Analysis of Factors Affecting Bank Profitability (Study at PT Bank Rakyat Indonesia (PERSERO) TBK for the Period 2004-2018)

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This study aims to determine the influence of Operational Efficiency Ratio (OER), Loan to Deposit Ratio (LDR) and Non Performing Loans (NPL) on Return On Assets (ROA) at PT Bank Rakyat Indonesia. This study uses secondary data obtained through documents in the form of PT Bank Rakyat Indonesia financial statements for the period of 2004-2018. The research method used is a descriptive verification method. Data analysis uses multiple linear regression analysis. The results of this study indicate that partially, Operational Efficiency Ratio (OER) has a negative effect on Return On Assets (ROA). Non Performing Loans have a positive effect on Return On Assets (ROA). While the Loan to Deposit Ratio (LDR) does not affect Return On Assets (ROA). Simultaneously, the results of the study show that Operational Efficacy Ratio (OER) and Loan to Deposit Ratio (LDR) and Non Performing Loans (NPL) have an effect on Return On Assets (ROA).

Key words: *Operational Efficiency Ratio (OER), Loan to Deposit Ratio (LDR), Non Performing Loans (NPL), Return on Assets (ROA).*

Preliminary
Research Background

The soundness of the bank can be seen from several indicators. One of the main sources that can be used as assessment material is through financial reports issued by the bank. Through the published financial statements a number of financial ratios can be calculated which are commonly used as the basis for evaluating the soundness of the bank. Some of the factors that must be considered by analysts in analyzing and assessing financial position are: (1) Liquidity, which shows the ability of a corporation to fulfil its short-term liabilities that must be fulfilled when billed. (2) Solvability, namely the ability of the corporation to fulfil all its long-term liabilities if the corporation is liquidated; both short-term and long-term obligations. (3) Profitability shows the capability of the corporation to raise profit during a particularistic period (Munawir, 2014).

One phenomenon that is happening in Indonesia is that the level of bank profitability continues to decline. The level of bank profitability has continued to decline over the past 5 years due to weak margins in lending, plus the high ratio of non-performing loans. This was stated by the Head of the Board of Commissioners of the Deposit Insurance Corporation (LPS) Halim Alamsyah Halim. He mentioned that one of the causes of a weak interest margin is the continued trend of declining credit interest. That, said Halim, makes banks have to work harder to generate higher profits.

In addition, Halim also highlighted the quality of loans that have not yet been recovered. Ironically, the credit restructuring relaxation policy was changed by the Financial Services Authority (OJK), even though the credit at risk ratio was still high. The decline in bank profitability, Halim described, is through a decline in the Return on Assets (ROA) of banks in the last 3 years. For example, for Banks with large assets or Commercial Banks Business Activities (BUKU) IV, the acquisition of ROA in December 2017 reached 4 percent, then decreased to a range of 2.5 percent, until 3 percent in December 2016, and stagnant in the range of 3 percent in September 2017. "From my data, in addition to weakening credit, yes, it has also been seen from 2011. ROA continues to decline. Now, it is difficult to exceed 3 percent overall," he said. (http://neraca.co.id).

As the oldest bank, Bank Rakyat Indonesia (BRI) remains consistent in providing merit to the segments of the micro, small and medium businesses and this commitment has continued from when BRI became a public company in 2003 until now. With the support of mature experience and capabilities in providing banking services, BRI was able to maintain its achievements as the bank with the biggest profit among the Indonesian banking industry. However, information was obtained that the ROA for PT BRI had decreased over the past

few years. The ratio of BRI ROA in 2017 was recorded at 3.54%, a decrease from 2016 (3.66%). (http://keuangan.kontan.co.id)

Bank Indonesia states that several factors influence bank performance, namely NPL (Non Performing Loans), LDR (Loan to Deposit Ratio), and OER (Operational Efficiency Ratio). The increasing level of NPL ratios can lead to weakening of profitability (ROA) in banks; this is because an increase in NPLs can increase reserves for elimination of earning assets. In addition, the LDR level, which has decreased and is not in line with banking targets, is also one of the causes of weakening profitability (ROA). There are also other causes that effect a decrease in ROA, which is a significant level of OER due to high bank lending rates (www.bi.go.id).

Problem Identification

What are the factors that affect bank profitability at Bank Rakyat Indonesia from the year of 2004 until 2018?

