The Effect of Banking Risk on Indonesia's Regional Development Banks

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Abstract

Bank's financial performance is the representation of its financial condition in particular period of time, either in relation to the fund raising or to the fund allocation, which is usually observed through several indicators, such as capital sufficiency, liquidity, and bank profitability. In the banking industries, profitability is the most accurate indicator to measure the bank performance. Instruments used to measure profitability are Return on Equity (ROE) and Return on Assets (ROA). In this study the effect of Banking Risk is analyze d by using the ratio of Non-Performing Loan (NPL), Net Interest Margin (NIM), Loan to Deposit Ratio (LDR), the ratio of Operational Cost to Operational Income (OCOI/BOPO) to financial performance in Regional Development Banks in Indonesia. The data used in this study were obtained from the Annual Report disseminated in the website of each banks. The number of samples is 26 Regional Development Banks in Indonesia with the period of 2013-2015. The result of this research shows that simultaneously NPL, NIM, LDR, and OBOI/BOPO are significant to ROA; while partially the NPL is significant and negatively affects ROA, NIM is significant and positively influences ROA, LDR is not significant and negatively affects ROA, and OCOI/BOPO is significant and negatively influences ROA. That means the banks have to minimize the ratio of NPL, LDR, and BOPO, for they have a negative influence on ROA. Conversely, banks have to maximize the ratio of NIM because the latter has a positive influence on ROA.

Keywords: financial performance, financial system, Indonesian banking, risk management in banking

JEL Classification: ***G21, G32***

INTRODUCTION

Nowadays, Banking has become dominant in financial system. Indeed, it expands its significance in supporting the economic progress of certain countries. Bank is an enterprise operating in financial sector or financial services. In Indonesia, banking sector is strictly regulated by Bank Indonesia as the central bank in the country, for it involves several parties in the communities. Therefore, to achieve banks' good performance and profitability requires good understanding and management of the financial system itself.

Measuring banks' performance can be conducted by seeing their financial position. In addition, predicting banks' future performance can be carried out based on their current condition. On the other hand, reviewing bank's financial system could be conducted based on banks' financial statement which contains information on optimal management in terms of funds.

One indicator that can be used to determine whether or not a bank is healthy is profitability ratio. Generally, a bank is considered healthy when its financial performance is good as measured by its profitability ratio. Bank's financial performance represents its financial condition in particular period of time, either in relation to the fund raising or to the fund allocation, which is usually observed through several indicators, such as capital sufficiency, liquidity, and bank profitability. In the banking industries, profitability is considered as the most accurate indicator to measure the bank performance using instruments, such as Return on Assets (ROA) and Return on Equity (ROE).

ROA is defined as the company's ability to gain the profits in operating the enterprise, or in other words, it is the financial ratio used to measure the bank ability to gain profit in general. The higher the ROA is, the higher the profit and the better the bank position in terms of assets management. Nonetheless, bank's better financial performance is influenced not only by internal factors, but also the external. Both ROA and ROE have positive and negative impact on the bank's performance. The latter refers to the banking risks on which this paper will focus, particularly four types of risks that can be measured using several ratios.

As contained in the Regulation of Financial Service Authority Number 18/PJOK.03/2016 on the Implementation of Risk Management for Bank, there are eight types of risks that need to be reviewed: credit, market, operation, liquidity, law, strategy, obedience, and reputation. However, only several indicators can be measured and required by Bank of Indonesia. The SEBI Number 13/24/DPNP/2011 mentioned four major banking risks that need to be assessed using the ratio. Those are credit, market, liquidity, and operational.

Based on the Circular Letter of Bank Indonesia Number 13/24/DPNP dated 25 October 2011, credit risk results from the failure of debtors and/or other parties in fulfilling the obligations to the bank. It can be measured using Non-Performing Loan (NPL), which is the comparison between the total non-performing loans and the total credit granted to the debtors. Veithzal *et al* (2013: 569) states that market risk arises due to the movement of market variables from the portfolio owned by a bank, which results in an adverse moment. One of the proxies of market risks is interest rate, which is measured from the difference between funding interest rate and lending interest rate commonly known as Net Interest Margin (NIM) that is used to

measure bank management ability in earning the income from the interest by observing the bank performance in allocating the credits, for bank operational income highly depends on the difference. NIM has positive correlation to ROA, meaning that the higher the NIM value is, the higher the interest earned on the productive assets managed by the bank will be. Thus, the increasing ROA will lead to the betterment of banking financial performance.

