

## The Influence of The Interest Rate (BI Rate) and Non Performing Loan (NPL) To The Distribution of Banking Credit in Bengkulu Province in The Years 2013-2015

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### Abstract

Banks collect funds from the public in the form of deposits and are distributed back in the form of credit to companies and individuals. This study is aimed to determine the effect of the BI Rate and Non-Performing Loans (NPL) to the capital loan in Bengkulu province in the years 2013-2015. Before doing the multiple regression analysis, the data should be free from the classical assumption. The empirical results of this partial analysis show that the variable BI Rate  $t_{count}(2.402) > t_{table}(2,228)$ , this means that the BI Rate has a positive effect on bank lending in the province of Bengkulu. Variable Non performing loans (NPL)  $t_{count}(2.531) > t_{table}(2,228)$  and  $sig.(0,037) < \alpha(0.05)$ , the variable Non-Performing Loan (NPL) revealed a positive and significant effect on bank lending in the province of Bengkulu. Simultaneously the variable BI Rate and Non-Performing Loans (NPL) have the values of  $F(11.336) > F_{table}(4.96)$  with  $sig(0.003) < \alpha(0.05)$ , it means that the variable BI Rate and Non-Performing Loan (NPL) simultaneously / concurrently affect the dependent variable. The result also shows the ability of a model prediction of 65.3% while the remaining 34.7% are influenced by other factors outside the model that has not been included in the study. Meanwhile the most dominant variable in the study is the variable BI Rate which has a value of the partial coefficient of 62.5%.

**JEL Classification:** E43, E52, E58

**Keywords:** BI Rate, Capital Loan, Non-Performing Loans

### 1. INTRODUCTION

The banking industry is an important part in the economy considering its role as a financial intermediary that unite the party which need funds with the party that has an excess of funds. Other than that it also has a role in accelerating payment traffic. Banks gather funds from the people in the form of deposit and distributed in the form of credit to companies and individuals.

Banks in their function as an intermediary institution has an important role in supporting the economic growth of a Country through national income. The accumulation of funds from the people and the distribution of the funds in the economic sector will be able to encourage the movement of the business world to be able to influence national income. Through the credit policy, banks have an important role in the equalization of the people's income. The people that have limited resources are able to use the banking credit facility to finance production

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factors so they are able to accelerate their economic activities and produce income. Therefore, through the banking system mechanism and the right credit policy, banks are able to perform their functions to help the government in equalizing the chance of business and the income of the people.

The position of banking as an intermediary institution makes it possible to be able to divide financial allocation that it owns in corresponding with the parties that need it. Because of that it is expected that banking is able to distribute credit to groups that are considered worthy and able to use the funds in the productive business sector. (Fahmi and Lavianti, 2010: 38)

The banking sector always follows the economic development in a country. The largest influence in change is primarily from external factors which is the presence of a real sector in economic growth, the development of society, politics and democracy and influence from the international world. In the banking sector present in Indonesia there is an internal factor that is able to change the banking condition directly, but the change will be greater if there is pressure from external change (Arthesa, 2004:42).

For a country, banks are able to be said as the economic blood of a country. Because of that the role of banking has a large influence on the economic activities of a country. In other words, the development of a bank in a Country is also able to become a measure of development in the country. In developed countries the banking sector has a large enough role which means the people and the government needs this banking sector more and more (Kasmir, 2012:7).

The Indonesian government begins to establish several regulations in the monetary field that has a purpose to suppress the rate of rupiah depreciation. One of the policies which is applied by the government as of today is to increase the Interest Rate (BI Rate). The increase in the interest rate is very much expected to be able to add national income funds which will also affect the increase of rupiah demands so the rupiah experiences a strengthening to foreign currency from other countries.

From the side of banking, the Interest Rate (BI Rate) increase also impacts from the side of the fund management and fund allocation (credit). The increase of the Interest Rate (BI Rate) is able to cause the increase of depositor customers which save their money in the bank. Yet, from another side, the interest rate increase will automatically increase the bank credit interest rate. This is able to cause customers to be uninterested to implement credit transactions to the banking side. A decrease in the number of customers and credit transactions is able to decrease the bank's profit.

