ATLANTIS PRESS

# Determinant of SMEs Credit in Indonesia: Intern vs Extern Factor

Ali Anis[1], Hari Setia Putra[2], Yunnise Putri[3]

[1,2,3]*Universitas Negeri Padang, Padang, Indonesia*
*Corresponding author. Email: hari.putra@fe.unp.ac.id*

**ABSTRACT**

This study explored the determinant of SMEs Credit in Indonesia from 2010-2018 using the Error Correction Model. Error Correction Model aims to identify long-term and short-term relationships that occur due to cointegration between research variables. The object of research is total SMEs Credit based on type of use. Based on the Error Correction Model analysis conducted, it can be concluded that CAR has a significant negative effect on total SMEs Credit, Inflation, LDR, BI Rate, ROA has no significant effect on total SMEs Credit, and NPL has a significant positive effect. Judging from the findings obtained in this paper, it is known that the variables originating from internal factors have more influence on the total SME loans disbursed than those from external factors.

*Keywords: SMEs Credit, Non-Performing Loan, Capital Adequacy Ratio, Return on Asset, Loan to Deposit Ratio, BI Rate, Inflation*

## 1. INTRODUCTION

According to Ravik, 2007 in (Lintang, 2019) Micro, Small and Medium Enterprises (SMEs) are the largest business group in Indonesia. These SMEs have three crucial roles in the Indonesian economy. First, the number of large SMEs and covering every sector of the economy. Second, SMEs absorb large numbers of workers. Third, SMEs make a major contribution to the national income. SMEs have a very important role in economic development and defense of the nation of Indonesia. This is evident when the crisis hit the Indonesian nation since 1997, SMEs at that time referred to as Small and Medium Enterprises became a rescue valve for the nation's economic recovery because they were able to make a very significant contribution to GDP and employment, Ravik 2007 in (Lintang, 2019). Since SMEs are generally based on local economic resources and are not dependent on imports, and the results are capable of being exported because of their uniqueness, the development of MSMEs

is believed to strengthen the foundations of the national economy (Widyaresti, 2012). When the economic crisis, small and medium enterprises can hold 99.45 percent of the total workforce, or 73.24 million workers. Contribution made by small and medium enterprises (SMEs) in conditions of economic crisis can be considered as a support in the process of national economic recovery, the views of national economic growth and in increasing employment opportunities.

In 2018, SMEs absorb as much as 120.598.138 workers by donating at 14,038,598.5 billion of GDP at the prices prevailing during the year (Depkop, 2018). Reflecting on the experience at the time of the crisis in 1997 to 1998 when the Indonesian economy was saved by SMEs and its contribution to GDP and employment in Indonesia is quite large. This certainly could be a breath of fresh air for the people of Indonesia in saving economy devastated by the pandemic struck Corona Virus Disease 2019 (Covid 19) that destroyed all the economic fundamentals in

Indonesia. Utilization of these SMEs in sustaining the economy should be able to restore the condition of the Indonesian economy towards better after the pandemic ends.

Moreover, in addition to visits from the ability to accommodate the sheer number of SMEs in a lot of labor, the quantity of SMEs which many in Indonesia is also a reason why SMEs can be termed immune to the crisis. Because of the nature of SMEs are flexible, making efforts to survive the crisis. Flexible effort defined as the ability to adapt to the market conditions change rapidly compared with large-scale enterprise in general bureaucratic. This business reaction speed to any changes such as the shift in consumer tastes, trends, new products and so forth is high enough, so that these small-scale businesses more competitive. In developing the SMEs get better, of course, very necessary role of financial institutions such as banks in the capital supporting the business units in the form of credit. Currently more SMEs access to financing obtained from commercial banks than financing institutions such as cooperatives and non-bank financial institutions (Kementrian Perdagangan, 2013). Judging from banking statistics Indonesia obtained via the website Financial Services Authority, the development loan portfolio of SMEs over time generally increasing, although there were a few times the decline but, since 2011 SME loans gradually increases as shown in Figure 1 below.

