CREDIT RISK MANAGEMENT SYSTEM OF COMMERCIAL BANKS: AN ANALYSIS OF THE PROCESS

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ABSTRACT: *Credit risk is the risk that a financial institution will incur losses because the financial position of a borrower has deteriorated to the point that the value of an asset (including off-balance-sheet assets) is reduced or extinguished. The purpose of this work is to expatiate strategies to mitigate challenges resulting from unpaid loans, which could be used further in understanding the components of credit risk management (CRM) system of commercial banks (CBs) in a less developed economy. This was accomplished through the use of both primary (interviews) and secondary (various relevant documents) information from CBs and key management officials dealing with credit management. The investigation proved that credit risk can be managed and minimized when formidable strategic approaches are implemented and adhered to. This implies that the strategy operated by a bank is an important consideration for a CRM system to be successful. Ghana, a less developed economy, provides an excellent case for studying how CBs operating in economies with less developed financial sector manage their credit risk.*

KEYWORDS: Credit Risk Management, Commercial Banks, Borrower, Loan

INTRODUCTION

Financial institutions (FIs) are very imperative in any economy. Their role is similar to that of blood arteries in the human body, because FIs pump financial resources for economic growth from the stocks to where they are required (Brooks, 2014). Commercial banks (CBs) are FIs and are key providers of financial information to the economy. They play even a most critical role to developing economies where borrowers have no access to capital markets. There is an indication that well-functioning CBs accelerate economic growth, while poorly functioning financial institutions hinder economic progress and intensify poverty (Muye and Muye, 2017). Commercial banks are confronted with various risks that can be categorized into three groups; financial [with credit risk (CR) being a component], operational and strategic. These risks have diverse impacts on the performance of CBs. The extent and the level of loss caused by CR compared to others is severe to cause bank failures (Ladley, 2013). Over the years, there have been increased number of substantial bank problems in both matured and emerging economies. Credit problems, especially weakness in credit risk management (CRM), have been identified to be a part of the major reasons associated with banking difficulties. Loans constitute a large proportion of credit risk as they normally account for highly significant in the equity of a bank. Thus, the banking business is likely to face difficulties when there is a slight deterioration in the quality of loans. Poor loan quality has its roots in the information processing mechanism. Laeven (2014) observed that these problems are at their acute stage in developing countries. The problem often begins right at the loan application stage and increases further at the loan approval, monitoring and controlling stages, especially when CRM guidelines in terms of policy and strategies or procedures for credit processing do not exist or weak or incomplete. Lending has been, and still is, the backbone of banking business, and this is truer to emerging economies like Ghana where capital markets are not yet well developed. To most of the transition economies, however, and Ghana in particular, lending activities have been controversial and a difficult matter. This is because business firms on one hand are complaining about lack of credits and the excessively high standards set by banks, while CBs on the other hand have suffered huge losses on bad loans. It has been found out that in order to minimize loan losses and so as the credit risks, it is essential for Commercial banks to have an effective CRM system in place (Muro et al., 2013). Regarding asymmetric information that exists between lenders and borrowers, banks must have a mechanism to ensure that they do not only evaluate default risk that is unknown to them ex-ante in order to avoid adverse selection, but also that can evolve ex-post in order to avoid moral hazards. According to Molla (2018), CRM is very essential to optimizing the performance of banks. Recognizing this importance, this paper focuses on understanding and evaluating the credit risk management system of commercial banks operating in Ghana.

LITERATURE REVIEW

What is meant by Credit?

The term Credit, in Latin means "he or she believes". This “believe” is the trust which permits one party to offer resources or money to another party whereby the second party does

not instantaneously or right away reimburse the first party. This spawns a debt to the second party, but with an arrangement either to repay or return those resources or possessions of equal value or excess at a later on. Credit is a contractual agreement that permits a borrower to receive something of value and agrees to reimburse the lender at a later date, usually with an interest. As opined by (Tetteh, 2012) the resources granted may either be financial (for instance loans), or they could be goods or services (e.g. consumer credit). However, credit includes any form of postponed reimbursement given out by a creditor (called the lender) to a debtor (referred to as a borrower).

