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ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE

**DETERMINANTS OF APPROVAL AND REPAYMENT
PERFORMANCE OF HOUSING FINANCE IN ADDIS ABABA;
IN CASE OF ZEMEN BANK S.C**

**A Thesis Submitted to The Department of Accounting and Finance
Presented in Partial Fulfillment of the Requirements for the Degree
of Master of Science in Accounting and Finance**

By; Mihretu Bayeh

Advisor; Takele Fufa (PhD)

March, 2022

Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE

Approval sheet

This is to certify that this thesis prepared by Mihretu Bayeh, which entitled Determinants of approval and repayment performance of housing finance in Addis Ababa in case of Zemen Bank S.C. and submitted in partial fulfillment of the requirement for the degree of Master of Science in Accounting and Finance complies with the regulations of the university and meets the accepted standards with respect to originality and quality

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Internal examiner: _____ Signature _____ Date _____

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Advisor: _____ Signature _____ Date _____

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Statement of declaration

I declare that this thesis entitled: Determinants of approval and repayment performance of housing finance in Addis Ababa in case of Zemen Bank S.C , hereby submitted by me in partial fulfillment of the requirements for the Degree of Master of Science in Accounting and Finance at the Addis Ababa University, This is my original work and has not been submitted for any degree in any other university. I have undertaken it independently with the advice of my advisor, Takele Fufa (PhD). In performing the thesis, i have used different sources and material, which have been acknowledged.

Name: Mihretu Bayeh

Signature: _____

Date: _____

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Abstract

This study was conducted on the topic of determinants of approval and repayment performance of housing finance in case of Zemen Bank S.C. with the objective of assessing the determinants of Approval and Repayment Performance of Housing Finance in Addis Ababa city. To conduct this study, the researcher used descriptive and explanatory research design and primary and secondary data were used. Primary data were collected using questionnaires and the secondary data were collected through verifying documents. The total population of the study was 655 which include 637 borrowers and 18 employees and the total sample size was 78. Stratified and judgmental sampling techniques were employed to select a sample from borrowers and employees of the bank respectively. In this study the data obtained from borrowers and the bank was analyzed using descriptive statistics analysis and Binary Logit Model was used to measure the variables those are determining loan repayment performance of housing finance. In the logistic regression model, a total of thirteen explanatory variables representing three dimensional namely demographic factors, socio-economic factors and institutional factors were considered to analyze loan repayment performance. Based on the findings of this study, the researcher concludes that employment status, income from other sources, spouse income sources, interest rate, change of inflation and loan utilization have found to be significant effect on loan repayment performance of housing finance. On the other hand, average house hold income, saving culture, loan size, loan repayment schedule, timeliness of loan release, loan supervision and loan diversion have found to be insignificant effect on loan repayment performance of housing finance. Finally, possible recommendations were suggested that, the bank might consider the significant variables such as employment status, income from other sources, spouse income sources, interest rate, change of inflation and loan utilization as the basis for loan approval and to minimize loan default rate.

Key words loan approval, repayment performance, housing finance, defaulter non-defaulter, binary logistic model

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CHAPTER ONE

1. INTRODUCTION

Commercial banks play an important role in the process of money transfer from surplus to deficit sector and thereby stimulate economic growth of a country. Loans are the most famous and perhaps the most important service provided by commercial banks. In the banking business, lending to the private sector plays a significant role, particularly lending to households where the most significant role is played by housing loans, which also contributes to economic growth due to its direct and indirect effects. (Datta & Jones, 2001).

Credit risk evaluation and lending decisions made in the past by lending institutions put a lot of emphasis on security than other similar important considerations (Kashuliza 2011). There are instances 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 Payner, and Redman (2002).

The main objective of the banks are they deliver loans, savings, money transfer, etc. to a large number of productive resource; people in the country in a cost-effective and sustainable way. The primary objective of banks are to provide financial services like (credit & saving) to the people in order to release financial constraint and help alleviating poverty. Each bank tries to maximize its repayment performance, whether or not it is profit oriented. High repayment rates are indeed largely associated with

benefits both for the banks and the borrowers (Sengupta and Aubuchon, 2008, cited by Fikirte, 2011). They enable the banks to cut the interest rate it charges to the borrowers, thus reducing the financial cost of credit and allowing more borrowers to have access to it.

Improving repayment rates might also help reduce the dependence on subsidies of the banks, which would improve sustainability. It is also argued that high repayment rates reflect the adequacy of bank`s services to clients` needs. They limit the incidence of cross subvention across the borrowers. Finally, yet importantly, repayment performance is a key variable for donors and international funding agencies on which many banks still depend for their access to funds (Godquin, 2004).

Arene (2008) outlines the main factors that determine loan repayment performance as loan size, enterprise size, income, age, number of years of business experience, distance between home and source of loan, education, household size, adoption of innovations, and credit needs. Like in other areas of the world, peoples in Ethiopia are living under poverty. Finance institutions in general and banks in particular plays crucial role in the development of Ethiopia in general and Addis Ababa in particular.

Though credit operation of commercial banks in Ethiopia shows a dramatic increase in loan approval and disbursal there are non-performing loans, which resulted from clients` default, which in turn come about from lack of follow-up, market problems, environmental problems, credit policy of the Bank, and so forth (Derege, 2010). This raises a question on how can commercial banks in Ethiopia increase the recovery performance of its borrowers of housing finance. This in turn entails a question on what are the factors that determine loan approval and recovery performance of borrowers. It is thus important to investigate and provide empirical evidence on factors that determine loan approval and recovery performance of housing finance of commercial banks in Ethiopia Addis Ababa city. Therefore, the researcher investigate determinants of loan approval and recovery performance of housing finance in Addis Ababa in case of Zemen Bank S.c.

