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Evaluation of the Factors Leading to Loan Default at Equity Bank, Kenya

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Abstract
This paper gives an evaluation of the causes of loan default among the customers of Equity bank. A sample of 80 respondents out of 240 respondents which comprised of both the bank managers and loan defaulters at Equity Bank was used in the study. This represented 33% of the target population. The population was stratified into bank managers and loan defaulters while loans were stratified into performing and nonperforming loans. Data was collected using two sets of questionnaires which were administered separately to the target population. Data was analyzed using Microsoft Excel Data Analysis Tools. In the evaluation of the causes of nonperforming loans, the paper considered the contribution of the factors such as the banks' lending practices as well as the economic backgrounds and financial decision making among loans recipients at Equity Bank Ltd. Microsoft Excel Data Analysis Tools were used to establish the relationship between amounts of loan advanced to an individual and the amount of loan defaulted. The paper established that the major factors influencing nonpayment of borrowed loans at Equity Bank Ltd were both internal and external. The paper recommended that banks' credit policies be reviewed to match the highly volatile economic trends within financial markets with a strong emphasis on institutional appraisals on credit worthiness.
Keywords: Loans, Bank, Default.

1.0 INTRODUCTION
1.1 Background of the Study
Equity Bank's tremendous growth within the East African Region since the beginning of the year 2009 and September 2010 is largely attributed to a 30% increase in Customer Asset deposit and a similar increase in the loan portfolio over the same period. With this trend expected to even increase further, there has been a fresh concern about the relative regression on loan performance (Alembi, 2009).

Many advisors in the commercial and financial world are advocating for more loans to people as long as the ability to pay can be proven. The question therefore is how a loans officer can prove that a person presenting him/herself for a credit facility is willing and able to honor his repayment obligations to the Bank? This brings about the issue of asymmetric information as stated in the model on adverse selection and moral hazard (Stigiz R, et al,1981). As pressure mounts to advance these loans, therefore it is important to suggest better and effective models for appraisal of loans to mitigate against credit risks which are leading to increased rate of bad loans in commercial Banks.

Equity Bank's group lending sector had 4.19 percent (4.19%)) of the total credit advanced to women and youth groups between April 2010 and June 2010 not performing according to Equity Bank Group Financial Results as at 30th, June 2010. According to the Central Bank of Kenya the gross non-performing loans in Commercial Banks increased from Sh61.5 billion in February 2009 to Sh63.2 billion in February 2010. Statistics indicates that only Sh71 million of the Sh 265 million advanced to women group since 2007 through the Women Enterprise Fund has not been repaid, putting to doubt recovery of the remaining Sh 194 million (Alembi, 2009). With the economy expected to shrink even further, there are concerns that many borrowers may not be able to repay their loans. It is in anticipation of this high-risk exposure that Banks should not take chances (Mwangi, 2010.)

1.1.1 Unsecured Lending
Equity Bank among other Banks has gone big on unsecured lending, offering up to Kshs. 3 million payable between one year and six years. Conditions for the unsecured loan include a minimum salary of Sh.5,000, a three month Bank salary statement and the employer's introduction letter. The Bank has classified these loan facilities into five main sectors as Consumer Loans, Agricultural Loans, Small and Medium Enterprises (SME) Loan, Group Lending Loans and Asset Financing (Alembi, 2009)

Many Banks today are struggling to recover back the huge amounts of funds advanced to the borrowers. It appears that the bulk of credit was given to non quality borrowers, as a consequence of poor loan appraisals and risk evaluation capabilities by lenders. Signs of hard times ahead are beginning to show as Banks fold up marketing tents and withdraw from the streets the sales teams that used to lure the public with cheap credit, according to the Central Bank of Kenya Annual Report, 2009.

Not all people are ready for credit; some are so poor that taking out a loan could further mire them in debt and poverty instead of helping. Because such groups are extremely vulnerable, they lack conventional collateral like land title deeds or car logbooks to be used as Banks fallback position in times of default. There are some countries where you would not recommend a loan scheme, because poverty is so entrenched (Bessis, 2005). Since

the year 2004, a large number of countries have experienced financial distress of varying degrees of severity, and some have suffered repeated bouts of distress (Hardy 1998). Bessis (2005) believes that the best warning signs of financial crises are proxies for the vulnerability of the banking and corporate sector.

