

Profitability Modelling As a Target Of Banking In Indonesia

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Abstract. The existence of banks is very important for a country because it plays a role in encouraging the economy of a country where banks provide lines of financing, savings, and lending so that, in the end, people's standard of living can increase. To be able to maintain banking survival, the company must be able to maintain its performance well, including by increasing high profitability, distributing dividends well, and maintaining the prospects of a growing business so that its performance is considered good. The research aims to analyze and find out the effect of capital adequacy, credit risk, and liquidity on the profitability of Conventional Commercial Banks listed on the Indonesia Stock Exchange (IDX). The sample in this study is a conventional commercial bank listed on the IDX for the period 2015-2019, as many as 41 companies. The data analysis technique used is a type of quantitative analysis. The results showed that capital adequacy and credit risk negatively affect profitability, but liquidity does not affect profitability. Furthermore, it is expected to be able to add variables that affect banking profitability and expand the research period and add research samples, not only for conventional commercial banks but also for Islamic banks.

Keywords: Capital Adequacy; Conventional Banks; Credit Risk, Liquidity; Profitability.

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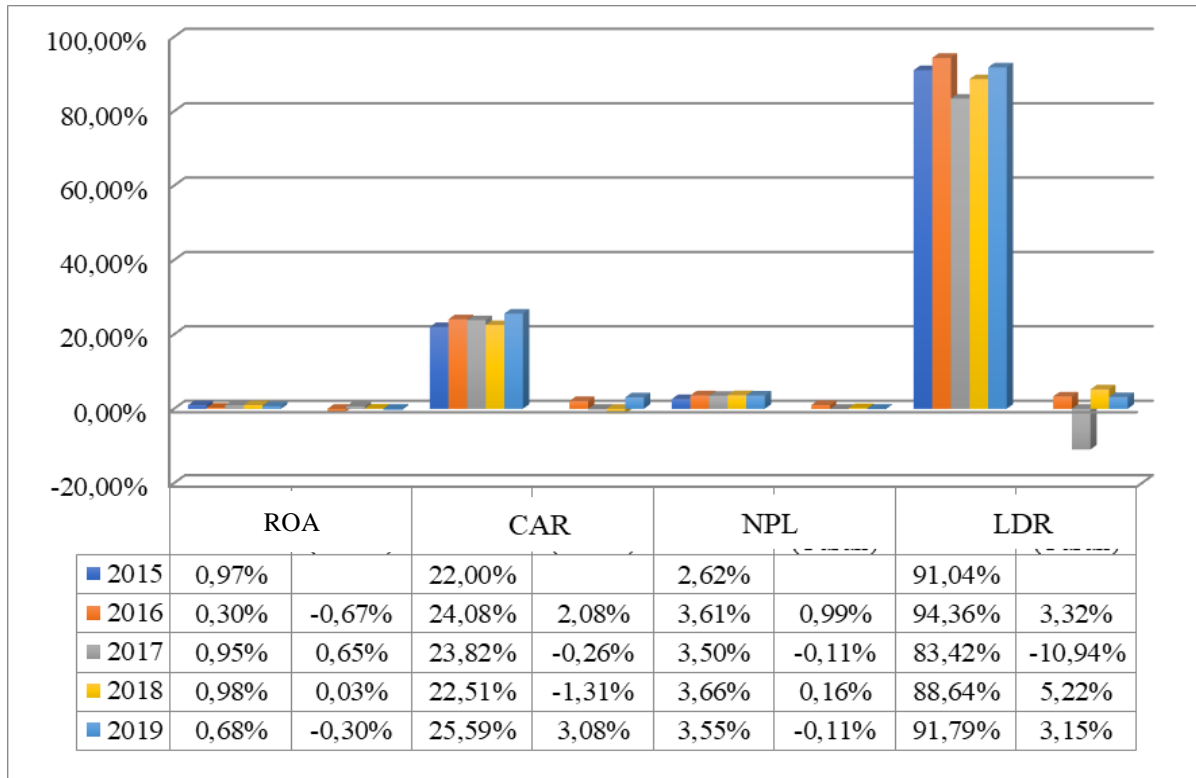
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INTRODUCTION

The existence of banks is very important for a country because it plays a role in encouraging the economy of a country where banks provide lines of financing, savings, and lending so that, in the end, people's standard of living can increase. To be able to maintain banking survival, the company must be able to maintain its performance well, including by increasing high profitability, distributing dividends well, and maintaining the prospects of a growing business so that its performance is considered good. The research aims to analyze and find out the effect of capital adequacy, credit risk, and liquidity on the profitability of

Conventional Commercial Banks listed on the Indonesia Stock Exchange (IDX). The sample in this study is a conventional commercial bank listed on the IDX for the period 2015-2019, as many as 41 companies. The data analysis technique used is a type of quantitative analysis. The results showed that capital adequacy and credit risk negatively affect profitability, but liquidity does not affect profitability. Furthermore, it is expected to be able to add variables that affect banking profitability and expand the research period and add research samples, not only for conventional commercial banks but also for Islamic banks.



