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# INFLUENCE OF CAPITAL, LIQUIDITY, OPERATING EFFICIENCY, AND LOCK CREDIT ON PROFITABILITY WITH INFLATION AS MODERATION

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Abstract. The more developed banking financial institutions, updates related to the development of the company will be very important towards industry 4.0. But profits that have not been stable, must continue to make improvements. This effort is to get high profits. With capital needed in the business in achieving the highest profit. The purpose of this study is to find out and analyze the influence of internal factors measured in the capital, liquidity, operating efficiency, and bad credit on profitability in banking companies. The empirical model is based on the research of Nicolae Petria, Bogdan Capraru, Iulian Ihnatov (2015). This research was conducted on banking companies that are listed on the Indonesia Stock Exchange in the period 2014-2019, namely 43 companies. The sampling technique is nonprobability sampling with a purposive sampling technique. The data analysis technique used in this study was moderated regression analysis. Based on the results of the analysis found that capital has a positive effect on profitability, liquidity has a positive effect on profitability, operating efficiency has a negative effect on profitability, and bad credit has a negative effect on profitability, with inflation as a moderating variable.

Keywords: Capital, Liquidity, Operational Efficiency, Bad Credit, Profitability.

#### 1. INTRODUCTION

Companies in general in carrying out their duties have a purpose is to get profits or increase the highest profitability so that in a state of the company able to make investors and the general public have confidence in the company. Factors involving customers are the main task of management in the progress of the company's development and improving the quality and quality of the company. According to (Gasperz, 2005), improving the quality and quality of the company is oriented to the company, customers, and markets through a combination of creating a significant increase in quality.

Profitability is the ability of a company to earn profits from year to year. Profitability is very important for the survival of the company, in the business activities of the company depending on the results of work every year which is seen in profitability. The measure of profitability in banking that is used in general is Return on Assets (ROA) which focuses on profits in the operations carried out. The theory used in this study is the Pecking Order theory which explains why the company has a higher profit level but with a low level of debt because it prioritizes the use of funds: a) The company gets funds from the company's internal activities, b) Estimates the ratio in payments, c) Constant in dividends, and d) external views. Because in this theory the company chooses funding that is not risky, that is, internally to meet the company's capital in its business. The higher the capital that is applied indirectly affects the profitability of the bank in the future business. But in every Indonesian banking period in terms of capital and profitability, it is volatile even though the developing theory states that capital in the company is in line with the profitability produced.

In Graph 1 shows that ROA from several years has fluctuated with CAR in capital proxies also experiencing a slight volatile that does not follow ROA. In addition to the Capital Adequacy Ratio (CAR) profitability is also influenced by other activities, namely lending because it is the main activity of banks in gaining profits derived from interest income. Credit / Liquidity is proxied by the Loan to Deposit Ratio (LDR). The amount of the LDR will affect the profits to be obtained. One of the indicators in lending is seen only by the LDR ratio so that it can make the benchmark for the bank's intermediation activities run in the distribution of funds in the form of loans.

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Graph 1



of a company. (Athanasoglou et al., 2005) suggested that the use of return on assets takes into account the risks derived from leverage and is the main ratio in banking profitability, so the ratio used is Return on Assets (ROA). So this research is proxied by ROA as a measure of bank profitability. The reason for using ROA is because it indicates internal management in utilizing the resources owned by the company to generate profit or profit as high as possible. (ROA) can be formulated as follows:

$$ROA = \underbrace{Net Profit}_{Total assets} X 100\%$$

Factors that influence bank profitability, Capital Adequacy Ratio (CAR) is a capital adequacy ratio that measures the ability of banks in funding to be used to overcome the risk of loss. This ratio is a minimum of 8%, the greater the CAR the better in the health of the bank in the face of possible losses. According to (Short, 1979; Bourke, 1989; Hassan and Bashir, 2003) one of the basic ratios for capital strength. It is expected that the higher the ratio, the lower the need for external funding and the higher the bank's profitability. This shows the bank's ability to absorb losses and handle existing exposures. Unlike (Aziz, 2016), the Capital Adequacy Ratio does not affect Return on Assets. Higher solvency can have a positive effect on performance such as reducing the risk taken by banks (Athanasoglou et al, 2006). CAR can be obtained by the formula:

$$\begin{array}{ccc}
\text{CAR} &= & \underline{\text{Capital}} & & \text{X } 100\% \\
& & & & & & & & \\
\hline
& & & & & & & & \\
& & & & & & & & \\
\end{array}$$

Another ratio that shows that experiencing good or bad is in terms of liquidity, which is indicated by the Loan to Deposit (LDR) ratio, this ratio is to measure banks in meeting their short-term obligations with funds obtained from third party funds (DPK). If the LDR value is too high, the bank experiences adequate liquidity in covering liabilities to customers (DPK). Conversely, if the bank is low, it has sufficient liquidity but the income will be lower because it is channeled to customers. According to (Alexiou and Sofoklis, 2009), the loan to deposit ratio is said to be a comfortable ratio because it reduces financing costs and increases bank profitability. LDR is calculated by the formula:

$$LDR = \frac{\text{Total Credit to third parties, not Bank}}{\text{Total Third Party Funds}} X 100\%$$

