The International Journal of Business Management and Technology, Volume 7 Issue 1 January-February 2023
ISSN: 2581-3889

Research Article Open Access

Analysis of the Effect of Operating Expenses on Operating Income (BOPO), Return on Assets (ROA), Return on Equity (ROE), on Loan to Deposit Ratio (LDR) at Bank Mandiri in 2014-2021

Wahyu Sri Handayani[1)] Nursiam[2)]

1) *Faculty of Economics and Business, University of Muhammadiyah Surakarta, Indonesia*
2) *Faculty of Economics and Business, University of Muhammadiyah Surakarta, Indonesia*

Abstract: *The purpose of this study is to analyze and find empirical evidence whether Operating Expenses on Operating Income (BOPO), Return on Assets (ROA), and Return on Equity (ROE) have an effect on the Loan to Deposit Ratio (LDR). The population in this study are financial reports issued by Bank Mandiri for 2014-2021, in which a sample of 32 data was taken using purposive sampling. Based on tests carried out with the help of the SPSS software program version 25, the results of this study state that Operating Expenses to Operating Income (BOPO), Return on Assets (ROA) andReturn on Equity (ROE) have an effect on the Loan to Deposit Ratio (LDR).*

Keywords: Operating Expenses to Operating Income (BOPO), Return on Assets (ROA), Return on Equity (ROE), Loan to Deposit Ratio (LDR), Mandiri Bank

I. INTRODUCTION

The State of Indonesia is a country that is developing in all sectors, both in the context of increasing economic equality or building economic growth where the economic sector is a top priority for the government for this increase. Now that the critical period has passed, the wheels of the Indonesian economy have been driven by many institutions. financial institutions, namely bank financial institutions whose role is more visible in carrying out economic development within the Indonesian state. Banking is everything related to banks, including institutions, business activities, and methods and processes in carrying out their business activities. Banks are defined as financial institutions whose business activities are collecting funds from the public and channeling these funds back to the community as well as providing other banking services. Meanwhile, the notion of a financial institution is any company engaged in the financial sector, where its activities are either only raising funds or only channeling funds or both (Kasmir, 2014, p. 3).

Credit provided by banks is based on trust so that the provision of credit is giving trust to customers. Because the provision of credit by the bank is intended as an attempt to make a profit, the bank may onlycontinue public deposits to customers in the form of credit if he is absolutely sure that the debtor will return the loan he received in accordance with the time period and terms that have been agreed upon by both parties. This shows that it is necessary to pay attention to the ability and willingness factors, so that prudence is concluded by maintaining the security element and at the same time the profit element of a credit. Economic development cannot be separated from the banking sector. Because banking has an important role in economic growth. This is because the banking sector has a main function, namely as a financial intermediary between those who have funds (surplus funds) and those who need funds (Julita, 2011).

A bank's performance will be assessed as good if it can be assessed from an assessment of its financial ratios, the ratio is a tool that is expressed in relative or absolute terms to explain certain relationships between one factor and another from a financial report. According to Hery (2015, p.149) the liquidity ratio is a ratio that shows the company's ability to meet obligations or pay off short-term debt. This ratio is used to measure how liquid a company is. Loan to Deposit Ratio (LDR) is used to assess the liquidity of a bank by dividing the amount of credit extended by the bank to third party funds. The credit in question is the amount of credit disbursed to the public,

The factors used in assessing bank performance are BOPO. BOPO according to the financial dictionary is a group of ratios that measure the operational efficiency and effectiveness of a company by comparing one to another. The lower