1.1. Statement of the problem

Ethiopia's population growth and rapid rate of urban expansion are placing substantial pressure on housing. The availability of finance is a key issue for any housing development activity. It affects developers, contractors and the ultimate buyers of the housing units. An efficient and sustainable housing finance regime is a pre-requisite for sustainable housing finance for the citizens of a nation. Housing finance market is an important medium for financing housing around the globe (Boamah, 2010). Housing finance market contributes significantly to addressing the problem of housing inadequacy or insufficiency by providing home buyers with long-term Housing loans with relatively moderate monthly installments. Housing investment has long duration and requires large amount of long-term finance. This can be adequately provided when sustainable housing finance market is in place.

The commercial banks' involvement in housing loans is limited due to many unfavorable factors. Besides unsatisfactory legal situation with regard to the property title deeds, macro-economic instability, high inflation, volatile real estate prices and non-availability of long term funds at reasonable interest rates also come in the way of the banks' active involvement in the home loan market. Similarly, housing finance is not a flourishing activity in the transition economies. Many countries in this category do not have strong and vibrant banking system, reliable legal system to confer property rights and financial stability to promote on a massive scale housing finance. Sudhir (2005)

With regard to extending loan to the housing finance it seems that the amount is getting smaller and banks are focusing more on business loans. The overall lending amount is also very small compared to the population size and housing demand. It is one thing to provide loan, but it is also another thing to make it more accessible. Recently accessing loan for housing purpose is not easy and dogged with multiple conditions. Mobilized deposits remain the major source of funding for banks in Ethiopia as well Behon (2011).

Gebeyo, (2002) conducted a study on major challenges of accessing housing project finance in Addis Ababa. The author indicated that the housing facility provision has two major challenges; affordability and quality. If citizens cannot afford, the construction of the houses cannot meet the intended purposes. The finding, however,

has not discussed other determinants that the affordability in order to introduce new ways of doing. This study thus attempts to look at other variables.

Regarding credit services, another study conducted by Derege, (2010) indicated that loan access is the serious problem for the targets of the housing. Besides, it has been underlined that the problem of credit occurs because of the problem in the regulatory, legal frameworks, and lengthy and costly legal procedure. The study did not disclose others other than the credit related problem Such as income from other sources, occupation, marital status, spouse income source, interest rate, employment status, timeliness, loan diversion, supervision and loan utilization which will be addressed in this research.

Consequently, this study looks at the determinants of approval and recovery performance of housing finance from the borrower's perspective. Most research on housing finance in Ethiopia has concentrated on the relationship of housing prices and housing mortgage implications only. However, that kind of empirical inclination has not looked at a number of variables such as income from other sources, occupation, marital status, spouse income source, interest rate, employment status, timeliness, loan diversion, supervision and loan utilization that have been mentioned in this study. However, these variables play a key role in determining the housing finance in Addis Ababa city and Ethiopia as a whole.

Since housing drives economic activity with both backward and forward linkages, a study on housing finance is important. There are a number of studies conducted related to credit approval and repayment performance of housing finance. For instance, Reza and Mansoori (2009), Pishbahar et.al (2015), Rifas, Nimsith and Shibly (2016), Belete (2015), Fikadu (2019), Feysa (2009), Saroha and Yadav (2016), Biniam (2018), and Yinebeb (2015) were conducting their study related to lending decision and repayment performance at European and other African countries. However, the economic performance, political, social and cultural factors are various from country to country. As a result, the identified determinant factors might not use for Ethiopia in general and in particular commercial banks. Additionally, most of the undertaken studies were conducted at micro finance institution and Small scale business. This in turn, that the types of the loans were short term and working capital

loan. While commercial banks in nature has financed short, medium and long term project (housing finance) and have higher risk than short term finance. Through various researches have been conducted on loan repayment performance at different places and time period but the results of the findings by various researchers are different and therefore inconclusive and not present with an assessment of credit approval. As per researcher knowledge, no study is conducted to examine the determinant of approval and repayment performance of housing finance at the same time. Thus, by taking in to account these and some other knowledge gaps and keeping the results or findings of the former studies, the researcher attempts to investigate the determinants of approval and repayment performance of housing finance in Addis Ababa with a particular emphasis of Zemen bank by seeking answer for the following research question;

1. What are the factors that determine approval of housing finance in Addis Ababa?
2. What are the factors that determine loan repayment performance of housing finance in Addis Ababa?

1.2. Objectives of the study

1.2.1. General objective

The general objective of this study is to assess the determinants of approval and repayment performance of housing finance in Addis Ababa city.

1.2.2. Specific objectives

The specific objectives of this study include the following;

1. To investigate the factors that determine approval of housing finance in Addis Ababa.
2. To analyze factors that determine the loan repayment performance of housing finance in Addis Ababa.

1.3. Research hypothesis

Ho1: income from other sources has no significant impact on repayment performance of housing finance.

Ho2: average household income has no significant impact on repayment performance of housing finance.

Ho3: employment status has no significant impact on repayment performance of housing finance.

Ho4: Interest rate has no significant impact on repayment performance of housing finance.

Ho5: timeliness has no significant impact on loan repayment performance of housing finance

Ho6: loan utilization has no significant impact on loan repayment performance of housing finance

Ho7: loan diversion has no significant impact on loan repayment performance of housing finance

Ho8: loan supervision has no significant impact on loan recovery performance of housing finance

Ho9: saving culture has no significant impact on loan repayment performance of housing finance

Ho10: change of inflation in the economy has no significant impact on repayment performance of housing finance

Ho11: home loan repayment period has no significant impact on repayment performance of housing finance

Ho12: loan size has no significant impact on repayment performance of housing finance

Ho13: spouse income source has no significant impact on loan repayment performance of housing finance

1.4. Significance of the study

The study was important to different stakeholders including:

The finding of this study believed to be an input for policy makers and regulatory bodies in improving the understanding of the gaps and problems with regard to housing finance.