Relevant information on the Bank's loan default rates was extracted from journals and the Bank's quarterly reports on credit analysis, available at Equity Bank Resource Centre, at Equity Centre, Nairobi Kenya. Respondents constituted Equity Bank managers, credit officers as well as a selected group of defaulters within the loan sectors in Equity Bank loan facilities namely Consumer, Agriculture, SME, Group Lending and Asset Financing according to Equity Bank product hand book, (20 I 0).

This research sought to establish the main factors influencing loan default in Equity Bank in Thika Kenya and identified the sectors which are mostly defaulted. Necessary recommendations on best lending practices suggested. The population was stratified into three strata based on type of respondent. The study used a stratified random sampling technique and a descriptive research design on the target population, who were deemed to have vital information necessary for the success of the study. The target population was heterogeneous. Bank managers and credit officers were issued with questionnaires from their respective offices. A selected group of defaulters was administered with a different set of questionnaire as they visited the Credit Collections Department at Thika Plaza.

A sample size comprising of 69 respondents was studied out or a target population of 228. This sample was appropriate and it constituted 30% of the population. A good sample size should account for a minimum of 10% of the population size (Mugenda and Mugenda, 1999.)

1.2 THE RESEARCH PROBLEM

The purpose of this paper was to establish factors responsible for increased rate of nonperforming loans at Equity Bank Thika, Kenya between January and September 2010 with 1.6% nonperforming loans on 30 days and 1.2 % nonperforming loans on 90 days.

In absolute figures, out of a total volume of Kshs 1.6 billion lend to loan recipients within the same period, a total of Kshs 17.2 millions on 30 days and Kshs13 millions on 90 had not been repaid (Alembi, 2010).

Equity Bank Thika branch has been hit hard by the highest ever reported write-offs amounting to Kshs 8 million and a similar provision sharply ate into second quarter profits initially at 25 millions, according to Equity Group Director Operations, Gerald Warui (Equity Bank intranet, September 2010).

1.3 GENERAL OBJECTIVE, SPECIFIC OBJECTIVES AND RESEARCH QUESTIONS

The main purpose this study was to investigate the causes of an increasing trend on loan default rate among loan recipients at Equity Bank Ltd. in Kenya.

1.3.1 Specific Objectives of the Study

1.   To investigate the reasons why people take loans.
2.   To investigate repayment abilities of loan recipients at the time of loan application.
3.   To investigate exposure levels of different loan products with regard to loan default.
4.   To assess the effectiveness of credit policies on loan management at Equity Bank Ltd.

1.3.2 Research Questions

The aim of the research was to answer the following research questions:

1.   What are the reasons for taking loans?
2.   What securities were used against the advanced facilities?
3.   Which class of Equity loans poses a higher risk of being defaulted?
4.   What credit policies and procedures are followed for loan acquisition at Equity Bank?

2.0 LITERATURE REVIEW

2.1 Introduction

According to Gorter and Bloem (2002), nonperforming loans are mainly caused by an inevitable number of wrong economic decisions by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, etc.). The problem of NPL's is widespread. Ishimura, Kazuhito, and Yukiko, (200 I) stated that one of the underlying causes of Japan's prolonged economic stagnation is the nonperforming or bad loan problem. They explain that some of the loans made to companies and industries by financial institutions during the bubble era became nonperforming when the bubble burst. This delayed structural reforms and prevented the financial intermediary system from functioning properly.

Fernandez, Jorge and Saurina, (2000) state that the growth of Bank credit in Spain and its prudential implications is an ever-present item on the agenda of banking supervisors, since most banking crises have had as a direct cause the inadequate management of credit risk by institutions.

They further assert that even though bank supervisors are well aware of this problem, it is however very difficult to persuade bank managers to follow more prudent credit policies during an economic upturn, especially

in a highly competitive environment. Mukalazi (1999) notes that reeling from years of economic mismanagement and political interference, Uganda's banking industry posted huge losses in the early 1990s. To help address credit risk management in Ugandan banks, the government has introduced a statute that deals with several issues such as insider lending, following the recent scandal in which billions of shillings were lent without sufficient collateral to Greenland Bank by the newly privatized Uganda Commercial Bank Ltd.

