Research.

THE EFFECT OF CREDIT RISK AND CAPITAL ADEQUACY RATIO UPON RETURN ON ASSET
(A Case Study at Banking Listed in Indonesia Stock Exchange)

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Abstract. *The aim of study to examine the effect of credit risk as measured by non performing loan, and capital adequacy ratio to profitability level measured by return on assets in banking companies listed in Indonesia Stock Exchange (IDX). This research belongs to causative research. The population in this study is the state-owned banks listed on Indonesia Stock Exchange. The sample of this study is determined by purposive sampling method so that obtained four sample companies. The type of data used is secondary data obtained from www.idx.co.id. The analysis method used is multiple regression analysis, correlation, determination and partial test of hypothesis with t test and simultaneously with F test.*
Based on the results of multiple regression analysis with 5% significance level, the results of this study conclude: (1) non performing loan has a negative and significant influence on profitability in banking companies listed on Indonesia Stock Exchange (2) capital adequacy ratio positively affect profitability on banking industry listed on Indonesia Stock Exchange. So simultaneously and together it can be concluded that NPL and CAR have an effect on ROA.

Keywords: non performing loan, capital adequacy ratio, return on asset

INTRODUCTION

In daily talks, banks are known as financial institutions whose main activity is receiving current account, savings and deposits. Then the bank is also known as a place to borrow money (credit) for people who need it. In addition, the bank is also known as a place to exchange money, move money or receive all forms of payment. According to the Law of the Republic of Indonesia Number 10 of 1998 dated November 10, 1998 concerning banking, the meaning of Bank is "a business entity that collects funds from the public in the form of savings and distributes it to the community in the form of credit and or other forms in order to improve the standard of living the people "(Kasmir, 2014: 24).

In order for the public to keep the money in the bank, the banks provide stimulus in the form of remuneration that will be given to the depositors. Such remuneration may be interest, profit sharing, prize, service or other remuneration. The higher reward given, will increase public interest to save money. Therefore, the banks must provide various stimulus and beliefs so that people are interested to invest funds. To assess a bank's health can be seen from various aspects. This assessment aims to determine whether the bank is in healthy or unhealthy condition so that Bank Indonesia as supervisor and coach of banks can provide direction or guidance on how the bank should be run or even stopped its operations.

To be able to maintain public trust, the bank must maintain its financial performance. Bank financial performance can be assessed from several indicators. One of the main indicators used as the basis for valuation is the financial statements of the bank concerned. Based on the financial statements will be calculated a number of financial ratios that are commonly used as the basis for assessment of bank soundness. Financial ratio is a technique of analysis in the field of financial management which is used as a measure of the financial condition of a company in a certain period or business results of a company at a certain period by comparing two variables taken from the financial statements of the company, both the balance sheet and profit and loss. Profitability ratio is one of the financial ratios that can be used to measure the effectiveness of the company in obtaining profit, or in other words profitability is a ratio that shows the company's ability to generate profit from its operational activities.

LITERTAURE REVIEW AND REASEARCH HYPOTHESES

A. Profitability

According to Sartono, RA (2010: 122) stating that "Profitability is the ability of companies to earn profits in relation to sales, total assets and own capital". According to Kashmir (2011: 196) profitability ratio is "the ratio to assess the ability of companies in the search for profit". According to Sawir (2008: 56), profitability is the end result of various policies and management decisions. The profitability ratio will provide the final answer on the effectiveness of corporate managers and provide an overview of the effectiveness of corporate management. Riyanto (2009: 36) Profitability is the ability of a bank in generating business profits with its own capital and foreign capital used to generate such profits.

Based on the opinion of the experts above, it can be concluded that the profitability ratio is the ratio to measure the level of effectiveness of management (management) company shown by the amount of profit resulting from sales and investments. The bottom line is the use of this ratio shows the efficiency of the company.

1. Profitability related to sales

    The first ratio to be considered is the ratio of gross profit margin. This ratio shows the profit of the firm relative to the sale after deducting its cost of production. This ratio is a measure of the company's operating efficiency. The second ratio to be considered is the ratio of net profit margin, the ratio that measures the profitability of the firm from sales after calculating all costs and income taxes. Taking these two ratios together simultaneously, it is given an assessment of the company's operations. If the gross profit margin declines, it is known that the cost of production has increased relative to sales. This is due to lower prices or lower operating efficiency with respect to volume. Therefore, these factors must be analyzed to determine the true cause.

