KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ART AND SOCIAL SCIENCE

SCHOOL OF BUSINESS

CAUSES AND EFFECTS OF LOAN DEFAULTS IN THE BANKING SECTOR:

(A CASE STUDY OF OKOMFO ANOKYE RURAL BANK LTD)

BY

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DECLARATION

I hereby declare that this submission is my own work towards the award of the degree of Master of Business Administration (MBA) and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, expect where due acknowledgement has been made in the text.

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ABSTRACT

A lot of improvement has been made since the first rural bank was established in 1976 at Agona Nyarkrom.In as much as deposits have been mobilized, as well as loans been granted, the habit of savings and thrift have been inculcated in the minds of our rural dwellers, as well as jobs also been created for our rural people. The study was therefore aimed at addressing the following issues: identifying the causes and effects of loan defaults, determining ways of reducing loan defaults in the banking industry and identifying the category of clients who default to enable banks take decisions on how to reduce the incidence of bad loans. The use of both self-administered well-designed paper questionnaires and interviews of some respondents after thorough explanation of the objectives of the study are the main techniques of primary data collection. SPSS and Eview were the main statistical software's used. Frequency tables and graphs were used to draw data where applicable and analyzed adequately with the view of making financial sense from the data collected. Other statistical methods like the Categorical Regression, Linear Regression, Chi-Square Analysis, Analysis of Variance, among others were all employed to answer various research questions. The results of the study showed that, the major causes of loan default according to Bank Officials were diversion of loan, under financing, ineffective monitoring, poor weather conditions, marketing problems, lack of managerial know-how and terms of the loan whiles high interest rate, high processing fees, delayed in loan disbursement, short term of loan repayment and size of loans all accounted to defaults from the views of clients. From the study it was established that high rate of loan defaults affected the asset quality of the bank as well as reduction of profit of financial institutions. The following recommendations were made to reduce loan default by clients: Being due diligence and having prudent credit analysis to scrutinise prospective loan applicants of the Bank, regular monitoring of loans by Credit Officers, it is recommended that loans granted to customers should be well secured in terms of adequacy of the collateral provided and also ensure that proper legal documentation is put in place

DEDICATION

This write up is dedicated to my entire family especially my parents, The Very Rev and Mrs Kyei-Baffour and my siblings, Adwoa,Yaw, Kwadwo and Maame Yaa for their prayers, support and encouragement.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Britannica.com defined bank as an organization that deals in money as well as its substitutes and provides other financial services. Apart from Banks accepting deposits as well as granting loans, profit is derived from the difference in the interest rates paid and charged, respectively. Banks are therefore critical to our economy. Banks have the primary function of putting their account holders' money to use by advancing it out to others who require financial assistance at a price.

Since independence, the financial markets in Ghana have been dominated by both foreign and government-owned commercial banks. Deficiencies in the financial intermediation therefore provided the prospect for local private investors to enter the financial markets, especially in those countries where the domestic private sector was comparatively well established, such as Ghana. Between the late 1970s and the mid1980s, a number of rural or local banks were set up in Ghana. These rural banks were set up to render banking services to the rural people since the foreign banks were only operating in the regional and district capitals. Agona Nyarkrom Rural Bank was however the first rural bank set up in the country in 1976 at Agona Nyarkrom in the Central Region. Recent statistics indicate that there are about 143 rural banks in the Ghana.

One of the main functions of banks is to lend loans and advances to customers who however satisfy the credit requirements based on the credit policy of the bank. Whiles short-term, medium-term and long term loans were granted by the universal banks, the rural banks only focused on the granting of short-term and often medium-term loans. It is

noted that the main source of operating income to the rural banks is interest income (either loan, overdraft or investment interests respectively). Investment income is largely obtained from investment in Government Treasury bills. Rural banks therefore channel most of their investment into loans at relatively higher interest rates for more interest income due to the unstable rate of the Treasury bill. It is important to note that the main source of funds for the rural bank's lending and company expansion is the deposits mobilized from the deposit clients(ie the surplus unit) since the rural banks are not well capitalized. In view of this, all loans disbursed to clients must be paid promptly so that the surplus unit (deposit clients) can make withdrawals of their deposits without any liquidity problem while the banks make more return to maximize the wealth of the shareholders thereby increasing the value of the company.

In a Ghana Banking Survey Report that was released in 2010 authored by Price water house Coopers, the total income of the banking industry more than doubled between 2007 and 2009 thus, from GHC 793 million in 2007 to GHC 1.5 billion in 2009 respectively. This resulted in the rapid deterioration of the industry's loan portfolio which negatively affected profit margins over the period. Over the three year period, the impairment charges for non-performing loans augmented from GHC 60 million in 2007 to GHC 266 million in 2009. Nonperforming loan ratio which measures the ratio of loan losses to gross loan advances deteriorated from 16.2% in December 2009 to 17.6% as at December 2010 according to Bank of Ghana.

As a result of this, the matter of loan default has raised worries among the various stakeholders and there is the need to however put in place drastic measures to deal with the various causes. The causes and effects of loan defaults is consequently what this study

seeks to discover as well as proposing some suggestions to reduce loan defaults with special prominence on Okomfo Anokye Rural Bank Limited.

1.2 Research Problem

The most predominant source of income and typically the largest asset for banks is their loan portfolio but it has been argued however in Ghana that the rate of loan default is high which vehemently affects the financial performance of Banks. In view of this, some SMEs operators have seriously argued and accused some of the bankers about their unwillingness to grant them loans to finance their businesses. The bankers on their part have also been castigating the SMEs operators about their inability to pay back the loans and thereby increasing the rate of loan default risk. According to Ameyaw (2011) in the past decade, the causes of loan default among group members and individuals have gained an ill fame from both the donor community and non-governmental organization
(NGOs) and have been criticized by many financial institutions of which Okomfo Anokye Rural Bank is not an exception.

The inability of customers to pay back loans that have been advanced to them by their bankers has led to the suffering of some financial institution. Loans have been considered as the most valuable financial assets of banks due to its significant contribution to the financial health through interest income earnings. The banking industry in Ghana however plays a major role in the development of the economy. Due to this, huge bad loans could go a long way to affect the performance role they play in the economy and since causes of loan defaults among groups and individuals issues do not have a commensurate level of formal academic study, it is significant to discover out the causes of loan defaults since banks may be forced to reduce the rate at which they grant loans to business owners, individuals, enterprises or those in need.

This might have adverse effects on businesses because those with poor credit rating would not be capable to access extra funds to augment their liquidity.

It is however very important to critically examined the various causes and effects of loan defaults in the banking sector as well as find the appropriate solutions in order to prevent the bank being face the problem of liquidation which subsequently may lead to a 'run' on the bank. It is within this context of inability of the individuals' accessibility to loans and the high rate of loan default risk experienced by the banking sector that have called for this piece of research. Hence my ultimate aim is to find out how banks, with more emphasis on Okomfo Anokye Rural Bank Ltd deal with the problems of loan default.

1.3 Objective of the study

Specifically, this study sought:

- To identify and examine the causes of loan defaults in Okomfo Anokye Rural Bank Ltd.
- To assess the effects of loan default on Banks' performance.
- To identify the group of clients who usually defaults and why they default to enable the banks take decisions.
- To ascertain the measures put in place to manage the defaults.

1.4 Research Questions

- What factors lead to loan defaults?
- What are the impacts of loan default on the Okomfo Anokye Rural Banks Ltd?
- Which category of customers normally defaults on loans?
- What measures are adopted by banking sector to reduce the level of default risk?

1.5 Relevance of the study

There has been a high demand for loans from the rural banks in recent times particularly microfinance loan products and for that matter more loans have been given to the clients but the absence of data on relevant information in developing countries such as Ghana is limiting studies on loan defaults in financial institutions in Ghana and Africa as a whole.

It must be emphasis that since the main source of funding for bank's lending is the deposit mobilized from the deposit clients (surplus unit), it is therefore important for clients who borrow from banks to repay all disbursed loans so that the bank can also pay interest on the deposits respectively.

In as much as the study is expected to increase our knowledge on the causes and the effects of loan defaults in the banking sector, it is also anticipated to add to the limited literature available in Ghana. Also, the research is expected to improve the operations of financial institutions in Ghana through alternative suggestions. The extent of bad debts suffered by the banking sector will be highlighted and the outcome of non-payment of loans on some financial indicators within the banking sector. Finally, it is expected to throw more light on the flaws in the lending practices embraced by the banks to guide policy makers within the industry.

1.6 Scope of the study

The study focuses on Okomfo Anokye Rural Bank because, OARB was granted a licence to provide banking services which includes the granting of loans to its clients. OARB has been advancing loans to its customers at the various sectors of the economy such as agriculture, trading, transportation, cottage industries and the services respectively.

As reported in the financial statement of the bank, the main focus of the work will be centered on the causes and effects of loan default. The period of the study will span from 2010 to 2014 for the various types of loans applicable in the bank. The purpose of choosing rural bank is that, they are required to lend to small and medium scale businesses that do not have collateral.

1.7 Organization of the rest of the study

The study comprises five (5) chapters. Each chapter is divided into different sections and sub-sections. The rest of the study is organised as follows:

The chapter two discussed the review of relevant literature on the causes and effects of loan defaults. Chapter three introduced the methodology employed in the study to achieve the research objectives. The chapter four is divided into data presentation and analysis. Chapter five presents the main findings, recommendations and some concluding remarks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews some related literature regarding the causes and effects of loan default in general. It also forms the theoretical basis upon which the study was conducted as well as how the empirical review of the study has been carried out. It concentrates on the literature regarding the various opinions expressed on the topic, causes and effects of loan default in the banking sector.

2.2 Theoretical Literature

A loan is said to be delinquent when there is delay in its payment. (CGAP, 1999). A delinquent loan becomes a defaulted loan when there is a minimum chance of recovery. The measurement of delinquency is very important because it enables banks to predict how much of the loan portfolio will eventually be lost because it never gets repaid. Apart from this, it also indicates an increased risk of loss as well as warnings of operational problems.

Broadly, there are three types of delinquency indicators: collection rate which is the difference between the amount that was actually supposed to be paid and the amount that has fallen due; arrears rate which is also the difference between the overdue amount and the total amount of loans and portfolio at risk rate which is the difference between the outstanding balance of the loan that are not paid on time as against the outstanding balance of total loans (CGAP, 1999). The situation whereby a debtor refuses to meet his or her monthly repayment as stated in the loan contract can be termed as loan default. The refusal to pay back loan is therefore default. When the debtor is not willing or unable to pay, debt may be considered as default. A default can occur when the borrower refuses to meet his

or her monthly repayment schedule or does not comply with the terms of the loan. A loan default occurs when the borrower does not make payment, (Murray, 2011).

According to Pearson and Greeff (2006), default occurs when at a certain point of the borrower's repayment; he or she does not meet at least three installments within a period of twenty four (24) month. This signifies a point in time and indicator of behaviour, wherein there is a demonstrable increase in the risk that the borrower eventually will not pay as schedule, by refusing to honour all repayments. The explanation is constant with international standards, and was essential because constant analysis mandates a common definition. The explanation doesn't mean that the borrower has indeed stopped payment of the facility and hastherefore been referred to legal or collection processes; or from an accounting viewpoint that the loan had been categorized as bad or doubtful. "The inability of a borrower fulfilling his or her payment obligation when due can also be term as default". (Balogun and Alimi, 1990)

2.2.1 Causes of Loan Defaults

The willful negligence, improper credit appraisal and lack of willingness in the payment of loans accompanied with diversion of funds by debtors all contributes to loan defaults according to Ahmad (1997). Hurt and Fesolvalyi (1998), cited by Kwakwa, (2009) established that, default in corporate loan increases as there is a decline in real gross domestic product and that the repayment ability of borrowers is directly affected by exchange rate depreciation. Balogun and Alimi (1988) were also of the view that loan size, delay in loan disbursement, smallness of farm size, age of farmers, poor supervision, high rate of interest, non-profitability of farm enterprises and undue government intervention with the operations of government sponsored credit programmes all accounted to loan default.

The following factors were also identified by the banking sector to be the major causes of loan default in MFIs in Ghana; poor credit appraisal improper or the absence of monitoring, poor selection of clients, diversion of funds on the part of client, unwillingness on the part of client to pay back loans, lack of training of clients, illiteracy and inadequate skills of clients poor business practices, and macroeconomic factors, poor management styles among others

Moreover, Akinwumi and Ajayi (1990) found out that repayment capacity of farmers may depend on the farm size, family size, and scale of operation, cost living of families and exposure to sound management techniques. According to Olomola (1999), repayment performance can hugely be affected by loan disbursement lag and high interest rate which can adversely increase borrowing transaction cost.

An alarming loan default according to Okpugie(2009) can also be caused by high interest rate charged by micro finance banks .This was however confirmed by Vandel (1993) who also found that borrowers normally default due to high interest rates being charged by banks. Unavoidable number of wrong economic decisions by individuals as well as plain bad luck, thus bad weather, unexpected changes in price of certain products can lead to loan default (Gorter and Bloem, 2002) .Under such situations, provision for bad debts can be made as well as spreading the risk through the undertaking of insurance can be made by borrowers to make allowance for normal share of non-performing loans.

One of the underlying factors stated by Nihimura,Kazuhito and Yukiko(2001) that has contributed to Japan's economic stagnation is non-performing or bad loan problem. They went on to explain that the bubble burst which came during the bubble era contributed to non–performance of loans given to companies and industries by financial institutions.

