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Determinants of Bank-Specific and Macroeconomic on Profitability of Regional Bank in Indonesia

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ABSTRACT

Regional Bank Profitability is one of challenging issues in Indonesian banking sector. Banking sector is lack generating higher profit then banks will get default and the effect shows to economy sector of each country. The source of data obtained from annual report of regional development banks (BPD) website and financial reports. This research covers the data over the period 2015-2019. This study includes major BPD banks of Indonesia. The analysis technique used to analyze the data in this study is done by classic assumption test, the multiple regression analysis. GDP is negative and significant, but Inflation is negative but not significant affect to profitability. Similarly, Banks specific variables Bank Size, CAR and BOPO. Finding shows that Bank size, CAR and BOPO are negative and significant to bank profitability.

Keywords *Bank Profitability, BPD, GDP, BOPO and CAR*
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INTRODUCTION

Bank is a financial institution that provide financial facilities to their customers according to their financial need. In recent days banking sector play an important role to boost national economy such as; all of financial transaction of export and import, Business activities and loan credit facilities Thus, Banking sector is lack generating higher profit then banks will get default and the effect shows to economy sector of each country. There are several types of Banks category in each country such as conventional commercial banks, regional banks and Micro-Finance to support provide the financial facilities to different level. There are many previous research has been done about commercial banks and Micro-Finance but very few research has been done in the area of reginal banks profitability. Indonesian is growing economy in Southeast Asia. Due to Indonesian economy size and their population it can easily predict that there are also necessity of regional banks. Meanwhile Indonesian regional Banks BPD banks performance is satisfactory though it's normally generate normal profit but not like national level commercial banks. Therefore, the area of research regarding regional banking profitability interesting issues to conduct research.

Bank is an institution that generate profit through borrowing and lending to the money to their customer. Almost all of banks try to raise their performance and increase the profit but some many banks faced default due to their some external and internal factors affect. Therefore, all of common banks have general problem which is banks are failed to generate adequate profit. There are some banks related research that shows the problems in profitability.(Alexiou & Sofoklis, 2009) mentioned in Greek banking sector and their profitability and investigated the effects of bank-specific and macroeconomic determinants of bank profitability. (Siddiqua et al., 2017) explored to identify the bank-specific internal factors that affect the profitability of state owned commercial banks of Bangladesh. (Athanasoglou, Panayiotis and Delis & Staikouras, 2006) also study about the profitability behavior of bank-specific, industry- related and macroeconomic determinants, using an unbalanced panel dataset of South Eastern European (SEE).

Similarly, (Kirer Silva Lecuna & Caliskan, 2020) explored about the determinants of the banking sector profitability in Turkey. Their findings, macroeconomic indicators such as inflation, interest rates and exchange rates play a significant role in shaping the performance of the banking system. However, banking sector variables such as assets, efficiency and liquidity are more crucial for profitability.(Flamini et al., 2009) examine the determinants of bank profitability in Indonesia. This research used Return on Assets (ROA) and Return on Equity (ROE) as proxies of profitability and analyze how variables from three categories that is internal, external, and market share variables affects them. (Dietrich & Wanzenried, 2014) analyzed bank-specific characteristics, macroeconomic variables, and industry- specific factors affect the profitability of 10,165 commercial banks across 118 countries. It shows that most of commercial banks explored two factors internal and external to measure the profitability.

Bank Profitability

In several countries, research has been conducted into the determinants of the profitability of banks. Samad, (2015) examined of 42 commercial banks from Bangladesh using ordinary least square regression (OLS) for the period from 2009 to 2001 explores the factors influencing the profitability of banks. It uses both the internal characteristics of banks (including bank sizes, operating efficiency of banks, capital efficiency and financial risk of banks) and economic growth as an external factor. The findings show that banks' operating efficiency and capital efficiency have a substantial positive impact on banks' profitability; banks' financial risk has a substantial negative impact on banks' profitability, while economic growth and the scale of banks have no impact on banks' profitability. Dao & Nguyen, (2020) explored in Asian developing countries, including Vietnam, Malaysia and Thailand, the paper explores the factors influencing the profitability of commercial banks. The research used panel data from four entities; ten banks in Vietnam, eight banks in Malaysia, nine banks in Thailand, and from 2012 to 2016, all 27 commercial banks. In particular, profits are classified as return on assets, return on equity and TOBINQ as indicator to measure the bank profitability. The empirical findings showed clear evidence that the variables had important impacts on profitability.

