

# The Effect Of Financial And Macroeconomic Performance On MSME Loans In Indonesian State-Owned Banks In 2015-2019

<sup>1</sup>Lucia Tannya Diandra, <sup>2</sup>Dadan Rahadian

\* <sup>1,2</sup>School of Economics and Business, Telkom University, Jl. Telekomunikasi Terusan Buah Batu, Bandung, 40257  
<sup>1</sup>lucia.tannyadiandra@gmail.com, <sup>2</sup> dadan.rahadian@telkomuniversity.ac.id

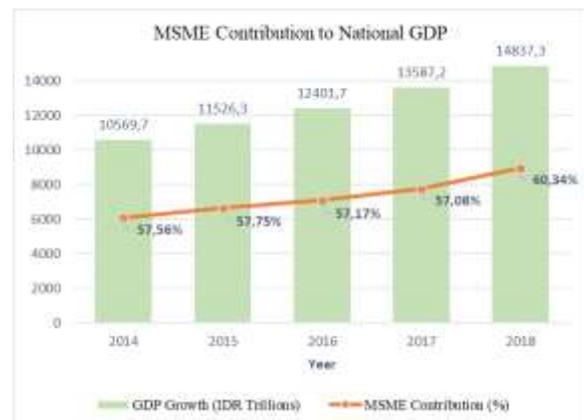
DOI: 10.29322/IJSRP.10.05.2020.p10180  
<http://dx.doi.org/10.29322/IJSRP.10.05.2020.p10180>

**Abstract-** This study aimed at analyzing the effect of the ratio of bank financial performances and macroeconomics to the distribution of MSME Loans by state-owned banks in Indonesia for the 2015-2019 period by using variables LDR, CAR, and ROA, BI7DRR and inflation. The sample of the study consisted of four Indonesian state-owned banks, namely BRI, BNI, BTN, and Mandiri, which were selected according to the criteria for purposive sampling. The data were obtained from quarterly financial reports of each bank in the official website of each state-owned bank. The analysis method used in this study was descriptive statistics and panel data regression with fixed effect models using the EViews application. The results showed that partially the liquidity ratio (LDR), profitability (ROA), and BI7DRR do not have a significant effect on MSME loans distribution. Meanwhile, the solvency ratio (CAR) and inflation have a significant negative effect on MSME Loans. In accordance with the simultaneous F-test, the ratio of bank both financial performances and macroeconomics have a significant effect on the distribution of MSME lending by the state-owned banks in the 2015-2019 period.

**Index Terms-** LDR, CAR, ROA, BI7DRR, Inflation, dan MSME Loans.

## I. INTRODUCTION

The economic growth of a country is crucial as it becomes an indicator of a country's economic ability that affects the public economic activities, both inside and outside the country, particularly during the slow global economic growth affecting the economy of developing countries. Thus, to maintain the stability of an inclusive and sustainable economy in Indonesia, it can be realized through one of the national economic strategies, namely empower MSMEs (Micro, Small, and Medium Enterprises). Although this country has a slow growth rate of GDP, the contribution of MSMEs to GDP in trillion Rupiah has increased from 2015 to 2018. on Figure 1, MSMEs contribute more than 50% of the total GDP in Indonesia.



**Figure 1 Contribution of MSMEs to GDP in 2014-2018**  
Source: Statistics Indonesia, 2019

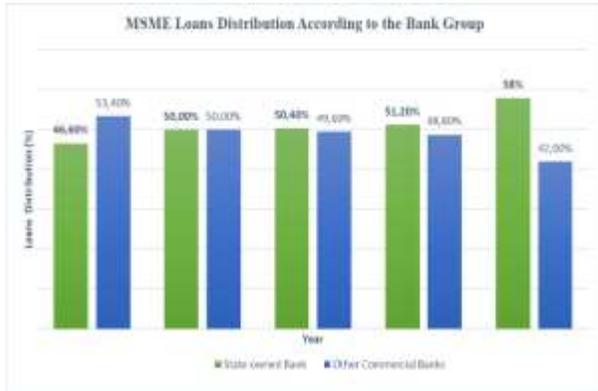
Article 3 of the Law of the Republic of Indonesia No. 20 of 2008 concerning MSMEs states that Micro, Small, and Medium Enterprises aim to grow and develop businesses to develop a national economy based on equitable economic democracy. The development of MSMEs shows great potentials in Indonesia viewed from the increasing number of the Indonesian population and their purchasing power which will be a large potential market.

Indeed, developing MSMEs requires government support, particularly in accessing funding. It is in line with the economic census conducted by Statistics Indonesia (BPS) in which more than 40% of MSEs state that capital becomes the main obstacle besides business competition and it will inhibit business actors to develop and expand the business (BPS, 2019).

In October 2015, the government launched the IV Economic Policy Package, which covers two important topics focusing on strengthening of the economy of society. The first topic is fair wage policies and the second is related to MSME capital expansion. Through the second policy, the government intends to improve and expand the access of MSME and productive efforts to financial institutions and increase financial inclusion (Ministry of Economic Affairs, 2016). Besides through the economic policy package, the government through Bank Indonesia has instructed banks to provide at least 20% of total loans for MSME since 2018 (Bank Indonesia Regulation No.