As stated in the Circular Letter of Bank Indonesia Number 13/24/DPNP dated 25 October 2011, liquidity risk is the bank incapability to fulfill the obligations due from the cash flow and/or from high quality liquid assets that can be mortgaged without disrupting the bank activities. Loan to Deposit Ratio (LDR) has a positive influence on ROA. It means that the higher the ratio, the lower the bank liquidity.

It is also stated that operational risk results from the inadequate and/or the non-functioning internal process, human error, system failure, and/or external occurrences affecting the bank operation. While operational risk can directly or indirectly damage the financial performance, it is also potential to prevent the bank from gaining profits. Operational risk can be measured using Ratio of Operational Cost on Operational Income (OCOI/BOPO). BOPO, which is the comparison between operational cost and operational income in measuring the efficiency and bank ability in its activities, has negative influence on ROA (Veithzal 2013: 482). The lower the BOPO level, the better the bank management performance, which proves that the bank is more efficient in using the available resources for the operation, leading to an increase in profitability. With regard to those types of banking risks—credit, market, liquidity, and operation—the author of this paper attempts to conduct an observation on all Regional Development Banks, which are 26 in total. Those banks have played significant roles in supporting the regional autonomy and the regional economic development.

The ratio data of the Regional Development Banks, data of NPL, NIM, LDR, BOPO, and ROA of Regional Development Banks in Indonesia in the period of 2013-2015 are presented in Table 1.

Table 1. Average Ratio of NPL, NIM, LDR, BOPO, and ROA in Regional Development Banks in Indonesia (2013-2015)

