Full Length Research Article

ANALYSIS ON NON PERFORMING LOAN: EMPIRICAL EVIDENCE AT REVOLVING FUND MANAGEMEMENT INSTITUTION FOR COOPERATIVES, MICRO, SMALL, AND MEDIUM ENTERPRISES UNDER THE MINISTRY OF COOPERATIVES AND SMALL AND MEDIUM ENTERPRISES REPUBLIC OF INDONESIA

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ABSTRACT

Revolving Fund Management Institution For Cooperatives, Micro, Small, And Medium Enterprises (LPDB-KUMKM/*Lembaga* Pengelola Dana Bergulir Koperasi Usaha Mikro, Kecil, dan Menengah) is a Microfinance institution in Indonesia supported by Ministry of Cooperatives and Small and Medium Enterprises Republic of Indonesia. This study aims to provide ajn overview of credit/revolving fund of LPDB to businesses located in the area of Indonesia, analyzing the characteristics of the debtors in LPDB, and analyzes the determinants of bad loans to debtors in LPDB. Descriptive method was selected to provides a overview of credit /revolving fund and analyzing the characteristics of the debtors. The logistic regression analysis was used to analyzes the factors that influence the occurrence of bad loans to debtors in LPDB. The result show that the overview of the deliquent debtor profiles in LPDB KUMKM is dominated by credit unions. Based on the logistics regression, there are four variables which significantly influence the collectibility of the loan: ie interest rate, monitoring strategies (BI checking/non BI checking), collateral level, and type of institution.

INTRODUCTION

The establishment of LPDB under the supervision and guidance of the Ministry of Cooperatives and SMEs aims to help businesses such cooperatives and SMEs in developing their business activities. One form of real support by the Ministry of Cooperatives and SMEs is to provide capital loan assistance through the provision of cheap credit facilities with low interest through LPDB. Capital support provided to each region in all provinces in Indonesia starting from 2006. From the LPDB database, it can be seen that the loans distributed by LPDB to cooperatives and SMEs from year to year continues to increase from Rp.410.2 billion in 2010 to Rp.975 billion in 2011, Rp. 1,071 trillion in 2012, Rp.1.427 trillion in 2013, Rp.1.154 trillion in 2014, or with an average growth of 140% since 2010. This shows that the Revolving Fund has managed to gain the confidence of the wider community. There are two problems concerning non performing loan of LPDB credits, at first LPDB did not use collateral and another is that revolving funds only channelled centrally from Jakarta, these leads to some debtor businesses lack of supervision and failing to repay the debts. The failing to repay the debts itself caused by the debtors business shutdown. Data from LPDB in the period of 2010-2014 shows that the total 4041 partners who partnered with LPDB have rated Bad Debt Ratio of 25.8% and bankrupt partner about 38 Partners, mostly in South Sulawesi and West Java accounted for 8.84% and 6.6%. (Figure 1).

Research purposes

The purposes of this research are to:

- Provide an overview of credit/revolving fund of LPDB-KUMKM around Indonesia.
- Analyzing the characteristics of the lending businesses in LPDB-KUMKM in 2010- 2014.
- Analyzes the determinant of bad loans on LPDB credits.

Benefits of Research

This research is expected to provide a significant contribution for the development of micro financing to the cooperatives and SMEs, especially in developing countries like Indonesia.

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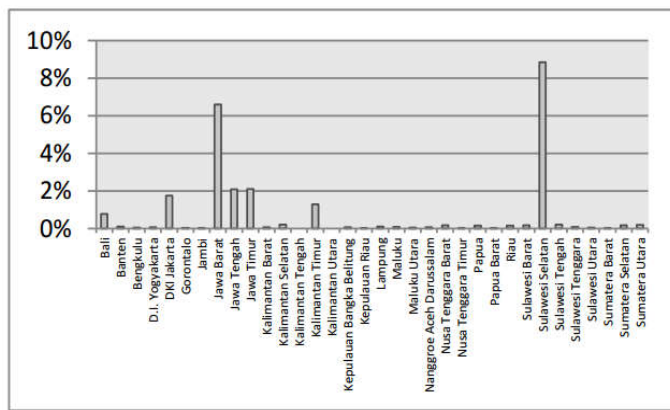School of Business, Bogor Agricultural University, Indonesia.