Source: Bank Financial Statements on IDX

Figure 1. ROA, CAR, NPL, and LDR 2015-2019

There was a decrease in Return on Assets (ROA) in 2016 and 2019 from the previous year by 0.67% and 0.30% respectively. Furthermore, seen in 2017 and 2018 ROA at Conventional Commercial Banks experienced an increase from the previous year of 0.65% and 0.03% respectively. While the Capital Adequacy Ratio (CAR) in 2016 and 2019 increased from the previous year by 2.08% and 3.08% respectively. Also seen in 2017 and 2018 CAR decreased from the previous year by 0.26% and 1.31% respectively. The theory explained by Usanti & Shomad (2017, p.167) says that the increase in Return on Assets (ROA) in a bank is caused by an increase in capital adequacy ratio (CAR) or the higher the capital adequacy ratio (CAR) the higher the return on assets (ROA) of a bank. Usanti & Shomad (2016) argued that an increase in capital adequacy ratio (CAR) causes an increase in return on assets (ROA) in a bank, or that the higher the capital adequacy ratio (CAR), the greater the return on assets (ROA) of a bank. The findings of earlier research undertaken by the author back up this

assertion. (Pratiwi, 2015), (Noman et al., 2015), (Rahman et al., 2015), (Purnamasari, 2019), (Fajari et al., 2017), (Peling & Sedana, 2018), (Almaqatari et al., 2019), (Nugrahanti et al., 2018), (Sudarmawanti & Pramono, 2017), (Pratama & Isyuardhana, 2019), (Zuwardi & Padli, 2019), (Abbas et al., 2019) which shows that Capital Adequacy (CAR) has an effect on Profitability (ROA). But, Hafiz et al. (2019), Amran et al. (2009), Rifqah & Hassan (2019), Imani & Pracoyo (2018), Pinasti & Mustikawati (2018), Riyanto & Surjandari (2018), Alexander (2021), (Ahmad et al., 2015), and Marina & Marlina (2015) who stated that capital adequacy (CAR) negatively affects the profitability (ROA) of banks, or that the higher the level of capital adequacy (CAR) of a bank, the profitability (ROA) of banks will decrease. There are still many variations in the results of previous research. Therefore, further research is needed.

It is seen in the table that in 2018 Return on Assets (ROA) increased 2017 by 0.03%. While Non-Performing Loan (NPL) in 2018 also increased from the previous year by 0.16%. In 2019, Return on Assets (ROA)

decreased from 0.30% in 2018 and was followed by a decrease in Non-Performing Loans (NPLs) in 2019 from the previous year of 0.11%. The theory described by Ismail (2015, p. 125) says that higher non-performing loans (NPLs) will cause banks to suffer losses, this is because banks do not receive back funds that have been channeled and lose the opportunity to get interested, resulting in a decrease in income or profitability (ROA). Ismail et al., (2015) said that higher non-performing loans (NPL) will result in bank losses, namely losses due to non-receipt of funds that have been disbursed and lost opportunities for interest, resulting in a decrease in income or profitability (ROA). It is supported by the results of previous research conducted by Hafiz et al. (2019), Abbas et al. (2019), Rifqah & Hassan (2019), Andrayani (2018), Noman et al. (2015), Rahman et al. (2015), Ahmad et al., (2015), Marina & Marlina (2015), Petria et al. (2015), Luqman Hakim & Sugianto (2018), Purnamasari (2019), Abbas et al. (2019), Septiani & Lestari (2016), (Mosey et al., 2018), (Riyanto & Surjandari, 2018), (Peling & Sedana, 2018), and Sudarmawanti & Pramono (2017), which shows that Credit Risk (NPL) affects Profitability (ROA). But Pratiwi (2015), Capriani & Dana (2016), Mbekomize et al. (2017), Fajari et al. (2017), and Nwude & Okeke (2018) state that credit risk (NPL) positively affects the profitability (ROA) of banks, or the higher the level of credit risk (NPL) of a bank then profitability (ROA) will increase. There are still many variations in the results of previous research. Therefore, further research is needed.

In 2016 and 2019 Return on Asset (ROA) decreased from the previous year by 0.67% and 0.30% respectively. While the Loan to Deposit Ratio (LDR) in 2016 and 2019 increased from the previous year by 3.32% and 3.15% respectively. In 2017, Return on Assets (ROA) increased from 0.65% in 2016. But the Loan to Deposit Ratio (LDR) in that year decreased from the previous year by 10.94%. The theory explained by Kariyoto, (2017, p.189) that the increase in Return On Assets (ROA) is caused by an increase in Loan to