Literature Review
Bank Profitability

Profitability is the capability to generate profits for a period of time with, the assets or capital possessed. Profitability ratio is a ratio used to count the effectiveness of enterprise management as a whole seen from the amount of profits obtained by the company (Munawir, 2010).

Return on Assets (ROA) is a ratio that describes the results of the use of company assets in generate net income, on the other hand, this ratio is used to count how much net income will be generated from each rupiah embedded in total assets (Hery, 2015).

ROA is selected as a measure of performance indicators for bank because ROA is used to show the effectiveness of an enterprise in raising profits by utilizing its assets. The higher the ROA, the better the financial performance because the rate of return is greater. If ROA increases, it means that the profitability of the company increases; so the final impact is increased profitability enjoyed by shareholders.

Operational Efficiency Ratio (OER)

Operational Efficiency Ratio (OER) is the comparison of operational costs to operating income which is used to describe the level of efficiency and capability of banks in carrying

out their operational activities. Operational Efficiency Ratio, or commonly called BOPO ratio, is one of the calculations in profitability analysis. The large number of operating costs or expenses and operating income can be seen in the calculation of the income statement of the bank concerned. (Lukman, 2009) OER has become one of the ratios whose value changes are very important, especially for the banking sector, considering that one of the criteria for determining the soundness of banks by Bank Indonesia is the value of this ratio.

Loan to Deposit Ratio (LDR)

Loan to Deposit Ratio (LDR) is a ratio to gauge the composition of the sum of loans given compared to the amount of funds received from community and owner's equity (Kasmir, 2012).

Latumaerissa (2014) argues that the LDR ratio is the ratio of banking company benefits related to liquidity aspects. This ratio illustrates the extent to which deposits are used for lending. If the level of the LDR ratio is too low, the higher the level of bank liquidity and this will cause the bank losses. An LDR ratio that is too high causes higher credit to be given and causes liquidity difficulties (Kamarudin et al., 2019).

Non Performing Loan (NPL)

Non Performing Loans are non-performing receivables to all credit. The receivables referred to are loans given to third parties excluding credit to other banks. Whereas non-performing loans are loans with substandard, doubtful and lost quality. This non-performing loan is calculated on a gross basis (Taswan, 2012: 61)

Banks face credit risks (jammed or unpaid). Credit that will default will be made a bad credit reserve. If the numbers related to the bad credit increases, the analysis must be more vigilant, because the bank can experience difficulties in getting their money back (Mamduh, 2014: 331)

Analysis of Factors That Affect Bank Profitability

Bank Indonesia states that several factors influence bank performance, namely NPL (Non Performing Loans), LDR (Loan to Deposit Ratio) and OER (Operational Efficiency Ratio). The increasing level of NPL ratios can lead to weakening of profitability (ROA) in banks; this is because an increase in NPLs can increase reserves for elimination of earning assets. In addition, the LDR level which has decreased and is not in line with banking targets is also one of the causes of weakening profitability (ROA). There are also other causes that cause a

decrease in ROA, which is a significant level of OER due to high bank lending rates (www.bi.go.id).

Research Hypothesis

Based on literature review and research objectives, the hypothesis that can be made in this study is:

H_1: There is influence of OER on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

H_2: There is influence of LDR on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

H_3: There is influence of NPL on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

H_4: There is influence of OER, LDR, and NPL on ROA at Bank Rakyat Indonesia for the period 2004-2018.

Method of Research
Type of Research

The type of research in this study is descriptive verification.

Data and Sources of Data

The data obtained in this research is secondary data, which can be measured by the numbers from annual statements of finance. Data in this study was obtained from the official website of PT. BRI (Persero) Tbk.

Statistical Hypothesis

Hypothesis 1:

H_0: $\beta_1=0$,   There is no effect of OER on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

H_1: $\beta_1\neq0$,   There is the influence of OER on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

Hypothesis 2:

H_0: $\beta_2=0$,   There is no effect of LDR on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

H_1: $\beta_2 \neq 0$,   There is the influence of LDR on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

Hypothesis 3:

H_0: $\beta_2 = 0$,   There is no effect of NPL on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

H_1: $\beta_2 \neq 0$,   There is the influence of NPL on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018..

Hypothesis 4:

H_0: $\beta_1 = \beta_2 = 0$,   There is no influence of OER, LDR, and NPL on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

H_1: $\beta_1 = \beta_2 \neq 0$,   There are the influence of OER, LDR, and NPL on ROA at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018.

Data Analysis Technique
Descriptive Statistics Analysis

In this study, analysis of descriptive statistics is used to get a description of the amount of OER, LDR, NPL, and ROA.