14/22 / PBI / 2012 concerning loans and Financing by Commercial Banks). Thus, it requires government institutions to contribute to the success of government strategy and policy. One institution that has a high responsibility in the economy of a country is financial institutions, namely banks.

As a financial institution, banks have great roles in the development and progress of a country as a financial intermediary to the public. Banks functions to collect funding from the public and then rotate or channel the funding to the public in the form of loans (Kasmir, 2017: 25). One of the loans provided by banks is MSME Loans. This loan aims to facilitate debtors or business actors for financing MSME needs.



**Figure 2 MSME Loans Distribution According to The Bank Group**

Sumber: Bank Indonesia 2019

In supporting government policies, state-owned banks are also required to provide MSME Loans. Based on figure 2 above, the distribution of MSME loans by state-owned banks from 2015 to 2019 in the second quarter increased each year and it dominated the distribution of MSME Loans in Indonesia compared to other commercial banks including foreign exchange BUSN, non-foreign exchange BUSN, BPD, joint-venture banks, and foreign banks.

In providing loans services, each bank has to maintain its performance. Kasmir (2017: 216) proposes principles to be considered by banks such as liquidity, solvency, and profitability. Banks should consider these three principles carefully to maintain good performance. In addition to bank internal factors, banks need to consider macroeconomic conditions in loans disbursement as it can affect the development of the debtor's business. The conditions cover inflation and monetary policy (Indonesian Bankers Association, 2018: 68).

Based on the background of the study, the main issues of this study are: (1) Is there a partial effect of bank financial performance on the distribution of MSME Loans in Indonesia by State-Owned banks? (2) Is there a partial macroeconomic effect on the distribution of MSME Loans in Indonesia by state-owned banks? (3) Is there a simultaneous effect of the ratio of bank financial performance and macroeconomics to MSME loans disbursements in Indonesia?

## II. IDENTIFY, RESEARCH AND COLLECT IDEA

### Definition and Function of Banks

Based on the Statement of Financial Accounting Standards (PSAK) No. 31 concerning Accounting for banks, banks are institutions that have a role as financial intermediaries for those who have excess funds (surplus units) with those who need funds (deficit units). The functions of banks are grouped into two, general and special functions. The general functions include (1) collect deposits, (2) lend the deposits in the form of loans, and (3) provide financial services to manage the flow of payments efficiently. Then the special functions consist of (1) agents of trust which based on the trust principle, (2) agents of development that mobilizes funds for the development of the country's economy, and (3) agents of service that provide banking services (Indonesian Bankers Association, 2018: 10).

### MSME Loans

The term of loans comes from the Latin "*credere*" which means trust. Trust will never be separated from the provision of loans as it is not difficult for banks to distribute loans, but it is extremely difficult for banks to withdraw these funds (Fahmi, 2014: 2). Each bank provides loans with certain objectives. Kasmir (2017: 88-89) highlights that the main objectives of banks in providing loans are to:

1. Get profit  
to obtain profit from the loans in the form of interest as a remuneration and administration fees charged to customers.
2. Help customers' business  
Another objective of providing loans is to help customers' business which needs funds, and it can be in the form of investment or capital funds. Through these funds, debtors can develop and expand their business activities.
3. Help the government  
From the government's point of view, the more loans provided by banks, the better as it can increase the development in various sectors.

Based on the objectives of loans, MSME Loans is considered as a type of productive loans. MSME loans is a type of loans given to owners of micro, small, and medium enterprises who meet the criteria of micro, small, and medium enterprises as stipulated in Law No. 20 of 2008 concerning MSMEs.

### Financial Performance of Banks

Fahmi (2012: 2) states that in general financial performance is an analysis to see the extent to which the performance of companies in accordance with the proper and correct financial implementation. The financial performance of a bank can be described from the regular financial statements published by the banks. To make easily understood reports, it requires an analysis based on financial ratios of the bank under applicable standards. Kasmir (2017: 216-229) states that financial ratios which are considered important are liquidity, solvency, and profitability.

#### 1. Bank Liquidity Ratio

Bank liquidity ratio can be measured using Loan to Deposit Ratio (LDR). Kasmir (2017:225) defines LDR as a ratio to

measure the composition of the total loan compared to the total of public funds and own capital.

$$\text{Loan to Deposit Ratio} = \frac{\text{Total Loan}}{\text{Total Deposit} + \text{Equity}} \times 100\%$$

The higher the LDR ratio, the more aggressive the bank liquidity. However, the lower the ratios, the higher the DPK that is not used for loans allocation (idle funds) or low level of loans distribution.

