



**THE INFLUENCE OF CAPITAL ADEQUACY AND LOAN TO DEPOSIT RATIO ON FINANCIAL PERFORMANCE WITH CREDIT RISK AS A MODERATION VARIABLE IN LISTED BANKING COMPANIES ON THE INDONESIAN STOCK EXCHANGE**

**Henry Jirwanto**

STIE Professional Manajemen College Indonesia

[henry.jirwanto@pmci.ac.id](mailto:henry.jirwanto@pmci.ac.id)

**Abstract**

The purpose of this study was to determine and analyze the effect of capital adequacy and loan to deposit ratio on financial performance with credit risk as a moderating variable in banking companies listed on the Indonesia Stock Exchange.

A population of 43 banking companies are listed on the Indonesia Stock Exchange for the 2015-2019 period. The research sample was 115 banking companies listed on the Indonesia stock exchange for the period 2015-2019. Researchers used documentation study data collection techniques to collect this research data. The data analysis model used in this study was to use an interaction method which is often referred to as Moderated Regression Analysis (MRA).

The results show that capital adequacy has an effect on financial performance in banking companies listed on the Indonesia Stock Exchange. Loan to deposit ratio has no effect on financial performance in banking companies listed on the Indonesia Stock Exchange. The existence of credit risk (moderating variable) will be able to strengthen the relationship between capital adequacy and financial performance. The existence of credit risk (moderating variable) will be able to strengthen the relationship between the loan to deposit ratio and financial performance. The existence of credit risk (moderating variable) will be able to strengthen capital adequacy and loan to deposit ratio on financial performance.

***Keywords: Capital Adequacy, Loan to Deposit Ratio, Financial Performance and Credit Risk.***

**I. INTRODUCTION**

Currently, the banking world is experiencing quite sharp competition, which has resulted in every bank trying to improve its financial performance. Banking financial performance can usually be measured from profits known as Return on Assets. Banking management needs to maintain a high level of Return on Assets (ROA). From the perspective of banking companies (issuers) who use Return on Assets as an analysis of the company's financial performance

in managing its assets. The higher the banking Return on Assets, the better the banking will be in carrying out its business activities because the company has a level of profit that can be used to finance its operational activities. The company's financial performance is influenced by capital adequacy and Loan to Deposit Ratio.

Bank performance is related to the funding sources of money distributed to customers or the public. One source of funding that has a big influence on the economy is the banking industry.

Banks are trusted institutions that function as intermediary institutions, helping the smooth running of the payment system, and no less important are institutions that are a means of implementing government policy, namely monetary policy. The accumulation of bank funds is used as the main source of capital apart from owner's capital to carry out operational activities. Adequate capital is a reflection of protecting the bank from unexpected losses, supporting future growth, and fostering public confidence in the bank's condition.

For banks, capital is important, banks must be able to maintain customer trust by having sufficient capital for daily operational activities. Therefore, Bank Indonesia determines the obligation to provide minimum bank capital as regulated in Bank Indonesia Circular Letter No.2/12/DPNP/2000 concerning the obligation to provide minimum bank capital. The level of capital adequacy in this research is represented by the Capital Adequacy Ratio (CAR). Banks must be able to meet capital adequacy standards to protect against risks that may arise in carrying out business activities. If the bank has sufficient capital, then the bank has sufficient financial resources to guard against potential losses. If capital adequacy (Capital Adequacy Ratio) is met, it will be able to increase the bank's ability to increase profits.

The opinion expressed by the Minister of Finance Sri Mulyani regarding financial institutions, especially banks, needs to have a vision and strategy in dealing with various kinds of disruption that is currently occurring, especially in the technology sector. He mentioned a number of technological disruptions that could affect banking, including robotics, machine learning, blockchain and artificial intelligence (AI). However, the company's response to the technological disruption that occurred was considered still inadequate

(<https://m.liputan6.com> accessed on 15 Oct 2020).