The Central Bank of Kenya defines NPLs as those loans that are not being serviced as per loan contracts and expose the financial institutions to potential losses according to Central Bank of Kenya, (1999). It is important to note that non-performing loans refer to accounts whose principal or interest remains unpaid 90 days or more after due date. According to the Central Bank of Kenya Supervision Report, 1999, the level of non- performing loans has been increasing steadily from shs.56 billion in 1997, to Shs. 83 billion in 1998 to shs.97 billion in 1999. This high level of non-performing loans continues to be an issue of major supervisory concern in Kenya.

According to a study by Brown, B. (1998), most of the Bank failures were caused by non-performing loans. Arrears affecting more than half the loan portfolios were typical of the failed Banks. Many of the bad debts were attributable to moral hazard: the adverse incentives on Bank owners to adopt imprudent lending strategies, in particular insider lending and lending at high interest rates to borrowers in the most risky segments of the credit markets. The single biggest contributor to the bad loans of many of the failed local Banks was insider lending (Brown, B. 1998) .In at least half of the Bank failures, insider loans accounted for a substantial proportion of the bad debts (Central Bank of Kenya Supervision Report, 1999)

2.2 Theoretical framework

The most profound impact of high non-performing loans in Bank's portfolio is reduction in the Bank profitability especially when it comes to disposals. According to African Journal of Accounting, Economics, Finance and Banking Research Vol. 4. No.4. 2009 Nelson M. Waweru & Victor M Kalani 17, to the International Monetary Fund (IMF) 2002, Banks' net profits had been sluggish for the last ten years. In the wake of mounting level of nonperforming loans and sporadic instances of scams and systemic hiccups, the area of risk management has caught the closer attention of regulators. Banks in India, no longer content with traditional measures such as exposure limits and credit rating, and are in the process of overhauling their entire system of risk management.

Non-performing loans remain a major problem for Commercial Banks in Kenya. Although the volume of total nonperforming loans appears to decline in some Banks, provisions on loan losses has increased in since 2002, where Commercial Banks in Kenya made provisions to the tune of Kshs 44.7 billion showing that nonperforming loans still adversely affect bank performance. Besides the impact of these provisions on profitability, the concentration of such loans made recovery hard owing to the poor state of the economy (Co-operative Bank, 2003). In his address to the Annual General Meeting the Kenya Commercial Bank (KCB) Chief Executive, Davidson, (2003) observed that the Bank had reported a loss principally caused by an increase in loan loss provisions, which increased from KShs 2.8 b in 200 I to KShs 4.9 b in 2002. These provisions were largely applied to the nonperforming loans that were booked in the nineties.

Davidson further observed that KCB has gone a further step and segregated the nonperforming loans into a separate area. The aim is to centralize all the nonperforming loans into one unit in order to be accounted for separately (Davidson, 2003).

According Central Bank of Kenya (2002), public sector Banks that gave loans without proper documentations are finding the loans difficult to recover. They have now shifted away from security based lending to the emphases on the customers ability to meet the loan repayments.

2.2.1 Strategies for dealing with bad loans

Goldstein and Turner (1996) suggest that there are several measures that can significantly reduce the incident of each of the factors underlying banking crises. For example, greater macroeconomic stability, a larger role for foreign owned banks, the wider use of market- based hedging instruments and higher levels of Bank capital would help to make the consequences for the domestic banking system less damaging. Limiting the allocation of Bank credit to particularly interest-rate-sensitive sectors, close monitoring of lending by weakly capitalized banks and employing the right mix of macroeconomic and exchange rate policies would similarly limit vulnerability to lending booms, asset price collapses and surges of capital inflows, (Goldstein and Turner, 1996).