Figure 1. Percentage of bad debt ratio (BDR) of LPDB-KUMKM Partner throughout Indonesia Period December 2014 (at provincial level)

LITERATURE REVIEW

Bad Loans

Bad loans or sometimes called non-performing loans can be defined as loans repayment experiencing difficulties due to the intentional factor and or external factors beyond the control of the debtor's ability (Eriani *et al.,* 2012). Non-performing loans refers to the financial assets of the bank/nonbank which no longer receives interest or installment payments in accordance within the specified time. Non-performing loans causes bank to stop generating revenue (Adhikary 2007). Bad loans can be measured from it collectibility. Collectibility is a overview of payment principal condition and payment interest condition on the loan and the level of acceptance of the possibility of returning the funds disbursed. Collectibility rate of the loans classified into five groups: performing, performing with notes, substandard, doubtful and not performing. Strict requirements in the credit policy will reduce the likelihood of a non performing loans, but will not eliminate the occurance of delinquency of payment.

The cause of bad loans/problems can be caused by the bank's creditors internal factors, debtors improprieties, and external factors such as:

- Debtor of the bad loan

Debtor conditions factors are generally categorized by 5C (character, capacity, capital, collateral, and condition). In practice, the five components of Cs are translated into the credit rating or credit scoring so that the bank can assess the risks that will be beared when it is channelling credit to the debtor. Thus the lender/bank can decide distributing credit to the concerned debtor, such as loan amount, interest rate, and maturity based on that rating and scoring. Implementation of the 5C for big clients can be different from the application for micro, small and medium clients due to technical problems. For example, the availability of the financial report and the financial management are not separated between the business finance and the household finance.

- External factors that cause bad loans are the decreasing of economic activity and high lending rates, the utilization by the not responsible debtor of the non healthy world of banking competitive climate, and problems that occurred in the debtor company.

Karim *et al.* (2010) do research to investigate the relationship between the efficiency of bank NPLs in Malaysia and Singapore. This study uses Stochastic Cost Frontier Approach by Greene (Greene, 1990: Prague Economic Papers, Karim 2010). From the results of these studies showed no significant difference in the cost-efficiency among banks, but in singapore have better cost efficiency. The high NPL resulting in cost efficiency of banks be well supported by the results of the research hypothesis by Berger & De Young (Berger, De Young, 1992: Prague Economic Papers, Karim 2010) the bad bank risk management resulted in poor quality and high NPL loans. Moti *et al.* (2012) doing research to calculate the credit management system effectiveness on the performance of loans in microfinance institutions in Kenya. Research methodologies were done using descriptive design. From these studies showed that the credit period, the involvement of loan officers and borrowers affect loan performance. Interest rates had a negative effect/reverse on loan performance, the higher the interest rate the performance level of the loan are lower. The performance of loans affected by credit risk, control of credit risk adopted by Microfinance Institutions (MFIs), credit insurance, credit agreements, diversification of credit, debtor's credit rating, and financial condition report.

Yudha (2011) conducted a study with some of the following objectives which illustrates the characteristics and conditions of each subsidized mortgage loan in the Greater Jakarta area, and determine the variables that influence the occurrence of bad loans subsidized mortgage loan in each region Jabodetabek. This study uses descriptive analysis and logistic regression analysis. The conclusion was that Bekasi is the area mostly receiving subsidized mortgage loan. Distribution of subsidized mortgage loan is dominated by fixed income households such as private sector employees, military/police, and civil servants. Depok has a low NPL throughout 2004-2009. Employment group of private sector employees have a high NPL. Variables that influence the occurrence of bad loans subsidized mortgage loan in Jakarta and Bogor are income, down payment percentage, and tenor. In Depok area, variables such as income and the percentage of down payment have real impact on credit quality. Tangerang and Bekasi areas variables such as employment, income, down payment percentage, and tenor have a significant effect on credit quality. Djanoko (2010) in his research aims to determine the implementation of the lending done by Swamitra-Swamitra in Yogyakarta, analyzes the factors that influence the smooth return of credit to micro, and formulate managerial implications associated with improved performance in Swamitra micro loans. This study uses three methodologies include descriptive analysis, factor analysis and logistic regression analysis. The conclusion of this study using logistic regression analysis. There are three variables that significantly influence the success of loan repayment in Swamitra which are business reputation variable, variable profit/payables, and inventory turnover variable.