### 2. Bank Solvency Ratio

The solvency of a bank can be measured using the Capital Adequacy Ratio (CAR). Taswan (2010: 166) states that the CAR ratio is the comparison of bank capital to Risk-Weighted Assets (ATMR). Latumaerissa (2011: 211) states that the CAR ratio aims to ensure that banks can anticipate losses from their activities. Typically, banks calculate the total capital needed to cover losses until getting a certain profit.

$$\text{CAR} = \frac{\text{Total Capital}}{\text{Risk - Weighted Assets (ATMR)}} \times 100\%$$

### 3. Bank Profitability Ratio

The profitability ratio can be measured using the Return on Assets (ROA). Pandia (2012: 71) states that ROA is a ratio showing the comparison of earnings (before tax) and total bank assets. It shows the efficiency level of the bank in managing assets. According to Kasmir (2017: 103-104), the higher the provided loans, the greater the profit earned. Therefore, banks tend to rely on their main income on the spread-based loans.

$$\text{ROA} = \frac{\text{Earning before tax}}{\text{Total assets}} \times 100\%$$

## Macroeconomics

The Indonesian Bankers Association (2018: 68) states that the macroeconomic aspect of a country is a condition affecting the development of the debtor's business and settlement of financial obligations. Some microeconomic conditions to be considered cover monetary policy, inflation, foreign exchange control, foreign exchange rates, and etc.

One of the strengthening the monetary operations framework performed by Bank Indonesia is implementing a reference interest rate or policy rate in the form of a BI 7-Day (Reverse) Repo Rate. BI7DRR is a substitute for the BI Rate, figures in the transmission of monetary policy which show the current economic situation, including a picture of the challenges in achieving the specified inflation target (Natsir, 2014: 104). Reducing the BI7DRR reference interest rate can increase the ability of the community to access loans and increase business activities which support economic development.

According to Boediono (2018: 155-158), inflation is a tendency of prices to rise generally and continuously. Inflation happens when the price increase extensively for (or results in an increase of) most of the prices of other goods.

$$IR_x = \frac{CPI_x - CPI_{x-1}}{CPI_{x-1}} \times 100$$

Notes:

$IR_x$  = Inflation Rate or inflation rate in year x

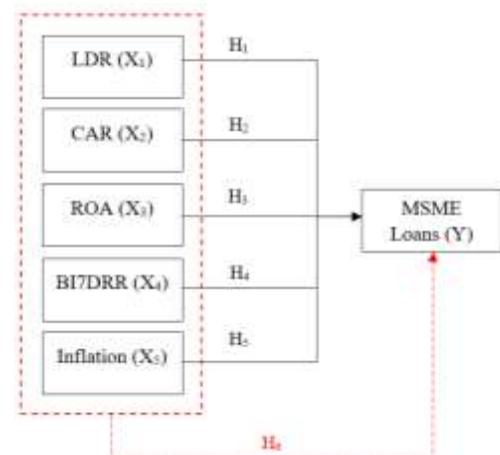
$CPI_x$  = Consumer Price Index in year x

$CPI_{x-1}$  = Consumer Price Index in the previous year

## Previous Studies

Concerning the factors affecting banks' loans, previous research on this topic provides different results. It is evidenced by research conducted by Pradana and Sampurno (2013) in which partially and simultaneously LDR, CAR, ROA, BI Rate, and Inflation variables have significant positive effects on Mortgage Loans volume. On the other hand, Romli and Alie (2017) found that CAR does not provide significant negative effects on loans. Another research conducted by Nurlestari and Mahfud (2015) revealed that the CAR variable has significant negative effects on the distribution of MSME Loans, while ROA has significant positive effects on the distribution of MSME Loans.

Then, research conducted by Siravati (2018) found that the inflation variable has significant negative effects on Mortgage Loans, while LDR has significant positive effects on Mortgage Loans. Syamsurijal and Lidya (2017) found that LDR has positive effects on bank loans, while ROA has no significant effect on bank loans. On the other hand, Putri and Akmalia (2016) revealed that LDR has no influence on bank loans, while CAR and ROA have significant positive effects on bank loans. Further, Mohamed (2019) found that monetary policy interest rates have significant effects on bank loans in Egypt. Abuka et al (2019) found that an increase in the central bank's monetary policy rate reduces the supply of loans and banks with higher liquidity adjusting the supply of loans with changes in the monetary policy. Rabab'ah (2015) found that liquidity ratios have negative and significant effects on the ratio of loans. The last, Yasnur and Kurniasih (2017) revealed that the BI Rate and CAR variables provide no effect on the growth of loans.



Notes:

————— = Partial effects

- - - - - = Simultaneous effects

Figure 3. Hypothesis Framework

**Hypothesis**

Based on the elaborated theories and review of the previous studies, the researchers propose the following hypotheses:

- H<sub>1</sub>: Liquidity Ratio (LDR) significantly affects the distribution of MSME Loans.
- H<sub>2</sub>: Solvency Ratio (CAR) significantly affects the distribution of MSME Loans.
- H<sub>3</sub>: Profitability Ratio (ROA) significantly affects the distribution of MSME Loans.
- H<sub>4</sub>: BI7DRR significantly affects the distribution of MSME Loans.
- H<sub>5</sub>: Inflation significantly affects the distribution of MSME Loans.
- H<sub>6</sub>: The ratios of the financial performance of banks and macroeconomics simultaneously affect the distribution of MSME Loans.

