

FACTORS AFFECTING LOAN REPAYMENT PERFORMANCE OF BANKS IN GAROWE DISTRICT, PUNTLAND, SOMALIA

Mustafe Abdirisak Mohamed

Master of Business Administration, Department of Business Administration (Finance Option)
Jomo Kenyatta University of Agriculture and Technology
muscadi@gmail.com

Prof. Willy Muturi

School of Business, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya
wmuturi@ihrd.jkuat.ac.ke

Prof. Mohamed Said Samantar

Professor of Economics at Puntland State University, Garowe, Puntland, Somalia
samantarms@hotmail.com

Abstract

The study was conducted to investigate some of the factors affecting loan repayment performance of banks in Garowe, Puntland, Somalia. In order for the study to achieve its purpose, three objectives were evaluated. First, to find out the extent by which the characteristics of the loan borrowers affect the repayment performance in the District of Garowe, second, to find out the loan characteristics effects on loan repayment and lastly, to establish the effects of purpose of the loan to the loan repayment concerning the borrowers. While carrying out the research, the independent variables were found out to be: The loan distinctiveness, the purpose of the loan and the borrower characteristics while the dependent variable was loan repayment performance. Two banks (Amal and Salaam) were involved in data collection whereby 165 borrowers were involved of which 38 were defaulters and 127 non-defaulters. Different research designs were employed in order to get information from the informants. To identify these factors causing effects on loan repayment performance of all the loan borrowers, logistic regression analysis was used. Descriptive research design was also employed in the whole study. From logistic regression analysis, it was found that period of loan and business purpose, education level, domestic purpose, availability of other source of income and social use have positive effects on borrower loan repayment significantly. The variable of business experience was found to be statistically significant although it has a negative sign whereas size variable of the loan has got positive sign without statistical significance. Conclusion: There is a considerable relationship seen between the performance of loan repayment and the characteristics of the borrowers in Garowe. There is also a significant relationship seen between the loan characteristics and loan repayment performance as well as a significant relationship between the purpose and performance of banks in Garowe district. Results lead to useful recommendations that the banks should be able to categorize all the factors which affect loan repayment abilities before releasing the loan to the borrowers which in turn would reduce the number of loan defaulters. The findings also recommended that the banks should apply more efficient and successful credit risk management technique that ensures that the loans match with repay ability, as well as no or minimal insider lending. This ensures that the loan defaulters are projected accordingly including relevant measures to minimize the same risks. Mandatory supervision of borrowers is also recommended by this study whereby the borrowers should be supervision on how they utilize the loan purpose and repayment. The supervision would therefore make it easy for banks to monitor the performance of the borrowers closely mitigating the problems involved in repayment and relationship of lenders and borrowers. Lender can introduce rewards to the people who did their repayments in timely manner including discounts.

1. INTRODUCTION

1.1 Background information of the study

Credit risk assessment and lending decisions made in the past by lenders put a lot of emphasis on security than other similar important considerations (Santomero, 1997). There are examples in the past when it was easier to get a loan from a financial institution as long as the borrower had security to be charged rather than the ability to service the loan. Cash flow projections, viability of the project, character of the borrower, previous loans completion and ability to repay were not considered as important. This way a number of lending institutions ended up with many loan defaults due to incomplete, poor and unprofessional credit risk assessment and valuation particularly using all the 5C's of credit appraisal model that is: capacity, credibility, capital, collateral and character. Effective loan portfolio management begins with oversight of the risk in individual loans (Sundarajan, 2007). Prudent risk selection is vital to maintaining favorable loan quality. Therefore, the historical emphasis on controlling the quality of individual loan approvals and managing the performance of loans continues to be essential.

It seems appropriate for any discussion of risk management procedures to begin with why these firms manage risk. According to standard economic theory, managers of value maximizing firms ought to maximize expected profit without regard to the variability around its expected value. However, there is now a growing literature on the reasons for active risk management including the work of (Sundarajan, 2007) and (Fallon, 1996) to name but a few of the more notable contributions. A review of risk management reported by (Strutt, 2000) contributions to the area of credit assessment and at least four distinct rationales offered for active risk management. These include managerial self-interest, the non-linearity of the tax structure, the costs of financial distress and the existence of capital market imperfections. Any one of these justifies the firms' concern over return variability, as the above-cited authors demonstrate.

Risk management today has become very significant due to the rapid growing complications of bank's business and lively operating environs. Risk management has curbed mostly the financial sectors. Risks at the peak level can be visualized because of the probability of bank's financial health being interfered with by variety of factors. These factors and parameters showing the bank's condition may differ from net interest margin to market value of equity. In addition, the factors causing the important of the interest margins are as well numerous. For example, changes in value of possessions or can be disturbances in operation due to technological errors creating defaults in repayment by the borrowers. The first two factors can be generally classified as market risks and credit risks. The main focus of Puntland banks is to provide medium as well as long term loans for investment projects. The investment projects are agricultural, manufacturing industries mostly exports industries and agro processing companies.

There is a dramatic increase in loan approval and disbursement in credit operation of banks. Clients' defaults lead to non-performing loans which as well resulted from lack of follow-up, credit policy of the bank, market problems and environmental problems. These entire problems raise a question on how the banks could be able to increase the repayment performance to their own clients. Another question also emerges on what could be the factors that affect loan settlement performance of the loan borrowers.