2. Profitability related to investment

    One measure of profitability relating to investment is the rate of return on investment or return on assets (ROA). This ratio measures the effectiveness of the company, in this case the bank utilizes all funds, showing the effectiveness of management in using assets to gain profitability. The ratio used to measure the ability of bank management in obtaining profit before taxes resulting from the average total assets.

    Factors affecting bank profitability can be sourced from operating performance indicated by some indicators. One of the main sources of indicators used as the basis for valuation is the financial statements of the banks concerned. Based on the bank's

financial statements, it can be calculated a number of financial report ratios that are commonly used as the basis for bank soundness rating such as capital ratio with CAR measurement, earning asset quality with NPL measurement. The high profitability of a company shows that most of the company's financial performance is said to be good, If the company's financial performance in generating profits increases then this will show the attractiveness of investors and potential investors in investing keperusahaan. For banks, the main advantage is obtained from the difference between the deposit interest given to the depositor with the interest on the loan or the credit being disbursed.

Profitability of a company is measured by the success of the company and the ability to use its assets productively, thus the profitability of a company can be known by comparing the profit earned in a period with the amount of assets or the amount of capital the company. Profitability is often used to measure the efficiency of capital use in a company by comparing profit with capital used in operations, therefore large profits do not guarantee or measure the company's success. Using profitability for a company's efficiency measures is a good way, because it will be difficult for companies to increase profitability without increasing efficiency. The formula for calculating ROA is as follows:

Ratio	Predicate
NPL $\leq$ 5%	Health
NPL > 5%	Unhealth

Profitability is measured by Return On Assets (ROA). According to Kasmir (2006: 280) ROA is a ratio to measure the ability of management to generate income from asset management. To measure the ability of bank management in gaining overall profit. The greater the ROA of a bank, the greater the level of bank profits and the better the bank's position in terms of asset use. In other words, the higher this ratio the better the asset productivity in obtaining net profit. This will further increase the attractiveness of the company to make the company terseut increasingly in demand by investors, because the rate of return or dividend will increasingly. Based on the above explanation, the Hypothesis proposed in this study is:

H_1 : Credit risk (NPL) and capital adequacy ratio (CAR) has a significant effect on profitability (ROA).

B. Credit Risk

According to Siamat (2008: 84) the definition of problem loans is "Problem loans or problem loans can be interpreted as loans that have difficulty repayment due to the gap factor and or because external factors beyond the ability of the debtor." Dendawijaya (2008: 82) said that non performing loans is a failure of the debtor to fulfill its obligation to pay installment (principal) loan with interest agreed by both parties in the credit agreement. According to Dendawijaya (2009), non-performing loans are loans whose collectibility category is included in the non-performing loans (NPL) criteria. This ratio shows the bank's management capability in managing non-performing loans provided by banks. This means that the higher the ratio will be the worse the quality of bank credit that causes the number of non-performing loans is greater, then the possibility of a bank in the increasingly troubled condition is the loss caused by the return of bad credit. Anwar, Y (2016) credit risk is measured using NPL ratios showed no significant difference, but an increase in NPL ratios.

According to the above definition, non-performing loans represent loans that have been deferred in the payment of principal installments and interest arrears or even not paid at all, due to the inability of the debtor to pay it, so the credit repayment

is not done on time and in accordance with the credit agreement. According to Bank Indonesia Regulation No. 7/2/PBI/2005 concerning the assessment of the quality of the assets of commercial banks Article 10, in determining credit quality, banks are required to pay attention to business prospects, performance and ability to pay the debtor.

One of the risks faced by banks is the risk of unpaid credit that has been given or often called credit risk. Credit risk or default risk generally arises from various credits that fall into the Non Performing Loan category. The existence of Non Performing Loan in sufficient quantities can cause difficulties as well as lower the soundness of the bank concerned. The level of credit risk diprosikan with NPLs can be used to measure the extent to which the existing problem loans can be met with productive assets owned by a bank. This ratio can be formulated as follows (As per SE No.6/23/DPNP May 31, 2004). The formula for calculating NPL is as follows:

$$Non\ Performing\ Loan = \frac{Credit\ Risk}{Total\ Credit} \times 100\%$$

The health rating criteria of the NPL ratio can be seen in the table below:

Table 1

Health Assessment Criteria Ratio NPL

Ratio	Predicate
NPL ≤ 5%	Health
NPL > 5%	Unhealth

Based on the above table, Bank Indonesia set the maximum NPL value is 5%, if the bank exceeds the limit given then the bank is said to be unhealthy. Based on the above explanation, the Hypothesis proposed in this study is:

H_2 : Credit risk (NPL) has a significant effect on profitability (ROA).