Strict asset classification and provisioning practices could reduce the increases of bad loans and protection against loan losses. Tirapat, (1999) agrees with Goldstein and Turner on the role of Government in determining to a great extent the success of efforts to managing such crises. It starts out by reviewing the banking structure, problems faced and some of the causes of recent banking crises. Drawing from the experience of 23 countries, Tirapat gives some of successful guidelines all of which show the important role of government in its regulatory role. According to the Bank of Japan (2003), the remedies to the problem of Non-performing loans can be grouped into three broad categories, all of which work towards enhancing the Banks' earning power. First is to further improve efficiency through cost reduction (Goldstein and Turner, 1996).

Secondly is to pursue a new lending strategy backed by appropriate credit risk evaluation, and third is to

provide new financial services to increase fee income. In china for example, one method that has been successfully used is turning over the non- performing assets to Asset management companies (China Daily, 2002).

Banking sector insiders said the Central Bank has responded to the IMF's concerns by inspecting a major international Bank and introducing additional reporting standards for non-performing loans that are seen to be the industry's soft belly. Though involving only one out of Kenya's 46 Commercial Banks, instability of anyone player is always seen as a market-wide problem because of the risk of contagion - the spread of instability among institutions that do business with each other (Central Bank of Kenya, 1999).

In finance, default occurs when a debtor has not met his or her legal obligations according to the debt contract, e.g. has not made a scheduled payment, or has violated a loan covenant (condition) of the debt contract. A default is the failure to pay back a loan. Default may occur if the debtor is either unwilling or unable to pay his or her debt. This can occur with all debt obligations including bonds, mortgages, loans, and promissory notes.

2.2.2 Distinction from insolvency and bankruptcy

The term default should be distinguished from the terms insolvency and bankruptcy.

- "Default" essentially means a debtor has not paid a debt which he or she is required to have paid.
- "Insolvency" is a legal term meaning that a debtor is unable to pay his or her debts.
- "Bankruptcy" is a legal finding that imposes court supervision over the financial affairs of those who are insolvent or in default.

2.2.3 Types of default

Default can be of two types: debt services default and technical default. Debt service default occurs when the borrower has not made a scheduled payment of interest or principal. Technical default occurs when an affirmative or a negative covenant is violated.

Affirmative covenants are clauses in debt contracts that require firms to maintain certain levels of capital or financial ratios. The most commonly violated restrictions in affirmative covenants are tangible net worth, working capital/short term liquidity, and debt service coverage.

Negative covenants are clauses in debt contracts that limit or prohibit corporate actions (e.g. sale of assets, payment of dividends) that could impair the position of creditors. Negative covenants may be continuous or incurrence-based. Violations of negative covenants are rare compared to violations of affirmative covenants.

With most debt (including corporate debt, mortgages and bank loans) a covenant is included in the debt contract which states that the total amount owed becomes immediately payable on the first instance of a default of payment. Generally, if the debtor defaults on any debt to the lender, a cross default covenant in the debt contract states that that particular debt is also in default.

In corporate finance, upon an uncured default, the holders of the debt will usually initiate proceedings (file a petition of involuntary bankruptcy) to foreclose on any collateral securing the debt. Even if the debt is not secured by collateral, debt holders may still sue for bankruptcy, to ensure that the corporation's assets are used to repay the debt.

2.2.3.1 Sovereign defaults

Sovereign borrowers such as nation-states generally are not subject to bankruptcy courts in their own jurisdiction, and thus may be able to default without legal consequences. One example is with North Korea, which in 1987 defaulted on some of its loans. In such cases, the defaulting country and the creditor are more likely to renegotiate the interest rate, length of the loan, or the principal payments. In the 1998 Russian financial crisis, Russia defaulted on its internal debt (GKOs), but did not default on its external Eurobonds. As part of the Argentine economic crisis in 2002, Argentina defaulted on $1 billion of debt owed to the World Bank.

2.2.3.2 Orderly defaults

In times of acute insolvency crises, it can be advisable for regulators and lenders to preemptively engineer the methodic restructuring of a nation's public debt- also called "orderly default" or "controlled default". Experts who favor this approach to solve a national debt crisis typically argue that a delay in organising an orderly default would wind up hurting lenders and neighboring countries even more.