Rachmat (2009) conducted a study entitled Influence of the Debtor Characteristics Against Performing Credit Payment at Bank XYZ with descriptive analysis, binary logistic regression and multiple logistic regression showed that in accordance with the method of binary logistic regression at 5% significance level variables influences the age and number of dependents. While the significance level of 1% is the ratio of income over expenditure of households, the ratio of income to installment loans, how old the business, and the loan plafond. Bhinadi (2010) conducted a study aims to estimate the factors

that affect non-performing loans at Bank Perkreditan Rakyat (Rural Bank) XYZ. The analytical tools used are logistic regression analysis and factor analysis. The results showed that the probability of non-performing loans in the BPR XYZ influenced by lending rate predictions, mortgage rates and credit ratio, the level of risk type of guarantee, and the risk level of groups of customer. This research was conducted by Messai and Jouini attempt to determine the cause of the NPL taken from 85 sample banks spread across three countries, namely Italy, Greece and Spain during the period 2004-2008 using panel data. The three countries experiencing financial crisis in 2008. The variables used are macroeconomic variables and bank specifications variable. Macroeconomic variables consist of the GDP growth rate, unemployment rate, and the real interest rate as well as in connection with specific variables chosen that is ROA (Return On Asset), changes in loan, and loan loss reserves against total loans ratio (LLR / TL). Based on the results of research using the panel data applicatons obtained that bad loans is negatively related to the rate of GDP growth, the advantages of bank assets, and positively associated with unemployment, loss reserves to total loans ratio, and interest rates. Kwambai and Wandera (2013) aims to determine the impact of credit information sharing in some commercial banks in Kenya, set a trend of bad debts before and after the introduction of the Credit Reference Bureau and identify the factors that explain the bad loans and to determine the cause of high economic sector of bad debts and the efforts made to reduce the risk in the sector. The study concluded that the sharing of credit information among financial institutions increase transparency, help banks providing loans prudently, lowering the level of risk to the bank, and reduce borrowing costs (interest on loans). The study also concluded that the higher growth sectors of the economy will increase the level of loan problems. Further research concluded the main factors causing bad loans at the bank is the character of the borrower, the high level of interest rates causing some borrowers have difficulties to pay, and misuse of loans.

METHODS OF RESEARCH

Data Types and Data Source

The data used in this research is secondary data obtained from the database of the company that is LPDB-KUMKM. The data is used to describe the lending in LPDB-KUMKM. The data consist of all the debtors from LPDB, a secondary data such as debtors profile, characteristics of business, credit, LPDB Vision and Mission, debtors data of small and medium enterprises, and channelling data of revolving fund

Method of Analysis

Processing techniques and data analysis performed in this study are as follows:

Descriptive analysis

Data analysis process basically involves the efforts of searching and disclosuring of relevant information contained in the data and presenting the results in a more compact form and simple which ultimately leads to the need for explanation and interpretation, the final results of this method are the simplification of the figures into table, graph or percentage

that can be used as material to explore the data and perform advanced analysis (Aunuddin 1989).

Logistic Regression Analysis

Logistic regression is a statistical analysis technique used to analyze the data that the response variable has two or more categories with one or more independent variables and continuous scale category. Binary regression model is the model used to determine the relationship between the explanatory variables (X) with the response variable (Y) that is binary. The dependent variable Y follows the Bernoulli distribution with distribution oppurtunity function adopted from the research of (Girsang 2014):

$$f(Y = y) = \pi^y (1 - \pi)^{1-y} \qquad \dots\dots\dots\dots\dots\dots(1)$$

with y = 0 or y = 1, and are the probability of y = 1

If the sum of response response variable Y is n, the oppurtunity of every event are equal, and each event is mutually free, then Y will follow the binomial distribution. Hosmer and Lemeshow (1989) explains that the logistic regression model with $E(Y=1|x)$ as (x) is:

$$\frac{e^{g(x)}}{1+e^{g(x)}} \qquad \dots\dots\dots\dots\dots\dots\dots(2)$$

In the logistic regression needs logit link function, logit transformation as a function of (x) is:

$$(x) = ln\left(\frac{\pi(x)}{1-\pi(x)}\right) = \beta_0 + \beta_1 X_1 + \cdots + \beta_\rho X_\rho \qquad \dots\dots(3)$$

Equations or models in a logistic regression equation in this study are: g + e g+

$$g(x) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 \qquad \dots (4)$$

Information:

(x) = Transformation logistics of chance events to i
β_0 = Intercept logistic regression
β_1 = Coefficient of explanatory variable interest rate loans.
β_2 = Coefficient of explanatory variable loan plafond
β_3 = Coefficient of explanatory variables monitoring strategy
β_4 = Coefficient of explanatory variables types of institution
β_5 = Coefficient of explanatory variables level of collateral
β_6 = Coefficient of explanatory variables age of business
X_1 = Explanatory variables interest rates
X_2 = Explanatory variables loan plafond
X_3 = Explanatory variables monitoring strategy
X_4 = type of institution explanatory variables
X_5 = Explanatory variables assurance level
X_6 = Explanatory variables age business
e = Error

RESULTS AND ANALYSIS

Description channeling overview of revolving fund in LPDB

Sources of capital assistance in LPDB-KUMKM is derived from the State Budget. Venture capital assistance received by the debtor in LPDB-KUMKM are 879 borrowers getting loans <Rp.500.000.000,- then 508 debtors getting loans between Rp.500.000.000, - until Rp.1.000.000.000, further 502 debtor getting loans between Rp.1.000.000.000,- until Rp.5.000.000.000,- and 161 other debtors getting loans >Rp.5.000.000.000,-. For borrowers who get a loan of more than five billion rupiah remains most prevalent among others, are Rural Banks, Venture Capital Company, the Cooperative Parent (Secondary Cooperatives), and certain Credit Unions. In revolving the funds, it is charged with an administrative fee in accordance with the respective agreement. Debtor recipient of revolving fund will repay the installments pattern agreed with the LPDB. The installment mentioned includes amount of loan capital plus notary fees and interest rates averaging 6% per year sliding apply for Rural Banks, Venture Capital Company, Secondary Cooperatives and Real Sector Cooperatives or SMEs, and 9% per year sliding applies to the Credit Unions. The provision of venture capital assitance mentioned depends on the feasibility of each business.

Table 1. Loan plafond received by the debtor of revolving fund

Loan Plafond	The number of debtors	Non Performing Loan
< Rp.500.000.000,-	879	0,91%
Rp.500.000.000,- – Rp.1.000.000.000,-	508	6,7%
Rp.1.000.000.000,- – Rp.5.000.000.000,-	502	12,8%
> Rp.5.000.000.000,-	161	7,8%

Characteristics of the debtor in the Revolving Fund Channelling

Debtor used in this study are debtors that borrows from LPDB in Indonesia during the period 2010 to 2014. Based on the data from LPDB, obtained 2050 sample of debtors that meet certain criteria as mentioned earlier. Debtors who meet the criteria for this study is a debtor who is still active in the business and has stopped their business. From 2050 there are 38 debtor's debtor who closed their business due to various constraints and other 2015 debtors are still actively conducting business until now. The following is a characteristic of LPDB debtor who is a business entity which are in terms of the loan plafond, interest rates, a monitoring strategy through BI (Central Bank Of Indonesia) checking or non BI checking, type of institution, level of assurance, and the age of the business. From the results of descriptive analysis of 2050 debtors during the period 2010 to 2014 divided by the condition of the collectibility of loan that is fluent or not performing. Collectibility conditions is performing when collectibility is A and not performing conditions if its bad debt ratio (BDR) C, D, and E

Characteristics of the debtor according to Loans Interest Rate

The relationship between the interest rate and bad loan quality can be seen in Figure 2

Figure 2 shows that the performing loan on debtor with the interest rate of 9% are about 63% performing, and the debtor that have interest rate 6% about 16% fluent. Debtors with an interest rate of 9% is the credit unions debtor and debtors with an interest rate of 6% are institutions such as real sector cooperatives/SMEs, and Rural Bank/Venture Capital Company. As for the NPL debtors, are debtors with a 9% interest, about 16% of them not performing, and then the debtor with a 6% interest rate about 5% of them not performing. Debtors that are not performing with an interest rate of 9% is a credit union debtor while debtors are not performing with an interest rate of 6% is the real sector cooperatives/small and medium enterprises.
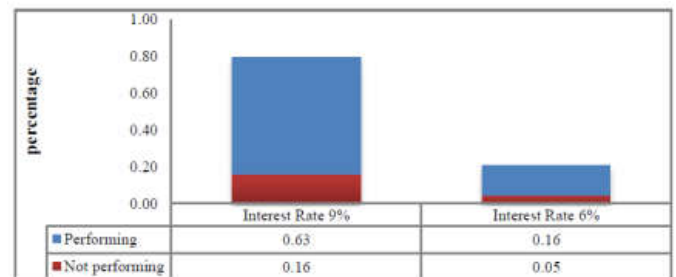