The bank is aware that some of the credit funds that they have are from the saving funds of customers that are trusted to be managed, so those funds have to be distributed back so the bank obtains profit. Because of that, the bank management has to apply a principle of being careful in every activity which one of them is distributing credit. Because being slightly negligent in implementing its role will decrease profit and even able to ruin the survival of the bank itself. This risk is reflected with the Non Performing Loan (NPL) ratio. Banks that experience

conditions of credit problems causes the healthy operational image of the bank to decrease in the eyes of the people, the banking world, and the central bank (Sutojo, 2008:185). The effort which is implemented by most large public banks for decreasing the above credit risk is by allocating a certain percentage from their productive deposit assets to become a reserve for eliminating credit. (Sutojo, 2008: 213)

The better banks play roles as intermediary institutions, the economic development of a country will grow more rapidly. If this credit distribution activity succeeds well the interest income and credit provision are the bank's largest operational income which will increase profit (Kuncoro and Suhardjono, 2011:206).

Observing the condition above, the writer feels interested to analyze whatever factors that influence bank credit distribution in corresponding with its role as an intermediary institution between the government and the people. So the writer created the research title of "The Influence of the Interest Rate (BI Rate) And Non-Performing Loan (NPL) To The Distribution Of Banking Credit In Bengkulu Province In The Years 2013-2015"

## **2. LITERATURE REVIEW**

### **Credit Distribution**

Credit is a right to accept payment or the obligation to implement payment in a future time as a cause of the handover of a good now (Suyatno and co: 1990). While according to Susilo and co. (2000). Credit is the provision of money or invoice based on the loaning agreement or detail between banks with other parties which obligate the loaning party to pay off their obligation after a certain time period.

According to Hasibuan (2008), so that the operational activities of banks are able to operate smoothly hence credit, as one of the banking products, has to be programmed well. The activity of distributing credit is based on several aspects, among others:

1. Juridical, which is the providing of credit to customers has to correspond with banking acts and Bank Indonesia regulations.
2. Economic, which is determining the profitability that is desired to be reached and the expected level of credit interest.
3. Prudence, which is the amount of credit limit (Legal Lending Limit) that is provided to customers.
4. Wisdom, is the guide which is comprehensive neither orally nor written which gives a general limit from the place where the management action will be implemented

In implementing the appraisal of credit, credit officials generally use the principles of credit appraisal called the 5C. According to Kasmir (2008: 108-111) the analysis with the 5c are as the following:

a. Character

Banks have to feel confident that customers which are given credit have a trusting character or nature, this is reflected from the customer's background neither which are the work background nor the personal background.

b. Capacity

For observing customers in their ability in the business field which is connected with their education, the business ability is also measured with their ability in understanding about government provisions.

c. Capital

For observing if the capital use is effective, financial reports are observed by implementing measurements such as from the terms of liquidation, solvability, profitability, and other measures.

d. Collateral

A guarantee which is given by the future customer neither physical nor non-physical.

e. Condition

In appraising credit there should also be an appraisal of the economic and political condition today and in the future in corresponding with each sector, and the business prospect of the implemented sector.

**Interest Rate (BI Rate)**

According to Siamat (2005:135) mentioned that : The BI Rate is an interest rate with a tenor of one month that is announced by Bank Indonesia periodically for a certain time period which functions as a signal (stance) of monetary policy.

Interest is able to be defined as the price that banks and customers have to pay as remuneration for their transactions (Ismail, 2010: 131). Interest rate is able to be defined as income which banks receive from the credit which is distributed to customers that have the obligation to pay loans provided by the bank side.

**Non Performing Loan (NPL)**

The occurrence level of troubled credit is usually sided with the Non Performing Loan (NPL) ratio. Non Performing Loan/ troubled credit is a situation where customers are not able to pay credit installments anymore which is already published by the bank side. According to Bank Indonesia the providing of troubled credit is categorized to become less fluent collectability, doubted, and jammed. (Kuncoro and Suhardjono, 2011 : 420).

Non Performing Loans (NPL) reflect credit risk, the higher the Non Performing Loan (NPL) level the higher the credit risk taken by the banking party (Ali 2004:231). The high level of troubled credit (NPL) makes a need for the banking party to provide larger reserve funds, so in the end the bank's capital is also streaked. The amount of troubled credit (NPL) becomes a cause of the difficulty of banking in distributing credit. If the troubled credit (NPL) is low, it is able to be ascertained that the financial condition of banks as credit providers are in a good condition.