Lenders (credit providers), such as banks, building societies, credit unions or finance companies, provide credit to borrowers who promise to pay at a stipulated date. Previous studies by Liberman (2016), Ouazad and Rancière (2016) and Koulafetis (2017) have reported that there are different forms of credit, including bank credit, consumer credit, international credit, public credit, investment credit, rent to buy and mortgages. Individuals and organizations have different motives for accessing credit. The rationale and the nature of credit have been classified into short-term, medium-term and long-term loans (Sedlak et al., 2016). The short-term loans are advances (e.g. personal loans) extended to the borrower with a payback period of not more than five (5) years. Medium-term loans (intended for Small and Medium Enterprises) have a repayment period that falling between five (5) and ten (10) years. Long-term loans (meant for larger corporate bodies) as the name points out, have a repayment period of more than ten (10) years. In Ghana, majority of the borrowers access short and the medium-term loans (Tetteh, 2012). It has been demonstrated by (Seifert et al., 2013) that banks profit from advancing credit to customers. An emphasis by Silvestro and Lustrato (2014) stipulates that one of the main significant operations of the banks is allotting credit to clients, and also being a major asset of the organization. It has the ability of generating colossal profit

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but comes with equally high risk as well. Bhasin (2015) found that credit menaces are the highest registered when banks are linked with losses. The credit menace arises from a borrower who does not honor reimbursement as promised (Maroro et al.).

Credit Risk Management

The principal goal of credit risk management is to decrease the effects of risks, related to an influence accepted by the public (Brigham et al., 2016). Usually, loans are the prime and most apparent source of credit risk of banks. However, there are other sources of credit risk which exist throughout the bank activities; including in the banking book and trading book that could appear on and off the balance sheet. Nowadays, commercial banks are increasingly prone to reasonably higher credit risk levels (Olson and Zoubi, 2017). These financial mechanisms include foreign exchange transactions, interbank transactions, bonds, trade financing, equities, swaps etc. In 2017, Brink (2017), Falkner (2017) and Harper et al. (2017) demonstrated that risks are several types of threats caused by humans, technology, organizations, environment and politics. Conversely, risk management involves all means available for person, staff, and organization to minimize or avoid a potential peril (McIlwraith, 2016). It is the duty of management to set up a credit supervision team to ensure that credit is properly maintained and administered. Gibson (2014) re-counted that one of the principal functions of an organization should be focused on risk management. Risk management involves identification, measurement, aggregation, planning and management as well as monitoring of the risk. Procedures for measuring a firm's overall exposure to credit risk as well as stringent internal rating system should be adequate (Kalunda et al., 2012). Effective Credit Risk Management involves establishing a suitable environment; operating under a sound credit granting process; maintaining an appropriate credit administration that involves monitoring process as well as satisfactory controls over credit risk (Gaitho, 2013). Top management is mandated to ensure that appropriate and clear Credit Risk Management guidelines. They plainly outline the scope and allocation of the bank credit facilities and the mode in which a credit portfolio is managed, i.e. how loans are initiated, evaluated, supervise and collected. In view of this, the guidelines should be well communicated throughout the organization; and that all and sundry involved in Credit Risk Management is obliged to understand them. This will enhance better application of those guidelines in the interest of the banking organization. Effective system ensures that loan repayment by borrowers is critical, thereby reducing the amount of loan losses to boost long-term success of the bank. Screening borrowers is a strategic activity that has generally been implemented

(Philippon, 2015) in the banking sector in terms of credit assessment. Gathering of reliable information from probable borrowers is imperative in carrying out effective screening. The assessment of borrowers can be performed through the use of qualitative or quantitative techniques. Borrowers' characteristics assessed through qualitative models can be assigned numbers with the sum of the values matched up to a threshold. This method is termed as "credit scoring". The modus operandi cannot only reduce processing costs but also reduce prejudiced judgments and possible biases. However, quantitative models make it possible to numerically establish which factors are critical in explaining default risk. The models evaluate the relative degree of importance of the factors, improve the pricing of default risk, be more able to screen out bad loan applicants and be in a better position to compute any reserve needed to meet anticipated future loan losses (Paseda, 2017). The meaningful rating systems signal changes in the expected level of loan losses of the bank. While managing credit risk, clearly established