Inadequate banking technology results in banks experiencing a decline in net profits and the company's ability to use sophisticated technology requires large amounts of capital. The decline in banking net profit was inseparable from the increase in operational expenses. Bank Indonesia is of the opinion that the credit slowdown in the first quarter was due to the lack of high corporate financing needs, including selective banking policies.

When the economy is turbulent, demand for credit increases, and non-performing loans slowly decrease. This is also supported by credit risk, which is the risk of bank performance which shows the ability of bank management in managing problem loans provided by the bank so that the higher the Non-Performing Loan ratio (NPL), the worse the credit quality of a bank, because it causes the number of problem loans to be greater, and of course this problem will also affect the level of bank performance, where when the number of bad loans increases, the effectiveness of bank performance will decrease. (Lestari, 2019).

The main activity of the Bank is making a profit and the bank also needs sufficient capital to carry out its business activities. To continue to have sufficient capital to meet healthy capital adequacy ratio standards, the bank must be able to obtain a return on assets which will later increase the bank's capital. If the bank has sufficient capital, then the bank has sufficient financial resources to guard against potential losses. If capital adequacy ratio is met, it will be able to increase the bank's ability to improve banking financial performance. As for Lestari's (2019) research replication, it is stated that banks that have adequate capital certainly show good banking financial performance. This is also supported by the greater the CAR, the greater the bank's profits. In other words, the smaller the risk of a bank, the greater

the profits the bank will obtain, the lower the CAR, reflecting the bank's increasingly weakening capital, and if the bank weakens, it will not be able to provide optimal services to the public.

Large banks usually have high credit so that the credit risk that occurs in companies is high. The level of non-performing loans is usually reflected in the Non-Performing Loans that occur at the bank. Large and small banks need to maintain and maintain the level of bad loans so that they remain ideal in accordance with the regulations set by Bank Indonesia.

Bank Indonesia stipulates that each bank must have an NPL value below 5 percent, which reflects the maximum value of non-performing loans from all credit distributed to the public by that bank. The replication of research by Purba and Damayanthi (2018) states that the higher the NPL level of a bank will cause the company's profitability to decrease. The costs of dealing with high NPL values will result in the loss of opportunities to obtain company profits from lending, which will have a negative impact on bank profitability.

## **II. LITERATURE REVIEW**

### **Understanding Accounting**

According to Hery (2017: 4), accounting is a technique that describes the relationship process between financial data sources and recipients of information through certain communication channels called the accounting cycle. All transaction data that has been recorded in the journal will be transferred (posted) to the ledger according to the classification of each related account. The next step is to prepare a trial balance, analyze adjustment data, prepare adjusting journal entries, post-adjustment trial balance, financial statements, closing journal entries, post-closing trial balance and reversing journal entries. The accounting process that begins with analyzing and journalizing transactions and ends with creating a report is called the accounting cycle.

The final product of this accounting cycle is a financial report.

According to Sujarweni (2015:3) "Accounting is the process of transactions that are proven by invoices, then from the transactions a journal, ledger, work balance is created, then information will be produced in the form of financial reports that are used by certain parties."

Based on the definition above, it can be concluded that accounting is a method that describes the process of relationships between sources of financial data from transactions that are proven by invoices, then from the transactions a journal, ledger, balance sheet is created, then information will be produced in the form of financial reports that are used by the parties. certain.

### **Definition and Types of Financial Reports**

According to Kasmir (2015:66), financial reports are the obligation of every company to make and report them in a certain period. What is reported is then analyzed, so that the company's current condition and position can be known. By carrying out the analysis, the company's weaknesses and strengths will be known. The financial report will also determine what steps the company will take now and in the future, by looking at various existing problems, both its weaknesses and strengths. Apart from that, it is also to take advantage of existing opportunities and face or avoid threats that may arise now and in the future.

