

Analysis of the Influence of Credit Risk, Market Risk, Liquidity Risk and Operational Risk on Bank's Financial Profitability "Regional Development Bank"

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ABSTRACT

This study aims to examine the influence of credit risk, market risk, liquidity risk and operational risk on the financial profitability of the bank "Regional Development Bank". This research includes causality research using a quantitative approach. The study population is the Regional Development Bank registered with the Financial Services Authority. Sampling is done by purposive sampling technique, which is based on the criteria of the bank that publishes financial statements for 5 consecutive years starting in 2012 until 2016. The data analysis technique used is multiple linear regression analysis. The results in this study indicate that: (1) Credit risk does not have a significant negative influence on bank financial profitability at Regional Development Banks; (2) Market risk does not have a significant negative influence on bank financial profitability at Regional Development Banks; (3) Liquidity risk does not have a significant negative influence on bank financial profitability at Regional Development Banks; (4) Operational risk has a significant negative influence on bank financial profitability at Regional Development Banks.

Keywords: Credit Risk, Market Risk, Liquidity Risk, Operational Risk, Profitability

1. INTRODUCTION

Banks are the most important financial institutions that affect the economy both micro and macro. The bank is an intermediary institution that acts as a financial intermediary between the parties holding the funds with those who need funds. In addition, banks must pay attention to the level of health of the bank so that it is always maintained because banks rely on the trust of customers in their business activities (Ponco, 2008). Industrial growth in Indonesia was accompanied by increased competition between banks. Banking competition can be measured

through the financial profitability of banks. The bank's financial profitability can also be used for banking evaluation material within a certain period. Financial profitability can be measured using financial statement analysis. Financial performance is one tool to assess the success of a bank. Banking can be said to be successful if the bank can achieve the objectives of its banking to the maximum, both in the form of profit or market share. According to Kusumawati (2012), financial performance is an analytical technique used to assess banking activities whether the activities carried out are going well

and in accordance with applicable regulations. The purpose of measuring the level of financial performance of banks has the aim to measure and assess the level of effectiveness and efficiency of banks in carrying out operational activities.

Financial performance can be measured using financial statement analysis. Financial ratio analysis can be used to forecast finances in the future, review existing problems and can measure effectiveness and efficiency in banking operations. One of the commonly used financial ratios is Return on Assets (ROA). The amount of ROA owned by banks should increase from time to time because the higher ROA in banks, the future. However, not all banks experience a continuous increase in ROA, this is the case for Regional Development Banks (BPD) which have decreased ROA. High and low ROA of a bank can be influenced by the financial performance of Regional Development Banks in each region. Because every BPD bank in an area is strongly influenced by the regional policy and several other aspects.

According PBI number 13/23 / PBI / 2011 article 2, Banks are required to implement Risk Management effectively. In banking, risk management is very crucial because risk factors that arise can be sourced from various factors, and risk definitions are only limited to losses that arise in the future. Therefore, the application of risk management in banks is expected to be able to control risks and losses that may occur. In this study, only four of the eight banking risks taken were able to significantly affect the performance of banks, namely credit risk, market risk, liquidity risk, and operational risk.

According to PBI number 13/23 / PBI / 2011, credit risk is the risk due to failure of customers or other parties in fulfilling obligations to the Bank in accordance with the agreement agreed. Market risk is the risk in the balance sheet and administrative account position due to changes in market prices, including risks in the form of changes in the value of assets that can be traded or leased. Liquidity Risk is the risk due to the inability of the Bank to meet obligations due from funding sources of cash flow and / or high quality liquid assets that can be pledged, without disrupting the activities and financial condition of the Bank. Operational Risk is the risk of loss caused by inadequate internal processes, internal process failures, human errors, system failures, and / or external events that affect the Bank's operations.

2. LITERATURE REVIEW

Profitability

According to Tandelilin (2001), the condition of a company will determine the amount of profits to be received by investors. The stability of financial performance is a guarantee for investors to get the best profit and service from the company. Low profitability indicates that the level of performance of the company's management is not good. Companies that have a loss or a low level of profitability will later have a bad impact from the reaction and will cause a decline in the performance evaluation of a company.

Profitability in this study uses ROA (Return on Assets). ROA is a ratio that illustrates the ability of banks to generate profits. Then the ROA ratio is a number that shows the relationship between one element with other elements in the financial statements. Profitability according to Kasmir (2008:196) is a ratio to assess the company's ability to seek profits. One way to measure the level of profitability of banks in this study is the profitability ratio that is using Return on Assets (ROA). ROA is the ability of bank management to obtain profit or overall profitability.

