

Creditric Calculation Model in Micro Financing IB on the Agricultural Sector in PT. BRI Shariah

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Abstract: Micro-enterprises, especially the agricultural sector is one of the centers of attention in the development and economy of Indonesia. One of the main problems in the agricultural sector is financing. Attention to the agricultural sector businesses are considered less, than that the agricultural sector has a fairly high risk. The purpose of this study was to analyze assessment with the principle of 5C, the risk of Islamic finance agriculture and calculating potential losses in the agricultural sector of Islamic finance BRI Syariah UMS KK Outlet Lembang. Bank BRI Syariah Lembang UMS KK Outlet is one of sharia institutions that provide microfinance iB allocation to the agricultural sector. This study uses primary data and secondary data. This study was conducted by quantitative descriptive method. Data analysis techniques to analyze the risks of Islamic finance is done by using stages Enterprise Risk Management (ERM) and methods creditrisk +. The results showed that BRI Syariah KK Lembang focus on 3C (character, capacity, and collateral) and sharia. There are 31 events in the risk of Islamic micro financing in the agricultural sector. One incident contained in the unacceptable level, this level is conducted and immediate action is needed to manage the risks, there is one event that a customer fails to pay. This can happen because the business went bankrupt, failing to harvest the influence of climate/weather, pests and fluktuaktif market price. Potential losses in the agricultural sector microfinance bank BRI Syariah KK Lembang in estimates is high at 91.92%. Risk mitigation measures that can be done is restructurin, disbursement of voluntary customer guarantee or together.

1 INTRODUCTION

Financing make a donation large enough in channeling the funds given by the Islamic bank, one of the financial institutions are aiming for segmentation of micro enterprises especially the agricultural sector, namely Bank Rakyat Indonesia Sharia (BRIS). With one of his cash office is located in Lembang Bank BRI Syariah KK Lembang.

The agricultural sector in the area of the Valley is one of the Bank's target market segmentation BRI Syariah KK Lembang given that the result of agricultural trade in the Valley it sustains a wide range of basic necessities in Bandung. But behind it was the agricultural sector experienced a decrease in Lembang price in the market, the weather also has a very strong influence resulting in reduced crop yields by 50% to 70%. (Suryana et al., 2016).

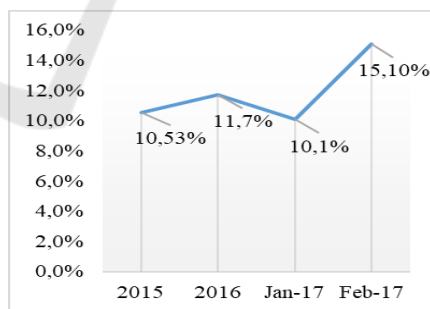


Figure 1: Nonperforming Finance BRI Syariah Outlet Lembang.

Source: Bank BRISyariah UMS Outlet KK Lembang (2017).

In figure 1, Non Performing financing (NPF) BRI Syariah KK Lembang in 2015 to 2017 in February have elevated her above NPF fairly high average level of bank health, even to exceed the provisions of 5% BI, one of which is present on the granting the financing of the agricultural sector, bank BRI Syariah

KK Lembang surely must be balanced with the risk management, this position on reputation management company in the League if it is able to control risk are good then the reputation will go up, if not able to control vice versa BRI Syariah KK Lembang his reputation will plummet.

The need for a series of procedures and management of financing feasibility risk facing financial institutions including Islamic banks, according to the research of Safitri and Hendry (2015), more emphasis on the principle of prudence, quickness, convenience and safety for Parties to the customer or the bank. But according to Rahma Yudi Astuti (2016) implementation of prudence here, that the procedure for channelling financing and credits do not based on raw or SOP guidelines alone but must respond to the internal integrity of dabbling on the process of channeling financing.

However, if seen from the distribution of financing on the agricultural sector, according to Rindi (2016) with focus on given micro financing on the agricultural sector cut flowers in a bank BRI Syariah Setiabudhi Bandung that the bank less meticulous in analyzing the agricultural aspect of the 5 c of the customer, as well as his less monitoring and follow up, against the customer who has provided the financing so that the NPF bank increases can be said that risk management in a bank BRI Syariah Bandung Setiabudhi felt less. Lack of access to economic resources, particularly funding for the agricultural sector and the SMES in the country Nigeria and hinder economic growth and development (Olaitan, 2006)

Based on the results of earlier research and the problem then a writer interested in researching microfinance risk management agriculture research with the title of "Model of computation of Credit risk + in Micro financing iB On the agricultural sector at PT. BRI Syariah UMS KK Outlet Valley". The benefits of research conducted in particular bank BRI Syariah is to optimize the Islamic financing in the agricultural sector and can formulate a risk management strategy in order to maintain competitive edge excellent service bank BRI Syariah and developing new innovations in the future.

