




Analysis of internal determinants of profitability of regional development banks

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Article Info	ABSTRACT
<p>Article history:</p> <p>Received Dec 9, 2021 Revised Dec. 20, 2021 Accepted Dec 30, 2021</p> <hr/> <p>Keywords:</p> <p>Capital Rati; Loan to Deposit Ratio; Overheads Efficiency Ratio; Profitability Ratio First keyword.</p>	<p>In creating a good economic system has to be supported with a solid, healthy and profitable banking system. Within the banking system, profitability is an important influence on the performance of a bank because it describes the effectiveness level of funding management that is collected from people. One step done by the government and people in improving financial stability and banking was first identified the internal determination factors that can be used as a guide in banking performance improvement so that the result achieved the target. Regional Development Bank is the research object chosen for this research. This research will give some answers to what internal factors significantly influence the profitability of Regional Development Banks. The collected data was the financial report quarterly from 23 BPDs that were taken as samples of the research. While the method used to analyze the data was the linear regression method with F and t tests. From the analysis of the results of the method it can be concluded that the management expenses, liquidity and capital factors have a significant influence on banking profitability both simultaneously and partially.</p> <p style="text-align: right;"><i>This is an open access article under the CC BY-NC license.</i></p> 

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1. INTRODUCTION

The recent economic conditions in Indonesia, which have often experienced financial crises, are the most important thing that must be addressed by the government and the people of Indonesia. In a country's economy, one of the sectors that plays an important role is banking, where the banking acts as a center for funding economic activities that functions to collect public funds and channel them back to the community.

Around 1950, the economic structure in Indonesia was still dominated by colonial structures and national banking was still controlled by foreign banks. After the recognition of sovereignty, the Indonesian government decided to continue its policy in the banking sector by establishing state-owned banks. Therefore, the history of Indonesian banking is inseparable from the influence of the countries that colonized it, both for state banks and national private banks.

In order to create a good economic system, it must be supported by a strong, sound and profitable banking system that will promote financial stability and facilitate payment traffic. In the banking sector, profitability has a very important influence on the performance of a bank because it can provide an overview of the level of effectiveness in managing funds collected from the public.

The better the performance of the bank, the profitability obtained will increase. Thus, the role of bank management is needed to oversee bank performance in an effort to increase profitability.

Regional Development Bank (BPD) is a bank established by the regional government to build development in the region and is directed to support the development of infrastructure, MSMEs and other economic activities. The existence of the BPD as a financial institution whose function is to drive the people's economy and encourage accelerated economic growth and regional development in all fields, was once questioned and received sharp scrutiny from various groups. Currently, regulations in the financial and banking sectors have not yet touched on the existence of BPDs. Supposedly as a development bank that has a special role, the regulations must be different from commercial banks in general. This is because BPDs have different characteristics from other financial institutions because most third party funds (DPK) belong to the government.

The placement of BPD funds in the form of SBI is quite high, indicating that the local government budget has not been used smoothly. On the other hand, the government will actually get an additional burden because it provides interest on SBI. If the funds can be put to good use, development in the regions will certainly materialize soon, thereby encouraging growth in the real sector. This is due to the high placement of BPD funds in the form of Bank Indonesia Certificates (SBI). This condition causes the BPD to fail in carrying out its mission as an agent of development and a driver of regional economic growth.

In line with the implementation of regional autonomy, the role and function of banking is very important, especially in reviving and spurring the regional economy. With more and more funds being located or invested in the banking sector in the regions, it demands that BPD as one of the regionally owned financial institutions be able to know macroeconomic conditions in the region, as a basis for making policies such as in lending, setting interest rates and marketing banking products and services. In ensuring the success of the efforts made by the government and the public in order to improve the stability of the financial and banking system, it is very necessary to identify the determinant factors that must be considered in these efforts.