The finding of this study could also help the bank to improve loan repayment performance. It gives some insights to the bank to understand the gaps in approving as well as repayment performance of housing finance, it would assist the bank to identify aspects or areas where borrowers experience challenges and work towards filling up the gap.

The finding of this study believed to help the borrower (house seeker) in improving their level of understanding of housing loan application process and utilization of the loan granted to them.

1.5. Scope of the study

In this study, the researcher attempted to identify determinants of approval and repayment performance of housing finance. Any research concerning housing finance all over Ethiopia as well as regional level is more complicated, very expensive and time consuming. Because of this, the study was mainly focused on Addis Ababa city. To make the study manageable and to evaluate the problem in detail, the researcher was only confined to the determinants of approval and repayment performance of housing finance in Addis Ababa city in case of Zemen bank SC.

1.6. Organization of the study

This paper would consist of five chapters. The first chapter deals with introductory part which contains background of the study, statement of the problem, objective of the study, research hypothesis, significance of the study, scope of the study and organization of the study. Chapter two presents the review of related literature that is related to housing finance. The third chapter contains brief description of the research methods that would use to conduct the study. The fourth chapter would contain result and discussion of the data that would be collected. Finally, chapter five deals with summary, conclusions and its recommendations

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Introduction

This chapter summarized theoretical literatures related to finance, loan approval, repayment performance and the information from other researchers who have carried out their research in the same field of study

The study included two theories, theory of finance and portfolio theory and. Like any other lending business, the lender is out to earn a return on the money advanced in the form of interest on top of the principal. This therefore means that they have to thoroughly evaluate the borrowers to make sure that they only extend credit to borrowers with ability and capacity to repay. These theories explain the reasoning and bases of credit extension and management of nonperforming loans among customers of commercial banks

Based on this available knowledge, the research pursued the realities of determinants of loan approval and repayment performance of housing finance in Addis Ababa.

2.2. Theoretical literatures

2.2.1 The Theoretical Concept of Finance

2.2.1.1 Theory of Finance

The theory of finance is concerned with how individuals and firms allocate resources through time. In particular, it seeks to explain how solutions to the problems faced in allocating resources through time are facilitated by the existence of capital markets (which provide a means for individual economic agents to exchange resources to be available at different points in time) and of firms (which, by their production-investment decisions, provide a means for individuals to transform (current resources physically into resources to be available in the future). Numerous economists have explained the role of finance in the market with the help of different finance theories. The concept of finance theory involves studying the various ways by which

businesses and individuals raise money, as well as how money is allocated to projects while considering the risk factors associated with them.

The concept of finance also includes the study of money and other assets, managing and profiling project risks, control and management of assets, and the science of managing money (Hull, John C, 2002). In simple terms, 'financing' also means provision and allocation of funds for a particular business module or project. The Arbitrage Pricing Theory, for example, addresses the general theory of asset pricing. Proper asset pricing is necessary for the proper pricing of shares. The Arbitrage Pricing Theory states that the return that is expected from a financial asset can be presented as a linear function of various theoretical market indices and macro-economic factors. Here it is assumed that the factors considered are sensitive to changes and that is represented by a factor-specific beta coefficient. The Prospect Theory, on the other hand, takes into consideration the alternatives that come with uncertain outcomes. The model is descriptive by nature and attempts to represent real-life choices but not optimal decisions.

2.2.1.2 Portfolio Theory

Since the 1980s, banks have successfully applied modern portfolio theory (MPT) to market risk. Many banks are now using value at risk (VAR) models to manage their interest rate and market risk exposures. However, even though credit risk remains the largest risk facing most banks, the practical of MPT to credit risk has lagged (Margrabe, 2007). Banks recognize how credit concentrations can adversely impact financial performance. As a result, a number of sophisticated institutions are actively pursuing quantitative approaches to credit risk measurement, while data problems remain an obstacle. This industry is also making significant progress toward developing tools that measure credit risk in a portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving customer relationships. The combination of these two developments has precipitated vastly accelerated progress in managing credit risk in a portfolio context over the past several years.

Traditionally, banks have taken an asset-by-asset approach to credit risk management. While each bank's method varies, this approach involves periodically evaluating the credit quality of loans and other credit exposures, applying a credit risk rating and aggregating the results of this analysis to identify a portfolio's expected

losses. The foundation of the asset-by-asset approach is a sound loan review and internal credit risk rating system. A loan review and credit risk rating system enable management to identify changes in individual credits or portfolio trends in a timely manner. Based on the results of its problem; loan identification, loan review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner.

In the expert system, the credit decision is left in the hands of the branch lending officer. His expertise, judgment and weighting of certain factors are the most important determinants in the decision to grant loans. The loan officer can examine as many points as possible but must include the five “Cs”; character, credibility, capital, collateral and cycle (economic conditions). In addition to the 5 Cs, an expert may also take into consideration the interest rate.

Due to the time consuming nature and error- prone nature of the computerized expertise system, many systems use induction to infer the human expert’s decision process. The artificial neural networks have been proposed as solutions to the problems of the expert system. This system simulates the human learning process. It learns the nature of the relationship between inputs and outputs by repeatedly sampling input/output information.

