# ASSESSMENT OF LOAN TO DEPOSIT RATIO SOE BANK (PERSERO) BASED ON FINANCIAL RATIO

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**ABSTRACT**

This study was conducted to examine the effect of Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Net Interest Margin (NIM) on Loan to Deposit Ratio (LDR). Theresearch object of the State-Owned Enterprise Bank and the research data variables are sourced from financial reports that have been published and accessed through their respective web addresses. The data analysis technique used multiple linear regression withleast squares equation and hypothesis testing using t-statistics to test the partial regressioncoefficients and F-statistics to test the significance of the effect together with a significancelevel of 5%. In addition, the classical assumption test was also carried out which included normality test, multicollinearity test, heteroscedasticity test and autocorrelation test. The results showed that the NIM variable showed a significant effect on LDR. The NPL variable has a significant negative effect on LDR. The CAR variable has a positive but notsignificant effect on LDR. The predictive ability of these three variables on the LDR in this study was 51.1%, while the remaining 48.9% was influenced by other factors that were notincluded in the research model.

**Keywords** : Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Non Perfoming Loan (NPL), Net Interest Margin (NIM)

## INTRODUCTION

The financial industry plays a role as a means of seeking long-term funds, saving activities by companies that need funds quickly, as well as individuals. 19 of 2003. The capital system of the business entity is owned by the state. The role of the financial industry as a financial intermediary between those who have funds and those who need funds (Bilian & Purwanto, 2017). This financial industry deserves to be called a service. The functions of the financial industry include loan services, currency circulation, money monitoring, storage and other functions in accordance with legislation.

The financial industry is none other than a bank under the auspices of BUMN. The banking sector has a positive development with the provision of credit and product innovation as a service. State-owned banking activities as distributors of individual funds, customers, depositors and interbank loans (Carindri & Untara, 2019).

The financial industry is a company engaged in the financial sector, meaning that banking activities are always related to the financial sector. The first activity of the financial industry is to collect funds from the wider community, known as in the banking world, is funding activities (Carindri & Untara, 2019). The financial industry also provides services in payment system traffic so that people's economic activities can run smoothly. With an efficient, safe and smooth payment system, the economy can run well. The level of importance for the economy, so every country strives for banks to always be in a healthy, safe and stable condition.

Implementation of the function as a collector and distributor of public funds properly, banks must be trusted by the community. Some of the funds used by banks in disbursing funds are customer or public funds collected through savings. The bank's own capital capital is very relatively small, so it is said that the bank is a trusted institution.

The problem in this study is to assess the Loan to Deposit Ratio of BUMN Banks in Indonesia. Management of Loan to Deposit Ratio as a complex problem in bank operations. The dominant management is public funds which are fluctuating. Therefore, the expected accuracy includes a minimum Loan to Deposit Ratio, monitoring balances to match correspondence and meeting fund withdrawals. The bank's Loan to Deposit Ratio will be predominantly influenced by the Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Net Interest Margin (NIM).

Based on this problem, it is

expected that the Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Net Interest Margin (NIM) can have an influence on the Loan to Deposit Ratio of BUMN Banks in Indonesia, so that things can be anticipated that make it difficult for customers to borrow, can used as a business medium, as a reference for flexibility and a measure of ability to pay short-term obligations.

## LITERATURE REVIEW

### Financial Ratio Analysis

***a. Capital Adequacy Ratio (CAR)***

Capital Adequacy Ratio (CAR) as a ratio intended to assess capital adequacy. This capital adequacy is used to minimize losses in credit made by customers (Sintha, 2014).

Assessment of the Capital Adequacy Ratio (CAR), as a development that is able to minimize losses. Bank Indonesia stipulates the capital CAR (Cappital Adequency Ratio), which is the minimum capital adequacy requirement that must always be maintained by each bank as a certain proportion of the total Risk Weighted Assets (RWA) (Bilian & Purwanto, 2017).

