The Effect of Capital Adequacy Ratio (CAR) and Loan To Deposit Ratio (LDR) on Return On Assets (ROA) at PT Bank BNI (Persero) Tbk.
Period 2008 – 2017

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Abstract : The purpose of this study was to determine the effect of CAR and LDR on ROA at PT Bank BNI (Persero) Tbk Period 2008-2017. This research method is a descriptive quantitative . The sampling technique used purposive sampling technique with a total sample of 10 . Data analysis used statistical tools with SPSS version 22 for windows with the an alysis method of normality, coefficient of determination, simple linear regression equations,multiply linear regression and hypothesis testing. It can also be seen that the value of t Count> t Table or 2.547> 2.364 means that H0 is accepted. H1 is rejected, so it is concluded that there is no effect between the Capital Adquacy Ratio (CAR) variable on Return On Assets (ROA). t value <than t Table or equal to 1.542 <2.364 means that H2 is rejected. H0 is accepted, so it is concluded that there is an effect but not significant between the Loan To Deposit Ratio (LDR) variable on Return On Assets (ROA). the value of f - calculated is greater, namely 5.894> 4.10 and the value is significant> than the terms of significance (0.032> 0.05). This provides an explanation that the independent variables Capital Adequacy Ratio (CAR) (X1) and Loan To Deposit Ratio (LDR) (X2) prove that they do not jointly influence the dependent variable, namely Return On Assets (ROA) (Y).

1   INTRODUCTION

In the world of banking as a service provider for the community, it is required to always be consistent in carrying out its functions as a bank. In accordance with Law no. 10 of 1998, Bank is a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit and / or other forms in order to improve the standard of living of the people at large. According to Kasmir (2014: 24), a bank is simply defined as a financial institution whose activities are to collect funds from the public in the form of deposits and then channel them back to the community, as well as provide other bank services. The capital aspect includes CAR (Capital Adequency Ratio), the asset aspect includes NPL (Non-Performing Loan), the management aspect includes NPM (Net Profit Margin), the earning aspect includes BOPO (Operational Cost of Operating Income), while the liquidity aspect includes LDR (Loan to Deposit Ratio)). The five aspects, namely capital, assets, management, earning, liquidity are assessed using financial ratios.

CAR (Capital Adequacy Ratio) is a capital adequacy ratio that shows the ability of banks to provide funds that are used to overcome possible risk of loss. This ratio is important because keeping CAR at a safe limit (at least 8%) means protecting customers and maintaining overall financial system stability. The greater the CAR value, the better the bank's ability to face possible risk of loss.

LDR (Loan to Deposits Ratio) is a ratio that measures a bank's ability to meet short-term liabilities (which can be called liquidity) by dividing total credit to total Third Party Funds (TPF). Banking liquidity needs to be managed to meet the needs when customers take their funds and distribute loans (credit) to borrowers (debtors). If the LDR value is too high, it means that banks do not have sufficient liquidity to cover their obligations to customers (TPF). Conversely, if the LDR value is too low, it means that banks have sufficient liquidity but may have lower income, because as it is known, the banking world earns income through extended credit. According to Bank Indonesia, Return On Assets (ROA) is a comparison between profit before tax and the average total assets in a period. Return on assets (ROA) is an analysis of the profitability ratio analysis. Profitability ratio analysis is a tool to analyze or measure the level of business efficiency or profitability achieved by the bank concerned. According to Bank Indonesia circular letter number 13/24 / DPNP dated October 25, 2011, the standard Return on Assets (ROA)

set for banks in Indonesia is at least 1.5%. Based on the data above, the authors are interested in conducting research with the title "The Effect of Capital Adequacy Ratio (CAR), and Loan To Deposit Ratio (LDR) on Return On Assets (ROA) at PT Bank BNI (Persero) Tbk. Period 2008 - 2017 "

2   LITERATURE REVIEW

CAR (*Capital Adequacy Ratio)*

According to Mulyono (2012; 113), CAR compares between capital equity and total assets of loans and securities. Capital Adequacy Ratio is a means of measuring bank financial performance. In addition, the Capital Adequacy Ratio also describes banking conditions in addition to:

a. An indication of whether the capital is sufficient (adequate) to cover the risk of loss arising from investment in product assets because any loss will reduce capital. Capital Adequacy Ratio measures the ability of bank capital to anticipate decreases in assets and cover possible losses in financing. Capital Adequacy Ratio that does not reflect a good increase in capital because capital can be used to guarantee financing offerings. A low Capital Adequacy Ratio indicates that the bank's capital is not good because the bank is not able to cover the possibility of failure in financing.

b. The ability to finance operations and finance all fixed assets and bank investments. A high Capital Adequacy Ratio indicates that there is sufficient capital to carry out business activities and can carry out business development and business expansion more safely.

c. The bank's ability to increase profitability. A high Capital Adequacy Ratio indicates that the bank has a sufficiently large level of capital in increasing cash reserves that can be used to expand its financing, so that it will open up greater opportunities for the bank to increase its profitability.

d. Resilience and banking banking. If the Capital Adequacy Ratio is low, the bank's ability to survive when it experiences losses is also low. Own capital is quickly used up to cover profitable losses and the continuity of the bank's business is not disturbed.