It is of great importance to investigate and provide empirical evidence concerning the factors affecting loan repayment performance of banks in Garowe District. By understanding the factors

affecting loan repayment performance, we would be able to as well understand the reasons behind the effects and provide future insights and guidelines for increasing probability of effective loan repayment.

We also investigate the factors which affect the performance of loan repayment towards the end of this research in Garowe district, Puntland in Somalia.

2. The Statement of the problem

Controlling non-performance of loans is very critical for both the performance of an individual bank and the economy's financial environment. The concept of banks and banking is fairly new in Somalia (Spark, 2016). After the civil war, the entire financial infrastructure had to be rebuilt from scratch. The financial sector has gradually improved over the last couple of years- local banks have established micro-investment department and loans are beginning to be provided. However, since the country has very limited experience in funding, investment and loan management, this process has not been littered with obstacles (Spark, 2016). Somalia has experienced banking problems culminating in bank failures (3 banks failed since 2007) and this crisis was mainly attributed to Non-Performing loans (NPLs).

According to (Mugambi, 2010) did an investigation into the factors leading to loan defaults of microenterprises financed by Cooperative Bank in Kangemi and Kawangware areas in Nairobi, Kenya and established that many Micro-enterprises were mainly constrained by irregular income, poor management and high competition from the well-established businesses.

According to (Waruinge, 2009) survey, the factors which contribute to non-performance of loans among commercial institutions including banks in Kenya and established that economic factors and poor credit management greatly contributed to high portfolio of nonperforming loans among commercial banks in Kenya. The study carried out by concentrated on microfinance enterprises which have a different practical operational and marketing strategies from those employed by Investment banks, also these studies were conducted in other countries and there is a need to carry out a research generally in Somalia and Particularly in Garowe. This research therefore sought to fill this knowledge opening by providing information on the factors which highly affect loan repayment performance of the banks in Garowe district, Puntland, Somalia.

Hence, the study focuses on identifying the factors which affect performance of loan repayment of borrowers from three broad perspectives. These are; borrower characteristics, loan characteristics and purpose of the loan.

2.1 The Objectives of the study

Divided into two:

2.1.1 General Objective:

The overall objective of the research was to determine factors affecting loan repayment performance of Banks in Garowe District, Puntland, Somalia.

2.1.2 Specific objective:

1. To unearth the extent to which borrowers' Characteristics affect loan repayment performance in Garowe District, Puntland, Somalia.
2. To find out the effect of loan Characteristics on loan repayment performance in Garowe District, Puntland, Somalia.

3. To identify the effect of purpose of the loan on loan repayment performance in Garowe District, Puntland, Somalia.

2.2 Research Questions

1. To what extent do borrowers' characteristics affect the loan repayment performance in Garowe District, Puntland, Somalia?
2. What are some of the effect of loan characteristics on loan repayment performance in Garowe District, Puntland, Somalia?
3. How does purpose of the loan affect loan repayment performance in Garowe District, Puntland, Somalia?

2.3 Significance of the study

The basis of this study is from the loan defaulting problem identified by Banks in Garowe and therefore limited research has been conducted to find out the possible causes of poor loan repayment performance in the banks of Somalia as whole. This has therefore created a very large information gap in this area; so, the study will reduce on the existing gap, by adding more knowledge to the few available ones.

2.4 Scope of the study

This research or study on identifying factors which affect loan repayment performance of the borrowers will be valuable in creating a meaningful relationship between all borrowers and all banks in Somalia. Even though, the study is restricted to the identifying the factors which affect loan repayment performance of borrowers of the banks in Garowe District Puntland Somalia. It does not include borrowers of other branches and banks in the country.

3. RESEARCH METHODOLOGY

3.1 Research Design

The research design used is a blueprint for conducting the research that specifies the procedures necessary to obtain the information needed to structure and solve the research problems (Cooper & Schindler, 2003). The research adopted descriptive research design in order to analyze the topic thoroughly. This method of research is preferred because a researcher is able to collect data, describe the state of affairs and answer questions concerning the subject of study. Descriptive research method reports and determines the way things are and it also helps a researcher to describe a phenomenon in terms of values, attitude and characteristics (Mugenda & Mugenda , 1999). According to (Ngechu, 2004), Descriptive research is relevant as it explains the current status of a phenomenon and is concerned with finding out the what, where and how of a phenomenon.

3.2 Research Population and Sample

This study targeted all the borrowers listed on Salaam and Amal banks' records in January 2018 totaling 165 (Amal and Salaam Banks, 2018). The study used all the target population so no sampling is used.

As of January, 2018, the total number of borrowers from the records of Amal and Salaam Banks was as Follows:

Table 3.1: Target Population

	Population
Non-defaulted Borrowers	127
Defaulted Borrowers	38
Total	165

3.3 Data and Data Collection Procedure

There exist two major types of data; primary data which is information gathered directly from the source for purposes of the study and secondary data which is information gathered from the published work of other authors (Wilsan, 2010).

This research used secondary data as sources of information; and these data were collected from the personal files of the borrowers of Salaam and Amal banks. The analysis of factors affecting loan repayment performance of the borrowers was also found from the borrower’s files as well as the financial reports of these two banks. For the purpose of collecting all the necessary information we used prepared standard. According to (Mugenda & Mugenda, 2003), secondary data is information collected from already published works such as books, articles, newspapers, and the internet. The secondary data is important because it acts as a support arm of the primary data; it provides background information on the research topic and it serves as a check and standard for evaluating primary data. Secondary data used in this research are; Bank records, magazine articles, journals, published books and the internet.