C. Capital adequacy Ratio

According to Brigham Houston (2011:258) Working capital is sometimes called gross working capital, simply referring to current assets used in operations. Net Working Capital is defined as current assets minus all current liabilities. Net Operating Capital is defined as current assets less current liabilities that are not subject to interest (accounts payable and accrued). Then it can be concluded that the bank's capital is the funds invested by the owner to finance activities at the time of establishment of the bank's business.

Capital is a factor that is very important for the development and progress of the bank, as well as an effort to maintain public confidence. As a business entity, bank capital should be used to safeguard the likelihood of losses arising from movements in bank assets that are primarily derived largely from third party loans (community funds). Capital adequacy in this study is proxied through Capital Adequacy Ratio (CAR). The CAR shows how much bank capital has been sufficient to support its needs and as a basis for assessing the prospects for continued business of the bank concerned (Dendawijaya, 2008:122).

According to Mudrajad Kuncoro and Suhardjono (2011 519), CAR (Capital Adequacy Ratio) is:"Capital adequacy demonstrates the bank's ability to maintain

sufficient capital and the bank's management capability in identifying, measuring, controlling and controlling risks that may affect the size of bank capital". According to Dahlan Siamat (2008:174) Capital bank is also a fund invested by the owner in the framework of the establishment of a business entity that is intended to finance the business activities of banks in addition to meeting the rules set.

Based on the opinions of the experts above, it can be concluded that the CAR is the capital adequacy ratio that serves to bear the risk of losses that may be faced by the bank. The higher the CAR the better the bank's ability to bear the risk of any credit / earning assets at risk. If the CAR value is high then the bank is able to finance its operational activities and contribute substantially to profitability.

In Bank Indonesia Circular Letter No.10/15/PBI/2008 article 2, paragraph 1 stated that banks are required to provide minimum capital of 8% of risk-weighted assets, CAR is a ratio showing how much the total assets of banks that are at risk (credit, investments, securities, claims to other banks) are financed from their own capital in addition to obtaining funds from sources outside the bank (PBI, 2008). The basic formula of calculation Capital Adequacy Ratio mathematically according to Kuncoro and Suhardjono (2009: 125) are as follows:

$$Capital\ Adequacy\ Ratio\ =\ \frac{Capital}{ATMR}\ x\ 100\%$$

Capital component consists of core capital and supplementary capital by taking into account the inclusion of the bank as a subtracting factor of capital, so that the ATMR of commercial banks is calculated based on the risk weight of each balance sheet and administrative account item. Bank Indonesia sets a policy for each bank to meet a minimum CAR of 8%, if less than 8% will be subject to sanctions by Bank Indonesia. The CAR provisions are in principle adjusted to the internationally accepted provisions. Based on the above explanation, the Hypothesis proposed in this study is:

H_3 : Capital adequacy ratio (CAR) has a significant effect on profitability (ROA).

D. Reasearch Framework

Based on introduction and theory of profitability, credit risk, and capital adequacy ratio, the research framework can be described as follows:
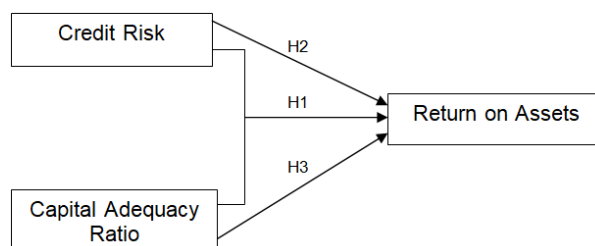

Figure 1. Research framework

METHOD

A. Population and Sample

Population is the whole object that meets certain requirements and is related to the problem under study. The population to be observed in this study are all banking

companies listed on the Indonesia Stock Exchange during the observation year from 2006 to 2015, with a population of 22 banking companies that have gone public. Sample selection is done by purposive sampling technique, that is sample selection based on certain criteria. Criteria to be used are:

1. Banking companies that have been public and listed on the Indonesia Stock Exchange from 2006 to 2015.

2. The company did not experience delisting during the observation period. Delisting is the non-fulfillment of the requirement of the listing of securities issuers that have made a public offering in the capital market.

