

## THE EFFECT OF RETURN ON ASSET (ROA) AND RETURN ON EQUITY (ROE) ON CAPITAL ADEQUACY RATIO (CAR) IN THE LQ 45 LIFTING BANKING SECTOR ON THE INDONESIA STOCK EXCHANGE

(Pengaruh Return on Asset (Roa) dan Return on Equity (Roe) Terhadap Capital Adequacy Ratio (Car) Pada Sektor Perbankan Indeks Lq 45 Lifting Di Bursa Efek Indonesia)

> Muhtyaningsih Harum Ode Halidu Management Studies Program. Faculty of Economics. Iqra Buru University. Maluku. Indonesia

Email: muhtyaningsihuniqbu@gmail.com

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#### Abstract

The goal to be achieved in this study is to determine the effect of Return On Assets (ROA) and Return On Equity (ROE) affecting the Capital Adequacy Ratio (CAR). This research was conducted on banking companies indexed Lq 45 on the Indonesia Stock Exchange (IDX). The analysis used in this research is multiple linear regression analysis with SPSS program. The data collection technique used in this research is using secondary data, namely by using library data for companies with an index of Lq 45 listed on the Indonesia Stock Exchange (IDX). The population in this study are 45 companies indexed Lq 45 on the Indonesia Stock Exchange (IDX) companies that meet the criteria as many as 5 banking companies. Based on the results of research with statistical tests, it shows that partially ROA has a significant effect on CAR. While ROE partially has a significant negative effect on CAR. Based on the F-statistical test, the ROA and ROE variables proved to have a significant negative effect on CAR.

Keywords: Pengaruh; Return on Asset (ROA) dan Return On Equity (ROE)

#### Abstrak

Tujuan yang ingin dicapai dalam penelitian ini adalah untuk menentukan pengaruh Return On Asset (ROA) dan Return On Equity (ROE) mempengaruhi Capital Adequacy Ratio (CAR). Penelitian ini dilakukan pada perusahaan perbankan yang terindeks Lq 45 di Bursa Efek Indonesia (BEI). Analisis yang digunakan pada penelitian ini adalah analisis regresi linear berganda dengan program SPSS. Teknik pengumpulan data yang digunakan dalam penelitian ini adalah menggunakan data sekunder yaitu dengan data kepustakaan perusahaan perankan yang terindeks Lq 45 yang terdaftar di Bursa Efek Indonesia (BEI). Populasi dalam penelitian ini adalah 45 perusahaan yang terindeks Lq 45 di Bursa Efek Indonesia (BEI) perusahaan yang memenuhi kriteria sebanyak 5 perusahaan perbankan. Berdasarkan hasil penelitian dengan uji statistik memperlihatkan bahwa secara parsial ROA berpengaruh signifikan terhadap CAR. Sedangkan ROE secara parsial berpengaruh negative signifikan terhadap CAR. Berdasarkan Uji F-statistik variabel ROA dan ROE terbukti berpengaruh negative signifikan terhadap CAR.

**Kata kunci:** The effect; of Return On Assets (ROA) and Return On Equity (ROE)

#### INTRODUCTION

Bank is a financial institution that functions as an intermediary between parties who have excess funds and those who experience shortages of funds. Banks are also referred to as a medium to facilitate payment traffic. Banking law NO. 10 of 1998 is stated as a business entity that collects funds from the public in other forms in order to improve the standard of living of the community.

Banks collect funds from several sources that are used to carry out bank operations. Banks obtain sources of funds from their own capital and funds from 3rd parties, by having sufficient capital it can make the level of public confidence in the bank will also be good because they consider that with sufficient capital banks can manage their finances well.

Provisions ofBank Indonesia Regulation No. 15/12/PBI/2013 article 2 paragraph 3 states that the minimum capital stock for a bank is no exception for commercial banks is for a bank that has a risk profile rating of at least 8% of its RWA capital and will increase if the risk rating increases as well . Measurement of bank capital fulfillment can be calculated using a measuring instrument called CAR or Capital Adequacy Ratio. The CAR ratio can be calculated based on the total bank capital and the total RWA as a weighting. The function of the CAR ratio is to determine the possible risk of loss that will be faced by a bank by knowing its capital adequacy which is measured in percentage.

Armelia in Nazaruddin, (2017: 13) Banks that have a high CAR are very good because these banks are able to bear the risks that may arise. With adequate capital, banks can carry out their operational activities more efficiently by allocating funds to productive assets that provide benefits for the bank and minimize risks. A high CAR indicates a more stable bank business due to stable public trust. CAR is associated with the level of bank risk. The smaller the risk of

a bank, the greater the profit earned by the bank. (Silvanita in Armelia, 2011).