3.4 Data Analysis

Data analysis was engaged in after all data had been collected and cleaned. It was a process used to make sense of the data. The type of the data analysis tool that was used in the study was dependent on the type of data that was; was the data qualitative or quantitative (Walsh & Wiggins, 2003). To analyze quantitative data frequency tables and statistical software packages were used (Wilsan, 2010). The quantitative data in this research analyzed by descriptive statistics using statistical package for social sciences SPSS. In this research the analysis of the data collected was used SPSS as the researcher regards it the most appropriate given its versatility and considering the nature of the data collected. The SPSS has the incredible capabilities and flexibilities of analyzing huge data within seconds and generating unlimited simple and sophisticated statistical results including simple frequency distribution tables, polygons, graphs, pie charts, percentages, cumulative frequencies, binomial mean, median standard deviation and other distributions. The data was presented using frequency tables and figures.

Logistic regression analysis used to predict loan repayment performance using the entire three-independent variable in the study: Borrower characteristics, Loan characteristics and purpose of the loan. The following regression model applied:

$$\text{Logit}(p) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_k X_k$$

Where p , is the probability of presence of the characteristics of interest. The logit transformation is defined as logged odds:

$$\text{odds} = \frac{p}{1 - p} = \frac{\text{probability of presence of characteristic}}{\text{probability of absence of characteristic}}$$

and

$$\text{logit}(p) = \ln\left(\frac{p}{1-p}\right)$$

An independent variable with a regression coefficient not significantly different from 0 ($P > 0.05$) can be removed from the regression model. If $P < 0.05$ then the variable contributes significantly to the prediction of the outcome variable.

The logistic regression coefficients show the change (increase when $\beta_i > 0$ decreases when $\beta_i < 0$) in predicted logged odds of having the characteristics of interest for a One-unit change in the independent variable.

When the independent variables X_a and X_b are dichotomous variables then the affect of this variables on the dependent variable can simply be compared by comparing their coefficient β_a and β_b .

The Wald statistics is the regression coefficient divided by its standard error squared: $(B/SE)^2$

Y= LoanRepPerformance

X_1 = EducationLevel

X_2 = BusExperience

X_3 = OtherIncomeSource

X_4 = LoanSize

X_5 = LoanPeriod

X_6 = BusinessUse

X_7 = DomesticUse

X_8 = SocialUse

LoanRepPerformance= $\beta_0 + \beta_1$ EducationLevel + β_2 BusExperience + β_3 OtherIncomeSource + β_4 LoanSize + β_5 LoanPeriod + β_6 BusinessUse + β_7 DomesticUse + β_8 SocialUse

The variable was zero “in the case of complete repayment on schedule date and equal to one in the case of complete default”. The effect of different factors on performance rate was estimated using the Logistic regression analysis.

4. RESEARCH FINDINGS AND DISCUSSION

4.1 Descriptive analysis

This chapter presents borrower’s characteristics, distinct characteristics associated to the loan plus the intended purpose the loan was secured for in its first section. Second part describes relationship between borrower’s characteristics, distinct characteristics to the loan, intended purpose the loan meant to serve and borrower’s repayment performance to the loan. Finally, this section entails logistic regression and interpretation of the research findings.

4.1.1 Effect of borrower characteristics on repayment performance to a loan

Borrower’s education level

Borrower’s education level was as shown below

Table 4.1: Borrowers education level

Non-defaulters		
Status	Frequency	%
Literate	104	81.9
Illiterate	23	18.1
Total	127	100

Defaulters		
Status	Frequency	%
Literate	17	44.7
Illiterate	21	55.3
Total	38	100

The result indicates that 81.9% of non-defaulters and 44.7% of the defaulters were literate on the other hand 18.1% of non-defaulters and 55.3% of defaulters were illiterate. This implies that literate borrowers are less likely of being non-defaulters.

Business Experience

Experience is a vital element for the success of business project operation. “Salaam and Amal Banks appraises the business experience of the credit seeker and one’s capability of managing the business successfully”. Based on this research, the average business experience of the borrower was 9 years while the minimum and maximum managerial experience was zero and nineteen years, respectively (table 4.2)

Table 4. 1: Business Experience

Non-defaulters		
Status	Frequency	%
Have	115	90.6
Have no	12	9.4
Total	127	100
Mean	10.2520	
Std. Deviation	5.68759	

Defaulters		
Status	Frequency	%
Have	25	65.8
Have no	13	34.2
Total	38	100
Mean	4.7368	
Std. Deviation	4.24063	

The borrowers have an average of business experience that was 10 years and 4 years for non-defaulters and defaulters, respectively.

Availability of Other Source of Income

As shown on (Table 4.3) The study discovered that 40% of the borrowers had no other source of income, whereas 60% of them had claimed to have other sources of income.

Table 4. 2: Other Income Source

Non-defaulters		
Status	Frequency	%
Have	88	69.3
Have no	39	30.7
Total	127	100

Defaulters		
Status	Frequency	%
Have	11	28.9
Have no	27	71.1
Total	38	100

In general, 69.3% of non-defaulters and 28.6% of defaulters of borrowers have other income sources other than the financed project. This means borrowers who have other sources of income had got better opportunity to repay the loan in more effective manner (Table 4.3).