Banks in providing credit have to implement an analysis to the customer's ability to pay back the installments of the provided credit. After credit is provided,

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banks are obligated to implement supervision and building the steps in the credit providing that it implements. (Kuncoro and Suhardjono, 2011:243).

The limit of troubled credit (NPL) that is allowed is maximized at 5%, if it is over 5% it will influence the appraisal of the relevant bank's healthy level. The troubled credit (NPL) ratio that is larger more and more shows that the bank party is not able to manage troubled credit (Riyadi, 2006:161).

### RESEARCH HYPOTHESIS

From the discussion above, the writer summarizes the hypothesis:

H<sub>1</sub> : Interest Rate (BI Rate) has a negative influence to Credit Distribution.

H<sub>2</sub> : Non Performing Loan (NPL) has a negative influence to Credit Distribution.

H<sub>3</sub> : Interest Rate (BI Rate) and Non Performing Loan (NPL) simultaneously influence to Credit Distribution.

### Analysis Frame

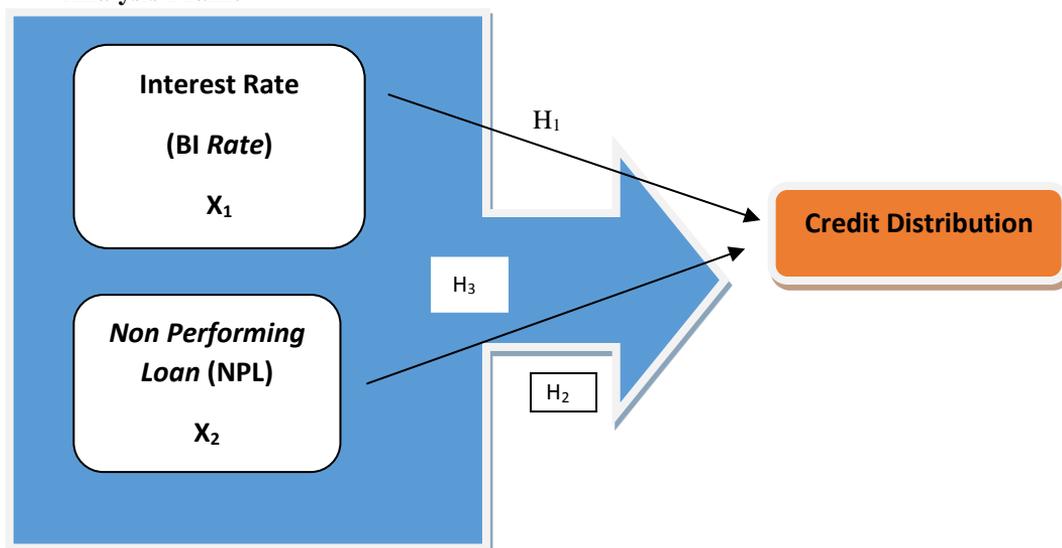


Figure 1 Analysis Frame

### 3. RESEARCH METHOD

The population of this research are all Banking institutions in Bengkulu province in the 2013-2015 period. Data that is used for this research is secondary data which consists of BI Rate, NPL and credit distribution data in the Banking in Bengkulu Province in the years 2013-2015 which is published by Bank Indonesia through the [www.bi.go.id](http://www.bi.go.id) website. Data that are used in this research are data of a three month period which is published by Bank Indonesia in Bengkulu Province in 2013-2015.

The analysis technique which is used is the quantitative analysis technique which is the double regression linear that is used to count the influence and make linear equations which are able to be a reference to project the Y variable (credit

distribution) based on the  $X_1$  variable, Interest Rate (BI Rate) and the  $X_2$  variable, Non Performing Loan (NPL), which the data is a time series with a cross section. The hypothesis in this research uses a simultaneous test (F-test) and a partial test (t-test) to know the influence between the independent variable (X) with the dependent variable (Y). The classic assumption tests in this research are the normality test, heteroscedasticity test, multicollinearity test and the autocorrelation test.