Credit Scoring Systems is where a credit score is used to represent the creditworthiness of a person. A credit score is primarily based on credit report information. Lenders, such as banks use credit scores to evaluate the potential risk posed by giving loans to consumers and to mitigate losses due to bad debt. Using credit scores, financial institutions determine who are the most qualified for a loan, at what rate of interest, and to what credit limits. This lending technology uses a summary statistic about the borrowers expected future loan repayment performance (Feldman 1997, and Mester, 1997). In fact credit scoring assumes that credit analysis ultimately determines that the personal credit history of small business owners is highly predictive of the loan repayment prospects of the business (Berger, Frame and Miller, 2002). Rutherford (1994, 1995) observes that although credit scores have been used for some time now in the U.S in underwriting consumers’ loans, this lending approach has only been recently applied to small commercial credits which have been thought to have non-standardized documentation and to be too heterogeneous. The

method for the use of credit scoring involves attaching heavy statistical weights to the financial conditions and history of the principal owner given that the credit worthiness of the owner and that of the firm are closely related for most small businesses (Feldman 1997, Mester 1997)

2.2.2 The Concept of Housing Finance

Housing finance involves the far larger sums spent by households and housing organizations that are derived from income and from borrowing. A consideration of what housing finance is tells us where the money comes from. It shows us that, whilst some finance comes from government, we need also to consider other sources such as earned income and private finance (King, 2005)

Finance connects people who need money and those who want to borrow money to earn interest, which stimulates the economic vitality of individual economic entities. Housing loans also play such a role. In general, it takes a large amount of money to buy a house. The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non-re-deployable assets (Williamson, 2012). Furthermore, Hasnah (2012) in the study of theory of firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even lose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly (Fisher, 2003).

In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government. Financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity (Nubi, 2008).

2.2.3 Demand side of Housing finance

Home ownership remains the key priority of most Ethiopians. However due to limited sources of mortgage financing, this priority has remained a dream for a significant proportion of the population. The demand for housing in the country has risen tremendously. Whilst many private developers have concentrated on the middle and upper end of the housing market, very few private developers have concentrated on affordable and economic housing for Ethiopians masses and the average Ethiopians worker leading to a deficit in housing delivery. Housing is not easily accessible to majority of Ethiopians partly due to financial constraints. The demand for loanable funds is a representation of demand for an increased stock of debt, to finance present aggregate demand for consumption, investment or government expenditure on goods and services (Petersen and Rajan, 2011). The demand for loanable funds is determined by the following factors:

Investment demand – Long term investment for capital projects like housing are usually financed by borrowing. When the need arises, these are usually considered as investment demand which results in demand for loanable funds. Again, when the income of individuals is increased, they are prepared to consider increased borrowing in that they can afford extra borrowings (Poole, 2003). On the demand side of housing finance, the most important factor being considered by banks is the ability of the borrower to repay the money borrowed. This can be secure, if the borrower is in employment at the point of borrowing. Considering the macroeconomic situations in the emerging economies and in particular Ethiopia, there is no way anybody can predict how long a borrower would be in employment. In developed economies, total sum borrowed is usually restricted to three to four times the applicant's salary (Warnock, 2008).

2.2.4 Conditions for Loan approval of housing finance

The loan approval process is the first step towards, holding of good portfolio quality. When individual credits are underwriting with sound credit principles, the credit quality of the portfolio is much more likely to be sound. The primary means to control loan quality is strengthening the approval process. The process should be compatible with the Bank's credit culture, its risk profile, and the capability of its lenders, further, the system for loan approvals needs to be establishing accountability.

An effective loan approval process establishes minimum requirement for the information and analysis upon which accredit decision is based, it provides guidance on the documents needed to approve new credit, renew credit, increase credit to existing borrowing, and change terms of previously approved credit. (Caracelli, 2009)

Under the severe macroeconomic conditions in the 1990s, particularly after the financial crisis in November 2007, the availability of bank loans is the focal point for housing finance. Extending credit is the careful balance of limiting risk and maximizing profitability while maintaining a competitive edge in a complex, global marketplace. Banks go through a thorough process in approving credit to hit the balance. Credit approval is the process of deciding whether or not to extend credit to a particular customer. It involves two steps: gathering relevant information and determining credit worthiness (Ross, 2003).

The quality of credit approval processes depends on two factors, i.e. a transparent and comprehensive presentation of the risks when granting the loan on the one hand, and an adequate assessment of these risks on the other. Furthermore, the level of efficiency of the credit approval processes is an important rating element. Due to the considerable differences in the nature of various borrowers and the assets to be financed as well the large number of products and their complexity, there cannot be a uniform process to assess credit risks. The quality of the credit approval process from a risk perspective is determined by the best possible identification and evaluation of the credit risk resulting from a possible exposure (Paul, 2013).

The credit risk can be distributed among the following risk components: Probability of default (PD), Loss given default (LGD) and Exposure at default (EAD). (Blackwell, Winters, 2003):

Default probability is the likelihood that the business will default on its repayment over the term of the facility. Reviewing a borrower's probability of default is basically done by evaluating the borrower's current and future ability to fulfill its interest and principal repayment obligations.

Exposure at default is the magnitude or exposure that would be materialized in the event of a default. It addresses what fraction of the exposure may be recovered through bankruptcy proceedings or through some other form of settlement in the event of a default. The loss given default is affected by the collateralized portion as well as the cost of selling the collateral. Therefore, the calculated value and type of collateral also have to be taken into account in designing the credit approval processes. In the vast majority of the cases described here, the exposure at default corresponds to the amount owed to the institution. Thus, besides the type of claim; the amount of the claim is another important element in the credit approval process. (Blackwell, Winters, 2003)

2.2.4.1 Loan assessment

The first stage in the loan granting process is the credit assessment. The stage at which the necessary documentations are presented to the bank by the loan applicant in order to obtain a credit facility is credit assessment (Njoroge, Kariuki & Ogollah, 2014).