2.2.3.3 Strategic default

When a debtor chooses to default on a loan, despite being able to service it (make payments), this is said to be a strategic default. This is most commonly done for non-recourse loans, where the creditor cannot make other claims on the debtor; a common example is a situation of negative equity on a mortgage loan in common law jurisdictions such as the United States, which is in general non-recourse. In this latter case, default is colloquially called "jingle mail" – the debtor stops making payments and mails the keys to the creditor, generally a bank.

2.2.3.4 Sovereign strategic default

As with Strategic default when a debtor *chooses* to default on loan sovereign borrowers such as nation-states also can choose to default on a loan. Ecuador's president Rafael Correa in 2008 had given the order not to approve a debt interest payment.

2.2.3.5 Consumer default

Consumer default frequently concern arrears in rent or mortgage payments, consumer credit, or utility payments.

A European Union wide analysis identified certain risk groups, such as single households, being unemployed – even after correcting for the (significant) impact of having a low income -, being young (especially being younger than around 50 years old, with somewhat different results for the New Member States, where the elderly more often at risk as well), being unable to rely on social networks, etc. Even internet illiteracy has been associated with increased default, potentially caused by these households being less likely to find their way to the social benefits they are often entitled to. While effective non-legal debt counseling is usually the preferred -more economic and less disruptive- option, consumer default can end-up in legal debt settlement or consumer bankruptcy procedures, the last ranging from 1-year procedures in the UK to 6-year procedures in Germany.

2.3 Conceptual framework

The conceptual framework comprised of dependent and independent variables. Independent variables were presumed to have caused the changes in the dependent variable. The dependent variable referred to as the criterion is the one that the researcher endeavors to explain (Kothari, 2004).

According to the conceptual framework for this study, the dependent variable was loan default and the independent variables were Income levels, Fraud, Layoffs, Deaths and Credit Management. Loan default was perceived to be triggered by any or a combination of these factors at any level of the credit cycle.
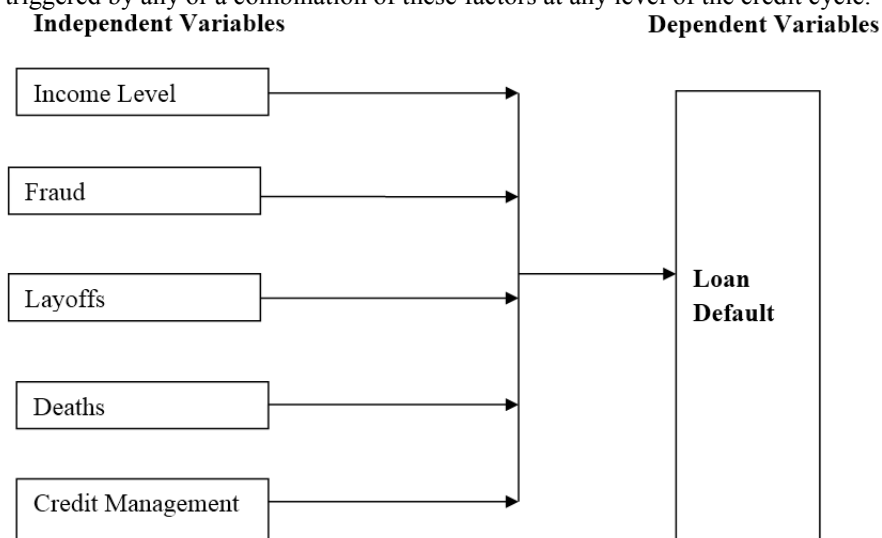

Figure 2: Conceptual Framework.

2.3.1 Income levels

Equity Bank Ltd, unlike other Commercial Banks in Kenya commands over 80% of the entire low income earners within the Kenya's banking industry. The group is characterized by lower and inconsistent incomes, popularly known to be at the bottom of the pyramid (Central Bank of Kenya Supervisory Report 2009).

2.3.2 Fraud

The banking industry has been adversely hit by increased cases of fraud since the late 1980's to date according to Bessis, J. (2005). Insider lending among other credit malpractices have gradually increased in Commercial Banks resulting into millions of funds being lost each year (Bessis, 1. 2005).