The financial intermediary system didn't function very well due to the delay in the structural reforms. According to Kohansal and Mansoori (2009), diversion of loan by borrowers as well as poor management procedures, unwillingness in loan repayments gave rise to loan defaults respectively. The following factors according to them could cause loan default in the banking sector:

- Imposition of interest ceilings by government.
- Exercising of monopoly powers in the credit markets by informal lenders.
- Borrowers incurring huge transaction costs when applying for loans.
- Problems caused by moral hazards.

Waweru & Kalani (2009) indicated legal issues as well as reduced consumer buying ability and economic downturn all contributed to non-performing loans in Kenyan banks. Nonperforming loans as well as loan delinquency according to the study are similar.

Unfortunately, the supports which are given by banks are normally inadequate which in one way or the other lead to the collapse of businesses thereby causing loan default. Illiteracy and inadequate skills were also pointed out according to the research to be a cause of loan default. However, since majority of clients are engaged in low paying traditional businesses, they rarely diversify their business skills which implies lack of knowledge about alternative marketable skills which could have benefited them to enable their business function properly.

Kasozi (1998) was of the view and quoted that "there are flaws of the borrower over which the creditor has minute control". One thing that needs to be emphasized is the management of the business.

Many debtors lack the technical knowhow like the keeping of business records as well as the checking of business performance until the time of repaying the facility. This is

normally difficult because profits are never plough back which eventually leads to loan default in the long run. According to the study, competitive factors cause loan losses which may lead to loan default. This occurs due to the fact that many banks are now into the same business of lending which has indeed intensify competition making it very difficult for banks attracting customers. This eventually leads to banks not asking for adequate collateral to militate against the risk they are exposing themselves to.

The following factors have been considered to cause loan default in the banking sector; the inability of banks to monitor micro and small scale enterprises, delays in the processing as well as the disbursement of loans, diversion of funds, over-concentration of decision making where all loans are required to be approved at the head office, Bichanger and Aseya (2013).

In addition, high rate of interest being charged by banks would comparatively face higher default rate. A study conducted by Sinkey and Greenwalt (1991) on large commercial banks in the US depicted that high interest rate being charged by banks was also associated with default.

Financial factors like cost of credit according to Rajan and Dhal (2003) that used panel regression could also have a significant impact on nonperforming loans (NPLs). Cost of borrowing or high interest rate charged by banks is one of the internal factors that leads to incidence of loan default on commercial banks in Kenya and this was revealed through a study conducted by Waweru and Kalini (2009).

In a study conducted by Rajan and Dhal (2003) on Indian commercial banks found that high rate of nonperforming loan may emanate from terms of credit. Rajan (1994) hypothesizes that "bank managers have short-term decision horizons because their reputations are strongly influenced by public perceptions of their performance, as

evidenced by short-term earnings. Managers in other to safeguard their reputation may end up giving loans to customers when there is expansion in the economy. Situations like these will result in some loans going to customers with higher default risk than would occur otherwise". Weinberg (1995) also recommends that "bank managers alter lending standards as market conditions change, pursuing to smooth overall lending risk".

2.2.2 Effects of Loan Defaults

At large, the key outcome of bad loans on banks is the point that financial growth of banks are limited by increasing bad loans or nonperforming loans, (Karim, Chan & Hassan, 2010; Kuo *et al*., 2010). Apart from this, bad loan in one way or the other deprives banks of the needed liquidity which therefore limit their capability of funding other potential viable businesses and make credit facilities available to individuals. Karim et al. (2010) argues that when banks are caught up in bad loans, it deprives them from exploring in other viable businesses. In the aspect of these imports, the bank experiences shortages in generated revenues (Ghana Banking survey, 2013), and these however lead to reduced financial performance (Karim *et al*., 2010; Nawaz et al. 2012; Ghana Banking Survey, 2013).

Another basic consequence of bad loans on banks is a reduction in the bank's lending potential (Karim *et al*., 2010). Though this has been acknowledged earlier, it is important to discuss it as a primary independent effect. Banks make a better part of their incomes and profit from lending activities (Karim *et al*., 2010; Nguta & Huka, 2013). Greater part of revenue of banks will be lost if banks lose much of their lending capital to bad loans. Once income is lost in one financial year, the ability of the bank to provide access to credit facilities to other businesses and individuals would practically fall in the following financial years. This means that the bank would fail to lend, or it would reduce its amount

allocated to lending in the next financial year. In this study, the amount located to lending is referred to as annual "loan size".

Research studies have shown that the effects of bad loans on the banks in terms of net financial performance (i.e. return on investment/net profit) and lending potential (i.e. annual loan size) are practical and realistic. These studies would be identified from the perspectives of foreign countries and Ghana. The studies of Karim et al. (2010), Obamuyi, (2007), Nguta & Huka, (2013), Nawaz *et al*., (2012), Fidrmuc & Hainz (2009), Chelagat (2012) and Aballey (2009) provide such evidence in a foreign country context. Apart from the report in Ghana Banking Survey (2013), a few other studies (Appiah, 2011; Awunyo-Vitor, 2012) have shown that bad loans negatively influence banks in terms of financial performance and lending potential in Ghana.

2.2.3 Strategies for managing bad loans

According to Kohansal and Mansoori (2009), "lenders are able to reduce the risk of loan default by devising various institutional mechanisms and these however include pledging of collateral, third-party credit guarantee, usage of credit ratings and collection agencies respectively".

Kay Associates Limited (2005) cited by Aballey (2009) states that "in order to reduce the rate of loan default, loans should only be given to borrowers or debtors who are most likely to repay when given and those who are unlikely to become insolvent. For a lending decision to be reached, all credit risk analysis of potential borrowers should be carried out in order to judge their credit worthiness". It is not surprising that Anjichi (1994) was of the view that the appraisal stage is the heart of high quality loan portfolio within the banking sector.

Whiles action should be taken against clients who defaults in loan repayment, credit officers must monitor the repayment ability of loan clients. That is, it will be necessary for banks to avoid advancing loans to risky customers in as much as loans are monitored. Banks should also renegotiate loans when customers get into difficult. Normally, credit officers get the needed information through direct interaction with the client in such way that each loan analysis seem to provide valuable insight as well as evaluating the application for the future of the client. But the most serious aspect of this is that, clients normally withhold a great deal of information making the evaluation very difficult and unreliable exercise. It will be very appropriate for loan officers as part of their monitoring activities visit the place of work or homes of clients with the main objectives of determining whether clients need loan or not. This will however enable the officer to assess the ability to effectively utilize the loan.

According to Bigambah (1997), it will be necessary for clients to be screened before loan is advanced in order to assess the credit worthiness of the applicant. It came out in a study conducted by Bigambah (1997) that in Uganda, loan default is mostly caused by poor credit appraisal by officers. It will be therefore appropriate for officers to have better appraisal in order to reduce loan default in the banking sector. This is because in a number of cases, it is revealed that information received is at times not verify and also doctored or falsified. Credit risk analysis is therefore another important element in loan appraisal which must be considered in order to reduce default.

It is always important for the lender to consider the borrowing proposition as well as the subsequent repayment in isolation from security. Both the future and the past should be considered when it comes to the screening of the applicant. It is always important to base lending activity on character, capital, purpose, amount, repayment, term and the security

of the loan respectively. Based on the above knowledge, it will be very important for the lender to investigate on the customer's record, ability and experience.

Anjichi (1994) also stressed that; frequent supervision by credit officers may go a long way to take away the agonies as well the frustrations of slow and distressed credits. This however, will help in keeping a good loan. This can be achieved through regular visits of the premises of borrowers to investigate the general state of affairs checking on the state of the morale of the borrower as well as the physical stock of finished goods. Advice and general business policy are considered. Credit policies and loan procedures of banks can be revised in order to become sensitive to the business development. Advising clients is very vital in minimizing loan default. Loans can also be monitored through the use of tracking sheets checking the amount deposited and the outstanding balance of borrowers. Anjichi again stressed that it is very important to detect loan default as early as possible as guidelines could be given to applicants in order to manage loan loss. The guidelines according to the researcher included immediate detection of nonperforming loans, reappraising the borrowers' financial position in respect to the market share and increasing the period of the loan repayment where necessary respectively.

Warue (2012) was of the view that credit referencing bureaus, regulators of financial institutions as well as the policymakers in the banking sector have to be wary of the alarming loan delinquencies in the industry and therefore advised that appropriate measures must be put in place in order to militate against the portfolio at risk. Furthermore, regular review of credit risk techniques as well as expanding loan monitoring framework among Self Help Groups (SHGs) for effective credit portfolio assessment can help manage default. Group solidarity must be strengthened by SHGs in order to facilitate prompt loan repayment by members of the group.

According to Saloner (2007) advancing loans to groups can go a long way to minimize loan default. Microfinance institutions take delight in advancing loans to groups other than individuals. As opposed to ROSCAs, the microfinance institutions offer the loans so that the debtors are not restricted to the funds that can be contributed by them. The general organization of group loaning is made up of group of borrowers, who work collectively, as well as support and guide. This can go a long way of maximizing the impact the loan can have on each individual. Members are normally responsible for selecting new members when it comes to group lending. This helps in the timely repayment of loan facilities by members since liability is jointly and severally shared among members. The default rate in group lending is therefore minimal as compared with the other loans.

There have been several studies on group lending and most of the results have proved to be very effective method since it helps to reduce loan default. Group lending according to Woolcock (2001), leads to improved performance by borrowers. He explains that, ones reputation within a group may serve as a strong incentive for each individual to operate fully. This however serves as an additional support and guidance from the group. He continued that since groups are normally formed from members living the same community, loans are normally paid on time and in full because borrowers fear to be affected in the community not only the lending group. This social effect has been considered to produce positive outcomes for the microfinance institutions but some researchers are of the view that it can lead to unhealthy social environment. According to Islam (1995) "group lending provides a great avenue for peer monitoring in microfinance institutions which in turn provides the institution with the ability to be more flexible with their finances".

Although most of the research on joint lending finds positive effects, an empirical study of microfinance institutions and borrowers in Thailand concluded that, contrary to conventional understanding, joint lending does not have a significant effect, either positive or negative, on the repayment of loans. (Kaboski and Townsend 2005). The general consensus in the literature on group lending and group liability is that group lending benefits both the borrowers and the institutions. The borrowers receive the additional support and assistance from a group of individuals dealing with the same types of issues. Furthermore, the institutions are able to lower costs by relying on the lending groups to provide these services that otherwise would be required from the institution itself. Group lending also works to move institutions into a more client-led realm, which has proven to be more effective in creating sustainable development programmes.

Saywer (1998) noted that "it is essential for the lender to take an active interest in the borrower and monitor his continuing ability to repay the debt. On monitoring, the lender should focus on the actual sales per month and compare with the monthly budget and reasons for any variance. This regular touch with the borrower will enable the lender to receive early warning of any problem".

Regular visits according to Bigambah (1997) enable clients to maintain their respective business which help them to pay their loans on schedule. The periodic visits of clients allow the credit officer to understand the business as well as the appropriateness of the terms of the loan otherwise the chances of the loan been defaulted will be extremely high.

2.3 Empirical Review

This chapter provides some empirical evidences which identify the major determinants of the causes, effects as well as strategies of managing defaulted bank loans. In case, some studies are conducted on particular country and the others on panel of countries.

The significance of bank's failure has pushed many researchers conducting studies on the determinants of nonperforming loans

Empirical studies have pointed to the contribution of commercial banks to the financial performance of banks both locally (Ahiabor, 2013; Mensah, 2004; Quaye, 2011; Agyei, 2012; Gyamfi, 2012) and internationally (Wang, 2013; Hassan, 2008). At the local level, lending activities among commercial banks support the growth of SMEs in virtually all regions of Ghana (Ahiabor, 2013; Mensah, 2004; Quaye, 2011; Agyei, 2012; Gyamfi, 2012). This situation is also a common feature of other countries such as Malaysia (Muhammad et al. 2010), Nigeria (Obamuyi, 2007), China (Wang, 2013), Kenya (Mwobobia, 2012) and Iran (Hassan, 2008). As a result, the contribution of commercial banks to the growth of SMEs is not limited to one country or jurisdiction.

2.3.1 Causes of Loan Default

According to an Empirical Study made on Commercial Banks in Pakistan by Badar &Yasmin (2013) on the title of "Impact of Macroeconomic Forces on Nonperforming Loans" the long and short run dynamics between nonperforming loans and macroeconomic variables covering the period from 2002 -2011 of 36 commercial banks in Pakistan were assessed. In that study, inflation, exchange rate, interest rate, gross domestic product and money supply were included as macroeconomic variables. Vector error correction model was used. The study established a strong negative relationship between nonperforming

loans and the following economic variables; inflation, exchange rate, interest rate, gross domestic product (GDP) and money supply respectively.

In a study by Sakiru *et al (2011)* on the influence of macroeconomic variable on nonperforming loans on the banking system in Malaysia, banks data for monthly time series of 2007:1 to 2009:12 periods were used for the study. The lending rate as well as the producer price and industrial production index were used as the microeconomic variables that affect nonperforming loans (NPLs). It was revealed after the study that lending rate which is also considered as the price of the loan had a significant positive impact on nonperforming loans after an Autoregressive Distributed Lag (ARDL) approach was used. The study continued to justify that nonperforming loans were expected to increase during periods of high lending rate which may cause borrowers to default.