Figure 2. The percentage debtor frequency by the interest rate

Characteristics of businesses according to Loan Plafond

The frequency percentage of the debtor that is performing and not performing against the loan plafond can be seen in Figure 3.
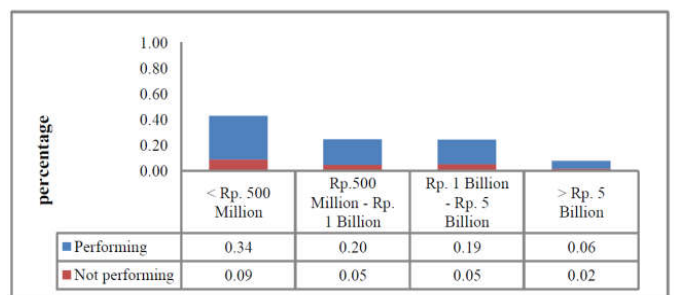

Figure 3. The percentage debtor frequency by the plafond

In Figure 3 it can be seen that 34% performing debtors repay lending plafond with a loan value below Rp 500 million, 20% of performing debtors repay the plafond of loans with a loan value of Rp 500 million - Rp 1 billion, 19% performing debtors returns loan plafond of Rp.1 billion - Rp. 5 billion, and 6% performing debtors return the loan plafond above Rp 5 billion. As for the non performing debtor in repayment of the loan plafond is 9% for loans below Rp.500 million, amounting respectively 5% for loans between Rp 500 million - Rp. 1 billion and Rp.1 billion - Rp.5 billion, and then by 2% non performing in the return of the plafond above Rp.5 billion. The most amount of debtors who is not performing at the plafond below Rp.500 million indicates the amount of loans in those plafond.

Characteristics of the debtor according to Strategy Monitoring

To determine the frequency percentage of the debtors that is performing and not performing against a monitoring strategy can be seen in Figure 4. Figure 4 shows that the performing

debtor by a monitoring strategy that is monitored not through BI Checking are about 72% and debtors with BI Checking about 8%. Non BI Checking debtor has the most amount in total due to the average debtor profiles included in these criteria are credit unions and cooperatives real sector. As for the non performing debtors, 21% debtors with non-BI Checking and 0,1% debtor with BI Checking.
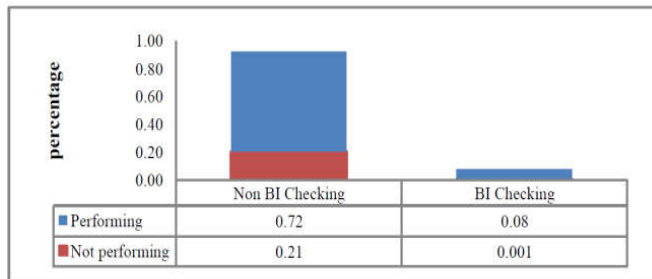

Figure 4. Percentage debtors frequency by monitoring strategy

Characteristics of the debtor by Level of Collateral

To determine the frequency percentage of debtors that is performing and not performing based on level of collateral can be seen in Figure 5.
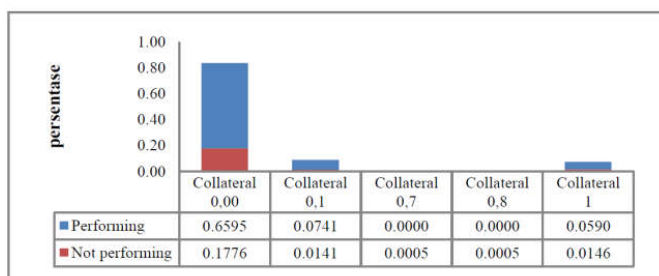

Figure 5. Percentage debtors frequency by the level of collateral

In Figure 5 it can be seen that 65.95% performing debtors have the value of collateral 0%, 7.4% performing debtors have the collateral value of 10%, and 5.9% performing debtors have the collateral value of 100%. As for the not performing debtor frequency by level of collateral are 17.76% of the debtor not perform with collateral value of 0%, 1.4% debtor not perform with collateral value of 10%, then 0.05% debtor not perform with collateral value of 70%, about 0.5% of debtors were not perform with collateral value of 80% and amounted to 1.46% of the debtor not perform with a value of 100% collateral. The most amount of debtors who not performing with the collateral value of 0% indicates the magnitude of the risk of not performing due to absence of collateral.