According to (Sufian & Habibullah, 2010) In terms of internal and external determinants, bank profitability can be measured by asset return (ROA) and return on equity (ROE). The internal determinants will be influenced by bank decision management and the objective of policy. The operation of a financial institution however will form of external determinants of industry and macroeconomic factors. Thus, the level of liquidity, the adequacy of capital, expense management, the size of the bank and the provisioning policy determine the profit. However, by using ROA to be a reliable indicator of shareholder value, shareholders think of the leverage effect and ROE are used by investment shareholders, since ROE is a tool to directly measure the financial return (Lee & Kim, 2013).

However, the shareholders think over the leverage effect by using ROA to be a trustworthy measurement of shareholder value and the shareholders in investment will used ROE, because ROE is a tool to assess the financial return directly (Lee & Kim, 2013). While the ROA describes the bank's success as net profit divided by average total assets. But the likelihood of risk-taking and potential profit fluctuations in banks will not be justified by ROA, and this is a ROA concern. While ROA defines as net profit divided by average total assets to measure the performance of bank. But possibility of risk-taking and potential variability of profit in banks, ROA would not justify it, and this is an issue of ROA (de Bandt et al., 2018).

Bank Specific Determinants

Bank size seen from the total assets of owned by each bank. Athanasoglou et al., (2008) and Sufian & Habibullah, (2009) and Petria et al., (2015) the relation between the size of the bank and profitability is defined in some of the literature showing the inverted U pattern. On the one hand, raising the size of the bank would improve economies of scale, thus increasing efficiency, but on the other hand, larger banks will make a bank inflexible, leading to lower results. Size can be proxy by bank with Natura's total assets.

The second determinant, capital, determines the profitability of banks since it can be allocated as consumer loans. Therefore, if not converted as loans, high or excessive core capital would have a negative effect on profitability. Capital is determined here by the Total Core Capital (TCORCAP) and the Capital Adequacy Ratio (CAR), calculated of a capital ratio to risk-weighted capital.(Herdhayinta & Supriyono, 2019). As it decreases the risks taken by the bank, higher solvency can have a positive impact on results.(Athanasoglou, et., *al.*,2006). On the other hand, higher solvency will reduce the leverage effect, thus it may increase the financing costs.

OE/OI, as indicated in the phrase, is calculated as the ratio of operating expenses to operating income. OE/OI demonstrates the performance of the bank's management and decides what approaches or opportunities should be taken by the managers. A high OE/OI indicates it's less effective for the bank. OE/OI, therefore, has a negative effect on the profitability of banks. The greater the OE/OI is, the lower the bank's profitability. In several European countries, research by (Abreu & Mendes, 2002) concluded that OE/OI has a major negative profitability effect. This outcome was consistent with (Bourke, 1989) and (Molyneux & Thornton, 1992).

Macroeconomic Determinants

Macroeconomic variables has huge influence on bank profitability. High economic growth will usually lead to further lending, resulting in a higher margin of interest. Prior study in other countries sees macroeconomic conditions as determinants of bank profitability (Azam & Siddiqui, 2012). (Staikouras & Wood, 2004) have argued that inflation in European countries affects the profitability of banks. The impact of interest on bank profitability in Macau was examined by (Vong and Chan , 2009).

Another important macroeconomic variable GDP growth is important variable in bank profitability literature. Most studies Athanasoglou et al., (2008) and Demirgüç-Kunt & Huizinga, (1999) have shown a positive relationship between inflation, GDP growth, and bank profitability and a negative relationship between the tax burden and bank performance. Previous studies show a positive correlation between GDP growth and bank profitability include Pasiouras & Kosmidou, (2007), Athanasoglou et al., (2008) and Dietrich & Wanzenried, (2014).

