The Effect of Banking Financial Ratio Toward Rural Banks Profitability (Empirical Study at PT. BPR BKK (Perseroda) All Over Central Java)

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ABSTRACT

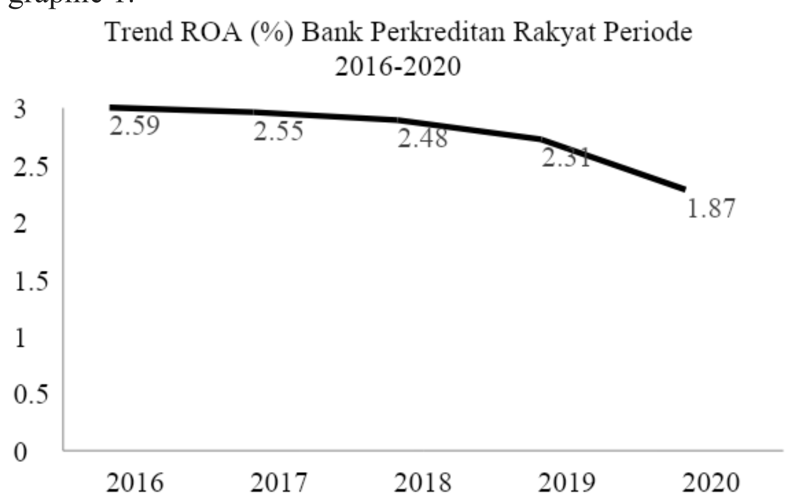
The purpose of this study was to examine the effect of the variables NPL, CAR, LDR and BOPO on profitability as measured by ROA at BPR BKK (Persero) in Central Java. This study was conducted using the total sampling method at 33 BPR BKK in Central Java. The data analysis technique uses descriptive statistics to interpret the data, hypothesis testing uses multiple regression methods which include classical assumption test, coefficient of determination test, F test, and t test to prove the hypothesis.
The results of hypothesis testing using t-test are known to be the t-count value of the NPL variable 0.019 with a significance of 0.985, the t-count value of the CAR variable 1.472 with a significance of 0.144, the t-count value of the LDR variable 0.592 with a significance of 0.555, and the t-count value of the BOPO variable -31,375 with a significance of 0.000. Based on the analysis, it was concluded that from the four variables studied, only the BOPO variable significantly affected the ROA ability of BPR BKK in Central Java with a positive direction, the other three variables, namely NPL, CAR, and LDR were not proven to have a significant influence on the ROA of BPR BKK in Central Java during the 2018-2021 period.
The results of this study have implications for BPR BKK in Central Java that in economic uncertainty, one of the most important things is to make cost efficiencies so that BPR can maintain profits.

Keywords: NPL, CAR, LDR, BOPO, Profitability

1. Introduction

Banks have a vital role in increasing the economic growth of a country, besides that, banks are also the economic backbone that becomes a mediator between investors and industries throughout the country. In carrying out their duty to raise funds, banks must convince their customers and the investors to entrust their funds that are deposited in the banks. Banks have to manage their risks and keep profitability stable and increase public confidence level. This is linked to bank health assessment which is very important for all stakeholders such as the owners, the management, the customers and the government itself. (Haffernan, 2005). The financial condition of a bank can be used by many interested parties as material for evaluating performance using the principle of prudence, and complying with all established regulations. (Idroes and Sugianto, 2016). It can be concluded that the health of a bank can be seen from the soundness of its financial performance. Assessment of bank performance is very important because banks manage funds from the public entrusted to banks. The public will have high loyalty if the bank to save its funds has a good and stable performance (Jumingan, 2014). Rural Banks (BPR) as a profit-oriented service company, the company must be able to maintain the best possible financial performance, especially the company's profitability. Sudiyatno (2015) stated that bank profitability is one aspect that can be used as a benchmark to assess the success of banks in carrying out their operations. Profitability in banking companies can be calculated using Return on Assets or called ROA (Ahamed, 2017). ROA shows the company's ability to rotate assets which can be seen from its sales volume, where the greater ROA indicates the company's ability to achieve higher profits. On the other hand, the declining ratio means that the company's management is less able to manage assets so that it is not able to increase revenue and reduce costs (Natalia, 2017).

The amount *Return on Asset* obtained at Bank Perkreditan Rakyat in the period 2016-2020 will be explained in graphic 1.