Characteristics of the debtor by Age of Business

One of the mandatory requirement for debtors to get a loan is age of the debtor's business operations. To determine the percentage of debtors performing and not performing against the age of the business can be seen in Figure 6.

In Figure 6 we can see that 20% of debtors performing with the age of less than 5 years, 21% performing debtors with the age of business between 5-10 years, 20% performing debtors with age of business 10-15 years, and 18% performing debtors with age of the business more than 15 years. As for the not performing debtors, 5% of the debtor not performing with age

of business less than 5 years, 4% of the debtor not performing with age of business 5-10 years, and then 6% of the debtor not performing with age of business 10-15 years, and 3% of debtors not performing with age of business more than 15 years of business.
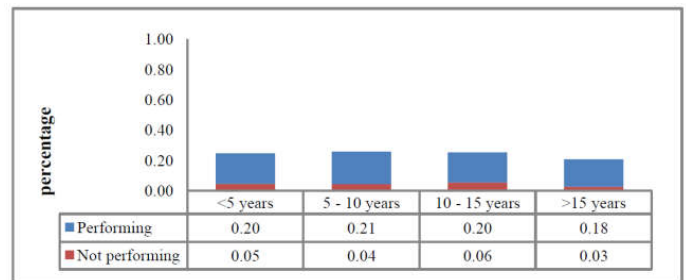

Figure 6. Percentage of debtors frequency by the age of business

Characteristics of the debtor by Type of Institution

Type of debtors in LPDB-KUMKM based on data obtained in this study are the Rural Banks/Venture Capital Company, Credit Unions, Real Sector Cooperatives, and Parent Cooperative/ Secondary Cooperatives. In Figure 7 shows that 80% of debtors are Credit Unions, 12% business active in the real sector such as trade and other services in the form of cooperatives or small and medium enterprises, 7% of Rural Banks/Venture Capital Company, and 1% is the Parent Cooperative or Secondary cooperative.
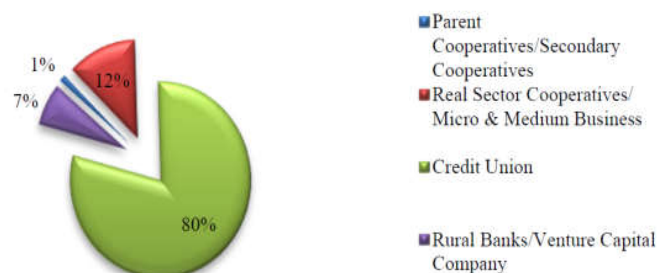

Figure 7. Percentage of debtors frequency by the institutions/debtors in LPDB

To determine the percentage of debtor performing and not performing against the types of institutions can be seen in Figure 8.
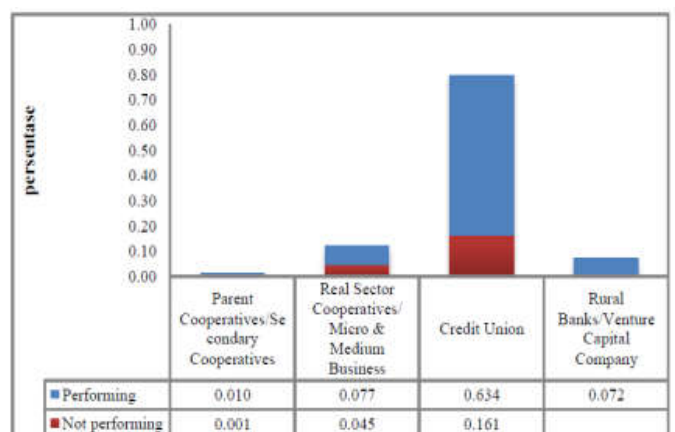

Figure 8. Percentage of debtors frequency by type of institution

Figure 8 shows that the performing debtors by type of institution which are Credit Unions by 63.4%, the Real Sector Cooperatives/Small and Medium Businesses by 7.7%, Rural Banks/Venture Capital Company by 7.2%, and Parent Cooperative/Secondary Cooperative by 1%. As for the not performing debtors there are, Credit Unions by 16.1%, the Real Sector Cooperatives/Small and Medium Enterprises by 4.5% and the debtor Parent Cooperative/Secondary Cooperatives by 0.1%.