Regression analysis

In the model (table 4.5) a variable having (+) value indicates its significant increase chances to default whereas variables having (-) value indicates their significant decrease chances to default. Nagelkerke R Square and Cox & Snell R Square at 95% confidence level approximates at 54.6% and 40.2% respectively showing the model’s goodness of fit was good.

Model conclusions

Table 4. 3: Model conclusion report

Model conclusions			
Step	-2 Log (likelihood)	Cox & Snell R Square	Nagelkerke R Square
1	140.806 ^a	.402	.546

Table 4. 4: equations variables

	coefficients	standard error	Wald value.	cox	Degree of freedom	p-value	Exponetiate(B)
EducationLevel	.496	.510	.946		1	.031	1.643
BusExperience	-.859	.599	2.054		1	.022	.424
OtherIncomeSource	1.265	.489	6.676		1	.010	1.012
Constant	.948	1.894	11.229		1	.001	.002

Logistic Regression Equation is:

$$\text{LoanRepPerformance} = 0.948 + 0.496 + (-0.859) + 1.265$$

Education Level

The independent variable education Level (EducationLevel) has a positive sign and its statistically significant at 0.031 as shown on table 4.5. The result shows that as the borrower's education level increases capacity to repay the loan will also increase. Also result on table 4.5 shows that if a borrower is literate, other things remaining constant his/her probability to repay the loan will increase by 64.3% ($1.643 \times 100 - 100$). This result is similar with the results by (Abafita, 2003) and (Gebeyehu, 2002)

Other source of Income

The predictor variable of other income source (OtherIncomeSource) has a positive sign and is statistically highly significant at 0.010. The result indicates borrowers having other sources of income had high chances to repay their advances. Also, table 4.5 shows that as the borrower's availability to other income sources increases, other things remaining constant his/her probability to repay the loan will increase by 1% ($1.01 \times 100 - 100$). The studies made by (Kamajou & Baker, 1980) in African countries as well as (Gebeyehu, 2002) in Ethiopia supports this result.

Business Experience

The variable business experience is statistically significant 0.022 but show negative sign -0.859

4.1.2 Effect of loan characteristics on loan repayment performance

Table 4. 5: Loan Repayment Period

Non-defaulters

Status	Frequency	%
Short & Long	10	7.9
Medium	117	92.1
Total	127	100

Defaulters

Status	Frequency	%
Short & Long	23	60.5
Medium	15	39.5
Total	38	100

As indicated on table 4.6 the result shows that 20% of whole borrowers are with short repayment period (up to 1 year) and long repayment period (between 3-5 years). Also, 80% majority of the borrowers are with medium repayment period (between 1-3 years). As indicated on similar table 4.6 the borrowers with short and long repayment period 7.9% of them repay their loan successfully while borrowers with medium repayment period 92.4% of them repay their loan successfully. At the same time borrowers with short and long repayment period 60.5% of them were defaulted while borrowers with medium repayment period only 39.5% were defaulted. This shows that as the

borrower takes a loan that will be repaid within the medium term of repayment, his/her ability to repay this loan successfully increases.

Size of the loan

Table 4. 6: Size of the loan taken the borrowers

The researcher also investigated whether the amount of loan disbursed was a contributory factor to the high rate of default at banks in Garowe.

Non-defaulters

Status \$	Frequency	%
5000 & below	74	58.3
5001-10000	39	30.7
10001-above	14	11
Total	127	100

Defaulters

Status \$	%	Frequency
5000 & below	3	7.9
5001-10000	14	36.8
10001-above	21	55.3
Total	38	100

As shown in table 4.7, borrowers who had taken 5000\$ and below 58.3% of them repay their loan successfully on the other hand borrowers who had taken 50000\$-10000\$ approximately 31% of them repay their loan successfully, also borrowers who had taken 10000\$ and above only 11% of them repay their loan successfully. This means the smaller the loan the lower the defaulting rate unlike when the loan size is large, when the size of the loan increases the probability of defaulting also increases and leads to repayment problem.

Regression Analysis

In the model (table 4.9) a variable having (+) value indicates its significant increase chances to default whereas variables having (-) value indicates their significant decrease chances to default. Nagelkerke R Square and Cox & Snell R Square at 95% confidence level approximates at 41.5% and 35.4% respectively showing the model’s goodness of fit was good

Table 4. 7: Model conclusion report

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	140.806 ^a	.354	.415

Table 4. 8: equations variables

	B-coefficient	Standard error	Wald value	Degree of freedom	p-value	Exponentiate (B-coefficient)
LoanSize	.321	.367	.764	1	.382	.726
LoanPeriod	1.488	.897	2.750	1	.027	1.229
Constant	.321	.924	5.138	1	.051	.084

Variable(s) entered on step 1: LoanSize, LoanPeriod, LoanPurpose.

Loan repayment period

The independent variable loan repayment period (LoanPeriod) as expressed on table 4.9 is statically significant at 0.027 because of (+) coefficient. This shows that as the borrower takes a loan that will be repaid within the medium term of repayment, his/her capacity to repay the loan successfully will increase. As indicated in table 4.9 that as the borrower takes a loan to be repaid within the medium repayment period probability to repay the loan will increase by 22.9%. (Roslan, Abdul H; Zaini, Mohd Abd Karim, 2009) Also came up with similar results in their study on micro credit schemes of Malaysia

Loan size

Variable loan size has a positive sign but not statistically significant.

