

# The Influence of Interest Rate of Indonesian Central Bank Certificate and Non Performing Loan to Investment Loans in SME'S in Indonesia

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## The Influence of Interest Rate of Indonesian Central Bank Certificate and Non Performing Loan to Investment Loans in SME'S in Indonesia

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### Abstract

This study aimed to obtain information and knowledge based on data and facts from the effect of SBI interest rate and non-performing loans to investment-lending in SMEs in Indonesia. The method used is a form of time series from the years 2011-2015 using quantitative methods with descriptive analysis. This data is presented every year on a monthly basis obtained from the website of Bank Indonesia ([bi.go.id](http://bi.go.id)). This study uses the data time series regression model with Cochrane-Orcutt correction techniques. Based on the analysis of simultaneous, SBI interest rate and NPL have the significant effect on SME investment lending. Based on the results of a partial analysis, the SBI interest rate has no effect on investment lending SME and Non-Performing Loans have a significant negative effect on investment lending to the SMEs. The Variations influence of two independent variables can be determined based on the R2 value of 0.991465 which indicates that 99% of the variation in the SME loan portfolio was affected by the SBI interest rate and the NPL and the rest influenced by other factors outside the research method.

**Keywords:** SME investment loans, SBI interest rate, Non Performing Loan

### Introduction

Indonesia is one of the developing countries in the world. With a population of two hundred and fifty million people causing various problems arising from the uneven distribution of development, especially in areas far from the central government. Starting from health problems, welfare, poverty, unemployment, inequality, income distribution, to urbanization with all its effects. To reduce the negative impact of this chain needs a real effort from the government. Efforts that can be done one of them by developing SMEs (Saparuddin, 2011).

The on-going economic community of ASEAN (MEA) is the perpetrators of MSMEs can expand the marketing area to abroad and can grow opportunities for foreign investors who will fund SMEs in Indonesia. However, the biggest challenge is the competitiveness of SMEs with imported products that are free entry. For that required skill and application of technology and capital in business development (Bado et al., 2011).

SME's are essentially in the works, the types of micro and small businesses are still classified as labor-intensive enterprises. Conversely, medium and large enterprises are classified into businesses that require capital is relatively high compared to labor capital. But still, micro, small, medium, and large businesses require business capital to start. For that needed capital assistance in the form of working capital credit and investment credit to develop SME's.

Table 1: Number of SME's Business Units

Business unit	2014	2015	2016
Micro Enterprises	54.559.969	55534.592	57.189.393
Small Business	602.195	629.418	654222
Medium Enterprises	44.280	48997	52106
Total (business unit)	55.206.444	56.534592	57.895.721

Source: Ministry of Cooperatives and SME's data centers

The number of SME's units scattered throughout Indonesia seen from table 1. The table shows that SME's increasingly experienced an increase in the number of units the number of units that originally only 55 million units in 2014 increased to 57 million in 2016. The increase of the SME's unit is not far from the capital assistance, while the SME's sector gets capital assistance from both domestic and overseas.

Out of 57.9 million units of SME's business in Indonesia, only 39.18%, or about 22.15 million business units have access to capital from banks. This is because the requirements are too heavy. According to the chairman of *Himpunan Pengusaha Putera Indonesia (HIPPI)*, one of the conditions that incriminating that is about the length of business that has been executed by the debtor is usually the bank wants to distribute the credit if the business has been running for 2 years and the grant given must be equal to the amount of loan proposed while domestic capital assistance is usually in the form of credit and subsidies from the government. Loans disbursed by banks based on usage are divided into three categories, namely working capital loans, investment loans, and consumer loans. The most disbursed loans are working capital credit at SME's, while investment credit is still low compared to working capital loan.

Banking institutions are as one of the parties in charge of raising funds from the community and have a responsibility to provide credit for parties that require especially for the SME's sector. With the issuance of Law No. 1 the year 2016 on guarantees for SME's, this law provides an easy access to financing from banks and non-banking institutions. However, it is also necessary to determine the internal and external conditions of banks in order to channel their funds.

One of the internal factors of banking that can affect the distribution of credit is Non-Performing Loan (NPL). NPL's are used to measure the ability of banks to reduce the risk of default on credit repayments by debtors. NPL reflect credit risk, the higher the NPL level, the greater the credit risk borne by the bank. Due to the high NPL banks must provide greater reserves, so that in the end bank capital eroded. Whereas the amount of capital greatly influences the extent of credit expansion. The magnitude of the NPL is one of the reasons for the difficulty of banks in lending (Agustiningrum:2011) and (Zulfikar:2014).

A sum of SME's credit with NPL value. The increase in the number of SME's loans nationally followed by an increase in NPL. In 2011, the number of SME's loans was 17.443.3 billion rupiah with a value of 3,63%. The next year the value of credit increased by 18.766.7 billion rupiahs but the percentage of NPL decreased, this indicates that the risk of default by SME's decreased so that banks consider this as an opportunity to earn greater profits by increasing the credit to be disbursed in the next year. Seeing a golden opportunity that banks continue to raise its lending to the SME's by 2015. In 2013, the number of lending increased to 21448.1 billion rupiahs followed by a decrease in the percentage of NPL by 3.35%. The more enterprising the banks channel their funds to SME's, by 2014 the increase in loans disbursed by 10000 billion rupiahs from the previous year, but the level of credit risk rose to 4.1%. This is considered a lack of credit management undertaken by banks (Ministry SME's: 2016).