2.3.3 Layoffs

Forced and early voluntary retirement instituted by many Kenya's Government Agencies saw many people out of employment in the early 80's and mid 90's. This trend threatens to hit financial institutions even much more in the wake of economic crunch witnessed in 2008 and 2009, likely to render borrowed facilities defaulted by loan recipients (Central Bank of Kenya Supervisory Report, (20 I 0).

2.3.4 Deaths

Natural deaths as well as permanent disabilities arc some of the harsh realities that have adversely rocked Kenyan Banks. Millions or unsecured loans have ended up in write-offs and subsequently losses (Ikhinde, S.1. 1996). The insurable age recommended by most Insurance Companies such as Britak, AP and Blue Shield lor borrowers of Bank credit facilities is a maximum of 75 years. However, due to the consistent competition witnessed in the banking industry between 2007 and this year ending 20 I 0, many Banks, Equity Group included have continually revitalized their aggression to lend to almost anybody willing to take credit. This trend increases the Banks exposure to bad loans as age factor is not considered hence increasing the risk of losses due to uninsurable risks according to Central Bank or Kenya Supervisory Report, (2010).

2.3.5 Credit Management

High levels of Portfolio at Risk (PAR) reported by nearly 70% of Commercial Banks in Kenya by September 2010 was attributed to ineffective credit management systems in use.

A good Credit Management System should be capable of sending early signals on potential loan slippages to allow for intervention measures in case of any looming loan default (Equity Bank intranet, 2010).

3.0 RESEARCH METHODOLOGY
3.1 Research Design:
A descriptive research design was used in data analysis. Kothari, 2004 defines descriptive research as studies concerned with specific predictions, with narration of facts and characteristics concerning individuals, groups and situations. The researcher obtained data on the quality of loan portfolio during the study period from the existing records at Equity Bank Resources Centre. This way, the researcher had no control over the variables but could only report what was happening. The research was a case study, covering Equity Bank within Thika town. A case study is one of the several ways of used in social research. It is also said to be a research strategy and an empirical inquiry that investigates a phenomenon within its real life context (Kothari, 2004).

3.2 Target Population:
The research focused on 8 middle level Bank Managers, 20 Credit Officers and 200 loan recipients who had defaulted in the five main loan sectors namely, Consumer, SME, Financing, Agriculture and Group Lending within Equity Bank in Thika town.

Table 2: Target population and Sample Size

Target Group	Total Number	Sample number	(%) Sample
Middle level managers	8	3	30
Credit Officers	20	6	30
Defaulters	200	60	30
Total	228	69	30

3.3 Sampling Technique.
The sample size for this research represented 30 percent (30%) of the total number of respondents within the area of study. A stratified random sampling was used. According to Mugenda and Mugenda (999), stratified random sampling achieves desired representation from various subgroups in the population. A sample size of 30 percent was perceived to be a good representation of the total population (Mugenda and Mugenda, 1999). Defaulted loan facilities were stratified based on number of days past due date for the monthly loan repayments. A sample size of 69 loan defaulters out of 200 loan defaulters classified was classified in table 3.

Table 3: Loan classification

Days in arrears	Number of Respondents	Percentage (%)	Classification
1-30	14	23	Normal
31-60	20	33	Watch
61-90	11	19	Substandard
91-120	9	15	Doubtful
Above 120	6	10	Loss
TOTAL	**60**	**100**	

The use of days past due on loan default as a sampling procedure was used to ensure all possible reasons for defaulting were identified (Ruth, S. T. 2008)

3.4 Specification of the model
The following regression model has been used to test the theoretical relation between loan default and its causes.
$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X4 + \beta_5 X_5 + \mu \ldots\ldots\ldots\ldots(1)$$
Where X_1 = Income level
X_2 = Fraud
X_3 = Layoffs
X_4 = Deaths
X_5 = Credit management.
Y = Loan defaults

3.5 Data Collection tools
In this study, questionnaires were used for data collection. This is basically because of their convenience and confidentiality. Questionnaires are free from biasness or the interviewer and gives respondents adequate time to give well thought out answers (Kothari, 2004).