Operational Efficiency is the management of management activities based on the effective and efficient level of operations carried out by considering the costs incurred and the income generated. Operational efficiency is proxied by the BOPO financial ratio (Operational Cost and Operating Income). The lower the BOPO, the more efficient the company is in carrying out its business activities in operational costs and the profits that the bank gets will be even greater. If

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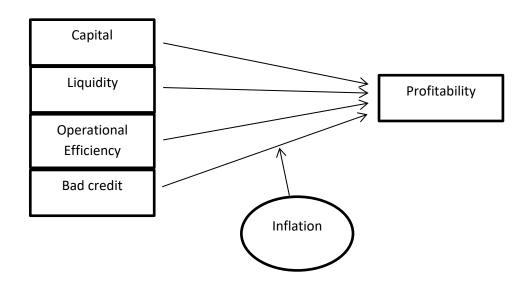
the operating costs are high on income, it will cause a negative relationship with the bank. Bank performance is not seen from the balance sheet but can be found in off-balance transactions that generate operating income which directly affects the positive impact on the bank's profitability (Alexiou and Sofoklis, 2009). Based on research (Wibowo and Syaichu, 2013) BOPO has a negative effect on Return on Assets. The formula used is:

Bad credit is funds that are given to debtors in the distribution of non-refundable forms of credit or within a certain time limit by the debtor. Bad credit is proxied by the ratio of Non-Performing Loans (NPL). Through Bank Indonesia Regulation (PBI), the ratio of non-performing loans or NPLs is set at a maximum of 5%. Less than that, the bank is in an unsafe condition. OJK (Financial Services Authority) is a supervisory agency that requires banks that have high NPLs to increase reserve funds. With the existence of a reserve fund or CKPN (Reserve for Impairment Losses), the bank can anticipate losses but will have an impact on the decrease in capital and income generated by the company. According to (Rose, 2003, pp. 172-173) problematic credit is one indicator of determining bank profitability. According to research (Zulifah and Susilowibowo, 2014) Non Performing Loans have a positive effect on Return on Assets. Different from research (Wibowo and Syaichu, 2013) which states that NPL does not affect Return on Assets. NPL can be formulated as follows:

$$\begin{array}{rcl}
\text{NPL} & = & \underline{\text{Total Problem Credit}} & X 100\% \\
\hline
\text{Total Credit} & & & \\
\end{array}$$

In the monetary sector, the inflation rate can be uncontrolled by company management and can disrupt banking activities in mobilizing public funds. Because of the higher the inflation rate, it will have an impact on the decline in interest rates. With this problem, there will be a decrease in people's interest in saving. Inflation is an increase in the price of goods and services if supply and demand are beading on the market. (Downes & Goodman, 1994). In the monetary sector, high and uncontrolled inflation can disrupt banking efforts in mobilizing public funds. According to (James A. Hanson and Roberto de Rezende Rocha, vol. 18) in his book states the relationship of inflation that can increase costs, especially in labor costs, so that funding in the company's capital in activities will decrease if inflation occurs in the country.

Based on the above description the formulation of the problem obtained is as follows: 1). Does Capital affect Profitability? 2). Does Liquidity affect Profitability? 3). Does operating efficiency affect profitability? 4). Does bad credit affect profitability? 5). Does Inflation have a relationship between capital and profitability? 6). Does Inflation have a relationship between Liquidity and Profitability? 7). Does inflation have a relationship between operating efficiency and profitability? 8). Does Inflation have a relationship between Bad Credit and Profitability?



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This research was conducted at banking companies listed on the Indonesia Stock Exchange (IDX) for the 2014-2018 period which can be accessed through the official website of the Indonesia Stock Exchange (BE), namely www.idx.com and other related websites. Data in the form of annual financial statements. The dependent variable in this study is profitability (Y). The independent variables in this study are capital (X1), Liquidity (X2), Operational Efficiency (X3), and Bad Credit (X4). The moderating variable is inflation (Z).

The population used is all banking companies registered in the 2014-2018 period. The sampling method used is nonprobability sampling with a purposive sampling technique. This study uses multiple linear regression data analysis techniques to test the direct effect and moderated regression analysis to test its moderation, with the following equation:

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\begin{array}{lll} Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon \\ Y = \alpha + \beta_i X_i + \beta_i Z + \beta_i X_i \beta_i Z + \epsilon \\ \text{Keterangan}: \\ Y & = \text{Dependent variable} \\ X_I, X_2, X_3, \, \text{dan } X_4 & = \text{Independent Variables} \\ Z & = \text{Moderation variable} \\ \alpha & = \text{Constant} \\ \beta_1 - \beta_i & = \text{Regression coefficient (value of increase or decrease)} \\ \epsilon & = \text{Error} \end{array}
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Before conducting a regression analysis, the classical assumption test is conducted so that the research model gives the best results consisting of the Normality Test, Multicolonity Test, Herosdasticity Test and Autocorrelation Test (Suliyanto, 2011).