**Figure 1.** Development of Smes Loans Disbursed
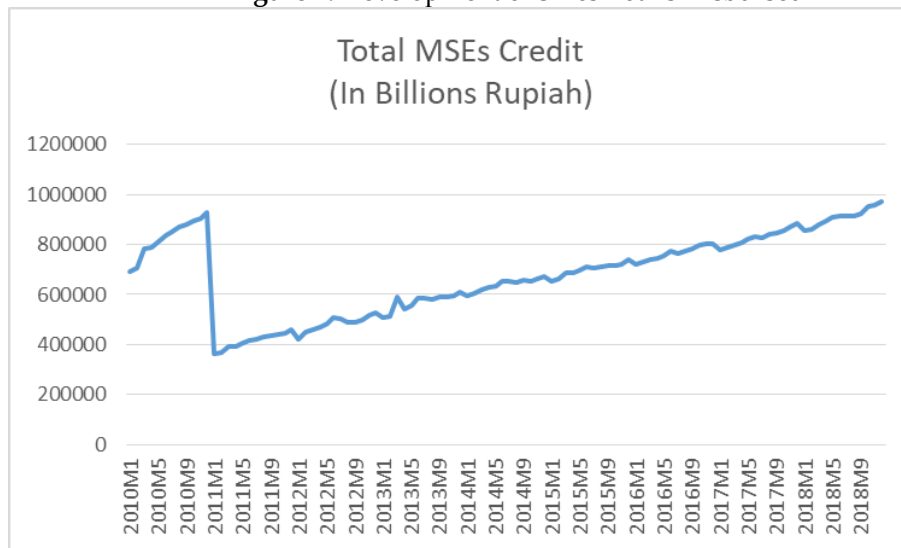


*Source: The Financial Services Authority (Processed Author, 2020)*

Although the growth of SMEs in Indonesia tends to increase, but the bank Indonesia (2016) revealed that the share of loan portfolio of micro small and medium enterprises (SMEs) are still small or not growing significantly. Portions SMEs loan portfolio in Indonesia reached 19.7 percent of total bank lending in Indonesia. This figure is still far behind other countries that have reached 35 percent, even in South Korea it has been 40 percent.

Siamat, 2005 in (RATNASARI, 2016) said that one reason for the concentration of banking business in lending is the nature of the bank as intermediary between surplus units to deficit units and the main source of bank funding comes from the public so that morally they should be channeled back to the community in the form of credit. But banking intermediation in Indonesia is still less than optimal.

According to (Panggalih, 2015) factors that affect the volume of bank lending is a Third Party

Fund (DPK), Non-performing loans (NPLs), the interest rate of Bank Indonesia Certificates (SBI), and lending rates. (Triasdini, 2010) believes that there are significant CAR (Capital Adequacy Ratio), NPL (Non-Performing Loan), and ROA (Return on Assets) against the working capital loan portfolio. Non-Performing Loan (NPL) is a ratio used to measure the amount of problem loans, including credit doubtful whether, substandard, or jammed against the total loans extended by banks. In addition, the capital adequacy issue which is very important in the banking business. Banks that have good capital adequacy show indicators as healthy banks. For capital adequacy indicates the state represented by a specific ratio called Capital Adequacy Ratio (CAR). If the value is higher then the bank's CAR is able to fund operations and contribute significantly to profitability. The high CAR showed a large well capitalized bank, the higher the amount of credit that can be distributed by banks. As well, the Loan to Deposit Ratio (LDR) is also considered to have an effect on lending. LDR is the ratio of loans with third party funds. LDR is used to determine and assess to what extent a bank has a healthy condition and in the operation or business activities. Financing the SMEs (Micro, Small and Medium Enterprises) is still a concentration of banking. It is estimated that credit to this sector continues to increase along with the still large untapped market. In addition, the low NPL SMEs sector makes these loans more attractive for banks. Banking competition, especially in the increasingly tight lending, because the pressure is mainly from the government and Bank Indonesia (BI) is not associated with the movement of the real sector, leads to a decrease loan interest rates that led to the banking income will go down. In addition to the challenge of its own banking side, the challenges of the external is still ahead.

**Figure 2.** Development of Non-Performing Loan SMEs Credit
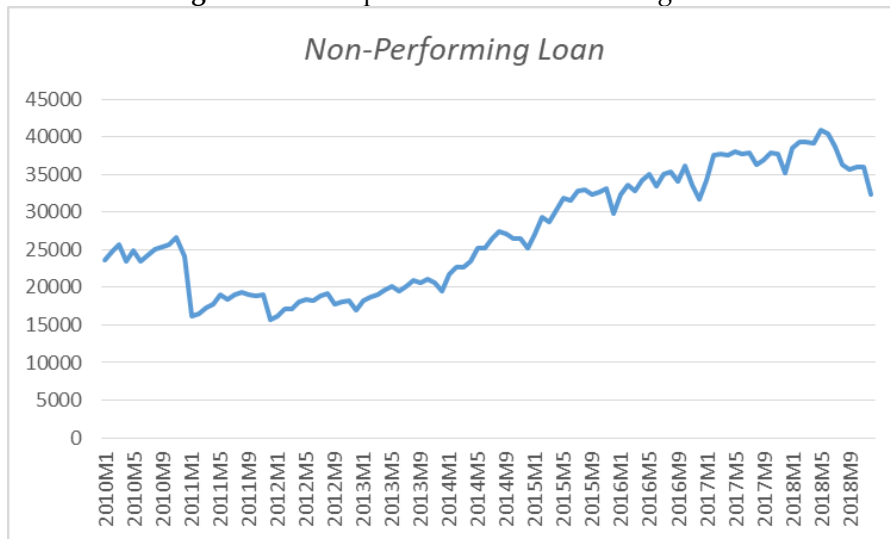


*Source: The Financial Services Authority (Processed Writer, 2020)*

This is what then made researchers interested in raising the title "Determinants of MSME Credit in Indonesia: Internal or External Factors?" so that the portion of MSME credit distribution in Indonesia can be minimized given the enormous contribution of this business to the economy. So that the results of this study will be able to provide an overview for related institutions in terms of increasing SME credit distribution in Indonesia based on determinants that influence both internal and external factors. In this study, SME credit determinants (LBD) in Indonesia are seen based on internal factors reflected by the Non-Performing Loans (LNPL), Capital

Adequacy Ratio (CAR), Return on Assets (ROA), Loan to Deposit Ratio (LDR) variables. While external factors consist of BI Rate (R) and Inflation (INF).

