using a purposive sampling method. Of the 44 banks listed on the Indonesia Stock Exchange, that meet the criteria were 23 companies. Data analysis using multiple linear regression analysis of panel data and path analysis with the help of the program Eviews 9.0.

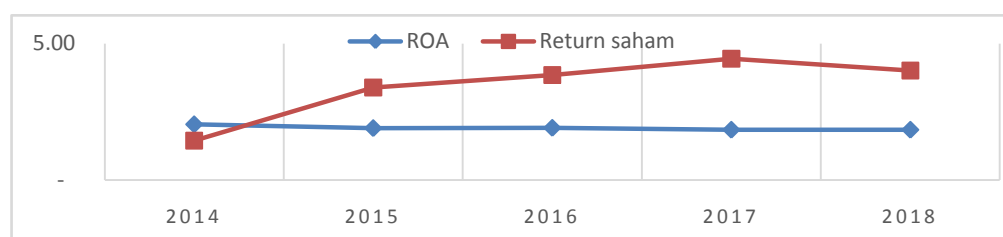
The results of this study indicate that directly NIM, NPL, CAR, OER have a significant effect on Return on Assets (ROA) either partially and simultaneously, with the NIM variable having the most dominant influence. The results of the analysis indirectly using the path analysis tool show that the variables CAR, OER, ROA partially have a significant effect on Stock Returns, while NIM, NPL, LDR have no significant effect. From the simultaneous testing, the variables NIM, CAR, NPL, LDR, OER and ROA together have a significant effect on Stock Returns. This study also proves that the variable ROA only intervenes, CAR and LDR in influencing stock returns.

Keywords: Stock Return (SR), Net Interest Margin (NIM),Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Loan toDeposit Ratio (LDR), Operating Efficiency Ratio (OER), Return On Asset(ROA).

Introduction

Banking is the main supporting institution for the economy in Indonesia. With its function as an intermediary institution channeling surplus unit funds to deficit units. On the other hand, the banking sector is one sector that is highly vulnerable to default risk due to its systemic nature. This risk encourages the strengthening and restructuring of the banking sector to strengthen a strong national and global financial system. The Financial Services Authority as the highest authority on the financial system in Indonesia continues to monitor and take various steps to maintain banking health and financial system stability. Financial Services Authority Circular Letter No.15/SEOJK.03/2015¹ requires banks to conduct self-assessment using a risk approach (Risk Based Bank Rating / RBBR) which includes the following factors: Risk Profile, Good Corporate Governance, Profitability (Earning) and Capital (Capital).

Fig. 1. Development of Profitability (ROA) and Stock Returns
Period 2014-2018



Performance appraisal in general is a necessity as a tool for analyzing the progress or setbacks of an organization. Analysis of financial performance is also useful to avoid the risk of loss on investment. As an indicator of company performance, investors usually focus on profitability analysis (Van Honre & Wachowicz, 2013)², with Return on Assets (ROA) as a measure. ROA is also useful in measuring the efficiency of the overall use of capital. This measure can be interpreted as adequacy in fulfilling obligations to shareholders, assessing the performance of leaders, and attracting the attractiveness of investors to invest their capital. (Simorangkir, 2004)³. The reason for using Return on Asset is also because the Financial Services Authority as banks supervisor prioritizes the profitability value of a bank as measured by assets, where most of the funds

come from the public and must be channeled back to the public. The main objective of investors in investing, including banking investors, is to increase wealth through the amount of return (stock return) received (Gitman, 2015)⁴. Tandelilin also states that stock returns are a factor that motivates investors to invest (Tandelilin, 2010: 102)⁵. Ensuring that stock returns are still profitable is the most important part in assessing the company's financial performance (Kieso et al. 2008)⁶. Therefore, it is very important for banks always to maintain the level of their financial performance.

On average, the overall performance of banking stocks in Indonesia is currently showing a downward trend (5%). Therefore, bank stock returns also tend to decline. There were several reasons for the decline in banking shares, namely because the share price of state-owned banks in the previous year had risen high, such as BBTN. Another thing that caused the decline in banking stock prices was also due to the heating up trade relations between the United States and China which was thought to cause an economic recession, and the increase in interest rates by the Fed (the American central bank) for 4 (four) times has succeeded in bringing the US dollar to a very high position strong. The potential for an increase in the benchmark interest rate by Bank Indonesia in mid-2018 and the weakening of the rupiah have prompted market players to sell banking shares. Many foreign investors come out and sell blue chip stocks which are included in the big category, namely BBRI, BBKA, BMRI and BBNI.

Apart from external factors as mentioned above, bank share prices are also influenced by bank financial performance, such as the deteriorating ratio of non-performing loans due to national economic conditions which have an impact on the performance of several sectors. Likewise, the Loan to Deposit Ratio has also decreased due to liquidity difficulties, so that banks are more likely to channel funds to safer financial instruments such as government bonds and certificate of Bank Indonesia. Capital Adequacy Ratio, which is as a measure of business development and accommodating risk of loss in bank operations, also fluctuates. Net Interest Margin which measures the ratio of a bank's ability to generate net interest income with the placement of earning assets (Taswan, 2006) tends to fluctuate and experience a decline. Operational Expenses/Operational Income as a measure of bank operational efficiency (Riyadi, 2006) also tend to decline. From the description of the conditions above, it can be concluded that there has been a decline in banking performance.