3. Publish annual financial statements from 2006 to 2015.

4. BUMN Banking Industry (state owned enterprises) consisting of, Bank BRI, Bank BNI, Bank BTN and Bank Mandiri.

B. Research Variable

Understanding independent variables according Sugiyono (2010: 59) namely: a variable that is often referred to as a variable stimulation, predictor and antecedent. This variable is commonly called the independent variable, where this variable is a variable that affects or causes the change or the incidence of the dependent variable. Dependent variables are often referred to as output variables, criteria, consequent or dependent variables. The dependent variable is a variable that influences or becomes a result, because of the independent variables. Therefore, the dependent variable (Y) in this study is profitability (ROA) which megukur the ability of banks to obtain profits from assets owned. Therefore, the independent and dependent variables in this study are:

1. Credit Risk

Represents the ratio of credits indicating the amount of credit disbursed that has problems regarding the failure of the debtor to fulfill its obligation to pay the principal installment and the agreed interest.

2. Capital Adequacy Ratio

Capital Adequacy Ratio shows how much bank capital is sufficient to support its needs and as a basis for assessing the prospects for the continuation of the business of the concerned bank (Dendawijaya, 2008: 122). Capital Adequacy Ratio is the ratio between the amount of capital itself to risk-weighted assets.

3. Return on Assets

Dependent variables are often referred to as output variables, criteria, consequent or dependent variables. The dependent variable is a variable that influences or becomes a result, because of the independent variables. Therefore, the dependent variable (Y) in this study is the return on assets (ROA) which measures the ability of banks to obtain profits from assets owned.

C. Data Analysis

In accordance with research objectives and hypotheses, the data analysis aims to determine the role of each independent variable in influencing the dependent variable. Before performing regression analysis, there are several testing requirements that must be fulfilled so that the results of data processing really describes what the research objectives are:

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1. Classic assumption test

    Classic asumi testing is done to determine the condition of existing data in order to determine the appropriate model of analysis. To test whether the equation of regression line obtained linear and can be used to forecasting, it must be tested classical assumption that is:

    a. Multicolonierity test

        Multicolonial test is intended to test whether the regression model found a correlation between independent variables. Basically multicolonierity is the existence of a perfect linear relationship (close to perfect) between some or all of the independent variables (Mudrajat Kuncoro, 2004: 98). This calculation will then be calculated through SPSS (Statiscal Prectice for Social Science) version 21 and if on the independent variable there is a value of variance inflation factor more than 10 then there is multicolonierity.

    b. Normality test

        Normality test is a test about the normality of the dependent variable distribution and the independent variable in the regression model. According to Ghozali (2009), a good regression model should have a normal data distribution or spread of statistical data on the diagonal axis of the normal distribution graph. If the assumption is violated, the statistical test becomes invalid for a small sample count. The statistical test that can be used is Kolmogorov-Smirnov non-parametric statistical test (K-S). The basic decision-making when done probability (asymptotic significancy), that are (1) Probability > 0.05, data distribution is normal and (2) Probability < 0.05, data distribution is not normal.

    c. Heteroscedasticity Test

        The heterodity assumption test aims to test whether in the linear regression model there is a variant inequality from one observation to another. If the variance and residual one observation to another observation remains, then it is called homocedasticity and if different it is called heteroscedasticity. A good regression model is homoscedasticity or does not occur heteroscedasticity. One way to detect the presence of heteroscedasticity can be done by glejser test. The glejser test considers to regress the residual absolute value of the independent variable (Gujarati, 2009: 93). If the independent variables are statistically significant affect the dependent variable, then indication of heteroscedasticity occurs.

    d. Autocorrelation Test

        The autocorrelation test is an assumption test in the regression where the dependent variable is not correlated with itself. The purpose of correlation with self is that the value of the dependent variable is not related to the variable itself, either the value of the previous period or the value thereafter. The way to detect an autocorrelation is to use Durbin Watson (DW) statistics.