This research is quantitative research to analyze the effects of the financial performance of banks and the macroeconomic situation on the distribution of MSME Loans by Indonesian state-owned banks in the first quarter of 2015 to the second quarter of 2019. Based on the objectives, the type of objective is descriptive and verification.

In determining the research sample, researchers applied a non-probability sampling technique with a purposive sampling design. Criteria for purposive sampling are state-owned banks in Indonesia from 2015 to present, offering MSME Loans, and quarterly publishing its financial statements. A total of four banks meet the criteria, namely BNI, BRI, BTN, and Mandiri.

The data were collected from the literature study and secondary data sources in the form of quarterly financial statements published on each official website of the bank. The financial statements are from the first quarter of 2015 to the second quarter of 2019. Then, BI7DRR and inflation data were accessed from the official website of Bank Indonesia ([www.bi.go.id](http://www.bi.go.id)).

**Analysis Method**

The collected data were analyzed using descriptive statistical tests, panel data regression analysis, coefficient of determination tests, simultaneous significance tests (F-tests), and partial tests (T-tests). Descriptive statistical tests are to provide an overview of research related to statistical value information, such as mean, median, minimum value, maximum value, and others. Based on the implementation time, this research was considered in the panel data, which is a combination of cross-section and longitudinal data (Ghozali, 2017: 195). Before estimating panel data regression, researchers conducted a model selection test using the Show test to select a good panel data regression estimation model (CEM or FEM). The general model for panel data regression can be seen below:

$$Y_{it} = \beta_{0it} + \sum_{k=1}^n \beta_k X_{kit} + \varepsilon_{it}$$

III. RESULT AND DISCUSSION

Table 1. Results of Descriptive Statistics Tests

	ln Loans	LDR	CAR	ROA	BI7DRR	INFLATION
Mean	11.141	0.941	0.195	0.026	0.057	0.039
Median	11.248	0.904	0.194	0.027	0.055	0.034
Maximum	12.892	1.142	0.229	0.041	0.075	0.072
Minimum	95.004	0.804	0.147	0.011	0.042	0.024
Std.Dev.	-0.1003	0.896	0.019	0.008	0.011	0.013
Skewness	1.993	0.943	-0.228	-0.215	0.380	1.142
Observation	72	72	72	72	72	72

Source: Output EViews 10 Student Lite Version (processed data)

The distribution of MSME Loans used units of billions of rupiah, hence the data transformation has to be performed using natural logarithms (ln). Table 4.1. shows the statistical values of the dependent variable of MSME Loans provided by state-owned banks with the mean value of 11.141, the median value of 11.248, the highest and lowest values of MSME Loans distribution of 12.889 and 95.004.

The LDR variable of state-owned banks shows a mean value of 94.14%, a median of 90.4%, a maximum value of 114.2% achieved by BTN in the second quarter of 2019 and a minimum value of 80.47% gained by BRI in the first quarter of 2015. According to Bank Indonesia Regulation No. 17/11/PBI/2015, the minimum and maximum LDR limits are 78% to 92%. Then, based on the average LDR, it reaches 94.14% or higher than the determined maximum LDR limit.

CAR variable has a mean value of 0.1953 (19.53%) with a median value of 0.1942 (19.42%), a maximum value of 0.2296 (22.96%) achieved by BRI in the fourth quarter of 2017 and a minimum value of 0.1478 or 14.78% achieved by BTN in 2015 the second quarter. According to Bank Indonesia Regulation No. 15/12/PBI/2013, the minimum limit of CAR for banks reaches 8%, thus, based on the descriptive statistical test results, it can be concluded that the CAR of state-owned banks for the period of 2015 to the second quarter of 2019 is higher than the determined minimum limit. As the CAR value is higher than the minimum limit, it means that the state-owned banks have fulfilled their obligations well and have good capital.

The mean value of the ROA variable obtained in descriptive statistical tests reaches 0.0265 (2.65%) with a median value of 0.0273 (2.73%), the maximum value of 0.0419 (4.19%) achieved by BRI in the fourth quarter of 2015, and the minimum value of 0.0112 (1.12%) achieved by BTN in the second quarter of 2019. The average ROA of state-owned banks in the period of 2015 to 2019 in the second quarter reaches 2.65% or higher than the minimum limit determined previously. Thus, it can be concluded that state-owned banks have good profitability.

The mean value of the BI7DRR variable reached 0.057 (5.7%) with a median value of 0.055 (5.5%), a maximum value of 0.075 (7.5%) in 2015, then the minimum value reached 0.042

(4.2%) in 2017 the third quarter to 2018 the first quarter. Based on the descriptive statistical test results, the inflation variable has a mean value of 0.039 (3.9%), a median value of 0.034 (3.4%), the highest inflation value of 0.072 (7.2%) in the second quarter of 2015, and the lowest value of 0.024 (2.4%) in the first quarter of 2019.