No	Name of the Bank	2013					2014					2015				
		NPL	NIM	LDR	BOPO	ROA	NPL	NIM	LDR	BOPO	ROA	NPL	NIM	LDR	BOPO	ROA
1	Bank Aceh	2.78	7.03	86.79	70.72	2.43	2.58	7.64	92.38	73.32	2.43	2.30	7.27	84.05	76.07	2.28
2	Bank Bali	0.33	7.63	88.33	63.03	2.89	0.35	7.68	97.34	64.89	2.76	1.94	6.85	97.99	69.67	2.44
3	Bank Bengkulu	0.38	9.36	105.04	68.99	3.27	0.39	8.39	86.06	72.41	2.71	0.39	6.86	91.38	77.06	2.43
4	Bank Dki	2.38	7.32	95.61	74.99	1.93	4.38	6.56	92.47	80.26	1.28	7.97	6.61	91.04	90.99	0.60
5	Bank Jambi	0.41	8.16	110.93	62.07	3.07	0.48	6.52	101.43	71.45	2.47	1.10	5.36	108.15	77.26	1.99
6	Bank Jabar Dan Banten	0.74	7.96	86.59	79.41	2.3	0.96	6.79	87.95	85.60	2.05	1.26	6.32	89.95	83.31	1.99
7	Bank Jawa Tengah	2.66	8.44	96.47	72.88	2.06	4.02	7.55	93.18	81.80	1.56	2.76	7.25	88.13	76.02	1.65
8	Bank Jawa Timur	2.91	7.14	84.59	70.28	2.49	3.31	6.90	87.83	69.63	2.47	4.30	6.41	84.11	76.12	2.07
9	Bank Kalimantan Barat	6.74	9.93	90.03	70.12	2.34	9.51	8.95	78.26	71.77	1.69	10.33	8.81	104.39	73.20	1.44
10	Bank Kalimantan Selatan	0.81	5.65	77.45	76.00	3.23	0.82	6.72	79.82	75.15	3.69	0.48	6.39	106.34	79.62	4.18
11	Bank Kalimantan Tengah	0.35	7.84	85.35	64.63	2.55	0.48	8.61	85.30	61.07	2.34	0.51	8.96	80.87	59.91	2.22
12	Bank Kalimantan Timur	1.55	6.77	84.06	71.30	1.87	3.47	4.95	90.89	80.39	1.97	3.77	6.03	100.12	85.30	1.80
13	Bank Lampung	0.76	5.58	110.56	80.86	1.58	1.06	7.61	112.96	69.33	3.12	1.12	7.21	94.63	68.73	2.84
14	Bank Maluku	2.46	9.45	90.86	71.62	2.47	2.38	10.44	92.26	99.38	0.01	2.37	9.14	85.28	70.30	2.83
15	Bank Nusa Tenggara Barat	1.73	11.08	104.25	64.19	3.81	1.46	8.80	99.23	65.79	3.36	1.34	7.98	102.93	67.19	3.68
16	Bank Nusa Tenggara Timur	1.30	9.35	96.36	67.13	3.19	1.52	10.13	87.68	69.24	2.96	2.32	9.19	90.09	69.28	2.70
17	Bank Papua	1.16	7.88	84.78	72.01	2.15	3.20	7.59	80.32	91.26	0.75	6.28	7.51	83.66	80.22	1.88
18	Bank Riau Kepri	2.81	7.49	86.8*	69.12	2.17	2.79	7.54	75.81	70.59	2.19	4.12	6.08	112.22	83.86	1.51
19	Bank Sulawesi Utara	1.40	11.17	96.71	75.53	3.63	2.69	9.72	118.84	81.52	3.41	2.36	9.18	94.44	87.35	2.76
20	Bank Sulawesi Selatan Dan Sulbar	1.15	10.73	111.93	68.06	3.62	0.82	10.34	107.06	65.23	4.00	0.65	10.02	116.18	63.82	4.35
21	Bank Sulawesi Tengah	2.93	8.80	128.43	64.67	2.62	1.40	9.65	120.44	69.27	2.96	1.71	7.53	80.62	71.60	2.49
22	Bank Sulawesi Tenggara	0.54	8.89	112.94	69.66	2.32	1.29	8.68	90.10	71.67	1.35	0.97	7.51	103.62	76.41	1.18
23	Bank Sumatera Barat	2.28	7.28	93.85	78.27	1.93	2.52	6.56	93.*7	84.51	1.63	2.74	6.94	94.71	81.75	1.63
24	Bank Sumatera Selatan Dan Bangka	1.15	7.97	95.43	86.23	1.23	7.10	7.67	89.43	81.54	1.56	4.39	7.91	101.24	81.44	1.71
25	Bank Sumatera Utara	3.83	9.34	96.27	74.22	2.47	5.48	8.14	92.72	80.30	1.99	5.02	7.26	93.37	82.16	1.93
26	Bank Yogyakarta	0.90	8.38	73.67	72.75	1.97	1.23	7.83	79.32	72.64	2.09	1.05	7.50	79.99	71.89	2.14

Source: *Processed data, 2019*

LITERATURE REVIEW

Banking Risk

According to the Regulation of Bank Indonesia Number 5/2003, Banking Risk means the potential of particular events causing damages to the bank. Risk will always be related to banking sector because of external and internal factors in the rapid development of banking business activities. Banking risk focuses on financial problem, for it operates in financial services. Bank provides facilities to allow the public, as the customers, to expedite all things related to financial problem. There are eight types of Banking Risks—e.g., credit risk, market risk, liquidity risk, operational risk, law risk, reputation risk, strategic risk, and obedience risk—as stated in the Regulation of Financial Services Authority Number 18/PJOK.03/2016 on the implementation of Risk Management for conventional Bank.

Non-Performing Loan (NPL) and Its Influence on Return on Asset (ROA)

One of the banking risks, according to the Regulation of Bank Indonesia, is credit risk. It is defined as the risk arising from the counterparty's failure to fulfill the obligations. However, Tsintsadze *et al* (2018) suggests that credit risk is encountered by the bank because it disburses the funds in the form of loans to the people. Because of various reasons, it is possible that debtor does not fulfill the obligations to the bank, such as loan principal, interests, and others. The failure in fulfilling the obligation causes the bank to suffer from the loss, for it fails to obtain the calculated returns.

Therefore, it is necessary to anticipate the possible risks in running the business. The management needs to minimalize the risk in the managing the production factors, funds, and other resources. Risk measurement is closely related to the measurement of return, because the bank experiences the risk arising in the attempt to obtain the return. According to Hempel *et al* (1986), there are four categories as the base to measure bank business risks. Those are liquidity risk, interest rate risk, credit risk, and capital risk.