4.1.3 Effect of Purpose of the loan on loan repayment performance

When the loan was received from the banks the aim and utilization related issues are more vital to be evaluated for its relation with the repayment performance of the borrowers. This discussion concentrates on the purpose for which the loan was borrowed. This is explained with the support of tables and charts as follows.

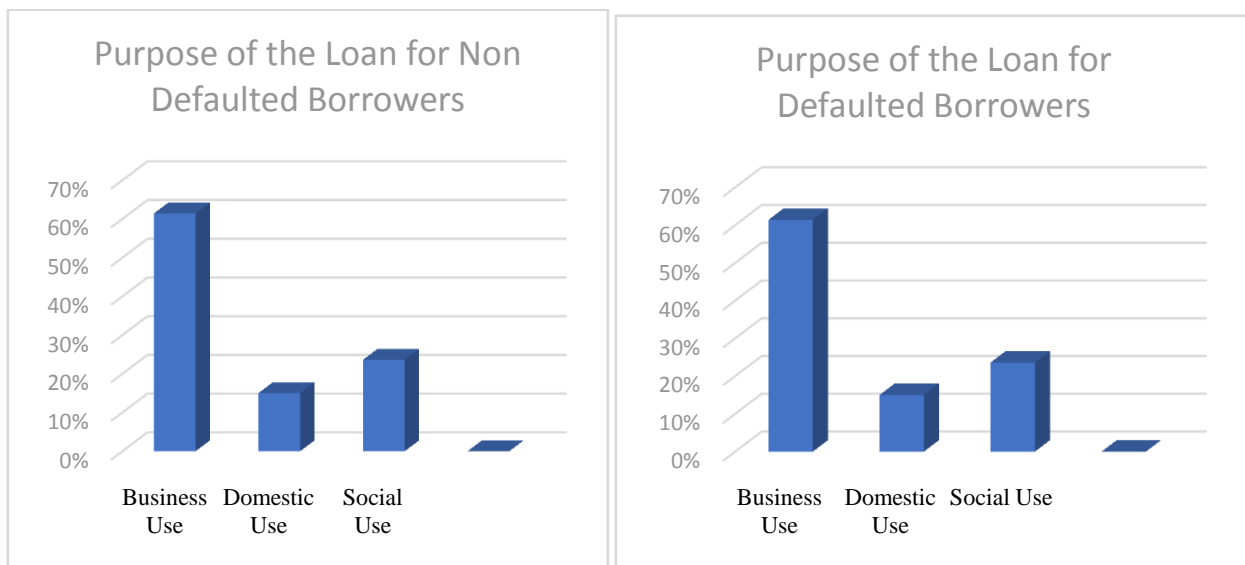


Figure 4. 1: Purpose of the Loan

Figure 4.2 shows that 78 (61.4%) of non-defaulted borrowers and 10(26.3%) of defaulters were used the borrowed money for business. 19(15%) of non-defaulters and 5(13.2%) of defaulted borrowers were used money for domestic purpose and finally 30(23.6%) of non-defaulters and 23(60.5%) of defaulters were used for the borrowed money for social purpose.

Generally, from the data result borrowers who used borrowed money for social purpose have greater default rate over the borrowers who used for business and domestic purposes.

Regression Analysis

In the model (table 4.9) a variable having (+) value indicates its significant increase chances to default whereas variables having (-) value indicates their significant decrease chances to default. Nagelkerke R Square and Cox & Snell R Square at 95% confidence level approximates at 30.6% and 20.2% respectively showing the model’s goodness of fit was good.

Table 4. 9: Model Summary

Conclusion model report

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	140.806 ^a	.202	.306

Table 4. 10: equation variables

	Variable coefficient (B)	Standard errors	Wald values	Degree of freedom	P-value	Exponentiate (B-coefficients)
BusUse	02.109	.678	011.651	1	.031	1.352
DomUse	-1.259	.214	4.131	1	.015	3.424
SocUse	5.265	.211	7.418	1	.036	5.561
Constant	2.563	4.264	3.229	1	.012	.054

a. Variable(s) entered on step 1: BusinessUse, DomesticUse, SocialUse.

Purpose of the loan

The independent variable Business Use (BusUse) has a positive sign as and is statistically significant at 0.031. The variable domestic Use (DomUse) is statistically significant but has a negative coefficient also variable social use (SocUse) has a positive sign and statistically significant. The result indicates that the probability of repaying loans successfully is higher for borrowers who use the loan for business investment rather than the borrowers who use the loan for social purpose and domestic use. The result shows that if a borrower uses the loan for business investment his/her probability of repaying the loan other things remaining constant will increase by 35.2%.

Model analysis

Study research involved logistic regression analyses to examine effects of independent variables between themselves. Data was analyzed using SPSS package to run logistic regressions.

Conclusion model report

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	140.806 ^a	.409	.628

The Nagelkerke R Square indicates above model explain approximate 63% dependent variable variation results at 95% confidence level showing the model’s goodness of fit was good.

Omnibus Tests of Model Coefficients

	Chi-square value	Degree of freedom	P -value
variation residual	037.276	8	.000
Model	037.276	8	.000

(Chi-square=37.276, DF=8, P<0.000) so our model is significantly better.