Deposit Ratio (LDR), or if the Return On Assets (ROA) increases, then the Loan to Deposit Ratio (LDR) will also increase. Kariyoto (2016, p. 189) argues that the increase in Return On Assets (ROA) is caused by an increase in Loan to Deposit Ratio (LDR), or that if the Return On Assets (ROA) increases, then the Loan to Deposit Ratio (LDR) will also increase. This is supported by the results of previous research conducted by Mbekomize et al. (2017), Pratama & Isyuardhana (2019), Ahmad et al., (2015), Pratiwi (2015), Rahman et al. (2015), Septiani & Lestari (2016), Purnamasari (2019), Fajari et al. (2017), Agustini et al. (2017), Peling & Sedana (2018), Sudarmawanti & Pramono (2017), Luqman Hakim & Sugianto (2018), and Abbas et al. (2019), which show that Liquidity (LDR) affects Profitability (ROA). But previous research conducted by Rifqah & Hassan (2019), Pinasti & Mustikawati (2018), Septiani & Lestari (2016), Nessibi (2016), Marina & Marlina (2015), and Hafiz et al. (2019). It is stated that liquidity (LDR) negatively affects the profitability (ROA) of banks, or the higher the level of liquidity (LDR) of a bank, the profitability (ROA) will decrease. There are still many variations in the results of previous research. Therefore, further research is needed.

This research aims to analyze and find out the effect of capital adequacy, credit risk, and liquidity on the profitability of Conventional Commercial Bank companies listed on the Indonesia Stock Exchange. The difference between this study and previous research is in its measurements. This research is expected to be able to contribute both theoretically and practically. The results of this research are expected to be used as a means of information, adding insight and understanding of science about capital adequacy, credit risk, and liquidity to the profitability of banking companies. And practical contributions to investors and financial managers in investment decision making, funding decisions, and financial performance to maximize the value of the company.

LITERATURE REVIEW

Capital adequacy and banking profitability

Capital is an important element in running a business, especially for banking companies. This is because of its business activities, where the bank serves as an intermediation institution related to the issue of collecting and disbursing funds. Ismanto et al. (2019) said that one of the benefits of bank capital is to provide a safer sense of investment for its owners. The Bank must make decisions regarding the adequacy and management of bank capital adequately to maintain the existence of the bank's business in the provision of loan funds. Bank financing activities in the form of credit require banks to have large capital to back up and rotate the bank's cash flow. The structure and size of the bank's capital determine how much strength and capacity the bank has in carrying out its business, as well as a benchmark for the bank's resilience to the potential risks that will be faced. Therefore, maintaining capital adequacy is an obligation for banks to maintain the availability of business funds for the sustainability of the bank's business.

Capital adequacy is the ability of a bank to calculate the capital owned by a company that is sufficient and fulfilled to support an operational activity. The level of capital adequacy is used to maintain public confidence in the ability of banks. The main factor that can affect the amount of bank capital is the minimum amount of capital that has been determined by the monetary authority, which is usually the central bank. According to Astarina & Hapsila (2015), the aspect of the financing, which is considered to be existing based on the obligation of providing minimum bank capital. The assessment is based on the Capital Adequacy Ratio (CAR) set by Bank Indonesia.

According to the Indonesian Bankers Association explained that in an industry that has high leverage (highly rated banks), the bank is very regulated to safeguard the interests of small investors who are very much mismanaged by the management of owner-intervention banks. Like any other venture, capital is a means of absorbing losses and a force for expansion. That is, any business loss will immediately affect bank financing, either

through the profit/loss mark to market process, or directly to financing through the risk of interest rate fluctuations in the banking book. The latter is associated with the bank's function as an intermediary.

The ratio of bank capital to risk-weighted assets is used to calculate the amount of capital adequacy ratio (ATMR). Banks must provide a minimum capital of 8% (eight percent) of Risk-Weighted Assets, according to Financial Services Authority Regulation No. 11/POJK.03/2016 (ATMR). If a bank cannot supply a minimum capital of 8%, it faces capital risk. The purpose of setting a capital adequacy ratio (CAR) at a specified level is to ensure that banks have enough capital to decrease the risk of risk as a result of growing or increasing asset expansion, particularly assets that are classified to provide returns while also containing risk. (Pinasti & Mustikawati, 2018).

Capital adequacy (CAR) is one of the internal factors that affect profitability (ROA) which is that the higher the level of capital adequacy of a bank (CAR), the level of public confidence in the bank is also high. This is because the bank can survive even if the bank suffers losses, so the public does not hesitate to deposit money in the bank. This deposit increase can be used as funds that will be channeled in the form of credit that can later contribute in the form of profits for the bank. So that the profitability (ROA) of a bank will also increase. Based on the description, the first hypothesis :

H₁: Capital adequacy affects banking profitability.

Credit risk and banking profitability

Ismail et al., (2015) explained that credit is the distribution of funds from the owner of the funds to those who need funds. The distribution of funds is based on the trust given by the owner of the funds to the users of the funds. In Latin, credit comes from the word "credere" which means to believe. That is, the party who gives credit believes that the party who receives the credit will pay off the credit given. On the other hand, the recipient of the credit gets the trust of the party who gave the

loan, so the borrower is obliged to return the credit he has received. Credit, according to Banking Law No. 10 of 1998, is the provision of money or bills that may be equated with it, based on a contract or agreement between the bank and another party that compels the borrower to repay his debt after a set length of time and with the payment of interest. This credit is the distribution of funds carried out by conventional banks to customers (debtors).