Similar to other companies in general, banking business also meets various risks. Among them is credit risk. In this research, the financial ratio used as the proxy of the value of credit risk is the ratio of NPL. The ratio shows bank management ability in managing the non- performing loans. Therefore, the higher the ratio, the worse the credit quality will be. Such a condition is usually followed by bigger non-performing loans, which consequently results in bigger problems for the

bank. In this case, the credit is given to the third party. Non-Performing Loans includes credit with substandard quality, doubted, and loss. Bank Indonesia has established the standards, which is less than 5%. This percentage minimizes the removal of Allowance for Possible Losses on Earning Assets that should be provided by the bank to cover the losses incurred by non-performing earning assets.

The previous study conducted by Usman (2003) on the influence of NPL on the changes of the next year's earning shows that NPL does not significantly influence the changes. Thus, it needs further study, particularly in observing the influence of NPL on ROA. The latter represents the profit performance, for it has calculated the assets. It is in line with the research finding by Sudiyanto and Suroso (2012) in which NPL has negative influence on ROA. Based on such arguments, the first hypothesis is generally as follows:

H1: Non-Performing Loan (NPL) has negative influence on Return on Asset (ROA)

Net Interest Margin (NIM) and Its Influence on Return on Asset (ROA)

As stated in the Regulation of Bank Indonesia Number 5/ 2003, market risk results from the movement of market variables from the portfolio owned by the bank, where the movement is potentially damaging. It includes interest rate and exchange rate. In general, bank performance is measured by the variables of growth of market share, variable of profitability, and variable of rate on return (Tainio *et al* 2000). Bank performance may decrease or increase, depending on the environmental factors, strategies, and structures.

The previous study on NIM by Sudiyanto and Suroso (2012) shows that NIM has positive influence on ROA in which the higher the NIM, the better the performance and thus, the higher the profits will be. The increasing profit is predicted to increase the bank's ROA.

H2: Net Interest Margin (NIM) has positive influence on Return on Asset (ROA)

Loan to Deposit Ratio (LDR) and Its Influence on Return on Asset (ROA).

The LDR indicates the availability of funds and resources currently and in the future, which is conceptually known as liquidity. Liquidity increases when the assets are mostly non-liquid with shorter terms of funds. The indicators of liquidity include the amount of secondary reserve for daily liquidity needs, relatively less stable concentration ratio on dependence, and the distribution of good financial sources from the third party. Petria *et al* (2015) states that loan to customer

deposits ratio (LDR in Indonesia) is used to find out the bank's ability in paying to the depositors using the given loan guarantee or as a proxy to liquidity risk. In this study LDR is used to find out whether it has positive influence on ROA, which is aimed to prove the research finding by Eng (2013) showing LDR has significant influence on ROA. It is also in line with the result of research conducted by Tran *et al* (2019) on liquidity risk in commercial banks in Vietnam. Since profit is one of the ROA components, it can be stated that LDR has positive influence on ROA. Thus, it can be assumed as follows:

H3: Loan to Deposit Ratio (LDR) has positive influence on Return on Asset (ROA)

Operational Cost against Operational Income Ratio and Its Influence on ROA

Operational efficiency also influences bank performance, in that it shows whether the bank has appropriately used all the production factors (Kalish & Gilbert, 1973). Based on Bank Indonesia's standards, operational efficiency is measured by Ratio of Operational Cost on Operational Income (commonly known as BOPO in Indonesia. The ratio is aimed to measure the ability of operational income to cover the operational cost.

The increasing ratio represents the bank's inability in minimizing the operational cost and maximizing the operational income. These situations may harm the bank, for it is less efficient. Bank Indonesia has established the best standard for BOPO ratio, which is below 90%. If the bank reaches almost 100%, it is categorized less efficient. In this research, BOPO Ratio is taken as one of the influential variables or factors having an influence on bank's financial performance. Ratio, which is often called efficiency ratio, is used to measure the bank management's ability to control the operational cost and the operational income. The smaller the ratio, the more efficient the cost. Hence, the assumption can be made as follows:

H4: Operational Cost against Operational Income (BOPO) has negative influence on the Return on Asset (ROA)

Based on the available data, the study will focus on the influence of NPL, NIM, and BOPO on ROA and examine whether the theory on NPL, NIM, and BOPO having positive or negative influence on ROA is true. It will also attempt to find out the influence of banking risks (credit, market, liquidity, and operation), as well as the ratio of NPL, NIM, LDR, and BOPO on the banking performance, which is measured using ROA in Regional Development Banks. The study

aims to find out the influence of banking risks, particularly that of all Regional Development Banks in Indonesia on the banking performance in the year of 2013-2015.