According to Irmawati (2014:22), this ratio measures the success of management in generating overall profits by comparing earnings before tax with total assets. Profit before tax is the net profit from bank operations before tax. Meanwhile, total assets are measured by the total number of assets owned by the bank concerned. The greater the ROA of a bank, means the greater the level of benefits achieved. Conversely, the smaller the ratio indicates the lack of ability of bank management in terms of managing assets to increase revenue or reduce costs. ROA calculation formula according to Kasmir (2008) is as follows:

$$\text{Return on Assets} = \frac{\text{Profit before tax}}{\text{Total Assets}} \times 100\%$$

Credit Risk

According to Ali (2006) credit risk is the risk of losses suffered by banks, related to the possibility that at maturity, the counterparty will fail to fulfill obligations to the bank. In short, credit risk is the risk of loss for the bank because the debtor does not repay the principal (plus interest). For example, banks experience losses as a result of the occurrence of bad loans. Here the debtor cannot repay the loan and does not pay off the loan interest. This can happen to a loan portfolio as a result of not repaying the principal loan. For most

banks, the portion of losses incurred by credit risk is the biggest element of loss risk because the margin received by banks in lending activities is relatively small. Meanwhile, the possible risk of losses suffered by banks following the occurrence of credit risk is very large. Thus, credit risk is the element that has the fastest potential in reducing bank capital.

According to the Indonesian Bankers Association (2015), credit risk is the risk due to the failure of the debtor and / or other parties in fulfilling the obligation to pay off credit to the bank. In lending activities, both commercial loans and consumer loans, there is a possibility that the debtor cannot fulfill obligations to the bank due to reasons, such as business failure, because the character of the debtor does not have the good faith to fulfill obligations to the bank, or indeed there is a mistake from the bank in the credit approval process.

According to the Indonesian Bankers Association (2015) credit risk can come from a variety of bank functional activities, such as credit activities and treasury activities. In treasury activities, for example banks buy corporate bonds, invest in securities, trade finance, whether recorded in a banking book or in a trading book. Credit risk accepted by banks is one of the business risks of banks, which results from non-repayment of loans given by banks to debtors. In this study the NPL ratio is used to show the ability of bank management to manage problem loans provided by the bank. NPL is a ratio that is used to measure the extent to which existing problem loans can be met with productive assets owned by a bank (Riyadi, 2006). The NPL can be formulated as follows:

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

Market Risk

According to Ali (2006), market risk is the risk of losses suffered by banks, as reflected in, among others, on and off balance sheet positions (balance sheets and administrative accounts). The loss arises as a result of changes in the market price of the bank's assets and liabilities. The price change is a result of changes in market factors. Market factors are bank interest rates, currency exchange rates, stock market prices, and securities and commodities.

According to Idroes and Sugiarto (2006) market risk is defined as the risk of loss in the balance sheet position and the recording of bills and liabilities outside the balance sheet (on-and-

off-balance sheets) arising from market price movements. According to the Indonesian Bankers Association (2015) market risk is the risk of price changes in balance sheet and administrative account positions including derivative transactions, due to overall changes and market conditions, including the risk of changes in option prices. Market risks include, among others, bank functional activities such as treasury activities (trading books) and investment activities in the form of securities, including credit books (banking books).

Market risk is the risk of market price changes in portfolio positions and administrative accounts, including derivative transactions. Price changes occur due to changes in market factors, including the risk of changes in option prices. Market factors mean exchange rates, interest rates, stock prices, and commodity prices. The ratio that can be used is the Internal Rate of Return (IRR) is a guideline value that is identical to how much interest rates that can be generated by these investments compared with bank rates that are generally accepted (market interest rates or Minimum Attractive Rate of Return / MARR).

How to calculate IRR is used to determine whether an investment is carried out or not, usually used a reference if the investment must be higher than the Minimum acceptable rate of return or the Minimum Attractive rate of return. In the IRR interest rate an NPV = 0, or commonly referred to as an IRR, implies an interest rate that can be given an investment, which gives an NPV = 0. The main requirement is if IRR > MARR interest rates. According to SE BI No 13/24 / DPNP / 2011 formula used as follows:

$$IRR = \frac{RSA (Rate Sensitive Assets)}{RSL (Rate Sensitive Liabilities)} \times 100\%$$

Liquidity Risk

According to Hanafi (2012) liquidity risk occurs when companies have difficulty paying short-term obligations. If liquidity risks are not handled properly, these risks can increase to solvency risk, which results in bankruptcy of the company. Compared to other business sectors, banks face greater liquidity risk. Liquidity risk is briefly the company's ability to meet its short-term obligations or the ability of a person or company to meet obligations or debt that must be paid immediately with current assets. Loan to Deposit Ratio (LDR) is the ratio between the size of the entire volume of credit extended by banks and the amount of funds received from various sources.

LDR is a traditional measurement that shows time deposits, current accounts, savings, etc. that are used in fulfilling customers' loan requests. This ratio is used to measure the level of liquidity. A high ratio shows that a bank lends all of its funds (loan-up) or is relatively illiquid.