To find out the condition of a bank, it can be seen from the financial statements presented by the bank on a regular basis. Bank financial statements can be used to assess bank performance over a certain period. This financial report is very useful, especially for owners, management, government, and the public as customers, so that they can know the condition of the bank. From the bank's financial statements, an analysis of the financial statements is carried out so that it can be seen how the development of banking finance and the results that have been achieved in the past.

With the analysis of financial statements, it can be seen what are the weaknesses and level of achievement of the bank itself. By knowing these weaknesses, banks can anticipate by making appropriate policies for bank management. However, apart from internal analysis, banks must also pay attention to external analysis.

The internal analysis used is by using financial ratios in accordance with the provisions in force at the bank. Financial ratios are the results of calculations of two kinds of bank financial data that are used to explain the relationship between the two financial data. By knowing the calculation using the formula to calculate the bank's financial ratios, we will assess the performance of each bank, whether it has worked efficiently and how the soundness of the bank concerned is, as well as what efforts must be made so that the bank can work more efficiently and better.

In this study, the banks studied were banks indexed to LQ 45 for five years on the Indonesia Stock Exchange, including: (1) BBCA (Bank Central Asia) Tbk, (2) BBNI (Bank Negara Indonesia) (Persero) Tbk, (3) BBRI (Bank Rakyat Indonesia) (Persero) Tbk, (4) BBTN (State Savings Bank) (Persero) Tbk, (5) BMRI (Bank Mandiri) (Persero) Tbk.

The Indonesia Stock Exchange is a party that organizes and provides a system and/or means to bring together offers of buying and selling securities of other parties with the aim of trading securities between them. Parties who organize and provide systems and or facilities to bring together offers to buy and sell securities of other parties, as shareholders. Listed issuers include banks indexed LQ45 on the Indonesia Stock Exchange.

The LQ45 index is a stock market index on the Indonesia Stock Exchange (IDX) consisting of 45 companies that meet certain criteria, namely: being included in the top 60 companies with the highest market capitalization in the last 12 months; being included in the top 60 companies with the highest transaction value in the market regular in the last 12 months; has been listed on the Indonesia Stock Exchange for at least 3 months; has high financial condition, growth prospects, and transaction value; and experienced an increase in the free float weight to 100% from previously only 60% in the assessment portion. The companies selected in this research are companies in the banking sector indexed by LO45 that have not experienced a change in position for 5 years.

The soundness of a bank can be measured by its financial ratios, namely the ratio of capital (capital), the ratio of assets (asset quality), management (management), the ratio of profits (earnings), and the ratio of liquidity (liquidity). The capital ratio commonly used to measure the health of a bank is the Capital Adequacy Ratio (CAR). However, CAR is not the only ratio that can be used to assess the soundness of a bank, there are many other factors that can be used to measure banking performance.

The amount of CAR is measured by the ratio of own capital to Risk Weighted Assets (RWA). RWA includes all assets (assets), both current assets and fixed assets as well as intangible assets, which can be in the form of cash, current accounts, equity participation, lending, to fixed assets. The elements of the assets owned have their own level of risk. The level of risk varies, there are 0 percent, 15 percent, 20 percent and 50 percent and even 100 percent of the nominal value as a reference in determining the weighted average risk assets (RWA).

PT. BMRI (Bank Mandiri) Tbk in (2015-2019) experienced an increasing trend in the number of assets. The lowest amount occurred in 2015 amounting 910.063.40, and the highest in 2019 was Rp. 1,318,246,335.-, the average during 2015-2019 was Rp. 738,576,947,-. Following the trend of increasing debt, the lowest amount of debt occurred in 2015 amounting to Rp. 736,198,705.-, and the highest in 2019 was Rp. 1,025,749,580. - , the average 2015-2019 is Rp. 219.589933,-. Then the capital has increased from year to year. The lowest capital in 2015 was Rp. 119,491,841.- and the highest capital in 2019 was 209.034,525. and an average of Rp. 167.372,505.-.

The increase in assets, debt and capital is accompanied by an increase in profit every year. In 2015 was the lowest profit achievement of Rp. 20,446,829.- and the highest in 2019 was Rp. 35,666,668.

Based on the data and information on banking problems above, the author intends to conduct a study with the title " Effect Of Return On Asset (Roa) And Return On Equity (Roe) On Capital Adequacy Ratio (Car) In The Lq 45 Lifting Index Banking Sector In The Indonesia Stock Exchange ".