Bank Indonesia stipulates the minimum capital requirement for banks in the Bank for International Strategy (BIS) stipulation that each commercial bank is required to provide a minimum capital of 8% of total risk weighted assets. The detailed classification of the Capital Adequacy Ratio according to Bank Indonesia is as follows.

Table 1. Classification level of Capital Adequacy Ratio according to BI

CAR	Predicate
>8%	Healthy
6,4%-7,9%	Unwell
<6,4%	Not healthy

Source: *www.bi.go.id*

Bank Indonesia stipulates the minimum capital requirement for banks in the Bank for International Strategy (BIS) stipulation that each commercial bank is required to provide a minimum capital of 8% of total risk weighted assets. The detailed classification of the Capital Adequacy Ratio according to Bank Indonesia is as follows. Bank Indonesia has amended the provisions regarding the minimum limit of Capital Adequacy Ratio from time to time, including:

a. Decree of the Board of Directors of Bank Indonesia No. 26 / KEP / DIR dated 29 May 1993, Bank Indonesia set a Capital Adequacy Ratio of 8% of the Risk Weighted Assets.

b. Decree of the Board of Directors of Bank Indonesia No.31 / 146 / KEP / DIR dated 12 November 1998 to be 4% of the RWA. This decline was due to the economic and monetary crises that occurred in Indonesia at that time. Mathematically, the amount of the Capital Adequacy Ratio can be calculated using a formula.

$$CAR = \frac{Equity}{ATMR} \text{ X } 100\,\%$$

LDR (Loan To Deposit Ratio)

This ratio states how far the bank has used depositors' money to provide loans to its customers. In other words, the amount of money used to make loans is money that comes from deposits from depositors. Prior to the package of financial, monetary and banking policies on May 29, 1998, the assessment of the health of bank liquidity in the form of a Loan To Deposit Ratio (LDR), was carried out using the formula.

$$LDR = \frac{Credit\ given}{Third-party\ funds} \; X\ 100\%$$

Meanwhile, according to Bank Indonesia Regulation number 19/6 / PBI / 2017 concerning the fifth amendment to Bank Indonesia Regulation number 15/15 / PBI / 2013 concerning the minimum statutory reserve requirement for commercial banks in rupiah and foreign currency for conventional commercial banks. In Bank Indonesia Regulation number 17/11 / PBI / 2015 issued on 26 June 2015 which took effect in August 2016, the Loant To Debt Ratio was changed to Loant To Funding Ratio. Changing the provisions of the Loant To Debt Ratio, which must be maintained from 92% to 94% after changing its name to loan to funding ratio.

ROA (Return On Assets)

According to Munawir (2010: 89) Return On Assets (ROA) is the same as Return On Investments in financial analysis which has a very important meaning as a comprehensive (comprehensive) financial analysis technique. This analysis is an analytical technique commonly used by company leaders to measure the effectiveness of the company's overall operations. According to Kasmir (2012: 201) Return on Assets is a ratio that shows the results (return) on the total assets used in the company. In addition, Return On Assets (ROA) provides a better measure of the company's profitability because it shows the effectiveness of management in using assets to generate revenue. According to Harahap (2010: 305), Return On Assets describes asset turnover as measured by sales. The bigger this ratio, the better and this means that assets can rotate faster and make a profit. From the above definitions, it can be concluded that the Return on Assets (ROA) is the ratio of the return on assets used to evaluate whether management has received an adequate return (reasobable return) from the assets under control. This ratio can be calculated with the formula:

$$ROA = \frac{EBT}{Total\ Aset} \; x\ 100\%$$
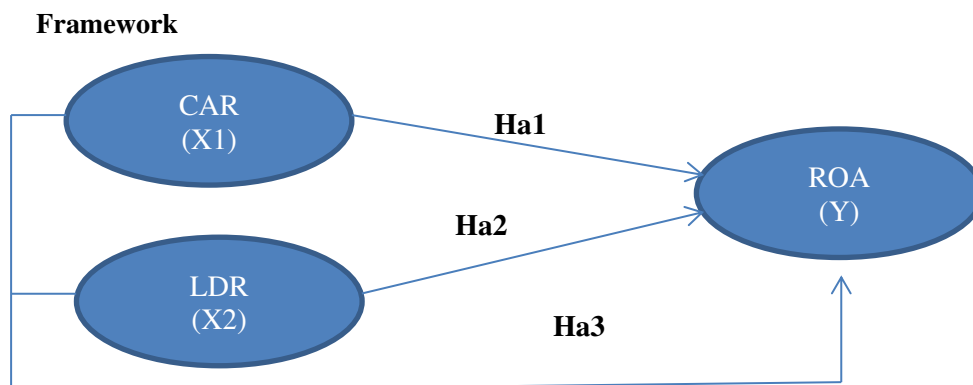
Framework

Figure 1. Research Framework

Hypothesis:
Ha1: CAR has a positive and significant effect on ROA
Ha2: LDR has a positive and significant effect on ROA
Ha3: CAR and LDR has a positive and significant effect on ROA

3   METHODOLOGY

This In this study we as researchers use quantitative research methods namely conducting research on the problems faced by the company on its financial performance. Data analysis used is quantitative data, namely data in the form of company financial statements that are expressed in numbers. From the figures obtained will be further analyzed with SPSS. Secondary data used in this study are:

a. Financial Report of PT. Bank BNI Persero, Tbk. audited files available at www.idx.co.id

b. Previous research that supports this research is in the form of journals, theses and articles.
c. Books support this research.

Population according to Sugiyono (2013: 117) suggests that "Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics. determined by researchers to be studied and then drawn conclusions ". Based on the definition of population above, what will be the population in this study is the Financial Report Data of PT. Bank BNI Persero, Tbk. According to Sugiyono (2013: 118) defines the sample as follows "The sample is the number and characteristics of the population". Sampling using nonprobability purposive sampling, where the sample taken from the population is determined based on the criteria set in this study (Sugiyono, 2013). The sample in this study is the financial report data of PT Bank BNI Persero, Tbk for the period 2008 - 2017 with a total sample size of 10 samples. The test used in this resea rch is the Simple Linea r Regression Test Method, to test the effect of the independent variable on the dependent variable. Testing data used in this study include classic assumption tests (Normality Test, Multicollinearity, Autocorelation, Heteroscedasticity) simple Multiply linear regression analysis, t test to test, f test to test and prove the research hypothesis, and the coefficient of determination.

4 FINDINGS AND DISCUSSION

Multiple Linier Regression

To determine the effects of the independent variables, namely the Capital Adquacy Ratio (CAR) and the Loan To Deposit Ratio (LDR) on Return On Assets (ROA), this study uses multiple regression analysis. In the following, there is a multiple linear regression test table from the processed SPS 22 data.

Table 1. Coefficients

Coefficients^a

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-1.351	1.151		-1.174	.279
	CAR	.109	.043	.610	2.547	.038
	LDR	.022	.014	.369	1.542	.167

a. Dependent Variable: ROA

From the results of multiple linear regression analysis with the SPSS 22 program in table 1 above, the regression equation is in the following form:

$$Y=(-1{,}351)+0{,}109\,X1+0{,}022\,X2$$

The interpretation of the equation is:
a. From the multiple linear regression equation above, it is known to have a constant negative sign of -1.351. So that the constant magnitude shows that if the independent variables (CAR and LDR) are assumed to be 0. Then the dependent variable is ROA of -1.351.
b. The CAR variable has a positive coefficient of 0.109. This means that if the CAR has increased by one percent (1%), the ROA will increase by 0.109.
c. The LDR variable has a positive coefficient of 0.022. This means that if the LDR has increased by one percent (1%), the ROA will increase by 0.022.

Hypothesis Test (t Test)
The basis for making decisions on the Partial Test (t test), namely:
1. If the value of t count> t table then H1 is accepted and H0 is rejected.
    Meaning: then there is a significant influence.
2. If t count <t table then H0 is accepted and H1 is rejected
    Meaning: then there is no significant effect.
3. If the value of t count> t table then H2 is accepted and H0 is rejected
    Meaning: then there is a significant influence.
4. If t value <table then H0 is accepted and H2 is rejected

Meaning: then there is no significant effect.

