CAPITAL AND NON-PERFORMING LOAN EFFECT ON PROFITABILITY THROUGH LOAN TO DEPOSIT RATIO

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ABSTRACT

The objective of this research is to analyze how capital and non-performing loan are affecting profitability through loan to deposit ratio in banking companies listed in Indonesia Stock Exchange within 2014-2019 period. This research was conducted by using a descriptive quantitative research approach. 23 banking companies were chosen as the sample used in this research through the purposive sampling method among a total of 39 banking companies listed in the said period. Data analysis and hypothesis were tested and processed by using theSmartPLS application. Results of this study showed that capital adequacy ratio does not have any significant effect towards neither return on assets nor loan to deposit ratio, the non-performing loan had a negative significant effect on both return on asset and loan to deposit ratio, loan to deposit ratio itself also shown a negative significant effect on return on assets while the loan to deposit ratio as intervening variable shown no mediation done between neither effect of capital adequacy ratio on return on assets nor non-performing loan on return on assets. Suggestion for next researchers who has interest in the similar topic is to include other possible intervening variables such as net interest margin in which measures the difference between the interest income generated by banks and the amount of interest paid out to lenders which is relative to the amount of the assets and to possibly extend the period upon the research in order to get better accuracy and understanding in the upcoming conducted research.

Keywords: Capital Adequacy Ratio, Non-Performing Loan, Loan to Deposit Ratio, Return on Asset

INTRODUCTION

Banking companies hold an important role in a country's economic growth. Profitability is one of the essential factors that investors would look up to before finally making an investment decision. Besides, capital usage and liquidity also play a crucial role in the problems in bank operations. Bank with more capital tends indicates how that the bank's capital could cover up the risk of credit exposures better than those don't. While for thenon performing loan itself, as we know, indicates that there was an issue upon loan collectability and for sure will impact the bank profitability.

In this research, we will analyze the impact of capital adequacy ratio and non-performing loan towards return on asset as well as loan to deposit ratio as an intervening variable between the said correlations.

LITERATURE REVIEW

Return on Assets (ROA) indicates the bank's efficiency in using its assets to earn profit.(Gitman, 2011)
Capital Adequacy Ratio (CAR) indicates the bank's health and shows how far the bank capital could cover the risk of credit exposure and bear the losses due to the credit given.(Taherinia, 2018). Bank with more capital tends to be more profitable(Herrero, 2009).
Non-Performing Loan (NPL) indicates the portion of uncollectible loans or problematic loans out of the total loan distributed. Higher problematic/uncollectible loans refrained banks on lending and thus further will impact the bank's profitability.(Jolevski, 2017)
Loan to Deposit Ratio (LDR) indicates how much the bank funds collected from the third party besides bank are distributed as loans. Higher loans distributed implied higher profit will be earned.(Berger, 1995)

METHODS

The research approach used in this is quantitative research and using a descriptive type of method. This research is conducted based on previous research. 23 out of 39 banks was selected as sample for this research was chosen through purposive sampling method with criteria : (1) Bank companies listed in Indonesia Stock Exchange during 2014-2019 period, (2) Bank companies that published their financial reports accordingly during the said period, (3) Bank companies which earned profit during the said period, (4) Bank companies who listed their non-performing loan in details during the said period. Hypothesis testing was conducted by using path analysis and data were processed by using SmartPLS.

Below shown selected sample list (classified by bank capital ownership for better reference on further discussions of each variable) :

Bank Group	No	Code	Bank Name
State-owned bank	1	BBNI	Bank Negara Indonesia (Persero) Tbk
	2	BBRI	Bank Rakyat Indonesia (Persero) Tbk
	3	BBTN	Bank Tabungan Negara (Persero) Tbk
	4	BMRI	Bank Mandiri (Persero) Tbk
Private Commercial Bank	1	AGRO	Bank Rakyat Indonesia Agroniaga Tbk
	2	BBCA	Bank Central Asia Tbk
	3	BBKP	Bank Bukopin Tbk
	4	BBMD	Bank Mestika DharmaTbk
	5	BINA	Bank Ina PerdanaTbk
	6	BNBA	Bank Bumi ArtaTbk
	7	BNGA	Bank CIMB NiagaTbk
	8	BSIM	Bank SinarmasTbk
	9	BTPN	Bank Tabungan Pensiunan NasionalTbk
	10	MAYA	Bank Mayapada InternasionalTbk
	11	MEGA	Bank MegaTbk
	12	NISP	Bank OCBC NISPTbk
	13	PNBN	Bank Pan IndonesiaTbk
Regional Owned Bank	1	BJBR	Bank Pembangunan Daerah Jawa Barat Tbk
	2	BJTM	Bank Pembangunan Daerah Jawa Timur Tbk
Joint Venture Bank	1	BACA	Bank Capital IndonesiaTbk
	2	BNII	Bank Maybank IndonesiaTbk
	3	MCOR	Bank China Construction Bank IndonesiaTbk
	4	SDRA	Bank Woori Saudara Indonesia 1906 Tbk