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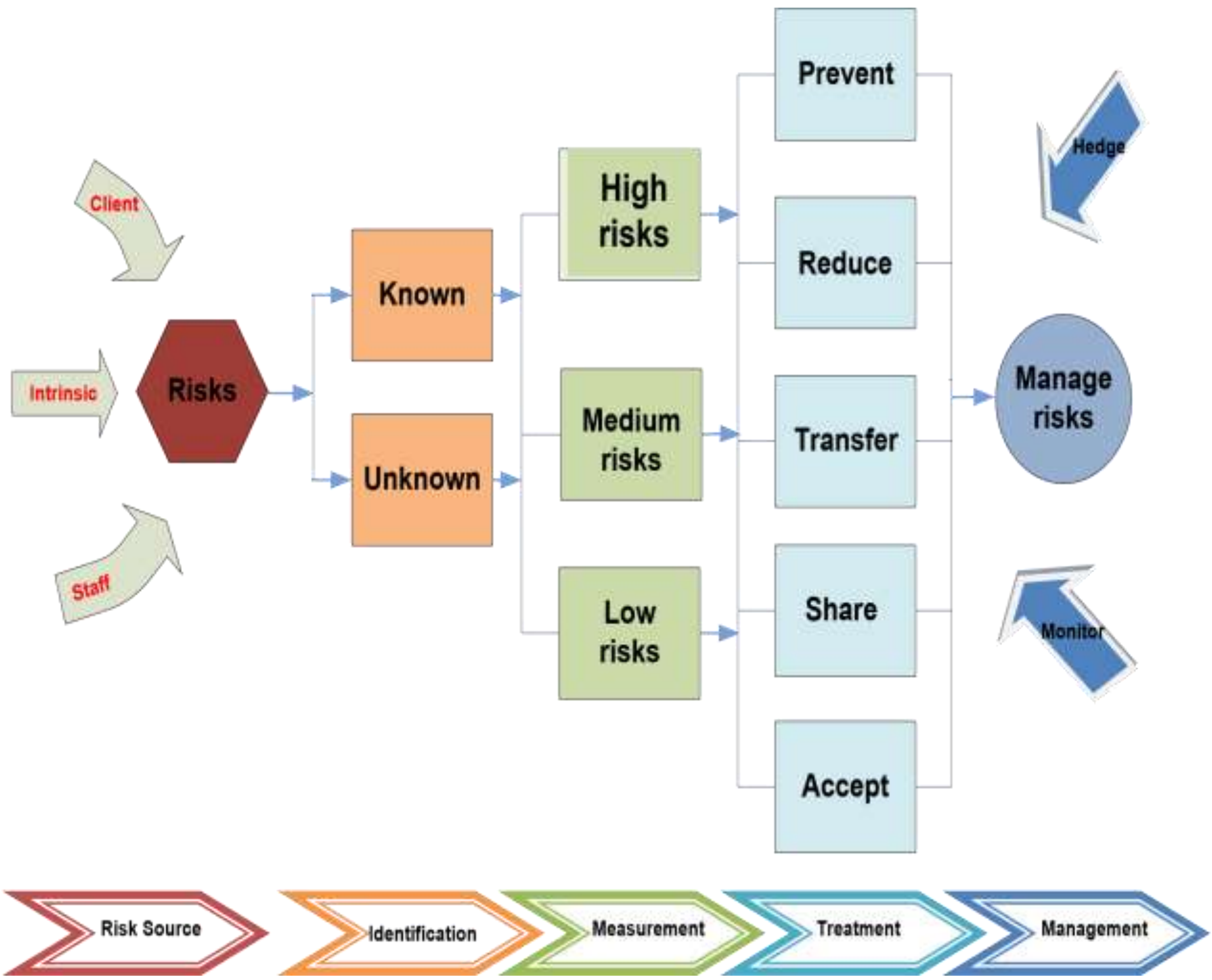
process for approving new credits and extending the existing credits should be seen as very significant.