These determinant factors can be used as a guide directing efforts to improve banking performance so that the results achieved are in accordance with the target. Therefore, the identification of the determinant factors affecting the profitability of Regional Development Banks can be used as a basis for consideration in formulating banking and financial sector policies to ensure the effectiveness of efforts to improve economic stability in this country.

2. RESEARCH METHOD

This research is a type of hypothesis research. This type of research usually explains certain relationships or determines differences between groups or the independence of two or more factors in a situation. Hypothesis type testing is done to examine the variance in the dependent variable or to estimate organizational output. The object of this research is the Regional Development Bank (BPD). The argument in choosing this object is that with government-owned status, these banks can generate large profits because they are supported by the government's role in managing the country's economy.

When the research was conducted in 2004-2007. The nature of the research conducted is a historical study in which the authors took data from published financial reports from each BPD.

Data Collection Method. The data used in this study is secondary data, namely quarterly financial reports from regional government-owned banks starting from the period 2004-2007. Secondary data is data collected for purposes other than to resolve the problems being faced. The data model in this study is panel data (pooled data), but to process data in this study using cross section data. This is because the purpose of this study is only to find out whether the independent variables tested have a significant effect on the dependent variable and also this study does not look for how much change occurs each year in the study period.

In this study, the authors took samples. As for what will be studied is a sample from the Regional Development Bank (BPD) with a total population of 26 banks. sample is part of the number

and characteristics possessed by the population. The sampling method in this study was purposive sampling, which is a sampling technique with certain considerations. Data collection technique ; a. Documentation is an activity of collecting data in written form, such as letters, diaries, reports, and so on, b. Library research (Library Research) is intended to obtain library data by studying, reviewing and examining literature that has relevance to the problem under study in the form of books or papers related to research.

Data analysis method. In this study, data processing will use regression analysis techniques. This regression analysis is used to explain the form of the relationship between the independent variable (X) and the dependent variable (Y). The general equation for multiple regression to be used in this study is as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon \dots \dots \dots (1)$$

Where

- a. Y is the dependent variable, namely profitability (ROA).
- b. X is the independent variable ; X_1 = Cost Management (OER) ; X_2 = Liquidity (LDR) ; X_3 = Capital (Primary Ratio).
- c. β_0 is the value for a linear function when it intersects the Y axis which is the estimate of Y if X = 0.
- d. β_i is the change in Y for a 1 unit change in X.
- e. ε is error.

Hypothesis Testing Techniques. The method to be used in testing the hypothesis of this study is the coefficient of determination (r^2) and the Goodness of Fit test. By testing the hypothesis with the coefficient of determination (r^2), it will be known how well the above model can be described on the independent variable on the dependent variable. While the Goodness of Fit test is used to determine statistical significance between the average sample distribution and parameters. In the Goodness of Fit test there are two calculation methods, namely the t-test and the F test. (1). F test, F test is used to determine the effect of the independent variables together (simultaneously) on the dependent variable, (2). T test, t test is used to test the regression coefficients of the independent variables in each model that exist partially on the related variables, (3). Classical Assumptions Test. Available data will be processed and tested using Statistical Software with multiple regression techniques, which is first tested by classical assumptions. The classic assumption tests are as follows: (a). Normality Testing, This normality test is to determine whether parametric or non-parametric statistics will be used in processing research data and to find out whether the data is normally distributed, (b). Multicollinearity test. Multicollinearity means that there is a significant correlation between the independent variables in the regression model, (c). Heteroscedasticity test, the heteroscedasticity test aims to test whether the regression model has the same variance from the residuals of one observation to another. (d). Autocorrelation Test, Autocorrelation Test, the relationship between one observation residual and another observation residual. Autocorrelation often occurs in time-series data.

3. RESULTS AND DISCUSSIONS

General Description of the Research Object

Regional Development Banks (BPD) are banks established in the first-level regions. The establishment of BPD is based on Law no. 13 of 1962. In Law no. 13 of 1962 explained that the establishment of the BPD has the purpose contained in article 4. Article 4 states the specific purpose of establishing the BPD is to provide financing for the implementation of regional development efforts within the framework of the Planned Universal National Development. The Regional Development Bank (BPD) has its own characteristics in the Indonesian banking system because the

ownership of the BPD is the Regional Government which consists of the Provincial Government and several Regency and City Governments in Indonesia.