Oral and Telephone interviews were used on 12 respondents who were not physically available during the period under study. An interview more often than not generates first hand information which is more reliable.

The researcher can also modify questions to get desired results.

3.6 Data Collection Procedure

Primary data was collected by use of questionnaires issued to respondents by the researcher and his research assistant. The researcher carried out both telephone and oral interviews to respondents who were not physically available at Equity Bank Debt Collection office and those who were not literate respectively.

Some vital information gathered was the amount of loan granted, the purpose of' loan, the repayment period as well as the type and value of securities pledged against borrowed facilities. Findings were recorded in an excel data base for easy analysis and interpretation.

3.7 Data analysis and Presentation

3.7.1 Preliminary analysis

Multiple regressions were run in SPSS to test the set hypotheses. By running the regression, investigation into the multicollinearity problem was carried out. Bivariate correlations among the independent variables were examined to find multicollinearity problem first. The existence of correlation of about 0.8 or larger indicates existence of multicollinearity problem (Lewis –Back 1993). None of the pair-wise coefficient of correlation was 0.8 or greater. Thus there was no multicollinearity problem.

Table 4: Pair-wise correlation

	X_1	X_2	X_3	X_4	X_5
X_1	1				
X_2	0.224	1			
X_3	0.489	0.367	1		
X_4	0.516*	0.211	0.528*	1	
X_5	0.282	0.338	0.597*	0.171	1

Correlation is significant at the 0.05 level (two – tailed) *

The pair-wise correlation approach of diagnosing the multicollinearity problem does not take the relation of an independent variable with all other independent variables into account. Therefore, regression of each independent variable on all other independent variables was run to assess the multicollinearity problem more precisely .The R^2 near to 1 indicates the high multicollinearity and R^2 indicates the larger multicollinearity .But none of the resulted R^2 is near to 1. The regression models used to assess the multicollinearity problems were

Model 1.1 $X_1 = a + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$

Model 1.2 $X_2 = a + b_1X_1 + b_3X_3 + b_4X_4 + b_5X_5$

Model 1.3 $X_3 = a + b_1X_1 + b_2X_2 + b_4X_4 + b_5X_5$

Model 1.4 $X_4 = a + b_1X_1 + b_2X_2 + b_3X_3 + b_5X_5$

Model 1.5 $X_5 = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$

Where x_1, x_2, x_3, x_4, x_5 , a and b_1, b_2, b_3, b_4, b_5 indicate the same as in the model (1).

Table 5: Results of the Models Used to Assess the Multicollinearity

Model	Model R^2	Adj R^2	S.E
1.1	0.357	0.022	0.408
1.2	0.284	-0.114	0.127
1.3	0.652	0.458	0.113
1.4	0.407	0.077	1.097
1.5	0.476	0.185	180.5

3.7.2 Final Analysis:

Variable	Beta coefficient	S.E	t- value
Constant	0.42	0.501	0.839
Income level X_1	-0.161	0.133	-1.211
Fraud X_2	0.299	0.442	0.676
Layoffs X_3	-0.629	0.497	-1.266
Deaths X_4	0.516	0.03*	17.2
Credit management X_5	0.434	0.012*	36.167

R^2= 0.534; Adjusted R^2=0.493; Correlation is significant at the 0.05 level (two – tailed) *

4.0   RESEARCH FINDINGS

Deaths and credit management significantly influence the rate of loan defaults. Proper records of all borrowers should well kept and accessible. It is recommended that steps in credit rationing process should investigate the borrower's repayment background and determining borrower's ability through savings and deposit as well as

examining borrower's loan objectives and getting borrower's additional information from either relatives or neighbors. The final step in credit rationing process should include the borrower's loan collateral. A more comprehensive insurance cover should be available for all borrowers to cater for the unforeseen circumstances e.g. death of the borrowers.

5.0 CONCLUSION

Out of the five examined explanatory variables; income level, fraud, layoffs ,deaths and credit management two variables deaths and credit management are statistically significant factors influencing loan default at equity bank. The other variables income level and layoffs are insignificant factors influencing loan default. Thus, for this study fraud, deaths and credit management are significant factors influencing loan default at Equity bank. The other factors are not.

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