The relationship between variables in this study, both variables from internal factors and variables in extrnal factors are explained as follows:

Effect of Non-Performing Loan (LNPL) to total SMEs credit disbursed

Non-Performing Loan (NPL) is a ratio used to measure the bank's ability to cover the risk of failure of loan repayment by the debtor. NPL reflects the credit risk, the higher the level of NPLs, the greater the credit risk borne by the bank (Pratama, 2010). As a result of the high NPLs banks must provide greater reserves so that in the end the bank's capital will be eroded. Whereas the amount of capital greatly influences the amount of credit expansion. The magnitude of NPLs is one of the causes of the difficulty of banks in channeling loans according to Sentausa 2009 in (Pratama, 2010). A high NPL results in the non-functioning of the bank intermediary function optimally because it decreases the circulation of bank funds, thereby reducing the opportunity for banks to earn income. In other words, NPLs reduce bank profitability. The NPL also forced banks to form a number of reserves to maintain bank liquidity and solvency to protect depositors.

Effect of Capital Adequacy Ratio (CAR) to total SMEs credit disbursed

*Capital Adequacy Ratio* (CAR) is a capital ratio that shows the ability of banks to provide funds for business development needs and to accommodate the risk of loss of funds caused by bank operations. The higher the CAR, the greater the financial resources that can be used for business development needs and anticipate the potential losses caused by lending. The health of a bank will affect how the bank's ability to extend credit. If a bank is in good health, it will affect long-term credit distribution so that it will influence business actors to conduct credit demand transactions. Bank health is measured through the Capital Adequacy Ratio (CAR) indicator (Sefriawan & Curry, 2018). So that the higher the CAR from a bank, the smoother the lending it will be.

Effect of Return on Assets (ROA) to total SMEs credit disbursed

ROA is a ratio used to measure the ability of a bank to make a profit. Menurut Kusnandar, 2012 dalam (Prihartini & Dana, 2018) said the high return on assets by banks, will increase profitability so that SMEs lending will also increase, because the bank's position is in a reasonably good level of performance. The greater profits generated indicate that the bank has managed its assets effectively. Therefore, approval of loans submitted by customers will be easier given by banks because banks are already good in their ability to generate profits, so the high ROA will increase credit distribution.

Effect of *Loan to Deposit Ratio* (LDR) to total SMEs credit disbursed

*Loan to Deposit Ratio* (LDR) is the ratio used to measure the relationship between the total amount of credit given by banks to funds that can be obtained from third parties, whether in the form of savings, current accounts, and deposits. The higher LDR ratio reflects that the number of loans provided by banks is increasing, so that it will increase the amount of income for banks on the receipt of loan interest. With the higher LDR ratio, the company will get additional funds from the community which can eventually be channeled back to those in need (Barus & Lu, 2013). The higher the LDR, the lower the liquidity capability of the bank concerned so that the likelihood of a bank in problematic conditions will be even greater. A high ratio shows that banks lend all their funds or are relatively illiquid. Conversely low ratio shows a liquid bank with excess capacity of funds that are ready to lend. Therefore, this ratio can also be a sign of whether a loan can still experience expansion or vice versa is limited.

Effect of BI Rate to total SMEs credit disbursed

The implementation of the BI Rate is the monetary operations carried out by Bank Indonesia through liquidity management on the money market aimed at achieving the operational targets of monetary policy according to Siamat, 2005 in (RATNASARI, 2016). With the increase in the BI Rate, it will be followed by an increase in the interest rates of commercial banks so that the owner of the funds will tend to save their funds in the bank in the hope of getting high interest, while those who need funds will be reluctant to make loans because they consider high interest rates. Thus the demand for money decreases so that demand for credit decreases.

Effect of Inflation to total SMEs credit disbursed

Boediono, 2001 in (RATNASARI, 2016) by using the assumption of real interest rates if inflation rises, it is expected that profits will increase and credit demand will also increase, but if inflation rises due to an increase in nominal interest rates, the demand for credit will also rise. Inflation is very influential with the demand for bank credit, because inflation means it also means an increase in prices. The more the price rises, then someone will try to meet the needs, and in meeting those needs can be a way to apply for credit using the assumption of real interest rates.

Previous research was conducted by Nensy Ratna and Yoyok Soesatyo in 2013. The title of the research was "Variables that Affect Credit Distribution to SMEs by Banks in Indonesia in 2011-2015". The results of his research show partially that the inflation and BI Rate variables do not affect the distribution of SMEs credit in three groups of banks in Indonesia while economic growth, NPL, CAR and DPK affect the distribution of SMEs credit to three groups of banks in Indonesia. While together the independent variables and dependent variables influence each other.