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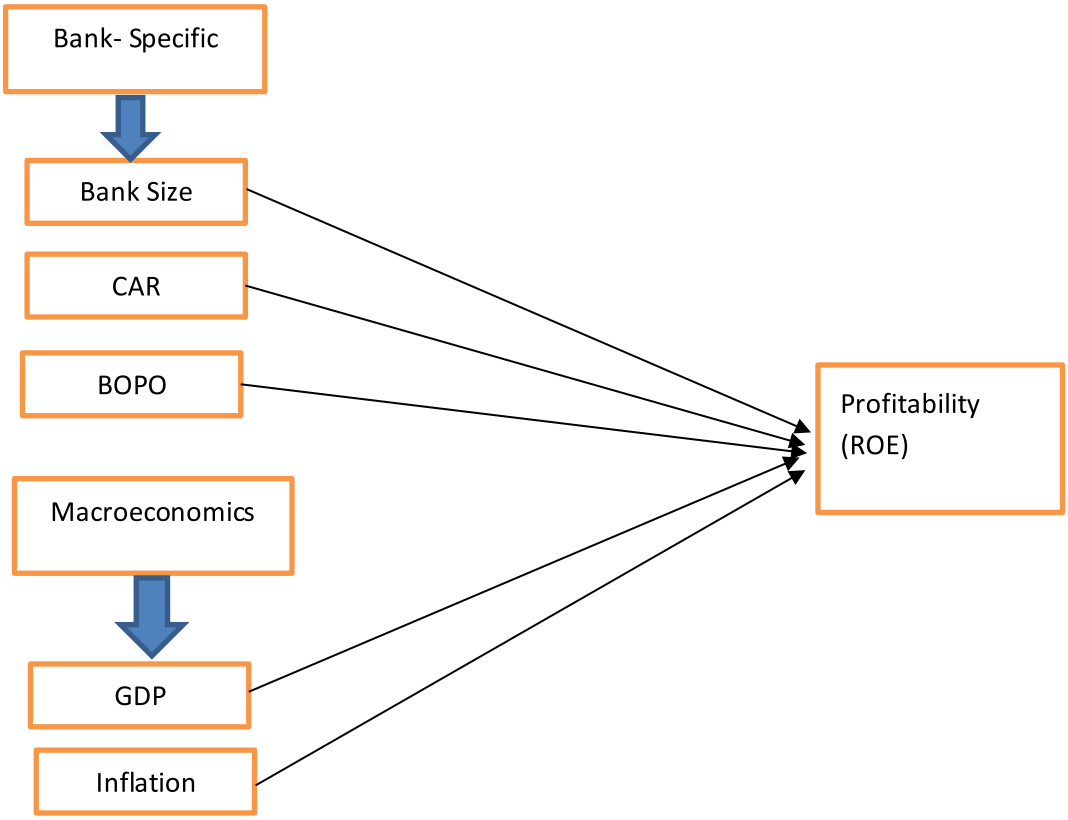
Based on the previous literature there are Hypothesis is given below determinants that affect to bank profitability.

H1: Bank Size has negative effect on Bank Profitability (ROE).
H2: CAR has negative positive effect on ROE.
H3: BOPO has negative effect on ROE.
H4: GDP growth has negative effect on ROE.
H5: Inflation has positive effect on ROE.



Picture 1.
Conceptual framework

More studies have expanded the number of factors considered. Thus, scholars (Athanasoglou et al., 2008;García-Herrero et al., 2009) have examined the effect of bank-specific (i.e. capital ratio, operational efficiency, bank size), industry-specific (i.e. ownership and concentration) and macroeconomic (i.e. inflation and cyclical output) determinants on bank performance. Damanhur et al., (2018) mentioned in Sharia regional banks in Indonesia. They analyze the effects of macro- and micro-economic variables on the ratio of troubled financing (Non-Performing Financing, NPF). (Profitabilitas & Di, 2020) discuss about in their study about increase the role of CASA and NIM in improving the

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profitability of banks in Indonesia. Their research emphasized that research by various CASA improvement strategies undertaken by banks to maximize profits, as well as OJK policies to support NIM to improve the efficiency and competitiveness of Indonesian banks.

Indonesian regional bank as called BPD bank growing fast and it is taking attention to examine their profitability. There are few research has been done about regional banks; (Yudaruddin, 2017) analyzed RDB is a bank with the main working area on a regional level. It makes RDB has a unique position because of its area of operations at regional level resulted in the bank's profitability is not only influenced by the economic conditions at the regional level but also at national and international level. Also, (Herdhayinta & Supriyono, 2019) found the Regional Development Bank (BPD Bank) is expected to be a strong, highly competitive bank, which will contribute to the growth and even distribution of sustainable regional economies. Only few paper have analyzed the determinants of regional banks profitability of Indonesia and previous study mostly focus on external determinants. Thus, this study try to explore both internal and external determinants on bank profitability BPD banks in Indonesia.

RESEARCH METHODE

Data Type and Source:

This research used secondary data for this study. The source of data obtained from annual report of regional development banks (BPD) website and financial reports; Balance sheet, Income statement and Key financial indicators. This research cover the data over the period 2015-2019. This study include major BPD banks of Indonesia. The analysis technique used to analyze the data in this study is done by classic assumption test, the multiple regression analysis.