Conversely, a low ratio shows a liquid bank with excess capacity of funds that are ready to lend. LDR is also called the ratio of credit to total third party funds used to measure third party funds channeled in the form of credit. According to SE BI Number 13/24 / DPNP / 2011, the LDR formula can be calculated by:

$$\text{LDR} = \frac{\text{Total Credit}}{\text{Third Party Funds}} \times 100\%$$

Operational Risk

According to Ali (2006), operational risk is the risk of loss to the bank caused by inadequate or failed processes in bank management, human resources, and systems. The risk of loss can also occur as a result of factors outside the bank. Operational risk is basically bound to a number of problems stemming from failures in the bank's internal management processes. According to the Indonesian Bankers Association (2015), operational risk is the risk due to inadequate and / or malfunctioning of internal processes due to the absence or dysfunction of work procedures, human error, system failures, and / or external events that affect bank operations. According to the Indonesian Bankers Association (2015) operational risks faced by all banks and become the root cause of other potential risks such as credit risk and market risk. Therefore, it is very important to know the factors that cause operational risk so that banks can make work plans to manage these risks.

Then operational risk is the risk arising from operational processes either because it incurs more operational costs or inaccuracies so that there is a possibility of loss. BOPO is a ratio of the ratio of Operating Costs to Operating Income, the lower the level of this ratio, means the better the bank's management performance, because it is more efficient in using existing resources in the company. Operating Costs to Operating Income (BOPO) aims to measure the level of efficiency and the ability of banks to carry out their operations. Considering that the main activities of banks are as intermediaries, namely collecting and distributing funds, the costs and operating income of banks are dominated by interest costs and interest income. The ratio of Operating Costs to Operating Income

(BOPO) shows the efficiency of a bank in running its main business, especially credit, based on the amount of funds collected. In collecting funds, especially public funds (third party funds), costs other than interest costs (including advertising costs) are required. Until now, the income of banks in Indonesia is still dominated by credit interest income. The formula of BOPO is as follows:

$$\text{BOPO} = \frac{\text{Operational Costs (Expenses)}}{\text{Operating Income}} \times 100\%$$

Relationship between Concepts

Influence of Credit Risk on Bank Profitability

Credit risk includes credit risk due to the failure of the debtor to pay obligations to the bank, risk due to the failure of counterparties (counterparty credit risk) to fulfill obligations, for example in derivative contract agreements, and credit risk due to failure of the payment process (settlement risk), for example in foreign exchange sale and purchase agreements. The ratio used is NPL or Non Performing Loans is one indicator of the health of the quality of bank assets. The indicator is the principal financial ratio that can provide information on the assessment of capital conditions, profitability, credit risk, market risk and liquidation.

In a previous study, Million Gizaw (2015) showed a significant negative effect on profitability with a sig rate of 0%. This is also supported by research by Didik Purwoko and Bambang Sudiyatno (2013) and Yuga Raj Bhattarai (2016). The higher the NPL ratio, the worse the quality of credit that causes the number of problem loans is greater so that it can lead to the possibility of a bank in a greater problematic condition. So in this case the higher the NPL ratio will negatively influence ROA.

Influence of Market Risk on Bank Profitability

Market risk is the risk of market price changes in portfolio positions and administrative accounts, including derivative transactions. Price changes occur due to changes in market factors, including the risk of changes in option prices. Market factors are the exchange rate, interest rates, stock prices, and commodity prices. The ratio that can be used is the Internal Rate of Return (IRR) is a guideline value that is identical to how much interest rates that can be generated by these investments compared with bank rates that are generally accepted (market interest rates or Minimum Attractive Rate of Return / MARR).

In a previous study by Muhammad Fahrul Rozi Syafi'i (2016) which showed market risk had a positive effect on profitability with a sig rate of 1.7%. This is because an increased market risk will make changes in high market prices (exchange rates, interest rates) will increase the revenue generated. The greater income generated will increase the total bank revenue, so that profits increase. Increased profits will make profitability increase, and bank profitability will increase.

Influence of Liquidity Risk on Bank Profitability

Liquidity risk occurs when a company has difficulty paying short-term obligations. If liquidity risks are not handled properly, these risks can escalate into solvency risks, which result in company bankruptcy. The ratio used is the LDR (Loan to Deposits Ratio), which is a ratio that measures the ability of banks to meet short-term liabilities (can be called liquidity) by dividing total loans to total Third Party Funds (DPK). Banking liquidity needs to be managed to meet the needs when customers take their funds and distribute loans (credit) to borrowers (debtors). If the LDR value is too high, it means that the bank does not have sufficient liquidity to cover its obligations to customers (DPK).

Conversely, if the LDR value is too low, it means the bank has sufficient liquidity but may have lower income, because as is known by the banking world. LDR reflects the ability of banks to repay withdrawals of funds by relying on loans. The higher the LDR, the better the company, because the higher this ratio means the number of loans increased so that interest income and profits increase. In other words the LDR ratio has a positive influence on ROA. This is supported by previous research from Muhammad Fahrul Rozi Syafi'i (2016) and Mohammad Morsh Procedure Rahman, et al (2015) which shows LDR has a positive effect on bank profitability.