**Selection of panel data estimation model**

The Chow Test aims to provide information on the determination of a better model among common effects or fixed-effects models. The testing process was performed by comparing the null hypothesis (H<sub>0</sub>) and the alternative hypothesis (H<sub>a</sub>). The formulation of the hypothesis is as follows:

H<sub>0</sub>: Common Effect model

H<sub>a</sub>: Fixed Effect model

If the F-statistical probability value > α (with 5% significance level), then H<sub>0</sub> is accepted and H<sub>a</sub> is rejected meaning that the common effect model is better than the fixed-effect model and vice versa.

Table 2 The Result of Chow Test

Effects-Test	Statistic	d.f.	Prob.
Cross-section F	233.847622	(3,63)	0.0000
Cross-section Chi-square	179.722323	3	0.0000

Source: Output EViews 10 Student Lite Version

Based on Table 2, it can be concluded that a good estimation model for this study is the fixed effect model (FEM). Then, the F-statistic of cross-section probability value reaches 0 ≤ 0.05 which is smaller than the specified α value. Referring to the criteria for decision making, H<sub>0</sub> is rejected and H<sub>a</sub> is accepted.

**Panel Data Regression**

Table 3 The Result of Panel Data Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.24089	0.707220	17.30847	0.0000
LDR?	0.706362	0.536735	1.316036	0.1929
CAR?	-6.146865	1.595268	-3.853187	0.0003
ROA?	-1.321750	5.063901	-0.261014	0.7949
BI7DRR?	-3.170831	1.937613	-1.636463	0.1067
INFLATION?	-8.744724	1.755271	-4.981978	0.0000
Fixed Effects (Cross)				
BNL--C	-0.059355			
BR1--C	1.607193			
BTN--C	-1.769420			
MANDIRI--C	0.221582			

Source: Output EViews 10 Student Lite Version

To illustrate the estimation process, the following equation explains the panel data regression model based on table 3.

$$Ln\_Y_{it} = \beta_0 + \beta_1(LDR)_{it} + \beta_2(CAR)_{it} + \beta_3(ROA)_{it} + \beta_4(BI7DRR)_{it} + \beta_5(Inflation)_{it} + \epsilon_{it}$$

**Determination Coefficient Test (R<sup>2</sup>)**

Table 4 The Result of Effects Specification Panel Data

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.986590	Mean dependent var	11.14186
Adjusted R-squared	0.984887	S.D. dependent var	1.089148
S.E. of regression	0.133895	Akaike info criterion	-1.067050
Sum squared resid	1.129459	Schwarz criterion	-0.782467
Log likelihood	47.41380	Hannan-Quinn criter.	-0.953757
F-statistic	579.3604	Durbin-Watson stat	0.655565
Prob(F-statistic)	0.000000		

Source: Output EViews 10 Student Lite Version

The Coefficient of Determination test (R<sup>2</sup>) is to state the proportion of the overall variation of independent variable values that can be explained or caused by a linear relationship with the independent variable, while the rest is caused by other variables. Based on the regression result in table 3, the R-squared value is 0.986 (98.6%) meaning that all independent variables of the study (LDR, CAR, ROA, BI7DRR, and Inflation) can explain the dependent variable (distribution of MSME Loans) of 98.6% or close to 100% and the remaining 1.4% is explained by other variables outside this study.

**Simultaneous F-test**

The criteria for rejecting or accepting H<sub>0</sub> are based on the probability value if F-statistics < α, then H<sub>0</sub> is rejected and if the value of F-statistics > F-table, then H<sub>0</sub> is rejected. The F-table value is determined based on α with df for the numerator (k-1) and df for the denominator (n-k). This study has a total of 72 observations (n) and 5 (k) independent variables of, then it obtained df numerator (k-1) = 6-1 that is 5 and the df denominator (nk) = 72-6 that is 66. Based on 0.05 significance level, the study obtained an F-table of 2.765521.

Based on the result of the panel data regression in table 4, the F-statistic probability value is lower than the significance level of 5% (0.00 < 0.05) and higher than the F-table (579.3604 > 2.765). Therefore, it can be said that H<sub>0</sub> is rejected and H<sub>a</sub> is accepted. It can be concluded that the independent variables consisting of financial performance ratios (LDR, CAR, ROA) and macroeconomics (BI7DRR, Inflation) simultaneously or jointly affect the dependent variable of MSME Loans distribution by State-Owned Banks in the 2015-2019 period.

**Partial T-test**

The t-test would be performed if the Probability (t-statistic) value is higher than α or a significant level that has been determined (p > 0.05), then H<sub>0</sub> is accepted and H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, H<sub>4</sub>, H<sub>5</sub> are rejected, and vice versa. Based on table 3, the LDR variable has a higher probability value (t-statistic) than the significance level (0.1929 > 0.05). Thus, it can be concluded that H<sub>0</sub> is accepted and H<sub>1</sub> is rejected. It means that the LDR variable partially has no significant effect on MSME loans distribution. CAR variable has a lower probability value (t-statistic) than the significance level (0.0003 < 0.05). Thus, it can be concluded that H<sub>0</sub> is rejected and H<sub>2</sub> is accepted meaning that the CAR variable

partially has a significant negative effect on MSME loans distribution. ROA has a higher probability value (t-statistic) than the significance level ( $0.7949 > 0.05$ ). Therefore, it can be concluded that  $H_0$  is accepted and  $H_3$  is rejected meaning that the ROA variable partially has no significant effect on MSME loans distribution.