RESULTS AND DISCUSSIONS

Descriptive Statistics

The descriptive statistics of this research were classified based on the bank capital ownership, which is the state-owned bank, private commercial bank, regional owned bank, joint venture bank, and the foreign bank. However, in this research foreign bank is not included in the sample. Descriptive statistics results shown that the highest CAR during 2014-2019 research period was shown by the private commercial bank group which has an average CAR around 22,32%, fulfilling the mandatory of minimum reserved capital set by Bank Indonesia at 8%, nevertheless, this might indicate that bank was reserving their capital to fulfill this minimum limit set instead of using it upon the bank operation to earn profit even though higher CAR indicates that bank has a better chance in covering the risk of credit exposure. On the other hand, the lowest NPL during 2014-2019 research period which indicates that non performing loans rarely take place was shown by private commercial bank group as well with an average of 2,27% while the maximum limit set by Bank Indonesia for NPL is at 5%. The highest LDR during the said period was then shown by the joint venture bank with an average 89,63%; still in the range of 78%-98% set by Bank Indonesia, indicating that bank funds are well distributed as loans to the debtors. ROA showed by the state-owned bank with an average of 2,42% is the highest amongst all bank groups during the said in this research; higher ROA indicates banks are using their assets effectively in returning assets; and in this case, minimum ROA of 1,5% were reached.

Determinant Coefficient

Based on table 1 shown below, it is known that capital adequacy ratio and non-performing loan simultaneously shown an effect of 17,8% towards return on assets, while capital adequacy ratio, non-performing loan, and loan to deposit ratio shown a simultaneous effect towards return on assets by 9,6%.

Table 1. Determinant Coefficient

	R Square	R Square Adjus...
LDR	0.178	0.166
ROA	0.115	0.096

Direct Effect / Path Coefficient

Path coefficient test was conducted by using bootstrapped data.

Table 2. Path Coefficient

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O/...	P Values
CAR -> LDR	-0.085	-0.091	0.049	1.722	0.085
CAR -> ROA	0.151	0.172	0.113	1.333	0.182
LDR -> ROA	-0.193	-0.184	0.093	2.064	0.039
NPL -> LDR	-0.418	-0.412	0.103	4.072	0.000
NPL -> ROA	-0.311	-0.303	0.100	3.112	0.002

The result of path coefficient test showed in table 2 indicates that p-values of CAR -> ROA shown 0,182which is greater than 0,05 and t-stat of 1,333 which is below t-table 1,96 shown that CAR has no significant effect on ROA during the research period.This is probably caused by the fluctuating ATMR which does not show any constant increment followed by the increasing bank capital each year. High CAR as shown in the private commercial bank group during 2014-2019 also might indicate that bank capital usage is more to fulfill the minimum reserved capital requirement instead to cover the risk of credit exposure, which finally causes CAR to not have any significant effect on ROA itself. The result of this research is supported by previous research conducted by (Pinasti, 2018) and (Suhandi, 2019) which concluded that CAR has no significant effect on ROA. However, the result is different from the research conducted by (Setyarini, 2020) in which she concluded that CAR has a significant effect on ROA.

The p-values of NPL -> ROA shown 0,002 which is below 0,05 and t-stat of 3,112 which is greater than t-table 1,96 shown that NPL has a significant effect on ROA, while coefficient -0,311 shown a negative correlation of NPL and ROA. This means that NPL has a negative significant effect on ROA during the research period. The gradually decreasing non-performing loan followed by a constant increment of loan distributed caused NPL value to be lowered accordingly and through this research, it is found that when NPL is decreasing, it as well indicates risk loan is decreasing; causing increment in loan distributing which then followed by the increment ROA itself due to the profit earned from the loan interest.The result of this research is supported by previous research conducted by (Ndoka, 2016) and (Joseph, 2012) which concluded that NPL has a negative significant effect on ROA. On the other hand, the research conducted by (Apriani, 2019) that concluded CAR has no significant effect on ROA.

The results have also shown p-values of CAR -> LDR as 0,085 which is greater than 0,05 and t-stat of 1,722 which is below t-table 1,96 shown that CAR has no significant effect on LDR during the research period. This is probably caused by the high level of capital is used upon the requirement of minimum reserved capital instead of being used to cover up the credit exposure risks shown by fluctuating ATMR, hence it has no significant effect in neither increasing nor decreasing total loan distributed with the bank funds.The result of this research is supported by previous research conducted by(Pratiwi, 2014) but different from the result obtained by (Edo, 2014) on his research.