Analysis of Multiple Linear Regression

Analysis of multiple linear regression is a statistical technique that is used to predict how the independent variables effect the dependent variable. In the regression analysis, besides measuring the strength of influence between 2 or more variables, it also shows the direction of the relationship between the dependent variable and the independent variable (Ghozali, 2016).

In this study there is one dependent variable (Y) and three independent variables (X). The equation of multiple linear regression in this study is able to be described as follows:

$$Y = \alpha + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + e$$

Multiple Linear Regression Analysis has classic requirements or assumptions that must be fulfilled so that the prediction model produced will be BLUE (Best Linear Unbiased Estimation).
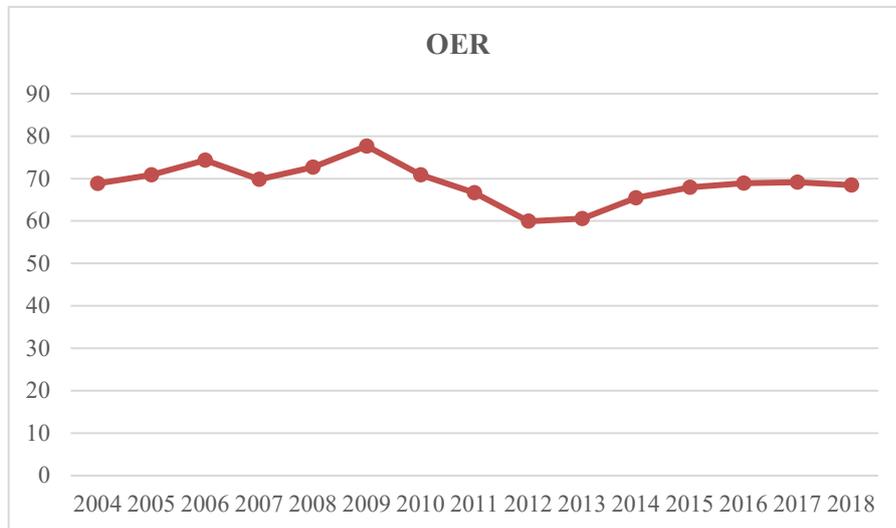Hypothesis testing is carried out consisting of partial hypothesis testing (t-test) and simultaneous hypothesis testing (F-test).

Results and Discussion
Descriptive Analysis

Description of Operational Efficiency Ratio (OER) at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018
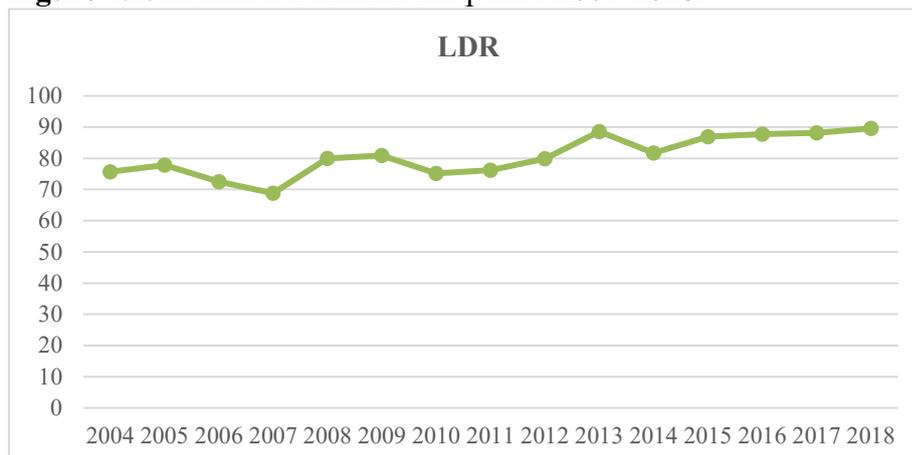
Figure 4.1. OER at PT BRI for the period 2004-2018

Based on the graph, it is known that OER values fluctuated up and down throughout 2004 to 2018. The highest OER value was in 2009 at 77.66% and the lowest OER value in 2012 was 59.93%. The average OER value for the period 2004-2018 was 68.81%.