2.2.4.2 Due diligence Assessment

This first steps of analysis of the borrower characteristics to go to the next step. Through conducting in-depth analysis of the borrower the credit officer either accept or reject the credit application based on the Bank criteria set. This is due to potential risk involved in a potential investment, a due diligence assessment is essential to the pre-funding commitment. The biggest investment a lender or creditor can make in a business is taking the time to determine the key aspects of the business environment, from the day-to-day operations practices, to human resource considerations, to the necessary practices to maintain customers. A due diligence assessment provides the answers to these questions, allowing creditors and lenders to decide if they are willing to proceed given the existing factors. As such, it is a helpful tool in making a more informed credit or investment decision (Martin, 2007).

Due diligence assessments also provide information which can be used when crafting lending or investment instruments for the benefit of lending or investing entities. Although the structure of each engagement is unique, projects typically focus on answering the following questions:

Market positioning, including competition, capabilities, market dynamics by segment; Execution capabilities, including strategy, management capabilities, cost structure, customer service, quality, product innovation, Attainability of business plan and projections; Cash flow forecast, quality of earnings and debt service capabilities and Focus Management Group rapidly assesses a company to identify key issues and drives; drawing conclusions regarding the advisability of the lender/investor to proceed with the transaction under consideration (Martin 2007).

2.2.4.3 Credit appraisal study

This is the basic stage in the lending process. It is described as the 'heart' of a high quality portfolio. This involves gathering, processing and analyzing of quality information as way of discriminating the client's credit worthiness and reducing the incentive problems between the lenders as principals and the borrowers as agents. The Bank's credit policy, procedures and directives guide the credit assessment process. Banks should base their credit analysis on the basic principles of lending which are Character, Capacity, Capital, Collateral and Conditions (Matovu and Okumu, 2006). It is designed to ensure lenders take actions which facilitate repayment or reduce repayment likely problems. This information about the riskiness of the borrower makes the financial institution to take remedial actions like asking for collateral, shorter duration of payment, high interest rates and other form of payment (Stiglitz, 2006) when a financial institution does not do it well, its performance is highly affected. And stressed the importance of credit analysis when he observed that its abandonment often resulted into several Banks using credit card to process. The variable in the researcher, according to Hunte (2006), included the length of time taken to process applications, credit experience and proportion of collateral security to the loan approved. It was found out that long waiting time reflected a shortage of credible credit information required to make informed credit decisions. This in turn leads to greater risk more intense credit rationing and low repayment rates.

The 'heart' of a high quality portfolio is credit appraisal. It involves determining the loan applicant's creditworthiness and reducing the default between the lenders as principals and the borrowers as agents through the process of gathering, processing and analyzing of quality information about the borrower. The credit assessment process is usually guided by the Banks credit policy, procedures and directives. Character, Capacity, Capital, Collateral and Conditions are the various principles of lending which banks base their credit appraisal (Matovu and Okumu, 2006). The principles are designed to ensure that actions that will facilitate repayment and reduce default rate are taken by lending institutions. Financial institutions take measures like requesting for collateral, shorter loan repayment period, high interest rates and other form of payment when the information gathered signals the possibility of the borrower to default payment (Stiglitz, 2006). The performances of financial institutions are highly affected when they do not adequately appraise loans.

2.2.4.4 Credit Documentation

The credit assessment process covers the credit documentation and disbursement process. The Process ensures that collateral securities and formal documentation is completed before the credit facility is disbursed. It further ensures that all the documentation is within the credit polity of the institution. Martin (2007), noted that documentation process should take into accounts the maintenance of updated credit files. He further stated that, lending institutions should impose relevant fees, update records and notification of credit reviews and renewal dates.

Loan documentation process involves reviewing the documents submitted by the borrower, checking the collateral security provided and a making a legal draft. It clearly outlines the necessary security and covenant before the credit facility is approved and disbursed. The legal aspect of the documentation process provides financial institutions the grounds to take legal action against borrowers in the event of default (Martin, 2007).

Credit documentation and disbursement is another aspect of credit assessment process. It encompasses the conduct of key exposure control measures that ensures securities and documentation is obtained before funds are disbursed, and that modification on all credit facilities is approved within credit policy. It also includes the maintenance of orderly updated credit files and the imposition of relevant fee's,

updating of records and prompts notification of credit reviews and renewal dates. Loan documentation involves the legal drafting, document review, collateral checks and the waiver of terms. While the disbursement function involves checking the validity of notes as well as ensuring that the documentation for the credit facilities are properly executed. Loan documentation defines the necessary security and covenant before the loan is made. It provides risk protection by providing grounds for the Bank to take legal action when borrowers fail to honor their obligations. Credit documentations clearly states the credit terms which are the conditions attached to the loan after the borrower's loan application has been favorably appraised (Martin, 2007). Credit documentations clearly states the credit terms attached to the loan after the borrower's loan application has been favorably appraised.

2.2.5 Repayment Performance of housing finance

According to Muluken, (2014), banks safety and soundness lies in having an efficient control loan recovery & credit function. Loan recovery performance (LRP) refers to the process by which the debt from a loan or credit line is recouped in either part or whole after being written off categorized as a bad debt. A written off or bad debt forms a loss whilst recovered bad debt constitutes an income to the account. Assessing the LRP encompasses the review of steps taken by the bank management in identifying and controlling the risk in the entire loans process. The evaluation focuses on the processes undertaken to determine challenges prior proceeding into challenges. Recovery forms backbone of every lending institution and consequently the institution success depends much on how the recovery process being controlled. Hence, any credit institutions study, loan recovery need be based on characteristics of client's financially and on financial sector, economic & competitive circumstances in addition the commonly utilized practices of lending within institution regulated by constitution (Madura et al 2004as cited by Muluken, 2014). For long, great LR managers have focused their effort on issuant carefully monitoring loan performance & approving loans (Bornstein & David, 2007as cited by Muluken, 2014).