Credit Risk Management Process

The process of management of credit risk in banking business tracks on the risk identification, measurement, assessment, monitoring and control. It involves identification of possible risk factors, evaluate their consequences, monitor activities exposed to the identified risk factors and institute control measures to prevent or reduce the unwanted effects. This process is applied within the strategic and operational framework of the bank.

Figure 1 : Credit Risk Management Process



Credit risk mostly crops up when the client or counterparty fails to meet its commitments in accordance with the agreed terms. The bank is expected to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. The primary goal of credit risk management is to increase a bank's risk-adjusted rate of return (Eckles et al., 2014) by managing credit risk exposure within acceptable structures. The sound practices seek to strive for integrated actions to specifically manage risk. The practices include: (i) identifying a potential credit risk; (ii) measuring the intensity of the risk; (iii) assigning an appropriate treatment to the credit risk detected; and (iv) monitoring and ensuring suitable control over credit risk. For these practices to be realized, principles for the management of credit risk cannot be circumvented. When a customer to whom a bank lends credit defaults on the payment; the bank is at a major risk, because its growth plans are based on the investments it makes out of the interest earned on this loan. However, regulatory requirements on loans should be more stringent, and banks are expected to become more circumspect in their lending activities. This will reduce indiscriminate and reckless lending, which could increase default rate. If a loan is to be allotted proper credit risk management process is required. Implementing a risk solution is very significant when a sound financial model runs through the entire business, as well adhering to real-time monitoring of credit scores. According to Weber et al. (2008), the process of credit risk management can be structured into the five phases, namely; rating, costing, pricing, monitoring and work-out phase. The main purpose of the rating is to verify the borrower's default risk. A credit rating comprises of an assessment of the creditworthiness of a borrower, to avoid the risk of default which could lead to financial losses. The borrower information is relevant to the lending decision. With this, loan managers conduct a credit assessment before lending money to the client. In addition to the personal credibility check, a credit merit appraisal is done to determine default probability of the loan. However, the rating officers must take a balanced and objective view of the borrower's financial condition and ability to repay the debt. Costing is needed in the process to quantify the expected loss from the loan in case the borrower becomes insolvent or bankrupt. The cost of risk includes two components: the statistical loss, or average loss as a result of default ("expected loss"), and the cost of losses in excess of the average loss. The statistical loss is the average loss due to defaults (or "expected loss") as a percentage of the balance of the loan. Expected loss depends on the borrower's credit risk. In the pricing phase, the identified costs are incorporated into the credit conditions. By charging every borrower a premium based on the expected loss, the average loss in loan through lending can be compensated for. Therefore, the bank will not suffer much in an event of loss. Monitoring is very important when loans are given out to customers. Monitoring involves frequent contact with clients, creating a conducive environment that the bank can be seen as a problem solver and a trusted adviser. Loan administrators are supposed to keep an eye on repayment rates and processes. Regular review of the borrower's loan information, as well as frequent on-site visit, updating borrower's credit files, enhance the extent at which the loan is remitted. During the loan period, the credit is decisively observed and changes in credit risk are examined. The purpose in the work-out phase is to trim down losses and if feasible get the borrower back on track. If a borrower's expected loss increases, the reason(s) accounted for this should be investigated and corrective measures taken to avert the situation. Bad credits (indicating credits that can partly be paid back or not at all by the borrower) are managed in the work-out division of the bank. Solutions offered to borrowers differ from an individual, company or entity to another in times difficulties. Therefore, every other phase of the credit risk management process is very important to the success of the bank.

METHODOLOGY

Structured and non-structured questionnaires were designed to obtain information on credit risk. This is because, we needed to gather firsthand information from the source. Apart from getting data from respondents, secondary data (such as reports, statements, newsletter and other

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relevant publications of the banking industry) were also collected from the banks to complement the survey data. Views of 285 respondents from 23 commercial banks were sought. The questionnaires were distributed to Credit Managers or Loan Administrators of the selected banks. These people were selected because they are involved in the credit allotment, formulating of credit policy and also ensuring that the credit policies are put into operation.

The Regression Model

A model was designed to assess credit risk management system of commercial banks.