Research conducted by Ake Lintang Samudra in 2019 entitled "Analysis of Factors Affecting SMEs Credit and Its Impact on Poverty in Indonesia" shows the positive and insignificant results of Bank Indonesia interest rates on total SMEs loans, which have been shown to have a significant effect on total SMEs credit, PDRB, NPL, number of bank branch offices and LDR have a significant positive effect on total SMEs loans and total SMEs loans have a significant negative effect on welfare in Indonesia. Ati Astuti in his 2013 study entitled "Influence of Inflation, BI Rate, Third Party Funds, Non-Performing Loans, and Capital Adequacy Ratio on Credit Distribution" (Case Study of 10 Largest Banks in Indonesia Based on Credit). The results of this study are funds and third party funds about a significant positive effect on lending. While the BI Rate, Non-Performing Loans and Capital Adequacy Ratio have a significant negative impact on lending. Among the independent variables consisting of inflation, the BI Rate, DPK, NPL and CAR, which are the most dominant influence the ability of banks in channeling loans with third party funds. The next research conducted by Irma Anindita in 2011 with the title "Analysis of the Effect of CAR, LDR, NPL and Interest Rates on MSME Credit Distribution". (Studies on commercial banks for the period 2000-2010). While LDR, NPL and interest rates with a test prove its significance. The results of a partial study with the t test, the results obtained CAR variables, NPL and interest rates were negative and significant to the distribution of SMEs credit while the LDR variable was not significant to the distribution of SMEs credit.

Yuda and Wahyu (2010) tried to conduct a study comparing the internal factors of banks to the loans extended. The results showed that DPK, ROA had a positive effect, while CAR and NPL had a negative effect. Ratnasari and Soesatyo (2015) conducted a study on "Variables that Influence Credit Distribution to SMEs by Banks in Indonesia in 2011-2015. The results of the partial research show that the Inflation and BI Rate variables do not affect the distribution of SMEs credit to three groups of banks in

Indonesia while economic growth, NPL, CAR and DPK increase towards SMEs lending.

## 2. METHODS

Data analysis in this study was carried out using the Error Correction Model (ECM) method as an econometric calculation tool and also used descriptive analysis method aimed at identifying long-term and short-term relationships that occur due to cointegration between research variables. To see the effect of independent variables on the independent variables in the long run and short run a stationarity test was performed using Augmented Dickey Fuller (ADF), long-term equation estimation, cointegration test, short-term equation estimation, ECM analysis and the classic assumption test. The data used in this study uses secondary data sourced from the official website of Bank Indonesia (BI), Badan Pusat Statistik (BPS), Otoritas Jasa Keuangan (OJK), and Kementrian Koperasi dan UKM (Kemenkop UKM) and other sites as material supporters in this study. This research is also based on some previous literacy studies on SMEs (Small and Medium Micro Enterprises) credit. The period used in this study was from 2010M1 - 2018M12. The object of research is Indonesia using time series data. The research variables used in this study are presented in tabular form as follows.
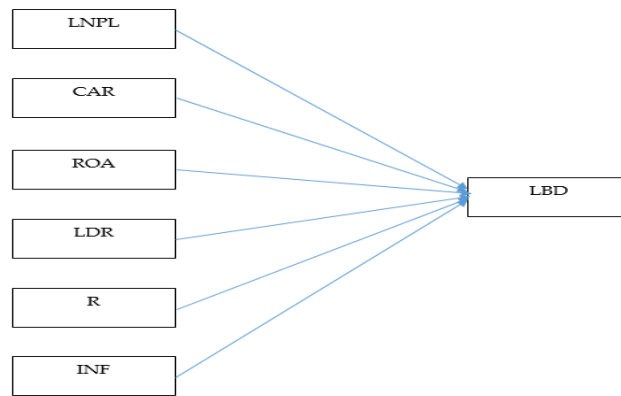


**Figure 3.** Conceptual Framework (Author's Process, 2020)

Information:
LNPL = Non Performing Loan (Internal Factor)
CAR = Capital Adequacy Ratio (Internal Factor)
ROA = Return on Assets (Internal Factors)
LDR = Loan to Deposit Ratio (Internal Factor)
R = BI Rate (External Factor)

INF = Inflation (External Factors)

$$\Delta LBD_t = b_0 + b_1\Delta CAR_t + b_2\Delta INF_t + b_3\Delta LDR_t + b_4\Delta LNPL_t + b_5\Delta R_t + b_6\Delta ROA_t + b_6 e_{t-1} + e_t$$

**Table 1.** Definition of Operational Research

| Variables | Defenition | Source | Information |
|---|---|---|---|
| Total SMEs Credit (LBD) | Total micro, small and medium credit distributed to the community. SMEs loans are given by the executing bank to the business banks to meet the financing in working capital or business capital | OJK | |

| | | | OJK | Internal Factor |
|---|---|---|---|---|
| | requirements so as to facilitate production or business. | | | |
| Non-Performing Loan (LNPL) | The ratio used to measure the ability of banks to cover the risk of failure to repay loans by debtors. NPLs reflect credit risk, the higher the level of NPL, the greater the credit risk borne by the bank. | | OJK | Internal Factor |
| Capital Adequacy Ratio (CAR) | CAR is a capital ratio that shows the ability of banks to provide funds for business development needs and to accommodate the risk of loss of funds caused by bank operations. | | OJK | Internal Factor |
| Return on Assets (ROA) | ROA is a ratio that is used to measure the ability of bank management to manage assets to generate profits (profits). The greater ROA reflects the greater the position of the fund in terms of asset use. | | OJK | Internal Factor |
| Loan to Deposit Ratio (LDR) | LDR is the ratio of the ratio of loans to third party funds. LDR is used to find out and assess how far a bank has a healthy condition in carrying out its operations or business activities. | | OJK | Internal Factor |
| BI RATE (R) | Policy rates that reflect the stance or monetary policy stance set by Bank Indonesia and announced to the public. | | BPS | External Factor |
| INFLATION (INF) | The tendency of rising prices of goods / services continuously, prices of goods and services will result in rising production costs in producing an item. | | BI | External Factor |