According to Winny Erwindia Hassan who is Chair of the Association of Regional Development Banks (ASBANDA), the performance of Regional Development Banks (BPD) continues to increase significantly from year to year. This is reflected in improvements in several key indicators. Total assets increased by 50.07% during 2006 to Rp158.43 trillion. As of June 2007, the figure reached IDR 164.75 trillion from the total assets of 26 Regional Development Banks spread over 1,193 branch offices or equivalent to 9.66% of all banking assets. Collection of third party funds (DPK) during 2006 increased by 51.51%. In terms of lending to the public, as of June 2007 it had reached IDR 65.12 trillion, during 2006 it had increased by IDR 11.02 trillion (24.53%). The market share for lending to national banks is equivalent to 7.76%. The composition of BPD credit is still dominated by consumption credit, which reached 69.04% as of September 2007, compared to 29.07% in national banking. On the other hand, BPD is still very little in financing working capital and investment, with a composition of 23.64% and 7.32% respectively. This is still relatively small when compared to national banking, namely 52.06% and 18.87%. This pattern of lending has the consequence of low undisbursed loans (loans approved by the bank but not realized by the debtor), low Loan to Deposit Ratio (LDR), high Net Interest Margin (NIM), low Non-Performing Loans (NPL) and placements in high SBI. BPD is still very little in financing working capital and investment, with a composition of 23.64% and 7.32% respectively. This is still relatively small when compared to national banking, namely 52.06% and 18.87%. This pattern of lending has the consequence of low undisbursed loans (loans approved by the bank but not realized by the debtor), low Loan to Deposit Ratio (LDR), high Net Interest Margin (NIM), low Non-Performing Loans (NPL) and placements in high SBI. BPD is still very little in financing working capital and investment, with a composition of 23.64% and 7.32% respectively. This is still relatively small when compared to national banking, namely 52.06% and 18.87%. This pattern of lending has the consequence of low undisbursed loans (loans approved by the bank but not realized by the debtor), low Loan to Deposit Ratio (LDR), high Net Interest Margin (NIM), low Non-Performing Loans (NPL) and placements in high SBI.

Research data, research data obtained by using purposive sampling method are 23 Regional Development Banks (table The selection of this data is done so that the data can be processed into a predetermined variable and minimize the occurrence of data deviations (outliers).

Table.1 Research Object of 23 Regional Development Banks

1	DKI bank
2	East Kalimantan Bank
3	BPD Aceh
4	BPD Bali
5	BPD West Java & Banten
6	BPD Central Java
7	BPD East Java
8	BPD Riau
9	BPD South Sulawesi
10	BPD West Sumatra
11	BPD North Sumatra
12	Yogyakarta Regional Development Bank
13	BPD Central Kalimantan
14	Lampung Bank
15	BPD Papua (Irian Jaya)
16	BPD Jambi
17	West Kalimantan BPD
18	BPD South Kalimantan
19	BPD Moluccas
20	West Nusa Tenggara BPD
21	BPD East Nusa Tenggara
22	North Sulawesi BPD
23	BPD South Sumatra

Data Analysis and Discussion.