the BOPO means the more efficient the bank is in controlling its operational costs, with cost efficiency the greater the profit the bank will get. Bank Indonesia (BI) report, as of the end of January 2010, the ratio of operating expenses to operating income (BOPO), which is used as an indicator of banking efficiency, is 97.36%. This figure is far above the BOPO ratio at the end of 2009 which was stuck at 86.63%. The increase in BOPO occurred in almost all bank groups. The non-foreign exchange bank group was recorded as having the highest BOPO ratio, namely 109.52%. While the BOPO of state-owned banks reached 96.37%. The joint venture and foreign bank group's BOPO rates were 86.02% and 99.46%, respectively. Meanwhile, foreign exchange banks have a BOPO of 90.74% and Regional Development Banks have the lowest BOPO ratio, which is 77.63%. According to (Sofyan, 2002) the level of profitability is the most appropriate indicator to measure the performance of a bank. the ratio of operational costs is used to measure the level of efficiency and the ability of a bank to carry out its operational activities. The lower the BOPO means the more efficient the bank is in controlling its operational costs, with cost efficiency the greater the profit the bank will get (Dendawijaya, 2004). The lower the BOPO, the higher the LDR, and the higher the BOPO, the lower the LDR in banking. respectively 86.02% and 99.46%. Meanwhile, foreign exchange banks have a BOPO of 90.74% and Regional Development Banks have the lowest BOPO ratio, which is 77.63%. According to (Sofyan, 2002) the level of profitability is the most appropriate indicator to measure the performance of a bank. the ratio of operational costs is used to measure the level of efficiency and the ability of a bank to carry out its operational activities. The lower the BOPO means the more efficient the bank is in controlling its operational costs, with cost efficiency the greater the profit the bank will get (Dendawijaya, 2004). The lower the BOPO, the higher the LDR, and the higher the BOPO, the lower the LDR in banking. respectively 86.02% and 99.46%. Meanwhile, foreign exchange banks have an BOPO of 90.74% and BPD have the lowest BOPO ratio of 77.63%. According to (Sofyan, 2002) the level of profitability is the most appropriate indicator to measure the performance of a bank. the ratio of operational costs is used to measure the level of efficiency and ability of the bank in carrying out its operations. The lower the BOPO means the more efficient the bank is in controlling its operational costs, with the existence of cost efficiency, the profits obtained by the bank will be even greater (Dendawijaya, 2004). The lower the BOPO will increase the LDR and the higher the BOPO will reduce the LDR in banks. 2002) the level of profitability is the most appropriate indicator to measure the performance of a bank. the ratio of operational costs is used to measure the level of efficiency and ability of the bank in carrying out its operations. The lower the BOPO means the more efficient the bank is in controlling its operational costs, with the existence of cost efficiency, the profits obtained by the bank will be even greater (Dendawijaya, 2004). The lower the BOPO will increase the LDR and the higher the BOPO will reduce the LDR in banks. 2002) the level of profitability is the most appropriate indicator to measure the performance of a bank. the ratio of operational costs is used to measure the level of efficiency and the ability of a bank to carry out its operational activities. The lower the BOPO means the more efficient the bank is in controlling its operational costs, with cost efficiency the greater the profit the bank will get (Dendawijaya, 2004). The lower the BOPO, the higher the LDR, and the higher the BOPO, the lower the LDR in banking. with cost efficiency, the profits obtained by the bank will be even greater (Dendawijaya, 2004). The lower the BOPO, the higher the LDR, and the higher the BOPO, the lower the LDR in banking. with the cost efficiency, the profits obtained by the bank will be even greater (Dendawijaya, 2004). The lower the BOPO will increase the LDR and the higher the BOPO will reduce the LDR in banks.

Return on assets(ROA) can measure the net profit obtained from the use of assets, meaning that the higher this ratio, the better the productivity of assets in obtaining net profits. Companies with a high ROA value, it can be said that the company is able to obtain high profits and good asset efficiency. However, if the ROA value is negative, it indicates the state of the company is at a loss, which means the company's ability from the capital invested as a whole in assets has not been able to generate profits. In other words, ROA becomes an indicator of a business unit to earn a return on a number of assets owned by the business unit. ROA can be obtained by calculating the comparison between profit before tax divided by total assets (Husnan, 1998). A high ROA value indicates that the bank earns a high profit/profit and conversely a low ROA value indicates that the bank earns a low profit/profit. The results of previous research show that the effect of high and low ROA generated by banks will affect the size of the amount of credit disbursement by banks, in line with increasing credit, it will increase the LDR itself.

ROE is a ratio that measures how much return a business owner (shareholder) gets on the paid-up capital for the business. ROE is an appropriate indicator to measure the success of a business "enriching" shareholders. This ROE measure of success can be compared to several other investment alternatives. With the philosophy that is often used that, the higher the risk of an investment, the higher the rate of return that must be provided by the investment. ROE is the ratio of return on equity, a measure of company performance as well as shareholders (Azwir, 2006). So the results of his research if the ROE value is high it will result in the LDR value in a bank experiencing problems in distributing credit to customers.