The regression equation takes the form:

$Y = a + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 + b6X6 + b7X7 + \mathcal{E}$

Where; Y is the Minimization of credit costs (MCRE)

X_1 is Elimination of bad customers (EBAD)

X_2 is State of the economy (ECON)

X_3 is Quality of staff (STAFF)

X_4 is Credit appraisal (APPR)

X_5 is Financial stability of the customer (FSTA)

X_6 is Collateral (COLA)
X_7 is Credit manual (CREM) a is the Constant term b_1 to b_7 are Coefficients

$\mathcal{E}$ is Error margin

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RESULTS

Table 1: Results of Regression

Variable	Coefficient B	Std. Error	t	Sig.	95.0% Confidence Interval for B		Rsquare
					Lower Bound	Upper Bound	
Elimination of bad customers	0.634	0.151	4.197	0.000	0.337	0.932	0.776
State of the economy	-0.102	0.108	-0.947	0.345	-0.314	0.110	
Quality of staff	0.146	0.104	1.397	0.005	-0.060	0.352	
Credit appraisal	0.304	0.093	3.251	0.001	0.120	0.488	
Financial stability of the customer	0.010	0.073	0.132	0.895	-0.134	0.153	
Collateral	0.603	0.137	-4.387	0.000	-0.873	-0.332	
Credit manual	0.491	0.056	8.745	0.000	0.380	0.602	
Constant	5.342	1.880	2.842	0.164	1.642	9.042	

a. Dependent Variable: Minimization of credit costs (MCRE)

The regression model arising from the data above is:

Y = 5.342 + 0.634X1 – 0.102X2 + 0.146X3 + 0.304X4 + 0.010X5 + 0.603X6 + 0.491X7 + Ɛ

Having set our Confidence Interval level at 95.0%, results of coefficient estimations of the study are shown in Table 1. With R-Square of 0.776, it means that model suitably predicted 77.6% of the distribution. This indicates that there was a level of appropriateness as a result of the reasonable estimation of the predicting variables. The coefficient of Elimination of bad customers (EBAD) is 0.634. This indicates that the degree of Elimination of bad customers (EBAD) contributes positively to Minimization of credit costs (MCRE) substantially. The coefficient of State of the economy (ECON) is found to be negative (-0.102) for Minimization of credit costs (MCRE). This indicates that the State of the economy (ECON) has a negative effect on credit cost minimization.

For Quality of staff (STAFF), the study produced a coefficient value of 0.146. This implies that STAFF has a positive effect on MCRE. From the investigation, it realized that the independent variable (STAFF) had a highly significant value of 0.000, demonstrating that Quality of staff

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has a higher tendency of minimizing credit risk. Our study confirms earlier research works by Gyabea (2016) and Dexu and Wenlong (2016) which identify that Quality of staff has the proclivity to reduce credit costs. Credit Appraisal (APPR) has a coefficient of 0.304 for Minimization of credit costs (MCRE). This means that for every unit increase in Credit Appraisal (APPR), we anticipate a 0.491 unit increase in Minimization of credit costs (MCRE), having all other variables constant. The result showed that APPR has a positive relationship with MCRE, and also with a high statistically significant value of 0.001. This indicates that the variable, Credit Appraisal (APPR) is highly capable of minimizing credit risk. This outcome corroborates previous research by Taiwo et al. (2017). The result produced by Financial stability of the customer (FSTA) on Minimization of credit costs (MCRE) was statistically insignificant. According to the outcome of the study, FSTA cannot be a predicting variable for MCRE. The p-value for FSTA is 0.895. From Table 1,

Collateral (COLA), as well as Credit manual (CREM) had positive effects on reducing credit risk. They both produced a high statistical significance level of 0.000, illustrating that these independent variables have a strong predictability power of the outcome; Minimization of credit costs (MCRE).