### 3. RESULT AND DISCUSSION

The classic assumption test results show that the regression model has met the normality assumption that the standardized residual curve of the Kolmogorov Smirnov test shows the sig value (p> 0.05), the regression model also does not contain multicollinearity between variables with VIF values <10 of all independent variables and Regression models are free from heteroscedasticity, using glacier tests where the absolute residual dependent variable shows that all independent values show significance from the t test> 0.05, for the autocorrelation test using the runs test, the results of the runs test show the significance of the unstandardized residual greater than 0.05, thus regression mode escapes from autocorrelation.

Hypothesis test results show that there is an influence of capital proxied by the Capital Adequacy Ratio on Profitability which is proxied with Return on Assets (p < 0.05) with a value of t = -0.216 and sig level = 0.829, this indicates that if capital rises profitability will decrease and if capital falls profitability will increase. By the study (Nicolae Petria, 2015) which states that capital is not in line with profitability but these variables affect the profitability of the company. Even the hypothesis was received but not in the same direction, because in the past 5 years there was a decline in the rupiah exchange rate which affected business activities in the sacrifice, with the value of the rupiah reaching its highest point of Rp.15,000 which almost matched the 1998 monetary crisis. proxied by loan to deposit ratio shows that there is no effect on profitability (p> 0.05) with a value of t = -2.277 and sig = 0.024, that the initial hypothesis of the study which affects profitability is rejected. With a large number of funds channeled to the public, it will reduce the level of bank capital as well as the profitability gained due to high business risks. Banking also in the past 5 years many do not comply with BI regulations regarding the minimum limit of funds disbursed. Hypotheses The operating efficiency that is proxied by operating costs to operating income (BOPO) has a relatively influential effect (p < 0.05). With a high enough t value reaching 40.902 and sig = 0,000. BOPO is a variable that affects the level of bank profits, because of its relationship in the business operations of the company being run. Bad credit proxied by a nonperforming loan (NPL) hypothesis is rejected, with p > 0.05 indicating the value of t = -1.076 and sig = 0.284. That banks have difficulty in preventing the occurrence of bad credit which ends with banks having to reserve high losses, with capital funds or reduce bank profitability. Because banks

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issue funds to a large community as indicated by the value of LDR that does not meet the minimum requirements of Indonesian banks, the impact will be seen from the high value of the NPL ratio.

The results of testing the relationship of inflation with variable capital, liquidity, operating efficiency, and bad credit to the profitability of the bank show that there is no relationship between Z variables to X and Y and variable Z is not a factor that moderates the relationship by looking at

the following table:

Model	Unstandardized Coefficients		Standardized Coefficients		
	В	Std. Error	Beta	t	Sig.
CAR_INFLATION	005	.005	125	-1.167	.245
LDR_INFLATION	.000	.003	017	153	.878
BOPO_ INFLATION	7.932	.001	.002	.017	.944
NPL_ INFLATION	027	.031	078	861	.391

The capital relationship with inflation to profitability shows the value of beta = -1.25, the value of t = -1.167, and sig = .245 that there is no significant relationship to inflation to capital and profitability. Inflation is not a factor that moderates the relationship between capital, liquidity, operating efficiency, and bad credit to profitability.

## 4. CONCLUSION

Capital variables have a significant negative effect on bank profitability in the period 2014 - 2018. This means that the higher the capital will reduce the profitability of the bank, and vice versa if the capital falls the level of bank profitability will rise. Liquidity has a significant negative effect on bank profitability, meaning that if higher bank liquidity profitability will decrease. Because banks cannot channel funds well which results in a reduction in business activities which are the main source of banks in gaining profits. Variable operating efficiency has a significant positive effect on bank profitability, meaning that good corporate management in managing the company will have a high level of profit. Bad credit has a significant negative effect on bank profitability, indicating that the high level of bad credit will have an impact on falling profitability, and vice versa. Because of the high congestion rate, the company must reserve funds as a loss of high accounts receivable.

Inflation was not able to strengthen the influence of capital, liquidity, operating efficiency, and bad debt on banking profitability for the period 2014-2018. Due to the crisis that hit Indonesia during this period, the strengthening of the dollar against the rupiah made the inflationary aspect not a moderating factor relationship of variable x to variable y. Regression coefficients that have a negative sign indicate that if high capital will be able to reduce profitability.

Suggestions for banking companies should need to maintain capital finance, liquidity levels, operating efficiency, and bad credit to stay by the regulations set by Indonesian banks. Because many banks are not yet by the applicable minimum standards of Indonesian bank rules. This can disrupt the stability of the company's business to increase high profits. For the next researcher can add external variables to better and extend years studied. Because business events or phenomena will have an impact on the company's business activities.

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