2. Multiple Linear Regression Analysis

    This analysis aims to determine whether the Non Performing Loan and Credit Adequacy Ratio affect the Level of Profitability. In this research, the technique used is multiple regression analysis technique, because the independent variable in this research more than one. Multiple regression analysis technique is a test technique used to determine the effect of independent variables to the dependent variable. The equation of multiple regression analysis can be formulated as follows:

$$Y = α + b_1X_1 + b_2X_2 + ε$$

Note:
Y   = Return on assets
α   = Constant
b_1,b_2 = regression coefficient of each independent variable
X_1 = Non Performing Loan
X_2 = Capital Adequasi Ratio
ε   = Error standar

3. Correlation Coefficient Analysis

This correlation technique is used to find the relation between proving hypothesis relation 2 variable when data of both variable in the form of interval or ratio, and data source of two variables or more is same. (Sugiyono, 2012: 228). The formula for calculating the correlation coefficient is as follows:

$$R_{xy} = \frac{\sum xy}{\sqrt{\sum x^2\, y^2}}$$

R_{xy} = coefficient between variables x and y

For the calculation results on the correlation coefficient value, can be seen in SPSS version 21.0. Where if the values of a variable rise while the values of other variables decrease, then the two variables have a negative correlation. Conversely, if the values of a variable rise and followed by the increase of the value of another variable or the decrease in the value of a variable and followed by the decrease in the value of another variable, the two variables have a positive correlation.The magnitude of the correlation coefficient is -1 ≤ r ≤ 11), if (-) means there is a negative relationship. (2) If (+) means there is a positive relationship. To determine whether a correlation coefficient including strong or weak, according to Sugiyono (2012:231) are as follows:

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Table 2
Cooeficient Correlation

R	Interpretation
± 0	not correlated
± 0.01 - 0.199	very low
± 0.21 - 0.399	low
± 0.41 - 0.599	medium
± 0.61 - 0.799	strong
± 0.81 – 1.000	very strong

source: Sugiyono (2012:231)

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4. Hypothesis testing

   a. Partial testing

   Hypothesis test is done partially between non performing loaan (NPL) and capital adequacy ratio (CAR) to return on assets (ROA) to know the significant level of influence of all independent variables to the dependent variable. To test the significance of a correlation coefficient using t test with the following formula:

$$t_{hit} = \frac{r \sqrt{(n-2)}}{\sqrt{1-r^2}}$$

   t = t-test value
   r = coefficient correlation
   n = number of samples

   The level of significance used is 0.05 (α = 0.05) / 5%. In this research used the error rate of 0.05 because it is a level of significance commonly used for social sciences research and is considered quite strict to represent the relationship between the variables studied. The hypothesis determination for partial test is as follows:

   1) $H_o : \beta_1 = 0$ Credit risk has no effect to return on assets
      $H_a : \beta_1 \neq 0$ Credit risk has effects to level of return on assets

   2) $H_o : \beta_2 = 0$ Capital adequacy ratio has no affect to the Return on Assets
      $H_a : \beta_2 \neq 0$ Capital adequacy ratio hss effects to return on assets

   b. Simultaneous testing

   Hypothesis test is conducted simultaneously between the possibility of credit risk failure and capital adequacy level to the level of profitablity. F test is done by comparing F arithmetic with F table contained in table Analysis of Variance (ANOVA). If the value of Fcount is greater than Ftable or its significance level is less than 5%, then in this case it shows that H_o is rejected with H_a accepted which means that there is significant influence between independent variable (credit risk and capital adequacy ratio) to dependent variable return on assets (ROA) simultaneously. This test is conducted on condition. (1) When F-value < F-table, then H_o is rejected and accept H_a, meaning that together independent variables have no effect on the dependent variable and (2) When F-value > F-table, then H_o is rejected and accept H_a means that together independent variables affect the dependent variable. The hypothesis used is as follows:

   $H_o : \beta1, \beta2 = 0$ Credit risk and capital adequacy have no a significant effect on return on assets

   $H_a : \beta1, \beta2 \neq 0$ Credit risk and capital adequacy rate have a significant effect on return on assets