METHOD

The study conducted is empiric in nature, as it studies the Regional Development Banks throughout Indonesia using available data. It is also aimed at explaining the relations among variables. The research is conducted based on the data taken from the banks' annual statements in the period of 2013-2015 to describe their respective NPL, NIM, LDR, BOPO, and ROA. The population and samples of the research include all Regional Development Banks (BPDs) throughout the country with the total number of 26.

The research employs a multiple regression analysis technique, which is a dependent technique. Thus, it needs to divide the variables into dependent and independent. Regression analysis is also statistic instrument that is used when the dependent and independent variables form a matric. However, in a particular condition, independent variable, which is in the form of non-metric data (dummy variable, ordinal or nominal form) can also be used. Multiple regression analysis is used in this research to find out the influence of NPL, NIM, LDR, and BOPO on ROA on those Regional Development Banks.

Simultaneous hypothesis test is meant to know the independent variable with X1 credit of the indicator of Non-Performing Loan (NPL), X2 Price with the indicator of Net Interest Margin (NIM), X3 of liquidity with the indicator of Loan to Deposit Ratio (LDR), X4 of efficiency with the indicator of BOPO. They have significant influence on the Return on Asset (ROA) of BPD banks in Indonesia. The definitions of those operational variables are presented in Table 2.

Table 2. Definition of Operational Variables

Variable	Variable Definition	Ratio	Scale
Credit Risk (NPL) (X1)	Credit repayment rate given by depositor to the bank	NPL	Ratio
Market Risk (NIM) (X2)	Ratio of interest rate on average earning assets	*NIM*	Ratio
Liquidity Risk (LDR) (X3)	Ratio describing the deposits capability in supporting the lending	*LDR*	Ratio
Operational Risk (BOPO) (X4)	Comparison between operational cost and operational income	*BOPO*	Rasio
Financial Performance (ROA) (Y)	Ratio of profit after tax on the total asset	*ROA*	Ratio

Source: *Processing data, 2019*

RESULTS

Table 3. Descriptive Variables

Variable	Mean	Std. Deviation	N
ROA	2.3476	.81378	78
NPL	2.3805	2.08432	78
NIM	7.9315	1.35852	78
LDR	97.9940	33.97969	78
BOPO	74.3497	7.63855	78

Source: *Processing data, 2019*

As indicated in Table 3, the number of samples used is 78, all of which are taken from the financial statements of all 26 BPD banks in Indonesia within the period of 2013-2015. The mean of ROA is 2.35%, exceeding the standard established by Bank Indonesia, which is below 1.5%. Seen from the standard deviation, which is 0.81%, it proves that ROA is in a good position because the mean exceeds the standard deviation. The mean of NPL is 2.39%, with the

standard deviation smaller than the mean (2.08%). It shows that the data NPL is appropriate. The mean of NIM is 7.93%, with the standard deviation of 1.36%. The smaller number of standard deviations shows small distribution of data variables or small difference of NIM. LDR determined for public bank is above 92%. From the statistic test result, the mean of LDR value is 97.99%, which is in accordance with the standard given by Bank of Indonesia. The result is good because the mean is bigger than the standard deviation, which is 33.98%. The mean of BOPO of all the BPD banks in Indonesia is 74.35%. It is good in terms of operational activities because it exceeds the standard deviation, which is 7.64% (see Table 3).