Equation variables

	Variable coefficient (B)	Standard error	Wald value	cox Degree of freedom	p-value	Exponentiate (B-coefficient)
EducationLevel	.496	.510	.946	1	.045	1.511
BusExperience	-.159	.231	4.054	1	.033	.216
OtherIncomeSource	2.265	.453	3.526	1	.031	1.231
LoanSize	.621	.524	.922	1	.682	.826
LoanPeriod	2.375	.672	4.572	1	.029	4.429
BusUse	1.109	.373	9.264	1	.041	1.352
DomUse	-.859	.599	2.054	1	.035	.424
SocUse	1.265	.489	6.676	1	.026	3.542
Constant	2.479	5.674	16.545	1	.003	.006

a. Variable(s) entered on step 1: EducationLevel, BusExperience, OtherIncomeSource, LoanSize, LoanPeriod, BusUse, DomUse, SocUse.

Writing this model in algebraic form, the regression equation is:

$$\text{LoanRepPerformance} = 2.479 + 0.496 + (-0.159) + 2.265 + 0.621 + 2.375 + 1.109 + (-0.859) + 1.265 + e$$

Independent variables Education Level (Education Level), Other Income Source (Availability of other sources of income), LoanPeriod (Loan period), BusUse (Business use), DomUse (Domestic use) and SocUse (Social use) affected borrowers repayment loan performance significantly. Variable BusExperience (Business experience) is statistically significant but have a negative coefficient to affect borrower’s repayment loan performance. On other hand, the above table also

indicates that the independent variable LoanSize (Loan size) was not a significant determinant to borrower's payment loan performance.

This means the increase of education by one year, will change borrowers loan payment performance by approximate 48%. A unit change availability of other income source will lead to a 2.266. Also, if the size of the loan increases in one unit it will lead to a 62% change in loan repayment performance. Finally, 1-year increase of repayment period will lead to a 2.375 change in loan repayment performance.

5. SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter provides the summary of the findings from our data. The chapter provides conclusion and recommendations of the research in line with our objectives of the study. The sole reason was to investigate key factors affecting advances/loan/mortgage payment performance in Garowe district. The study mainly focused to what margin borrowers' characteristics can affect the loan/advances payment performance in Garowe district, Puntland, Somalia and identify the effect of the purpose of the loan on loan repayment performance in the area.

5.2 Summary of key findings

This part presents summary of our research as indicated by our objectives using data available in chapter four of this research study. We arranged the summary in line with objectives of our study and research question presented to respondents. This section presents detailed major research findings discussion plus comparison to literature review in our study.

5.2.1 Borrower's characteristic effects loan performance repayment

Research established that there existed an association between traits of borrowers and their performance to loan repayment based Garowe districts banks. Case study also revealed that borrower's education level had significant and positive effect on ability to repay their loan. The study also established that availability of other income source affected the rate of loan repayment. The study further revealed that the business experience is statistically significant but show negative sign.

In conclusion traits of borrowers affected level of advances/loans/mortgage repayment performance to a very large extent range at Garowe district.

5.2.2 Effect loan characteristics to loan performance repayment

Research results indicated there exist an association between loan characteristic and its repayment performance in the banks of Garowe district. Research established maturity period of the loan affected the level of loan repayment performance of banks in Garowe district. But variable size of the loan has a value though insignificant.

Research study established that maturity period of the loan affected the level of loan repayment performance at microfinance Banks in Garowe district. Borrower's inherent characteristics to their business are main causes of loan non repayment (Derban, 2005). The study further established loan characteristics affected microfinance banks loan repayment performance in Garowe district to a very great extent.

A researcher (Vigeninna & Critikosis, 2004) concluded that to realize 100% loan repayment banks needed to focus non-convictional collaterals, thorough screening their loan assurance procedures and inclusive of integrated formula with incentive to their borrowers.

Another researcher (GODQUIN, 2004) concluded loan size had an inverse relationship to repayment success. His conclusion is in line with (PANG 1991) suggestion: main determinant of loan repayments are loan interest charge and loan size. (Hietalahti & Linden, 2006) research suggested large debts lead to performance repayment hiccups, dissatisfaction together with drop outs.

The study further established microfinance banks mortgage/loan/advances was highly associated to loan characteristics.

5.2.3 Effect of Purpose of Loan on loan repayment performance

The study revealed loan intended purpose and its repayment performance were highly associated in Garowe districts banks. Research result shows: probability of repaying loans successfully is higher for borrowers who use the loan for business investment rather than the borrowers who use the loan for domestic and social purpose.

Most of the borrowers were taking the loan for using their businesses and remaining borrowers used for domestic purpose and social purpose. Between those purposes the study discovered that borrowers who use their loan for business purpose only a few members were defaulted. A researcher (Stiglitz & Weiss, 1981) suggested banks should have a scale to establish good borrowers and bad borrowers. Banks should establish procedures and controls to monitor their borrowers and see to it the loans acquired are used for their intended purpose.

The study additionally recognized that purpose of the loan highly affected its repayment in Garowe district's banks to a very great extent.

5.3 Conclusion

From our study borrowers' characteristics and loan performance repayment were highly associated in Garowe district banks. Banks and other money lenders should examine borrower's characteristics before they loan insurance. They need to distinguish between good and bad borrowers.

Loan characteristics and repayment progress were also highly associated in Garowe districts banks. Non-repayment mostly was incurred due to some inherent borrower's traits and characteristics of their businesses together with loan/mortgage intended purpose.