Several researchers have tested the factors that affect the Loan to Deposit Ratio (LDR) and have different empirical results. For example, research conducted by Utari (2011) which shows that BOPO has a significant positive

effect on LDR, while Sofyan's research (2019) shows that BOPO has no effect on LDR. In Hermawan's research (2009) it showed that ROA had no significant effect on LDR, while in Ramadhan's study (2013) it showed that ROA had a positive and insignificant effect on LDR. Hermawan's research (2009) shows that ROE has a significant effect on LDR.

In this study, researchers try to update research from(Sofyan (2019) in analyzing several factors that can affect the Loan to Deposit Ratio. These factors are BOPO, ROA, and ROE. The difference between this study and previous research is that the variables are replaced, namely the variables previously used CAR, NPL, and NIM. In addition, this study also updated the research year for 8 consecutive years, namely from 2014-2021.Based on the above background, this research takes the title "Analysis of the Effect of Operating Expenses on Operating Income (BOPO), Return on Assets (ROA), Return on Equity (ROE), on Loan to Deposit Ratio (LDR) at Bank Mandiri in 2014-2021" .

II. HEADINGS

Fundamental Theory

Fundamental Theory Fundamental theory is based on national and global economic conditions. This theory focuses on financial ratios and events that directly or indirectly affect a company's financial performance. Some experts argue that fundamental theory is more suitable for making decisions in choosing which company shares to buy for the long term.

Bank Liquidity

According to Simorangkir (2004) liquidity is the ability of a bank to pay off financial obligations that can be immediately disbursed or that are due and provide loans (loans) to people who need loans..

Loan to Deposit Ratio (LDR)

LDR is the financial ratio of banking companies related to the liquidity aspect. The liquidity ratio is a ratio that shows the company's ability to meet its short-term obligations (Hery, 2018:149). In other words, the liquidity ratio is a ratio that can be used to measure to what extent the company's ability to pay off its short-term obligations that will soon mature. Loan to deposit ratio is the ratio of the total amount of credit disbursement to the total funds received. This financial ratio is used as an indicator to determine the level of ability of banking companies to channel core capital and Third Party Funds (DPK) sourced from the public (in the form of savings, demand deposits, certificates of time deposits, and time deposits) in the form of loans..

Operating Expenses to Operating Income (BOPO)

The BOPO ratio is the ratio used to measure a bank's management ability to control operational costs against its income. All operational activities certainly require costs, without costs it is impossible for these activities to run. Operational costs will be related to operating income, where if the income is greater than operating costs, the company will earn a profit.

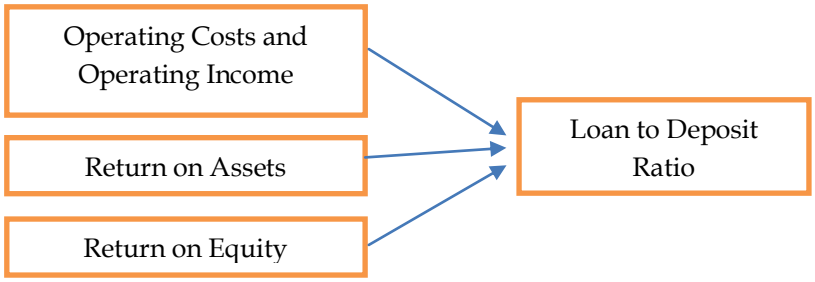
Return on Assets (ROA)

Return *On Assets* (ROA)To measure the ability of bank management in obtaining profits or profits as a whole, it can be seen from the profitability ratios. Return on assets (ROA) is an analysis used by companies to measure the ability of the company's capital to generate profits through the total assets (wealth) owned by the company after adjusting for the costs to fund these assets. Adjustment for costs to finance assets in question is a ratio used to measure the ability of capital invested in overall assets to generate net profit (Sujarweni, 2017).

Return on Equity (ROE)

ROE is a ratio that measures how much return a business owner (shareholder) gets on the paid-up capital for the business. ROE is an appropriate indicator to measure the success of a business "enriching" shareholders. This ROE measure of success can be compared to several other investment alternatives.