Based on the described background, the problem formulation of this research is as follows:

- 1. How big is the effect of Return On Assets (ROA) partially on the Capital Adequacy Ratio (Car) in the Banking Sector Lq 45 Lifting Index on the Indonesia Stock Exchange
- 2. How big is the effect of Return On Equity (ROE) partially on the Capital Adequacy Ratio (Car) in the Banking Sector

Lq 45 Lifting Index on the Indonesia Stock Exchange

3. What is the effect of Simultaneous Return On Assets (ROA) and Return On Equity (ROE) on the Capital Adequacy Ratio (CAR) in the Banking Sector Lq 45 Lifting Index on the Indonesia Stock Exchange.

#### RESEARCH METHOD

The object studied in this study is the banking sector that meets the qualifications for the LO 45 Index for 5 consecutive years the Indonesia Stock Exchange. Companies that have an LQ of 45 consist of 45 companies in 2015-2019. There are 10 companies in the banking sector, while only 5 banks qualify. five banks that are used as objects according to their respective financial statements (1). Bank Negara Indonesia, Tbk (2). Bank Rakyat Indonesia, Tbk (3). State Savings Bank, Tbk (4). Bank Central Asia Tbk and (5). Bank Mandiri Tbk. This bank is administratively headquartered and domiciled in Jakarta. For website-based data access using a approach information technology with searching through the internet network.

The time required starts from observation and data collection, processing data, compiling a report which takes 3 (three) months. The research was carried out in May-July 2021 according to the targets set in the research. The population in this study is a number of companies belonging to the LQ 45 index, totaling 45 issuers with various types of business, both trading companies, management industries and companies including banking services. The data collection techniques are as follows;

- 1. Data were collected by data retrieval techniques through online website searches www.idx.co.id and www.bi.go.id.
- 2. Online website search by accessing financial data on the PT. BRI Bank, PT. Bank BCA, PT. BNI Bank, PT. Bank BTN, PT. Bank Mandiri and the Indonesia Stock

Exchange. Scientific journals online, online books, blocks and articles are downloaded by making selections, and choices.

3. The data collected is after being verified, processed as information material, tested and validated with the aim of being accurate, accountable and can be trusted for its authenticity. The method of analysis used in answering the hypothesis is Ordinary Least Squares (OLS) or the method of least squares. multiple linear regression model because it has more than one independent variable. Multiple linear regression analysis is a linear relationship between two or more independent variables (X1, X2,....Xn) with dependent variable the (Y).

#### **DISCUSSION**

#### Indonesia Stock Exchange (IDX)

Indonesia Stock Exchange (IDX) or Indonesia Stock Exchange (IDX) is a party that organizes and provides a system as well as a means to bring together securities buying and selling offers of other parties with the aim of trading securities them. The Indonesia between Exchange is the result of the merger of the Jakarta Stock Exchange (JSX) and the Surabaya Stock Exchange (BES). For the of operational effectiveness transactions, the Government decided to merge the Jakarta Stock Exchange as the stock market with the Surabaya Stock Exchange as the bond and derivatives market to become the IDX. The resulting exchange began operating stock December 1, 2007.

Historically, the capital market has existed long before Indonesia's independence. The capital market or stock exchange has existed since the Dutch colonial era and precisely in 1912 in Batavia. The capital market at that time was established by the Dutch East Indies Government for the benefit of the colonial government or the VOC. Although the capital market has existed since 1912, the

development and growth of the capital market did not go as expected, even during several periods of capital market activity experiencing a vacuum. This was caused by several factors such as the world war which required the stock exchange to be closed. And finally, on November 30, 2007, the Surabaya Stock Exchange (BES) and the Jakarta Stock Exchange (JSX) were merged and changed their names to the Indonesia Stock Exchange (IDX), and this is the beginning of the re-activation of the Indonesia Stock Exchange until now.

To provide more complete information about the development of the stock exchange to the public, the IDX disseminates data on stock price movements through print and electronic media. One indicator of stock price movements is the stock price index. And currently, the IDX has several types of indices, plus a sectoral index as of 09 May 2019. One of several stock price indexes is the LQ45 Index. Where the LO45 Index is an index that measures the price performance of 45 stocks that have high liquidity and large market capitalization and are supported by good company fundamentals.

The Central Statistics Agency (BPS) recorded the number of public companies on the Indonesia Stock Exchange (IDX) as much as 709 as of October 2020. There are 9 business sectors of companies listed on the IDX, these sectors are to separate each company industry so that the classification is easier.