The following factors were found to be causes or determinants of nonperforming loans after a study was conducted in Ethiopia by Wondimagegnehu (2012); poor credit assessment by loan officers, poor or failed loan monitoring, underdeveloped credit culture, lenient credit terms and conditions by banks, aggressive lending , compromised integrity, weak institutional capacity, unhealthy competition among banks, willful defaults by borrowers, diversion of loan funds for unexpected purpose by borrowers and finally overdue financing. All these according to the researcher had a significant impact or effect on nonperforming loans.

The characteristic of business according to Nguta and Guya (2013) in Kenya may as well as cause loan default in the banking sector. It was revealed in the study that 67.9% of businesses in the manufacturing sectors of the economy were expected to default in their loan repayment. This was however followed by the service industry claiming 64.0% and then agriculture with 58.3%.The trade sector after the study recorded the least with

34.9%.The trade sector's minimum percentage was attributed to the fact that, the industry dealt in the sale of fast moving product which were on high demand and could translate to good business performance and increased revenue that accounts for low default. It was revealed in the study that businesses that have been in operation for less than two years had 54.4% of defaults during loan repayment while 44.2% for businesses that have been in operation for periods between two and five years respectively. Businesses that have been in operation for periods between five to ten years claimed the highest percentage of defaulting in their loan repayment of 78.6%. Default in loan repayments were 0.0% in businesses that have been in operations for periods more than ten years.

The study furthermore revealed that businesses located within municipality had high repayment defaults rate of 55.7% as compared to businesses operating outside the municipality. There were higher cases of loan repayment default, thus 62.8% in businesses that had monthly profits below Kshs.10,000 followed by those that made profits between Kshs.11,000 and Kshs.50,000 claiming 42.5% respectively. Notwithstanding these, business that operated between monthly profit margins of Kshs.51, 000 and Kshs.100, 000 had 22.7% cases of loan defaults and finally businesses having monthly profit above Kshs. 100,000 having minimum cases of loan defaults.

The following factors were identified as the causes of loan defaults from the industrial sector after a survey have been conducted in different banks in India by Berger and De Young (1995); improper selection of entrepreneur in the sector, poor project viability analysis, inadequate collateral/equitable mortgage against loans, unrealistic terms as well as schedule of loan repayment, lack of monitoring and finally defaults due to natural calamities. Naturally, time of disbursement, supervision and profitability of enterprises

were seen as factors that could contribute to the repayment ability and consequently high default rate after a study was conducted by Okorie (1986) in Ondo state in Nigeria.

Lenient credit terms were seen as a contributing factor of nonperforming loans after Jimenez and Saurina (2005) conducted a study on Spanish banking sector between 1984 and 2003. They attributed the leniency to the following; disaster myopia , herd behavior, moral hazard, and agency problems that entice mangers in taking risky decision and lending during excessively during periods of booms as per the research.

The following are the causes of loan default.

- Delay in the disbursement of loans by credit officers
- Failure of business.
- Hash payment terms.
- High lending rate rate.
- Insufficient loan sizes.
- Unexpected eventualities.
- Absence of training for the customers before and after payment of loans.

Time of disbursement of the loan funds to the customer according to Okorie (1986) can be a major cause of loan default among microfinance institutions. In a separate study conducted by Vandel (1993) and Okpugie (2006) clients of microfinance institutions defaulted in the repayment of their loans due to high interest rate charged by the microfinance institutions. The causes of loan default by clients in the banking sector differ; as clients seems to have different reasons for defaulting as oppose to that of loan officers after visits to the field. In all these it will be very appropriate to give much consideration to that of loan officers in order to reduce the rate of defaults in the banking sector.

2.3.2 Effects of Loan Default

Bad loans result from the inability of debtors to repay their loans and their interests within the specified time (Aballey, 2009), resulting in adverse effects on the financial condition of the creditor (Aballey, 2009; Agu & Okoli, 2013). In the context of this study therefore, a bad loan is the consequence of a loan client not being able to repay its loan, resulting in a negative financial effect on a commercial bank. Logically, bad loans take their name from the fact that they are practically in opposition to the financial situation of the bank. By the time they are referred to as "bad loans", there is the fear that the amounts involved and their interest cannot be fully paid by the debtor (Chelagat, 2012; Awunyo-Vitor, 2013).

In a study conducted by Hyun and Zhang (2012) in their investigation on the impact of macroeconomic as well as bank factors of nonperforming loan between sub-sample periods of 2002-2006 and 2007-2010 came out with the following variables) Gross Domestic Product (GDP) growth rate, unemployment rate and lending rate all these being macroeconomic variables. The banks specific variables therefore included Return on Equity (ROE), solvency ratio, inefficiency size of bank as well as non-interest income respectively. According to the study, during the pre-financial crises period, there was a negative relationship between solvency ratio, Return on Equity (ROE), lending rate Gross Domestic Product (GDP) growth rate as well as unemployment rate and nonperforming loans (NPLs). The negative of the rate of lending nonperforming loans therefore meant that an increase in the interest rate limited people and also businesses ability to borrow which thereby decrease the amount of loan leading to the reduction of loan default.

In a similar study conducted by Swamy (2012), on the examination of macroeconomic and indigenous determinants of nonperforming loans (NPLs) in the Indian banking sector, between 1997 and 2009 came out with the following economic variables; Gross Domestic

Product (GDP) growth rate, inflation rate, per capital income, saving growth rate, bank size, loan to deposit rate, lending rate of banks, operating expenses to total assets, ratio of priority sector's loan to total loan and ROA. It was revealed after the study that the rate of inflation as well as GDP growth rate, capital adequacy, bank lending rate and saving growth rate had an insignificant effect on loan defaults where as a positive relationship was established between NPLs and loan to deposit ratio and Return on Asset (ROA).Size of the bank rather had a strong negative relationship or effects on the level of NPLs

In this regard, a financial loss is encountered instead of a profit, leading to adverse effects on the commercial bank, the defaulting SMEs and other corporations and individuals who would like to borrow from the commercial bank in future. Bad loans need to be avoided in view of the fact that their effects are multidimensional; thus they do not only hinder profitability among commercial banks, but they also limit lending to the defaulting SMEs, individuals and other corporations. This assertion is based on evidences in Ghana (Appiah, 2011; Awunyo-Vitor, 2012; etc.) and in foreign countries (Karim *et al*. 2010; Obamuyi, 2007; Nguta & Huka, 2013; etc.).

Research studies have shown that bad loans make two major effects on banks. These effects are the limitation of bank's financial performance and lending potential. In a foreign country context, this evidence is acknowledged by Karim *et al*. (2010), Obamuyi, (2007), Nguta & Huka, (2013), Nawaz *et al*., (2012), Fidrmuc & Hainz (2009), Chelagat (2012) and Aballey (2009), whereas Appiah (2011) and Awunyo-Vitor (2012) also provide these evidences in the Ghanaian context. Though these evidences on the effect of bad loans on banks prevail, it is realized that the general contribution to academic debate on the subject is weak owing to the fact that studies on the subject are generally few and most of them provided their evidences based on meta-analysis and literature reviews. This work however

provides related evidence using secondary data and empirical analysis, which provides a more valid and verifiable estimation of the effect of bad loans on banks. This study is however limited to the lending practice of banks in Ghana because much of the lending activities are geared towards SMEs' financial needs.

The 2013 Ghana Banking Survey indicates that many commercial banks in Ghana are encountering massive bad loans. The situation is considered serious because the country's major banks such as Ghana Commercial Bank, Ecobank (Ghana) Limited, Stanbic Bank (Ghana) Limited and Standard Chartered Bank (Ghana) Limited are facing the same problem. The report does not reveal the exact repercussions of the situation; but based on other evidences, it is certain that bad loans affect the financial condition of banks.

Research studies have shown that the effects of bad loans on the bank in terms of net financial performance (i.e. return on investment/net profit) and lending potential (i.e. annual loan size) are practical and realistic. These studies would be identified from the perspectives of foreign countries and Ghana. The studies of Karim et al. (2010), Obamuyi, (2007), Nguta & Huka, (2013), Nawaz *et al.*, (2012), Fidrmuc & Hainz (2009), Chelagat (2012) and Aballey (2009) provide such evidence in a foreign country context. Apart from the report in Ghana Banking Survey (2013), a few other studies (Appiah, 2011; Awunyo-Vitor, 2012) have shown that bad loans negatively influence banks in terms of financial performance and lending potential in Ghana.

2.3.3 Strategies for managing Loan defaults

Timely disbursement of loans, adequate loan sizes as wel as training before and after loan disbursement of loan funds, flexible repayment terms of loan, reasonable conditions of loans, flexible lending rate and finally regular monitoring of loan clients are strategies that could be put in place to manage loan defaults in the banking sector. Bigambah (1997)

confirmed the findings of the measures enumerated above. According to him, regular visits of clients would enable them maintain their respective businesses which would in one way or the other encourage clients to repay loans that have been disbursed to them. These regular visits would enable credit officers understand the businesses of the client as well as the appropriateness of the terms of the loan. That is the loan amount, frequency of repayment and repayment periods.

The following factors were considered from the point of view of banks of managing or minimizing loan defaults; regular visits of home and businesses of loan clients, quick follow-up after missed installment, adequate and proper appraisal, proper client selection, group lending and usage of third party guarantee. All these measures confirmed the findings of many writer. According to Anjichi (1994) "many of the agonies and frustrations of slow and distressed credits can be avoided by good loan supervision". This, according to him will go a long way in keeping a good loan. This can be through regular visits of the premises of the borrower to conduct investigation on the general state of affairs as well check the morale and the physical stock of all finished goods. This can go a long way to help monitor all business activities of loan clients thereby helping to reduce default. Solidarity groups being formed can be very key in the prevention of loan defaults or arrears in micro finance institutions or the banking sector. Group members must therefore be educated on the role and the responsibility of the signing for each group member within the group.

It will be therefore appropriate for banks to frequently review their lending policies as well as their procedures in advancing loans to their clients accordingly. It is the sole duty of the credit supervisor in checking the performances of loan officers as well as ensuring that all policies are well followed. The supervisor must also ensure that all the relevant problems

of his officers are well dealt with in order to ensure good performances from them. This is because it will make no sense if policies are well documented but are not followed in the field.

Apart from this, it is very important to limit the geographical scope of credit officers. This will enable them visit more clients as possible as well reduce the time and at the same cut down the cost of travelling to long distances visiting homes and offices of loan clients. More visits however enable credit officers to establish very good relationship with their loan clients there by decreasing the default rate within the banking sector. It is very important for both credit officers and management to pay attention to detail. The past due within the portfolio of each credit officer must be well tracked weekly to ensure prompt repayment of arrears. In managing loan defaults, it will be appropriate for credit officers to respond quickly to problem clients in their portfolio.

Advancing loans to microfinance entrepreneurs who have been in business for at least twelve months will help reduce past due in loan portfolios there by helping to reduce the default rate within the banking sector. This is because it is likely for businesses that have been in operation for at least twelve months to default in their loan repayment. It is very important for clients to be given adequate training before the disbursement of each loan funds in order to reduce arrears or default within the banking sector. Groups are expected to get larger loan after each loan cycle according to banks because it is assume that the loan will be repaid on time based on previous records. In order for loan default to be managed, it is always appropriate for banks to apply the same rigorous financial and charter test to both new and repeated loans. This is because clients seem to often fall behind on second and third loan cycles due to the fact that client may either take the banks for granted or may default due to the large amount of the facility.

According to Stearns (1997) another strategy that has proven quite effective in finding solutions to default is to design an incentive system for the loan officers that include ontime payments as an important variable. If well designed, the system can motivate credit officers to look for and eliminate the causes of arrears, as well as to meet other programme objectives. Management of banks must stop lending to new clients until the portfolio at risk ratio fall to the acceptable level if the arrears or the default rates rises to such an extent that it can lead to a run on the bank. (ie threatens the life of bank).Credit officers must be due diligence I their selection of their loan clients.

Apart from banks recruiting very skilled credit officers, there must be regular training being organized for them. Client must be classified under the following categories by credit officers in order to help manage loan default.

- Prepared and capable of repaying

- Prepared but un capable of repaying

- Unprepared but capable of repaying and ☐ Unprepared and incapable of repaying.

The management of banks could consider the following courses of action:

Prepared and Capable of Repaying: Credit officers could be given the permission to receive partial payment at either the business or residence of the client

Prepared but Incapable of Repaying: Loans can be reschedule for client with very good excuse. This can be done by adding up the total past due of the client including both the principal and interest to the new loan and letting the client sign a new contract on the loan. This can help hide a problem that can however resurface into a worse condition.

Unprepared but Capable of Repaying: Legal or court action can be taken against clients who are able but doesn't have the intention of repaying. Names of such client scan be

publicly posted. Banks too can rely on both religious and community leaders in the recovering of their defaulted loans. Banks can stop lending to the entire community if the arrears are high in a measure of managing loan default in the banking sector. Financial institutions can finally hand over clients who default in the repayment of their loan to debt collectors. Staffs of the banks can also be trained in debt collection. Banks can develop their capacities through attorney

Unprepared and incapable of Repaying: It will be better for banks to stop following such client since doing that is poor use of staff time. Such loans can be written off.