***b. Non Performing Loan (NPL)***

Non-Performing Loans (NPLs) are loans classified as current loans, doubtful loans and bad loans. Non-Performing Loan (NPL) as a condition of the debtor not being able to pay the installment obligations that had been promised at the beginning (Herhayinta & Supriyono, 2019).

Non-Performing Loans (NPLs) as a way to measure the size of the percentage of non-performing loans in a bank as a result of the customer's non-current payments in installments (Carindri & Untara, 2019).

Credit risk can be calculated using Non Performing Loans (NPL) because NPL is able to measure current credit risk and can be met with earning assets owned by a bank.

***c. Net Interest Margin (NIM)***

Net Interest Margin (NIM) is the ratio between bank interest income minus bank interest costs divided by average earning assets. Net interest income is obtained from interest income minus interest expense (Bilian & Purwanto, 2017).

The greater this ratio, the higher the interest income on productive assets managed by the bank, so that the probability of the bank being in a problematic condition is getting smaller.

Net Interest Margin (NIM) as an indicator in the assessment of profitability aspects. Net Interest Margin (NIM) to measure the ability of bank management to manage their productive assets in order to generate net interest income (Carindri & Untara, 2019).

**d. Loan to Deposit Ratio Bank BUMN**

Loan to Deposit Ratio as the company's ability to meet the company's internal daily operational needs. Loan to Deposit Ratio as a company's ability to meet financial obligations that must be met immediately (Herdhainta & Supriyono, 2019). Loan to Deposit Ratio is shown to compare current assets with current liabilities in a certain period which is called the current ratio.

The long-term goal of a bank is to make a profit. Profits are earned through proper management. Financial management will face problems with Loan to Deposit Ratio, solvency, and profitability. Monitoring the consistency of the company's position in order to remain liquid, the company must manage its Loan to Deposit Ratio in the right way (Carindri & Untara, 2019). Loan to Deposit Ratio for banks is a very important issue because it relates to public trust, customers and the government.

**Capital Adequacy Ratio (CAR) terhadap Loan to Deposit Ratio**

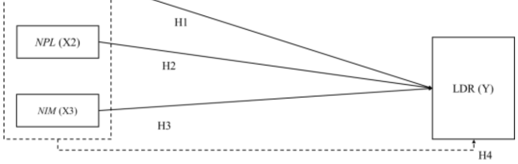
According to (Musa et al., 2019), stated that various positive developments in the banking sector since the implementation of the stabilization program, among others, in the provision of credit which began to increase in product innovations that started running, such as the development of derivative products (including credit linked notes), and product collaboration with other institutions (mutual funds and bancassurance). The bank used in this study is a state-owned bank (Persero). State-owned Bank (Persero) is a bank partially owned by the government of the Republic of Indonesia and is the best bank in Indonesia. The state-owned bank Tbk consists of PT. Bank Negara Indonesia (BNI), PT. Bank Rakyat Indonesia (BRI), PT. Bank Mandiri, PT. State Savings Bank (BTN).

The results of the partial test (t test) between the CAR variable and the LDR variable show the regression coefficient value of 0.738, the t-count value of 0.966 has a positive effect on LDR. If the value of the CAR variable is increased/decreased by 1 unit, the value of the LDR variable will increase/decrease by 0.966. And a significant value of 0.343 is greater than 0.05. Thus it can be concluded that the CAR ratio partially has a positive and insignificant effect on the LDR Non Performing Loan (NPL) on the Loan to Deposit Ratio

NPL has a negative and insignificant effect on LDR, so this condition indicates that hypothesis 2 (H2) is rejected. Where the t-test of the NPL variable with the LDR variable shows the NPL regression coefficient value of -8.367, while the t-count value is -1.979 which means it has a negative effect on LDR, and a significant value of 0.209 which is greater than 0.05 in other words that NPL has a negative effect. and not significant to the LDR of state-owned banks, so it can be concluded that the NPL ratio has an insignificant negative effect on the LDR (Musa et al., 2019).