It is feared that the decline in banking performance will influence investors to maintain their shares. Several previous studies have shown the effect of financial performance on stock returns. Prasetyaningrum (2014)⁷, Chilla (2010)⁸, and Praditasari (2012)⁹. They found that profitability has an effect on Stock Return. Praditasari states that Capital Adequacy Ratio, Loan to Deposit Ratio, and ROA have a positive effect on stock prices, while Chilla stated that Net Interest Margin, Capital Adequacy Ratio, Loan to Deposit Ratio, and Operational Efficiency Ratio have a positive effect on stock prices. Septiva and Falianny (2012)¹⁰ analyzed the banks financial performance (the ratio of NIM, CAR, NPL, LDR, and OER) to profitability. The result showed that partially the Net Interest Margin, Capital Adequacy Ratio, Non Performing Loan, and Operational Efficiency Ratio variables had a significant effect on the profitability ratio, while Loan to Deposit Ratio had no effect on the Return on Asset as profitability ratio. However, the results of Guna's research (2013)¹¹ stated that partially the Capital Adequacy Ratio and Non Performing Loan variables have no significant effect on the Return on Asset, while the Net Interest Margin, Loan to Deposits Ratio, and Operational Efficiency Ratio had significant effect on the Return on Asset. The results of this study serve as a valuable basis for the general assessment of commercial bank management, as well as for identifying several potential sources of volatility in their financial performance in the future. Thus, corrective actions can be planned and implemented in advance.

According to Sufian and Chong (2008)¹² bank size, credit risk, and cost preference behavior were negatively related to bank profitability, while non-interest income and capitalization have a positive impact. In addition, the results also indicated that inflation has a negative impact on bank profitability, while the impact of economic growth, money supply, and stock market capitalization has not significantly explained variations in bank profitability in the Philippines. Research in Nigeria by Olalekan (2013)¹³ examined the effect of capital adequacy factors and other external factors on profitability. This study also concludes that profitability is an efficient indicator of risk management.

According to Syauta and Widjaja (2009)¹⁴ NPL has an influence on fluctuating bank stock returns, however, Loan to Deposit Ratio and Net Interest Margin had no effect. Also concluded that Returns on Asset has an influence on the fluctuation of banking stock returns, all of which are caused by the subprime mortgage case. Meanwhile, according to Sambul, Mumi and Tumiwa (2016)¹⁵, Capital Adequacy Ratio, Non-Performing Loans did not have a significant effect on stock prices, while Loan to Deposit Ratio and Returns on Asset had an effect on stock prices. Hendarwin's research (2013)¹⁶ only showed that Returns on Asset had a positive effect on stock prices. Likewise, according to Budiman (2007)¹⁷ and Suteja (2015)¹⁸, partially, Returns on Equity Ratio and inflation had a positive effect on Stock Return.

The inconsistency of the results of previous research, as stated above, requires further research to prove that the concept of corporate financial performance affects stock returns, and stock returns are a determining

factor in investing. The difference between this study and previous research is to make the Return on Asset variable as an intervening variable of financial performance on stock returns. Given the importance of the role of the banking industry for the economy in Indonesia and with the currently declining performance of banking stocks, it is necessary to re-examine the financial performance of banks in Indonesia. Its direct impact on stock performance, as well as the role of profitability in affecting financial performance indirectly on stock performance. Therefore this study is to empirically prove the effect of Net Interest Margin, Capital Adequacy Ratio, Non-Performing Loans, Loan to Deposit Ratio and Operational Efficiency Ratios as direct financial performance variables on stock returns, and the role of profitability (Return on Assets) to see the indirect effect that has an impact on stock returns.

This research is expected to be useful as evaluation material for banks to improve the level of poor performance health based on the assessment of the health level of the Financial Services Authority. Banks that have a healthy level of health are expected to be able to maintain it, so that it is expected to provide information for investors as input in predicting Stock Returns as a material for making investment decisions. Thus, the sustainability of banking stocks can always be maintained.

Literature Review

Arbitrage Pricing Theory (APT)

Arbitrage Pricing Theory proposed by Stephen Ross (1976)¹⁹, one of the theories on the level of return and risk of securities, states that two investment opportunities that have identical characteristics cannot be sold at different prices (the law of one price). If an asset with the same characteristics is sold at a different price, there will be an opportunity to arbitrage by buying an asset with a low price and at the same time selling it at a higher price to get profit without increasing the risk. This theory also explains that the level of profit on the assets portfolio is influenced by multiple market risk factors. Macroeconomic variables have a systematic influence on the rate of return (return). Economic strength affects the discount rate, the company's ability to drive cash flow (cash flow), and future dividend payments (future dividend payouts). Arbitrage Pricing Theory encourages the development of research based on variables or factors that are thought to affect a security.

Signaling Theory

Signaling Theory is an action taken by company management that provides instructions for investors about how management views the company's prospects (Brigham and Houston, 2011)²⁰. Therefore, managers in a company with very favorable prospects will try to avoid selling shares and seek any new capital needed in other ways, including the use of debt that exceeds the target capital structure. A company with an unfavorable prospect will tend to sell its shares with the intention of sharing the loss with the new shareholders. The announcement of the issuance of shares by a company is generally a signal that management views the company's prospects as bleak, because issuing new shares means giving negative signals which can then depress stock prices (Brealey et al, 2007)²¹.

Asymmetric Information Theory

Information asymmetry is a condition in which there is an imbalance in information acquisition between the management as the information provider and the shareholders or stakeholders in general as information users. The asymmetry theory states that the parties related to the company do not have the same information about the prospects and risks of the company. Certain parties have better information than others. Managers are usually better informed than outsiders (investors). Therefore, it can be said that there is information asymmetry between managers and investors.

Scott (2000)²² explains that there are two kinds of information asymmetry, namely: (1) Adverse selection, managers and other insiders usually know more about the condition and prospects of the company than outside investors. Also, facts that may influence the decision to be taken by the shareholders are not conveyed to the shareholders; (2) Moral hazard, the activities carried out by a manager are not fully known by shareholders or lenders. Therefore, the manager may take action beyond the knowledge of the shareholder in violation of the contract, and in fact ethically or normally it may not be feasible to do so. The existence of asymmetric information allows conflicts that occur between the principal and the agent to try to take advantage of other parties for their own interests. Asymmetric information will affect the company's financial policies relating to the determination of the company's capital structure. As a result of the existence of Asymmetric Information, companies tend to maintain the possibility of debt in order to benefit from a good investment opportunity without having to issue new shares at a price that is falling due to bad signaling.