Description of Loan to Deposit Ratio (LDR) at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018
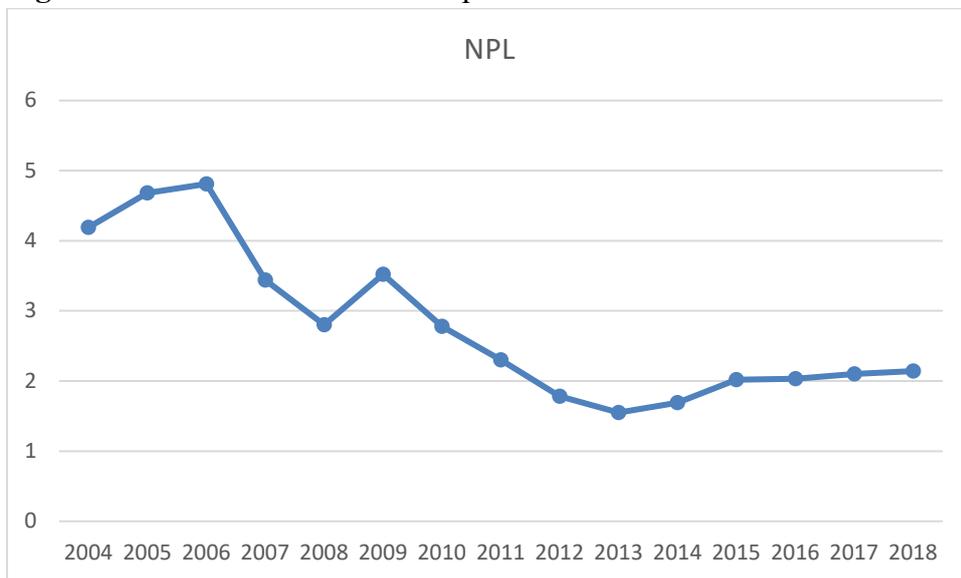
Figure 4.2. LDR at PT BRI for the period 2004-2018.

Based on the graph it is known that the LDR value fluctuated up and down throughout 2004 to 2018. The highest LDR value was in 2018 at 89.57% and the lowest LDR was in 2007 at 68.8%. The average LDR value for the period 2004-2018 was 80.63%

Description of Non Performing Loan (NPL) at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018
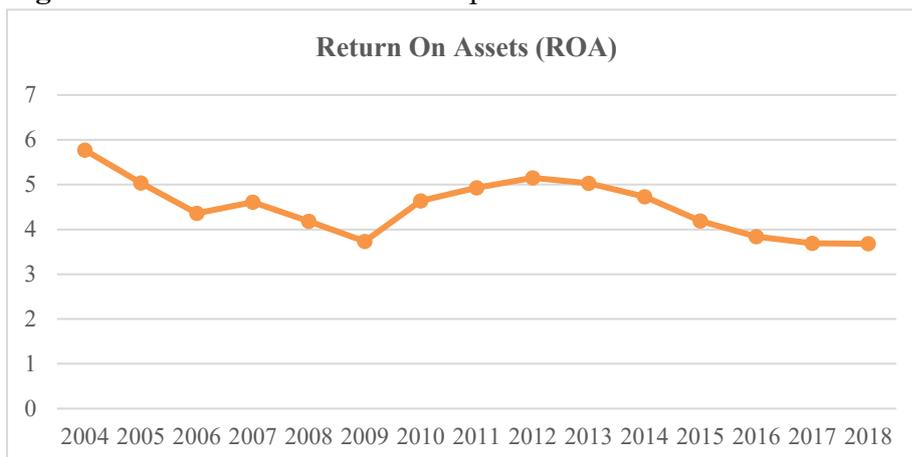
Figure 4.3. NPL at PT BRI for the period 2004-2018

Based on the graph it is known that the value of NPL fluctuated up and down throughout 2004 to 2018. The highest NPL value was in 2006 at 4.81% and the lowest NPL value was in 2013 at 1.55%. The average NPL value for the period 2004-2018 was 2.79%.

Description of Return on Assets (ROA) at PT Bank Rakyat Indonesia (Persero) for the period 2004-2018

Figure 4.4. ROA at PT BRI for the period 2004-2018

Based on the graph it is known that the value of ROA fluctuates up and down throughout 2004 to 2018. The highest ROA value is in 2004 at 5.77% and the lowest ROA value is in 2018 which is equal to 3.68%. The average value of ROA during the period 2004-2018 was 4.5%.

Analysis of Factors Affecting Bank Profitability
Classical Assumption Test Results

In order for the analysis carried out to be BLUE (Best, Linear, Unbias and Estimator), the assumption test will first be carried out.