*Source: Author's Process, 2020*

## 3. RESULT AND DISCUSSION

Stationarity Test

Before conducting a regression with the ECM test, first the stationarity test is performed to determine whether the variables used are stationary or not. If the data is not stationary, spurious regression will be obtained, an autocorrelation phenomenon occurs and also cannot generalize the results of the regression for a different time. In addition, if the data used is stationary, OLS regression can be used, but if it is not stationary, the data needs to be seen for stationarity through the degree of integration test.

**Tabel 2.** Stationarity Test Result

| Variables | Unit Root test pada | ADF Test Statistic | Critical Values 5% | Prob.* | Information |
|---|---|---|---|---|---|
| LBD | 2ˢt Difference | -12.94994 | -2.889474 | 0.0000 | **Stationary** |
| LNPL | 2st Difference | -11.62635 | -2.892200 | 0.0000 | **Stationary** |
| CAR | 2st Difference | -8.791773 | -2.892536 | 0.0000 | **Stationary** |

| | | | | | |
|---|---|---|---|---|---|
| ROA | 2st Difference | -6.662151 | -2.892200 | 0.0000 | **Stationary** |
| LDR | 2st Difference | -8.058583 | -2.890926 | 0.0000 | **Stationary** |
| R | 2st Difference | -16.20868 | -2.889200 | 0.0000 | **Stationary** |
| INF | 2st Difference | -8.468689 | -2.890327 | 0.0000 | **Stationary** |

*Source: Author's Process, 2020*

Based on the data presented in the above table, it is known that all research variables are stationary at the 2st difference level by comparing the value of the ADF Test Statistics that is greater than the Critical Values value. Besides that, the probability of data is also smaller than the real value of 1%, 5%, 10%.

Cointegration Test

After doing stationarity test on all data in the study, cointegration test is needed to see whether the residual regression produced is stationary. Cointegration test is used to provide an initial model that has a long-term relationship (cointegration relationship). The rest must be stationary on the level.

**Table 3.** Cointegration Test Results

Null Hypothesis: ECT has a unit root

Exogenous: Constant

Lag Length: 12 (Automatic - based on SIC, maxlag=12)

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic | | -3.343220 | 0.0156 |
| Test critical values: | 1% level | -3.500669 | |
| | 5% level | -2.892200 | |
| | 10% level | -2.583192 | |

*MacKinnon (1996) one-sided p-values.
*Sources: Author's Process, 2020*

From the results of the processed data it is known that the residual (ECT) is stationary at the level of level, seen from the small probability value of the real level value of 5% (0.0156 <0.05) so that the data can be said to be cointegrated, and it can be concluded that there is a long-term balance between variables used in research.

Estimated Long-Term Equation

In the long run, the CAR variable has a significant negative effect, the Inflation variable has no significant effect, the LDR variable has no significant effect, the LNPL variable has a significant positive effect, the BI Rate variable has no significant effect and the ROA variable has a significant positive effect on the total independent variable of SMEs credit as seen in the following table.

**Table 4.** Long-term Estimated Results

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| C | -0.425576 | 1.077941 | -0.394805 | 0.6938 |
| CAR | -0.048674 | 0.011411 | -4.265449 | 0.0000 |
| INF | 0.009490 | 0.009207 | 1.030828 | 0.3051 |
| LDR | 0.001089 | 0.001012 | 1.075499 | 0.2847 |
| LNPL | 1.380409 | 0.098612 | 13.99839 | 0.0000 |
| R | -0.020828 | 0.014079 | -1.479365 | 0.1422 |
| ROA | 0.271281 | 0.075321 | 3.601666 | 0.0005 |

| | | | |
|---|---|---|---|
| R-squared | 0.829444 | Mean dependent var | 13.40213 |
| Adjusted R-squared | 0.819312 | S.D. dependent var | 0.259231 |
| S.E. of regression | 0.110192 | Akaike info criterion | -1.510560 |
| Sum squared resid | 1.226378 | Schwarz criterion | -1.336718 |
| Log likelihood | 88.57022 | Hannan-Quinn criter. | -1.440073 |
| F-statistic | 81.86329 | Durbin-Watson stat | 0.632273 |
| Prob(F-statistic) | 0.000000 | | |

*Sources: Author's Process, 2020*

Based on the data processed above, a long-term equation of the total SMEs credit can be formed:

Log (LBD) = b0 + b1 CAR + b2 INF + b3 LDR + b4 Log (LNPL) + b5 R + b6 ROA

Log (LBD) = -0.425576 -0.425576 -0.048674*CAR + 0.009490*INF + 0.001089*LDR + 1.380409*Log (NPL) - 0.020828*R + 0.271281*ROA

Based on the above equation, it is known that in the long run there are several variables that determine total credit. CAR variable has a negative and significant relationship to total SMEs credit, NPL variable has a positive and significant relationship to total SMEs credit, ROA variable has a positive and significant relationship to total SMEs credit, in addition CAR, INF, and LDR variables have no significant effect on total MSME credit. This means that when the CAR variable increases by 1 percent, the total SMEs credit (LBD) variable will decrease by 0.43 percent, when the NPL variable increases by 1 percent, the total SMEs credit (LBD) will increase by 1.38 percent then when the ROA variable increases by 1 percent then the total SMEs credit (LBD) will increase by 0.27 percent. However, increasing or decreasing the CAR, INF and LDR variables did not have a significant effect on the total SMEs credit (LBD).