On the Indonesia Stock Exchange (IDX), there are hundreds of companies listed on the capital market. So that investors or shareholders can manage portfolios and risk management easily, these companies are then divided into 9 stock sectors. This division is based on related company data to divide it by industry type. The company's 9 business sectors are listed on the IDX and their sub-sectors.

1. Agriculture, covering various businesses in the fields of plantations, food crops,

- animal husbandry, forestry, engagement, to services related to the agricultural industry.
- 2. Mining, this industry emphasizes companies engaged in mining, for example coal mining, petroleum mining, quarrying rocks, sand, or clay, mineral mining, to mining asphalt and limestone.
- 3. Basic Industry & Chemicals, this sector uses companies for classification in the field of basic materials and chemicals. The sub-sectors related to this sector include; Cement (cement), Ceramics, Glass, Porcelain (Ceramics, glass, and porcelain), Chemicals (chemicals), Plastics and Packaging (Plastics and packaging) and other sub-sectors.
- 4. Miscellaneous Industries or Miscellaneous Industry, industries belonging to this sector are businesses in the manufacture of machinery, both heavy machinery, light machinery, to supporting components.
- 5. The Consumer Goods Industry sector includes companies engaged in the management of basic or semi-finished materials into products that can be consumed by the public. Examples are Food And Beverages (food and beverages), Tabacco Manufacturers (cigarettes), and other sub-sectors.

#### Multicollinearity Test

According to Ghozali (2016), multicollinearity testing aims to test whether the regression model is found to have a correlation between independent (independent) variables.

The research variable to measure the influence relationship consists of the dependent and independent variables, both variables must be linear (similar). The relationship is linear and classified in the degree of relationship that is not perfect, close to perfect and perfect and this occurs

in the relationship of the independent (independent) variables, namely ROA and ROE.

The purpose of the Multicollinearity Test is to determine whether in the regression model that is formed there is a high or perfect correlation between the independent variables. If the correlation between the independent variables is high or perfect, it is declared to contain multicollinearity, one of the causes of changes in economic variables changing over time (Suliyanto; 2011: 31).

The results of the multicollinearity test of the effect of ROA and ROE on the Capital Adequacy Ratio are shown in table 4.8 as follows:

Table
Multicollinearity test of ROA and
ROE against
Capital Adequacy Ratio 5 banks
2015-2019 Tahun

Model	R	R Square	Adjusted R Square	
1	0.438a	0.192	0.188	

On the table. Based on the results of the Summary model, it can be seen that the R square value is 0.438 while the Adjusted R Square value is 0.192 which indicates that the coefficient value is moderate, neither high nor low. This can be seen in the Interpretation Guidelines for Correlation Levels in table 4.9 below.

Table Correlation Level Interpretation Guidelines

Correlation Coefficient Interval	Relationship Level		
0,00 - 0,19	Very low		
0,20 – 0,36	Low		

0,40 – 0,59	Currently
0,60 – 0,79	Strong
0,80 - 1,00	Very strong

The regression model formed is not or imperfect correlation between independent variables, it is stated that ROA and ROE have a relatively moderate relationship and it is stated that this does relationship not contain multicollinearity. Does contain not multicollinearity means that the relationship of influence in this regression model is feasible to be used to predict the Capital Adequacy Ratio.

Multicollinearity test can also be done by comparing the tolerance value (TOL) and Variance Inflation Factor (VIF) in the Colinearity Statistical coefficient table. Tolerance and VIF values do not contain multicollinearity if the value is not more than 10. In the table, respectively, the tolerance values for the two variables, X1 (ROA) 0.281 and X2 (ROE) 0.281 and the VIF values for the two variables, X1 (ROA) 3.562 and X2 (ROE). ) 3,562 can be seen in the coefficient table in table 4.10 as follows:

#### **Table**

Multicollinearity test of ROA and ROE variables on Capital Adequacy Ratio of 5 banks Based on Tolerance Value and VIF 2015-2019 Tahun

Model		dardized ficients	Standardized Coefficients	T	Sig.	Correlations		Collinea	
	В	Std. Error	Beta			Zero- order	Partial	Part	Tolerar
(Constant)	25.329	4.983		5.084	.000				
ROA	7.147	3.261	0,793	2.192	.39	0,327	0,423	0,42	.281
ROE	0.823	0.542	-0.549	-1.518	.143	0,123	-0.308	-0,291	.281