Research Framework



Based on this frame of mind, the hypotheses formulated in this study are:
H1 : BOPO affects the Loan to Deposit Ratio (LDR) at Bank Mandiri in 2014-2021.
H2 : Return on Assets (ROA) has an effect onLoan to Deposit Ratio (LDR) at Bank Mandiri in 2014-2021.
H3 : Return on Equity has an effect on the Loan to Deposit Ratio (LDR) at Bank Mandiri in 2014-2021.

III. INDENTATIONS AND EQUATIONS

Types of research
This type of research is descriptive quantitative and hypothesis testing.

Population and Sample
The population in this study is the Financial Statements of Bank Mandiri at the Financial Services Authority (OJK) for 2014-2021. This research uses a purposive sampling method, with the following criteria:

1. Quarterly financial reports at Bank Mandiri from the Financial Services Authority (OJK) in a row for the 2014-2021 period.
2. financial reportsBank Mandiri presentedin rupiah currency.

Data source
The data for this study uses secondary data, namely in a monthly time series from 2014 to December 2021 issued by the financial statements of Bank Mandiri and from the Financial Services Authority (OJK).

Method of collecting data
Data collection techniquein this study using the historical research method which is causal-distributive, meaning that the research was conducted to analyze a past situation and show the direction of the relationship between the independent variables, namely operating expenses, operating income, return on assets, and return on equity with the dependent variable, namely loan to deposit ratio obtained from Bank Mandiri's financial statements and from the Financial Services Authority (OJK). Then the data is processed through SPSS 25 with the theoretical basis obtained.

Data analysis method
The data analysis method used in this study is the Ordinary Least Square (OLS) method, with the following research model:

$$LDR_t = \alpha + \beta 1\ BOPO_t + \beta 2\ ROA_t + \beta 3\ ROE_t + u$$

Information:

LDR	=Loan to Deposit Ratio
BOPO	= Operating Expenses Operating Income
ROA	=Return on Assets
ROE	=Return on Equity
α	= Constant
β1, β2, β3	= Regression coefficient
t	=datatime series
u	=term error

IV. FIGURES AND TABLES

Research Sample Determination Table

No	Information	Amount
1	Publication of Bank Mandiri's financial reports at the Financial Services Authority (OJK) for the 2014-2021 period	8
2	Bank Mandiri Financial Statements that are not consecutive during the period March-December	(0)
3	Bank Mandiri Financial Statements are presented not in rupiah currency	(0)
	The number of reports	8
	The number of samples that can be processed is 8 x 4 quarters	**32**

Based on data Publication of Bank Mandiri's financial reports for the 2014-2021 period, all publication reports fall into the research criteria. Where for 8 years Bank Mandiri published Financial Statements using the rupiah currency. In processing the data there are no outliers so that the Publication Report for 4 quarters each year in a row for a period of 8 years produces results the number of samples is 32 sample data of Publication of Bank Mandiri Financial Statements that have met the criteria.

Table of Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		32
Normal Parameters, b	mean	.0000000
	std. Deviation	2.16044258
Most Extreme Differences	Absolute	.086
	Positive	.078
	Negative	-.086
Test Statistics		.086
asymp. Sig. (2-tailed)		.200c,d

Source: SPSS data analysis results, 2025

Based on the results of the normality test with the Kolmogorov Smirnov test, a statistical test value of 0.086 was obtained with an Asymp value. Sig. (2-tailed) of 0.200, which means it is greater than the significant level (0.200 > 0.05). So from these results it can be concluded that the data used in this study were normally distributed.

Table of Multicollinearity Test Results

Variable	*Tolerance*	VIF	Conclusion
BOPO	0.188	5,308	There is no multicollinearity
ROA	0.101	9,855	There is no multicollinearity
ROE	0.257	3,893	There is no multicollinearity

Source: SPSS 2025 data analysis results

Based on the table above, it can be seen the results of calculating the VIF value for BOPO of 5.308 with a tolerance of 0.188. The VIF value for ROA is 9.855 with a tolerance of 0.101 while the VIF for ROE is 3.893 with a tolerance of 0.257. All variables fulfill the multicollinearity free requirements, namely Tolerance > 0.10 and VIF values < 10. So it can be concluded that there are no symptoms of multicollinearity between the independent variables for the regression equation.