Another internal factor is the capital adequacy ratio (CAR). CAR is an indicator of the bank's ability to cover its decline in assets effect from loss - loss bank that caused by assets that risky. Nonperforming loans can also be affected by CAR. If that CAR owned by a bank decreased, resulting in decreased ability of banks in lending because banks can lose the ability to generate an optimum profit from its core activities. External factors need to be considered for banks such as Bank Indonesia Certificates and third-party funds (Defri, 2012) and (Shaw, Chang, & Chen, 2013).

The existence of banks that have 2 operational tasks, namely the task of collecting funds from the community and the task of allocating these funds so that the bank gets a profit. In relation to the first task, banks should be able to attract people to save their funds. Funds collected from the community are the largest source of funds most relied upon by banks (80% - 90% of all funds managed by banks). The funds received are third-party funds. Therefore, the greater the Third Party Fund received, the more increasing the role of banks in channeling funds to parties who lack the funds in the form of credit provision. The majority of SME's in Indonesia source of financing coming from bank credit. So that the credit is expected to increase the number of SME's (Defri:2012).

Bank Indonesia Certificate (SBI) is a mechanism used by Bank Indonesia to control the stability of the rupiah. Bank Indonesia may sell SBIs in order to absorb the excess base money that has been realized. Also has its own role in the

provision of credit to be done. The interest rate on SBI sales is determined through the auction system. In addition, SBI is considered the safest instrument to place funds for commercial banks because it has a low-risk level. The high SBI interest rate prompted banks to choose to save their funds by buying the securities rather than having to channel their funds through credit.

At the beginning of the year, the SBI rate is 6.93%. However, the next month until July SBI rate fell to 6.65%. However, an Agustus until the SBI rate rose to 7.10%. The high SBI rate attracts banks to prefer to put their funds in this security.

The research problem is:

- 1) Is there any influence of the interest rate on the Investment Credit of SME's sector Investment sector In Indonesia?
- 2) Is there any effect of Non-Performing Loan to SME's sector investments in Indonesia?

### **Literature Review**

The Bank serves as an intermediary between the excess funds and the underfunded party. Bank deposits at most raise funds in the form of third-party funds. Third party funds that have been collected will be channeled back to the parties in need through lending. This credit distribution can be interpreted as a money supply which the bank gives to the underground community. The money supply made by the bank is affected by the demand for money made by the debtor. The larger the portion of fundraising in short-term liabilities, the greater the need for funds to meet the needs of liquidity.

Referring to the anticipated loan theory (Prochnow, 1949), this theory explains that each bank should be able to provide long-term credit with a repayment schedule that has been determined. This repayment schedule or installment will provide a source of liquidity to the bank. The trigger of anticipated loan theory is due to low demand for bank loans to banks during economic depression resulting in excess liquidity, on the other hand, bank profitability is very low during the depression.

The use of Anticipated income theory has encouraged banks to become more aggressive lenders by creating installment loans with longer maturities. These loans are for example investment credit, business credit, property loan and so on with the longer due date. An anticipated income theory is an alternative to earning theories of credit and shift ability assets (Edmonds, 2006).

With a large amount of credit disbursed to the community and when the maturity of these funds serve as a tool for bank liquidity. When the credit channeled increases, then the securities investment is reduced. This means that when long-term demand for public credit weakens, banks will place on short-term securities investments so that long-term credit distribution will weaken.

### **None Performing Loans and Lending Investment**

(Love and Turk-Ariss:2014) in Awatef Louhichi and Younes Boujelbene: " credit growth is positively related to credit risk. That is rapid loan growth is negatively affected by adverse-selection which reduces the bank's asset quality ".

(Ogawa:2008) in Kentaro Imai mentions that: "Utilizes microdata and indicates that banks' non-performing loan ratios negatively affect lending attitudes toward their clients, SMEs and subsequently the rate of change in fixed tangible assets of their SMEs"

(Khemraj and Pasha:2009) in Awatef Louhichi and Younes Boujelbene: "admitted that rapid credit growth is often associated with NPLs. However, when Investigating Guyanese banking sector, they found that NPLs is negatively related to credit growth. "(Recognizes that rapid credit growth is often associated with high NPL. However, the results of an investigation into the bank Guyanese, it was found that the NPL is negatively related to growth credit.