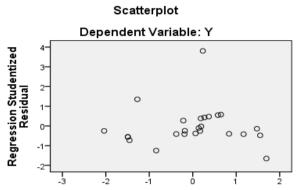
table 4.10 the value of the tolerance of the second variable, X1 (ROA) 0.281 and X2 (ROE) 0.281 and the value of the second variable VIF, X1 (ROA) 3.562 and X2 (ROE) 3.562 when compared to standardized value based on a maximum assessment of 10 and or less than 10 The ROA and ROE values show numbers below standardization. The ROA and tolerance values are less than 10 (0.281 < 10) and the VIF value is also smaller than 10 (3.562 < 10) meaning that it is not found that the ROA and ROE variables contain multicollinearity, and the regression is declared feasible or good for predicting the capital adequacy ratio.

#### Heteroscedasticity Test

According to Ghozali (2011:139) the heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from one observation residual to another observation. If the residual variance from one observation to another observation remains, it is called homoscedasticity or there is no heteroscedasticity.

In this case, there can be unequal value differences in the regression model resulting from increased experience, an increase in the economy and an increase in data collection techniques. To detect further, look at the Scatterplot image. If the

scatterplot spreads randomly, it shows that there is no heteroscedasticity problem in the regression model that is formed. The scatterplot can be seen in curve 4.2 as follows;



Regression Standardized Predicted Value

Based on curve 4.2 in the Scatterplot test on the standard probability value of the data and the average value of the difference in deviations, it is found to be very relatively small, meaning that the difference between the ROA, ROE and CAR variables is exactly the same and the spread does not make a shape and the more spread out this test explains that there is no heteroscedasticity.

#### **Autocorrelation Test**

According to Ghozali (2018:111) autocorrelation test is used to test whether in the regression model there is a correlation between the confounding error in period t and the confounding error in period t-1 (previous).

The data taken through the document retrieval process and through a further management process both viewed by time (time series) and space (cross section) and further processed in the form of panels can cause autocorrelation problems or problems in regression analysis. To detect whether there are symptoms of autocorrelation, the Durbin Watson Test method is used, another technique with the aim of having a relationship between the data retrieved and interdependence, so that the data is not in

Durbin-

Watson

1.541

(Muhtyaningsih Harum Ode Halidu)

Autocorrelation Test Effect of ROA and ROE Variables on Capital Adequacy Ratio 5 banks Durbin Wiston Test method 2015-2019 Tahun

Based on table 4.12 after being compared, the DW value of the test results shows a value of 1.541 which is in a position between dL and dU (1,206 – 1.55). after looking into the criteria without a conclusion, there is no autocorrelation. This means that it can be said to be good or not good (but more likely to not contain autocorrelation) to predict the regression model.

The key to the classical test to measure the effect of Return On Assets and Return On Equity on the Capital Adequacy Ratio by using Multiple Linear Regression analysis tools can be used and is feasible to predict the Capital Adequacy Ratio. Appropriate to be used on the grounds that the data taken is normally distributed, does not contain multicollinearity, heteroscedasticity, and autocorrelation.

To assess the presence of autocorrelation, it must be compared with the DW value in the Durbin Watson Test table in the autocorrelation test criteria with the Durbin Watson test.

sync, changes occur, and manipulates data

with perceptual errors in data processing.

Std. Error of the

Estimate

8.58536

Model

1

0.438°

# The autocorrelation test criteria are presented in Table 4.11 as follows: Table Autocorrelation test criteria

Durbin Watson (DW)	Conclusion	Description
	There is	0 s.d 1.206
< dL	autocorrelation (+)	
		1.206 s.d 1.55
dL. s.d. dU	Without Conclusion	
		1.56 s.d 2.45
dU s.d. 4 – dU	No autocorrelation	
		2.46 s.d 2.794
4 - dU s.d 4 - dL	Without Conclusion	2 705 les etes
. 4 11	<b>T</b> l	2.795 ke atas
>4 – dL	There is	
	autocorrelation (+)	

From the assessment criteria, the DW value and the DW table will be compared. In the DW table of 2 independent variables (k) and the number of sample data (n) for 5 banks and 5 years of observation (5 x 5 = 25) or n is 25. For the value of dL = 1,206 and dU = 1,550 4-dU values; (4-155= 2.45) and a value of 4-dL; (4-1.206=2.794) and the value of DW = 1.553 is listed in the Autocorrelation Test table in table 4.12 as follows:

Table 4.12

#### Hypothesis testing

Hypothesis testing to find out the independent variables (ROA) and (ROE) either partially or simultaneously have a significant relationship and influence on the Capital Adequacy Ratio. This test is carried out in order to find out whether the theoretical hypothesis has conformity with the evidence of the research findings and can be answered on the hypothesis made.