Efficiently loan recovery performance starts with overlooking of risk in loans of individual. Issuant selection of risk is crucial in controlling commendable quality of loan. Of essential is controlling the quality of individual's loans and the management of the loans performance, which has been an historical emphasis. Better management designs have been enhanced by the implementation of better technology and

rejoinders systems. Hence, early indications of increasing risks can be established by the recovery management through having in place comprehensive review of the loan portfolios (Koopahi, and Bakhshi, 2002).

According to various researchers, financial institutions loan recovery performances can be influenced by a number of factors identified as borrower's characteristics and lender's lending characteristics. The lending approaches of banks can be classified as group-based approach and individual-based approach for housing finance. A common characteristic of group lending approach is that the group obtains the loan under joint liability, where each member in a group is responsible for repayment of loans of his or her peers. Screening of the viable loan applicants, monitoring the individual borrower's efforts and enforcing recovery of their peers' loan among the members are listed as the major characteristics of group-based lending approaches of housing finance (Zeller, 1999 as cited in Abafita, 2003)

Group lending approaches creates better information on borrower's efforts in settling the loan obligations and have better monitoring advantages among the members than that of individual borrowers. Members can get important information like reputation, indebtedness and asset ownership of the loan applicants at a lower cost. They can also easily monitor individual efforts made towards ensuring repayment. Moreover, group members appeared to be in a better position to assess the reason for default and inform to the lending institutes for the shocking experience exercised by the members which seems beyond their control (Zeller, 1999 as cited in Abafita, 2003).

Individuals are supposed to select those whom they trust to form a group with; that is, they are more interested to form group with those whom can make regular repayments and have a good concern about the possible loss they face in case of non-repayments (Abafita, 2003). In most of the cases, in group-lending approaches the functions of screening, monitoring and enforcement of repayments are mainly endorsed to the group members than the lending institutes (Abafita, 2003). Furthermore, in addition to the above benefits from group-based lending approach, commitment of the borrower to feel indebtedness to the obligation they entered into is an exemplified character of borrowers for on-time loan recovery performances (Florence & Daniel, 2014).

On the other hand, individual based lending approach is the other approach that loan contract obligation is endorsed only to the single individual borrower. According to

(Reikne 2006 as cited in Abafita, 2003), individual based lending approach may have better recovery performance than that of the group lending approach. This is due to the possible existence of fragmented geographical locations and high market share competitions among the group members which in turn affects mutual indebtedness's.

Besides, borrowers' characteristic that is the ability to repay the loan on-time can be determined by: 1) the willingness of borrower to repay the loan, 2) capacity (how much debt a borrower can handle) and 3) the cumulative capital (Assets) owned by the borrower. Before delivering credit service, identifying and analyzing the characteristics of the borrowers is an important issue to be considered by the credit managers to judge whether the borrowers exerts the lowest efforts to honor the credit obligations (Abrham 2002).

Repayment performance of borrowers can be affected due to various factors. An economic theory suggests that a flexible repayment schedule set by the lending institutes can benefits borrowers and potentially enhances their capacity of repaying their debts. On the contrary, banks practitioners believed that high repayment rate can be realized through maintaining the regular repayment time schedules (Abdulfettah 2009, Armendariz and Morduch, 2002 and Morduch, 1999 as cited by Derege 2010).

According to Bayang (2009 cited in Derege 2010), lack of sufficient monitoring and reporting to ensure whether funds are utilized for the intended purposes are another possible factors that determines repayment coverage. Furthermore, the repayment rate improved as borrowers get closer to the loan limit, which is the maximum available loan. In other words, motivation for reaching the maximum loan level is positively associated to the repayment performance.

Cowling, (2011) also considers the effect of housing finance-bank relationship on loan approval. As pointed out in Petersen, and Rajan, (2011), it is anticipated that a closer relationship between bank and borrower will result in an increased probability of a loan request. But, this relationship was not confirmed by the data. The recent research concerning the Japanese housing finance by Olotuah, and Aiyetan (2006) pointed out that rejection of a loan request has become a common phenomenon for both old and new customers or main bank and non-main bank customers alike Some authors link the recovery performance with firm characteristics such as Olotuah, and Aiyetan (2006) mention that firm's profit significantly influenced loan recovery.

Besides that, Kashuliza (2011) raise the question of whether default is random, influenced by erratic behavior, or systematically influenced by area characteristics that determine local productions conditions or branch level efficiency. Olotuah, and Aiyetan (2006) study on Grameen overdue loans supports the idea of partial influence of area characteristics. Rural electrification, road width, primary educational infrastructure and commercial bank density are positively correlated with a low default rate as well as predicted manager's pay. Kashuliza (2011) shows also that access to other credit sources, market selling activities and urban location were linked to a better recovery performance. Khan and Ahmed (2001) argued that some banks factors that related to risk management structures put in place by banks were to blame for loan defaults. These banks factors include tax procedures used in credit risk assessment. Negligence in monitoring loan defaults, insider loans, lack of trained personnel and unaggressive credit collection methods.

According to Chijoriga, (2007) granting credit is a journey, the success of which depends on the methodology applied to evaluate and grant the credit. This journey starts from the application for credit through acquisition of credit sales and ends at the time the debt is fully paid. Numerous approaches have been developed for incorporating risk into the decision making process by lending organizations. They range from relatively simple methods such as the use of subjective or informal approaches to the use of fairly complex methods like the computer simulation models (Lino, 2009). Many lending decisions by the financial institutions are based on the decision makers' subjective feelings about the risk in relation to the expected recoveries of the borrower.