Graphic 1 BPRs ROA Trend in 2016-2020
Source: Statistik Perbankan Indonesia (2020)

Data information gives an indication of a decline in the company's performance at Rural Banks. The existence of this phenomenon is interesting to conduct a study related to what factors can have an impact on increasing and decreasing the financial performance of a company which is generally reflected in its profitability.

Profitability of banking companies can be measured using bank financial statements (Claessens & Laeven, 2003; Borio & Drehmann, 2009). Management financial ratio analysis can detect various changes in the form of trends, the existence of relationships and also the various assumptions that make these changes (Hoshi et al., 1990). The high profitability (ROA) of banks is influenced by Non Performing Loans (NPL), Capital Adequacy Ratio (CAR), Loan Deposit Ratio (LDR), and Operating Expenses for Operating Income (BOPO) (Kasmir, 2014).

Banking companies sometimes deliberately take a risk, with the aim of seeing the various potential benefits. Every risk is often unavoidable and must be managed as well as possible in order to gain profits for the company (Natalia, 2017). Non Performing Loan (NPL) is the ability of banks to manage non-performing loans provided by banks. Ismail (2009) defines non-performing loans as a condition of customers who cannot pay part or all of their obligations to the bank according to the agreement. The high ratio will reduce the quality of bank credit where the increase in non-performing loans can make the bank lose, as well as if the NPL is lower, the bank's profit or profitability (ROA) will increase. Wirasukma (2016) and Saputra (2016) in their research found the influence of credit risk on financial performance. Research by Muhamad (2018), Hakim (2017), and Dahkan et al (2020) concludes that there is no real effect between Non-Performing Loans (NPL) on Return on Assets (ROA).

Bank operations require substantial capital so that they can face the risk of losses that may occur in the future. If the CAR value is high, it means that the bank has high capital reserves, on the other hand, if the CAR is too high, it can create an idle fund, which is a condition where a lot of idle funds cannot be utilized by bank management (Septiani, 2015). Considering the very important aspect of capital, one of the ratios used to measure capital adequacy is the CAR (Capital Adequacy Ratio). This ratio is the method used to calculate the capital adequacy of a bank (Pandia, 2017). Christaria and Kurnia (2016) in their research provide information that CAR has a significant effect on ROA. In contrast to Silaban (2017) and Safitri, et al (2021) that the capital adequacy ratio (CAR) has no significant effect on bank profitability.

Banking profitability is influenced by the Loan to Deposit Ratio (LDR), namely the ability of banks to pay their debts and repay their depositors, as well as the ability to fulfill credit requests submitted. Loan to Deposit Ratio (LDR) is a ratio used to measure bank liquidity in repaying funds withdrawn by customers in the form of savings, bank deposits, and demand deposits (Kasmir, 2016). The high LDR ratio will affect the profitability of the bank where the high ability to channel credit will increase interest income so that the company's income increases. Dahlan's research, et al (2020) found a direct influence of Loan to Deposit Ratio on Profitability. In contrast to Yuhasril's research (2019) that there is no significant effect between LDR and ROA.

Another indicator used to measure bank efficiency is the comparison between operating costs and operating income (BOPO). This ratio shows the efficiency of the bank in carrying out its operations. Rivai, et.al (2013), stated that BOPO is a ratio to measure the efficiency and ability of a bank during the company's operational activities. BOPO is a comparison of operating costs with operating income, where a decrease in the BOPO ratio indicates the performance of bank management is getting better. In banking companies, liquidity is an important and vital factor in improving company performance.

Research by Ruziqa and School (2013) found that liquidity has a significant effect on return on assets (ROA). Akinwumi et al. (2017) found that there was a significant effect between liquidity and bank financial performance in Nigeria. Wood and Skinner (2018) found that liquidity and other bank-specific factors, such as capital adequacy and bad loans, have a significant positive effect on bank performance through the return on assets (ROA) variable in Barbados.

This study is a replication of the research of Ruziqa and School (2013), Akinwumi et al. (2017), Wood and Skinner (2018) and Djelassi & Boukhatem (2020) who find that profitability is only influenced by NPL and CAR. The research tries to include the Loan Deposit Ratio (LDR) and

Operational Costs variables as factors that affect the profitability of Rural Banks. The study also re-examined the results of previous studies with inconsistent results on the effect of the ratio of Non Performing Loans (NPL), LDR, and CAR on profitability (ROA).