Bank Soundness Level

Financial Services Authority Regulation No. 4 / POJK.03 / 2016²³ concerning Assessment of the Soundness of Commercial Banks, as well as Regulation of the Financial Services Authority Number 18/POJK.03/2016²⁴ concerning Application of Risk Management for Commercial Banks stipulates that Banks in Indonesia are required to conduct self-assessments on the Soundness of the Bank using the Risk approach (Risk Based Bank Rating / RBBR) both individually and on a consolidated basis. The scope of the assessment includes risk profile, governance, profitability (earnings), and capital to produce a Bank Soundness Level composite rating.

Banks are generally said to be in a healthy condition if they are considered capable of facing significant negative effects from changes in business conditions and other external factors. This influence is reflected in the rating of the assessment factors, including the assessment of profitability and capital which are generally good. Profitability (earning) as a measure of a bank's ability to earn profits is assessed through evaluation of the performance of profitability, sources of profitability, sustainability of profitability, and management of profitability. The bank with the highest profitability rating reflects very adequate profitability, exceeds the target profit and supports capital growth. Assessment of the Capital factor includes evaluation of capital adequacy and adequacy of capital management. In addition, in assessing capital adequacy, banks must also link capital adequacy with the Bank's Risk Profile, such as operational risk, market risk and credit risk. The higher the risk of the bank, the more capital that must be provided to anticipate this risk. A bank with the highest capital rating reflects the bank has adequate quality and capital adequacy relative to its risk profile, accompanied by very strong capital management in accordance with the characteristics, business scale and complexity of the bank's business.

Stocks Returns (Rs)

Return on shares is one of the factors that motivates investors to invest and is also a reward for the courage of investors to take risks for their investments. Stock return is the level of return enjoyed by investors on a stock investment they do (Keown et al. 2005)²⁵. Every investment, both short and long term, has the main objective of getting a profit called return, either directly or indirectly. In simple terms, investment can be defined as an activity to place funds in one or more than one asset during a certain period with the hope of earning income or an increase in investment value. In practical terms, the rate of return on an investment is the percentage of total income during the investment period compared to the purchase price of the investment. On the other hand, return also has a very significant role in determining the value of a company.

Total return is the overall return of an investment in a certain period of capital gain (loss) and dividend yield (Bodie et al. 2014: 32)²⁶. A high stock return indicates that the stock is actively traded. Husnan (2008) also distinguishes stock income into two, namely income in the form of shares and capital gain, which is the difference between the selling price and the purchase price.

Net Interest Margin (NIM)

Net Interest Margin is the ratio between net interest income and the average earning assets. Banks with Net Interest Margin values ranging from 1.5% to 2% are categorized as quite high. This ratio also shows the ability of earning assets to generate net interest income (Rivai et.al, 2013: 481)²⁷. In general, in a bank, income is interest in the form of interest plus fees and commissions, while interest expense consists of interest plus fees and commissions.

Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is a measure of the ratio of the capital adequacy ratio to the risk of the assets/bank capital of the bank. Capital assessment is intended to assess the adequacy of bank capital in safeguarding position risk exposures and anticipating future risk exposures. Dendawijaya (2009)²⁸ states that CAR is a ratio that shows the extent to which all risky bank assets (investment credit, securities, claims on other banks) are to be financed from their own capital funds, in addition to obtaining funds from outside sources, such as public funds, loans (debt) and others. CAR is an indicator of a bank's ability to cover a decrease in its assets as a result of bank losses caused by risky assets (for example, loans).

The measure of capital is important for modern banking as a means of reducing crisis and reducing the risk of failure. Strong bank capital also serves as a lure for depositors to save, because they believe their funds are in a safe place. It also important for the investors because they believe they will have better investment opportunities. Especially for banks that have gone public, having a sufficiently high capital adequacy will give investors confidence to buy bank shares.

Based on the regulations, bank capital consists of core capital and supplementary capital, while Risk Weighted Assets is calculated based on the value of each asset item on the balance sheet multiplied by the

weight of the respective risks. The higher the capital adequacy ratio the better the condition of a bank. Based on the Financial Services Authority Regulation No.4/POJK.03/2016 concerning the minimum capital requirement for commercial banks, which stipulates the minimum capital adequacy ratio for commercial banks in Indonesia is 8%.

NonPerformingLoan

The aspect of the credit risk profile is that the non-performing loan (NPL) is one of the key indicators for assessing the performance of bank functions. Several things that have led to non-performing loans include an increase in operating costs. These additional operating costs incurred come from a variety of sources which include the cost of supervising problem borrowers, evaluating collateral, binding fees and taking over collateral in the event of default. Other causes include poor managerial management caused by failure of managers in managing credit/loan portfolios, inadequate knowledge of credit evaluation and improper allocation of resources for credit supervision. Financial Services Authority Regulation No.4/POJK.03/2016 stipulates that the ratio of non-performing loans is 5% of total loans. The NPL calculation can be calculated based on the amount of Allowance for Impairment Losses in accordance with Bank Indonesia Circular Letter Number 11/33 /DPNP which took effect starting January 1, 2010. The allowance for impairment losses is an allowance that is formed if the carrying value of the credit after the impairment value is less than the initial carrying value. It is the amount that is lowered from the carrying value to the amount that can be recovered from assets. It is also a special reserve fund established by banks to mitigate non-refundable credit risk. The formation of allowance for impairment losses funds is based on credit assessments conducted by banks.

Loan to Deposit Ratio (LDR)

Herdiningtyas and Almilia (2005)²⁹ state that the Loan to Deposit Ratio (LDR) is a ratio used to see the amount of credit and bank liquidity. This ratio measures the composition of the amount of credit given compared to the amount of third party funds that are deposited to the bank. LDR can also be used to assess bank management strategies. Conservative bank management usually has a relatively low LDR. On the other hand, if the LDR exceeds the tolerance limit, it is said that the bank management is very expansive/aggressive. The higher the ratio, the lower the liquidity capacity of the bank concerned, because the amount of funds needed to finance credit is getting bigger. This ratio is also an indicator of the vulnerability and capability of a bank. The safe limit of a bank's LDR is around 80% with a tolerance limit ranging between 85% and 100% (Dendawijaya, 2009). Financial Services Authority Regulation states that the safe limit for a bank's LDR is 110%, however it is recommended that it ranges from 78% - 100%. If it is more than 100%, it must add 0.2% required reserve for every 1% increase in LDR.