Table of Autocorrelation Test Results

Model Summaryb

Model	Durbin-Watson
1	1,711

Source: SPSS 2025 data analysis results

The autocorrelation test results presented in the table obtained the Durbin Watson value in the regression model which is equal to 1.711, which means it is between -2 to +2, so it can be concluded that there is no autocorrelation and the regression model for this research is acceptable.

Table of Heteroscedasticity Test Results

Model	Sig	Information
(Constant)	0.221	
BOPO	0.253	There is no heteroscedasticity
ROA	0.965	There is no heteroscedasticity
ROE	0.256	There is no heteroscedasticity

Source: SPSS 2025 data analysis results

The results of the heteroscedasticity test are presented in the table above, which shows that the residual absolute values of all independent variables in the regression model have a significance value of > 0.05. It can be concluded that the regression in this study did not occur heteroscedasticity.

Table of Results of Regression Model Equations

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Betas	t	Sig.
1	(Constant)	26.013	17,513		1,485	.149
	BOPO	.520	.184	.548	2.822	.009
	ROA	19,546	2,343	2,206	8,341	.000
	ROE	-1,713	171	-1.663	-0.008	.000

Source: SPSS 2025 data analysis results

Based on the table data above, the regression equation can be made as follows:

LDR = 26,013 + 0,520 BOPO + 19,546ROA - 1,713 ROE + u

Information:

LDR =*Loan to Deposit Ratio*(%)
BOPO = BurdenOperational Operating Income (%)
ROA =*Return on Assets*(%)
ROE =*Return on Equity*(%)
u = term error

Based on the results of multiple linear regression above, it can be interpreted as follows:

1. Based on the results of the regression equation, the constant value is 26,013 with a positive value. This shows that if the value of Operating Expenses to Operating Income (BOPO), Return on Assets (ROA), and Return on Equity (ROE) of Bank Mandiri is assumed to be constant or equal to zero, then Bank Mandiri's Loan to Deposit Ratio (LDR) tends to will increase by 26.013 percent, and vice versa.
2. The magnitude of the coefficient in the variable regression equation of Operating Expenses to Operating Income (BOPO) is 0.520 with a positive value. This shows that, if each increase in the BOPO value is 1%, the Loan to Deposit Ratio value will also increase by 0.520%. Conversely, if Bank Mandiri's BOPO value drops by 1%, then Bank Mandiri's Loan to Deposit Ratio figure will also decrease by 0.520%.
3. The magnitude of the coefficient in the Return on Assets (ROA) variable regression equation is 19.546 with a positive value. This shows that, if the Return on Assets value of Bank Mandiri increases by 1%, then the value of the Loan to Deposit Ratio will also increase by 19.546%. Conversely, if the Return on Assets value decreases by 1%, the Loan to Deposit Ratio value will also decrease by 19.546%.
4. The magnitude of the coefficient in the variable regression equation Return on Equity (ROE) is 1.713 with a negative value. This shows that, if the Return on Equity value of Bank Mandiri in the observation period increases by 1%, then Bank Mandiri's Loan to Deposit Ratio will decrease by 1.713%. Conversely, if Bank Mandiri's Return on Equity value drops by 1%, then Bank Mandiri's Loan to Deposit Ratio value will actually increase by 1.713%.

Table of F Test Results

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	583,691	3	194,564	37,651	.000b
	Residual	144,693	28	5.168		
	Total	728,384	31			

Source: SPSS 2025 data analysis results

Based on the table, the results of the F test in the regression model obtained F count < from F table (37.651 < 2.93) with a significance value of 0.000 <0.05. So it can be concluded that the regression model used in this study is fit of goodness.