2.4 Organizational Profile

On January 18, 1983 Okomfo Anokye Rural Bank (OARB) Ltd was incorporated as a limited liability company and issued with a Certificate of Incorporation (No. 21, 793) under the Companies Code 1963 (Act 179). The Bank of Ghana issued the license for the operation business of Banking to OARB on the 7 the day of February, 1983. The bank received its Certificate to Commence Business on July 6, 1983 from the Registrar of Companies.

The bank Head Office/Branch of the bank is situated at Wiamoase in addition to the Agona Branch in the Sekyere South District of the Ashanti Region and five (5) branches located as follows: Ashanti New Town, Pankrono and Kronum Abuohia in Kumasi and Boamang and Tetrem in Afigya Kwabre District. The OARB also has two mobilization centres located at Bepoase in the Sekyere South District and Ahwia Yam Market in the

Kwabre District. The Bank as a legal entity, operates under the Ghana Banking Act, 2004 (Act 673) and Banking Amendment Act 2007 (Act 738).

The Bank is a registered Limited Liability Company with authorized ordinary shares of 5 billion of no par value. The shares is currently GH¢0.02. The average minimum

shareholdings are 250 shares per shareholder and the maximum is not more than 10% of the stated capital.   A family may be able to purchase 40% of the stated capital while a company may purchase 50%. Sale of shares is open to all adults above 18 years who desire to become shareholders. The total number of shareholders as at December 31, 2013 was 4,296 with a total shareholding of 43,294,994. The stated capital was GH¢730,000.00. (OARB Five Year Strategic Plan, 2015 – 2019)

2.4 Liquidity support and Prudential Regulation.

Deposit insurance schemes were not crucial factors in contributing to moral hazard in the failed banks. Kenya and Nigeria have provided deposit insurance since the late 1980s, but only for deposits below a specified minimum amount. Many of the failed banks' deposits were not insured, because they were too large (as in the case of most of the institutional deposits) and/or because they were from sources not covered by the insurance scheme. But the willingness of the regulatory authorities to support distressed banks with loans, rather than close them down, was probably an important contributor to moral hazard. Many of the failed banks in Kenya, Uganda and Zambia had been able to borrow heavily from their respective Central Banks for several months, and in some cases for more than a year, before they were closed. The extent of imprudent management in the failed banks indicates that there were serious deficiencies in bank regulation and supervision. When many of the banks were set up in the 1980s or early 1990s, banking legislation was outdated and Central Bank supervision departments were seriously understaffed. In Kenya and Nigeria many banks avoided being inspected for long periods because the rapid expansion of banks in the second half of the 1980s overwhelmed supervisory capacities. (Kariuki, 1993).

Furthermore, political pressure was brought to bear on Central Banks to exercise regulatory forbearance. The Central Banks often lacked sufficient independence from the government

to refuse liquidity support to politically connected banks and to strictly enforce the banking laws. In particular, for those banks with strong political connections, the expectation that regulators could be pressured to exercise forbearance must have seriously undermined discipline and incentives for prudent bank management.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The main motive behind this research was to ascertain the main causes and effects of loan defaults within the banking sector with particular reference to Okomfo Anokye Rural Bank. Adopting the appropriate methodology was therefore of high significance. The methodology helps to link the research problem as well as the research questions to the goals of the research accordingly. This study was mainly based on a single case study thus, Okomfo Anokye Rural Bank Ltd. Thus Research design, population of the study, sample and sampling procedure as well as the research instrument and its administration are however emphasized in this chapter. Also analyzing of data using the statistical tools were also pointed out.

3.1 Research Methods

Classification of Research can be in many diverse ways based on the methodology of the research, that is, the creation of knowledge, the user group, the investigation of the research problem, etc. Basic, applied, qualitative and quantitative research methods respectively are

basically the four main research methods. However, for the purpose of this study, the researcher adopted both qualitative and quantitative methods.

Numeric figures or numbers indicates quantitative research and is used in the projection for future period. It also aims to measure the amount or quantity as well as comparing it with past records. In social sciences, "quantitative research refers to the systematic empirical investigation of quantitative properties and phenomena and their relationships". Developing and employing mathematical models, theories or hypothesis relating to phenomena is what quantitative research is aimed at.

Central to quantitative research is the measurement process since it supplies a fundamental link between empirical observation and mathematical expression of quantitative relationships. Quantitative research has statistics as the most largely used sector of mathematics. Comprehensively, statistical methods are used in the fields of economics, commerce, etc. Quantitative research takes the form of structured questions, with presumed response options and the involvement of large number respondents.

Qualitative research on the other hand indicates non-quantitative type of analysis. The collection, analyzing and interpreting of data by observing what people do and say represents Qualitative research. Qualitative research can be defined as the meanings, definitions, characteristics, symbols as well as metaphors and the description of things. It is mostly non-objective and applies diverse methods of data collection, mainly individual, focus groups and in-depth interviews. Naturally, exploratory and open ended research comprises this type of research. In depth interview of small numbers of people are conducted and or relatively scanty number of focus groups are conducted. The following types can further be classified in Quantitative research.

Therefore the causes and effects of loan defaults in the banking sector cannot be expressed easily with the help of few sentences. On one hand, only in numerical figures can some effects be indicated like interest rates and its effect on loan default, while on the other hand, descriptive ways can only impacts like business experience, methods of loan default reduction.

3.2 Research Design

According to Gravetter and Forzano (2011), "a research design is a general plan for implementing a research strategy. A research design specifies whether the study will involve groups or individual participants will make comparisons within a group or between groups, and how many variables will be included in the study" Also, it shows a comprehensive outline of how an investigation will be conducted. A research design will characteristically involve the method of data collection, the instruments to be selected, and the usage of the instruments as well as the planned means for analysis of the data collected.

There are several research designs which can be used for conducting research and among some are historical Research, Case and Field Research Design Descriptive or Survey, Correlational or Prospective Research, Causal Comparative or Ex Post Facto Research, developmental or time Series Research and Experimental Research designs respectively. However, for the purpose of this research which was to identify the causes and effects of loan defaults in the banking sector, as well as identifying the categories of clients who normally default and why they default, descriptive survey design was applied because it tackled questions and views of existing issues. Both qualitative and quantitative data were very necessary in this part in answering the mentioned research questions. Both primary and secondary information were considered.

3.3 Population

Population can be referred to as a group of people or events from which the sample is employed and to which the study results will generalize. A target population can also be defined as the population of individuals which are interested in describing and making statistical inferences about". Therefore the population for the study involved the people who, for the at least five years (2010-2015) have been gaining from our numerous loan facilities.

The management and the entire staff in the Credit Department of the bank were also included. These groups of people were chosen by the researcher because, most of them have been working with the bank for a long time and as a matter of fact, have gained rich knowledge in loan default by clients as well as the effects loan defaults poses on the performance of the bank and can also respond better to questionnaires.

3.4 The Sampling Method

There are two main sampling methods namely; Probability sampling and nonprobability sampling methods. However, the difference between them is that probability sampling has every unit gaining an equal 'chance' of being selected, and that chance can be quantified but when every item that does not have equal chance of selection nonprobability sampling is then applied. The probability sampling method employed in the study is some form of random selection and simple random sampling is the simplest form of random sampling. In addition to simple random sampling, there are other probability methods of sampling which include stratified sampling and cluster population. When using simple random sampling, a sample is randomly drawn from the sample. The division of the population into likely or homogenous subgroups where in each subgroup, a simple random sample is taken is referred to as Stratified sampling, which is otherwise called quota or proportional

random sampling. Under cluster sampling, the whole population is divided into smaller groups from which sampling is carried out from only one of the divided groups. For the purpose of this study, the technique that was employed to select the respondents (thus, the bank's clients) was stratified random sampling technique, whereas the technique that was applied in selecting the members of management for the study was purposive sampling technique. The sample size of 60 respondents which comprises 40 clients and 20 credit officers were selected. The selection of these beneficiaries were done in consultation with the Credit Officers of in the credit management of the bank and the selection of the interviewee of clients was done by random sampling as already mentioned. The researcher did not use an interpreter because the Credit Officers who assisted me to interview the clients could speak the local language fluently. They were therefore able to interpret everything to those who neither could read nor write in responding to questionnaires.

3.5 Method of data collection

Data can be collected in two different ways, thus primary and secondary sources respectively. Primary data involves the collection of new data whereas data that has already been collected for some other is secondary data. Data can either be categorized as quantitative or qualitative. A data can be said to be quantitative when it is expressed in numbers whiles qualitative data cannot be express in numbers. Data that are collected through the use of senses such as color, smell and texture is qualitative. Scores on examination test, number of hours spent on an activity, weight etc. are all examples of qualitative data

Basically, primary data in research can be collected through many methods. It is always very important to select the right and the appropriate method to ensure that relevant and valid information are acquired. The methods however include observation, surveying,

interviewing and questionnaires. The most used tools in the collection of primary data are questionnaires and interview. Both structured and unstructured interviews were used to solicit the ideas of bank officials through a face to face interaction. Monthly returns presented the Bank of Ghana, financial statements and sorts of records were used for the secondary data. Questionnaires and interview were used by the researcher in the collection of data from the target group.

Questionnaires are any written instruments that presents respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers (Brown, 2001 as cited by Dörnyei and Taguchi, 2010). The outcome of questionnaires must not be influenced by researchers but instead have to accept it no matter results it produces. In order to ensure that all bias was eliminated in the research work, the researcher however took pragmatic steps in the preparation of the questionnaire. The most importance questions were directed towards the causes and effects of loan default in the banking sector with particular emphasis on Okomfo Anokye Rural Bank. Basically two types of questions were adopted in the setting out of the questionnaire. The two questions are closed and open ended questions. The selection of already provided answers or no response in responding to answers in a questionnaire is what we term as closed ended questions .On the other hand, an open ended question is one that cannot be responded with a simple "yes or no" answer. They often don't have single right answer .Close ended structured questionnaires were used for the purposes of this thesis through the adoption of like scale as the parameters for possible responses. The following were some of the key areas which were of concern whiles setting the questionnaires for the credit officers within the

- The trend of loan default from 2010 to 2015

- Examine the main causes of loan default

- Measures put in place to reduce default

- Adverse effects of high default rate

The use of both self-administered well-designed paper questionnaires and interviews of some respondents after thorough explanation of the objectives of the study are the main techniques of primary data collection. This is rightly so against the backdrop of having some respondents who are assumed not to be proficient in reading and writing which make the self-administered method inappropriate all the time. It is important to mention that, the content of the questionnaire is carefully chosen to elicit the required data which could be analyzed to achieve the stated objectives of the study.

The use of interviews as a method of data collection was necessitated by the quest to allow the managers of the rural banks the opportunity to provide explanations in their own words to support whatever claims that they may make. To ensure that this was possible, open ended questions were adopted to allow the respondent the freedom of supporting their answers with a reason.

The researcher was able to acquire secondary data from the management of the rural bank. The data generally gave an overview of the role of the rural bank. Some information also gave a background history of the formation of the rural bank. All information obtained was used as and when it was deemed necessary. Books, articles, new papers, dissertations and other books pertaining to my area of work were all con consulted and well examined. In the successful completion of the thesis, most of the information gathered from the secondary source proved to be very significant.

3.6 Data Analysis and Management

In managing the data gathered, manual entry into various computer platforms was done. A third party, preferably, a trained statistician was made to vet accuracy of entries made before analysis is carried out. Data was stored as backup on external hard drives and hard copies of answered questionnaires kept in safe boxes.

Data was analyzed to address the objectives of the study using predominantly statistical software like SPSS or Eview. Frequency tables and graphs will be drawn from the data where applicable and will be analyzed by researcher adequately with the view of making financial sense from the data collected. Data may also be summarized using Pie chart and descriptive statistics like means as well as standard deviations for quantitative variables where applicable. Other statistical models like the Categorical Regression, Linear Regression, Chi-Square Analysis, Analysis of Variance, among others will be employed to answer various research questions.

After the data had been collected from the various clients as well as the staff and management, there was an initial editing to see if respondents understood and answered the required questionnaire properly. Some statistical techniques were used to analyze the data. They included descriptive and inferential statistical methods like frequently distribution using tables to portray phenomena in absolute amount and percentages. Tables and graphs have been used to illustrate the figures obtained to ensure proper understanding. Such classification gave more meaning to the analysis and offered opportunity for comparative discussions.

The performance of these tests was to help the researcher to determine the causes and effects of loan defaults in Okomfo Anokye Rural Bank Ltd.