2 LITERATURE REVIEW

According to of the Microcredit microfinance is a program of giving small loans to poor people for self-employment or business projects they run that generate profit by allowing can guarantee the life of the self himself and his family. Financing or financing

is the awarding of kucuran funding provided by one party to the other party to support investment that has meant well done by the party itself or an institution (Muhammad, 2005). Characteristics of micro-finance or microfinance, according to Abdul Rahim (Rahman, 2010) among other lending on a small scale to small entrepreneurs and small-scale lending apply also to the poor.

Microfinance is designed to help the poor and microfinance service providers are always related to the granting of funds for a very poor community, the microfinance scheme had operations since the year 1960-70s but already since a long time usage for conventional microfinance is always involved, whereas the majority of the poor who have low incomes and the majority of Islam would still choose access in islamic microfinance (Wilson, 2007).

Banking risk management as in the regulation of Bank Indonesia No. 11/25/PBI/2010 on the application of risk management for commercial banks is a series of methodologies and procedures used to identify, measure, monitor problem circumstances, and manage risks arising from all activities or the activities of a project business bank (Farida and goddess, 2016). Enterprise risk management is a system of management of risks faced by the Organization in a comprehensive manner with the end goal of increasing the value of the company (Laluma, 2011).

In addition, the granting of financing by type of activity is financing institutions infuse funds that often become the main cause of the financing institutions face big problems (Siswanto, 1997). A risk is an event or an event that in case of can impede the achievement of the goals or objectives of a company Division (Hery, 2015). Necessity of risk management risk management is conducted, is a field of study that exposes about how an organization apply a measure in mapping the existing problems with a variety of management approaches in a comprehensive manner and systematic (Fahmi, 2015).

If humans are able to predict future events as this is contrary to the provisions of the word Allah in terms of Commerce was only Allah can predict profit or loss and the man only as sought in the management of risk in order to more was and alert in the management of his business (Rivai and Ismal, 2013). The word of God Surat Al Baqarah ayat Al-Baqara verse 280 and 283:

وَإِنْ كَانَ دُوعُسْرَةً فَنَظِرَةٌ إِلَىٰ مَيْسَرَةٍ ۗ

"And if (the person who owes it) in the lurch, then give respite until he widened"

One of the tools of risk management is the analysis of Enterprise Risk Management (ERM), is defined as a process to manage risks of the company as a whole to reach different types of risk, and lines of business ((IBI) Ikatan Bankir Indonesia, 2015). According to the COSO (2004) that the company must apply the 8 stages of important components that are interdependent and relate in risk management is the internal Environment (Internal Environment), goal Setting (Objective Setting), the identification of event (Event Identification), the task is at risk (Risk Assessment), response (risk Response), the activity control (Control Activities, information and communication (Information & Communication) and monitoring (Monitoring). One of the analytical tools to measure failure risk is Credit risk + model it for analysis failure of risk which must be faced at a time when the debtor was in a State of not being able to pay his debts (CSFB, 1997). This is applied to calculate the credit risk, where the distribution of losses from the credit portfolio is reflected by the frequency from the default (the frequency of event) and the value of loans defaulted (severity of loss) (CSFB, 1997).

3 METHODOLOGY

In accordance with the original purpose of this research is to analyze the risk management over the potential risk of micro financing iB on the agricultural sector in the bank BRI Syariah KK Lembang. Objects in this research was conducted at Bank Rakyat Indonesia (BRIS) Sharia cash office. Based on the objectives to be achieved, then the research is

descriptive research using quantitative directed. Data sources used for this research in the form of primary data and secondary data.

In this study the method of purposive sampling will be imposed on the practitioner's role as informant BRI Syariah KK Lembang. Upon consideration of the chosen that respondents selected customer/trade in the agricultural sector.

Data analysis techniques used in this research is a descriptive analysis, i.e. the method of ERM with the research phase are used in analyzing financing risk management within the agricultural sector in BRI Syariah KK Lembang consists of 8 components Enterprise Risk Management (ERM) and to measure the potential harm micro financing iB credit risk + is calculated by the method of aiming to measure the failure of risk which must be faced at a time when the debtor was in a State of not being able to pay his debts.