The double regression linear model for this test is stated by the equation as of below (Utama, 2009: 77):

$$Y_t = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \mu_t \quad (1)$$

Remarks:

- $Y$  = Credit Distribution
- $\alpha$  = Constant
- $\beta_{1,2}$  = Regression Coefficient
- $X_1$  = Interest Rate (BI Rate)
- $X_2$  = Non Performing Loan(NPL)
- $\mu$  = error term

#### 4. RESEARCH RESULTS AND DISCUSSION CLASSIC ASSUMPTION

Before implementing the double regression test, the present data has to be independent from the classic assumption which are:

##### 1. Normality Test

Normal P-P Plot of Regression Standardized Residual

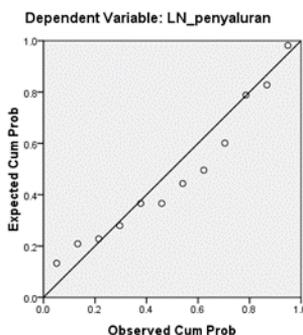


Figure 2 Normality Test Results

Based on the normal p-plot residual it is seen that data is distributed normally. This is seen from the data that spreads close to the diagonal line or following the direction of the diagonal line. So it is able to be summarized that the regression model fulfills the data normality assumption.

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2. Multicollinearity Test

Table 1 Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	LN_Birate	.685	1.461
	LN_NPL	.685	1.461

The results above show that the VIF value of each independent variable is far below 10, which are  $X_1 = 1.461$  and  $X_2 = 1.461$ . So it is able to be summarized that there is no multicollinearity between the independent variables of Interest Rate (BI Rate) and Non Performing Loan (NPL) in the regression model.

3. Autocorrelation Test

Table 2 Autocorrelation Test Results

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.846 <sup>a</sup>	.716	.653	.06877	.813

a. Predictors: (Constant), LN\_NPL, LN\_BIRate

b. Dependent Variable: LN\_penyaluran

For  $\alpha = 0.05$ ,  $k = 2$  and  $n = 12$ , a value of  $dL = 0.812$  and  $dU = 1.519$  is obtained. Because the Durbin Watson value of 0.813 is located between the  $dL$  and  $dU$ , it is summarized that the model experiences uncertainty, because of that to be able to obtain a certain result the Run test is implemented with the results:

Table 3 Run Test Results

**Runs Test**

	Unstandardized Residual
Test Value <sup>a</sup>	.00112
Cases < Test Value	6
Cases >= Test Value	6
Total Cases	12
Number of Runs	6
Z	-.303
Asymp. Sig. (2-tailed)	.762

a. Median

Results of the run test show that *Asymp.sig (2-tailed)*  $0,762 > 0,05$  which means the data that is used are random enough so there are no autocorrelation problems.

#### 4. Heteroscedasticity test

Table 4 Heteroscedasticity test Results

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.121	.258		.469	.650
	LN_BIRate	-.056	.148	-.149	-.376	.716
	LN_NPL	.045	.093	.193	.485	.640

a. Dependent Variable: ABRESID

The Heteroscedascity test with the method of the Glesjer Method obtained a sig BI Rate value of 0.716 and a sig NPL of 0.640 where the values are  $>$  than  $\alpha$  **0.05** so it is able to be summarized that data does not have heteroscedascity.

## DOUBLE REGRESSION ANALYSIS

### 1. T TEST

Table 5 T Test Results

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	7.997	.425		18.836	.000
	LN_BIRate	.585	.244	.516	2.402	.040
	LN_NPL	.315	.153	.441	2.531	.037

a. Dependent Variable: LN\_penyaluran

From the table results above the regression equation is able to be seen and the relations of each independent variable to the dependent variable:

$$\begin{aligned} \hat{Y} &= 7,997 + 0,585 X_1 + 0,315 X_2 \\ t_{\text{count}} &= (18,836) \quad (2,402) \quad (2,531) \\ Sig &= (0,000) \quad (0,040) \quad (0,037) \end{aligned}$$

#### a. The First Hypothesis Test (H<sub>1</sub>) :Interest Rate (BI Rate) has a negative influence to Credit Distribution.

From the test results a  $t_{\text{count}}$  value for X<sub>1</sub> as large as 2.402 and a  $t_{\text{table}}$  value of 2.228 is obtained. As a cause of  $t_{\text{count}} > t_{\text{table}}$  H<sub>0</sub> is rejected, which means the Interest Rate (BI Rate) has a positive influence to credit distribution in Bengkulu Province. Which means that in every increase in the Interest Rate (BI Rate) as large as 1%,

the credit distribution will increase as large as 0.585%, *ceteris paribus*. The result of this research is corresponding with the research implemented by Greydi Normala Sari (2013) where it is obtained that Interest Rate (BI Rate) has a positive and significant influence to credit distribution.