Operational Efficiency Ratio

Operational Efficiency Ratio (OER) is used to measure the ability of bank management to control Operational costs against Operational income. The smaller this ratio means the more efficient the operational costs incurred by the bank concerned, so that the possibility of a bank in a problematic condition is getting smaller. Operational costs are calculated based on the sum of total interest expenses and total other Operational expenses. Operational income is the sum of total interest income and total other Operational income.

Dendawijaya (2009: 98) states that the Operational efficiency ratio is used to measure the level of efficiency and the ability of a bank to carry out its operations. According to Financial Services Authority regulation, Operational efficiency is measured by the Operational efficiency ratio with a maximum limit is 90%. Operational efficiency also affects bank performance that indicates whether the bank has used all of its production factors appropriately and its results. Meanwhile, Kuncoro and Suhardjono (2002)³⁰ stated that Operational efficiency ratio means profitability ratio and bank success is based on a qualitative assessment of bank profitability which can be measured using the ratio of Operational expenses to Operational income. The smaller this ratio means the more efficient the operational costs incurred (Herdiningtyas and Almilia, 2005).

Operational efficiency can be achieved through careful planning, setting measurable income activities and targets, and limiting spending. The smaller the OER ratio means the more efficient the operational costs incurred by the bank concerned, and any increase in Operational costs will result in reduced profit before tax which will ultimately reduce the profit of the bank concerned (Dendawijaya, 2009). Based on Financial Services Authority regulations, the normal OER amount ranges from 94% -96%.

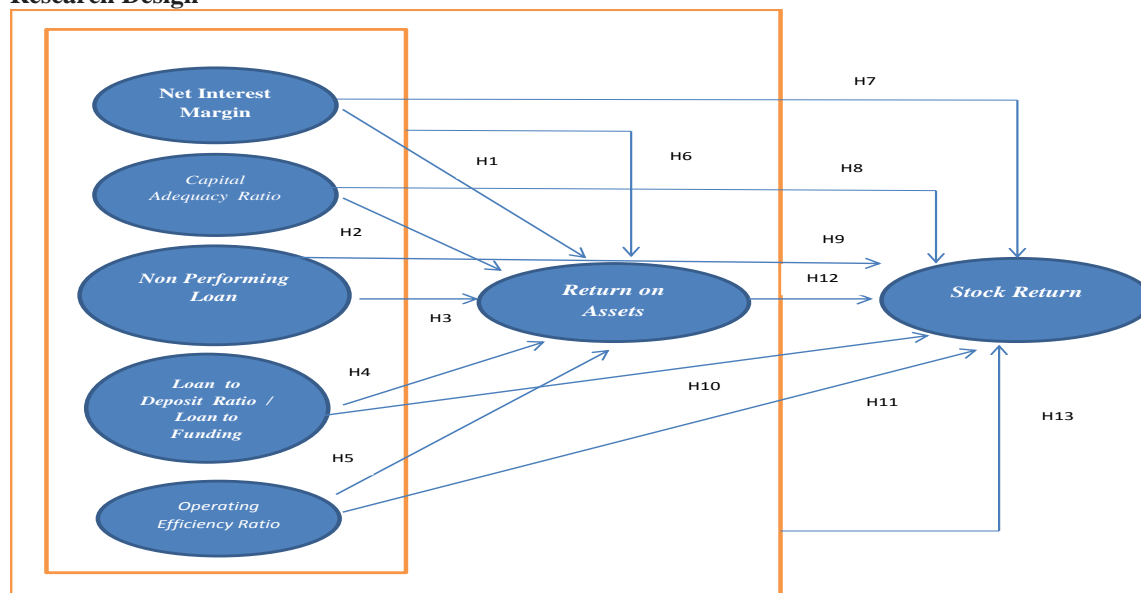
ReturnonAssets

Return on Asset (ROA) is a ratio used to measure the ability of bank management to gain overall profit. According to Sudana (2011: 22)³¹, the profitability ratio is a ratio measuring the company's ability to generate profits by using the sources owned by the company, such as assets, capital or company sales. Profitability ratios

are considered the most valid tool in measuring the results of the company's operations, because profitability ratios are a comparison tool for various investment alternatives according to the level of risk. The greater the investment risk, the higher the profitability is expected. Brigham and Houston (2006:107) stated that "the profitability ratio will show the effects of liquidity, asset management, and debt on the results of operations". This ratio is used to determine the company's ability to generate profits or how effective the management of the company is by management. To be able to continue his life, the company must be in a favorable situation. If the company is in an unfavorable condition, it will be difficult for the company to obtain loans from creditors or investments from outside parties. Based on the provisions of the Indonesian Financial Services Authority, a good ROA standard is around 2%. The greater the ROA the better the company's performance, because the return is greater. Dendawijaya (2009) adds that the reason for using ROA is because the Indonesian financial system authority prioritizes the value of a bank's profitability as measured by assets where most of the funds come from the public and then channeled back to the public.

Hypotheses and Research Design

Research Design



Hypotheses

Hypotheses of this study as stated below:

- H₁₋₅ : NIM, CAR, NPL, LDR and OER partially affect Return on Assets (ROA)
- H₆ : NIM, CAR, NPL, LDR and OER simultaneously affect the Stock Return (Rs)
- H₇₋₁₁ : NIM, CAR, NPL, LDR and OER partially affect Stock Returns (Rs)
- H₁₂ : ROA has a partial effect on Stock Returns (Rs)
- H₁₃ : NIM, CAR, NPL, LDR and OER simultaneously have an effect on Stock Return (Rs)

Research Method

This research is a quantitative study using secondary data in the form of bank financial statements of commercial banks listed on the Indonesia Stock Exchange. The population in this study were 44 banking companies listed on the Indonesia Stock Exchange for the period 2014-2018. The choice of a banking company is because banks are financial institutions that have a very important role in developing the economy and national development and function as collectors of customer funds and channel funds to deficit units. Also banks are high regulated financial institutions so that in this case banks are required to have the good one financial performance.