According to Hanafi (2016:27), financial reports are important because they provide input (information) that can be used for decision making. Many parties have an interest in financial reports, starting from investors or potential investors, funders or potential funders, to the management of the company itself. Financial reports are expected to provide information regarding profitability, risk and timing of cash flows generated by the company.

According to Harmono (2018:22) "Financial reports describe the financial impact of transactions and other events which are classified into several large groups according to their economic characteristics. This large group is an element of financial reports."



Based on the opinion above, it can be concluded that a financial report is a report that contains all financial transactions which are classified into several large groups according to their economic characteristics in a certain period.

### Capital Adequacy

According to the Indonesian Bankers Association (2016a: 176) "Capital adequacy ratio is the Minimum Capital Requirement (KPMR) ratio that must be met by Banks, namely a minimum of 8%."

According to Sujarweni (2017:96-97), "Capital (capital) is the ratio used in this calculation, namely the Capital adequacy ratio (CAR), which is a comparison of the amount of capital with the amount of Assets Weighted According to the Ratio (RWA)."

*Capital adequacy ratios* as an indicator of a bank's ability to cover declines in assets as a result of losses suffered by the bank, the size of the capital adequacy ratio is determined by the bank's ability to generate profits and the composition of the allocation of funds to assets according to the level of risk. The capital component consists of core capital and supplementary capital taking into account investments made by the bank as a capital deduction factor, so that the Risk Weighted Assets (RWA) of commercial banks are calculated based on the risk weight of each asset item on the balance sheet and administrative accounts.

According to Sujarweni (2017:97), the amount of a bank's CAR can be calculated using the formula:

$$\text{Capital Adequacy Ratio} = \frac{\text{Jumlah Modal}}{\text{ATMR}} \times 100\%$$

### Loan to Deposit Ratio

According to the Indonesian Bankers Association (2015a: 12), "Loan to Deposit Ratio (LDR) is the ratio between the total volume of credit disbursed by banks and the amount of funds received from various sources."

According to Asiyah (2015:6), distribution of excess funds means that in community life there are parties who have

excess funds, while there are parties who lack funds. In relation to funding issues, the financing mechanism can be a bridge in balancing and channeling excess funds from parties who have excess (surplus) to parties who are deficient (*minus*) funds.

According to Harahap (2018:321), "The Loan to Deposit Ratio (LDR) shows how much of the loan provided is funded by third party funds. Bank Indonesia sets a maximum of 85%."

According to Hery (2019: 150), a bank that is able to fulfill its financial obligations on time means that the bank is in a liquid state, and a bank is said to be able to fulfill its financial obligations on time if the bank has means of payment or current assets that are greater than its current liabilities. or short-term debt. On the other hand, if a bank cannot fulfill its financial obligations when it is billed, it means that the bank is said to be illiquid.

Based on the experts' descriptions, researchers can conclude that the Loan to Deposit Ratio (LDR) is a ratio that compares the composition of the amount of credit given with the amount of funds saved by customers.

According to Sujarweni (2017:102), the Loan to Deposit Ratio formula is:

$$\text{LDR} = \frac{\text{Kredit yang diberikan}}{\text{Dana yang diterima}} \times 100\%$$

### Financial performance

According to Sujarweni (2017:71), performance is the result of evaluating the work that has been completed, the results of the work are compared with the criteria that have been determined together. Every work that has been completed needs to be assessed/measured periodically.

According to Harmono (2018:23), "Company performance is generally measured based on net income (profit) or as a basis for other measures such as investment returns (*return on investment*) or earnings per share (*earnings per share*)."

## III. RESEARCH METHODS

### Research Location and Time

Research was conducted at banking companies listed on the Indonesia Stock

Exchange for the 2020-2024 period. The research started from August 2023 to April 2024.

### Population and Sample

A population of 43 banking companies listed on the Indonesia Stock Exchange for the 2020-2024 period. Research samples were taken using purposive sampling. The research sample was 115 banking companies listed on the Indonesian Stock Exchange for the 2020-2024 period.