**Net Interest Margin (NIM) terhadap Loan to Deposit Ratio**

According to (Musa et al., 2019), NIM has a significant positive effect on LDR, so this condition indicates that hypothesis 1 (H1) is accepted. Where the value of t count on the NIM variable is 0.558, the regression coefficient is 1.685 and a significant value is 0.043 which means it is smaller than 0.05. The higher the NIM, the greater the net income received by the bank. Vice versa, the lower the NIM value, the interest income on productive assets managed by the bank, thus allowing the bank to experience less problematic conditions.




**HYPOTHESIS**

The hypotheses in the study were extracted from the formulation and objectives of the problems to be discussed as follows:

$H_0$ There is no influence of the Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Net Interest Margin (NIM) partially and simultaneously on the Loan to Deposit Ratio of BUMN Banks in Indonesia

$H_a$ The influence of Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Net Interest Margin (NIM) partially and simultaneously to the Loan to Deposit Ratio of BUMN Banks in Indonesia

**METHOD**

This study conducted an analysis to see the effect of CAR, NPL and NIM on LDR at state-owned banks listed on the Indonesia Stock Exchange. This design is used because the research is testing or confirming the relationship or influence between variables. Causal research is designed to identify causal and effect relationships between variables where the research problem has been clearly defined.

Bank Indonesia stated that the healthiest LDR ratio was in the range of 78% - 100%. LDR to assess how far a bank's ability to repay withdrawals made by depositors by relying on credit as a source of liquidity. The higher the ratio can indicate the lower the liquidity capacity of the bank concerned because the amount of bank funds needed to finance credit is getting bigger.

The population in this study were 3 banks registered as state-owned banks (Persero), namely BRI, MANDIRI, BNI, BTN with data for a research period of 5 years from 2016 - 2020. This study used a sample determined by purposive sampling technique. ), which is done by taking samples from the population based on certain criteria. The sample in this study is CAR, NPL, NIM, and LDR published by state banks through quarterly reports for the period 2016 to 2021.

Primary data is data obtained directly from the internet from OJK for the period 2016 to 2020 at BRI, MANDIRI, BNI, BTN. Secondary data is data supporting primary data obtained from accredited research journals and management theory e-books.

This method is carried out through the collection and recording of annual report data at each Government Bank in Indonesia to find out its financial ratios for the period 2016 - 2020. The data in this study was obtained from the internet by downloading it through the website of Government Banks in Indonesia OJK.

**RESULT**

The lowest CAR ratio data is 13.10%, while the highest CAR ratio is 22.13%. From the average value (mean) shown (16.77%) it can be concluded that statistically the CAR ratio of BUMN Banks during the study period was far above the standard set by Bank Indonesia, namely a minimum of 8%, so it can be said that State Banks have meet the CAR requirements as determined by Bank Indonesia. Meanwhile, to see how big the data deviation is in the CAR ratio, it can be seen from the average value (mean) of 16.77%, with a Standard Deviation (SD) of 2.46%, where the standard deviation value is smaller than the average CAR. so that the CAR variable can be said to be good.

The NPL ratio data shown reached its lowest point at 4.42% while the maximum point was 10.86%. Meanwhile, the average is 6.5% greater than the standard deviation of 1.85%, indicating that the NPL variable data is good. According to BI regulations for the healthy bank category, the NPL should be below 5%. Looking at the average NPL, state-owned banks in the research period should try to reduce the NPL so that they can be categorized as healthy banks.

The next variable is NIM which shows the lowest level at 0.30% and the maximum at 4.05%. The comparison between the mean value and the standard deviation is 1.11%. This means that the data deviation of the NIM variable is good.

The next variable is LDR where according to the information obtained from the descriptive calculation above, the minimum LDR was 38.96% obtained by Bank BNI in 2002 while the maximum was 108.42% obtained by Bank BTN in 2010 and has an average of 67.89 %. The standard deviation for the LDR is 17.19% smaller than the average value, indicating that the LDR variable data is good.

**Multicorrelation Test**

This test aims to test whether the regression mode found a correlation between the independent variables (independent). The results of the data test showed that the Tolerance value was taken to 0.10 and the VIF value was not above 10, this means that from these four variables there is no multicollinearity.