The sampling method used random sampling with purposive sampling method. The criteria of them were conventional commercial banks listed in Indonesia stock exchange, published consecutive 2015-2018 financial reports, did not transfer of share ownership and did not suffer a loss during the observation period. From a total population of 44 banks, a sample of 23 banks was obtained. The analytical method used in this study is multiple linear regression and path analysis, with the help of the Eviews 9.0 program. The data analysis technique starts with descriptive statistical test, then continued with the classical assumption test, multiple linear regression analysis for panel data and path analysis.

Variable Measurement

Stocks Return (RS)

$$R_{st} = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100\% \quad (1)$$

Annotation :

R_{st} = Stock return in period t

P_t = Share price during the analysis period

P_{t-1} = Share price before the analysis period

Net Interest Margin (NIM)

$$NIM = \frac{Net\ Interest\ Income}{Amount\ of\ Productive\ assets} \times 100\% \quad (2)$$

Capital Adequation Ratio (CAR)

$$CAR = \frac{Bank's\ Capital}{risk\ weighted\ assets\ and\ current\ liabilities} \times 100\% \quad (3)$$

Non Performing Loan (NPL)

$$NPL = \frac{Non\ Performing\ Loans}{Total\ Loans} \times 100\% \quad (4)$$

Loan to deposit ratio (LDR)

$$LDR = \frac{Amount\ of\ Loans}{Amount\ of\ Third\ Party\ Funds} \times 100\% \quad (5)$$

Operational Efficiency Ratio (OER)

$$OER = \frac{amount\ of\ operational\ cost}{Amount\ of\ oprational\ income} \times 100\% \quad (6)$$

Return on Assets(ROA)

$$ROA = \frac{Earning\ before\ Tax}{Total\ Asset} \times 100\% \quad (7)$$

Results and Discussion

Classical Assumption Test Results

From the panel data regression model suitability test, the model selection used is the Random Effect Model (REM). Therefore, the results of the image on the classical assumption test use the FEM model. The results of the classical assumption test concluded that heteroscedasticity did not occur in the regression model, because the residuals did not form a certain pattern and the residuals tended to be constant. For the multicollinearity test using the Partial Correlation Test between independent variables resulted in a value of r < 0.90 for all independent variables, which means that the research model does not have multokinearity problems between independent variables (Widarjono, 2013).

Results of the Panel Data regression model selection

Tabel.1 Results of Selection of Panel Data Regression Model Testing

Selection Test Methods	Testing Results Model	The selected model
<p>Chow Test, selection : H_0 = CEM H_1 = FEM H_0 if the F Test Prob. > α 0.05, CEM is selected H_1 if the F Test Prob. < α 0,05 FEM is selected</p>	<p>Common Effect vs Fixed Effect, F Prob = 0.0000 < α 0,05</p>	<p>Fixed Effect</p>
<p>Hausman Test, selection : H_0 = REM H_1 = FEM</p>	<p>Fixed Effect vs Random Effect, Prob. 0.6050 > α 0,05</p>	<p>Random Effect</p>

H ₀ if the Hausman Test Probprob. > α 0,05 H ₁ if the Hausman Test Prob prob. < α 0,05		
Lagrange Multiplier (LM-Test), selection : H ₀ = CEM H ₁ = REM H ₀ if the LM Test Prob. > α 0.05, CEM is selected H ₁ if the LM Test Prob. < α 0.05, REM is selected	Common Effect vs Random Effect Prob. Sig. 0.0000< α 0,05	Random Effect

Based on table 1, the panel data regression model selected the Random Effect Model

Panel Data Regression Test Results

Table 2. Multiple Regression of Random Effect Model Independent Variables to Return on Assets (ROA)

Dependent Variable: ROA?
Method: Pooled EGLS (Cross-section random effects)
Date: 03/11/20 Time: 11:10
Sample: 1 5
Included observations: 5
Cross-sections included: 23
Total pool (balanced) observations: 115
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.159982	0.559410	16.37437	0.0000
NIM?	0.134142	0.024767	5.416163	0.0000
CAR?	-0.019308	0.006931	-2.785715	0.0063
NPL?	-0.037147	0.018894	-1.966079	0.0518
LDR?	-0.001362	0.003096	-0.439978	0.6608
OER?	-0.089954	0.004460	-20.16771	0.0000

Effects Specification		S.D.	Rho
Cross-section random		0.257106	0.6885
Idiosyncratic random		0.172937	0.3115

Weighted Statistics			
R-squared	0.869166	Mean dependent var	0.549342
Adjusted R-squared	0.863164	S.D. dependent var	0.464544
S.E. of regression	0.171841	Sum squared resid	3.218693
F-statistic	144.8233	Durbin-Watson stat	1.249502
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.929908	Mean dependent var	1.907043
Sum squared resid	9.766288	Durbin-Watson stat	0.411801

The estimation results of the factors that affect Return on Assets were Net Interest Margin, Capital Adequacy Ratio, Non Performing Loans, Loan to Deposit Ratio and Operational Efficient Ratio, using the random effect model as shown in table.2 can be written in the following equation:

$$PL = -9.159982 + 0.134142 * NIM - 0.019308 * CAR - 0.037147 * NPL - 0.001362 * LDR - 0.089954 * OER \quad (4.1)$$

The NIM coefficient is 0.134142 and the probability of significance is 0.00008 < 0.05. It can be interpreted that H₀ is rejected and H₁ is not rejected, which means that Net Interest Margin has a positive and significant effect on Return on Assets. Net Interest Margin (NIM) has a regression coefficient β = 0.134142. It can be interpreted that if there was an increasing 1 percent at Net Interest Margin, will increase the Return on Assets (ROA) of 0.134142. The results of this study indicate that the Net Interest Margin, which indicates the ability of bank management to manage its earning assets to generate net interest income, is getting bigger, it will increase interest income on productive assets managed by the bank. So that the possibility of a bank in a problematic condition is getting smaller. Also the greater the change in a bank's Net Interest Margin, the greater the bank's profitability (ROA) will be obtained, which means that the financial performance is getting better or increasing. These findings support the research results of Purwoko and Sudyatno (2013), Raharjo and Syamsudin (2014) that the results show that Net Interest Margin has a positive and significant effect on Return on Assets.