### Data collection technique

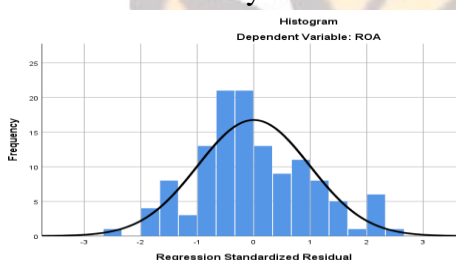
Researchers used documentation study data collection techniques to collect data for this research.

### Data Types and Sources

The type of data used in this research is secondary data. Secondary data obtained by researchers are financial reports of banking companies listed on the Indonesia Stock Exchange for the 2020-2024 period.

## IV. RESEARCH RESULTS AND DISCUSSION

### 1. Normality Test



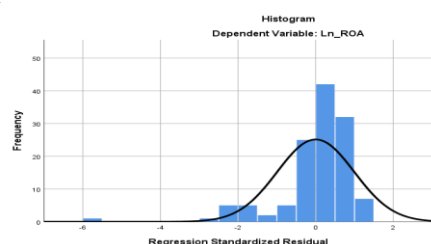
### Histogram Graph

This research also uses histogram analysis and normal probability plot. Here's what the two graphs look like:

### Histogram Before Transformation

From this histogram, it can be concluded that the residual data is not normally distributed because it can be seen from the direction of the histogram which slopes to the right or left and does not form an inverted bell. The

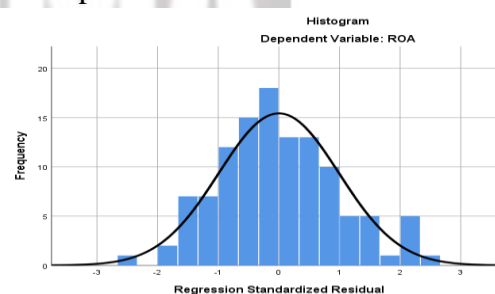
histogram data is not normal, so a transformation to Ln is carried out and can be presented as follows:



### Histogram After Transformation

From this histogram, it can be concluded that the residual data is not normally distributed because it can be seen from the direction of the histogram which slopes to the right or left and does not form an inverted bell. The histogram data before and after transformation is not normal, so problematic data is removed.

According to Hardisman (2021:119) researchers can discard the most extreme data (outliers). After the data was discarded, the normality test was carried out again. This can be done continuously, until the extreme data is discarded. However, it should be noted that discarding extreme data can only be done if the research is carried out with a large number of samples.



### Histograms

From this histogram, it can be concluded that the residual data is normally distributed because it can be seen from the direction of the histogram which does not tilt to the right or left and forms an inverted bell.

### Kolmogorov-Smirnov test

## Discussion

The Effect of Capital Adequacy on Financial Performance

Based on the results of this research, capital adequacy influences the financial performance of banking companies listed on the Indonesia Stock Exchange. Most banks have limited capital adequacy to carry out their operational activities and banking financial performance also often experiences decline. This is supported by Bank Central Asia Tbk's capital in 2019 amounting to IDR 177,888,239,000,000, down from 2018 of IDR 156,051,518,000,000 with profit before tax in 2019 amounting to IDR 7,876,926,000,000, up from 2018 of IDR 7,593,637,000,000. This is consistent with increased capital which can increase profits before tax.

Banking has sufficient capital to carry out its operational activities. Bank capital is formed from its own capital and capital from third party funds. This capital will be used to distribute to the community. These distributed funds often pose a risk known as credit risk. If the credit risk incurred is high or low, it has an impact on the company's profitability.

The results of this research are in line with the replication of research by Iman (2017) which states that the capital adequacy ratio has a positive and significant effect on return on assets. Meanwhile, research replication by Iman (2017) states that the capital adequacy ratio is a factor that influences the high and low return on assets of a company. The higher a bank's capital adequacy ratio, the higher the rate of return on assets. Bank capital adequacy ratio information can be used as a tool to find out profit information and as a measure of company performance.