Factors Affecting Non Performing Credit Risk

Determining the explanatory variables (X) used in this study is the consideration of the author, discussions with preceptor, and some earlier research related to non performing credit risks. The dependent variable (Y) is the collectability of debtors that describe the quality of loans. Collectability data of debtors consists of four categories: performing, performing with notes, substandard, doubtful, and not performing at all. To analyze the logistic regression, the collectability of debtors are grouped into a binary 0 if performing and 1 if not performing. The group consists of debtors who is not performing that has collectability C, D, and E. The explanatory variables used were the loan plafond, lending interest rate, monitoring strategy through BI (Bank Central Of Indonesia) checking or non-checking, type of institution, level of assurance, and the age of the business. Results of the logistic regression model equation is log () where p is the probability of non performing and (1-p) is the performing odds, so if described in terms of mathematical equations in a model:

$\text{Log}\ (p/1\ p) = -43.733 + 19.842$ plafond $+ 17.612$ age of business $+ 5.841$ monitoring strategy $+ 0.934$ interest rate $+ 0.801$ type of institution $+ 0.576$ level of collateral.

Table 2. Factors that influence the loan quality of debtors

Variabel	B	S.E.	Wald	Sig.	Odd Ratio
Credit Plafond	19.842	28251	64.641	0.999	4.144
Interest rates	0.934***	0.195	22.866	0.000	2.546
Monitoring strategy	5.841***	0.946	38.127	0.000	343.97
Type of institution	0.801*	0.417	3.695	0.055	2.228
Level of collateral	0.576**	0.289	3.964	0.046	1.778
Age of Business	17.612	40184	0,000	1.000	4.454
Constant	-43.733	49119	0.000	0.999	0.000

Description: *** significant at α = 1%; ** significant at α = 5%; * significant at α = 10%

In the model shows that the variables that have real affect/significant at significance level α = 0,01 on the quality of the loan is interest rates and a monitoring strategy, then the variables that have real affect/significant at significance level α = 0,05 on the quality of the loan is level of collateral, and variables that have real affect/significant at significance level α = 0.1 to the quality of the loan is a type of institution. While loan plafon and age of business did not significantly affect the quality of the loan because the p-value is greater than α = 0.1, then accept H_0, means that there is no relationship/influence between loan plafond and age of business to the quality of loans. Based on these three factors, a monitoring strategy is the variable most influential and positive impact on quality of the performing loan with the effect of 5,841 units. Debtors who do BI checking have a tendency to have more good performing loans 343,973 times compared with the non BI checking debtors. Debtors with 9% interest rate has a tendency of non performing loan 2,546 times compared with debtors of 6%

interest rate. Furthermore, the debtor with no collateral have a tendency experience of bad loans 1,778 times compared to debtors who have collateral.

Factors Possesing Significant Influences

Interest rates

The interest rate is a variable that has a significance value of 0.000 on the real level of 1% and the regression value of 0.934. In Table 2, the value of the odds ratio of 2.546 units means that interest rate of 9% have a chance of non performing loan bigger than the debtor with an interest rate of 6%. It can be seen clearly that this is very much due to the level of not performing collectibility of most debtors who received the most loans, there are Credit Unions that is dominated by a interest rates of 9%. The interest rate will be higher with larger plafond because the level of risk will increase which leads to greater loan burden of the debtor to repay the bigger credit. According to research Bhinadi (2010), explains that the variable interest rate is a variable that significantly affect the probability of problem loans in BPR XYZ.

According to research conducted by Soebagio (2005) found that the micro variable mortgage interest rates have a significant effect on the NPL on Commercial Banks. This is because the larger the burden of repayment will lead to greater credit risk.

Monitoring strategy

Variable monitoring strategy is a variable that has the significance of 0000 on the real level of 1% with the biggest regresssion value of 5.841. In Table 2, the value of the odds ratio are 343.973 units, means that with a monitoring strategy BI (Bank Indonesia) checking will have potentially of perfoming loan greater than the debtors with non-BI checking monitoring strategies checking. Variable monitoring strategy of BI checking was done for the analysis of the loans to the financial institution (Rural Banks) or non-bank financial institutions (Venture Capital Company), but for the loans to cooperative financial institutions or the real sector businesses cannot done with BI checking. Pointing to Figure 4 about the frequency debtor by a monitoring strategy, it can be seen that most debtors were in a group of non BI checking. Meaning here, the management should have a more intensive role in maintaining debtors. Because with the contiuous and strict monitoring both before and after the loans disbursement can expect the level of loan collectibility to enter the good performing category.