The CAR coefficient is -0.019308 and a significant probability of 0.0063 < 0.05. It can be interpreted that H₀ is rejected and H₂ is not rejected, which means that the Capital Adequacy Ratio has a negative and significant effect on Return on Assets. The Capital Adequacy Ratio has a regression coefficient β = -0.019308.

It can be interpreted that if there is an increase of 1 percent the Capital Adequacy Ratio will reduce the Return on Assets by -0.019308. The results of this study indicate that the greater the Capital Adequacy Ratio, the greater the Return on Assets obtained by the bank. Because the greater the Capital Adequacy Ratio, the higher the bank's capital capacity in maintaining the possibility of risk of loss in its business activities. The bank's performance has also improved. In addition, the higher the bank capital, the more secure the bank can expand its business. The existence of business expansion which in turn will affect the bank's financial performance. These findings support the research results of Purwoko and Sudiyatno (2013), Guna (2013), Raeskysa (2012) which showed that the Capital Adequacy Ratio has a negative and significant effect on Return on Assets.

The NPL coefficient is -0.037147 and a significant probability of $0.0518 > 0.05$. It can be interpreted that H_0 is accepted and H_3 is not rejected, which means that Non-Performing Loans have a negative and insignificant effect on Return on Assets. Non Performing Loans have a regression coefficient $\beta = -0.037147$ which can be interpreted that if there is an increase of 1 percent Non Performing Loans it will reduce the Return on Assets by -0.037147. This is because the value of the Provision for Earning Asset Losses can still cover non-performing loans. Banking profits can still increase with high NPLs because banks can still get a source of profit not only from interest but also from other sources of profit, such as fee-based income, which also has a relatively high effect on ROA levels. These findings support the results of research by Hutagalung and Raeskyesa (2012) which show the opposite result that Non-Performing Loans have a negative and insignificant effect on Return on Assets.

The LDR coefficient is -0.001362 and a significant probability of $0.0518 > 0.05$. It can be interpreted that H_0 is not rejected and H_4 is rejected. It means that the Loan to Deposit Ratio has a negative and insignificant effect on Return on Assets. Loan to Deposit Ratio has a regression coefficient $\beta = -0.001362$, which can be interpreted that if there is an increase of 1 percent Net Interest Margin, it will reduce the Return on Assets by -0.001362. This is because the credit extended by banks does not contribute much to profits because there is a high gap between banks that operate in extending credit. So there are banks that do not optimize third party funds, on the other hand there are banks that are excessive in providing credit. These findings support the research results of Septiva and Falianny (2012), Sudiyanto (2010), showing the opposite result, namely the Loan to Deposit Ratio has a negative and insignificant effect on Return On Assets.

The OER coefficient is -0.089954 and a significant probability of $0.0000 < 0.05$. It can be interpreted that H_0 is rejected and H_5 is not rejected. It means that Operational Efficiency Ratio have a negative and significant effect on Return on Assets. Operational Efficiency Ratio has a regression coefficient $\beta = -0.089954$. It can be interpreted that if there is an increase of 1 percent Operational Efficiency Ratio it will reduce the Return on Assets by -0.089954. An increase in bank operating costs that are not accompanied by an increase in bank operating income will result in reduced profit before tax, which in turn will reduce Return on Assets. These findings support the results of research by Saharjo and Syamsudin (2014) showing the opposite result that OER has a negative effect on Return on Assets.

Equation testing for all variables simultaneously in this model is carried out using the F test. The results of the F test show Net Interest Margin, Capital Adequacy Ratio, Non Performing Loan, Loan to Deposit Ratio and Operational Efficiency ratio simultaneously have a significant effect on Return on Assets. It can be seen in table 2 where the F-statistic = 144.8233 and the value probability (significance) of $0.000000 < \alpha = 0.05$. The value of R square (R^2) = 0.869166. It can be interpreted that the variation of changes in Return on Assets can be explained by the large variety of variables, including Net Interest Margin, Capital Adequacy Ratio, Non Performing Loans, Loan to Deposit Ratio and Operational Efficiency ratio of 86.91%, while the remaining 13.09% is explained by other variables outside of this research model. For the adjusted coefficient of determination or adjusted $R^2 = 0.863164$. It means that after considering the degrees of freedom of the model used, all independent variables used in this study can explain the Return on Assets of 86.31%. The results of this study are in line with the research hypothesis which states that Net Interest Margin, Capital Adequacy Ratio, Non Performing Loan, Loan to Deposit Ratio and Operational Efficiency ratio collectively equal significant effect on Return on Assets. So that H_0 is rejected and H_6 is not rejected.