Several studies (Pearson, and Greef. (2006) show that when a loan is not repaid, it may be a result of the borrowers' unwillingness and/or inability to recover. Stiglitz, and Weiss, (2006) recommend that the banks should screen the borrowers and select the "good" borrowers from the "bad" borrowers and monitor the borrowers to make sure that they use the loans for the intended purpose. This is important to make sure the borrowers can pay back their loans.

Green and Thakor (2015), suggest to look at a borrower's past record and economic prospects to determine whether the borrower is likely to recover or not. Besides

characters of the borrowers, collateral requirements, capacity or ability to recover and condition of the market should be considered before giving loans to the borrower.

Matin (2007), analyzing the determinants of the recovery performance of Grameen Bank borrowers, found that multiple NGO membership, which he associates to access to other sources of 'cheap' finance had a negative impact on the recovery performance. He also found that education and the area of the operated land, which can be proxies' for wealth of the borrower, had a positive impact on the recovery performance. The membership period was positively associated with default while the loan size did not have a significant impact on the recovery performance.

2.3 Review of empirical studies

2.3.1 Approval and Recovery performance of housing finance

There are various research works have been conducted on credit approval and repayment in world. Among these research, Reza and Mansoori (2009), conducted their study on Factors Affecting loan Repayment Performance of Farmers in Khorasan-Razavi Province of Iran. They investigated the factors influencing on repayment behavior of borrower farmers that received loan from agricultural bank by using a logit model and a cross sectional data of 175 farmers of Khorasan-Razavi province in 2008. Their result showed that loan interest rate is the most important factor affecting on repayment of agricultural loans. Experiences in farming and total cost of application are the next factors, respectively. In their research titled as: “Factors Influencing Agricultural Credits Repayment Performance among Farmers in East Azarbaijan Province of Iran”, Pishbahar, Ghahremanzadeh, Ainollahi, and Ferdowsi (2015) carried out a study used sample of 779 individual farmers who had previously received loans from Agricultural Bank during the period 2004-2008 and investigated that an activity besides farming, extension of the repayment period of the loan, and large volume of received loans are the factors that had statistically significant negative impacts on loan repayment. On the other hand, factors such as: high interest rates of loans, having collateral of guarantor, services received from the banks, and long term maturity period for the loans increase the probability of timely loan repayment significantly.

Rifas, Nimsith & Shibly (2016), conducted their study on the title of factors influencing to recover the bank loans in the Islamic financial institution: special reference to Amana Bank PLC. In their study the four factor, credit policy, installment, climate and political factors were tested. The findings of their study indicated that all the four factors positively impact on loan recovery. There is significant relationship between credit policy, installment, climate and political factors on loan recovery, all factors are contributing to recovery the bank loan in Islamic financial institutions.

Using survey instrument with a sample size of 422 respondents and total of fifteen explanatory variable aimed at identifying the major socio-economic factors and loan related factors that determine loan repayment performance of borrowers in Oromia credit and saving S.C, Belete (2015) investigate that, sex, age, group size, business experience, timelines of loan release, suitability of loan repayment period were found an important factor that influence loan repayment performance of the borrowers. However, as per his finding educational level, training, loan size, frequency of collection and loan diversion were found to be statistically insignificant.

The study by Fikadu (2019) indicated that, age of the borrowers, level of education, income from activities financed by the loan, suitability of, family size, loan diversion rate, residential area, loan size and grace period were significantly affect loan repayment performance.

A study titled as “The trend of Loan Recovery Performance in Banking Industry” and carried out by Feysa (2009), indicated that there are many factors which hamper loan recovery performance of the Awash International Bank S.C. For example: poor loan assessment procedures; lack of effective use of man power; lack of revision appropriate revision of credit manual and lack of willingness of borrowers to disclose their information fully.

On the other hand there are few studies have been conducted on credit approval. Among these, research conducted in India by Saroha and Yadav (2016) titled as, “An Analytical Study of Housing Finance in India with special reference to HDFC and LIC Housing Finance Ltd”, found that increased rivalry among banks and housing finance companies increases regulator fears well lead to a dilution in underwriting and appraisal standards. Due to a greater competition between lenders to

stepping up volume to maintain profit arise from waiver of pre-payment penalty charges, housing finance industry could be saddled with an increasing number of bad loans. Biniam Tilahun (2018), carried out his study on factors affecting lending decision of commercial banks in Ethiopia and finds that commercial banks various types of lending models in evaluating credit applications and mostly they consider on collateral, capital, capacity, liquidity, profitably, debt ratio and credit track records.

A study by Yinebeb Girma (2015) finds that all banks in Ethiopia are highly engaged in the provision of loans for working capital requirements and trade facilitation services, housing project finance is given minimal attention, insufficient amount of fund set aside for it, CBE give priorities in the provision of long-term finance for public projects leaving housing projects insufficiently attended, and private banks complain about the directive of the National Bank of Ethiopia requiring them to purchase government bond for 27% of any outstanding loan they issue.

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performance. The membership period was positively associated with default while the loan size did not have a significant impact on the recovery performance.

Knowledge Gap

A review of past studies on the credit approval and repayment performance indicate interesting findings. For instance, Reza and Mansoori 2009 investigate that, interest rate, farming experience and application cost are the factors affecting agricultural loan. With this regard a study carried out by Pishbahar, Ghahremanzadeh, Ainollahi, and Ferdowsi (2015), examined that, besides farming, repayment period and volumes of the loan are the factor that significantly impact on loan repayment.