The BI7DRR variable has a higher probability value (t-statistic) than the significance level ( $0.1067 > 0.05$ ). Thus, it can be concluded that  $H_0$  is accepted and  $H_4$  is rejected meaning that the BI7DRR variable partially has no significant effect on MSME loans distribution. Inflation variable has a lower probability value (t-statistic) than the significance level ( $0.00 < 0.05$ ). Thus, it can be concluded that  $H_0$  is rejected and  $H_5$  is accepted meaning that the inflation variable partially has a significant negative effect on MSME loans distribution.

### **Effects of Liquidity Ratio (LDR) on the distribution of MSME Loans**

Based on the LDR variable coefficient result, the regression estimation indicates that if there is an increase in one unit in the LDR, the distribution of MSME loans will be 12,946. However, the partial t-test result shows that  $H_0$  is accepted and  $H_1$  is rejected. It means that LDR does not have a significant effect on MSME loans distribution by state-owned banks in the 2015-2019 period. The probability value (t-statistic) is  $0.1929 > 0.05$  which means that the LDR variable has a positive value and has no significant effect on the distribution of MSME Loans by state-owned banks in the 2015-2019 period.

The relationship value of the LDR variable tends to be positive but does not significantly affect the distribution of MSME loans. It indicates that the high liquidity of state-owned banks to third-party funds (DPK) to allocate Loans, particularly MSME Loans, has not been optimal yet because the DPK is allocated to other loans programs except MSME Loans. Generally, BTN banks have an average LDR of above 100%, prioritizing the allocation of DPK for KPR (Mortgage Loans), although they still allocate MSME Loans. This study is consistent with the results of the previous study conducted Putri and Akmalia (2016) in which LDR tends to have a positive effect on loans but it is not significant or insignificant.

### **Effect of Solvency Ratio (CAR) on MSME loans distribution**

The coefficient value of the CAR variable indicates that each CAR variable has increased by one unit, then the distribution of MSME Loans by state-owned banks reaches 6.094. Further, the estimation result of panel data regression on the t-test is the probability (t-statistic) CAR value of  $0.0003 < 0.05$  meaning that  $H_0$  is rejected and  $H_2$  is accepted. It indicates that the CAR variable has a significant negative effect on the distribution of MSME Loans by state-owned banks in the 2015-2019 period. T deals with prudence principle or regulation by Bank Indonesia in which if the CAR value increases, the bank has a lot of capital and tries to compensate by allocating funds to lower risk sectors such as large companies.

The result of this study is in line with the previous study conducted by Annisa and Mohamad (2015) in which CAR has a

significant negative effect on the number of MSME Loans of a bank due to the minimum limit set by Bank Indonesia of 8%.

### **The Influence of the Profitability Ratio (ROA) on the distribution of MSME Loans**

The ROA variable is viewed from the coefficient in which if ROA increases by one unit, the distribution of MSME loans will be 10.92. The partial t-test results show that the ROA variable does not affect the distribution of MSME Loans by state-owned banks in the 2015-2019 period. In other words,  $H_0$  is accepted and  $H_3$  is rejected with a detailed probability value (t-statistic) ROA of  $0.7949 > 0.05$ .

The result of this study is consistent with the previous study conducted Syamsurijal and Lidya (2017) in which ROA has no effect on commercial bank loans in Indonesia because banks have several other priorities for funding in addition to loans and ROA is not the only main source for funding loans.

### **Effect of BI 7-Day (Reverse) Repo Rate on the distribution of MSME Loans**

The coefficient value of the BI7DRR variable indicates that if this value rises by one unit, the distribution of MSME Loans will reach 9.07. The results of the t-test revealed that partially the BI7DRR variable does not affect the distribution of MSME loans of state-owned banks in the 2015-2019 period. Statistically,  $H_0$  is accepted and  $H_4$  is rejected because the probability value (t-statistic) of BI7DRR is  $0.1067 > 0.05$ .

It can be concluded that BI7DRR, which is one of the monetary policies of Bank Indonesia, is ineffective. The debtors and loanors ignore the development of BI7DRR's value and continue providing MSME loans. The result of this study is supported by research by Maulana and Augustina (2017) and Rabab'ah (2015) that the rise and fall of the BI Rate or reserve ratio (RR) do not affect banks to extend loans during the study period.

### **The effect of Inflation on the distribution of MSME Loans**

Based on the coefficient value of the inflation variable, there is an increase in inflation by one unit and the distribution of MSME Loans by state-owned banks in the 2015-2019 period reaches 3.48. The result of Panel data regression estimation in the partial t-test shows the probability inflation value (t-statistic) of  $0.00 < 0.05$ . Thus,  $H_0$  is rejected and  $H_5$  is accepted. It means that the Inflation variable has a significant negative effect on the distribution of MSME loans by state-owned banks in the 2015-2019 period.