## V. CONCLUSIONS AND RECOMMENDATIONS

Based on the research results, several conclusions can be drawn as follows:

1. Capital adequacy influences the financial performance of banking companies listed on the Indonesia Stock Exchange.
2. The loan to deposit ratio has no effect on the financial performance of banking companies listed on the Indonesia Stock Exchange.
3. The existence of credit risk (variablemoderating) will be able to strengthen the relationship between capital adequacy and financial performance in banking companies listed on the Indonesia Stock Exchange.
4. The existence of credit risk (moderating variable) will be able to strengthen the loan to deposit relationshipratio of financial performance in banking companies listed on the Indonesia Stock Exchange.

### Suggestion

Based on the research results that the author has put forward, the suggestions that the author can give are as follows:

1. Banks should continue to pay attention to factors that influence financial performance where banks operate within the scope of economies of scale and continue to ensure that operational complexity and inefficiency do not occur as the size of the bank increases.
2. For banks, increasing the amount of financing and other investments that have added value needs to be maintained in order to produce the financial performance expected by the bank.
3. Banks must designate part of their profits as bank capital so that banks do not receive funding from Bank Indonesia.
4. Banks must be wary of slowing funds from partiesthird, which can make the Loan to Deposit Ratio increase. If this happens, bank liquidity will become tighter, causing growth to slow down even though banks have to issue credit more quickly.



**BIBLIOGRAPHY**

Arifin, Johar. 2017. SPSS 24 for Research and Theses. Jakarta: PT. Scholastic.

Asiyah, Binti Nur. 2015. Sharia Bank Financing Management. Yogyakarta: Kalimedia Publishers.

Fahmi, Irham. 2015. Conventional & Sharia Banking Management. Jakarta: Media Wacana Partner Publisher.

Ghozali, Imam. 2018. Application of Multivariate Analysis Using the IBM SPSS 25 Program. Semarang: Diponegoro University Publishing Agency.

Hanafi, Mamduh. 2016. Financial Management. First Printing. Edition 2. Yogyakarta: BPFE Yogyakarta Publisher.

Hantono. 2017. Concept of Financial Report Analysis using the Ratio & SPSS Approach. First Printing. Yogyakarta : Deepublish (CV. Budi Utama).

Harahap, SS 2018. Critical analysis of financial reports. Jakarta: Publisher Raja Grafindo Persada

Harmono. 2018. Financial Management. Jakarta: Publisher PT Bumi Aksara

Simorangkir N, Manalu PD. (2024). The Influence of Career Development and Rewards on Campus Employee Performance at STIE Professional Management College Indonesia. International Journal of Management Research and Economics, 2(2), 358-368.

Hasibuan, Malay. 2015. Banking Basics. Jakarta : PT Bumi Aksara.

Henry. 2017. Accounting Theory Concept and Analysis Approach. Jakarta: PT Grasindo.

Henry. 2019. Banking Management. Jakarta: PT Grasindo.

Hikmawati, Fenti. 2019. Research Methodology. Third Printing. Jakarta: Publisher Raja Grafindo Persada.

Indonesian Bankers Association. 2015a. Banking Credit Business. Jakarta : PT Gramedia Pustaka Utama.

Yep FJ, Manalu PD. (2024). Analysis Of Export And Import Activities In Pt. Buana Mas Citra Lestari. Journal of Financial Management & Accounting 1(1), 12-16, 3062-7478

Bank Business. Jakarta : PT Gramedia Pustaka Utama.

\_\_\_\_\_. 2016b. Bank Risk Management Supervision. Jakarta : PT Gramedia Pustaka Utama.

Ismail. 2016. Banking Management From Theory to Application. Jakarta: Prenadamedia Group.

\_\_\_\_\_. 2016a. Understanding