Mosey et al. (2018) define risk credit, also known as default risk, as a risk caused by customers' failure or inability to repay the loan amount obtained from the company and its interest within the predetermined period. Credit risk is the risk that arises because the loan may default. One form of credit risk is problem credit, which is categorized as non-current, doubtful, and bad credit. Credit risk control is carried out through a series of banking risk management processes. Effectiveness in relation to the process of banking risk management in controlling credit risk is the efforts made to have utilized the resources owned, both in the form of human resources and technological resources, in the right way and achieve the goal, which is to minimize credit risk.

According to the Indonesian Bankers Association (Indonesia, 2015), a Non-Performing Loan (NPL) is a risk resulting from the failure of the debtor or other party to fulfill its obligation to pay off creditors, who, in this case, are banks. When many banking industries have bad credit problems, bank Indonesia regulation No.18/PBI/14/2016 stipulates that the non-performing loan (NPL) ratio is a maximum of 5% of total credit. The regulation was made to supervise and regulate economic traffic so that there is no monetary crisis.

Credit distribution is one of the highest profits earned by banks, so banks must be more careful in determining who is entitled to receive a credit to anticipate the presence of problematic credit. Credit risk has an important role in the profitability of a bank because the decrease in bank income arises from a decrease in the interest on loans obtained. Credit Risk is projected with a Non-Performing Loan (NPL) that serves to measure the bank's ability to deal

with the risk of credit return failure by debtors. Fauziah et al., (2017) said that non-performing loans (NPLs) used to measure the minimum capital in closing a bank's credit risk are gross non-performing loans (NPLs). This is because non-performing loans (NPL) net only takes into account credit that has been stuck in status, while in non-performing loans (NPL) gross, in addition to bad credit status, credit status that is not current and doubtful is also taken into account, which in the future can increase its status to be stuck.

Credit Risk (NPL) and Profitability (ROA) demonstrate the ability of a bank's management to manage problematic credit. The lower the level of credit risk (NPL), the lower the risk borne by a bank, so that the level of profitability (ROA) of a bank will be high. The high level of Credit Risk (NPL) of a bank will disrupt the bank's performance so that it will have an impact on lower Profitability (ROA). Based on the description, the second hypothesis:

H₂: Credit risk affects banking profitability.

Liquidity and banking profitability

According to Sri Hayati & Si (2017), liquidity is the ability of a bank to meet its short-term obligations with the current funds available. Short-term obligations are in the form of savings deposits, deposit deposits, and immediate obligations. Simply put, the meaning of liquidity is the availability of sufficient cash at any time needed. For the banking world, liquidity issues are very important because they relate to customer confidence in banks. To foster good relations with customers, the bank as much as possible must be able to meet the needs of customers, especially in their demand for credit and other business transactions.

If the bank has difficulty in meeting the demand or withdrawal of funds, then customer confidence in the bank will decrease. Public trust in the bank is an important key in maintaining the stability of the bank. Therefore, to avoid this, banks must be good at managing their funds. Similarly, an excess of funds can have negative consequences for the bank, because an excess of funds makes it

difficult for banks to provide credit to the community. Idle funds will result in costs incurred by the bank greater than the receipts obtained from the receipt of interest for the credit given to customers.

According to Kasmir (2017), The liquidity ratio measures a company's capacity to meet short-term debt and obligations. This means that if the company is billed, it must be able to pay the debt, particularly matured debts. According to Astarina & Hapsila (2015), a bank can be said to be liquid if it can pay off all its debts, especially savings deposits, deposits, and current accounts that have matured, and can meet all credit applications that are worth financing. So, it can be concluded that liquidity is the ability of the company to provide sufficient sources of funds to meet its financial obligations that must be met immediately at the time of billing.

Agustini et al. (2017) said that in liquidity management, banks strive to maintain liquidity ratio status, minimize idle funds to increase income with very little risk, and meet their cashflow needs. One way to measure bank liquidity is to be measured using the Loan to Deposit Ratio (LDR). Funds channeled to third parties are obtained from the management of public funds, so that banks are required to maintain liquidity and receive trust from the public to save money in the bank. Banks will earn income through credit interest from the distribution of public funds to increase the profitability of the bank. Ismanto et al. (2019) stated that bank liquidity is the main task for corporate liquidity management to maintain the level of the bank's ability to meet its short-term obligations. A bank's liquidity is determined by its ability to satisfy its financial obligations on schedule. To meet its financial obligations, the means of payment or current assets owned by the bank must be greater than its current debt.

The loan to deposit ratio (LDR) is the ratio of credit to total third-party funds used to quantify third-party money funneled through credit, according to the statement, Ahmad (2015). According to Fauziah (2017), The loan-to-deposit ratio (LDR) formula is used to determine and assess the soundness of a bank's

commercial operations. The recommended loan to deposit ratio (LDR) according to Bank Indonesia Regulation No. 18/14/PBI/2016 is 80 percent to 92 percent. The higher the Loan to deposit ratio (LDR) indicates that the bank lends all its funds or it can be said that the bank is relatively illiquid. Conversely, the lower the loan to deposit ratio (LDR) indicates that the bank is an overcapacity of funds ready to lend so that the bank can be said to be liquid.