The low inflation value triggers the purchasing power causing the increase of demand for selling goods and attracting the MSMEs to get capital as business or production capital. This study is consistent with the result of the previous study conducted by Siravati (2018) in which inflation has a significant negative effect on Mortgage Loans.

### The effect of finance and macroeconomic performance on MSME Loans simultaneously

The probability value (F-statistic) is 0.00 lower than the specified significant level ( $0.00 < 0.05$ ) and the F-statistic value is higher than the F-table ( $579.3604 > 2.765$ ). Thus,  $H_0$  is rejected and  $H_6$  is accepted. It can be concluded that the independent variables namely financial performance ratios (LDR, CAR, ROA) and macroeconomics (BI7DRR, Inflation) jointly or simultaneously provide a significant effect on the dependent variable, namely the distribution of MSME Loans by state-owned banks in the 2015-2019 period.

#### IV. CONCLUSION

Based on the discussion of the results of data analysis in accordance with the formulation of the research problem, it can be concluded that:

1. The bank's financial performance in carrying out its obligations can be seen from three important ratios, namely liquidity, solvency, and profitability. Partially LDR and ROA provide no significant effect on the distribution of MSME Loans. Meanwhile, CAR has a significant negative effect on the distribution of MSME Loans by state-owned banks in the 2015-2019 period.
2. The macroeconomic effect in this study consists of BI7DRR and inflation. The BI7DRR variable does not provide a significant effect on MSME Loans. However, inflation has a negative and significant effect on the distribution of MSME Loans by state-owned banks for the 2015-2019 period.

The independent variable of the bank's financial performance simultaneously has a significant effect on the distribution of MSME Loans by state-owned Banks in the 2015-2019 period.

#### V. SUGGESTION

The study provides some suggestions regarding the distribution of MSME Loans in Indonesia based on the results of the study:

1. For banking institutions, especially state-owned banks in Indonesia, to be more careful and pay attention to financial performance related to MSME Loans. It is not only banking institutions that play an important role in helping MSME loans but also the government needs to maintain the banks' performance and macroeconomic conditions to increase the economic growth in Indonesia.
2. Whereas for MSMEs that apply for MSMEs Loans (debtors), it is expected they should consider the developments of banks's performance (loansors) and the inflation rate in Indonesia.

#### REFERENCES

[1] Abuka, Charles, et al. (2019). "Monetary policy and bank lending in developing countries: Loan applications, rates, and real effects". *Journal of Development Economics*, 139, pp.185-202.

[2] Badan Pusat Statistik. (2019). ANALISIS HASIL SE 2016 LANJUTAN Potensi Peningkatan Kinerja Usaha Mikro Kecil.

[3] Badan Pusat Statistik. (2019). Produk Domestik Bruto Indonesia Menurut Pengeluaran, 2014-2018.

[4] Bank Indonesia. (2019). MSME Loans Quarterly Report.

[5] Bank Indonesia. (2019). Clarification of the BI7DRR. <https://www.bo.go.id/en/moneter/bi-7day-RR/penjelasan/Content/Default.aspx>

[6] Bank Indonesia. (2019). Inflation Report. <https://www.bi.go.id/en/moneter/inflasi/data/Default.aspx>

[7] Bank Indonesia. (2019). Data of BI 7-Days (Reverse) Repo Rate. <https://www.bo.go.id/en/moneter/bi-7day-RR/data/Content/Default.aspx>

[8] Bank Indonesia. (2019). Peraturan Bank Indonesia No. 17/11/PBI/2015 Tentang Giro Wajib Minimum Bank Umum.

[9] Bank Indonesia. (2013). Peraturan Bank Indonesia No. 15/12/PBI/2013 Tentang Kewajiban Penyediaan Modal Minimum Bank Umum.

[10] Bank Indonesia. (2012). Peraturan Bank Indonesia No. 14/22/PBI/2012 Tentang Pemberian Kredit Atau Pembiayaan Oleh Bank Umum dan Bantuan Teknis Dalam Rangka Pengembangan UMKM.

[11] Bank Indonesia. (2019). Surat Edaran Bank Indonesia Nomor 3/30/DPNP tanggal 14 Desember 2001.

[12] Boediono. (2018). *Ekonomi Makro*. Edisi 4. BPFE.YOGYAKARTA.

[13] Fahmi, Irham. (2012). *Analisis Kinerja Keuangan Panduan bagi Akademisi, Manajer, dan Investor untuk Menilai dan Menganalisis Bisnis dari Aspek Keuangan*. Alfabeta. Bandung.

[14] Fahmi, Irham. (2014). *Manajemen Perkreditan*. Alfabeta. Bandung.

[15] Ghozali, Imam, dan Ratmono, Dwi. (2017). *Analisis Multivariate dan Ekonometrika Teori, Konsep, Dan Aplikasi dengan EViews 10*. Edisi 2. Universitas Diponegoro. Semarang.

[16] Ikatan Bankir Indonesia. (2018). *Memahami Bisnis Bank*. Edisi 2. Gramedia. Jakarta.

[17] Ikatan Bankir Indonesia. (2018). *Bisnis Kredit Perbankan*. Gramedia. Jakarta.