On the other hand, the p-values of NPL -> LDR shown as0,000 which is below 0,05, and t-stat of 4,072 which is greater than t-table 1,96 shown that NPL has a significant effect on LDR, while coefficient -0,418 shown that LDR has a negative correlation of NPL and ROA. This means that NPL has a negative and significant effect on LDR during the research period. Increment in the non-performing loan has caused bank to be more selective in granting credit/releasing loan to their customers; in this case one of the joint venture banks shows in the year their non-performing loan started to increase, the loan released to debtors are decreasing.The result of this research is supported by previous research conducted by(Hersugondo & Tamtomo, 2012) but different from the result obtained by (Kartika & Nuranisa, 2014) on their research.

Meanwhile, the result has also shown p-values of LDR -> ROA as 0,039 which is below 0,05, and t-stat of 2,064 which is greater than t-table 1,96 shown that LDR has a significant effect on ROA,while coefficient -0,913 shown a negative correlation of LDR and ROA. This eventually means that LDR has a negative and significant effect on ROA during the research period. This might be caused by the increasing loan released to debtors, there is the possibility of the non-performing loan increment which will result in the decrement of the profit earned from the loan interest that is supposed to be received. Emphasizing this, the joint venture bank data within 2014-2019 period shows the highest LDR while their ROA is relatively one of the lowest of all bank groups in the said period.The result of this research is supported by previous research conducted by (Raharjo, 2014) but is not supported by the result of previous research conducted by (Dewi, 2015).

Indirect Effects

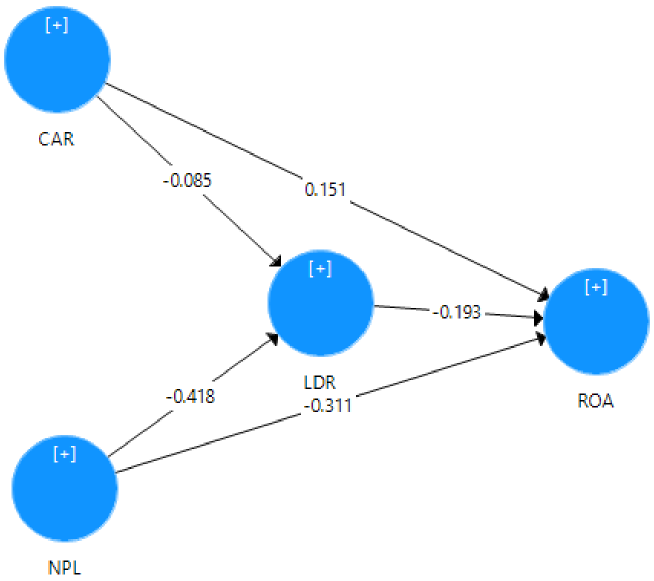
Through this research, it is found that LDR does not show any significant mediation effect between CAR nor NPL towards ROA. It is due to the p-value of each independent variable towards the dependent variable through LDR as the intervening variable shows a greater value than 0,05 and t-stat is below t-table of 1,96.

Table 3. Indirect Effects

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O/...	P Values
CAR -> LDR ->...	0.016	0.017	0.013	1.215	0.225
NPL -> LDR -> ...	0.080	0.081	0.051	1.575	0.115

The insignificant effect of LDR as the mediation variable might because the capital usage itself is not maximized to cover up the risk of credit exposure, followed by the bank funds is not well distributed as loans thus even though there is an increment of capital, as long as the increment is not followed by the increment of loans distributed as well, it will not effectively effecting the profit earned. On the other hand, the insignificant effect of LDR as the mediation variable is even though the non-performing loan is increasing, the loan distributed will remain the same or might be increased as well since bank has their prepared fund which is meant to cover the risk; for example, the reserved capital.

Figure 1. Direct and Indirect Effect



CONCLUSIONS

It is concluded that CAR does not show any significant effect on ROA nor LDR during the research period, NPL has a negative and significant effect on ROA and LDR during the conducted research period, while LDR as the intervening variable does not show any mediation effect on CAR towards ROA nor NPL towards ROA correlation.

SUGGESTIONS

As the result shown that LDR does not have any significant effect as an intervening variable between CAR towards ROA nor NPL towards ROA in this research period, it is suggested to add another intervening variable such as Net Interest Margin (NIM) in which measures the difference between the interest income generated by banks and the amount of interest paid out to lenders which is relative to the amount of the assets and to possibly extend the period upon the research to get better accuracy and understanding in the upcoming conducted research.

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