The result of this research is not corresponding with the theory that Interest Rate (BI Rate) is assumed to have a negative influence to the credit distribution of banking because Interest Rate (BI Rate) is the interest rate level that becomes a reference for public banks to make decisions in determining the level of credit interest rate that will be distributed to the loaner or debtor party. This is possible as a cause of many other factors that cause consumers to not be concerned about the present interest rate amount, so they still decide to take credit loans in banks for the needs of funding.

**b. The Second Hypothesis Test (H<sub>2</sub>) : Non Performing Loan (NPL) has a negative influence to Credit Distribution**

From the test results the value is obtained as  $t_{count}(2.531) > t_{table}(2.228)$  and the sig value  $(0.037) < \alpha (0.05)$  so the Non Performing Loan (NPL) variable is said to have a positive and significant influence to Credit Distribution in Bengkulu Province. The result of this research is not corresponding with the theory that states that the increase of Non Performing Loans (NPL) will cause the increase in credit risk that the bank is responsible for. (Ali, 2004:160).

The Non Performing Loan (NPL) that occurs in Bengkulu Province has still not yet passed the maximum limit and is still able to be tolerated by Bank Indonesia which is with the maximum of 7.2%. So, although Non Performing Loans (NPL) occur in Bengkulu Province, when the NPL is still tolerant and able to be controlled, credit distribution will not be decreased but the number will still be increased.

This research is supported by the research implemented by Indira (2008) which states that Non Performing Loan (NPL) has a positive and significant influence to credit distribution. The amount of NPL levels are still able to be solved with the third party fund levels that are able to be accumulated by the banking institution party. Although Non Performing Loans (NPL) increase credit is still able to be distributed with reserve funds that the banking party has.

**2. F TEST**

Table 6 F Test Results

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.107	2	.054	11.336	.003 <sup>a</sup>
	Residual	.043	9	.005		
	Total	.150	11			

a. Predictors: (Constant), LN\_NPL, LN\_BIRate

b. Dependent Variabel: LN\_penyaluran

The F statistic test shows if all independent variables are entered are they influencing together to dependent variables (Ghozali; 2006). Such as seen in table

6, the value of  $F_{\text{Count}} (11.336) > F_{\text{table}}$  is obtained with a sig value of  $(0.003) < \alpha (0.05)$ , so the decision that the independent variables of Interest Rate (BI Rate) and Non Performing Loan (NPL) simultaneously/together influence to the dependent variable of Credit Distribution. This is corresponding with the third hypothesis ( $H_3$ ): Interest Rate (BI Rate) and Non Performing Loan (NPL) simultaneously influence to Credit Distribution. The value of Adjusted  $R^2 = 0.653$  shows the value of 65.30%. This shows that Interest Rate (BI Rate) and Non Performing Loan (NPL) are able to explain the credit distribution as large as 65.30% and the rest is influenced by other independent variables that are not used in this research.

The most dominant variable that has an influence is able to be seen from its Partial coefficient. From test results the following data is obtained:

Table 7 Partial Coefficient Values

Independent Variable	Partial Coefficient Value
BI Rate	0,625
NPL	0,565

From the result of the table above it is able to be seen that the Interest Rate (BI Rate) value is as large as 0.625 (62.5%) and the NPL value is as large as 0.565 (56.5%). So the Interest Rate (BI Rate) variable has the most dominant influence to banking credit distribution in Bengkulu Province. This is because there are still many consumers/people which first see the credit interest rate amount as the base of consideration in applying for banking credit in Bengkulu Province. Generally if the credit interest rate is too large people will postpone for a banking credit loan, yet if it is the contrary, the credit interest rate is low, people take this chance for loaning banking credit to fulfill funding needs.

## 5. SUMMARY AND SUGGESTIONS

From the results of the research, the summary is able to be withdrawn as the following:

1. Partially the Interest Rate (BI Rate) variable has a significantly positive influence to banking credit distribution in Bengkulu Province. This is possible because there are many other factors which cause consumers to not be concerned anymore about the present Interest Rate (BI Rate), so they still decide to implement credit loans to banks for the needs of funding.
2. Partially the Non Performing Loan (NPL) variable also has a significantly positive influence to banking credit distribution in Bengkulu Province. This is because the amount of Non Performing Loan (NPL) in Bengkulu Province is still able to be controlled, so banking institutions will still distribute credit.
3. Simultaneously/together the variables of Interest Rate (BI Rate) and Non Performing Loan (NPL) have positive and significant influences to the distribution of banking credit in Bengkulu Province.