Hypothesis testing is carried out in two ways or types according to the hypothesis made. Hypothesis testing is carried out partially and simultaneously or simultaneously. Each has a different meaning and a different interpretation of the research results. The partial hypothesis is to prove the hypothesis by self-testing between the independent variable (ROA) and the dependent variable CAR as well as (ROE) with their respective CAR. Simultaneous hypothesis testing to prove together, simultaneously ROA and ROE variables were tested against CAR.

#### Partial Test (t Test)

Two independent variables (ROA and ROE) will be tested one by one not simultaneously or independently. ROA is separately linked to CAR, as well as ROE to CAR. The theoretical hypothesis is (1). It is suspected that Return on Assets has a significant effect on the Capital Adequacy Ratio at 5 Banks, (2). It is suspected that Return On Equity has a significant effect on the Capital Adequacy Ratio in 5 banks.

The t-test can be proven by comparing the t-count value (calculated result) with the t-table (standardized value). The t-test is based on;

The value of t-count > t-table), meaning that the effect of ROA on Capital Adequacy (CAR) is proven, meaning that the variation of the policy of increasing the turnover rate encourages achievement of profits, and has an impact on increasing the availability of Availability of capital with the aim of maintaining the risk of lack of capital faced by the five banks. ROA has a significant effect and increases CAR if the relationship between the two is unidirectional or positive and vice versa ROA has a non-unidirectional (negative) relationship, it will decrease CAR. Then if the value of t-count < t-table), it means that the policy to increase or decrease the ROA of a positive or negative relationship between asset management (assets) will not encourage an increase in profit which has implications for the amount of adequate capital availability because the relationship is not significant meaningless.

## Effect of ROA Ratio on CAR (BBCA, BBNI, BBRI, BBTN and BMRI)

Banks that have a high CAR are very good because these banks are able to bear the risks that may arise. With adequate capital, banks can carry out their operational

activities more efficiently through allocating funds to (productive) banking assets, providing credit, financing, interbank deposits and trading in securities that provide benefits for banks and minimize risks. A high CAR indicates a more stable bank business due to stable public trust.

CAR is associated with the level of bank risk. The smaller the risk of a bank, the greater the profit earned by the bank. (Silvanita in Armelia, 2011). Capital (Permodalan) Riyadi (2006:171) said that every bank operating in Indonesia is required to maintain the Minimum Capital Adequacy Requirement (CAR). The level of Minimum Capital Adequacy Requirement or CAR of a bank will be influenced by 2 main factors. namely the amount of capital owned by the bank and the amount of Risk Weighted Assets (RWA) managed by the bank. This is because the assessment of the capital factor is based on the ratio of Capital to Risk Weighted Assets (RWA).

Based on the hypothesis that Return on Assets (ROA) partially has a significant effect on the Capital Adequacy Ratio (CAR) in the Banking Sector, the Lq 45 Lifting Index on the Indonesia Stock Exchange.

This study intends to examine the effect of Return On Assets on the Capital Adequacy Ratio of the banking sector listed on the Indonesia Stock Exchange. The results showed that the Return on Assets (ROA) partially had a significant effect on CAR. In fact, the ROA position in the banking industry, especially the five banks, is already above the minimum standard value given by Bank Indonesia, which is at least 1.5%. The bank management has worked efficiently in using bank assets, resulting in very large profits or profits.

The t-test of the effect of ROA on capital adequacy is proven, after being compared and obtained the t-count value > t-table variation of the policy of increasing or decreasing the effect of the effectiveness of asset management shown by the level of

asset turnover by achieving ROA above the average 5-12% or having an effect The increase in capital adequacy was due to the achievement of profits obtained by the five banks, meaning that the policy to increase the asset turnover rate (assets) would encourage a very significant increase for five years.

Although it can be seen that during 2015-2019 the variation in profits obtained by the 5 banks was unstable (up or down) and was shown to rise and fall in certain years, the average 2019 bank BBNI, BBTN, BBRI, BBCA experienced a decline in profits except Bank Mandiri). The increase in profit is due to an increase in assets every year and is followed by an increase in bank debt, and an increase in capital. While the increase in profit from year to year is not stable, but the company is still in a healthy condition.