Table of the Results of multiple linear regression analysis

Variable	T count	T table	Sig	Conclusion
BOPO	2,822	1,701	.009	H1 acepted
ROA	8,341	1,701	.000	H2 is accepted
ROE	-10,008	1,701	.000	H3 accepted

Source: SPSS 2025 data analysis results

The results of partial hypothesis testing are as follows:

1. The results of the t test output for the variable Operating Expenses against Operating Income (BOPO) obtained the value of t count (2.822) > from t table (1.701) indicating that H1 is accepted. A significant value of 0.009 <0.05 indicates that there is an influence of the Operating Expenses on Operating Income (BOPO) variable on the Loan to Deposit Ratio (LDR) variable.
2. The results of the t test output for the variable Return on Assets (ROA) obtained t count (8.341) > from t table (1.701), which indicates that H2 is accepted. A significant value of 0.000 <0.05 indicates that there is an effect of the Return on Assets (ROA) variable on the Loan to Deposit Ratio (LDR) variable.
3. The results of the t-test output for the Return on Equity (ROE) variable obtained the t-count value (-10,008) > from t table (-1.701) which shows H3 is accepted. A significant value of 0.000 <0.05 indicates that there is an effect of the Return on Equity (ROE) variable on the Loan to Deposit Ratio (LDR) variable.

Table of R Test Results

Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.895a	.801	.780	2.27324	1,711

Source: results of SPSS 2025 data analysis

From the table above, it can be seen that the adjusted R Square value is 0.780. This means that 78% of the model variation can be explained by the 3 independent variables. Meanwhile, 22% is explained by variables outside the model.

Discussion

Influence Operating Expenses Operating Income (BOPO) *to Loan to Deposit Ratio (LDR)*

Based on the results of the t-test, it shows that the variable Operating Expenses on Operating Income (BOPO) has a t-count value of 2.822, which is greater than t-table of 1.701 with a significance value of 0.009 <0.05, indicating that H1 is accepted. The BOPO variable has a regression coefficient value of 0.520, where the number is positive, so it can be concluded that the Operating Income Operating Expenses (BOPO) variable has a positive effect on the Loan to Deposit Ratio (LDR). These results can be explained that considering that the main activity of the bank in principle is to act as an intermediary, namely collecting and distributing funds, the bank's operating costs and income are dominated by interest. The lower the BOPO, the higher the LDR, meaning that the bank's operational costs are more efficient in running their business. so that the possibility of banks in troubled conditions is getting smaller, and the higher the BOPO, the lower the LDR in banks, this shows the inability of banks to manage operational spending. The results of this study are supported by research conducted by Utari (2011) which explains BOPO has a significant positive effect on

LDR. Meanwhile, another study that is different from the results of this study is research conducted by Sofyan (2019) which states that BOPO has no effect on the LDR of BPRs in the districts of West Java Province. This shows that the high BOPO ratio is not a BPR operating expense. and the higher the BOPO, the lower the LDR in banks, this shows the inability of banks to manage operational expenditures. The results of this study are supported by research conducted by Utari (2011) which explains that BOPO has a significant positive effect on LDR. Meanwhile, another study that is different from the results of this study is the research conducted by Sofyan (2019) which states that BOPO has no effect on the LDR of BPR in the Regency of West Java Province. This shows that the high BOPO ratio is not a BPR operating expense. and the higher the BOPO, the lower the LDR in banks, this shows the inability of banks to manage operational spending. The results of this study are supported by research conducted by Utari (2011) which explains BOPO has a significant positive effect on LDR. Meanwhile, another study that is different from the results of this study is research conducted by Sofyan (2019) which states that BOPO has no effect on the LDR of BPRs in the districts of West Java Province. This shows that the high BOPO ratio is not a BPR operating expense. Meanwhile, another study that is different from the results of this study is the research conducted by Sofyan (2019) which states that BOPO has no effect on the LDR of BPR in the Regency of West Java Province. This shows that the high BOPO ratio is not a BPR operating expense. Meanwhile, another study that is different from the results of this study is the research conducted by Sofyan (2019) which states that BOPO has no effect on the LDR of BPR in the Regency of West Java Province. This shows that the high BOPO ratio is not a BPR operating expense.