Tabel 3. Multiple Regression of Random Effect Model Independent Variables to Stocks Return

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	24.69664	5.530250	4.465737	0.0000
NIM?	-0.220934	0.226120	-0.977065	0.3307
CAR?	0.092602	0.045967	2.014546	0.0464
NPL?	-0.022123	0.042924	-0.515403	0.6073
LDR?	-0.001381	0.016538	-0.083504	0.9336
OER?	-0.251971	0.036804	-6.846215	0.0000
ROA?	-1.381198	0.330041	-4.184925	0.0001
Effects Specification				
			S.D.	Rho
Cross-section random			2.491424	0.8053
Idiosyncratic random			1.225186	0.1947
Weighted Statistics				
R-squared	0.224255	Mean dependent var	0.365064	
Adjusted R-squared	0.181158	S.D. dependent var	1.389281	
S.E. of regression	1.257159	Sum squared resid	170.6884	
F-statistic	5.203493	Durbin-Watson stat	1.017709	
Prob(F-statistic)	0.000097			
Unweighted Statistics				
R-squared	0.258517	Mean dependent var	1.699638	
Sum squared resid	970.3954	Durbin-Watson stat	0.179011	

The estimation results of the factors that affect stock returns (RS), namely Net Interest Margin, Capital Adequacy Ratio, Non Performing Loans, Loan to Deposit Ratio, Operational Efficiency Ratio and Return on Assets using the random effect model as shown in table. 3 can be written in the form of the following equation:

$$Rs = 24.69664 - 0.220943*NIM + 0.092602*CAR - 0.022123*NPL - 0.001381*LDR + 0.251971*OER - 1.381198*ROA \quad (4.2)$$

The NIM coefficient is -0.220934 and a significant probability of 0.3307 > 0.05. It can be interpreted that Ho is not rejected and H7 is rejected, which means that Net Interest Margin has a negative and insignificant effect on Stock Returns. Net Interest Margin has a regression coefficient $\beta = -0.220934$. It can be interpreted that if there is an increase of 1 percent, Net Interest Margin will reduce the Stock Return by -0.220934. The results of the analysis show that NIM has no significant effect on stock returns. The problematic condition of the bank is getting smaller when the NIM ratio is high due to higher interest income. This condition makes investor confidence better. But from the results of the NIM regression analysis said that it has no significant effect on stock returns, it means that not all investors see the condition of the bank in terms of interest income. The results of this hypothesis test support the research conducted by Syauta and Widjaja (2009) with the results of empirical testing of Net Interest Margin having a negative and insignificant effect on stock returns.

The CAR coefficient is 0.092602 and a significant probability of 0.0464 < 0.05. It can be interpreted that Ho is rejected and H8 is not rejected, which means that the Capital Adequacy Ratio has a positive and significant effect on Stock Returns. The Capital Adequacy Ratio has a regression coefficient $\beta = 0.092602$. It can be interpreted that if there is an increase of 1 percent the Capital Adequacy Ratio will increase the Stock Return by 0.092602. The Capital Adequacy Ratio shows the capital capacity in a company. As one of the indicators of the assessment of potential investors regarding the health of the bank is the Capital Adequacy Ratio, so that when the Capital Adequacy Ratio (CAR) of commercial banks is in good condition, analysts and potential investors can take good decisions based on available data. Investors' investment decisions will have an increased impact on stock returns due to investor confidence in the bank concerned. The results of this hypothesis test support the research conducted by Praditasari (2009), Putri (2015) with the results of empirical testing of the Capital Adequacy Ratio (CAR) has a positive and significant effect on stock returns.

The NPL coefficient is -0.022123 and a significant probability of 0.6073 > 0.05. It can be interpreted that Ho is not rejected and H9 is rejected, which means that the Non Performing Loan has a negative and insignificant effect on Stock Returns. Non-Performing Loans have a regression coefficient $\beta = -0.022123$ which can be interpreted that if there is an increase of 1 percent Non-Performing Loans it will reduce the Stock Return by -0.022123. From an investor's perspective, one of the factors that should be taken into consideration in investing in the capital market is the acquisition of profits, where in the banking industry most of the profits are obtained from lending. The higher the credit channeled, the greater the interest income. Thus, it can be concluded that investors are still interested in investing their shares in a bank as long as the bank makes a profit

without considering the level of credit quality that is reflected in the size of the Non-Performing Loan (NPL). The results of this hypothesis test support the research conducted by Hendarwin (2013), Putri (2015), Sambul, Murni and Tumiwa (2016) with the results of empirical testing of Non Performing Loan (NPL) having a negative and insignificant effect on stock returns.

The LDR coefficient is -0.001381 and a significant probability of $0.9336 > 0.05$. It can be interpreted that H_0 is not rejected and H_{10} is rejected, which means that the Loan to Deposit Ratio has a negative and insignificant effect on Stock Returns. Loan to Deposit Ratio has a regression coefficient $\beta = -0.001381$ which can be interpreted that if there is an increase of 1 percent Loan to Deposit Ratio, it will reduce the Stock Return by -0.001381. A reduction in LDR followed by a reduction in stock returns means that banks are less active in distributing loans for the growth of the business world. The low ratio of loans to society is also due to the low demand for credit as a result of economic conditions that are not profitable. Thus, banks must make more efforts to increase third party fund collection and be active in channeling these funds in the form of credit to the public, in order to improve the main function of banking institutions as institutions intermediation. The results of this hypothesis test support the research conducted by Hendarwin (2013) with the results of empirical testing of the Loan to Deposit Ratio (LDR) having a negative and insignificant effect on stock returns.

The OER coefficient is -0.251971 and a significant probability of $0.0000 < 0.05$. It can be interpreted that H_0 is rejected and H_{11} is not rejected, which means that operational efficiency ratio have a negative and significant effect on Stock Returns. Operational efficiency ratio has a regression coefficient $\beta = -0.25197$. It can be interpreted that if there is an increase of 1 percent operational efficiency ratio will reduce the Stock Return by -0.25197. These results indicate that if a bank has a high OER value, the stock return will experience a decline. A high OER ratio indicates the low ability of bank management to control operating costs against operating income. This of course will provide a negative signal for investors to invest in a bank that has a high OER value. So that it will lower the share price, because the large OER value makes a company's shares less attractive to own or buy. Stock prices that have decreased will also have an effect on the rate of return. The results of this hypothesis test support the research conducted by Hendarwin (2013) with the results of empirical testing operational efficiency ratio having a negative and significant effect on stock returns.