Profitability (ROA) is affected by the loan-to-deposit ratio (LDR). If the bank's Loan to Deposit Ratio (LDR) rises, the bank's profitability (ROA) rises as well. A high loan-to-deposit ratio (LDR) could indicate that the bank is increasing lending or making large loans. The bank will be able to expand its profits if the interest income gained from credit is larger than the interest expense on deposits or deposits. In this instance, the bank's profitability (ROA) will rise. (Purnamasari, 2019). Liquidity (LDR) with Profitability (ROA) is the higher the liquidity level (LDR) of a bank, indicating the level of corporate profits is also higher. This is due to the increasing placement of funds in the form of credit given to customers so that income from interest will increase, which can then increase profitability (ROA) in the company. Based on the description, the third hypothesis is :

H₃: Liquidity affects banking profitability.

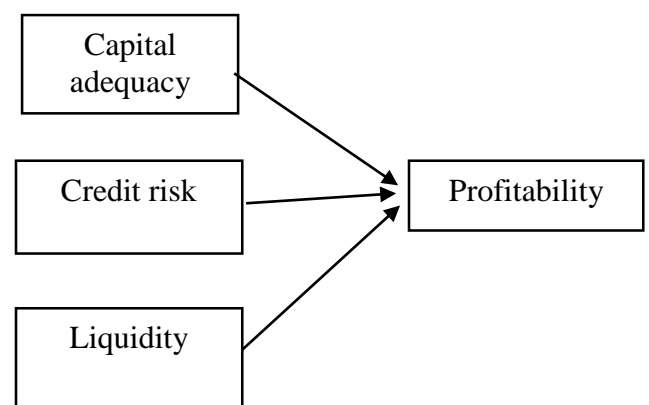


Figure 1. Research Model

RESEARCH METHODOLOGY

The data analysis method used to test the effect of capital adequacy, credit risk, and liquidity on the profitability of conventional

commercial banks listed on the Indonesia Stock Exchange (IDX) in this study is a regression analysis of panel data. The use of panel data is because this study uses several years and also many companies. The first use of time series data, which is meant to be because this study uses a period of five years, namely from 2015 to 2019. Then the use of cross-section because this study took data from many companies (pooled) consisting of several banking companies as a sample of research. The study's population is a traditional commercial bank that is listed on the IDX. Saturated sampling was utilized, which is a sampling approach that uses all members of the population as samples, in this case, all conventional commercial banks registered on the IDX between 2015-2019.

Almaqtari et al. (2019) said that the capital adequacy ratio is one of the basic ratios for determining capital strength. Based on the concept, the bank must manage risk and allocate capital to absorb possible losses on all its activities. Capital allocation for the variety of risks faced by banks is called the adequacy of minimum capital provision or Capital Adequacy Ratio (CAR). CAR is calculated as follows:

$$CAR = \frac{\text{Total Capital}}{\text{ATMR}} \times 100\%$$

In addition to minimizing the ratio of non-performing loans (NPL), banks must also be able to reduce the costs incurred. One way to measure banking operations is by assessing operating expenses against operating income. It can be viewed with the following formula:

$$NPL = \frac{\text{Total Credit Problems}}{\text{Total Credit}} \times 100\%$$

Purnamasari (2019) said that the Loan to Deposit Ratio (LDR) is calculated from the ratio of total credit to deposits. Credit granted to a third party constitutes the overall credit in

question (excluding loans to other banks). Deposits, savings, and term deposits are examples of third-party funds (excluding between banks), with the formula:

$$LDR = \frac{\text{Total Credit}}{\text{Total third party funds}} \times 100\%$$

The data used is a type of quantitative analysis, where all the data collected in this study will then be analyzed and tested hypotheses. This study uses regression analysis of panel data (pooled data). The hypothesis tests used in this study are partial test (t) and coefficient of determination (test), R^2 with the panel data regression equation model being as follows: $Y = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon_{it}$

Information:

Y = Measured Profitability (ROA)

a = Constant

β (1,2,3) = Independent variable regression coefficient

X_1 = Capital Adequacy (CAR)

X_2 = Credit Risk (NPL)

X_3 = Liquidity (LDR)

e = Error term

i = Company Name

t = Period of time

RESULT AND DISCUSSION

Descriptive statistical analysis

Descriptive statistical analysis is used to describe data regarding the nature or character of each variable used in research. Here are the descriptive statistics in this study:

Table 1. Descriptive Statistics

	ROA	CAR	NPL	LDR
<i>Mean</i>	0.008563	0.225789	0.031279	0.884362
<i>Median</i>	0.022000	0.218034	0.035782	0.864378
<i>Maximum</i>	0.054200	1.478943	0.149200	4.893400
<i>Minimum</i>	-0.167800	0.081321	0.000000	0.454370
<i>Std. Dev.</i>	0.026765	0.157348	0.02223	0.327483
<i>Observations</i>	205	205	205	205