Model Analysis

To determine the influence of bank specific factors; bank size, CAR, BOPO and macro-economic factors; GDP, inflation of the profitability, it will be used as a multiple regression analysis model estimation method with the following equation:

$$ROE_{i,t} = \beta_0 + B_1 Bank\ Size + \beta_2 CAR + \beta_3 BOPO + \beta_4 GDP + \beta_5 Inf$$

Where,

$\beta_1(Bank\ Size\ )_{i,t}$	= Bank Size of the banks ***i*** and period ***t.***
$\beta_2(CAR)_{i,t}$	= Capital Adequacy Ratio of banks ***i*** and in the period ***t.***
$\beta_3(BOPO)_{i,t}$	= Bank quality of the bank ***i*** and period ***t***.
$\beta_4(GDP)$	= GDP growth in the period ***t.***
$\beta_5(INF)_t$	= Inflation in the period of ***t.***

$\epsilon_{i,t}$ = Composite error term
β_i = 1, 2, 3……6

RESULT AND DISCUSSION

Table 1.
Descriptive statistics

Variable	N	Min.	Max.	Mean	Std.Dev
ROE	50	6.11	34.10	19.09	6.52
Size	50	1.68	6.12	3.88	1.40
BOPO	50	60.13	90.99	74.65	6.29
CAR	50	14.41	36.76	22.33	3.90
GDP	50	4.90	5.20	5.0400	0.10
Inflation	50	1.60	4.30	3.22	1.05

Based on above table the descriptive table1. As dependent variable Return of Equity (ROE) min is 6.11 and maximum is 34.10 and mean is 19.09. Which indicate that the BPD banks ROE have not that much fluctuation. Similarly, Size of the banks min. is 1.68 and max.6.12 and mean is 3.88 and it shows that even through all are regional banks but there is still banks size variation in different region. About BOPO, min is 60.13 and max 90.99 and average is 74.65 and its shows that banks efficiency is not bad of BPD banks. Likewise, CAR min, max and mean are 14.41, 36.76 and 22.33 and it clarify that CAR has also not that much high and low differences. The macroeconomics variable GDP growth rate and Inflation; GDP min is 4.90 , max 5.20 and mean is 5.04 which shows that it is not that changes. Lastly, Inflation min is 1.60, max 4.30 and mean is 3.22 and it's describe that inflation has a bit changes not that much inflation during this period of study.

Table 2.
Coefficients

Variable	Un-Std Coeff		Std-Coeff	t	Sig.
	Beta	Std. Error	Beta		
Con	169.217	37.417	-	04.522	0.000
B. size	-0.125	0.476	-0.347	-3.123	0.003
BOPO	-0.0698	0.114	-0.673	-6.127	0.000
CAR	-0.600	0.184	-0.359	-3.254	0.002
GDP	-20.333	6.773	-0.321	-3.020	0.004
Inflation	1.028	0.649	0.165	1.584	0.121

(source: regression output of SPSS)
* significance 0.001 *** ,Significance 0..05 ** and Significance 0.01)

Table 3.
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756[a]	.572	.512	4.55967

a. Predictors: (Constant), Inflation , Size , CAR, GDP, BOPO

The result of regression analysis on this research demonstrate that bank – specific variables and macroeconomic effect on bank profitability shows in table 2. It indicates that the dependent variable in the perception of ROE. The independent variables are Bank Size (BZ), Capital Adequacy Ratio (CAR), BOPO, Gross Domestic Product growth (GGP) growth, Inflation (INF). Throughout the regression result, it shows that there are five variables Bank Size, CAR, BOPO GDP, and Inflation. Bank Size, CAR, BOPO and GDP are

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significant on ROE of BPD Indonesian banks. On the other hand, Inflation is positive but not significant on ROE. In table no .3 the value of R^2 is 0.756 and Adjusted R^2 is 0.572 and it is confined that 57.2% of sample variation exist on ROE. It confirmed that the banks independent variables variation on Indonesian BPD banks. The result also found Durbin Watson is 4.55 which indicates that there is autocorrelation among variables.

CONCLUSION

In this study, macroeconomics variables GDP is negative and significant but Inflation is negative but not significant affect to profitability. Similarly, Banks specific variables Bank Size, CAR and BOPO. Finding shows that Bank size, CAR and BOPO are negative and significant to bank profitability. Thus, regional bank of Indonesia (BPD) need to consider about more over Banks Size and CAR, BOPO and GDP variables need to consider for baking action toward profitability. It is noteworthy to say that BPD banks has been not grown as advanced as compare to conventional commercial banks. Through this research and findings can at least help analyze the ROE related determinants. This research try to provide clear direction to BPD Indonesian banks and policy makers and as well academicians to understand about Profitability and give further avenues to do add more variables do detail research.

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