3.7 The Model

This section deals with the estimation of an econometric model based on the information gathered from the financial institution and survey. The dependent variable are the Return on Equity (ROE), Return on Asset (ROA), and Asset Quality (AQ). The independent variables based on previous literature will be: the capital adequacy, liquidity and operating efficiency, etc. Other variables which could be investigated as independent variables include age of respondents, family size, marital status, size of loan granted, type of business, etc. This is expressed in some functional relation as

$$Y_i = f(X_i) \ldots\ldots\ldots\ldots\ldots (1)$$

The two most important statistical frameworks for modelling and estimating a linear relationship between variables are the Ordinary Least Square (OLS) and the Maximum Likelihood approaches. In this study, we employ the OLS to estimate and test the linearity of relation if any between Return on Equity (ROE) and pre-selected variables. There exist a number of reasons for using this econometric technique for such a study on an inchoate financial institution in developing country like Ghana. "In the first place, the parameter estimates obtained from the OLS have some optimal and desirable properties described as BLU (Best, Linear and Unbiased) and above all, minimum variance property. Secondly, the computational procedure of the OLS is fairly and relatively simple while the data requirement is also not excessive. Again, the least squares method has been used in a wide range of economic relationships with fairly satisfactory results, and, despite the improvement of computational equipment and of statistical information which facilitated the use of other more elaborate econometric techniques, OLS is still one of the most commonly employed methods in estimating relationships in econometric models. Furthermore, the mechanics of least squares are simple to comprehend. Finally, OLS is an essential component of most other econometric techniques. In fact, with the exception of

the Full Information Maximum Likelihood method, all other techniques involve the application of the least squares method, modified in some

respects(Koutsoyiannis, 2001)

3.8 Research Working Definitions

As pointed out earlier, the OLS is being employed to test the linear relationship between Return on Equity and other variables which on our a priori information can affect the profitability- the viability of the financial institution. In cases like this, an appropriate specification of the relationship between ROE and the preselected variables would be modelled as: $ROE = \alpha_1 + \alpha_2 CA + \alpha_3 OE + \alpha_4 LIQ + \alpha_5 AQ + E$

Where:

ROE= return on equity

CA= capital adequacy

OE= operating efficiency

LIQ= liquidity

AQ= Asset Quality

E=   random error term

In brief, the following variables are calculated as follows: Capital Adequacy as the ratio of equity and total asset, operating efficiency is the ratio of operating expenses and total income, asset quality is the ratio of impairment and advances, liquidity is the ratio of advances and customer deposits.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.0 Education and Access to Credit

Cross tabulation tables (contingency tables) display the relationship between two or more categorical (nominal or ordinal) variables. The size of the table is determined by the number of distinct values for each variable, with each cell in the table representing a unique combination of values. Numerous statistical tests are available to determine whether there is a relationship between the variables in a table.The purpose of a cross tabulation is to show the relationship (or lack thereof) between two variables. A number of tests are available to determine if the relationship between two cross tabulated variables is significant. One of the more common tests is chi-square. One of the advantages of chi-square is that it is appropriate for almost any kind of data.(SPSS, version 16)

Pearson chi-square tests the hypothesis that the row and column variables are independent. The significance value (Asymp. Sig.) or the P-Value has the information we are looking for. The lower the significance value, the less likely it is that the two variables are independent (unrelated). However, it is important we do not misconstrue dependence of variables to be the same as causes of association. Thus, 'correlation' does not mean 'causation'

The first kind of relation we test is the number of times benefited from loan and educational background of client relationship. In the table below, the number of times a respondent has benefited from a loan facility is used as proxy of loan default rate. This is true in the sense that already defaulted clients shall not be granted a second loan as a policy of the bank.

Table 4.0.1 Number of times benefited from loan * Educational background of clients Cross tabulation

			Educational background of clients			
			Basic	Secondary	Tertiary	Total
Number of time benefited from loan	Once	Count	3	1	16	20
		% within Number of time benefited from loan	15.0%	5.0%	80.0%	100.0%
	Twice	Count	0	4	7	11
		% within Number of time benefited from loan	.0%	36.4%	63.6%	100.0%
	Trice	Count	1	0	9	10
		% within Number of time benefited from loan	10.0%	.0%	90.0%	100.0%
	Others	Count	2	4	13	19
		% within Number of time benefited from loan	10.5%	21.1%	68.4%	100.0%
Total		Count	6	9	45	60
		% within Number of time benefited from loan	10.0%	15.0%	75.0%	100.0%

Source: Researcher's field data analysis

For instance, out of the six respondents who just completed basic schools, three of them have benefited once from a loan facility, only one of them has benefited three times while two have benefited more than three times. However, sixteen out of the forty-five respondents who have completed tertiary education have benefited once and thirteen have benefited more than three times from a loan facility. The other information in the cells of the above table can be similarly explained.

The Chi-Square Tests table below gives the statistical significance test needed to make a scientific conclusion about the Association (or lack of it) between the number of times benefited from a loan facility and the educational background of respondents. The PValue (Asymp. Sig) of the Pearson Chi-Square provides the needed information to ascertain the association between the two variables in the contingency table in Table

4.0.1 above.

Table 4.0.2 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.915[a]	6	.178
Likelihood Ratio	10.896	6	.092
N of Valid Cases	60		

Source: Researcher's data analysis.

Notwithstanding this observed phenomenon in the contingency table 4.0.1 above, the Chi-Square test in the second table 4.0.2above indicates that there is no such strong association between educational background and number of times benefited from a loan facility in the data set at the 0.05 level of significance. In this case, the significance value is relatively high that it is displayed as 0.178, which means that it would appear that the two variables are, indeed, unrelated. Thus, the two variables are statistically independent which means that the numbers in the table stand out in an obvious way, indicating an obvious independence between the variables.

The Chi-Square test is also carried out for other pairs of variables with the view of establishing the categories of respondents/clients who normally defaults and why they default to enable the Bank take decisions. For instance, the relationship between business category (as in formal or informal sectors) and number of times benefited from loan facility is investigated. However, it is established that there is no association between the two variables at 0.05 levels of significance. Meanwhile, the reported P-Value is relatively small that it is displayed as 0.069. This means that a test at 0.10 levels of significance has established a strong association between the variables.

Other vital variables which are believed to cause default on loan are investigated. At the 0.10 level of significance, quantities like family size and marital status are associated with the number of times one has benefited from a loan facility.

4.1 Frequency Analysis

For categorical data, the most typical summary measure is the number or percentage of cases in each category. The mode is the category with the greatest number of cases. For ordinal data, the median (the value at which half of the cases fall above and below) may also be a useful summary measure if there is a large number of categories. The Frequencies procedure produces frequency tables that display both the number and percentage of cases for each observed value of a variable. (Koutsoyiannis, 1977)

The factors which are believed to be the causes of non-performing loans are assessed through the frequency analysis. The Frequency tables and Bar Charts of some selected variables such as delay in loan disbursement or approval, poor credit analysis, under financing, terms of loan, marketing problem, ineffective monitoring, etc. are done to reveal opinion of Credit Officers on causes of high rate of Non-Performing Loans. Again, the opinion of clients on a priori factors of high loan default rate such as high interest rate, size of loan, delay in loan disbursement, term of loan, among others are assessed through the frequency analysis.

In the Table 4.1.1 below, eight credit officer or bankers are of the view that poor credit appraisal is a cause of bad loans against twelve of them who think otherwise. The valid percentage column gives a clear picture of this frequency analysis. Thus, 40% of valid responses to the question of whether or not poor credit appraisal is a cause of bad loans responded Yes while 60% responded No.

Similar analysis of other factors reveals through a simple majority decision that delayed in loan approval cannot be a factor of bad loans according to the credit officers at the Okomfo Anokye Rural Bank. However, an overwhelming majority are of the view that such factors such as diversion of loan, under financing, ineffective monitoring, poor weather conditions, marketing problems, lack of managerial know how and terms of loan are the causes of bad loans.

Table 4.1.1 Poor credit appraisal

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	13.3	40.0	40.0
	No	12	20.0	60.0	100.0
	Total	20	33.3	100.0	
Missing	NR	40	66.7		
Total		60	100.0		

Source: Researcher's data analysis

Moreover, the clients of the Bank are of the view that such factors like high interest rate, high processing fee, delayed in loan disbursement, short term of loan repayment and size of loan could be causes of bad loans. For instance, the frequency table 4.1.2 below indicates that 88.3% of the clients believe that high rate of interest can be a cause of high rate of bad loans.

Table 4.1.2 High interest rate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes No		53	88.3	88.3	88.3
Total		7	11.7	11.7	100.0
		60	100.0	100.0	

Source: Researcher's data analysis

The other analysis this study investigate is the strategies of loan recovery used by the Bank. The frequency table 4.1.3 below shows that call on guarantor has been the major recovery strategy adopted by the Bank. Thus, 55% of valid responses see the call on guarantor as the preferred choice of loan recovery strategy.

Table 4.1.3 Loan recovery strategy used

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Court Action	4	6.7	20.0	20.0
	Seizure of collateral/Asset	5	8.3	25.0	45.0
	Call on guarantor	11	18.3	55.0	100.0
	Total	20	33.3	100.0	
Missing	NR	40	66.7		
Total		60	100.0		

4.2 Regression and Analysis of Variance

These statistical models are used to investigate factors/causes and effects of NonPerforming Loans. The Analysis of Variance (ANOVA) is a statistical method used to breakdown the total variance of a variable into additive components which may be attributed to various, separate factors. These factors are the "causes" or "Sources" of variation of the variable being analysed. This definition makes it clear that ANOVA and Regression are almost the same. In regression analysis, the aim is to determine that factors which cause the variation of the dependent variable. However, the significant difference between the two models lies in the fact that regression analysis provides numerical values for the influence of the various explanation variables on the dependent variable, in addition

to the information concerning the breaking down of the total variance in the dependent variable into components, while ANOVA provides only the latter type of information.

The tables below provide the ANOVA and Regression Analysis. The study used the multiple regression technique to arrive at establishing the possible determinants of loan default (as proxied by the number of times of loans benefited). The table 4.2.1 below summarizes the findings of the analysis.

The most common measure of how well a regression model fits the data is the statistic RSquare (R^2) also called Coefficient of Determination. This statistic represents how much of the variance in the response is explained by the weighted combination of predictors. The closer R^2 is to 1, the better the model fits.

The R Square from the analysis stands at 0.306 indicating that only a paltry of 30.6% of total variation in the rate of loan default can be explained or accounted for by the high interest rate, high processing fees, delay in loan disbursement, short term of loan, loan size, kickbacks to credit officers, rude behaviour of officers and provision of collateral.

In other words, the 'Goodness-of-fit' measure of a linear model, also sometimes called the 'Coefficient of Determination' gives an indication that our model is not good enough in explaining the default rate on loans to clients by the Okomfo Anokye Rural Bank.

Thus, the relationship cannot be described as linear but perhaps other functional forms. This assertion is however contrary to what the F-test shows. Clearly the F-value of 2.812 in the Analysis of Variance (ANOVA, Refer to the table 4.2.2 below) is too large at the 0.05 level of significance to reject the assertion of no regression. In this table, out of a total of 92.933 sums of squares in the default rate, a colossal portion of 28.442 could be accounted for by the model which has incorporated above set of factors of default rate as

the explanatory variables. This yielded a P-Value of 0.012 which is too small and hence rejects the assertion of no regression.

Table 4.2.1 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.553[a]	.306	.197	1.125

Source: Researcher's field data analysis.

Table 4.2.2 ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	28.442	8	3.555	2.812	.012[a]
	Residual	64.491	51	1.265		
	Total	92.933	59			

Source: Researcher's field data analysis

However, as clearly seen from the Table 4.2.3 below, the test for the statistical significance of the individual explanatory variables is worth commenting. The regression coefficients are indicated in the column Beta (Standardized Coefficients) in the Table. The column named t gives the t-values of the parameter estimates. The t-value is a statistic used to test the null hypothesis that there is no linear relationship between the dependent variable and the independent variable in question. This is tantamount to the test that the regression coefficient is equal to zero. When the significance level is less than 0.05 preferably, the coefficient is considered to be significant. For instance, the tvalue of high interest rate stands at 0.473 with a corresponding P-Value of 0.258. This is an indication that high interest rate is not statistically significant at 0.05 level of significance. Thus, the regression coefficients of the high interest rate charged can be assumed to be equal to zero.

Table 4.2.3 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.475	.677		-.702	.486
	High interest rate	.541	.473	.139	1.145	.258
	High processing fees	-.253	.490	-.065	-.516	.608
	Delay in disbursement of loan Short term of repayment	-.239	.388	-.079	-.615	.541
	Kickback/bribe to credit officers	-.081	.352	-.030	-.231	.818
	Loan size too small	.549	.560	.122	.979	.332
	Rude behaviour of credit officer/other staff	.444	.377	.151	1.176	.245
	Provision of collateral	.713	.527	.172	1.352	.182
		1.162	.323	.450	3.596	.001

Source: Researcher's field data analysis

Another vital observation that is worth mentioning is the signs of the regression coefficients. The standardized coefficients are shown in the table 4.2.3 above. The sign of the coefficient indicates whether the predicted response increases or decreases when the predictor increases, all other predictors being constant. For categorical data, the category coding determines the meaning of an increase in a predictor. For instance, an increase in factors like high processing fee, delay in loan disbursement and short term of loan repayment will result in a decrease in rate of loan default. In this case, except high processing fee, delay in loan disbursement and short term of loan which are negative, the

others are positive. The negative coefficient tells us that there is an inverse relationship between the rate of default and the explanatory variable (factor) in question.

The value of the coefficient reflects the amount of change in the predicted loan default rate. Using standardized coefficients, interpretations are based on the standard deviations of the variables. Each coefficient indicates the number of standard deviations that the predicted response changes for a one standard deviation change in a predictor, all other predictors remaining constant.(Milton and Arnold,1995) For example, a one standard deviation change in high interest rate yields an increase in predicted default rate by 0.139 standard deviations. The standard deviation of loan default rate is 1.255, so loan default rate increases by 1.255×0.139=0.1744.