Effect of Return on Assets (ROA)to Loan to Deposit Ratio (LDR)

Based on the results of the t-test, it shows that the Return on Assets (ROA) variable has a t-count value of 8.341 which is greater than t-table of 1.701 with a significance value of 0.000 <0.05, indicating that H1 is accepted. The Return on Assets variable has a regression coefficient of 19.546, where the number is positive, so it can be concluded that the Return on Assets (ROA) variable has a positive effect on the Loan to Deposit Ratio (LDR). The above results indicate that the greater the Return On Assets (ROA) of a bank, the greater the level of profit achieved by the bank with large profits, so a bank can channel more credit. High profits make banks gain the trust of the public which allows banks to raise more capital so that banks have the opportunity to lend more widely. The results of this study are in line with research conducted by Setianingsih (2012) which found that ROA has a positive and significant effect on bank lending. Sofyan (2019) found different results showing that ROA had a negative effect on BPR LDR in the districts of West Java Province. This shows that the increase in the ROA ratio desired by the BPR Management affects the decrease in the level of liquidity. The high ROA determined by BPR Management is to fulfill obligations to shareholders, assess the performance of the leadership. The results of this study are in line with research conducted by Setianingsih (2012) which found that ROA has a positive and significant effect on bank lending. Sofyan (2019) found different results which showed that ROA had a negative effect on the LDR of BPR in the Regency of West Java Province. This shows that the increase in the ROA ratio desired by the BPR Management affects the decrease in the level of liquidity. The high ROA determined by the BPR Management is to fulfill obligations to shareholders, assessing the performance of the leadership. The results of this study are in line with research conducted by Setianingsih (2012) which found that ROA has a positive and significant effect on bank lending. Sofyan (2019) found different results which showed that ROA had a negative effect on the LDR of BPR in the Regency of West Java Province. This shows that the increase in the ROA ratio desired by the BPR Management affects the decrease in the level of liquidity. The high ROA determined by the BPR Management is to fulfill obligations to shareholders, assessing the performance of the leadership. Sofyan (2019) found different results which showed that ROA had a negative effect on the LDR of BPR in the Regency of West Java Province. This shows that the increase in the ROA ratio desired by the BPR Management affects the decrease in the level of liquidity. The high ROA determined by the BPR Management is to fulfill obligations to shareholders, assessing the performance of the leadership.

Effect of Return on Equity (ROE)to Loan to Deposit Ratio (LDR)

The results of the t test for the Return on Equity (ROE) variable obtained the t value of-10,008 which is greater than t table of -1.701 indicates H3 is accepted. A significant value of 0.000 <0.05 indicates that there is an effect of the Return on Equity (ROE) variable on the Loan to Deposit Ratio (LDR) variable. The Return on Equity variable has a regression coefficient of -1.713, where the number is negative, so it can be concluded that the Return on Equity (ROE) variable has a negative effect on the Loan to Deposit Ratio (LDR). The results of this study are supported by research from Hermawan (2009) who found that ROE has a significant effect on LDR. ROE is very attractive to shareholders and

prospective shareholders, and also to management, because this ratio is an important measure or indicator of shareholders value creation, meaning that the higher the ROE ratio, the higher the company's value. This is an attraction for investors to invest in the company. According to the results of this study, the ROE value of Bank Mandiri is low, meaning that the company is not profitable. the ROE value in the bank is unstable, meaning that the bank is considered to be less balanced with its own capital with the profits received by the bank from customers.

V. CONCLUSION

Based on the results of the tests that have been carried out, it can be concluded that:

1. Operating Expenses Operating Income(BOPO) affects the Loan to Deposit Ratio (LDR).
2. *Return on Assets*(ROA) affects the Loan to Deposit Ratio (LDR).
3. *Return On Equity*(ROE) affects the Loan to Deposit Ratio (LDR).

Research Limitations and Suggestions:

1. In this study, researchers only took three independent variables, namely BOPO, ROA, and ROEwith an R Square value of 0.780 while there are many other factors that can affect the Loan to Deposit Ratio (LDR).
2. The object used is only Bank MandiriMandiri for the period March-December 2014-2017, so it cannot represent all banks registered with the Financial Services Authority (OJK).

So expected:

1. For financial companies, this research is expected to help analyze the Loan to Deposit Ratio (LDR) so that it can improve the company's ability to meet its short-term obligations.
2. For further research, it is hoped that future research will add other variables, as well as expand the research object and increase the research period so that the research results are more valid.

REFERENCES

[1.] Arisandi, Desi. 2008. Analisis Faktor PenawaranKredit pada Bank Umum di Indonesia. Jurnal Program Studi Manajemen Perbankan Universitas Gunadarma.