Influence of Operational Risk on Bank Profitability

Operational risk is the risk arising from operational processes either due to incurring more costs or inaccurate operations so that there is a possibility of loss. The ratio used is BOPO (Operating Expenditures to Operating Income) which is a ratio that illustrates the efficiency of banks in conducting their activities. Operational expenditure is interest expense given to customers while operating income is interest earned from customers. The smaller the value of BOPO means more efficient banking in operating. Operational

costs are used to measure the level of efficiency and ability of banks to carry out operational activities. The more efficient the banking system is in operating it will affect the increase in the bank's profitability, so that profits increase.

The smaller the BOPO shows the more efficient the bank is in carrying out its business activities so the better the bank is. In other words, the BOPO ratio has a negative influence on ROA. This is supported by previous research on behalf of Didik Purwoko and Bambang Sudiyatno (2013), which shows that BOPO has a negative effect on bank profitability.

Framework

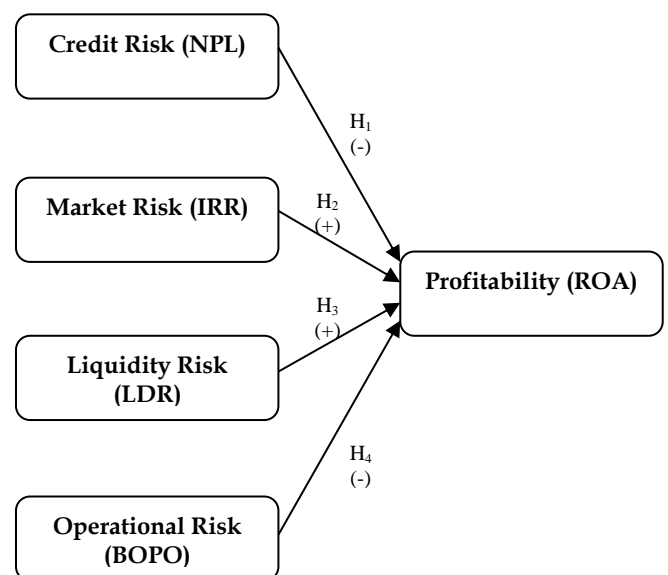


Figure 1 Framework

Research Hypothesis

Based on the description of empirical studies and theoretical studies, the hypotheses in this study can be described as many as four hypotheses, namely:

- H₁ : Credit risk has a significant negative influence on bank profitability at Regional Development Banks in Indonesia.
- H₂ : Market risk has a significant positive influence on bank profitability at Regional Development Banks in Indonesia.
- H₃ : Liquidity risk has a significant positive influence on bank profitability at Regional Development Banks in Indonesia.
- H₄ : Operational risk has a significant negative influence on bank

profitability at Regional Development Banks in Indonesia.

3. RESEARCH METHODS

Research Design

Based on the data source used, this research can be classified as research using secondary data. Based on the method of analysis, this research can be said to be a quantitative research method because it uses a numerical scale. Based on the type of data, this study is archival research. This research can be classified based on its purpose as a casual research study.

Population and Sampling Techniques

In this study, the population that was used as the object of research was the Regional Development Bank registered with the Financial Services Authority. The sampling technique in this study was conducted by purposive sampling with the following criteria: Regional Development Banks that publish financial statements for 5 consecutive years from 2012 to 2016.

Data and Data Collection Methods

By reviewing its nature, the type of data used is quantitative data and secondary data in the form of financial ratios of regional development banks in Indonesia for the period 2010-2016. The data of this study are pooling data, which is a combination of time series and crosssections during the period of 2010 to 2016. While viewed from the way to obtain it, the source of the data used is secondary data from the data of the Regional Development Bank's annual Financial Statements, with criteria namely:

1. This research collects data and theories relevant to the problem to be examined by conducting a literature study of literature and other literature materials, such as articles, journals, books, and previous research.
2. Secondary data collection in the form of annual financial reports obtained from Bank Indonesia with the website <http://www.bi.go.id>, and the Financial Services Authority with a website <http://www.ojk.go.id>.

Data Analysis Method

This study aims to test the significance of the factors that affect the profitability of banks by

using Multiple Regression analysis accompanied by a classic assumption test.

4. RESEARCH ANALYSIS AND DISCUSSION

Multiple Linear Regression Equations

Multiple linear regression analysis is used to measure how much influence each independent variable (x) has on the dependent variable (y).