[18] Kasmir. (2017). *Analisis Laporan Keuangan*. Cetakan 10. Rajawali Pers. Depok.

[19] Kasmir. (2017). *Bank dan Lembaga Keuangan Lainnya Edisi Revisi 2014*. Cetakan 18. Rajawali Pers. Jakarta.

[20] Kementerian BUMN Republik Indonesia. (2019). Daftar BUMN. <http://bumn.go.id/halaman/situs>

[21] Kementerian Koordinator Bidang Perekonomian Republik Indonesia. (2016). *Paket Kebijakan Ekonomi IV: Negara Hadir, Memperkuat Ekonomi Rakyat*. Jakarta.

[22] Latumaerissa, Julius R. (2011). *Bank dan Lembaga Keuangan Lain*. Salemba Empat. Jakarta.

[23] Murni, Asfia. (2013). *Ekonomika Makro*. Cetakan 3. Refika Aditama. Bandung.

[24] Natsir, M. (2014). *Ekonomi Moneter dan Kebanksentralan*. Edisi 1. Mitra Wacana Media. Jakarta.

[25] Nurlestari, Annisa, and Mahfud, M. K. (2015). "Analisis Faktor-Faktor yang Mempengaruhi Penyaluran Kredit UMKM (Studi Pada Bank Umum yang Terdaftar di Bursa Efek Indonesia Periode 2009-2013)". *Jurnal Manajemen Diponegoro*, Vol. 4, No. 4, pp. 1-12.

[26] Pandia, Frianto. (2012). *Manajemen Dana dan Kesehatan Bank*. Rineka Cipta. Jakarta.

[27] Pernyataan Standar Akuntansi Keuangan- PSAK Nomor 31 tentang Akuntansi Perbankan.

[28] Pradana, Yoga, and Sampurno, R. D. (2013). "Analisis Pengaruh LDR, CAR, ROA, dan Faktor Eksternal Perbankan Terhadap Volume KPR Pada Bank Persero Periode 2008-2012". *Jurnal Manajemen Diponegoro*, Vol. 2, No. 3, pp. 1-15.

[29] Putri, Yua Molek W., and Akmalia, Alien. (2016). "Pengaruh CAR, NPL, ROA, dan LDR Terhadap Penyaluran Kredit Pada Perbankan (Studi Pada Perusahaan Perbankan yang Listed di Bursa Efek Indonesia Periode 2011-2015)". *Balance: Economic, Business, Management, and Accounting Journal*, Vol. 13, No. 2, pp. 82-93.

[30] Rabab'ah, Mwafag. (2015). "Factors Affecting the Bank Loans: An Empirical Study on the Jordanian Commercial Banks". *International Journal of Economics and Finance*, Vol. 7, No. 5, pp. 166-178.

[31] Romli, Harsi, and Alie, Marzuki. (2017). "Diterminan Penyaluran Kredit dan Implikasinya Terhadap Kinerja Profitabilitas Bank yang

- [32] Terdaftar di Bursa Efek Indonesia Periode 2010-2014". *Jurnal Manajemen dan Bisnis Sriwijaya*, Vol. 15, No. 1, pp. 62-76.
- [33] Shokr, Mohamed A. (2019). "Real interest rate, income and bank loans: panel evidence from Egypt". *Journal of Financial Economic Policy*, Vol. 11, No. 4, pp. 1-17.
- [34] Sriyana, Jaka. (2014). *Metode Regresi Data Panel* (Ed. 1- Cet.1). EKONISIA. Yogyakarta.
- [35] Siravati, Sandi Atmaja. (2018). "Dampak Kebijakan Loan to Value dan Variabel Makroekonomi terhadap Permintaan Kredit Pemilikan Rumah". *Economic Development Analysis Journal*, Vol. 7, No. 4, pp. 404-411.
- [36] Tan, Syamsurijal, and Anggreani, Lidya. (2017). "The effect of financial performance on state-owned banks loans in Indonesia". *Jurnal Prespektif Pembiayaan dan Pembangunan Daerah*, Vol. 4, No. 4, pp. 259-270.
- [37] Taswan. (2010). *Manajemen Perbankan Konsep, Teknik, dan Aplikasi*. Ed. 2. UPP STIM YKPN YOGYAKARTA. Yogyakarta.
- [38] Undang-Undang Republik Indonesia Nomor 20 Tahun 2008 tentang Usaha Mikro, Kecil, Dan Menengah.
- [39] Yasnur, Maulana, and Kurniasih, Augustina. (2017). "Factors Affecting Bank Lending Growth: Cases in Indonesia". *International Journal of Scientific and Research Publications*, Vol. 7, No. 11, pp. 69-76.

#### AUTHORS

**First Author** – Lucia Tannya Diandra, Undergraduate, Bachelor of Management and Business, Telkom University, Indonesia.

E-mail: lucia.tannyadiandra@gmail.com

**Second Author** – Dadan Rahadian, Department of Management Business Telecommunication and Informatic, School of Economic and Business, Telkom University, Indonesia.

E-mail: dadan.rahadian@telkomuniversity.ac.id