Sole purpose loan was intended for and its performance repayment was also highly associated in Garowe districts banks. Thorough borrowers screening needed to be performed to establish good and bad borrowers.

5.4 Recommendations

The study recommended that:

Based on the result obtained from this study, the study recommends that banks should identify factors that affect loan repayment ability before permitting loans to borrowers to reduce loan defaults.

Garowe districts banks and other money lenders should establish credit risk management controls and systems to tighten loan performance repayment. Banks need to ensure established risk credit management policies are implemented and followed.

Banks need to formulate policies, controls and systems that will ensure loan acquired is used strictly to purpose intended for. Mitigation policies should also be established to strengthen relationship between the lenders and borrowers through offering cash management advisories Banks need to introduce giving incentives to borrowers who repay their loan earlier before due date

5.5 Suggestion for further research

This research just concentrates on the borrowers' level of education, business experience, availability of other source of income, loan size, loan payment period and loan intended purpose such as (business purpose, domestic purpose and social use) but there are many other factors that can affect Garowe district banks repayment performance on their loan. An extended research to other factors affecting loan repayment in Garowe district's banks, Puntland state Somalia ought to be conducted.

REFERENCES

- Abafita, J. (2003). *micro finance and loan repayment performance, case study of the Oromia Credit and Savings Share Company (OCSSCO) in Kuyu.*
- Addisu, M. (2006). Micro-Finance Repaymet Problem in the Informal Sector in Addis Ababa. *Ethopian Journal of Business & Development, Volume 1 and 2.*
- Akerlof, G. (1970). The Market for Lemons: Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics*, Vol. 84, No. 3 pp. 488-500.
- Arene, C. J. (1992). Loan repayment and technical assistance among smallholder maize farmers in Nigeria. *African Review of Money and Banking. A Supplement of Savings and Development Journal*, 1, 64-72.
- Berger, A. N., Frame, W. S., & Miller, N. H. (2002). Credit Scoring and the price and availability of small business credit. *Journal of money, credit and banking.*
- Chijoriga, M. M. (1997). An application of credit scoring and financial distress prediction models to commercial bank lending: The case of Tanzania. *PhD Dissertation University of Vienna.*
- Chong, F. (2010). Evaluating the Credit Management of Micro-Enterprises. department of Banking and Finance. *University of Technology*, 2(7), 149-158.
- Cooper, R. D., & Schindler, S. P. (2003). *Business Research Methods*. Boston: McGraw-Hill.
- Copisarow, R. (2000). The application of micro credit technology to the UK: key commercial and policy issues. *Journal of Micro Credit*, 1(1).
- Coyle, B. (2000). *Framework for Credit Risk Management*. UK: CIB Publishing.
- Derban, W. K. (2005).
- Diagne, A., Simtowe, F., Chimombo, W., & Mataya , C. (2000). Design and Sustainability issues of rural credit and savings programs for the poor in Malawi : An Action Oriented Research Project. *International Food Policy Research Institute -IFPRI*, Washington.

- Duffie , D. J., & Huang, C.-F. (1985). Implementing Arrow-Debreu Equilibria by Continuous Trading of Few Long-Lived Securities. *Econometric Society*, Volume 53: 1337-1356.
- Edgcomb, E., & Barton, L. (1998). "Social intermediation and microfinance programs: A literature review". *Microenterprise Best Practices*.
- Ekumah, E. K., & Essel, T. T. (2003). INFORMATION IS POWER: The Credit Accessibility In Rural Banks In Ghana Rural Banks In Ghana. *IFLIP Research Paper*, 03-12.
- Fallon, W. (1996). Calculating Value-at-Risk. *a paper presented at the Wharton Conference on Risk Management in Banking* .
- Fieldman, R. (1997). Banks and a Big Change Called credit Scoring . *Federal Reserve Bank of Minneapolis*, 19-25.
- Gebeyehu, A. (2002). *loan repayment and its determinants in small-scale enterprise financing in Ethiopia*. Addis Ababa: University Ethiopia.
- Godquin, M. (2004). Microfinance repayment performance in bangladesh: how to improve the allocation of loans by MFIs. *World Development*, 32(11), 1909-1926.
- Greenbaum, S I; et al. (1991). *Contemporary financial intermediation*. Forth Worth, Texas: Dryden Press.
- Greenbaum, S. I., & Thakor, A. V. (1995). *Contemporary Financial Intermediation*. Texas: Forth Worth: Dryden Press.
- Harrison, J. M., & Kreps, D. (1979). Martingales and arbitrage in multiperiod securities markets. *Journal of Economic Theory*, 381-408.
- Hart, O. D. (1975). On the optimality of equilibrium when the market structure is incomplete. *Journal of Economic Theory*, 11(3), 418-443.
- Hietalahti, J., & Linden, M. (2006). Socio-economic Impacts of Microfinance and Repayment Performance: A Case Study of Small Enterprise Foundation, South Africa. *Progress in Development Studies*, 6(3), 201-210.
- Hoque, M. Z. (2000). *Guided industrial credit*. Monash University:
<http://www.bizresearchpapers.com/Document4.pdf>. 22 April 2010.
- Kamajou, F., & Baker, C. (1980). Reforming Cameroon's government credit project: Effects of liquidity management of small farm borrowers. *merican Journal of Agricultural Economics*, 62(4):709-718.
- Kegode, M. A. (2006). *Factors that determine credit worthiness of Visa Card holders: A Case Study of Kenya Post Office Savings Bank*. University Of Nairobi: MBA unpublished Project.
- Khan, T., & Ahmed, H. (2001). Risk Management: An Analysis of Issues in Islamic Financial Industry (Occasional Papers). *The Islamic Research and Teaching Institute (IRTI)*, Occasional Paper, No. 5.
- Khandker, S. R., Khalily, B., & Khan, Z. (1995). "Grameen Bank: performance and sustainability". Washington: World Bank Discussion Paper, No.306.