**Autocorrelation Test**

From the autocorrelation test, the Durbin-Watson value for this study was 2.223. Because the value lies between 1.743 (du) and 2.257 (4-du) assuming k = 4 and N = 85 (N-k-1); it can be concluded that this research is free from autocorrelation problems and it can be said that there is no autocorrelation.

**Uji Heteroskedastisitas**

Based on the heteroscedasticity test using plot graph observations, it is known that the data (dots) spread evenly above and below the zero line, and do not gather in one place and the points form a certain pattern so that it can be concluded that in this regression test there is no heteroscedasticity problem.

**Analisis Regresi Berganda**

Based on the results of the multiple regression test used are as follows:

LDR = 76,614 + 1,685 NIM - 8,367 NPL + 0,738 CAR + e

From the multiple linear regression equation above, the results of multiple regression can be explained as follows:

It is known that the resulting constant is 76.614 with a positive sign. The magnitude of the constant shows that if the independent variables (NIM, NPL and CAR) are assumed to be constant, then the dependent variable, namely LDR (Loan to Deposit Ratio) is 76.614.

1. The variable coefficient of NIM = 1.685, it means that every 1% increase in NIM causes LDR to increase by 1.685%
2. The coefficient of the NPL variable = -8.367, meaning that every increase in NPL is 1 %, resulting in a decrease in LDR by 8.367%.
3. The coefficient of the CAR variable = 0.738, meaning that every 1% increase in CAR causes the LDR to increase by 0.738 %.

**Coefficient of Determination**

The calculation results

obtained the coefficient of determination (R2) of 0.511. In other words, this shows that the percentage of LDR variation that can be explained by variations of the three independent variables, namely CAR, NPL, NIM is 51.1%, while the remaining 48.9% is explained by other variables outside the research variables.

**F Test**

From the results of the regression analysis, it can be seen that the calculated F is 9.848 with a significance of 0.000b. The significance obtained is smaller than 0.05, which means that the independent variable (X1 to X4) simultaneously affects the dependent variable (Y).

**T Test**

The effect of each variable CAR, NPL and NIM on LDR is seen from the direction of the sign and the level of significance (probability). The NIM and CAR variables have a positive direction, while the NPL variable shows a negative direction.

**NIM has a significant positive effect on LDR.**

From the test results above, it shows that NIM has a significant positive effect on LDR, so this condition indicates that hypothesis 1 (H1) is accepted. Where the value of t count on the NIM variable is 0.558, the regression coefficient is 1.685 and a significant value is 0.043 which means it is smaller than 0.05. The higher the NIM, the greater the net income received by the bank. Vice versa, the lower the NIM value, the interest income on productive assets managed by the bank, thus allowing the bank to experience less problematic conditions (Almilia and Herdiningtyas et al., 2005).

**NPL has a negative and insignificant effect on LDR**

The test results above show that NPL has a negative and insignificant effect on LDR, so that condition shows that hypothesis 2 (H2) is rejected. Where the t-test of the NPL variable with the LDR variable shows the NPL regression coefficient value of -8.367, while the t-count value is -1.979 which means it has a negative effect on LDR, and a significant value of 0.209 which is greater than 0.05 in other words that NPL has a negative effect. and not significant to the

LDR of state-owned banks Persero, so it can be concluded that the NPL ratio has no significant negative effect on the LDR.

**CAR has no significant positive effect on LDR**

The results of the partial test (t test) between the CAR variable and the LDR variable show the regression coefficient value of 0.738, the t-count value of 0.966 has a positive effect on LDR. If the value of the CAR variable is increased/decreased by 1 unit, the value of the LDR variable will increase/decrease by 0.966. And a significant value of 0.343 is greater than 0.05. Thus, it can be concluded that the CAR ratio partially has no significant positive effect on LDR, so this condition indicates that hypothesis 4 (H4) is rejected.