In this study, the data analysis used to determine the internal determinant factors of profitability is a linear regression profitability model where this model can determine what factors influence bank profitability.

a. Calculation of Internal Determinant Factors

Cost management calculations in this study use the Overheads Efficiency Ratio (OER) where this ratio is calculated by dividing overhead costs by total assets for each Regional Development Bank which is the object of research in 2004-2007. The liquidity ratio (LDR) of each Bank is obtained from the financial reports contained in the calculation of the financial ratios of each Bank. LDR calculations have been carried out by each bank without any further processing. The calculation of the LDR value follows the provisions of Bank Indonesia, namely the results of a comparison between total credit and total third party funds.

b. Calculation of Profitability Ratios

In this study, the Bank's profitability ratio used is Return on Assets (ROA). This indicator can function to measure the ability of the Bank's management in obtaining profits (profit) as a whole. ROA calculation is obtained by dividing net profit before tax by total assets. The greater the ROA of a Bank, the greater the level of profit achieved by the Bank and the better the position of the Bank in terms of asset use. From the results of calculations using the Microsoft Excel program, the ROA value of each bank is obtained.

c. Discussion of Calculation Results

Discussion of Calculation Results, From the value of the ratio of internal determinants shows that for the ratio of cost management (OER) BPD East Kalimantan in the 4th quarter of 2007 has the lowest level of cost management ratio which is equal to 1.46%. This means that the East Kalimantan BPD has a high level of cost efficiency thus indicating that the East Kalimantan BPD has a good ability to manage the costs incurred to acquire assets where in 2007 the 4th quarter of the East Kalimantan BPD experienced an increase in other operational costs but not significantly accompanied by a significant increase in total assets from the previous year.

Classical Assumption Testing

Prior to data analysis, the classical assumption test was first carried out so that decision making through the F test and t test should not be biased. The basic assumptions that are fulfilled from the classic assumption test are as follows:

a. Normality test

The residual aims to test whether the regression model, the dependent variable and the independent variables both have a normal distribution or not. The residual normality test used in this study is the One - Sample Kolmogorov -Smirnov test with the following hypothesis formula:

Ho : normally distributed data

Ha : the data is not normally distributed

The proposed test criteria are:

Ho is accepted if the statistical significance of Asymp Sig < 0.05

Ha is accepted if the statistical significance of Asymp Sig > 0.05

Table .2 Normality Test Results
One-Sample Kolmogorov-Smirnov Test

	asyp. Sig. (2- tailed)	Provision	Information
ROA	0.115	Asymp. Sig > 0.05	Normally distributed
OER	0.065	Asymp. Sig > 0.05	Normally distributed
LDR	0.055	Asymp. Sig > 0.05	Normally distributed
<i>Primary Ratio</i>	0.155	Asymp. Sig > 0.05	Normally distributed

Source: Processed data

Multicollinearity Test

This test aims to test whether the regression model found a correlation between independent (independent) variables. To determine whether there are multicolline symptoms or not, the Variance Inflationary Factor (VIF) is used. Multicollinearity testing criteria are: (a). If VIF is greater (>) than 10 then Ho is rejected, and Ha is accepted. (b). If VIF is smaller (<) than 10 then Ho is accepted, and Ha is rejected.

Table.3 Multicollinearity Test Results

	VIF	Provision	Information
OER	1,060	VIF < 10	There is no multicol
LDR	1,689	VIF < 10	There is no multicol
<i>Primary Ratio</i>	1,630	VIF < 10	There is no multicol

Source: Processed data

Autocorrelation Test

The autocorrelation test aims to test whether in a linear regression model there is a correlation between confounding errors in period t and errors in period t (previously). Autocorrelation is a problem that is often found in time series data. In this study, the autocorrelation test is not necessary because the research data is in the form of a cross section, the autocorrelation test has more influence on time series data. To obtain unbiased research results, the research data must first meet the classic assumption test criteria.

Heteroscedasticity Test

This test is used to test whether in the regression model there is an inequality of variance from one residual observation to another. If the residual variance from one observation to another observation remains, then it is called Homoscedasticity and if it is different it is called Heteroscedasticity. A good regression model is a model that does not have heteroscedasticity. the formulation of the hypothesis proposed is: Ho : There is no heteroscedasticity problem in the model, Ha : There is a heteroscedasticity problem in the model, The proposed test criteria are: Ho is accepted if the statistical significance is <0.05, Ha is accepted if the statistical significance is > 0.05. The method used in this study to test heteroscedasticity is the Glejser Test. From this test, the output is obtained in table 4.6 below:

Table.4 Heteroscedasticity Test Results

	Sig.	Provision	Information
OER	0.667	Sig > 0.05	There isn't any heteroscedasticity
LDR	0.071	Sig > 0.05	There isn't any heteroscedasticity
<i>Primary Ratio</i>	0.960	Sig > 0.05	There isn't any heteroscedasticity

Source: Processed data

Based on table 4 above, it can be concluded that the regression model does not experience heteroscedasticity as indicated by the significance level of the independent variables which is greater than 0.05 so that the hypothesis Ho is accepted.

Calculation of Linear Regression Profitability Model

To determine the internal determinants of profitability, a linear regression profitability model was formed. The 3 independent variables included in the regression model are cost management, liquidity, and capital. Based on the results of multiple linear regression, the profitability regression line equation is obtained as follows:

$$ROA = 2.873 - 0.444 \text{ OER} + 0.009 \text{ LDR} + 0.194 \text{ Primary Rati} \dots\dots\dots(2)$$

Based on the linear regression model above, it can be seen that there is a negative relationship between the cost management variable and the profitability variable, which is equal to 0.444. This means that each increase in one unit of cost management will reduce profitability by 0.444 units.

Coefficient of Determination

The coefficient of determination (R²) is a test to measure how far the model's ability to explain the variation of the dependent variable. The value of the coefficient of determination is between zero and one. In general, the coefficient of determination for the cross-sectional data is relatively low due to the large variation between each observation.

Table.5 The Coefficient of Determination Results

	R	R Square	Adjusted R Square
Model	0.658	0.433	0.428
Study			

Source: Processed data

Based on table 5, the coefficient of determination of the profitability linear regression model is 42.8%. Meanwhile, the coefficient of determination of 57.2% is explained by other factors outside the model. This means that the model's ability to explain variations in the independent variables is not too high.

Effect of Independent Variables on Dependent Variables Simultaneously

To determine the effect of the independent variable on the dependent variable together with α = 5%, the F test can be used. In the F test there are rejection criteria as follows: Using Test statistics: Reject Ho if F > F_α, Using p-value (F stat sign): Reject Ho if p-value < α

Table.6 F Test Results

Model		Sum of Squares	Df	MeanSquare	F	Sig.
1	Regression	373,931	3	124,344	92,483	.000a
	residual	489,401	364	1,345		
	Total	862,432	367			

a. Predictors: (Constant), Primary Ratio, OER, LDR, Dependent Variable: ROA

Source: Processed data

The Effect of Independent Variables on Partially Dependent Variables

To determine the effect of the independent variable on the dependent variable partially, the coefficient test is carried out individually, namely by using the t test. Based on table 5, the variables that have a significant effect on profitability are cost management variables, capital liquidity because the level of significance is less than 5%.

4. CONCLUSION

After processing the data and providing analysis on 23 samples from Regional Development Banks in research on the internal determinants of profitability of Regional Development Banks, the following conclusions are obtained: (a). Internal factors that influence BPD profitability are cost management, liquidity, and capital. This can be seen from the tests that have been carried out using Statistical Software, namely the F test and t test. (b). Based on the partial test that has been done with the t test,

the cost management factor has a negative influence on bank profitability. This is because the lower the costs incurred to acquire assets, the higher the level of cost efficiency so that the profits obtained increase. Whereas, for liquidity and capital factors have a positive influence on bank profitability. The liquidity factor has a positive relationship because banks expand credit by channeling higher and current loan amounts so as to increase the amount of profit the bank earns. The capital factor has a positive influence because the higher the amount of capital owned by a bank, the profits will also increase, (c). Factors of cost management, liquidity, and capital (internal factors) have a significance level simultaneously on bank profitability of 0.000. Meanwhile, the magnitude of the partial significance level of internal factors, namely cost management, liquidity, and capital on profitability is 0.000; 0.017; 0.000.

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