[2.] Billy ArmaPratama. (2009). AnalisisFaktor-faktor yang Mempengaruhi Kebijakan Penyaluran Kredit Perbankan (Studi pada Bank Umum di Indonesia PeriodeTahun 2005-2009). ISSN 1907-6304.

[3.] Brigham, Eugine F & Phillip R Daves, 2004, Intermediate Financial Manajemen, 8 th edition, New York: Mc Graw-Hill.Inc.

[4.] Dendawijaya, L. (2004). Manajemen Perbankan. Jakarta: Ghalia Indonesia.

[5.] Dendawijaya, Lukman, 2005, Manajemen Perbankan, EdisiKedua, Ghalia Indonesia, Bogor

[6.] Himaniar Triasdini. (2010). Pengaruh CAR, NPL dan ROA terhadap Penyaluran Kredit Modal Kerja (Studi pada bank Umum yang Terdaftar di Bursa Efek Indonesia Periode 2004-2009).

[7.] Hery. 2015. Analisis Laporan Keuangan. Edisi 1. Yogyakarta: Center For Academic Publishing Services.

[8.] I Made PratistaYuda. Wahyu Meiranto. 2010. PengaruhFaktor Internal Bank Terhadap JumlahKredit Yang disalurkan. Semarang :Universitas Dipenogoro. Jurnal Akuntansi dan Auditing Vol.7 No.1 November 2010, 94-110. ISSN 2277-5811.

[9.] Jopie Jusuf. 2014, Analisis Kredit Untuk Account Officer. Jakarta: PT Gramedia

[10.] Julita, 2011. Pengaruh Debt To Equity dan Long Term Debt to Equity Ratio terhadap Profitabilitas Perusahaan. (Studi Kasusterhadap Perusahaan Telekomunikasi yang terdaftardibursaefekindonesia).

[11.] Kasmir, 2014. Analisis Laporan Keuangan, cetakan ke-3. Jakarta: PT Raja Grafindo Persada.

[12.] Kuspita, Maya. 2011. Pengaruh CAR, LDR, NPL, BOPO, ROA dan DPS Terhadap Return Saham Pada Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia, Skripsi Fakultas Ekonomi Jurusan Akutansi Universitas Pembangunan Nasional "Veteran", Yogyakarta

[13.] Maharani,I.G.A.C., Suardana,K.A.(2014). Pengaruh Corporate Governance, Profitabilitas, dan Karakteristik Eksekutif Pada Tax Avoidance Perusahaan Manufaktur. E-jurnal Akuntansi Universitas Udayana, Vol 9 (No. 2), hal 525-539

[14.] Oktaviani P, V. D. Doda, Wulan P.J Kaunang. Faktor-FaktorPerilaku yang Berhubungandengan Penggunaan Alat PelindungDiri (APD) Pada Pekerja Proyek Pembangunan Gedung Fakultas Kedokteran di PT. SumberAlam Sejahtera Fakultas Kesehatan Masyarakat Universitas Sam Ratulangi. 2014

[15.] Pranita, Ratih 2008. "Analisis Penawaran dan Permintaan KreditInvestasi". Skripsi. Bogor: Fakultas Ekonomi dan Manajemen, Institut Pertanian Bogor.

[16.] Setianingsih I, 2012, Hubungan Antara Aktifitas Fisik Dengan Persentase Lemak Tubuh Pada Wanita Dewasa Obesitas Di Sport Club House Universitas Brawijaya Malang, Universitas Brawijaya, Malang

[17.] Shandy Bintang Ramadhan.(2013). AnalisisFaktor-faktor yang Mempengaruhi Penyaluran Kredit Perbankan (Studi pada Bank Umum Swasta Nasional DevisaTahun 2007-2011). Skripsi pada Fakultas Ekonomi dan Bisnis Universitas Diponegoro.

[18.] Simorangkir O.P, EtikaBisnis, Jabatan dan Perbankan, Jakarta: PT. RinekaCipta, 2004

[19.] Subegti, RanggaBagus.2010.DeterminasiPenyaluranKredit Bank Umum di Indonesia periode 2006-2009. Jurnal Keuangan dan Perbankan, Vol 14, No. 3 September 2010, hlm 415-424.

[20.] Wiratna Sujarweni. 2017. Analisis Laporan Keuangan. Yogyakarta: Pustaka Baru.