5. Determination coefficient test (R^2)

   This test aims to measure how far the ability of the model in explaining the variation of bound variables. The coefficient of determination (R^2) denotes the proportions expressed by the independent variables in the model of the dependent variable, the remainder explained by other variables not included in the model, false model formulations and experimental errors. The coefficient of determination is used to find out what percentage of the variation of the

dependent variable can be used by the variation of the independent variable. By formula:

$$R^2 = r^2 \times 100\%$$

note:
R^2 = Determination coefficient
r   = Correlation coefficient

RESULT

A. Descriptive Statistics

To further facilitate in viewing the description of the variables studied and after going through the processing using the SPSS program, these variables can be described statistically as illustrated in Table 3. Descriptive Statistics of Research Variables. From table 3 it can be seen that the sample used in this study is 40 data during the 2006 - 2015 research period. The dependent variable is ROA which shows the mean (average) of 2.9018%, with a maximum value of 5.15% and a minimum value of 0, 90%. The NPL has a mean of 3.7880% with a maximum value of 16.30% and a minimum value of 1.55%. The maximum value of CAR obtained is 25.30% with mean 16,8175% and minimum value 13.18%.

Table 3

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
NPL	40	1,55	16,30	151,52	3,7880	,43078	2,72452
CAR	40	13,18	25,30	672,70	16,8175	,41600	2,63100
ROA	40	,90	5,15	116,07	2,9018	,19495	1,23297
Valid N (listwise)	40						

B. Classic Asumption Test

In multiple regression testing, to obtain accurate research required testing with classical assumptions, namely in the form:

1. Normality Test

Normality test is performed to find out whether the data taken comes from a population that is normally distributed. A good regression model is normally distributed or close to normal. Using SPSS 21.0 software, the following results are obtained at Table 4:

Table 4
Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		40
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	1,03745411
Most Extreme Differences	Absolute	,128
	Positive	,128
	Negative	-,080
Kolmogorov-Smirnov Z		,810
Asymp. Sig. (2-tailed)		,527

a. Test distribution is Normal.
a. Calculated from data.

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Based on the results of normality test by kolmogorov-smirnov method, then obtained Sig value of 0,527 > 0,05 so H_o accepted, meaning residual data of normal distribution so that can be used in parametrik statistic and regression test and correlation can be done.

2. Multicolinearity Test

The way to detect the presence or absence of multicolinearity is to look at its VIF value (Varian Inflation Factor). From the results of SPSS 21.0 obtained the following values:

Table 5
Multicolinearity Test

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3,617	1,127		3,209	,003		
1 Non Performing Loan	-,250	,069	-,552	-3,637	,001	,832	1,203
Capital Adequacy Ratio	,014	,071	,029	,193	,848	,832	1,203

a. Dependent Variable: Return on Assets

All the variables used as the regression models prerequisitors showed a fairly small VIF value, all of which were below 10 (NPL = 1.203 and CAR = 1.203) while the tolerance values were more than 0.1 (NPL = 0.832 and CAR = 0.832). This means showing that the independent variables used in the study do not show the existence of symptoms of multicollinearity, with the understanding of all these variables can be used as independent variables.

3. Heteroscedasticity Test

Heteroskedasticity test is used to determine whether there is correlation between independent variables and confounding variables. The results of this test are shown in Table 6.

Table 6
Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	,796	,628		1,268	,213		
1 Non Performing Loan	,022	,038	,105	,587	,561	,832	1,203
Capital Adequacy Ratio	-,002	,040	-,009	-,049	,961	,832	1,203

a. Dependent Variable: RES2

Based on the results of heteroscedasticity testing, then obtained the value of Sig. Non Performing Loan = 0,561 > 0,05 and Sig value. Capital Adequacy Ratio = 0.961 > 0.05. Then the regression model does not contain any problem of heteroscedasticity. This means that the regression model occurs in the same variance of the residual one observation to another observation or called homoscedasticity.

4. Autocorrelation Test

The autocorrelation test is an assumption test in the regression where the dependent variable is not correlated with itself. The purpose of correlation with self is that the value of the dependent variable is not related to the variable itself,

either the value of the previous period or the value thereafter. The way to detect an autocorrelation is to use Durbin Watson (DW) statistics.

Table 7
Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,540[a]	,292	,254	1,06512	,281

a. Predictors: (Constant), Capital Adequacy Ratio, Non Performing Loan
b. Dependent Variable: Return on Assets

Based on the autocorrelation test in Table 7. Autocorrelation Test Results. It was found that the Durbin-Watson value was 0.281, that means no autocorrelation.