Table 1 Results of Multiple Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t _{count}	Sig
	B	Std. Error	Beta		
Constant	10.788	0.657		16.410	0.000
Credit Risk	0.031	0.027	0.049	1.164	0.247
Market Risk	-0.002	0.005	-0.018	-0.386	0.700
Liquidity Risk	0.004	0.006	0.030	0.642	0.522
Operational Risk	-0.109	0.005	-0.931	-22.223	0.000

Based on the results of the statistical output in Table 1 above, the regression equation can be formulated as follows:

$$\text{ROA} = 10.788 + 0.031 \text{NPL} - 0.002 \text{IRR} + 0.004 \text{LDR} - 0.109 \text{BOPO}$$

The interpretation of the above model is as follows :

- a. The amount of the constant value (β_0) = 10.788 shows the amount of bank financial profitability (ROA) when there is no influence of credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) or it can be said that the risk value credit (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) are zero or constant.
- b. Regression coefficient for credit risk (NPL) = 0.031 shows that if credit risk (NPL) increases by one unit, bank financial profitability (ROA) will increase by 0.031 assuming market risk (IRR), liquidity risk (LDR), and risk operational (BOPO) is constant.
- c. Regression coefficient for market risk (IRR) = -0.002 indicates that if market risk (IRR) increases by one unit, bank financial profitability (ROA) will decrease by 0.002 assuming credit risk (NPL), liquidity risk (LDR), and operational risk (BOPO) is constant.
- d. Regression coefficient for liquidity risk (LDR) = 0.004 shows that if liquidity risk (LDR) increases by one unit, bank financial profitability (ROA) will increase by 0.004 assuming credit risk (NPL), market risk

(IRR), and risk operational (BOPO) is constant.

- e. Regression coefficient for operational risk (BOPO) = -0.109 shows that if operational risk (BOPO) increases by one unit, bank financial profitability (ROA) will decrease by 0.109 assuming credit risk (NPL), market risk (IRR), and liquidity risk (LDR) is constant.

Correlation Coefficient and Determination Coefficient

Table 2 Correlation Coefficient and Determination Coefficient

R	R Square	Adjusted R Square	Std.Error of the Estimate
0.912	0.832	0.827	0.71582

Based on table 2 above, it can be seen the influence between credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) on profitability. From the table above it is known that the R that shows the correlation number is 0.912, which means the influence between credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) on profitability is very strong with measurement parameters a correlation value of more than 0.8-1. Then from the table above can also be seen the magnitude of the R-Square determination coefficient value of 0.832, which shows the percentage of profitability can be predicted / explained by each variable free of credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO). From table 2 above it can be concluded that the four variables free of credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) can explain the dependent variable namely profitability of 83.2 percent.

Hypothesis Testing

- a. Simultaneous Test (F Test)

Furthermore, to examine the influence simultaneously of credit risk variables (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) on bank financial profitability (ROA), a F test. Then based on the F test results according to calculations using SPSS software assistance can be seen in the appendix as in the following table:

Table 3 Simultaneous Test Regression Analysis (Test F)

Model	Sum of Squares	df	Mean Square	F _{count}	Sig.
Regression	304.937	4	76.234	148.780	0.000
Residual	61.488	120	0.512		
Total	366.425	124			

Testing steps:

1. $H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$
Means, independent variables (X_1, X_2, X_3, X_4) simultaneously has an insignificant influence on dependent variable.
 $H_1 : \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$
Means, independent variables (X_1, X_2, X_3, X_4) simultaneously has an significant influence on dependent variable.
2. If the significance value of the F test sig < 0.05, then H_0 is rejected and H_1 is accepted.

Based on Table 3 the significance value is 0,000 or <0.05. This shows that H_0 is rejected and H_1 is accepted. So that the credit risk free variable (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) have a significant simultaneous influence on the financial profitability of banks Regional Development Banks.

- b. Partial Test (t Test)

Then to test the influence of each variable partially used a t test that can show the partial influence of each independent variable on the dependent variable:

Table 4 Partial Test Regression Analysis (t Test)

Model	t _{count}	Sig
Constant	16.410	0.000
Credit Risk	1.164	0.247
Market Risk	-0.386	0.700
Liquidity Risk	0.642	0.522
Operational Risk	-22.223	0.000

1. Partial test of credit risk variables (NPLs) on bank financial profitability(ROA).

Based on Table 4, the test results are as follows:

- a. $H_0 : \beta_1 = 0$

Means, credit risk variable (NPL) has no significant influence on bank financial profitability (ROA)

$H_1 : \beta_1 \neq 0$

Means, credit risk variable (NPL) has a significant influence on bank financial profitability (ROA)

- b. $\alpha = 0,05$ with $df (n - k - 1) = 120$
- c. $t_{table} = 1.9799$
- d. $t_{count} = 1.164$

Based on Table 4, the t_{count} is 1,164 and the significant value is 0.247. Because $t_{count} < t_{table}$ and significant value > 0.05 , this means that credit risk (NPL) partially has no significant influence on profitability, so the proposed hypothesis is not proven true.

2. Partial test of market risk variables (IRR) on bank financial profitability (ROA).

Based on Table 4, the test results are as follows:

- a. $H_0 : \beta_2 = 0$
Means, market risk variables (IRR) do not have a significant influence on bank financial profitability (ROA)

$$H_1 : \beta_2 \neq 0$$

Means, market risk variable (IRR) has a significant influence on bank financial profitability (ROA)

- b. $\alpha = 0,05$ with $df (n - k - 1) = 120$
- c. $t_{table} = 1.9799$
- d. $t_{count} = -0.386$

Based on Table 4, the t_{count} is -0.386 and the significant value is 0.700. Because $t_{count} < t_{table}$ and significant value > 0.05 , this means that partial market risk has no significant influence on profitability, so the proposed hypothesis is not proven true.