2. Literature Review

2.1 Agency Theory

Agency theory (agency theory) explains that the agency relationship arises when one or more people (principals) hire another person (agent) to perform an activity and then delegates decision-making authority to the agent (Jensen and Meckling, 1976). The relationship between principals (society) and agents (banking management) in banking companies is influenced by the presence of a regulator, namely the government through Indonesian Bank Central (BI). This is the basis that the principal gives responsibility to the agent in accordance with the agreed work contract in accordance with the policies approved by the regulator in this case BI. Control in banking does not only involve the principal, but also creditors or depositors. In banking terms it is called market discipline, in the agency perspective it can be explained through debt agency relationships (Taswan 2010). The use of debt or public funds can create agency problems when managers decide to do something high risk investment. Such a decision if it goes well will be very profitable for the bank, but if it fails it will be very detrimental to the depositors. Agency theory in this research refers to bank customers as the principal and the banking party as the agent. Where the bank will distribute the funds that have been accommodated properly and correctly according to what has been determined.

2.2 Signaling Theory

Signaling theory was first formulated by Spence (1973) which states that there is an information asymmetry between two parties, namely insiders and outsiders. In this context it means that insiders or parties who manage the company have complete information about the condition of the company, while the outsider associated with investors does not have more information about insiders. Signaling theory is essentially concerned with reducing information asymmetry between two parties (Spence, 2002). Therefore, insiders or company management will try to send signals that contain information to outsider or investors. The information can be in the form of financial reports, company policy information or other information that is carried out voluntarily by the company's management. Signal theory suggests how a company should provide signals to users of financial statements. This signal is in the form of information about what management has done to realize the owner's wishes. Signals can be in the form of promotions or other information stating that the company is better than other companies (Meythi & Hartono, 2012). In this case the company provides information related to financial performance.

2.3 Financial Performance

Regarding the notion of financial performance, Horne & Wachowicz, 2001 (2001), explained that financial performance is an analysis carried out to see how far a company has implemented using financial implementation rules properly and correctly. Such as by making a financial report

that meets the standards and provisions in SAK (Standar Akuntansi Keuangan) or GAAP (Generally Accepted Accounting Principles), and others.
To measure the company's financial performance by using financial ratios, it can be done with several financial ratios. Each financial ratio has a specific purpose, use and meaning. Then, each result of the measured ratio is interpreted so that it becomes meaningful for decision making (Jumingan, 2014).

2.4 Profitability

Brigham and Houston (2018) define profitability ratios as a collection of ratios that explain asset, liquidity, and debt management as a result of company activities. Overall research on pofitability is only measured by ROA and ROE. Return on Assets shows the company's ability to earn an overall profit. Hanafi (2015), states that return on assets is the ability to earn a net profit based on a certain level of assets.

2.5 Non Performing Loan (NPL)

Banking is one type of instruction that cannot be separated from various risks such as credit risk, liquidity, market and even political risk, and credit risk is the highest risk that must be faced (Chen and Pan, 2012). Credit risk is related to the size of the loan by the bank, which cannot be repaid on time either in part or in whole. (Campbell, 2007). It can be interpreted that if credit risk is not managed properly it will create bank losses where it is when the borrower cannot fulfill debt obligations as they fall due or at maturity which can result in the bankruptcy of a company causing bankruptcy (Coyle, 2000). Research conducted by Wulandari and Sudjarni (2014) found that partially NPL has a negative and significant effect on profitability. Other studies by Wirasukma (2016) and Saputra (2016) prove that credit risk affects financial performance. Silaban's research (2017) Non-performing loans (NPL) have a negative effect on bank profitability. Christaria and Kurnia (2016) found a significant effect between NPL and ROA. Research conducted by Yuhasril (2019) found that NPL has a significant effect on ROA. Based on this description, the hypothesis in this study is:

H1: The Non-Performing Loan Ratio (NPL) has a negative and significant effect on the profitability of PT. BPR BKK in Central Java for the period 2018-2021.

2.6 Capital Adequacy Ratio (CAR)

Capital is a very important factor for the development and progress of the bank and efforts to maintain public trust. Bank Indonesia (BI) as a monetary authority sets the provisions regarding the minimum capital provision obligations that must be met by each bank. Capital coverage is an important factor of banks in the context of business development and accommodating the risk of loss. Bank Indonesia requires the provision of minimum capital that must be maintained by each bank as a certain proportion of total Risk-Weighted Assets (ATMR) (Kusmayadi, 2018). Research conducted by Natalia (2017) Saputra (2016) and Sudiyatno (2015) proves that efficiency affects financial performance. Research by Christaria and Kurnia (2016) found a significant effect between CAR and ROA. CAR has a significant effect on ROA (Mili, Sahut, Trimeche, & Teulon, 2017). Based on the description, the research hypothesis is:

H2: The Capital Adequacy Ratio (CAR) has a positive and significant effect on the profitability of PT. BPR BKK in Central Java for the period 2018-2021

2.7 Loan to Deposit Ratio (LDR)

One of the risks that must be faced in the banking industry is liquidity risk. For the banking world, maintaining public trust is very important and liquidity is the main heart for banks. This is because bank funds as a means of operation are more dominated by funds coming from the community (Widyastuti et al., 2017). Liquidity is the ability of a bank to pay all of its short-term debt (repaying the disbursement of its depositors' funds and being able to sufficient the request for credit that has been filed) at the time it is billed with the liquid instruments it controls. In the banking industry, liquidity plays an important role in boosting banking performance. The higher loan to deposit ratio indicates the greater the amount of funds channeled to third parties in the form of credit. Research conducted by Wirasukma (2016) proves that liquidity has an effect on financial performance. Christaria and Kurnia (2016) found a significant effect between LDR and ROA. Based on the description, the research hypothesis is:

H3: The Loan to Deposit Ratio (LDR) has a positive and significant effect on the profitability of PT. BPR BKK in Central Java for the period 2018-2021.

2.8 Operational Expense of Operational Income (BOPO)

One of the other risks faced in the banking industry is operational risk. Operational risks occur due to uncertainty over the bank's business activities, including the possibility of operating losses in the event of a decrease in profits affected by the bank's operating cost structure and possible failure of services and new products offered (Andesfa and Masdupi, 2018). A proxy often used to measure operational risk is the ratio of Operating Expenses to Operating Income (BOPO). This ratio is often also referred to as the operational efficiency ratio, because it measures the bank's ability to manage operating costs compared to its operating income (Al-Homaidi et al., 2018).

H4: The Operational Expense of Operating Income (BOPO) has a negative and significant effect on the profitability of PT. BPR BKK in Central Java for the period 2018-2021.

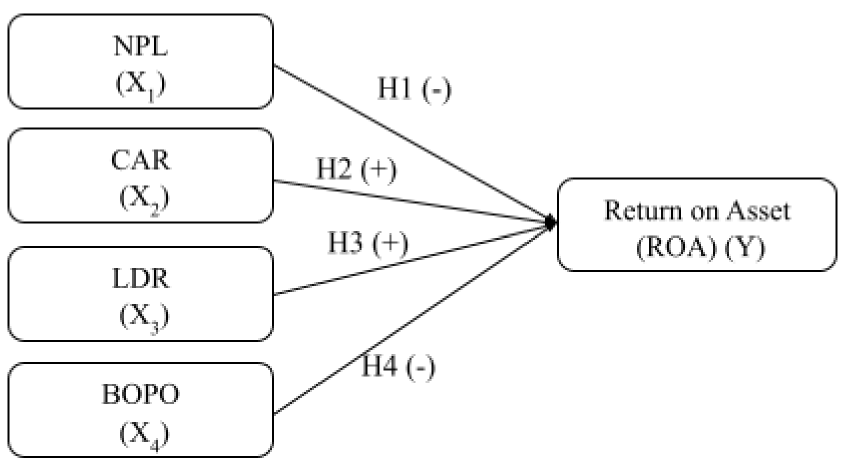


Figure 1. Research Model

3. Research Methodology

3.1 Research Design

The type of research will be use is a type of quantitative research, namely data measured in a numerical scale. This study uses secondary data that has been collected by data collection institutions and published to the public using data (Sugiyono, 2016). The population in this study was PT. BPR BKK in Central Java, amounting to 33 BPR BKK. The sampling technique in this study was done by Total sampling. Total sampling is a sampling technique in which the number of samples is equal to the population. In this study, based on the data source, the data that will be use is secondary data. Secondary data is data taken from records or other sources that have existed before.

3.2 Data Analysis Technique

The analytical method used in this research is multiple linear regression analysis using software analysis tool (SPSS). Multiple linear regression analysis is used to determine the effect of one dependent variable (bound) with two or more independent variables (Ghozali, 2018).

4. Results

4.1 Descriptive Statistics

Descriptive statistics describe only each of the variables of the minimum, maximum, average and standard deviation values.