Table 2. Hypothesis (t-Test)

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.351	1.151		-1.174	.279
	CAR	.109	.043	.610	2.547	.038
	LDR	.022	.014	.369	1.542	.167

a. Dependent Variable: ROA

Based on the table above, it can be seen that the influence of the Capital Adquacy Ratio (CAR) variable on Return On Assets (ROA) is seen from the coefficient value of 0.109 and a significant value of 0.038> 0.05 than the limit of significance value. It can also be seen that the value of t count> t table or 2.547> 2.364, which means that H0 is accepted H1 is rejected, so it is concluded that there is no effect between the variable Capital Adquacy Ratio (CAR) on Return On Assets (ROA).

And it can be seen that the effect of variables on Return On Assets (ROA) is seen from the coefficient value of 0.022 and a significance value of 0.167 which is greater than the limit of significance value of 0.05. It can be seen that the value of t count <t table or equal to 1.542 <2.364 means that H0 is accepted. H2 is rejected, so it is concluded that there is no effect between the Loan To Deposit Ratio (LDR) variable on Return On Assets (ROA).

Hypothesis Test (F Test)

the Simultaneous test (F test) is used to test the effect of the independent variable (Independent) Capital Adquacy Ratio (CAR) and Loan To Deposit Ratio (LDR) together on the related variable (Dependent) Return On Assets (ROA). The following is a simultaneous test table (f test).

Table 3. Annova Test

ANOVAᵃ

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.827	2	1.414	5.894	.032ᵇ
	Residual	1.679	7	.240		
	Total	4.506	9			

a. Dependent Variable: ROA

b. Predictors: (Constant), LDR, CAR

The Based on the simultaneous test table above (Anova), it is known that the significance value for the effect of X1 and X2 simultaneously on Y is (0.032> 0.05) and the calculated F value> from F table is 5.894> 4.10, so it can be concluded that H0 rejected H3 is accepted, which means the independent variable Capital Adquacy Ratio (CAR) (X1) and Loan To Deposit Ratio (LDR) (X2), simultaneously affect but not significant to the dependent variable, namely Return On Assets (ROA) (Y).

Coefficient of Determination (R2)

The magnitude of the influence of Capital Adquacy Ratio (X1) and Loan To Deposit Ratio (X2) on Return On Assets (Y) can be seen by using the analysis of the coefficient of determination or abbreviated as Kd which is obtained by squaring the correlation, namely

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792ᵃ	.627	.521	.48975

a. Predictors: (Constant), LDR, CAR

Results of the analysis obtained above can be seen that the R Square value is 0.627. This means that the influence of the independent variable Capital Adquacy Ratio (CAR) and Loan To Deposit Ratio (LDR) on the dependent variable Return on Assets (ROA) is 62.7%, while the remaining 37.3% is influenced by other variables not included in this research model. Then the R value of 0.792 or 79.2% indicates that the effect of the independent variables in this research mode is the Capital Adquacy Ratio (CAR) and the Loan To Deposit Ratio (LDR) on the dependent variable, namely Return On Assets (ROA).

5   CONCLUSION

Based on the results of the research and the discussion that the research has described, it can be concluded that:

1. Partial effect of Capital Adquacy Ratio (CAR) on Return On Assets (ROA) at PT. Bank BNI Persero, Tbk. There is no influence between the variable Capital Adquacy Ratio (CAR) on Return On Assets (ROA) seen from the coefficient value of 0.109 and a significance value of 0.038> 0.05 significance value. Judging from the coefficient value of 0.109. It can also be seen that the value of t Count> t Table or 2.547> 2.364 means that H0 is accepted. H1 is rejected, so it is concluded that there is no effect between the Capital Adquacy Ratio (CAR) variable on Return On Assets (ROA).

2. The partial effect of the Loan To Deposit Ratio (LDR) on the Return On Assets (ROA) at PT. Bank BNI Persero, Tbk. There is no effect between the Loan To Deposit Ratio (LDR) variable on Return On Assets (ROA) seen from the coefficient value of 0.022 and a significance value of 0.167> a significance value of 0.05. It can also be seen that the value of t count <than t Table or equal to 1.542 <2.364 means that H2 is rejected.

3. The simultaneous effect of Capital Adquacy Ratio (CAR) and Loan To Deposit Ratio (LDR) on Return On Assets (ROA) at PT. Bank BNI, Tbk. Has a significant effect which can be seen from the results of the f test. It is known that the value of f - count is greater, namely 5.894> 4.10 and the significant value> of the significance requirements (0.032> 0.05). This provides an explanation that the independent variables Capital Adquacy Ratio (CAR) (X1) and Loan To Deposit Ratio (LDR) (X2) prove that they do not jointly influence the dependent variable, namely Return On Assets (ROA) (Y).

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