Source : data processed

From the descriptive statistical analysis above, we know that the average value, mean, highest value, lowest value, and standard deviation of each variable are as follows:

The average ROA of 41 banks for 5 years i.e. 2015-2019 is 0.008563 or 0.85%. This can be shown that the rate of an asset taking from the profit generated by the company against the total assets of the company from 41 conventional commercial banks on the IDX in 2015-2019 averaged almost all equally good. The lowest ROA experienced by Bank Artos Indonesia amounted to -0.167900 or -16.78% in 2019, this is due to pre-tax profit in 2018 of Rp-18,352,112,530 decreased to Rp-118,794,857,111 in 2019. This is due to the establishment of Impairment Loss Reserves (CKPN), by comparing them to total assets in 2019 amounting to Rp664,673,471,410, while in 2018 it reached Rp1,321,057,201,505 which means that the return on assets in 2019 at Bank Artos Indonesia is very low. Meanwhile, the highest ROA experienced by Bank Rakyat Indonesia (Persero) amounted to 0.054200 or 5.42% in 2015, This is due to the pre-tax earnings profit of Bank Rakyat Indonesia (Persero) in 2015 recorded at Rp32,494,018,000,000, 32,706,000,000,000, resulting in an increase of 5.5% compared to Rp30,804,112,000,000. This growth, supported by an increase in operating income consisting of net interest income increased by 13.3%, and operating income other than the interest which grew 33.4%. At the end of 2015, the rate of *return on assets* (ROA) reached 5.42% by comparing the total assets of Bank Rakyat Indonesia (Persero) at the end of 2015, which amounted to Rp878,426,312,000,000,

which grew 9.5% in 2014 amounting to Rp801,984,190,000,000, which means the return on assets in 2015 at Bank Rakyat Indonesia (Persero) is very high. This increase is mainly recorded in the credit distribution post as a majority component of total assets. Recorded in 2015 the amount of credit given reached Rp581,094,544,000,000 increased from the previous year which only reached Rp510,696,841,000,000. The majority of credit growth occurred in the Micro segment of Rp24,370,000,000,000 and corporations amounting to Rp25,050,000,000,000. With this growth, the composition of Credit to Gross Productive Assets rose from 70.1% to 74.3%. In addition to credit portfolios, most assets are government bonds and short-term instruments that are liquid and low risk, especially in the placement of securities in which securities are issued by Bank Indonesia. The standard deviation of profitability (ROA) of 0.026765. If greater than the mean value, then it means that the data used there is a gap between the highest enterprise ROA value and the lowest company ROA value.

The average CAR of 41 banks over the last 5 years, i.e. 2015-2019, was 0.225789 or 22.57%. This indicates that the average *Capital Adequacy Ratio* (CAR) in banking companies is in good condition and is still at a minimum limit, according to Financial Services Authority regulation No. 11/POJK.03/2016 on Bank Minimum Capital Provision Obligations that the capital *Adequacy Ratio* (CAR) requirement limit that must be owned by banks is 8%. The lowest CAR experienced by the Banten Regional Development Bank amounted to 0.081321 or 8.13% in 2015. Despite being the lowest, the CAR ratio of the Banten

Regional Development Bank is still above the minimum CAR limit set by Bank Indonesia, which is 8%. The ratio of CAR Bank Bukopin decreased compared to 2014, which was 10.05%, because there was a decrease in the total capital of Banten Regional Development Bank from Rp709,127,000,000 in 2015 to Rp406,584,000,000, by comparing it to the total ATMR in 2014, amounting to Rp7,052,809,000,000, and totaled Rp5,068,502,000 in 2015. Meanwhile, the highest CAR experienced by Bank Artos Indonesia amounted to 1.478943 or 147.89% in 2019. The amount of CAR ratio in Bank Artos Indonesia is caused by total capital that increased from 2018 by Rp109,708,000,000 and in 2019 to Rp666,829,000,000 by comparing the total ATMR in 2019 of Rp448,363,000,000 means that capital adequacy is very good because it is well above the minimum limit of 8%. The standard deviation of capital adequacy (CAR) of 0.157348 means that if it is smaller than the mean value, then the data used is in good condition.

The average NPL of 41 banks for 5 years, namely 2015–2019, is 0.031279 or 3.12%, which is still below the maximum non-performing loan (NPL) limit set by Bank Indonesia Regulation No. 18/14/PBI/2016 of 5%. The lowest NPL experienced by Bank National Nobu amounted to 0.000000 or 0.00% in 2015. This is due to the total non-performing loan (NPL) problem loan (NPL) until the end of 2015, which amounted to Rp 0 by comparing the total credit given in 2015 to Rp3,482,580,000,000, meaning that the Problem Credit at Bank National Nobu is very low. Meanwhile, the highest NPL experienced by the Bank of India Indonesia amounted to 0.149200 or 15.82% in 2016. This is because, in 2016, bad credit at Bank of India Indonesia increased from the previous year. In 2016, problematic credit at Bank of India Indonesia reached Rp395,552,058,438 while in 2015 it reached Rp319,755,614,926. This means Bank of India Indonesia's problem credit is quite high because it has problem credit of more than 5% based on what has been set by Bank Indonesia. This is also seen from the financial statements, where the trade sector became the

largest contributor to the increase in the level of problem credit. The NPL ratio in the field of trade reached 6.39%, which is higher than in the industrial field, which is only about 5.67% and followed by the mining and transportation sectors. The standard credit risk deviation (NPL) of 0.02223 means that if it is smaller than the mean value, the data used is in good condition.