(Melitz and Pardue:1973) in Binangkit formulated the credit supply model of the banking system as follows:

$$SK = g(S, ic, ib, D)$$

Where:

- SK = total credit offered by the bank
- S = constraints faced by the bank
- ic = interest rate of bank credit
- ib = opportunity costs lend money
- BD = the cost of bank deposits

Factors affecting the second credit offer is bank interest rate (ic), if the bank lending rate is higher then the bank will increase the amount of credit because the bank wants a big profit. The third factor is the opportunity cost (ib), the main source of bank income is from lending, but the business also has a big risk. The Bank may gain other benefits from investing in securities with consideration of the opportunity cost. The investment can be in the form of Bank Indonesia Certificates (SBI) which have the low-risk level. The Bank will consider the interest rate and risk obtained if the SBI gives a high-interest rate, and the credit is considered to provide high NPLs, then banks will tend to choose to channel more funds to be invested in SBIs than credit. So that can be expressed in the relation of function as follows:  $K_s = f(\text{the business prospect of a debtor, condition of the banking itself})$   $KS = f(\text{SBI, NPL})$

### Data and Proxy Measures

This research is carried out by using data in the form of time series and monthly data from 2011 to 2015. This study was conducted in January-June 2016 because it is an effective time for researchers to conduct research so that researchers can focus on the time of research and limitations of researchers in time, energy, and materials. The data used in this study is secondary data that are quantitative, where data has been available in the form of numbers. While the data used in this study, including monthly data coincide based on time series obtained from Bank Indonesia (BI), Central Bureau of Statistics (BPS), and Ministry of Cooperatives and SME's.

### Methodology

In this study, there are three variables that become the object of research where the investment credit sector SME's sector is the dependent variable (Y). While the independent variable is the interest rate of SBI (X1) and Non-level Performing Loan (X2).

The quantitative analysis technique that is done is doubled linear regression. However, it can be returned to the linear model when the natural logarithm model is taken (ln). The researchers formulated the regression equation model as follows:

$$\text{Credit} = \alpha + \beta_1 \text{SBI} + \beta_2 \text{NPL} + e$$

Where:

- Credit = Investment credit channeling
- SBI = Interest Rate of SBI
- NPL = Non-Performing Loan
- a = Constants
- b = coefficient regression
- e = failure factor statistics

### Empirical Results

This research used regression analysis of panel data and processed using Eviews 8.0 program. The advantages of this program are its ability to process time series data becomes easier, researchers have done so the researchers decided to use the time series regression equation in this study. Results of data processing with the program are as follows:

### Equation Regression

From the results of the regression equation with Cochrane-Orcutt correction technique, it yields multiple linear regression estimations with the following:

**Table 2: Results of Multiple Regression Estimation  
 (Cochrane-Orcutt Model)**

Variable	Model Cochrane-Orcutt		
	Coeff.	t-Statistic	Prob.
C	33.41002	62.00200	0.0000
SBI_Rate	0.017171	1.335312	0.1873
NPL	-0.051281	-3.195628	0.0023
AR (1)	0.979382	75.65430	0.0000
R <sup>2</sup>	-	-	0.991465
R <sup>2</sup> -adj	-	-	0.990999
F	2129.587	-	0.0000
DW	-	-	2.019601

Based on the results table regression estimation summary output Eviews 8.0 coefficient value is 33.41002, while the slope coefficient for the SBI rate is 0.02 and Non-Performing Loan (NPL) of -0.051281. From the coefficients can be assumed regression equation as follows:

$$\text{CREDIT} = 33.41 + 0.02 \text{ SBI} - 0.051 \text{ NPL} + [\text{AR} (1) = 0.979381708858] + e$$

From the results of multiple linear regression estimations, it can be explained things as follows:

- 1) The regression coefficient of the SBI rate variable (SBI\_rate) of 0.02 indicates that each addition of one percent in the SBI\_rate variable will provide an additional score of 0.02 on the investment credit lending in the SME's sector. Based on the regression coefficient test result, SBI interest rate variable does not affect investment credit in the SME sector because of t- statistic value <t- table(1.335312 <1.671). But the results are not significant states, is visible from SBI\_rate variable probability value of 0.1873 which is greater than a predetermined critical value is 0, 05 (0.1873> 0.05). The regression model tested shows positive coefficient, which means there is no positive influence of SBI\_rate variable but the result is not significant.
  
- 2) The regression coefficient of Non-Performing Loan variable of 0.05 states that each addition of one percent in the NPL variable will give the addition of a score of 0.05 on the lending of investment in SME's sector. Based on the regression coefficient test result, SBI interest rate variable affects investment credit in SME's sector because t- statistic > t- table (3.195628> 1.671). Results in significant states are seen from the value of the variable probability NPLs amounting to 0.0023 which is smaller than a predetermined critical value is 0, 05 (0.0023 <0.05). The regression model tested shows a negative coefficient, which means there is a significant negative influence of the variable NPL.

The t-test is used to know the significance of each independent variable influence on the dependent variable. This test is done by comparing between t arithmetic and t<sub>table</sub>.

**Table 3: Test Result t**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SBI_RATE	0.017171	0.012859	1.335312	0.1873
NPL	-0.051281	0.016047	-3.195628	0.0023
C	33.41	0.54	62.00200	0.0000
AR (1)	0.979382	0.012945	75.65430	0.0000

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