3. Partial test of liquidity risk variable (LDR) on bank financial profitability (ROA).

Based on Table 4, the test results are as follows:

- a. $H_0 : \beta_3 = 0$
Means, liquidity risk variable (LDR) does not have a significant influence on bank financial profitability (ROA)

$$H_1 : \beta_3 \neq 0$$

Means, liquidity risk variable (LDR) has a significant influence on bank financial profitability (ROA)

- b. $\alpha = 0,05$ with $df (n - k - 1) = 120$
- c. $t_{table} = 1.9799$
- d. $t_{count} = 0.642$

Based on Table 4, the t_{count} is 0.642 and the significant value is 0.522. Because $t_{count} < t_{table}$ and significant value > 0.05 , this means that liquidity risk (LDR) partially has no significant influence on profitability, so the proposed hypothesis is not proven true.

4. Partial test of operational risk variables (BOPO) on bank financial profitability (ROA). Based on Table 4, the test results are as follows:

- a. $H_0 : \beta_4 = 0$

Means, Operational risk variable (BOPO) does not have a significant influence on bank financial profitability (ROA)

$$H_1 : \beta_4 \neq 0$$

Means, Operational risk variable (BOPO) has a significant influence on bank financial profitability (ROA)

- b. $\alpha = 0,05$ with $df (n - k - 1) = 120$
- c. $t_{table} = 1.9799$
- d. $t_{count} = -22.223$

Based on Table 4, the t_{count} is -22,223 and the significant value is 0,000. Because $t_{count} > t_{table}$ and significant value < 0.05 , this means that operational risk (BOPO) partially has a significant influence on profitability, so the proposed hypothesis is verified.

Discussion

Based on the results of the F test or simultaneous testing, the results are obtained that simultaneous credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) have a significant influence on profitability (ROA) on BPD. This can be proven from the value of Sig. from the regression model smaller than 0.05. The influence of credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) on bank financial profitability (ROA) is very strong to reach 83.2% while 16.8% of other factors affect profitability, which means there are still other factors besides credit risk (NPL), market risk (IRR), liquidity risk (LDR), and operational risk (BOPO) which are thought to affect bank financial profitability (ROA).

Partially using the t test statistic shows that there is an insignificant positive influence of credit risk (NPL) on bank financial profitability (ROA). This means that in this study the higher the credit risk (NPL) of a bank does not become a benchmark for the success of bank management to share a high ROA. In theory, NPL is calculated from the ratio between non-performing loans and total loans provided by the Regional Development Bank. The direction of the coefficient of credit risk variable (NPL) is positive, meaning that the higher the ability of bank management to manage problem loans from all loans given by the bank to the public, the greater bank profit will be. Thus the first hypothesis in this study which states "Credit risk has a significant negative influence on bank profitability at Regional Development Banks in

Indonesia" is rejected. This result is contrary to the results of the Million Gizaw (2015) study where the NPL ratio has a significant negative influence on profitability. This also contradicts the research of Didik Purwoko and Bambang Sudiyatno (2013) and Yuga Raj Bhattarai (2016) which states that the higher the NPL ratio, the worse the quality of credit which causes the amount of problem loans is greater so that it can lead to the possibility of a bank in problematic conditions the greater it is.

Partially by using t-test statistics, there is an insignificant negative influence of market risk (IRR) on bank financial profitability (ROA). This means that in this study the higher the market risk (IRR) of a company is not a benchmark for the success of bank management to share high ROA. In theory, the IRR is calculated from the comparison value between IRSA (Interest Rate Risk) and IRSL (Interest Rate Sensitivity Liability). The direction of the market risk variable (IRR) coefficient is negative, meaning that the higher the IRR, the smaller the bank's profit. Thus the second hypothesis of the study which states "Market risk has a significant positive influence on bank profitability at Regional Development Banks in Indonesia" is rejected. This result is contrary to the results of research by Muhammad Fahrul Rozi Syafi'i (2016) which shows that market risk has a positive effect on profitability. This is because an increased market risk will make changes in high market prices (exchange rates, interest rates) then it will increase the revenue generated. The greater income generated will increase the total bank revenue, so that profits increase. Increased profits will make profitability increase, and bank profitability will increase.

Partially by using t-test statistics, there is an insignificant positive influence of liquidity risk (LDR) on bank financial profitability (ROA). This means that in this study the higher the LDR of a company is not a benchmark for the success of bank management to share a high ROA. In theory, the LDR is calculated from the ratio between the amount of credit given and the total third party funds. The direction of the variable LDR coefficient is positive, meaning that the higher the Bank's ability to repay obligations to customers who have invested their funds by relying on loans that have been provided as a source of liquidity, the greater bank profits will. Thus the third hypothesis of the study which states "Liquidity risk has a significant positive influence on bank profitability at Regional Development Banks in Indonesia" is rejected. This result is contrary to the results of the study of Muhammad Fahrul Rozi Syafi'i (2016) and

Mohammad Morsh Procedure Rahman, et al (2015) which shows that the LDR has a positive effect on bank profitability.