The average LDR of 41 banks for 5 years, namely 2015–2019, is 0.884362 or 88.43%, which is still at the Loan to Deposit Ratio (LDR) limit set by the Bank Indonesia Regulation No. 18/14/PBI/2016 of 80%-92%. However, some banks have LDR values outside the limits set by the Bank Indonesia Regulation itself. The lowest LDR experienced by Bank Artos Indonesia amounted to 0.454370 or 45.44% in 2019, this is because the amount of credit given to the community in credit distribution decreased. Recorded in the financial statements, the amount of credit given in 2018 amounted to Rp392,854,559,221 while in 2019 to Rp284,795,294,435, Compared to the total Third Party Funds (DPK), which increased in 2018, by Rp511,938,049,628 to Rp599,084,251,452 in 2019. This means that the liquidity of Bank Artos Indonesia in 2019 is still very high because credit distribution is still below Bank Indonesia's standard of 80%-92%. The highest LDR experienced by Bank Amar Indonesia amounted to 4.893400 or 466.78% in 2016, This is due to the amount of credit given to the community in the distribution of credit which increased in 2016 by Rp319,973,117,110 from 2015 amounting to Rp257,892,034,552 by comparing it to the total Third Party Fund (DPK) which decreased in 2016 amounting to Rp68,548,905,539 from 2015 amounting to Rp85,686,928,546, This means that the liquidity level of Bank Amar Indonesia is very low because it is above the standard set by Bank Indonesia of 80%-92%. The standard deviation liquidity (LDR) of 0.327483 means that if it is smaller than the mean value, then the data used is in good condition.

Panel Data Regression Results

Table 2. Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.038392	0.004703	8.163173	0.0000
CAR	-0.067843	0.010386	-7.532478	0.0000
NPL	-0.373425	0.062013	-6.147238	0.0000
LDR	0.0135871	0.004626	0.283469	0.7838

Source : Output E-Views 10.0

The Effect of Capital Adequacy on Profitability.

Based on the probability test that can be seen in Table 2 above, it is proven that capital adequacy (CAR) of 0.0000 is smaller than 0.05 or 5% with a t-statistic value of -7.532478. So H_0 was rejected and H_a was supported so that capital adequacy (CAR) was significantly negative to profitability (ROA). The coefficient of regression for Capital Adequacy (CAR) is -0.067843, which has a negative value and indicates a negative relationship with Profitability (ROA). The test results of Capital Adequacy (CAR) to Profitability (ROA) are influential. This study shows that if the value of capital adequacy increases, then the profitability achieved by Conventional Commercial Banks on the Indonesia Stock Exchange will decrease, and vice versa. A negative direction between capital adequacy to profitability is possible if the inconsistent growth rate of Capital Adequacy Ratio (CAR) on Conventional Commercial Banks on the IDX is covered by the management of the company's operational activities well so that the bank can produce high output that can increase profitability. This means that in expecting the return of assets, the bank must pay attention to the Capital Adequacy Ratio (CAR) to meet the minimum CAR rate of 8% following financial services authority regulation No. 11/POJK.03/2016.

Ismanto et al. (2019) stated that the Bank must make decisions regarding the adequacy and management of bank capital adequately to maintain the existence of the bank's business in the provision of loan funds. Therefore, maintaining and maintaining capital adequacy

is an obligation for banks to maintain the availability of business funds for the sustainability of the bank's business. Therefore, the capital owned by the bank must be able to be used and optimized effectively to be able to generate optimal profit. The results of this study are supported by previous research conducted by Ahmad et al., (2015), Alexander (2021), Marina & Marlina (2015), Pinasti & Mustikawati (2018), Imani & Pracoyo (2018), Rifqah & Hassan (2019) and Hafiz et al. (2019).

The Effect of Credit Risk on Profitability.

Based on the probability test that can be seen in Table 2, it is proven that credit risk (NPL) of 0.0000 is smaller than 0.05 or 5% with a t-statistic value of -6.147238. Then H_0 is rejected and H_a is supported so that Credit Risk (NPL) is significantly negative to Profitability (ROA). The coefficient of regression for credit risk (NPL) is -0.373425, which has a negative value indicating a negative relationship with profitability (ROA). The test results of Credit Risk (NPL) to Profitability (ROA) are influential. This means that in expecting the return of assets, the bank must consider non-performing loans (NPL) in disbursing funds, with a maximum regulatory rate of 5% that has been set by Bank Indonesia Regulation No.18/PBI/14/2016, which can reduce the problem of non-performing loans (NPL) and the level of return on assets will be obtained to the maximum. These results showed that the lower credit risk (NPL) in conventional commercial banks will be able to affect the increase in profitability (ROA), and vice versa.