Finally, it is worth commenting on the information in the third column of the table below. This column gives the standard error of the test statistic (t-value) which is the measure of how much the value of the test statistic varies from sample to sample. Statistically speaking, it is the standard deviation of the sample distribution of the tstatistic. Literally speaking, these values tell us how the computed value of the t-statistic could vary if a different sample is used in calculating the t-value. However, the corresponding P-Values show that except provision of collateral, none of the predictors are statistically significant at 5% confidence level.

The intercorrelations among the predictors are useful for identifying multicollinearity in the regression. Variables that are highly correlated will lead to unstable regression estimates. However, due to their high correlation, omitting one of them from the model only minimally affects prediction. The variance in the response that can be explained by the omitted variable is still explained by the remaining correlated variable. However, zero-order correlations are sensitive to outliers and also cannot identify multicollinearity due to

a high correlation between a predictor and a combination of other predictors. The intercorrelations of the predictors for both the untransformed and transformed predictors are displayed. All values are near 0, indicating that multicollinearity between individual variables is not a concern. (Koutsoyiannis,1997)

4.3 Effects of Non-Performing Loans on Profitability

The table 4.3.1 below gives the descriptive statistics of the various variables in question. In other words, the table aids in getting the general idea about the behaviour of the variables under study. That is, we try to give a general quantitative description of the variables by obtaining a single value from the values of the variable and their corresponding probabilities. The mean as a typical example is the average value which can be viewed as an indication of the central value of the density or frequency function.

That is why the mean of a variable is sometimes referred to as the location parameter. For instance, the variable return on equity (ROE) has a mean of 0.197 which stand for the centre of the variable ROE because all other observed values occur around this figure and similar thing can be said about the other means in this study.

One cannot adequately describe a random variable without commenting on the standard deviation. The standard deviation of a variable gives an idea of how the values are dispersed about the mean. In this case, a standard deviation value of 0.0.033 for the return on asset (ROA) implies that on the average, the values of the random variable ROA will deviate from its mean by 0.033. This tells us that one will prefer a very small value as the standard deviation of a variable which makes it more predictable. **Table 4.3.1 Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Asset Quality of Bank	10	.009	.102	.038	.033
Return on Equity	10	.124	.295	.197	.054
Return on Asset of Bank	10	.014	.225	.132	.083
Valid N (listwise)	10				

The study uses the simple regression technique to arrive at establishing the possible impact of non-performing loans (Asset Quality) on banks' profitability as proxied by the return on equity (ROE) or return on asset (ROA). The table 4.3.2 below summarizes the findings of the analysis. The R Square from the analysis stands at 0.200 indicating that 20% of total variation in the return on equity of the Okomfo Anokye Rural Bank can be explained or accounted for by the capital adequacy ratio. In other words, the 'Goodnessof-fit' measure of a linear model, also sometimes called the 'Coefficient of Determination' gives an indication that our model is quiet good in explaining the profitability of the institution in question. This assertion is contrary to the F-value of 1.995 in the Analysis of Variance (ANOVA, Refer to the table 4.3.3 below). In this table, out of a total of 0.026 sums of squares in the return on equity, only 0.005 could be accounted for by the linear model of return on equity asset quality.

Table 4.3.2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.447[a]	.200	.100	.051024

Source: Researcher's field data analysis

The test of significance of a regression shows that there no such statistical significant regression at the 5% level of confidence. Thus, the P-value of 0.196 is too big to reject the null hypothesis of no regression.

Table4.3.3 ANOVA

Model		Sum of Squares	df	Mean Square	F	P-Value
1	Regression	.005	1	.005	1.995	.196[a]
	Residual	.021	8	.003		
	Total	.026	9			

Source: Researcher's filed data analysis

Moreover, table 4.3.4 below, the test for the statistical significance of the asset quality is worth commenting. The regression coefficients are indicated in the column Beta in the Table. The column named t gives the t-values of the parameter estimates. The t-value is a statistic used to test the null hypothesis that there is no linear relationship between the dependent variable (ROE) and the independent variable (capital adequacy), or, in other words, that the regression coefficient is equal to zero. When the significance level is less than 0.05 preferably, the coefficient is considered to be significantly different from zero. For instance, the t-value of -1.412 shows that the asset quality variable in the model is not statistically significant at 5% confidence level given that the P-value is 0.196 and as such cannot be said to be different from zero. However, the constant term is statistically significant at 0.05 level of significance. This can attributable to the fact that certain crucial factors of profitability can be included in the model

Table 4.3.4 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.224	.025		8.823	.000
Asset Quality of Bank	-.730	.517	-.447	-1.412	.196

a. Dependent Variable: Return on Equity

Another vital observation that is worth mentioning is the signs of the regression coefficients. The negative coefficient of the predictor tells us that an increase or better state, an improvement in asset quality will result in a decrease in return on equity and vice-versa.The regression coefficient for the asset quality is -0.447 which means that a unit

increase or improvement in the asset quality of the institution will attract a 0.477 fall in the return on equity of the institution in its operations.

4.4. The Test for Autucorrelation

A very vital assumption in Ordinary Least Square Analysis is that the error terms in the linear model are uncorrelated. In other words, we talk of the problem of Autocorrelation if the residuals for consecutive observations are correlated. Thus, successive terms or values of the random error term are temporally dependent; meaning the value which the residual assumes in any one period is dependent on the value it assumes in any previous period. This definition tells us that Autocorrelation is a special correlation in the sense that it refers to correlation between successive values of the same variable but not between two distinct variables, hence the name Serial Correlation.

The presence of serial correlation in any statistical analysis emanates from several reasons which include omitted explanatory variables, mis-specification of the model, interpolation in the statistical or econometric observations, and mis-specification of the true random error term.(Milton and Arnold,1995)

Table 4.4.1 Residual Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.447[a]	0.200	0.100	0.051	1.638

a. Predictors: (Constant), Asset Quality of Bank
b. Dependent Variable: Return on Equity

The residual test in table 4.4.1 above is reproduced from the model summary in table 4.3.2 to aid in explaining autocorrelation. A graphical way of portraying the existence of serial correlation in our analysis is by plotting the regression residuals either against their own lagged values, or against time. However, there are more accurate tests for the existence or

the incidence of Autocorrelation. The traditional applied tests are the von Neumann ratio and the Durbin-Watson test. Since the latter test is suitable for small samples, we use that in this study to investigate the problem of serial correlation. This test calculates a Durban-Watson value which if stands at 2 gives an indication of the absence of serial correlation. The table above gives such a test. The Durbin-Watson value is given as 1.638 which implies an existence of positive serial correlation in the analysis for some reasons as cited above. For this reason, it is recommended that subsequent studies on determinants of return on equity will look at other relevant explanatory variables which must be included in the model to take care of the omitted variables problem.
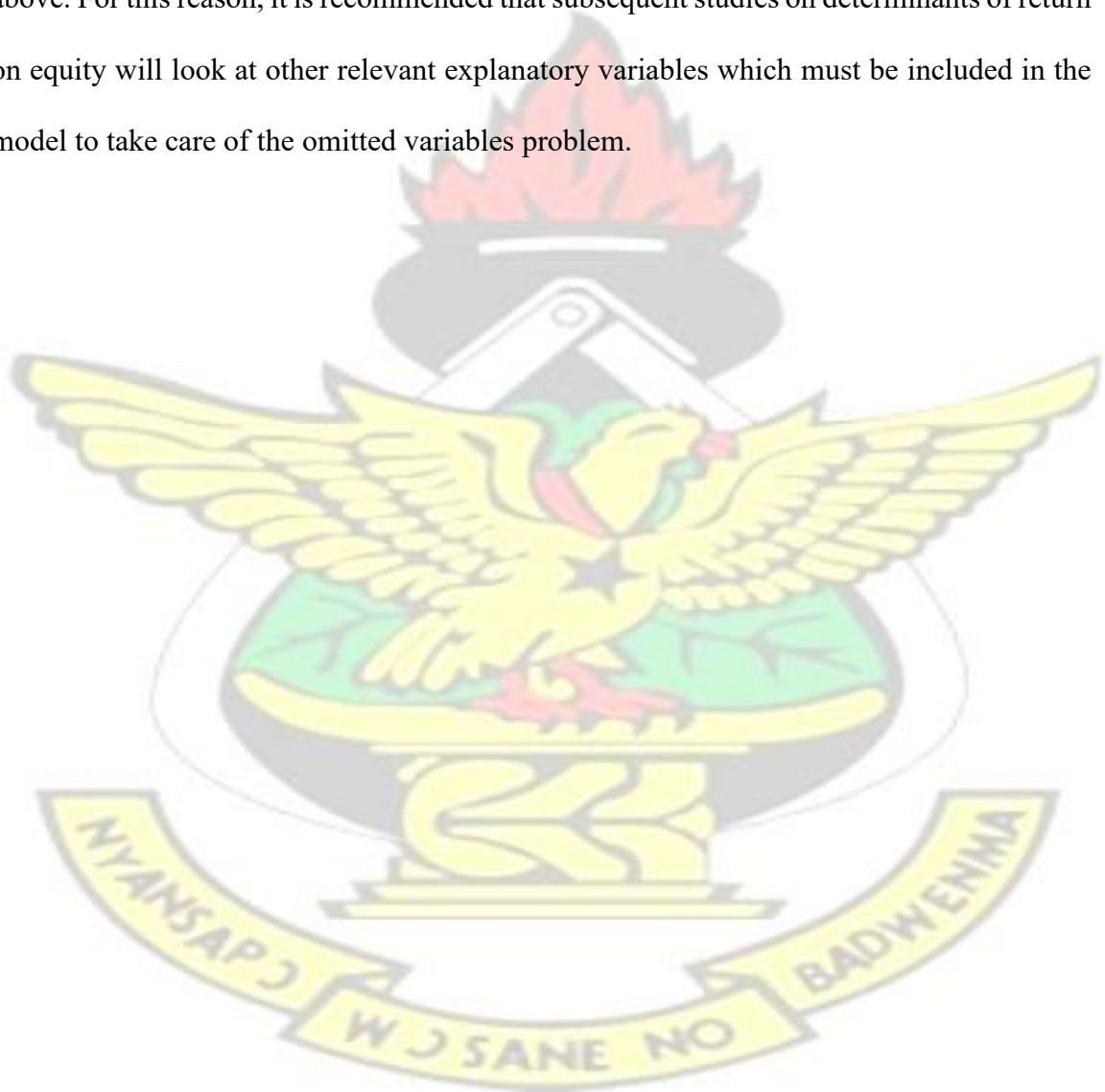
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Summary of Findings

The chi-square test is used to investigate the association (or lack of it) between the rate of loan default and some selected quantities; to wit: educational background, business categories, family size and marital status. Such variables such as family size marital status, and business types are related to loan default rate at the 0.10 levels of significance.

The causes of loan default are investigated through the frequency analysis tables. The identified causes of loan default according to Bank Officials are diversion of loan, underfinancing, ineffective monitoring, poor weather conditions, marketing problems, lack of managerial know-how and terms of the loan. However, clients of the Bank are of the view that such factors like high interest rate, high processing fees, delayed in loan disbursement, short term of loan repayment and size of the loan are causes of loan default.

The study examines four possible strategies for controlling non-performing loans at the Okomfo Anokye Rural Bank. These are court actions, seizure of assets or collateral, call on guarantor and sale of assets. However, the overwhelming majority representing 55% of valid responses prefer call on guarantor as the surest way of securing loans granted to clients or improving loan impairment.

The causes of bad loans are investigated using the multiple regression and ANOVA techniques. The coefficient of determination stands at 0.306 (30.6%) which is an indication of poor liner model between the bad loan and identified factors.

Thus, the relationship cannot be described as linear but perhaps other functional form. This is rightly so because the ANOVA indicates a significant regression at the 5% levels of

confidence. That is, high interest rate, high processing fee, delayed in loan disbursement, short term of loan repayment, kickback to loan officers, loan size and provision of collateral are all factors of bad loans. Moreover, the direction of effects of these factors on bad loans reveals a negative association for high processing fee, delayed in loan disbursement and short term of loan repayment. The only significant factor according to the analysis is the provision of collateral.

5.1 Conclusion

The main objectives of the study are to identify the causes of NPL and effect of NPL on profitability. Again, the study examines the group of people who default on loans and measures put in place to control Non-Performing Loans.

The Mathematical and Statistical models have reveal that the size of one's family, the business category and marital status have association with number of times one has benefited from loan facility (a proxy of loan default rate). Again, the identified causes of loan default according to Bank Officials are diversion of loan, underfinancing, ineffective monitoring, poor weather conditions, marketing problems, lack of managerial know-how and terms of the loan. However, clients of the Bank view high interest rate, high processing fees, delayed in loan disbursement, short term of loan repayment and size of the loan as causes of loan default.

Another profound finding of the study is a possible non-linear relationship between nonperforming loan and factors like high interest rate, high processing fee, delayed in loan disbursement, etc.

5.2 Recommendations

The findings of the study necessitate a great deal of policy recommendations which could be provided and implemented for the growths of the Okomfo Anokye Rural Bank. The

prominent one among them is the fact that business categories, family size and marital status have significant relation with number of times one has benefited from a loan facility. This calls for a stringent due diligence and credit analysis to scrutinise prospective loan applicants of the Bank in line with these variables.