The test results for the operational risk variable (BOPO), partially operational risk (BOPO) has a significant and negative effect on profitability. Thus the fourth research hypothesis which reads "Operational risk has a significant negative effect on bank profitability at Regional Development Banks in Indonesia" is accepted. An increase in BOPO will reduce the value of profitability. BOPO is a comparison between operating costs and operating income. BOPO measures the ability of banks to utilize their funds and the costs incurred to operate these funds. The increase in BOPO will reflect the lack of ability of banks to reduce their operational costs, which can result in losses for banks because they are less efficient in managing their business. So it was concluded that the increasing BOPO, the decreasing Profitability (ROA) in BPD. The results of this study support the research results of Didik Purwoko and Bambang Sudiyatno (2013), which shows that BOPO has a negative effect on bank profitability.

5. CONCLUSIONS AND SUGGESTIONS

Conclusion

Based on the description of the results of research and discussion on the Analysis of the Influence of Credit Risk, Market Risk, Liquidity Risk and Operational Risk on the Bank's Financial Profitability in the previous chapter, the following conclusions can be drawn:

1. Credit risk does not have a significant negative influence on the banks financial profitability of Regional Development Bank.
2. Market risk does not have a significant negative influence on the banks financial profitability of Regional Development Bank.
3. Liquidity risk does not have a significant negative influence on the banks financial profitability of Regional Development Bank.
4. Operational risk has a significant negative influence on the banks financial profitability of Regional Development Bank.

Suggestions

Suggestions that can be given by researchers based on the results of this study are as follows:

1. Pay more attention to operational risks to BPD profitability, because these operational risks have an impact on profitability (ROA) on BPD.
2. Pay more attention and improve the financial condition of BPD including credit risk, market risk, liquidity risk, operational risk, because credit risk, market risk, liquidity risk, operational risk influence BPD profitability.
3. To get good results, BPD profitability should be added by using other factor variables from the external side of the Commercial Bank.

BIBLIOGRAPHY

- Abiola, I. (2014). The Impact of Credit Risk Management on the Commercial Banks Performance in Nigeria. *International Journal of Management and Sustainability, Conscientia Beam*, Vol. 3 No. 5, pp. 295-306.
- Alshatti, A. S. (2014). The Effect of the Liquidity management on Profitability in the Jordanian Commercial Banks. *International Journal of Business and Management*, Vol. 10 No. 1, pp 62 - 71.
- Bank Indonesia dengan website <http://www.bi.go.id>, dan Otoritas Jasa Keuangan dengan website <http://www.ojk.go.id>.
- Bhatarai, Y. R. (2016). Effect of Credit Risk on the Performance of Nepalese Commercial Banks. *NRB Economic Review*.
- Boy L., dan S. Ericson. (2007). *Manajemen Aktiva Pasiva Bank Devisa*. Jakarta: PT GRASINDO Gramedia Widiasarana Indonesia.
- Dhia, S., Ibrahim K. Alulis., K. Sayari. (2016). Information Influencing Commercial Banks Profitability. *International Journal of Economics and Finance*, Vol. 8 No. 6, pp. 166 - 174.
- Didik P., dan B. Sudiyatno. (2013). Faktor-Faktor Yang Mempengaruhi Kinerja Bank (Studi Empirik Pada Industri Perbankan Di Bursa Efek Indonesia. *Jurnal Bisnis dan Ekonomi (JBE)*, Vol. 20 No. 1, pp. 25 - 39.
- Ghozali, I. (2005). *Aplikasi Analisis Multivariate dengan program SPSS*, Badan Penerbit Universitas Diponegoro, Semarang.
- Gizaw, M., Kebede, Matewos., dan Selvaraj, Sujata. (2015). The Impact of Credit Risk on Profitability Performance of Commercial Banks in Ethiopia. *African Journal of Business Management* Vol. 9 No. 2, pp. 59-66.
- Gujarati, Damodar N. (2006) *United States Military Academy, West Point. Essentials of Econometrics*. Third Edition. McGraw-Hill International Edition.
- Hanafi, M. (2006). *Manajemen Risiko Edisi Pertama*. Yogyakarta: UPP STIM YKPN
- Hanafi, M. (2014). *Analisis Laporan Keuangan*. Yogyakarta: UPP STIM YKPN
- Hanafi, M. (2012). *Manajemen Risiko Edisi Kedua*. Yogyakarta: UPP STIM YKPN.
- Idroes, Ferry N dan Sugiarto, (2006). *Manajemen Risiko Perbankan dalam Konteks Kesepakatan Basel dan Peraturan Bank Indonesia*. Graha Ilmu: Yogyakarta.
- Ikatan Bankir Indonesia. (2015). *Manajemen Risiko 1 (Mengidentifikasi Risiko Pasar, Operasional, dan Kredit Bank)*. Jakarta: PT Gramedia Pustaka Utama.
- Ikatan Bankir Indonesia. (2015). *Manajemen Risiko 2 (Mengidentifikasi Risiko Likuiditas, Reputasi, Hukum, Kepatuhan, dan Strategik Bank)*. Jakarta: PT Gramedia Pustaka Utama.
- Ikatan Bankir Indonesia. (2015). *Manajemen Risiko 3 (Mengendalikan Manajemen Risiko Bank)*. Jakarta: PT Gramedia Pustaka Utama
- Irmawati, & Sari, D. Kartika. (2014). Analisis Pengaruh Capital Adequacy Ratio, Loan to Deposit Ratio, dan Net Interest Margin Terhadap Return On Asset Pada PT. Bank Mandiri Persero Tbk Periode 2008-