Table 1. Descriptive Statistics Results

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
NPL	116	0,59	25,92	6,40	4,29
CAR	116	14,00	88,99	29,97	15,98
LDR	116	47,87	116,25	73,85	10,40
BOPO	116	66,99	118,37	81,06	7,52
ROA	116	-2,35	5,64	2,73	1,13

4.2 Multiple Regression Analysis

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig,
	B	Std, Error	Beta		

NPL	0,0002	0,008	0,001	0,019	0,985
CAR	0,0029	0,002	0,041	1,472	0,144
LDR	0,0018	0,003	0,017	0,592	0,555
BOPO	-0,1445	0,005	-0,963	-31,375	0,000
Constant: 14,2189 Adjusted R-Square: 0,915 F Count: 311,203 Significance F count: 0,000					

4.2.1 Coefficient of Determination Test (Adjusted R2)

Based on obtained an Adjusted R2 value of 0.915, this value can be interpreted that variations in the NPL, CAR, LDR, and BOPO variables are able to explain the variation of the ROA variable by 91.5% while the other 8.5% is influenced by other variables that are not included in this research model.

4.2.1 F Test

The F test is to see the simultaneous effect of the variables NPL, CAR, LDR and BOPO on ROA. Based on table 9. it is known that the calculated F value is 311.203 with a significance value of 0.000. A significance value smaller than alpha 0.05 indicates that simultaneously the variables NPL, CAR, LDR, and BOPO have an effect on ROA.

4.2.2 Hyphotesis Test

The first hypothesis testing aims to test the effect of NPLs on Return on Assets (ROA). Based on table 10, it is known that the calculated t value of the NPL variable is 0.019 with a probability value of 0.985. Using df (n-k-1=116-4-1=111) and alpha 5% obtained t table by 1,981. Since the calculated value of t is smaller than the table t, with a probability value greater than 0.05 it can be concluded that partially the NPL variable has no effect on Return on Assets (ROA), so the first hypothesis is rejected. The second hypothesis test aims to test the effect of CAR on Return on Assets (ROA). Based on table 10, it is known that the value of t counting the CAR variable is 1.472 with a probability value of 0.144. Using df (n-k-1=116-4-1=111) and alpha 5% obtained t table by 1,981. Since the calculated value of t is smaller than t of the table, with a probability value greater than 0.05 it can be concluded that partially the CAR variable has no effect on the Return on Assets (ROA), so the second hypothesis is rejected. The third hypothesis test aims to test the effect of LDR on Return on Assets (ROA). Based on table 10, it is known that the calculated t value of the LDR variable is 0.592 with a probability value of 0.555. Using df (n-k-1=116-4-1=111) and 5% alpha obtained t table by-1,981. Since the calculated t value is smaller than the table t, with a probability value greater than 0.05, it can be concluded that partially the LDR variable has no effect on the Return on Assets (ROA), so the third hypothesis is rejected. The fourth hypothesis test aims to test the effect of BOPO on Return on Assets (ROA). Based on table 10, it is known that the calculated t value of the BOPO variable is -31.375 with a probability value of 0.000. Using df (n-k-1=116-4-1=111) and alpha 5% obtained t table by -1.981. Since the value of -t is calculated and smaller than the -t of the table, supported by a probability value smaller than 0.05, it can be concluded that partially the BOPO variable negatively affects the Return on Assets (ROA), so the fourth hypothesis is accepted.

5. Discussion

5.1 The Effect of NPLs on the ROA of BPR BKK in Central Java

The results of this study are different from the findings of previous studies conducted by Wulandari and Sudjarni (2014); Silaban (2017) which states that NPLs negatively affect ROA.
As well as the study conducted by Dahlan et al., (2020) which in its conclusion did not find any significant influence of NPLs on profitability as measured by ROA, this happened because in general BPR applies higher lending rates, the application of relatively high credit interest on RURAL BANKS due to its relatively narrow market share. Because BPR applies relatively high interest on loans, the interest income obtained is also high, therefore even though the NPL of BPR is in a fairly high category, its profitability is still in the good category, because it is still covered by interest income, this also explains why high NPLs do not have a significant influence on ROA on BPR BKK in Central Java.