Non-performing loans (NPLs) are thought to result in bank losses due to non-receipt of cash disbursed as well as unacceptably low-interest revenue. That is, the bank loses the potential to earn interest, resulting in a reduction in total income (Ismail et al., 2015). Therefore, the greater the Credit Risk (NPL), the performance of a bank will be disrupted where profitability (ROA) will decrease. That is, increased credit risk (NPL) can cause the bank's credit quality to get worse, which reflects bad credit in bank credit

management. Therefore, the bank must be able to bear any losses in its operations so that it affects the decrease in profitability obtained by a bank. If a bank obtains low Credit Risk (NPL), then the bank does not need to think about how to bear every loss in its operations for credit that directly affects the decline in profits earned by the bank. The results of this study are supported by previous research conducted by Ahmad et al., (2015), Noman et al. (2015), Septiani & Lestari (2016), Marina & Marlina (2015), Andrayani (2018), Mosey et al. (2018), Riyanto & Surjandari (2018), Peling & Sedana (2018), Luqman Hakim & Sugianto (2018), Abbas et al. (2019), Rifqah & Hassan (2019) and Hafiz et al. (2019).

The Effect of Liquidity on Profitability.

Based on the probability test that can be seen in Table 2 it is proven that liquidity (LDR) of 0.7838 is greater than 0.05 or 5% with a t-statistic value of 0.283469, then H_0 is supported and H_a is rejected, so liquidity (LDR) is not significantly positive for profitability. This coefficient of regression on Liquidity (LDR) of 0.0135871, which has a positive value, indicates a positive relationship with Profitability (ROA). The Loan to Deposit Ratio (LDR) is a comparison of the amount of credit channeled and the number of third-party funds collected to assess a company's ability to pay back its obligations to depositors while also meeting the borrower's credit request. According to Ismanto et al. (2019), Bank liquidity is the main task for the company's liquidity management to maintain the level of the bank's ability to meet its short-term obligations. A bank that can meet its financial obligations on time means that the bank is in a liquid state. The Bank must be able to keep its LDR from exceeding the limit set by Bank Indonesia Regulation No.18/14/PBI/2016, which is 80%-92%. So, with the establishment of LDR, the bank must maintain the principle of prudence in expanding credit, which only wants to be able to increase the number of the company's assets in a fast time, because in this case, it could endanger the survival of the bank, which would further endanger the deposit funds of the deposit customers of the

depository. So that will cause the bank to experience liquidity difficulties, or the liquidity of the bank is increasingly at risk because of the high risk of credit caused by the provision of funds. Therefore, the bank must always maintain the principle of prudence.

The results of this study showed that a large amount of liquidity as measured by the Loan to Deposit Ratio (LDR) had no significant effect on ROA in the Conventional Commercial Bank sector on the IDX. This condition illustrates that the bank cannot maximize the value of income from funds lent to the community. This can be caused because many credits are experiencing failure, or the higher the problem credit adds to the burden for the bank.

According to Ismail et al., (2015), credit problems in banks are caused by internal and external factors. Internal factors of the bank include improper analysis, collusion between bank officials who handle credit with customers, limited knowledge of bank officials about the type of debtor business, and weaknesses in coaching and monitoring debtor credit. While external factors of the bank include intentional elements made by customers in the form of intentional Ness not to make installment payments to banks, debtors expand too large, and misappropriation by using credit funds is not following the purpose of use. Changes in government policies and regulations that affect debtors, natural disasters that cause debtor losses, and loss-making debtor companies are all examples of accidents. Efforts that can be made by banks to overcome problematic credit include rescheduling or rescheduling, reconditioning or changing all or part of agreements that have been made by the bank with customers, restructuring or changing the underlying financing structure of lending, combination, and execution or the last alternative that can be done by the bank with the sale of collateral owned by the bank. The results of this study are supported by previous research conducted by Fisseha (2015), Imani & Pracoyo (2018), and Pratama & Isyuardhana (2019).

CONCLUSIONS

The results of studies have proven that testing the capital adequacy variable as measured using the Capital Adequacy Ratio (CAR) negatively affects profitability. Thus, the research hypothesis is not supported. The results of studies have proven that testing credit risk variables measured using non-performing loans (NPL) negatively affect profitability as measured by return on asset (ROA), thus the research hypothesis is supported.

The results of studies have supported that testing Capital Adequacy as measured using the Capital Adequacy Ratio (CAR) negatively affects profitability. The results of studies have supported that testing credit risk measured using non-performing loans (NPL) negatively affects profitability as measured by return on asset (ROA), thus the research hypothesis is supported. The Loan to Deposit Ratio (LDR), which measures changeable liquidity, does not affect profitability as measured by Return on Asset (ROA). As a result, the research hypothesis remains unsupported.

This research has limitations in that there are still banks that do not publish their financial statements in a row in the year of research, and the sample used is limited to be able to meet a criterion, so not all banks can be sampled, so they cannot describe all the findings for other banking companies. This provides space for further research.

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