**Table 5.** Estimated Error Correction Model (ECM)

Dependent Variable: D(LBD)
Method: Least Squares
Date: 05/10/20   Time: 13:27
Sample (adjusted): 2010M02 2018M12
Included observations: 107 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| C | 0.001933 | 0.006910 | 0.279721 | 0.7803 |
| D(CAR) | -0.054175 | 0.015308 | -3.538934 | 0.0006 |
| D(INF) | 0.008557 | 0.012130 | 0.705416 | 0.4822 |
| D(LDR) | 0.000354 | 0.000474 | 0.746826 | 0.4569 |
| D(LNPL) | 0.988703 | 0.115151 | 8.586125 | 0.0000 |
| D(R) | 0.006137 | 0.036063 | 0.170161 | 0.8652 |
| D(ROA) | 0.026005 | 0.056539 | 0.459950 | 0.6466 |
| ECT(-1) | -0.250672 | 0.070601 | -3.550526 | 0.0006 |
| R-squared | 0.489277 | Mean dependent var | | 0.003190 |
| Adjusted R-squared | 0.453165 | S.D. dependent var | | 0.096042 |
| S.E. of regression | 0.071021 | Akaike info criterion | | -2.379852 |
| Sum squared resid | 0.499357 | Schwarz criterion | | -2.180015 |
| Log likelihood | 135.3221 | Hannan-Quinn criter. | | -2.298841 |
| F-statistic | 13.54899 | Durbin-Watson stat | | 2.121171 |
| Prob(F-statistic) | 0.000000 | | | |

*Sources: Author's Process, 2020*

Based on the table above we get the following short-term equation:

D Log (LBD) = b0 + b1*D (CAR) + c2*D (INF) + c3*D (LDR) + c4*D Log (LNPL) + c5*D(R) + c6*D (ROA) + ECT (-1)
D Log (BD) = 0.001933 -0.054175*D CAR + 0.008557*D INF + 0.000354*D LDR + 0.988703*D Log (LNPL) + 0.006137*D R + 0.026005*D ROA - 0.250672*ECT (-1)

The results showed the value of the ECT coefficient on the model had a negative and significant relationship for the estimated total SME credit (LBD). These results indicate that in the short and long term the internal and external variables used in this study have a significant effect on the total independent variable SME credit (LBD) with an R-squared value of 48.9 percent so it can be concluded that the dependent variable which is included in the model is good enough. The ECT coefficient value of 0.250672 means that the difference between the total SME credit with a balance value of 0.250672 will be adjusted within 1 year.

Based on the test results it can be explained that the influence of the independent variables on the dependent variable is as follows:

1. Effect of Capital Adequacy Ratio (CAR) to total SMEs credit disbursed

CAR is capital for all banks and to support the operational activities of a bank and to support the possibility of losses that will occur. The estimation results using the Error Correction Model method show that CAR variables in the long term and short term have a significant negative effect on the amount of SMEs credit, which means that if there is an increase in CAR by 1 unit, the total SMEs credit will decrease. The results of this study do not prove the research conducted (RATNASARI, 2016) which found that CAR had a positive and significant relationship to the distribution of SMEs credit channeled by banks based on their groups. But the results of this study are in accordance with the study conducted (Darmawan, Wahyuni, & Atmadja, 2017) which states that CAR has a negative and significant effect on lending. Besides this research is also supported by the results of studies conducted (Pratama, 2010) which states CAR has a significant negative effect on bank credit.

In recent years, the total SMEs credit extended by banks has increased. The possibility of CAR

has a significant negative effect on total credit because when a bank gives a lot of loans to the public. It is important to remember that credit has an uncollectible risk. The greater the credit given, the risk of uncollectible loans will be even greater which can make the value of the Risk Weighted Assets (RWA) increase. When the RWA value is high, the divider value in the CAR ratio will be higher so that the bank's CAR value can decrease (small). Conversely, if the CAR is high it can indicate that the RWA is low. So a low RWA position indicates that the bank is not giving much credit to the public so that credit is low.

**2.** Effect of INF (Inflation) to total SMEs credit disbursed

Estimation results show that inflation in the long term and short term has a positive but not significant relationship, meaning that rising inflation does not have a significant effect on total SMEs credit. This finding might be due to the very high capital requirements of business actors who are in dire need of capital for business so that even though inflation is high, business actors will still apply for loans from banks. And when viewed from the data that exists between inflation and the number of SMEs credit channeled by Indonesian banks shows that data is out of sync because inflation tends to fluctuate while total SMEs credit tend to increase. The results of this study are in line with the research conducted (Sari & Abundanti, 2016), (Tomak, 2013), (Al-Kilani & Kaddumi, 2015) but different from the research conducted (Lintang, 2019) who found inflation to have a significant negative effect on total SMEs credit.