Besides, one important measure that can be put in place to reduce the incidence of loan default within the banking sector is to ensure that loans are properly and effectively monitored as well as supervised by its credit officers. Besides, another important way of minimizing loan defaults is through regular and effective monitoring and supervision of loan facilities granted to clients. This would prevent diversion of funds into business ventures other than the agreed purposes, help credit officers assist customers who are facing some business management problems such as improper records keeping, and overtrading that affect their business operations

Loans must be well secured in terms of the provision of adequate collateral as well as ensuring that proper and prudent legal documentation been put in place for all loans been disbursed. This is because it will be very difficult and unusual for banks and other lenders to tell from the faces of their client whether they are good or bad borrowers .Putting such mechanisms in place will enable banks and other financial institutions reduce all the losses that arises from loans as well as minimize the effects of such loans in the form of bad debt provisions on the financial performance of banks

Clients who have outstanding loans but operate profitable businesses can be refinanced to increase their cash flow generation capacity to be able to repay the outstanding loan balance.

The outstanding loan balance should also be rescheduled to match the new cash flow from the business. This will bring back the facility to current and also reduce the high provision for bad and doubtful debts made on non-performing loans.

The Bank should also resource the Recovery Department to enable them carry out their functions very well to recover the overdue loans. The Department should also be involved in the monitoring of loans from the day the loans are granted.

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APPENDICES

Appendix I, Frequency Analysis

Variable	Responses	Valid Responses	Valid Percent
Delayed Loan Approval	Yes	7	35
	No	13	65
Poor Credit Appraisal	Yes	8	40
	No	12	60
Diversion of Loan	Yes	20	100
	No	0	0
Under Financing	Yes	14	70
	No	6	30
Ineffective Monitoring	Yes	14	70
	No	6	30
Poor Weather Conditions	Yes	15	75
	No	5	25
Marketing Problem	Yes	17	85
	No	3	15
Lack of Business Know-how	Yes	14	70
	No	6	30
Term of Loan Repayment	Yes	15	75
	No	5	25
Unwillingness to Pay Loan	Yes	12	60
	No	8	40
Non-Compliance to Credit Policy	Yes	9	45
	No	11	55

Appendix II, Frequency Analysis

Variable	Responses	Valid Responses	Valid Percent
High Interest Rate	Yes	53	88.3
	No	7	11.7
High Processing Fee	Yes	53	88.3
	No	7	11.7
Delay in Loan Disbursement	Yes	47	78.3
	No	13	21.7
Short Term in Loan Repayment	Yes	42	70
	No	18	30
Kickback/Bribes to Loan Officials	Yes	5	8.3
	No	55	91.7
Small Size in Loan	Yes	46	76.7
	No	14	23.3
Rude Behaviour of Loan Officers	Yes	6	10
	No	54	90

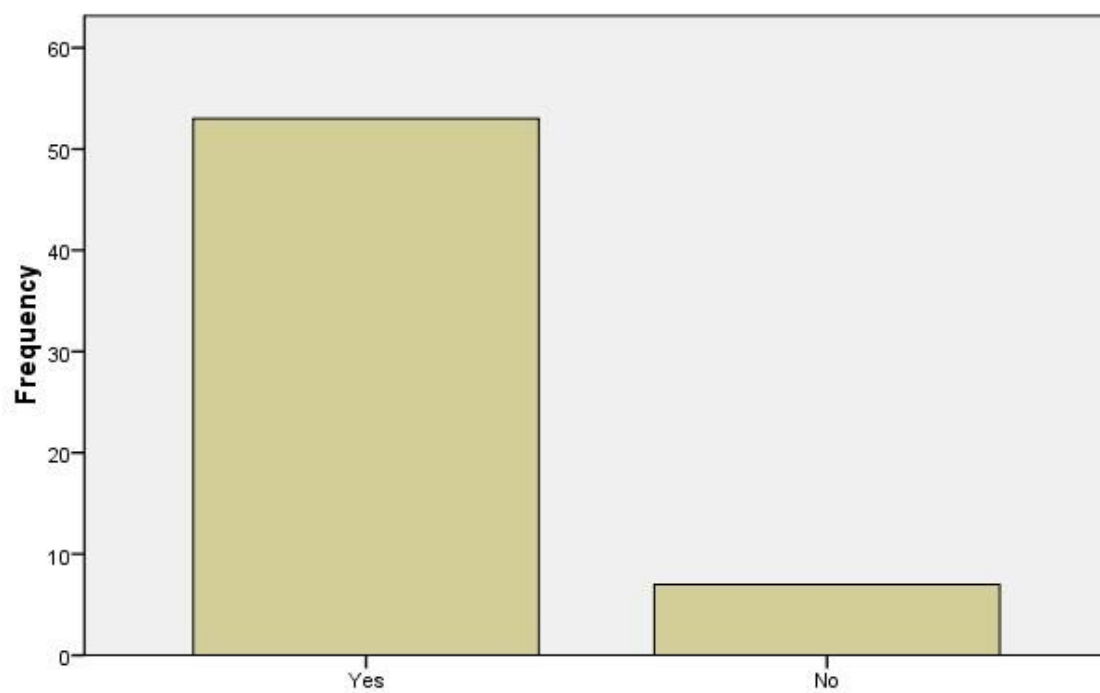| Provision of Collateral | Yes | 22 | 36.7 |
| | No | 38 | 63.3 |

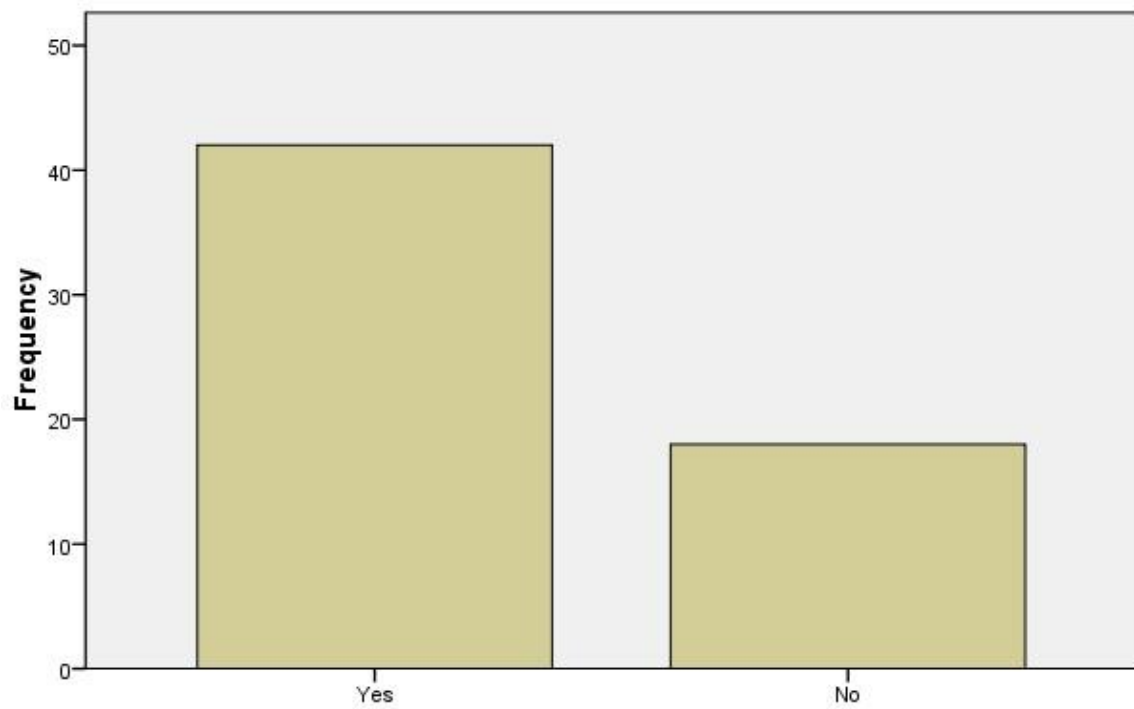## Appendix III

High ineterest rate
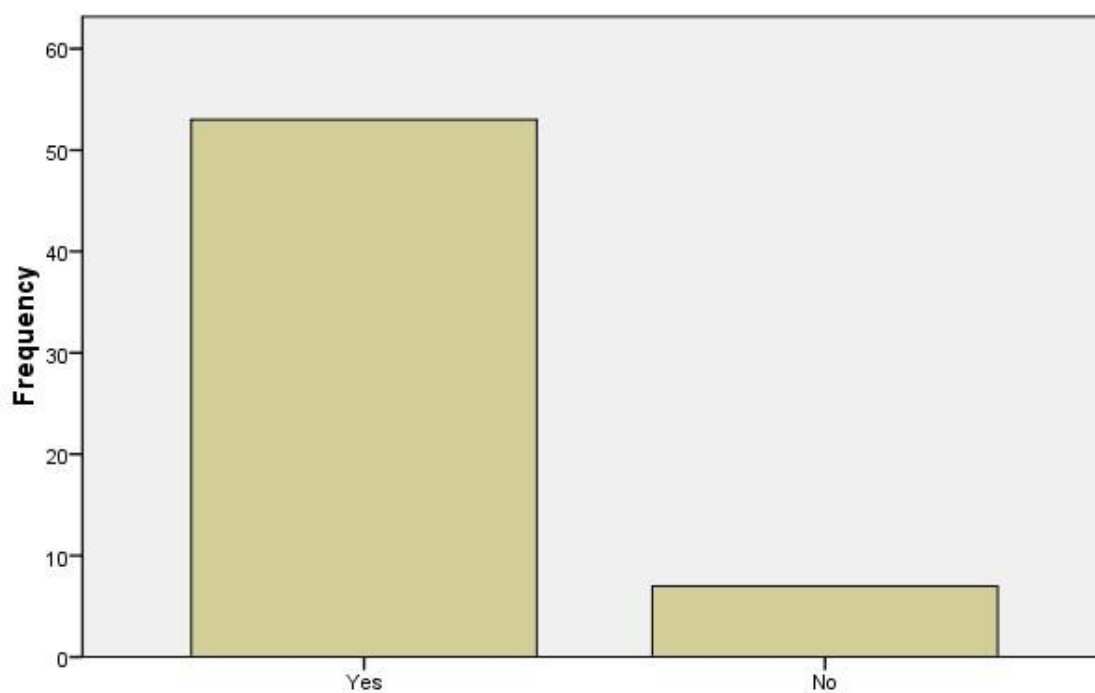
High ineterest rate
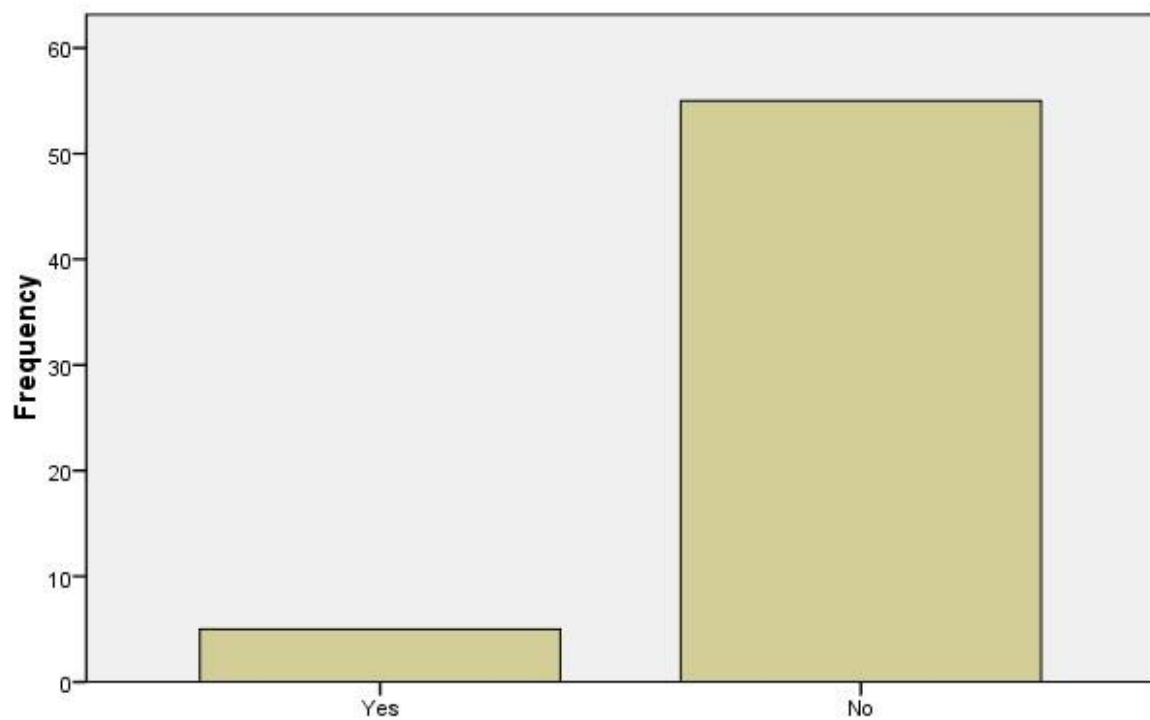
High processing fees