2012. *Jurnal Universitas Muhammadiyah Surakarta*.

C75C2-DA39-47E3-AFA6-0AEB03A7E4FF/21949/pbi_130112

- Kasmir. (2004). *Bank dan Lembaga Keuangan Lainnya*. Jakarta: PT.Raja Grafindo Persada.
- Kasmir. (2000). *Manajemen Perbankan*. Jakarta: PT Raja grafindo Persada.
- Kasmir. (2008). *Analisis Laporan Keuangan*. Jakarta: Penerbit Rajawali Pers.
- Khairunnisa. A. (2012). Pengaruh Loan To Deposit Ratio, Biaya Operasional Per Pendapatan Operasional dan Net Interest Margin terhadap Profitabilitas Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia. *Jurnal Riset Akuntansi dan Bisnis*, Vol. 12 No. 2, pp. 165 - 183.
- Kusumawati, Melia. (2012). Analisis Komparatif Kinerja Keuangan Perbankan Berdasarkan Metode CAMELS dan RGEC pada PT. Bank Mandiri (Persero) Tbk". *Jurnal Akuntansi Unesa*. Vol. 2 No. 2, pp. 1-22.
- Masyhud. A. (2006). *Manajemen Risiko (Strategi Perbankan dan Dunia Usaha Menghadapi Tantangan Globalisasi Bisnis)*, Jakarta : PT Raja Grafindo Persada.
- Million G., Matewos K., dan S. Selvaraj. (2015). The Impact of Credit Risk on Profitability Performance of Commercial Banks in Ethiopia. *African Journal Of Business Management*. Vol. 9 No. 2, pp. 59 - 66.
- Peraturan Bank Indonesia Nomor 13/23/PBI/2011 tentang Penerapan Manajemen Risiko bagi Bank Umum Syariah dan Unit Usaha Syariah,
- Peraturan Bank Indonesia Nomor 5/8/PBI/2003 tentang Penerapan Manajemen Risiko bagi Bank Umum,
- Peraturan Bank Indonesia Nomor: 13/1/PBI/2011 tentang Penilaian Tingkat Kesehatan Bank Umum. Terpublikasikan melalui website: <http://m.bi.go.id/NR/rdonlyres/DFC>
- Ponco, B. (2008). Analisis Pengaruh CAR, NPL BOPO, NIM DAN LDR Terhadap ROA Pada Perusahaan Perbankan Yang Terdaftar di BEI Periode (2004 - 2007). *Tesis Universitas Diponegoro*.
- Rahman, M. M., K. Hamid, dan A. Mannan Khan. (2015). Determinants of Bank Profitability: Empirical Evidence from Bangladesh. *International Journal of Business and Management* Vol. 10 No. 8, pp. 135-149.
- Rahman, M.M., Hamid, K., dan Khan, A.M. (2015). Determinants of Bank Profitability: Empirical Evidence from Bangladesh. *International Journal of Business and Management*, Vol. 10, No. 8.
- Retnadi, Djoko. (2006). Perilaku Penyaluran Kredit Bank. *Jurnal Kajian Ekonomi*.
- Riyadi S. (2006). *Banking Assets and Liability Management*, Edisi Ketiga. Jakarta. Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Siamat, D. (2005). *Manajemen Lembaga Keuangan, Kebijakan Moneter dan Perbankan*. Jakarta: Fakultas Ekonomi Universitas Indonesia, edisi kesatu.
- Supriyono. (2011). *Akuntansi Biaya Pengumpulan Biaya dan Penentuan Harga Pokok*, Buku 1 Edisi 2. Yogyakarta: BPFE
- Syafi'I, M. F. R., and E. Rusliati. (2016). Credit Risk, Market Risk, Operational Risk and Liquidity Risk on Profitability of Banks in Indonesia. *Trikonomika*. Vol. 15 No. 2, pp. 78-88
- Tandelilin, E. (2001). *Analisis Investasi dan Manajemen Portofolio*, Yogyakarta: BPFE Yogyakarta.
- Yudiana, F. E. (2013). *Dasar-dasar Manajemen Keuangan*. Yogyakarta: Ombak.