5.2 The Effect of CAR on the ROA of BPR BKK in Central Java

Based on descriptive statistics, the capital ratio at BPR BKK in Central Java is high at 30.11 percent. Nevertheless, the statistical results do not provide sufficient evidence that CAR significantly improves the ability of RURAL BANKS to generate profits.
Silaban (2017) in the results of his study also obtained the same findings, namely that CAR does not significantly affect changes in profit levels or profitability proxied with ROA. This can be explained by the fact that the capital owned by the bank is only used to meet the requirements of Bank Indonesia. Another thing that may happen is because banks invest more in productive assets but are less cautious in channeling funds to the real sector, and provide less oversight of bad financing so that some of the bank's capital (CAR) is actually used to cover risks. This opinion was affirmed by the results of a study by Hakim (2017) who also found that CAR had no significant effect on ROA, and explained that the fulfillment of a Capital Adequacy Ratio (CAR) of at least 8% was only intended by Bank Indonesia to adjust conditions to international banks.
This provides an explanation why although the CAR of BPR BKK in Central Java is in a high category, but statistically it is not proven to have a significant influence on changes in profits, and in the context of this study, what really determines the change in profit is in BPR BKK Central Java is BOPO. The better the BPR management in carrying out cost efficiency will greatly impact the change in profits at BPR BKK Central Java. The results of this study are different from the findings of previous studies conducted by Christaria and Kurnia (2016); Mili et al., (2017) who stated that CAR has a positive effect on ROA.

5.3 Effect of LDR on ROA of BPR BKK in Central Java

The results of this study are different from the findings of previous research conducted by Wirasukma (2016) and Christaria and Kurnia (2016) which stated that the loan to deposit ratio has a positive effect on ROA.

The absence of the influence of LDR on ROA is in line with a study conducted by Kusmayadi (2018) which also concluded that LDR is not a predictor of the ROA variable. A higher LDR is not a guarantee for rural banks to obtain a high level of profit. A high Loan to Deposit Ratio (LDR) indicates aggressive credit expansion. Aggressive credit expansion will give rise to credit risk, namely the emergence of opportunities for customers who experience bad debts or even default. Aggressive lending without being balanced with good credit quality will only increase risk, especially if lending does not consider the principles of prudence and control. Based on data, bad loans or NPL ratios of BPR BKK in Central Java are high, this gives an indication that the credit quality is in the poor category, thus it provides an explanation that even though the LDR ratio is increasing but control over bad debts is low, it will not have a significant effect on increasing profits.

5.4 The Effect of BOPO on the ROA of BPR BKK in Central Java

Descriptive statistics show that on average BPR BKK in Central Java is able to maintain the ratio of operating costs to operating income at 80.77 percent, this figure is quite far from the limit set by Bank Indonesia regarding BOPO, which is a maximum of 96 percent. The results of the regression analysis provide empirical evidence that the cost efficiency ratio measured by BOPO plays a very important role in increasing the profit of BPR BKK in Central Java. The study provides evidence that BPR BKK in Central Java is able to manage costs very well. The results of this study support the findings of previous studies conducted by Sabir, et al, (2012); Natalia (2017); Saputra (2016); Christaria and Kurnia (2016); Yuhasril (2019) who stated that BOPO has a negative effect on ROA.

6. Conclusion

Based on the results of the analysis, it can be concluded that simultaneously the variables of NPL, CAR, LDR, and BOPO have an effect on ROA. Partially, it can be concluded that:

1. The NPL variable has no effect on Return on Assets (ROA) of BPR BKK in Central Java during the 2018-2021 period. This condition provides findings that in general, the ability of BPR BKK in Central Java to generate profits is not influenced by the high and low of existing non-performing loans.
2. The CAR variable has no effect on the Return on Assets (ROA) of BPR BKK in Central Java during the 2018-2021 period. These results show that the ability of the BPR to generate profits from its managed assets is not directly determined by the obligation to provide minimum capital.
3. The LDR variable has no effect on the Return on Assets (ROA of BPR BKK in Central Java during the 2018-2021 period. This condition shows that the liquidity of a rural bank is not a guarantee in increasing the ability of BPR BKK in Central Java to generate profits.
4. The BOPO variable negatively affects the Return on Assets (ROA) of BPR BKK in Central Java during the 2018-2021 period. It means that an increasing of BOPO variable will decrease ROA Variable.

The results of this study have implications for BPR BKK in Central Java that in economic uncertainty, one of the most important things is to make cost efficiencies so that BPR can maintain profits. However, this study was only conducted on BPR BKK in Central Java

Province, which incidentally is owned by the local government, so the generalization is limited. To obtain strengthening generalizations, it is necessary to conduct comparative studies on non-BKK or other private BPRs in different provinces or with a wider population scope, so that it is hoped that they can provide strong conclusions and basic generalizations. In addition, out of the 4 hypotheses proposed, only one hypothesis was confirmed, thus giving rise to a recommendation to build a more comprehensive model of the variables that affect the profitability of a BPR. Further research can add variables of asset growth and income diversification as has been done by Ahamed (2017).

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