## CONCLUSION

The NIM variable has a significant positive effect on LDR at state-owned banks in Indonesia. The NPL variable has no significant negative effect on LDR at state-owned banks in Indonesia. The CAR variable has no significant positive effect on LDR at State-owned Banks in Indonesia. The most dominant variable partially to LDR is the NIM variable.

Investors or customers can see these three variables in managing the company and determining their investment strategy. Net Interest Margin (NIM) can be used as a guideline for determining investment strategies. For the issuer (company), by looking at the LDR variable, it is expected that the company can maintain the LDR between 80% - 110% in accordance with the standards used by Bank Indonesia. If the LDR is 80%, the company will make a profit.

For further researchers, it is hoped that they can examine other variables outside of this variable including the EPS, ROE, TPF, PER, PBV variables and other indicators, in order to obtain more varied results that can describe what things can affect the LDR.

For the public, it is expected to be a benchmark in assessing bank liquidity as a reference in choosing a bank to deposit their funds in a bank.

## REFERENCE

Bilian, F., & Purwanto. (2017). Analisis Pengaruh CAR, NIM, BOPO, dan LDR terhadap Profitabilitas Bank Persero. *Faculty of Business, President University, Bekasi, Indonesia*, *2*(1), 155–168.

Carindri, F., & Untara. (2019). the Effect of Risk, Profitability, and Liquidity on Capital Adequacy. *Journal of Business Economics*, *24*(1), 36–50. https://doi.org/10.35760/eb.2019.v24i1.1854

Herdhayinta, H., & Supriyono, R. A. (2019). Determinants of Bank Profitability: the Case of the Regional Development Bank (Bpd Bank) in Indonesia. *Journal of Indonesian Economy and Business*, *34*(1), 1. https://doi.org/10.22146/jieb.17331

Kanagal, N. B. (2013). Conceptualization of perceived value pricing in strategic marketing. *Journal of Management & Marketing Research*, *12*(2), 1–17. http://www.aabri.com/manuscripts/121280.pdf

Mei, N. A. M. (2012). Pengaruh Marketing Mix Terhadap Loyalitas Konsumen Suplemen Impor dari USA di Kabupaten Bantul Akademi Manajemen Administrasi (AMA). *Jbma*, *I*(1), 37–53.

Musa, D. A. L., Alam, S., & Munir, A. R. (2019). Analisis Car, Npl, Nim, Roa Terhadap Ldr Pada P.T. Bank Bumn (Persero) Di Indonesia. *Jurnal Economix*,*7*(2), 1–8.

Parhan, M. (2021). The Determinant of Banking Profitability in Indonesia (A Study of Commercial Banks Listed on the Indonesia Stock Exchange in 2013-2019). *Jurnal Il miah M ahasiswa FEB*. https://jimfeb.ub.ac.id/index.php/jimfeb/article/view/7163

Sintha, L. (2014). Analisis Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), BOPO, Return On Asset (ROA) dan Net Interest Margin (NIM) terhadap Loan to Deposit Ratio (LDR) pada Industri Perbankan. *Jurnal Keuangan Dan Perbankan*, *2*(3), 148–162.

Yudha, A., Chabachib, M., Rini, I., & Pangestuti, D. (2018). ANALYSIS OF THEEFFECT OF NPL, NIM, NON INTEREST INCOME, AND LDR TOWARD ROA WITH SIZE AS CONTROL VARIABLES (Differences Study on Domestic and Foreign Banks Listed on BEI Period 2010-2015). *ANALYSIS OF THE EFFECT OF NPL, NIM, NON INTEREST INCOME, AND LDR TOWARD ROA WITH SIZE AS CONTROL VARIABLES (Differences Study on Domestic and Foreign Banks Listed on BEI Period 2010-2015)*, *26*(2), 100–113.

https://doi.org/10.14710/jbs.26.2.100-113
Yusup, F. (2018). Uji Validitas dan Reliabilitas Instrumen Penelitian Kuantitatif. *Jurnal Tarbiyah : Jurnal Ilmiah Kependidikan*. https://doi.org/10.18592/tarbiyah.v7i1.2100