Changes in the position of assets, debt and capital will affect profits and adequacy, which will capital have implications for the amount of capital available against the level of risk-weighted assets. The effect shown by ROA is indicated that if ROA increases, there will be an increase in profit, of course, assets will increase (assets), if assets increase, CAR will increase. In this case, an increase or decrease in ROA to CAR will result in an increase in the capital owned.

The t-test is supported by the theory where ROA is one indicator of the success of a business unit to earn a return on a number of assets owned by the business unit, and this is managed effectively, the greater the level of profit achieved by the company and the better and efficient use of total capital. The achievement of banking profits can be in the form of adequacy in fulfilling obligations to shareholders (investors) for the capital invested in the company.

The benefits obtained by investors are higher or the rate of return or dividends will be greater, making banks gain the trust of the public which allows banks to raise

more capital so that banks have the opportunity to lend more broadly.

Adequacy of capital or available capital is adequate, this can be realized in how much funds are obtained from debt and additional main capital and completeness to meet the needs of business development and accommodate the risk of loss of funds caused by bank activities, both guaranteeing and supporting assets that contain or generate risk.

This study also supports several previous studies conducted by several researchers; (1). Hadi Susilo Dwi Cahyono, Anggraeni with the research title; "The effect of liquidity, asset quality, market sensitivity, efficiency, and profitability on CAR in foreign exchange banks that go public" The results show that LDR, IPR, APB, NPL, IRR, PDN, BOPO, FBIR, ROA, and ROE simultaneously have no effect significant to CAR.

Partially only IPR, APB, and PDN have a significant effect on CAR. This is in line with this study that the partial test of ROA and ROE is not significant, the difference between Cahyono's research is that the two variables have no significant effect. In contrast to the results of this study, one of the influential variables is the ROA variable. While the simultaneous test has similarities that ROA and ROE have no significant effect on the CAR of PT. International Indonesia Bank, Tbk, PT. Permata Bank, Tbk, and PT. Pan Indonesia Bank, Tbk. (Hadi Susilo et al).

## Effect of ROE on CAR BBNI, BBTN, BBRI, BBCA and Bank Mandiri.

Return On Equity (ROE) is a very important indicator for shareholders and potential investors because it is a comparison between a bank's net profit and capital, the aim is to measure the bank's ability to obtain net profit associated with dividend payments. Comparison between net income (net income) with the average equity (average equity) or investment bank owners.

The increase in this ratio means that there is an increase in net profit from the profit in question which is then associated with the possibility of paying dividends (especially for those who have gone public) and shows a comparison between the profits earned by the company and the assets or capital needed to generate profits and is a reflection of the profits earned by the profit from own capital company. (shareholders). The level of quality and character of shareholders affects capital adequacy because their policies determine whether profit (return) is distributed or not

Bank in obtaining profit or profit as a whole with the capital owned or capital used to generate the profit. The greater the ROE ratio of a bank, the greater the level of profit achieved by the bank.

The safe ROE standard according to Bank Indonesia is in the range of 5 percent to 12.5 percent. According to the Circular Letter of Bank Indonesia number 13/24/DPNP, ROE is used to measure the ability of a bank's paid-in capital to generate profits. The greater this ratio indicates the ability of the bank's paid-in capital to generate profits for shareholders, the greater.

According to BI standards, a good ROE is more than 12%, while BCA (16.78), BNI (16.7), BTN (10.38), BRI (3.86) & Bank Mandiri (17. ,49)., the average ROE achievement is greater than 5-12 percent, except for BRI which is considered less good. The five banks exceeded predetermined standards and were said to be healthy, despite a decline in the last year (2019). This means that the ability of the Indonesian banking industry in obtaining profits from its own capital is 10% - 17.49, meaning that every Rp. 1 capital alone is able to generate Rp. 0.17 net profit after tax.

The effect of ROE on CAR in this study is not significant even though Bank BCA, BNI, BTN, BRI and Bank Mandiri have adequate capital, because the probability is greater than the tolerance limit (>) of 0.000.

Research with the hypothesis of Return On Equity (ROE) has a partial but not significant effect on the Capital Adequacy Ratio (CAR) in the Banking Sector Lq 45 Lifting Index on the Indonesia Stock Exchange. The result of t-test shows that t-count < from t-tab. This finding provides information from the management that BCA, BRI, BTN, BNI Bank and BRI banks during 2015-2019 made a profit (profit). Earnings from asset management, especially credit (loans) and financing, have been shown to be managed effectively, but in recent years there has been a decline for several banks.