**3.** Effect LDR (*Loan to Deposit Ratio*) to total SMEs credit disbursed

The results showed the LDR has a positive but not significant relationship to the total SMEs credit in the short and long term in line with the research (Putri & Akmalia, 2016). This shows that the influence of LDR is not so significant to the total SMEs credit. This condition reflects that banks are not efficient in maximizing income

from funds lent to the public. This can be caused by the number of loans that have failed so that adds to the burden on banks. This research is not in accordance with the study conducted by (Lintang, 2019) who find LDR has a positive and significant relationship to total credit.

**4.** Effect LNPL (*Non-Performing Loan*) to total SMEs credit disbursed

The LNPL variable in the long term and in the short term has a significant and positive effect on the total SMEs credit. The results of this study indicate that the greater the value of NPLs, the greater the total SMEs credit in Indonesia. This might occur because a large NPL indicates a large demand for SMEs credit as well. This is not in accordance with the theory of banking intermediation which states that an increase in NPLs can reduce profits and cause banks to tighten lending in a region. NPL is an indicator of credit risk, the higher the NPL, it will reduce SMEs credit distribution because banks do not want adverse risk. Therefore, banks will reduce the amount of lending to avoid the risk of non-performing loans. However, the demand for SMEs credit that is so large from business actors is the reason why NPLs have a significant positive effect on total SMEs credit. The results of this study are in accordance with theoretical models as well as previous studies conducted by (Pratama, 2010) dan (RATNASARI, 2016) which explains that NPLs affect the total SMEs credit. According to (Pratama, 2010) high NPLs will increase risk premiums which have an impact on high lending rates but different results are found instead (Febrianto & Muid, 2013) which said that NPL did not have a significant effect on lending.

**5.** Effect R (BI *Rate)* to total SMEs credit disbursed

Estimation results show that the BI Rate variable in the long term and short term has a positive but not significant relationship to the distribution of SMEs credit distributed by banks based on their groups. The results of this study are consistent with the study listed in the Policy Brief (2013) published in the study

(RATNASARI, 2016), which states the BI Rate has no effect on lending and research conducted by (Lintang, 2019). Due to the fact that applies to several banks in Indonesia, the reduction in the BI Rate caused by a decrease in the inflation rate in Indonesia is not followed by a decrease in loan interest rates. Plus, the government is now starting to take part in determining the amount of credit interest rates, especially SMEs credit.

**6.** Effect ROA (*Return on Investment*) to total SMEs credit disbursed

Based on the estimation results, Return on Assets (ROA) has a positive and significant relationship to total SMEs credit in the short term but has no influence in the long term, meaning that in the long run the increase in ROA is not always accompanied by an increase in lending due to ROA fluctuations that occur so small that it cannot compensate for the increase in lending. The ups and downs in profit of a bank are closely related to the capital owned by the bank which will be used to make profits, one of which is by channeling credit, while the amount of capital of a bank can be reduced because the income earned by banks in the form of profits is used to cover the risk of problem loans, distributing dividends to holders shares and can also be used to make investments by placing funds in SBIs with fairly competitive returns and risk free. The results of this study are consistent with research conducted by (Oktaviani & Pangestuti, 2012), (Widiyanti, Mariso, & Sjahruddin, 2014), (Selviana & Khairunnisa, 2015) which states ROA has a positive and not significant effect on total credit but (Daelawati, 2013) found that ROA had a positive and significant effect.

## 4. CONCLUSION

Based on the results of research conducted, it can be concluded that in the long term or in the short term the internal variable Capital Adequacy Ratio (CAR) has a negative effect on the total SMEs credit, the Non-Performing Loan variable (LNPL) has a significant positive effect on the total SMEs credit, but differs from ROA variable which has a significant positive effect in the short term but not in the long term. The rest of the Loan to Deposit Ratio (LDR), BI Rate and Inflation have no significant effect on the total SME credit. Judging from the findings obtained in this paper, it is known that the variables originating from internal factors have more influence on the total SME loans disbursed than those from external factors.

The results of this study are expected to be able to provide input to authorized institutions to be able to maximize the distribution of MSME loans given the importance of the role of these business units in the Indonesian economy especially when the COVID-19 type of corona virus epidemic is sweeping the world today. With the characteristics of SMEs that are more flexible compared to large industries, the authors believe that SMEs are able to revive the twisted economy of Indonesia as happened after the 1997-1998 monetary crisis in Indonesia before. And the authors are very hopeful to the government to allocate more funds to finance the Micro, Small and Medium Enterprises Unit (SMEs) sector because of the importance of this business sector as the motor of the country's economy.

## REFERENCES

Al-Kilani, Q. A., & Kaddumi, T. A. (2015). Cyclicality of Lending Behavior by Banking Sector for the Period (2000-2013): Evidence from Jordan. *International Journal of Economics and Finance*, *7*(4), 57–65. https://doi.org/10.5539/ijef.v7n4p57

Barus, A. C., & Lu, M. (2013). Pengaruh Spread Tingkat Suku Bunga dan Rasio Keuangan Terhadap Penyaluran Kredit UMKM Pada Bank Umum di Indonesia. *Jurnal Wira Ekonomi Mikroskil*, *3*(1), 11–20. https://doi.org/10.1017/CBO9781107415324.004

Daelawati, M. (2013). *Analisis pengaruh roa, car, npl dan ldr terhadap perkembangan kredit perbankan*.