Return on Asset coefficient of -1.381198 and a significant probability of $0.0001 < 0.05$. It can be interpreted that H_0 is rejected and H_{12} is not rejected, which means that Return on Assets has a negative and significant effect on Stock Returns. Return on Assets has a regression coefficient $\beta = -1.3811984$. It can be interpreted that if there is an increase of 1 percent Return on Assets (ROA) will reduce the Stock Return by -1.381198. This shows that a company that has a good company performance will produce a high level of profitability. This high profitability represented by company, through the General Meeting of Shareholders mechanism, will be able to attract investors to invest their capital in the company. So that many investors choose companies that have high profits. Later on it can increase stock returns arises from changes in share prices, as a result of market reactions due to the delivery of an entity's financial information to the capital market. Of course, investors will choose stocks that have a good reputation because investors want to get a high rate of return from their investment. The results of this hypothesis test support the research conducted by Praditasari (2009), Hendarwin (2013), Syauta and Widjaja (2009), Sambul, Murni and Tumiwa (2016) with the results of empirical testing of Return on Assets which does not have a negative and significant effect on stock return.

Equation testing for all variables together in this model is carried out using the F test. The results of the F test as seen in table 4.3 show Net Interest Margin, Capital Adequacy Ratio, Non Performing Loan, Loan to Deposit Ratio, Operational efficiency ratio and Return On Assets together have a significant effect on Stock Returns, where the F-statistic value = 5.203493 and the probability value (significance) of $0.000097 < \alpha = 0.05$. The value of R square (R^2) = 0.224255 can be interpreted that the variation of changes in stock returns can be explained by the large variety of variables, including Net Interest Margin, Capital Adequacy Ratio, Non Performing Loans, Loan to Deposit Ratio, Operational efficiency ratio and Return On Assets, of 22.42%, while the remaining 77.58% is explained by other variables outside of this research model. The adjusted coefficient of determination or R^2 adjusted = 0.181158, it means that after considering the degrees of freedom of the model used, all independent variables used in this study can explain the Stock Return of 18.11%. The results of this study are in line with the research hypothesis, which states that Net Interest Margin, Capital Adequacy Ratio, Non Performing Loans, Loan to Deposit Ratio, Operational efficiency ratio and Return on Assets together have a significant effect on Stock Returns. So that H_0 is rejected and H_{13} is not rejected.

For companies in order to produce the best profitability performance and have an impact on increasing share prices, the internal factors of banking companies must receive more serious attention, especially the Capital Adequacy Ratio. In many studies, Capital Adequacy Ratio is a company's capital that can measure the company's profitability performance. For banks, it is also important to be able to produce the best financial performance in order to increase the wealth of investors.

Operational efficiency ratio have a negative and significant effect on bank financial performance (ROA). The results of this study are in accordance with the concept and logic of bank operations and the efficiency theory, which states that bank efficiency can be achieved in several ways, including by increasing operational income and reducing operating costs. With the same operating costs, it can increase operating income. So that in the end will increase the bank's operating profit and ROA. Efforts that can be made by management to improve bank performance (ROA) are to reduce operating costs (OER) through efficiency programs. Efforts that can be made by management to improve bank performance (ROA) are by increasing operational efficiency, controlling credit risk, and anticipating market risk. Bank operational costs must be reduced by maximizing available resources. Likewise credit risk must be reduced by improving credit quality through tightening credit standards and also market risk can be anticipated by maximizing spreads through the setting of competitive loan interest rates. The capital market in Indonesia is a capital market that is at a developing stage (emerging market), so the opportunity to implement this policy is quite open.

The direct and indirect effects based on the results of the analysis and hypothesis testing of panel data regression, Return on Assets and Stock Returns are presented in the following table:

Tabel 4. Direct Effect and Indirect Effect

Variabel	Direct Influence to			Indirect Influence to		
	ROA	Significance	Rs	Significance	Rs	Significance
NIM	0.134142	Significant	-0.220934	Not Significant	-0.185276	Not Significant
CAR	-0.019308	Significant	0.092602	Significant	0.026668	Significant
NPL	-0.037147	Not Significant	-0.022123	Not Significant	0.051307	Not Significant
LDR	-0.001362	Not Significant	-0.001381	Not Significant	0.001881	Significant
OER	-0.089954	Signifikan	-0.251971	Significant	0.124244	Tidak Signifikan
ROA	-	-	-1.381198	Significant		

Conclusion

Based on the results of the analysis and testing in the previous chapter regarding the factors affecting stock Return (Rs) with Return on Assets (ROA) as an intervening variable in banking companies listed on the Indonesia Stock Exchange for the period 2014-2018, the following conclusions are drawn: (1) For the first structure, Net Interest Margin is proven to have a positive and significant effect on Return on Assets. Capital Adequacy Ratio and Operational Efficiency Ratio are proven to have a significant effect on Return on Assets but have a negative value. Non Performing Loans and Loan to Deposit Ratio are negative and not proven to have a significant effect on Return on Assets. Meanwhile, Net Interest Margin, Capital Adequacy Ratio, Non Performing Loans, Loan to Deposit Ratio and Operational Efficiency Ratio have a significant effect on Return on Assets simultaneously. The magnitude of the influence of the independent variables in explaining the change in Return on Assets is 86.91%, while the remaining 13.09% is explained by other variables outside this research model; (2) For the second structure, Net Interest Margin, Non Performing Loans and Loan To Deposit Ratio are negative and are not proven to have a significant effect on Stock Returns. Capital Adequacy Ratio is positive and proven to have a significant effect on Stock Returns. Operating Efficiency Ratio and Return on Assets are negative and proven to have a significant effect on stock returns. Simultaneously Net Interest Margin, Capital Adequacy Ratio, Non Performing Loans, Loan to Deposit Ratio, Operational Efficiency Ratio and Return on Assets have a significant effect on Stock Returns. The value of R square (R²) = 0.224255 can be interpreted that the variation of changes in stock returns can be explained by the large diversity of independent variables only 22.42%, while the remaining 77.58% is explained by other variables outside this research model; (3) Based on the results of the analysis of the intervening variables, it is concluded that Return on Assets is not a mediator of the effect of Net Interest Margin, Non Performing Loans, and Operational Efficiency Ratio on Stock Returns, but Return on Assets (ROA) is a mediator of the influence of the Capital Adequacy Ratio and Loan to Deposit Ratio to Stock Return.

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