C. Multiple Linear Regression Analysis

Multiple linear regression analysis is used to predict how the state of the dependent variable, if two or more independent variables as a predictor factor are manipulated. The statistical calculation in this multiple linear regression analysis can be seen in table 8 below:

Table 8

Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,617	1,127		3,209	,003
	Non Performing Loan	-,250	,069	-,552	-3,637	,001
	Capital Adequacy Ratio	,014	,071	,029	,193	,848

a. Dependent Variable: Return on Assets

Based on the above table, then obtained multiple linear regression equation as follows:

$$Y = 2,982 - 0,282 X_1 + 0,085 X_2 + \varepsilon$$

The coefficients contained in the above equation can be explained as follows:

1. Constant value (Y) equation above is equal to 3,617 number indicates level Return on Assets (ROA) obtained by company if variable X (NPL and CAR) ignored. This means that when both independent (free) variables are ignored then the ROA variable volume is positive, and if the independent variable (free) is 0 then ROA at Bank Mandiri, BRI, BNI and BTN is 3.617.

2. The regression coefficient of NPL (X_1) = - 0.250 means that if the value of the NPL variable (X_1) is increased by 1 unit, then the ROA (Y) level will decrease by 0.250 with the constant variable X_2 assumption. This negative coefficient value proves that the variable X_1 (NPL) has the opposite relationship to Y (ROA), where if the NPL value increases then the value of ROA will decrease.

3. The regression coefficient of CAR (X_2) = 0.014 means that if the value of the variable CAR (X_2) is increased by 1 unit, then the ROA (Y) rate will increase by 1.014 with the assumption of constant X_1 variable. Positive coefficient value this

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proves that variable X_2 (CAR) have positive effect or have direct relationship to ROA (Y). Where if the value of CAR is rising then the value of ROA will increase.

D. Hypothesis Testing

1. Partial Test

The t test is used to determine the partial influence of the independent variables (NPL and CAR) against the dependent variable (user satisfaction). The following will explain the test of each variable partially presented in Table 8.

Table 8
Partial Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,617	1,127		3,209	,003
	Non Performing Loan	-,250	,069	-,552	-3,637	,001
	Capital Adequacy Ratio	,014	,071	,029	,193	,848

a. Dependent Variable: Return on Assets

Based on Table 8 t test results for variable X_1 (NPL) obtained t-count = -3,637 with a significant level of 0.000. By using the 5% significance limit, we obtain t-table 2.052 hence we get t-value < -t-table or value -3,637 < -2.052 and have Sig value. ie 0.001 < 0.05 then it can be taken a decision that H_o is rejected and H_a accepted. So partially NPL (X_1) has a significant influence on ROA level.

Based on Table 8 t-test results for variable X_2 (CAR) obtained t-value = 0.193 with significance level of 0.848. By using the 5% significance limit, we obtain t-table of 2.052 hence the value of t-value > -t-table or value 0.193 > -2.052, and has sig value > α is 0,848 > 0,05 hence can be taken decision that H_o accepted and H_a rejected in other word that there is no significant influence and direction between X_2 (CAR) to ROA (Y). This is because if an increase in CAR will not cause a decrease in ROA.

Based on Table 8 t-test results for variable X_2 (CAR) obtained t-value = 0.193 with significant level of 0.848. By using the 5% significance limit, we obtain t-table of 2.052 hence the value of t-count > -t-table or value 0.193 > -2.052, and has sig value. < α is 0.848 > 0,05 hence can be taken a decision that H_o accepted and H_a rejected in X_2 (CAR) to ROA (Y). This is because if the increase in CAR will not cause a decrease in ROA.

2. Simultaneous Test

F test is done to test whether there is influence between independent variable (X) with dependent variable (Y) together. Result of the simultaneous test, see Table 9 below:

Table 9
Simultaneous Test

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17,313	2	8,656	7,630	,002[b]
	Residual	41,976	37	1,134		
	Total	59,289	39			

a. Dependent Variable: Return on Assets
b. Predictors: (Constant), Capital Adequacy Ratio, Non Performing Loan

Based on Table 9, the value of F-count is 7.630 with the value of profitability (Sig.) = 0.002, F-value value 7.630 > F-table 3.35, and the sig value is smaller than probability value 0.05 or value 0.002 < 0,05, then H_o is rejected and H_a accepted, so it can be concluded that the level of NPL and CAR together (simultaneously) significantly influence the Return on Assets (ROA).

E. Determination coefficient test (R^2)

The coefficient of determination is used to know how big the influence or high level of influence between Non Performing Loan (NPL) and Capital Adequacy Ratio (CAR) as independent variable to Return on Assets (ROA) as dependent variable. The calculation of coefficient of determination with SPSS 21.0 software can be seen in table 10.