4 RESULTS AND DISCUSSION

The identification of the risks already mentioned earlier then calculated or assessed with measurements being an indicator of the size of the risk. The possibility of risk or probability of risk impact risk and then converted into the form of a score based on the indicators on the impact of the risk, this will result in a score of risk which further grouped in accordance with the category level risk, and risk mapping done by classifying into 4 levels of risk which comprises unacceptable levels, issue, supplementary issue, and acceptable (Hery, 2015).

Table 1: Risk mapping.

Risk Probability	Index	Risk Effect				
		Catastrophic	Significant	Moderate	Minor	Insignificant
		5a	4a	3a	2a	1a
Catastrophic	5a	25 Unacceptable	20 Unacceptable	15 Unacceptable	10 Supplementary Issue	5 Supplementary Issue
Significant	4a	20 Unacceptable	16 Unacceptable (14)	12 Issue	8 Supplementary Issue (3,8,12,16)a	4 Acceptable
Moderate	3a	15 Unacceptable	12 Issue (13)a	9 Issue (11,15,29)a	6 Supplementary Issue (9,20,24,26,28)a	3 Acceptable (17,21)
Minor	2a	10 Issue	8 Supplementary Issue	6 Supplementary Issue	4 Acceptable	2 Acceptable
Insignificant	1a	5 Issue (1,4,7,22)	4 Acceptable (6,10,19,23,27)a	3 Acceptable (2,18,25,31)a	2 Acceptable	1 Acceptable

Table 1 is risk mapping, unacceptable levels of depth, this level is done immediately and action needed to manage risk, if the risk of this happening obviously will have an impact is very detrimental to the bank. Unacceptable levels of classification i.e. the customer experience the default (the default) to the bank or financing problem. Previous research revealed that the respondent agriculture requires funds for agricultural businesses although must face various risks (Azis and Yusoff, 2014).

Of the 18 total financing the troubled debtors who are in collected 2-5 i.e. Rp. 1,967,302,427. Then a group of debtors agriculture bank BRI Syariah KK Lembang grouped based on the assumption of likelihood of default (probability of default), the next step of determining the value of the value of the recovery rate and the real loss, the real value of stop loss value between zero (lowest) means there is no loss at all, if exceeding the number one (highest) means that the company facing a loss in the amount of 100% RR and Riil Lost can see in table 2.

Table 2: RR and Riil Lost.

Costumer	RR	Riil Loss
A	0,38	0,62
B	0,14	0,86
C	0,21	0,79
D	0,90	0,10
E	0,51	0,49
F	0,31	0,69
G	0,64	0,36
H	0,39	0,61
I	0,16	0,84
J	0,38	0,62
K	0,92	0,08
L	0,51	0,49
M	0,69	0,31
N	0,52	0,48
O	0,67	0,33
P	0,29	0,71
Q	0,91	0,09
R	0,31	0,69

Source: Micro Finance IB Data, Processed

After determining the value of RR and the real Loss, and then calculate the expected loss and expected loss individually. After the calculations are then retrieved a total of value of expected loss amounting to Rp 675,477,523 appeal, thus, total losses should be covered by the provision of company bank BRI Syariah KK Lembang is amounting to Rp 675,477,523. After the results of the expected loss. Then it can be resumed by calculating the expected loss in each individual each classroom appeal that

appointed, divided so 10 classes in a group exposure to 1 million, 10 million and 100 million.

The next step of determining the number of the customer, the determination of the amount of the debtor's gridlocked in the method of computation of credit risk + use statistical analysis using the poisson distribution. Authors using microsoft excel in a calculation. Then retrieved the number of debtors who could jam with 96% confidence level as follows table 3:

Table 3: Determination of n-poisson distribution with the default.

Class	1 Million	10 Million	100 Million
	Poisson	Poisson	Poisson
1	0,830178	0,883795	0,71003
2	-	0,930397	-
3	0,735758	0,695369	-
4	-	-	-
5	-	0,930397	-
6	-	0,928661	-
7	0,761488	0,914098	-
8	-	0,739437	-
9	0,926907	-	-
10	-	-	-

Source: Research Result (2017)

The next step is the calculation of Unexpected Loss (UL) loss due to non-payment borrowers who should be controlled while not expected before. It became the image of the magnitude of the potential losses that will be faced by bank BRI Syariah KK Lembang, the value of the loss that was not expected and should be controlled normally total value of unexpected loss bigger than expected loss.