Delay in disbursement of loan
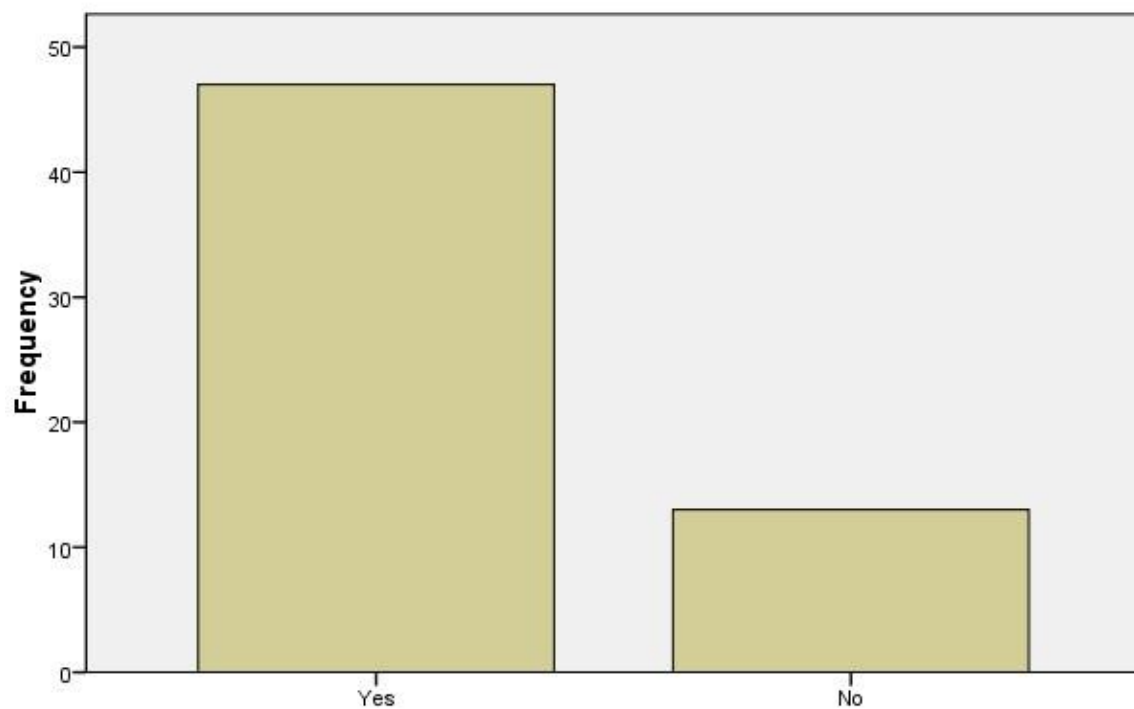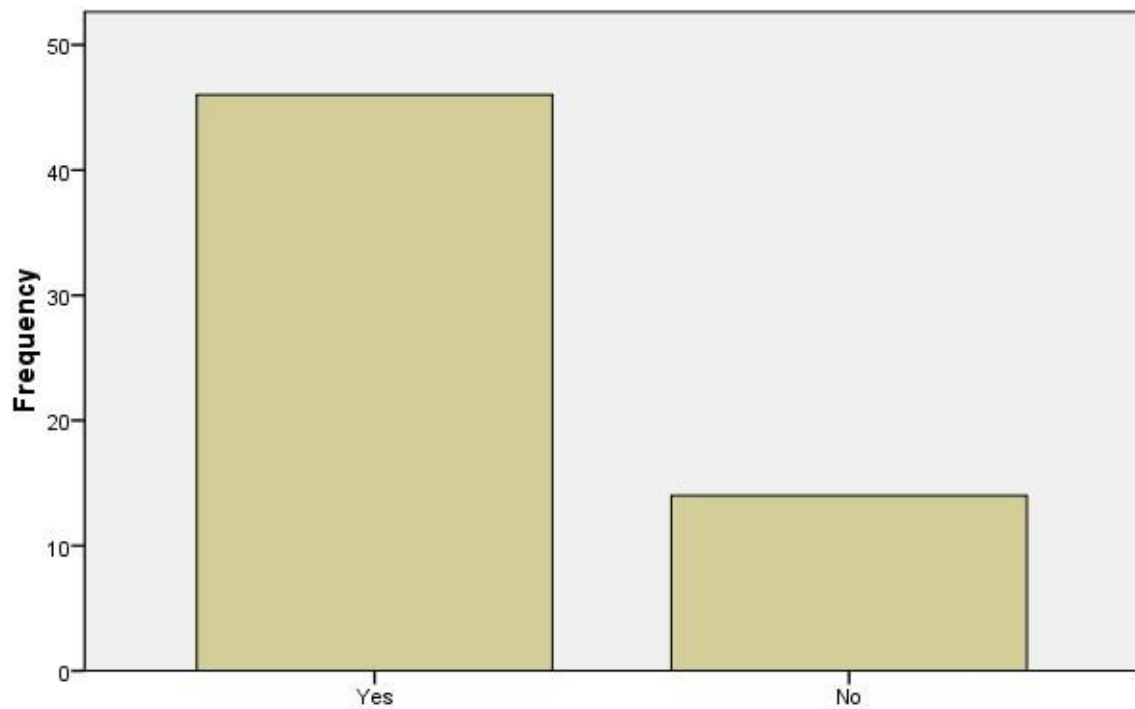
Short term of repayment

Short term of repayment

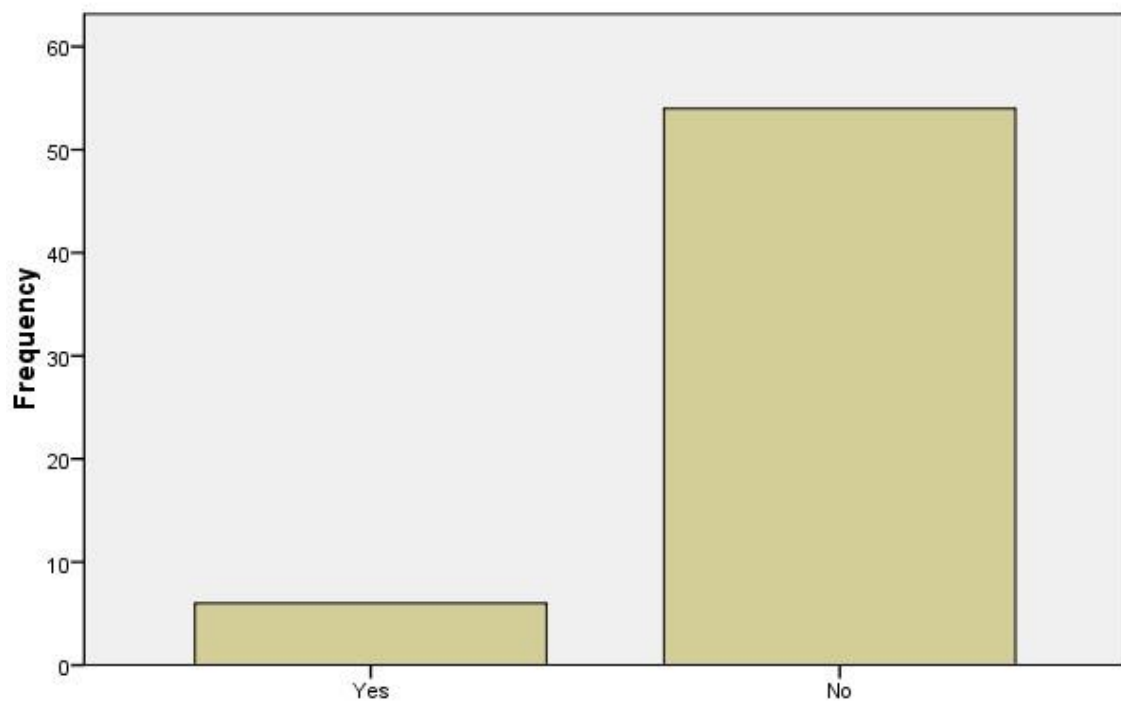## Kickback/bribe to credit officers

Kickback/bribe to credit officers

Loan size too small

Loan size too small

Rude behaviour of credit officer/other staff

Rude behaviour of credit officer/other staff

Provision of collateral
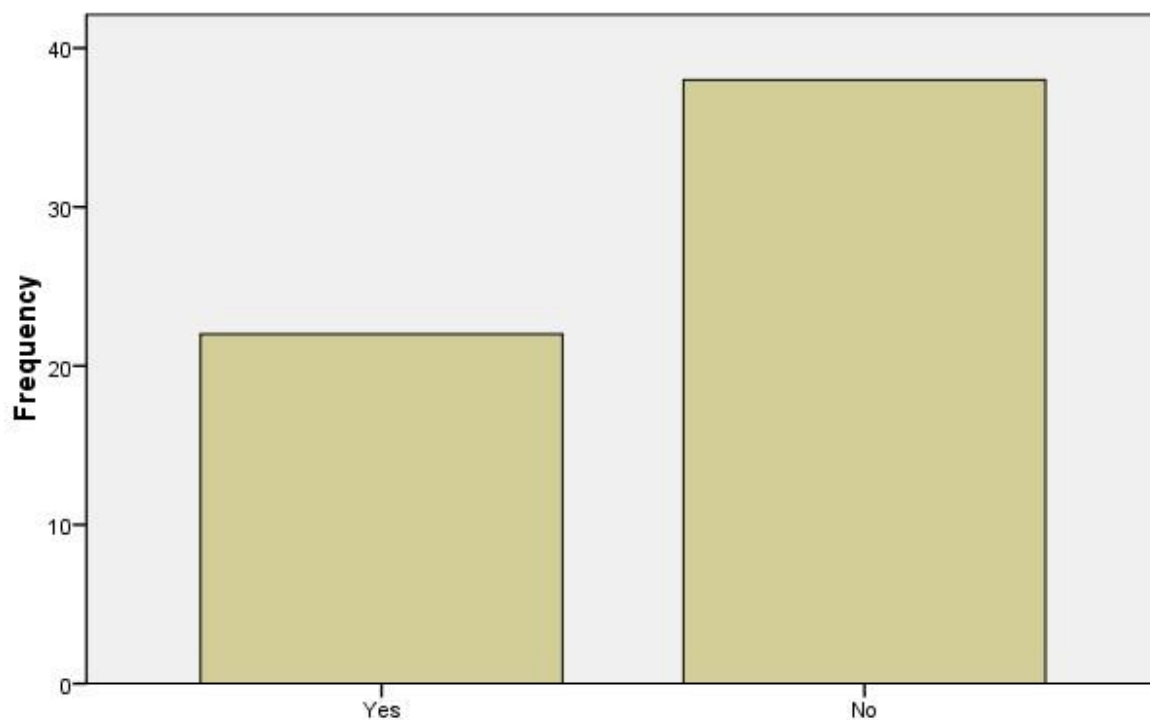
Provision of collateral

Appendix IV

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.553ᵃ	.306	.197	1.125

a.   Predictors: (Constant), Provision of collateral, Loan size too small, High ineterest rate, Rude behaviour of credit officer/other staff, High processing fees, Kickback/bribe to credit officers, Delay in disbursement of loan, Short term of repayment

b.   Dependent Variable: Number of time benefited from loan

ANOVAᵇ

Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	28.442	8	3.555	2.812	.012
	Residual	64.491	51	1.265		
	Total	92.933	59			

a.   Predictors: (Constant), Provision of collateral, Loan size too small, High ineterest rate, Rude behaviour of credit officer/other staff, High processing fees, Kickback/bribe to credit officers, Delay in disbursement of loan, Short term of repayment

b.   Dependent Variable: Number of time benefited from loan

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.475	.677		-.702	.486
	High interest rate	.541	.473	.139	1.145	.258
	High processing fees	-.253	.490	-.065	-.516	.608
	Delay in disbursement of loan	-.239	.388	-.079	-.615	.541
	Short term of repayment	-.081	.352	-.030	-.231	.818
	Kickback/bribe to credit officers	.549	.560	.122	.979	.332
	Loan size too small	.444	.377	.151	1.176	.245
	Rude behaviour of credit officer/other staff	.713	.527	.172	1.352	.182
	Provision of collateral	1.162	.323	.450	3.596	.001

a. Dependent Variable: Number of time benefited from loan

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.193[a]	.037	-.083	.085938

a. Predictors: (Constant), Asset Quality of Bank

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	1	.002	.310	.593[a]
	Residual	.059	8	.007		
	Total	.061	9			

a. Predictors: (Constant), Asset Quality of Bank

b. Dependent Variable: Return on Asset of Bank

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.114	.043		2.655	.029
	Asset Quality of Bank	.485	.871	.193	.556	.593

a. Dependent Variable: Return on Asset of Bank

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.447[a]	.200	.100	.051024

a. Predictors: (Constant), Asset Quality of Bank

ANOVAb

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.005	1	.005	1.995	.196[a]
	Residual	.021	8	.003		
	Total	.026	9			

a. Predictors: (Constant), Asset Quality of Bank

b. Dependent Variable: Return on Equity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.224	.025		8.823	.000
	Asset Quality of Bank	-.730	.517	-.447	-1.412	.196

a. Dependent Variable: Return on Equity

Number of time benefited from loan * Able to pay loan Crosstabulation

			Able to pay loan		
			Yes	No	Total
Number of time benefited from loan	Once	Count	19	1	20
		% within Number of time benefited from loan	95.0%	5.0%	100.0%
	Twice	Count	9	2	11
		% within Number of time benefited from loan	81.8%	18.2%	100.0%
	Trice	Count	9	1	10
		% within Number of time benefited from loan	90.0%	10.0%	100.0%
	Others	Count	19	0	19
		% within Number of time benefited from loan	100.0%	.0%	100.0%
Total		Count	56	4	60
		% within Number of time benefited from loan	93.3%	6.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.969ᵃ	3	.265
Likelihood Ratio	4.518	3	.211
N of Valid Cases	60		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .67.