Table 4 shows that from the calculation, the F value is 17.687 with the significance of 0.000. Because the significant value is smaller than the confidence rate of 5%, there is significant influence of the variables of NPL, LDR< BOPO< and NIM, on ROA> based on the tables, it can be seen that, partially, NPL significantly influences ROA, for the significant value of NPL is below 5%, which is 0.1%. The variable of NIM significantly influences ROA. It is because the significant value of NIM is below 5%, which is 2.5%. LDR does not significantly influence ROA, for it is above 5%, which is 62.7%. BOPO significantly influences ROA because it reaches the score below 5%, which is 0.0%. The result shows coefficient correlation (R) and coefficient determination (R square). R value explains the relation among independent variables (x) and dependent variables (y). As shown from the data, the coefficient correlation is 70.2%, meaning that the x variables (NPL, NIM< LDR, and BOPO) and the y variables (ROA) are in the strong category.

R square explains the amount of variable y as the result of x. The calculation obtains the R2 value of 0.492 or 49.2%, which means ROA is influenced by the independent variables (NPL, NIM< LDR, and BOPO), while 50.8% of it is influenced by other factors outside the model. Adjusted R square is the score of R2 which is adjusted so that it is almost similar to the quality of model. From the calculation, the score of adjusted R square is 46.4%. Standard error of the estimate means the standard error from the estimation, which is 0.595%. The problems that may arise in the use of multiple regression formulation is multi-co-linearity. It is a condition where the independent variables correlate to other independent variables, or particular independent variable is the linier function of the other. Multi-co-linearity can be seen from the tolerance value or the value of Variance Inflation Factor (VIF). The limit of tolerance value is

above 0.10, or the VIF value below 10.

Table 4. Regression Result of NPL, NIM, LDR and BOPO on ROA of BPD Banks in Indonesia

	t-test	Sig.	Collinearity Statistics	
			Tolerance	VIF
NPL	-3.321	.001	.864	1.158
NIM	2.294	.025	.867	1.153
LDR	-.488	.627	.974	1.026
BOPO	-4.798	.000	.775	1.290
	F Test	**Sig**		
NPL, NIM, LDR, BOPO	17.687	.000[b]		
Obs	78			
R	.702[a]			
R^2	.492			
Adjusted R^2	.464			

Source: *Processing data, 2019*

As indicated in Table 4, the tolerance value of independent variable is above 0.10 and VIF below 10. Thus, it can be concluded that multi-co-linearity does not occur in the regression model, then it can be tested. In Table 4, the constanta shows the score of 5.345. It means that if the independent variables are assumed to be in fixed condition, the ROA will increase to as much as 5.345%. The variable of NIM has positive and significant direction on ROA. Meanwhile, the variables of NPL, LDR, and BOPO are negative and significant. As expressed in Table 4, the regression analysis shows that most independent variables significantly influence the dependent variable. It is proven by the significance rate of independent variables, which are mostly below 0.05. As for the NPL on ROA, the score is -0.116 and it is below 0.05. It means that NPL has negative influence on ROA.

The statistic number of NIM on ROA is 0.123 and the significance is below 0.05. It means that NIM has positive influence on ROA>LDR, as ROA reaches the score of - 0.001. It also means that LDR has negative influence on ROA. In addition, the statistic number of BOPO on ROA is -0.048, meaning that it has negative influence. From the calculation, the F value is 17.687 and the significance rate is 0.000. For it is smaller than the confidence rate, which is 5%, it means that the variables of CAR, NPL, LDR, BOPO, and NIM, simultaneously influence ROA.

DISCUSSION

Hypothesis (H1) Test on the Influence of NPL on ROA

The first hypothesis states that NPL has negative and significant influence on ROA. The research finding shows that the significance value is 0.001, while the regression coefficient is -0.116. From the significance rate, it is below 0.05. Meanwhile, the value of the coefficient regression means that 1% decrease of NPL will decrease the value of ROA to as much as 0.116%. Therefore, the first hypothesis is accepted. Based on the regression equation, it can be seen that the coefficient for this variable is positive, meaning that the influence is positive. The condition proves that the higher the NPL, the higher the ROA will be. The relation between ROA and bank's NPL shows the potential of Non-Performing Loans to arise. Lending is expected to result in bigger profit for the bank, leading to an increase in its ROA. As mentioned above, NPL results from the decrease in loan quality due to the debtor's declining financial condition, such as in the form of late payment, other problem of payment, poor prospect of the debtor's business, and the effect of Bank Indonesia's implemented regulation (Regulation of the Bank of Indonesia Number 7/2/PBI/2005 on the Assessment of Bank Quality).