The result of the calculation of the unexpected loss showed the potential losses to the agricultural sector amounted to RP. 731,280,608. The values emerge from every 1 person debtor who could jam from-1 million, 10 million, and 100 million. The potential losses are more dominant in the appeals of 10 million with a value of Rp. 604.310.641. Last step i.e. calculating economic capital calculation based on obtained values economic capital, amounting to Rp. 55,803,085. So the capital should be provided due to the unexpected loss is loss of Rp. 55,803,085.

As the event risk has been explained earlier that the bank BRI Syariah events the most prominent risk i.e. the customer hangs/default where the customer is not able to reimburse the installment to the bank, then the Act of monitoring/ monitoring for the troubled financing is absolutely necessary. Abdullah (2013) are trying to see the granting of financing on the agricultural sector with comparison with

manufacturing, construction and real estate in Malaysia, it turns out the research stated that there is a correlation and levels of his output is significantly higher, in this study turns out to reap the results of that research results have a positive impact towards economic growth in Malaysia.

Significant relationship between the agricultural sector and Islamic banking that provides ease of different types of capital for farmers which means improving the livelihood of the farmers, but farmers face financing problematic in usability to the banking Sharia (Hassan, 2012). The positive role of financial institutions and provide solutions to access financing on farmers so as to promote agriculture in Malaysia (Mohd et al., 2015).

There is research done by Rashid (2013) the results of his research mentioned that in Pakistan the agricultural sector is still minimal funding and climate also influence against the sustainability of the agricultural business. This is a picture in the agricultural sector to obtain running funding, whereas if it is seen that the agricultural sector is quite large participation in donations of food for humans.

Based on the research result Santeramo et al. (2014) that the lack of massive intervention against the agricultural sector to provide assistance in the form of subsidies or funding his results the agricultural sector at risk as heavy as productive potential, vulnerability and food insecurity. That is on offer in risk insurance contract here should be on the increase.

The results of this study refers to the value of the regression showed a significant positive relationship but not between the company and the value of ERM. These findings do not support the assumption that increasing the value of ERM company, also showed a significant negative relationship between the value of the company, its size and profitability. (Tahir, 2011)

First, if the troubled financing the bank dug deeply starting from character or Action monitoring its efforts to providing supervision and coaching to customers who default. Secondly, if business borrowers into bankruptcy, damage caused by nature and other external factors then it is done restructure. The Act of monitoring i.e. monitoring, review location customer efforts to see his efforts with the purpose of knowing the level of health of his efforts, then another to bank out fash or take over other to bank.

If viewed from the pasca finding and the disbursement of financing actions monitoring is done by analyzing in an orderly start from character or characters the customer effort, evaluation of

customer's financial reports on a regular basis, action monitoring also can be done by plunging directly into the customer's business location such as with hospitality.

5 CONCLUSIONS

Based on the results of the study conducted by the researchers, can be drawn the conclusion that the results of the judging aspect 5 c (character, capacity, capital, condition, coletteral) + Sharia, that BRI Syariah KK Lembang focus more on 3 c (character, capacity, colleteral) + Sharia. Furthermore, the results of the identification of risk financing and operational risks related to the agricultural sector in the bank BRI Syariah KK lembang, either directly or indirectly generate a risk event that consists of 31 16 event risk 13 financing of operational risk events, and 2 external risk events.

Results for mapping and measuring the risks associated with the agricultural sector with an unacceptable level of risk events with 1 as the customer experience a default to the bank because his business into bankruptcy. After the results of the calculation of the potential loss of Sharia financing micro iB for the agricultural sector in the bank BRI Syariah KK Lembang being estimated at RP. 731,280,608 this relatively high potential 91.92% if compared with the total of his tray of Rp. 795.537.654 And further risk mitigation action that results in a set of bank BRI Syariah KK Lembang, one of the major risks in financing micro-iB is the financing problematic/jammed. So the risk mitigation actions that can be performed by bank BRI Syariah KK Lembang IE restructure, customers guarantee disbursement on a voluntary basis or together. Risk mitigation actions can be done with monitoring at regular intervals. This contribution deals with the implications of the development of the theory in economics, specifically on the measurement of the probability of the risk with Enterprise Risk Management (ERM) and measuring potential losses with Creditrisk +.

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