DISCUSSION

Credit risk management should not necessarily be a stringent regulatory activity, but rather a proactive, strategic and business-driven control for the banking sector. However, it has to do with putting in place strategies that generate an enabling environment for creditors and borrowers to make better investment decisions. The sense of balance is realized when the bank has a system for allotting the right amount of money and ensuring repayment of the loan. Credit risk issues should be assessed by the Credit Managers or Loan Administrators such that strategies could be also established on credit risk management. The strategies can be like credit policy manuals which could be the blueprint used by banks in its decision to allocate credit to clients. Harris (2015) claims that the credit instruction manual espouses credit limits, establishment of credit period, as well as credit rating of customers. The principal objective of a credit policy guideline is to circumvent extending credit to clients who are unwilling or incapable to pay back the loan received. This blueprint will assist Credit Managers or Loan Administrators to do proper credit appraisal on the borrowers. Credit Appraisal ensures that a lender appraises the technical likelihood, economic feasibility and bankability including creditworthiness of the borrower. It assesses if the client is likely and responsible to pay back the loan sum in the stipulated time, or not. This would help in eliminating bad customers who would take the loan but unable to repay the amount as intended. The bank is expected to identify and get rid of bad customers who possess non-value activities, behaviors and actions that increase credit risk. Nonetheless, the financial stability of the customer remains so important, albeit with reducing credit risk. The customer whose financial position is not strong or stable is likely to default in repayment of the money borrowed (Olowa and Olowa, 2017). In an event of default, banks require collateral or a property or other asset offered by the borrower as a way for a bank to protect the loan. The collateral offers some security to the lender should the customer fail to repay the loan. Properties such as a house or an automobile can be used as collateral, and safety is placed on such item. Usually, credits that are safeguarded by collateral characteristically have lower interest rates, larger loan amounts, or better terms than unsecured loans. This initiative relives the clients of higher interests, and therefore makes

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them encouraged to pay. Also, due to the collateral taken by the lender, the borrower would make a frantic effort for debt settlement, in order to possess the property once again.

CONCLUSION

The research findings pointed out that credit risks are minimized whereby enhanced credit control policies are established. Apart from having sound credit policy guidelines, banks should have credit control measures and actions organized as a unit or department to ensure that monies disbursed to borrowers are tracked and retrieved. The departmental head should be fully involved in credit risk assessment as a periodic modest practice in managing credit risk (Dlugosch et al., 2018). The core functions of a credit department include evaluation of credit risk, establishment of credit terms and limits, monitoring and control of debt, ensuring that the customer master file is up-to-date and accurate, collection of payments from borrowers. Also, through the department, high risk customers are kept under control, and action is swiftly taken to resolve any uncertainty or disagreement that crops up. The strategies and roles played by credit administrators to minimize risks are geared towards creating optimum cash flow while at the same time ensuring continuity of the banking business. In spite of identifying the organization's business strategy and what it must do to succeed, competent staff members are required to minimize risk. During granting of loans, the officer should establish his or her credibility as a professional, knowledgeable, wellinformed and friendly businessperson. As asserted by Kirschenmann (2016), the credit officer is expected to ask valid questions and gather information about the borrower, as well as his or her banking history. Through this, the officer can develop initial observations about client's behavior and right from there evaluation starts. Addae-Korankye (2014) bemoaned that many of the agonies and frustrations of slow and distressed credits can be avoided by good loan supervision. As the loan is given out, continuous supervision reduces credit risk, through effective monitoring and thereby improves bank loan growth. However, if his credit scores come in lower than expected, the credit officer can suggest ways to improve them, which could potentially reduce lending costs. Credit risk is the most critical risk and hence must be well managed, since it could greatly affect the performance of the bank.

RECOMMENDATIONS

The banking sector should encourage the use of a credit manual as a basis for sifting out bad customers. This research suggests that the banking sector should adopt the use of more hale and hearty practices in managing risk like credit insurance. In the bid to reduce credit risk, the banks are recommended to practice the use of credit derivatives. Credit derivatives present a distinctive opportunity for credit administrators to add a new dimension to their efforts to manage risks. Credit derivatives allow the lender or borrower to transfer the default risk of a loan to a third party (other than the lender or debt holder). Banks are also mandated to lay emphasis on credit appraisal as a way of evaluating loan applications to find out repayment ability of the borrower. The principal objective is to ensure the security of the money of that bank and its clientele.

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