A bank can operate the business well if its score of NPL is below 5%. The range of 5%-8% is in quite good category. The equation of regression shows that the coefficient of this variable is positive. Therefore, the increase of NPL does not decrease the ROA because Provision for Loan Losses on Earning Assets can cover the non-performing loans. The banking profit can increase with high score of NPL because other profit sources from the interest, such as fee-based income is relatively high. Besides, NPL may take place not only because the debtors are not able to pay, but also because the strict regulation of Bank Indonesia in terms of categorizing the credits. It is possible that the debtors in performing loans can be categorized into the non-performing. The results are supported findings of studies conducted by Tulung and Ramdani (2016).

Hypothesis (H2) Test on the Influence of NIM on ROA

While the first hypothesis states that NPL has positive and significant influence on ROA, the second hypothesis assumes that NIM has positive influence on ROA. The result of research shows that the significance value is 0.025, while the coefficient regression is 0.123, meaning that NIM has positive influence because the score is below 0.05. For the coefficient regression, the value means that 1% increase of NIM will increase the ROA to as much as 12.3%.

Therefore, the second hypothesis is acceptable. The findings support the results by Tulung *et al* (2018) who state that NIM has both a positive and significant influence on ROA. It means that bank's ability in gaining interest influences the bank's income on the total assets.

Hypothesis (H3) Test on the Influence of LDR on ROA

The third hypothesis states that LDR has positive influence on ROA. The research results in the significance rate of 0.627, while the coefficient regression is -0.001. It shows that LDR has negative influence on ROA and it is not significant because the value is above 0.05. In other words, LDR has negative influence on ROA. Therefore, the third hypothesis is rejected. The higher the LDR, the lower the ROA rate is. The higher the LDR, the lower the ROA rate and the riskier the bank liquidity will be. If the percentage of lending on the funds from the third party ranged between 80% to -110%, the bank can be considered to have good profitability. However, the rate of ROA of Regional Development Banks is likely to decrease if the lending turns to non-performing loans. The findings are not in line with the research by Tran *et al* (2019) which shows that LDR, partially, has positive influence and significant on ROA. The differences are perhaps caused by the object of the research, number of samples, ratio being used, and the period of time.

Hypothesis (H4) Test of the Influence of BOPO Ratio on ROA

The research results show that the significance value is 0.000, while the coefficient regression is -0.048. It means that BOPO has negative influence on ROA, which is significant because the value is below 0.05, which is 0.0000. The value of coefficient regression, which is -.0.048, means that 1% increase of BOPO, will cause the ROA to decrease by 4.8%. Thus, the fourth hypothesis—which states that BOPO ratio has a negative influence on ROA—is accepted. The findings support the research by Tulung and Ramdani (2018) and Rahardjo *et al* (2014), which shows that BOPO has a negative and significant influence on ROA. Hence, the bank's efficiency rate in operating the business will influence its income rate or earnings.

CONCLUSION

Based on the data analysis and hypothesis testing, the evidences are proven by calculating the ratio using the SPSS (Statistical Package for the Social Sciences), as mentioned elsewhere in the previous section on the influence of credit risk (NPL), market risk (NIM), liquidity risk

(LDR), and operational risk (BOPO) on the financial performance (ROA) in Regional Development Bank in Indonesia, in the period of 2013-2015.

First, credit risk has a significant and negative influence on bank's financial performance, thus the first hypothesis (H1) is accepted. Second, market risk has a significant and positive influence on financial performance; therefore, the second hypothesis (H2) is accepted. Third, liquidity risk does not have any significant and negative influence on financial performance. Hence, the third hypothesis (H3) is rejected. Fourth, operational risk has significant and negative influence on financial performance, thus the fourth hypothesis (H4) is accepted. Fifth, simultaneously credit risk, market risk, liquidity risk, and operational risk significantly influence bank's financial performance. Therefore, the fifth hypothesis (H5) is acceptable.

For the banking in general, the implementation of banking risk measurement should be more optimized. It may include the quantitative analysis process, the approaches of using financial ratios, as well as qualitative approaches involving reliable human resources in the management of bank's financial risk. The future research is expected to produce better results and to use more samples with various characteristics, particularly the dependent variables that influence bank's financial performance.

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