1. Normality Test Results

   Based on the results of the normality test it's able to be deduced that the data tested in this research is normal because of the value of significance (2-tailed)> than 0,05.

2. Multicollinearity Test Results

   The output of the VIF test turns out which the value is 3,042 which means that it is less than 10, it can be deduced that the data doesn't have multicollinearity.

3. Heteroscedasticity Test Results

   Based on Heteroscedasticity Test can be deduced that in this regression model, there is no heteroscedasticity.

4. Autocorrelation Test Results

   Based on the results of autocorrelation test, the value of Durbin Watson is between 1,543 - 2,457 or according to criteria du <d <4-du (1,543> 2,107 <2,457). Thus it can be concluded which in this regression model there is no problem of autocorrelation.

Tabel 4.1: Table of Results of Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.158	.020		7.856	.000
	OER	-.138	.025	-1.020	-5.453	.000
	LDR	-.035	.018	-.365	-1.952	.077
	NPL	.374	.136	.653	2.748	.019

Multiple Linear Regression Analysis

Based on the results of the regression analysis calculation table above, the regression equation can be determined as follows:

$Y = 0{,}158 - 0{,}138X_1 - 0{,}035X_2 - 0{,}374X_3$

Based on the equation above, the explanation can be said as follows :

1. Constant (βo)

   The constant value (a) of 0.158 shows the magnitude of the dependent variable (ROA) is 0.158 if it is not influenced by independent variables (BOPO, LDR, and NPL).

2. Coefficient of Operational Efficiency Ratio (OER)

   $\beta_1 = -0{,}138$ shows the value of the influence of OER is negative at -0.138 units against ROA, which means that every increase in OER (X_1) of 1 unit will cause a decrease in ROA (Y) of -0.138 units assuming the other independent variables are constant (fixed).

3. Coefficient of *Loan to Deposit Ratio* (LDR)

   $\beta_2 = -0{,}035$ show the influence value of LDR variable is negative at -0.035 units against ROA, which means that any increase in LDR (X_2) of 1 unit will cause a decrease in ROA (Y) of -0.035 units with assuming other independent variables are constant (fixed).

4. Coefficient of *Non Performing Loan* (NPL)

   $\beta_3 = 0{,}374$ shows the influence value of NPL variable is positive at 0.374 units against ROA, which means that every increase in NPL (X_3) of 1 unit will cause an increase in ROA (Y) of 0.344 units assuming the independent variable others are constant (fixed).

The results of the t-test calculation show t count> t table (| -5,453 |> 2,201), this shows that the OER variable negatively effects on ROA. The output of the calculation of the t test show t count <t table (| -1,952 | <2,201), this shows that the LDR variable does not affect ROA. The results of t-test calculations show t count> t table (2,748> 2,201). This describes that the NPL variable positively affects ROA.

The results of the calculation of the F test show F count > F table (14,291> 3,29), this shows that the variables OER, LDR, and NPL have a simultaneous effect on ROA.

Coefficient of Determination (R²)

In this multiple linear regression, the magnitude of R^2 is analyzed. Usage of the test in this study is to see the influence of independent variables on the dependent variable. The value of R^2 is 0.796 or 79.6%. This shows that the variation of the dependent variable Return on Assets (ROA) is able to be explained together by the independent variables of 0.796 or 79.6%, while the rest (20.4%) is influenced by another variable(s) that has not been studied.

Conclusion

1. The average OER value for PT Bank Rakyat Indonesia for the period 2004-2018 is 68.81%. The highest BOPO value is 77.66% and the lowest BOPO value is 59.93%.
2. The average LDR value of PT Bank Rakyat Indonesia for the 2004-2018 period was 80.63%. The highest LDR value was 89.57% and the lowest LDR was 68.8%
3. The average NPL value at PT Bank Rakyat Indonesia for the 2004-2018 period was 2.79%. The highest NPL value of 4.81% and the lowest LDR value of 1.55%
4. The average value of ROA at PT Bank Rakyat Indonesia for the 2004-2018 period is 4.5%. The highest ROA value is 5.77% and the lowest LDR value is 3.68%.
5. OER has a negative effect on ROA at PT Bank Rakyat Indonesia for the period.
6. LDR does not affect ROA at PT Bank Rakyat Indonesia for the period.
7. NPL has a positive effect on ROA at PT Bank Rakyat Indonesia for the period.
8. OER, LDR, and NPL, simultaneously affect ROA at PT Bank Rakyat Indonesia for the period.

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