Table 10
Determination Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,540[a]	,292	,254	1,06512

a. Predictors: (Constant), Capital Adequacy Ratio, Non Performing Loan

Based on the results of data in table 10 above shows the results in this study that to determine the contribution of independent variables to the dependent variable is done by using the amount of coefficient value determination (Adjusted R Square). The result of Adjusted R Square is 0.254 where this number indicates that the contribution of all independent variables are NPL (X_1) and CAR (X_2) variable to Return on Assets (Y) variable is 25,4% The rest equal to 74,6% ROA influenced by other variables not examined in this study, such as Net Interest Margin (NIM), Loan to Deposit Ratio (LDR) and Earning Ability (BOPO).

DISCUSSION

The effect of Non Performing Loan (NPL) on Return On Assets (ROA) on Banking Industry Listed on Indonesia Stock Exchange Based on the result of SPSS 21.0 test, t-value -3,637 and t-table 2,052 are obtained t-value < -t-table is -3,637 < -2,052. It means H_o is rejected and H_a accepted, in other words that there is significant influence and have negative or opposite effect between variables X_1 (NPL) with variable Y (ROA). This means that if an increase in NPLs, it will result in a decrease in ROA. According to Dendawijaya (2009) one of the impact of the existence of a high NPL (large) in a company will result in the profit will be reduced so that bad for the profitability of banking.

Based on the results of SPSS 21.0 test obtained tcount = 0.193 with ttable 2.052, then the results obtained t-count > -t-table or 0.193 > -2.052, which means H_o accepted and H_a rejected, in other words that there is no significant influence and direction between X_2 (CAR) against ROA (Y). This is because if an increase in CAR will not cause a decrease in ROA.

Based on result of hypothesis test by using F test (simultan) that shows that this test is used to test the regression coefficient as a whole and to know the meaning of relation between independent variable together with dependent variable. hypothesis testing using 5% significance level, obtained F-count value of 7.630 where this value which will be the test statistic to be compared with the value of F-table calculated by df1 (degrees freely) = 2 and df2 (degrees freely denominator) = 27, then the value obtained F-table of 3.35. Based on the value of F-valuet and F-table value that has been obtained then F-value > F-table or 7.630 > 3.35, which means H_o is rejected and H_a accepted,

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degan other words that simultaneously Non Performing Loans (NPL) and Capital Adequacy Ratio (CAR) together have a significant effect on ROA.

To anticipate and minimize the risk of non-performing loans, it is necessary to have effective and efficient credit management and can be done, one of which is by screening the loan to customers who apply for loan. This loan screening can be done based on prinsp 6C, which are:

1. Character is a character or character of a person in this case is a prospective debtor. The goal is to give confidence to the bank that the nature or character of the prospective customer is truly trustworthy.

2. Capacity is looking at the ability of the prospective customer in paying the loan that is connected with his ability to manage the business and the ability to make a profit.

3. Capital or Capital is to know the sources of loans owned by customers to the business to be financed by the bank.

4. Collateral is a guarantee provided by a prospective customer both physical and non physical. The guarantee should exceed the amount of the loan.

5. The condition of economic (economic condition) is in assessing the financing should also be assessed the current economic conditions and possibilities in the future according to their respective sectors, as well as the business prospects of the sector he runs.

6. Constraint (Constraint) is the principle of the last lending, the principle of this constraint refers to the possibility of pressure (regression) to the presence of potential borrower companies. Such pressure will disrupt the tranquility of management in managing its business.

CONCLUSION

This study aims to examine the effect of credit risk and capital adequacy level on the level of profitability. Based on the results of research and discussion that has been presented in the previous chapters, it is concluded as follows:

1. Credit risk as measured by Non Performing Loan (NPL) has a significant influence on profitability in the banking industry listed on the Indonesia Stock Exchange (IDX) in 2006-2015.

2. The level of capital adequacy as measured by the Capital Adequacy Ratio (CAR) has no significant effect on profitability in the banking industry listed on the Indonesia Stock Exchange (IDX) in 2006-2015.

3. Credit Risk Level (NPL) and Capital Adequacy Ratio (CAR) simultaneously significantly influence the level of Profitability (ROA) in the banking industry listed on the Indonesia Stock Exchange (IDX).

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