- Kimeu, K. T. (2008). *A Survey of credit risk management techniques of unsecured bank loans for commercial banks in Kenya*. University of Nairobi: MBA unpublished Project.
- Lintner, J. (1965). The Valuation of risk assets and the selection of risk investments in stock portfolios and capital budgets. *Review of economics and statistics*, 47,13-37.
- Luce and Raiffa. (1957). *Risk Management: A Conceptual Framework. Long Range*. Published by Elsevier Ltd.
- Margrabe, W. (2007). *Credit risk management of commercial loan portfolio*.
- Matin, I. (1997). Repayment performance of Grameen Bank borrowers: The unzipped' state. *Savings and Development*, 4, 451-473.
- McMenamin, J. (1999). *Financial Management*. London and New York: Published by Routledge.
- Merna, T., & Njiru, C. (2002). A Project Management Prospective to the Management of Federal roads in Nigeria: Case study of Minna-Bida Road. *Journal of Finance and Economics*, Vol. 1 No. 4, 54-61.
- Mishkin, F. S. (1997). *Financial Markets and Institutions*. New York: Addison Wesley.
- Misukin, A. K. (1991). *The Economics of Money, Banking and Financial Markets" Town*. Addison-Wesley Series in Economics.
- Mugambi, M. (2010). Factors leading to loan defaults of microenterprises financed by cooperative bank in Kingami and Kawangware areas in Nairobi. *Thesis Project*.
- Mugenda, M. O., & Mugenda, G. A. (2003). *Research Methods*. Nairobi, Kenya: Laba Graphics Services Ltd.
- Mugenda, O. M., & Mugenda , A. G. (1999). *Research Methods: Quantitative and Qualitative Approaches*. Acts Press, Nairobi.
- Mwengei, K. B. (2013). Assessing the Factors Contributing to Non –Performance Loans in Kenyan Banks. *European Journal of Business and Management*, 5(32), 155-162.
- Nannyonga, H. L. (2000). Determinants of repayment behaviour in the Centenary Rural Development Bank in Uganda. *Unpublished Doctoral Dissertation. The Ohio State University. United States*.
- Ngechu, M. (2004). *Understanding the Research Process and Methods: An Introduction to Research Methods*. Nairobi: Acts Press.
- Oke, J ; et al. (2007). An Empirical Analysis of Microcredit Repayment in Southwestern Nigeria. *Humanity & Social Sciences Journal*, 2(1), 63-74.
- Paxton, J. A. (1996). Determinants of successful group loan repayment: an application to Burkina Faso. *Ph.D. Dissertation, The Ohio State University*.
- Payner, T. H., & Redman, A. I. (2002). The pitfalls of property valuation for commercial real estate lenders: using a comparative income approach to improve accuracy. *Briefings in Real Estate Finance*, Vol. 3 No.1, pp.50-59.

- Radner, R. (1967). Competitive equilibrium under uncertainty. *Econometria*.
- Roslan, Abdul H; Zaini, Mohd Abd Karim. (2009). Determinants of microcredit repayment in Malaysia: the case of Agrobank. *Humanity & Social Sciences Journal*, 45-52.
- Rutherford, R. (1994). Securitizing Small Business Loans: A Banker's Action Plan. *Commercial lending review*, Volume 10(1) 62-74.
- Santomero, A. M. (1997). Commercial Bank Risk Management: An Analysis of the Process. *Wharton Financial Institutions Centre*.
- Sharpe, W. F. (1964). Capital Asset Prices: A theory of market equilibrium under conditions if risk. *Journal of Finance*, 19(3), 425-442.
- Spark. (2016). BANKING IN SOMALIA: SMES STRUGGLE TO GET FINANCED. <http://www.spark-online.org/banking-somalia-smes-struggle-get-financed/>.
- Stiglitz, J. E., & Weiss, A. (1981). Credit Rationing in Markets with Imperfect Information. *The American Economic Review*, Vol. 71, No. 3 pp. 393-410.
- Strutt, J. (2000). Risk assessment and management: the engineering approach. *Centre for Industrial Safety and Reliability, Cranfield University., unpublished paper*.
- Sundarajan, V. (2007). Risk Characteristics of Products: Implications for Risk Measurement and Supervision. In S. Archer, & R. A. Abdel Karim, *Islamic Finance: The Regulatory Challenge*. John Wiley and Son (Asia) Pte Ltd.
- Vigenina, D., & Kritikos, A. S. (2004). The individual micro-lending contract: is it better design than joint-liability? Evidence from Georgia. *Economic System*, 28, 155-179.
- Walsh , M., & Wigans, L. (2003). *Introduction to Research*. Cheltenham, United: Nelson Thomes Ltd.
- Waruinge. (2009). factors contributing to non-performance of loans among commercial banks in Kenya.
- Wilsan, J. (2010). *Essentials of Business Research: A Guide to Doing Your Research Project*. London, United Kingdom: Sage Publications Ltd.