From the partial coefficient table it is able to be seen that Interest Rate (BI Rate) has the most dominant influence to credit distribution in Bengkulu Province. This is because there are still many consumers/people which first see the credit interest rate amount as the base of consideration in applying for banking credit in Bengkulu Province. Generally if the credit interest rate is too large people

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will postpone for a banking credit loan, yet if it is the contrary, the credit interest rate is low, people take this chance for loaning banking credit to fulfill funding needs.

From the summary that is obtained, the writer provides the following suggestions:

1. It is expected to be able to add other independent variables to enrich this study which is adapted with the economic situation of today.
2. Bank Indonesia should be careful in determining Interest Rate (BI Rate), because Interest Rate (BI Rate) influences the amount of banking credit distribution in Bengkulu Province.
3. Other researchers are expected to use other methods that are more complete and accurate so a more valid summary is able to be obtained.

### **References**

- Arthesa, A., & Hendiman. (2004). *Bank dan Lembaga Keuangan bukan Bank*. Jakarta : PT Indeks Kelompok Gramedia
- Ali, M. (2004). *Asset Liability Management, Menyiasati Risiko Pasar dan Risiko Operasional dalam Perbankan*. Jakarta: PT. Elex Media Kompetindo Kelompok Gramedia.
- Fahmi, I., & Hadi, Y. L.(2010). *Pengantar Manajemen Perkreditan*. Bandung: Alfabeta.
- Hasibuan, M. S. P. (2008). *Manajemen Sumber Daya Manusia*. Jakarta: PT. Bumi Aksara.
- Indria, A. (2008). *Pengaruh Dana Pihak Ketiga, Non Performing Loan, dan Suku Bunga Sertifikat Bank Indonesia (SBI) Terhadap Jumlah Kredit Bank Umum di Provinsi Bali*. [Skripsi]. Universitas Udayana.
- Ismail. (2010). *Manajemen Perbankan: Dari teori menuju Aplikasi*. Jakarta: Kencana.
- Greydi, N. S. (2013). Faktor-faktor yang mempengaruhi penyaluran kredit bank umum di Indonesia (periode 2008.1 – 2012.2). *Journal of the Faculty of Economics and Business*. Department of Development Economics, Sam Ratulangi University Manado, ISSN2303-1174 Vol.1.
- Ghozali, I. (2006). *Aplikasi Analisis Multivariate Dengan Program SPSS*. Cetakan Keempat. Semarang: Badan Penerbit Universitas Diponegoro.
- Kasmir. (2008). *Bank dan Lembaga Keuangan Lainnya* (Edisi Revisi 2008). Jakarta: PT. Raja Grafindo Persada.
- Kasmir. (2012). *Manajemen Perbankan* (Edisi Revisi). Jakarta: PT Raja Grafindo Persada.

- Kuncoro, M., & Suhardjono. (2011). *Manajemen Perbankan Teori dan Aplikasi*. Yogyakarta:BPFE.
- Riyadi, S. (2006). *Banking Assets and Liability Management*. Jakarta: LP-FEUI.
- Siamat, D. (2005). *Manajemen Lembaga Keuangan; kebijakan moneter dan perbankan (edisikelima)*. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Sutojo, S. (2008). *Strategi Manajemen Kredit Bank Umum*. Jakarta: PT. DamarMuliaPustaka.
- Susilo, S. Y, dkk. (2000). *Bank dan Lembaga Keuangan Lain*. Jakarta: SalembaEmpat.
- Suyatno, T. (1990). *Dasar-dasar perkreditan (cetakanketiga)*. Jakarta: Gramedia.
- Utama, M. S. (2009). *Buku Ajar Aplikasi Analisis Kuantitatif*. Denpasar: SastraUtama.
- <http://www.bi.go.id/id>. (Accessed on March 20 2017).
- <http://www.bi.go.id/id/publikasi/kajian-ekonomi-regional/bengkulu/Pages/KEKR-Provinsi-Bengkulu-Tw.-IV-2015.aspx>