Darmawan, G. A. S., Wahyuni, M. A., & Atmadja,

A. T. (2017). Pengaruh Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Produk Domestik Bruto (PDB), dan Return on Asset (ROA) terhadap Penyaluran Kredit Perbankan (Studi Empiris pada Perusahaan Perbankan yang Terdaftar di BEI Periode 2013 - 2015. *S1 Ak Universitas Pendidikan Ganesha*, *Volume 1*(2).

Depkop. (2018). Perkembangan Data Usaha Mikro , Kecil , Menengah Dan Usaha Besar. *Www.Depkop.Go.Id*, *2000*(1), 1.

Febrianto, D., & Muid, D. (2013). *ANALISIS PENGARUH DANA PIHAK KETIGA, LDR, NPL, CAR, ROA, DAN BOPO TERHADAP JUMLAH PENYALURAN KREDIT (Studi pada Bank Umum yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2009-2012). 2*(4), 259–269.

Kementrian Perdagangan. (2013). Analisis Peran Lembaga Pembiayaan Dalam Pengembangan UMKM. *Pusat Kebijakan Perdagangan Dalam Negeri*, 90.

Lintang, A. S. (2019). *INDONESIA*.

Oktaviani, & Pangestuti, I. R. D. (2012). Pengaruh DPK, ROA, CAR, NPL dan Jumlah SBI terhadap Penyaluran Kredit Perbankan (Studi pada Bank Umum Go Public di Indonesia Periode 2008-2011). *Diponegoro Journal of Management*, *1*(2), 430–438.

Panggalih, D. N. C. (2015). *Analisis Pengaruh Dana Pihak Ketiga ( Dpk ), Non Performing Loan ( Npl ), Suku Bunga Sertifikat Bank Indonesia ( Sbi ), Dan Suku Bunga Kur Terhadap Penyaluran*.

Pratama, B. A. (2010). *ANALISIS FAKTOR - FAKTOR YANG MEMPENGARUHI KEBIJAKAN PENYALURAN KREDIT PERBANKAN (Studi pada Bank Umum di Indonesia Periode Tahun 2005 - 2009). 19*(2), 135–148. https://doi.org/10.14710/jbs.19.2.135-148

Prihartini, S., & Dana, I. M. (2018). PENGARUH CAR, NPL, DAN ROA TERHADAP PENYALURAN KREDIT USAHA RAKYAT (Studi Kasus pada PT Bank Rakyat Indonesia Tbk). *E-Jurnal Manajemen Universitas Udayana*, *7*(3), 1168. https://doi.org/10.24843/ejmunud.2018.v7.i03.p02

Putri, Y. M. W. &, & Akmalia, A. (2016). Pengaruh CAR, NPL, ROA dan LDR Terhadap Penyaluran Kredit Pada Perbankan. *Journal Balance*, *XIII*(2).

RATNASARI, N. (2016). Variabel - Variabel Yang Mempengaruhi Penyaluran Kredit Kepada Umkm Oleh Perbankan Di Indonesia Tahun 2011-2015. *Jurnal Pendidikan Ekonomi (JUPE)*, *4*(3), 1–10.

Sari, N., & Abundanti, N. (2016). Pengaruh Dpk, Roa, Inflasi Dan Suku Bunga Sbi Terhadap Penyaluran Kredit Pada Bank Umum. *E-Jurnal Manajemen Universitas Udayana*, *5*(11), 254484.

Sefriawan, M. R. A., & Curry, K. (2018). Analisis Pengaruh Spread Tingkat Suku Bunga, Ldr, Dan Car Terhadap Penyaluran Kredit Umkm Pada Bank Buku 4 Periode 2015-2017. *Seminar Nasional Cendekiawan*, *2*(2), 110–117.

Selviana, S. F., & Khairunnisa. (2015). Pengaruh Non Performing Loan (NPL) Dan Return On Assets (ROA) Terhadap Penyaluran Kredir Perbankan (Studi Pada Bank Go Public Yang Terdaftar Di BEI). *E-Proceeding of Management*, *2*(3), 3345–3350.

Tomak, S. (2013). *DETERMİNANTS ofCommercïalEvïdence From Turkey*. 933–943.

Triasdini, H. (2010). Pengaruh CAR, NPL, dan ROA terhadap Penyaluran Kredit Modal Kerja (Studi Pada Bank Umum yang Terdaftar di Bursa Efek Indonesia Periode 2004 - 2009). *Jurnal Ekonomi Dan Keuangan*, *4*(3), 130–135. Retrieved from http://eprints.undip.ac.id/23074/

Widiyanti, Mariso, M., & Sjahruddin. (2014). Pengaruh CAR, ROA, NPL, BOPO dan DPK terhadap Penyaluran Kredit UMKM di Indonesia (Studi pada Bank Umum yang Terdaftar di BEI Periode 2010-2012. *Jom Fekon*,

*1*(2), 1–15.

Widyaresti, E. pradipta. (2012). *Analisis Peran Bri Unit Ketandan Dalam Pemberian Kredit Usaha Rakyat* (Vol. 1).