Return on Equity (ROE) partially has no effect on CAR, this is due to a decrease in net profit after tax and total equity, so that it has an impact on poor capital ratios and affects capital adequacy and when linked to Bank Indonesia regulations the ROE value should be greater . The decrease in the value of the ROE ratio does not indicate that it is not healthy. Although the ROE has decreased, it is still declared healthy because the value is above 13%, on the other hand, the decline will not have an impact on capital adequacy.

It can be said that if the management in banking can produce a high Return on Equity (ROE) which has an impact on increasing profits so that bank capital can minimize the decrease in its assets properly so as to minimize losses due to a decrease in its assets.

## Effect of ROA and ROE on CAR (BBCA, BBRI, BBNI, BBTN and BMRI)

Capital Adequacy Ratio (CAR) or capital adequacy ratio is useful to accommodate the risk of loss that may be faced by the bank. In principle, it aims to protect customers from the risk of loss that may be experienced by the bank. In addition, to maintain the stability of the financial system as a whole.

The Capital Adequacy Ratio (CAR) shows how much all bank assets that contain risks

(credit, investments, securities, claims on other banks) are also financed from own capital in addition to obtaining funds from other sources.

Research shows that the Bank's overall Return On Assets and Return On Equity are above the minimum standard given by Bank Indonesia, which is at least 1.5% for ROA while ROE is 5% - 12%. The achievement of the results of the bank management has been said to work efficiently in using bank assets in generating very large profits or profits.

Simultaneously test the hypothesis on the third hypothesis (hp.3) that changes that occur in ROA and ROE will affect CAR. The CAR ratio indicates that capital must be available in a size that is safe enough to protect the customer from the risk of loss.

In the banking world there is a standard for capital ownership or what is known as the minimum capital adequacy requirement (KPMM) which is based on the standard set by the Bank for International Settlements (BIS) of 8% of risk-weighted assets (RWA). This minimum capital provision is calculated using the Capital Adequacy Ratio (CAR). CAR is carried out to cover all possible loss risks, both credit risk, operational risk, and market risk.

The correlation shown by ROA and ROE to CAR can be detected by the F (simultaneous) test. The results of the test on the research hypothesis which states that ROA and ROE have an effect on CAR, found that (1). The relationship is quite moderate ( R2 = 0.438 ) and (2). Simultaneous test with a probability value of F (0.096). (3). The effect of ROA and ROE is not significant on CAR. (4). The hypothesis was rejected.

The research findings mean that the two variables ROA and ROE have no significant effect on the capital adequacy of BBNI, BBTN, BBRI, BBCA and Bank Mandiri banks, on the other hand guaranteeing the availability of capital and also not avoiding the possible risk of loss from managing assets and capital owned by

the bank. or from other sources. The capital ratio (CAR) is not guaranteed, although it is supported by the efficiency of the management in managing the assets and capital owned by the company and the share capital of the shareholders, but shows a decline in profits in certain years.

The addition of capital in unstable market conditions will increase the high adequacy of funds and the management of assets that are less effective because the additional lending in the form of high financing and disbursements will increase the high outstanding credit and can cause quite large arrears. Such large arrears can cause management to be less effective and efficient due to the addition of high operational costs. If it cannot be controlled better, it will reduce the capital adequacy ratio.

In line with the results of the study, the value of the regression coefficient (B) in the Unstandardized Coefficient of Variable Coefficient column ROA B = 7.147 and B value on the ROE variable = -.823 Each decision to increase the ROA ratio along with ROE, is not separated individually or one by one, with the following conditions:

The ROE and ROA ratios increased by 1% will not affect the availability of funds (CAR), because the changes are not significant. The value of the correlation coefficient (B = 7.147) means that if the ROA is increased it does not affect the increase in the availability of capital (CAR), if it continues to increase it will result in bad and will disrupt the availability of bank capital and be fatal. Conversely, ROE shows that if the company will increase ROE, by increasing capital by issuing shares to issuers as additional capital with the aim of spending on assets, it will increase the company's ability to earn profits (profit).

#### **CLOSING**

The ROA variable partially has a significant influence and has a positive

direction on CAR at state banks for the 2015-2019 period, so the hypothesis is accepted, if the change in the 1% increase in ROA will affect the CAR increase in the five banks by 1.67 percent.

The ROE variable partially has no significant effect and the direction is negative on CAR, so the hypothesis is rejected, in other words the large change in ROE does not affect the magnitude of the decrease in the availability of capital owned by the five banks. Simultaneously ROA and ROE have no significant effect on CAR, so the hypothesis is rejected or in other words variations due to an increase in ROA and a decrease in ROE simultaneously do not affect the availability of capital owned by the five banks.

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