Level of collateral

Collateral variable are divided into five types ie value of 0% from the loan plafond value, 10% from the loan plafond value, 70% from the loan plafond value, 80% the loan plafond value and a collateral of 100% from the loan palfond value. A significance value of 0.046 at the 5% significance level, indicating that the level of collateral have significant effect on the level of collectibility of loans. The amount a regression coefficient of 0.576 with a value of 1.778 units odds ratio indicates there is a great influence between the level of collateral to the collectibility of the loan. Based on these results, the debtor with no collateral had a bad loans tendency

of 1.778 times compared to debtors who have collateral. The result of study has been in accordance with the research result by Arlan (2011).

Type of Institution

On variable type of institutions have 0.055 significance level, which means that the variable types of institutions has significant effect on the significance level $\alpha = 0.1$ which is demonstrated by the significance of less than 0.1. Variable regression coefficients of the type of institution is 0.801 with the odds ratio value of 2,228 units. Variable types of institutions designated in Table 2 has a significance value of 0.055 which means that the variable types of institutions significantly influence the level of collectibility of loans. Most debtors of LPDB is cooperative, it indicates the need for prudence processing of loan applications in this cooperative institutions. Joint liability scheme can be carried out to ensure good performing loan as done on the concept of Grameen Bank by Yunus (1983).

Managerial implications

Managerial implications for LPDB-KUMKM as the institution that manages the revolving fund are as follows:

- In channelling revolving funds, factor like interest rates will be higher with larger plafond because the level of risk will increase which leads to greater loan burden of the debtors to repay bigger credit. So that when analyzing loan credit must be measured and counted elaborately related to the repayment capacity of the debtors.
- Regarding monitoring strategy (BI checking or non BI checking) in this empirical evidence, it can be seen that most debtors were in a group of non BI checking. Meaning, the management should have a more intensive role in maintaining debtors. Because with the contiuous and strict monitoring both before and after the loans disbursement can expect the level of loan collectibility to enter the good performing loan category.
- The debtor with no collateral had a bad loans tendency compared to debtors who have collateral.
- Most debtors of LPDB is cooperative, it indicates the need for prudence processing of loan applications in this cooperative institutions. Joint liability scheme can be carried out to ensure good performing loan as done on the concept of Grameen Bank or increasing the level of the collateral for the loan.
- Revolving fund channelling to Rural Banks or Venture Capital Company, can be increased because they have better supervision from the Bank Indonesia.

Conclusions and Recommendations

The conclusion of this study are:

- In channelling the revolving funds, LPDB-KUMKM have standard operational procedure of lending to Micro and Small Enterprises (MSEs) through intermediary of Credit Unions, lending to Cooperatives, Small and Medium Enterprises through intermediary of the Venture Capital Company (PMV), lending to Cooperatives, Small and Medium Enterprises through Intermediaries of Banks, and lending directly to the real sector cooperatives and SMEs.

- From 2050 of study sample that was taken, most debtors are credit unions that is equal to 1629 with a percentage of 16.1% not performing, debtors who got a loan are at most 4 year old businesses, the greatest amount of the loan plafond are Rp.50.000.000.000 and the smallest are Rp.50.000.000,-, the greatest amount of interest rate of 9% is for credit unions, and 1245 debtors does not include their collateral for a loan with a percentage of them 17.76% not performing. Loans that disbursed to 1890 debtors, their administrative monitoring was not done with BI checking because the loans largely dominated with cooperative institutions.
- Overview debtor profiles not performing in LPDB-KUMKM is dominated by credit unions. Based on the analysis of logistics, there are four variables were significant to the collectibility of the loan ie interest rate, monitoring strategies by BI checking/non BI checking, level of collateral, and type of institution. Based on these four factors, monitoring strategies are the variable that influences most significantly and has positive impact on the quality of non performing loans.

Relevant suggestion to solve the problem of bad loans is expected to be useful for the related parties which is, the lending to cooperatives especially credit unions should be more careful to tighten lending requirements. The researcher parties next research is expected to add other variables that have not been tested in this study further, for example direct research to the end user of intermediary dealer loan or adding research variables.

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