However, studies were conducted on agricultural loans and the economic performance, political, social and cultural factors are various from country to country. As a result, the identified determinant factors might not use for Ethiopia. Additionally, most of the other undertaken studies were conducted at micro finance institution and Small scale business. This in turn, that the types of the loans were short term and working capital loan. While commercial banks in nature has financed short, medium and long term project (housing finance) and have higher risk than short term finance. Through various researches have been conducted on loan repayment performance at different places and time period but the results of the findings by various researchers are different and therefore inconclusive and not present with an assessment of credit approval. As per researcher knowledge, no study is conducted to examine the determinant of approval and repayment performance of housing finance at the same time. Thus, by taking in to consideration this research gaps, the researcher attempted to investigate the determinants of approval and repayment performance of housing finance and tried to fill the gap by focusing on analyzing the determinants of approval and recovery performance of housing finance.

2.4 Variables of the study

2.4.1 Dependent variable

Approval and recovery performance of housing finance was the dependent variables of the study.

2.4.2 Independent variables

Determinants of loan approval and Loan Recovery Performance of housing finance are described below.

Household Income

The amount of money someone is paid in, calculated from gross income from employment, net income from self-employment, and income from other sources (Abafita, 2003)

Income from other sources

Borrowers with some diversified income sources can make recovery performances more successful. Income from other sources can be listed as follows but not limited to Salary/Wages, equipment rental services (such as house rent, and others). An increase in other source of income earned by borrowers might have the possibility that loan could probably approved to and repaid by respective borrowers on time (Abafita, 2003)

Marital status

Marital status is the legally defined marital state and the distinct options that describe a person's relationship with significant other. Married, single, divorced, and widowed are examples of such status and sometimes may be a source of discrimination. Therefore, it is expected to have positive relationship with approval and recovery performance of housing finance (Abafita, 2003)

Spouse's income source

Home loan eligibility goes up in case of joint home loans as the repayment capacity goes up (depending on the income of co-applicant). However, if your spouse is working, both yours as well as your spouse's income will be considered to determine your repayment capacity. Moreover, you can avail of home loan at five basis points below the normal home rate if the loan is in your wife's name (Kashuliza, 2011)

Saving culture

Saving the portion of income not spent on current expenditures. Borrowers usually save from their proceeds for consumption smoothing purposes throughout the year, accumulation of wealth, and for contingency purposes in case of bad accident. In this study saving habit is expected to have a positive relationship with loan repayment.

Therefore, if the group borrowers developed saving habit practice, may help them to use the borrowed money properly than non-developed saving habit borrowers, and more the amount of savings, the greater the capacity to repay as opposed to low amount of savings (Abafita, 2003)

Collateral

Collateral refers to security or guarantee for the loan borrowed. Collateral acts as an indication enabling the bank to attenuate or eliminate the adverse selection problem caused by the existence of information asymmetries between the bank and the borrower at the time of the loan decision. Although bank knows the credit quality of the customers, the collateral helps to alleviate moral hazard problems once the loan has been granted (Aghion, 2004).

Consequently, problem of moral hazard faced by the bank in lending could be restrained by having collateral. As stated by Bolton (2010), collateral can be seen as an instrument ensuring good behavior on the part of borrowers, given the existence of a credible threat. Hasnah (2012), has found that character plays a significant role on the probability of loans approved by credit officers.

Employment status

Employment status is the status of a worker in a company on the basis of the contract of work or duration of work done. A worker may be full time employee, par-time employee, or an employee on a casual basis. It is the status of an economically active person with respect to his or her employment, that is to say, the type of explicit or implicit contract of employment with other persons or organizations that the person has in his/her job. So it is expected to have negative relationship with approval and recovery performance of housing finance (Asqual, 2010)

Interest rate

An interest rate is the rate at which interest is paid by borrowers for the use of money that they borrow from the lending institution. Rose (2011) defined interest rate as the price of the loanable funds. Interest rates can be looked at from two perspectives, that of the borrower and the lender. Interest rate is the costs of borrowing money expressed as a percentage of the amount borrowed. The borrower assesses the returns of the proposed project and considers the interest rate of the credit facility before deciding to take the facility. Lenders on the other hand consider costs such as production cost, the inflation rate, personnel, administrative costs, provision for loan

loss and capital growth before determining the interest to be charged on a particular facility at a particular time. Financial institutions should charge rates that can cover costs and make a contribution for the institution. Rate of interest is generally taken as the price of credit; the amount of interest paid or earned depends on a number of other factors: the amount lent or borrowed, the length of time involved, the stated (or nominal) annual rate of interest, the interest payment schedule, and the method used to calculate interest (Zeller and Sharm, 2008)

Repayment period

The shorter the repayment period, the more your bank likes you. For example, several banks give maximum score to people who opt for a repayment period of up to five years. It falls to half if the repayment period is between 10 and 15 years. And it is at the lowest end for those opt for a payment period of 15-20 years. So, the next time, try to shorten your loan period if approval becomes difficult (Abafita, 2003)

Loan size

Loan size refers to the amount of money disbursed to the borrower. The loan amount can be small, medium or big. Banks prefer bigger loans to smaller ones because the transaction costs of bigger loans are lower than small and medium loans but have higher returns. Efficient loan size should fit the capability of the borrower to repay and stimulate enterprise performance. Poor loan sizing is illustrated by extensive credit rationing, which issues too little credit to too many borrowers (Pische, 1991). However, Chirwa (1997), points to the fact that borrowers are tempted to divert portions of loans when the amount is relatively large for the project. He explained that most of such loans are diverted for non-business purposes, hence the default. This refers to the loan size that the commercial banks approved to the borrowers' business appraisals. As it was revealed by some researchers, this factor can negatively or positively influence the repayment performance of borrowers. The assumption is that the more the sufficient loan amount disbursed to the requesters the more they can finance the proposed purpose and the more they can succeed the profitably. On the other hand, the less approved loan size below the proposed purpose to the borrower, the higher the possible difficulties they can face while achieving their objective due to insufficiency of funds available by the commercial banks.

Inflation

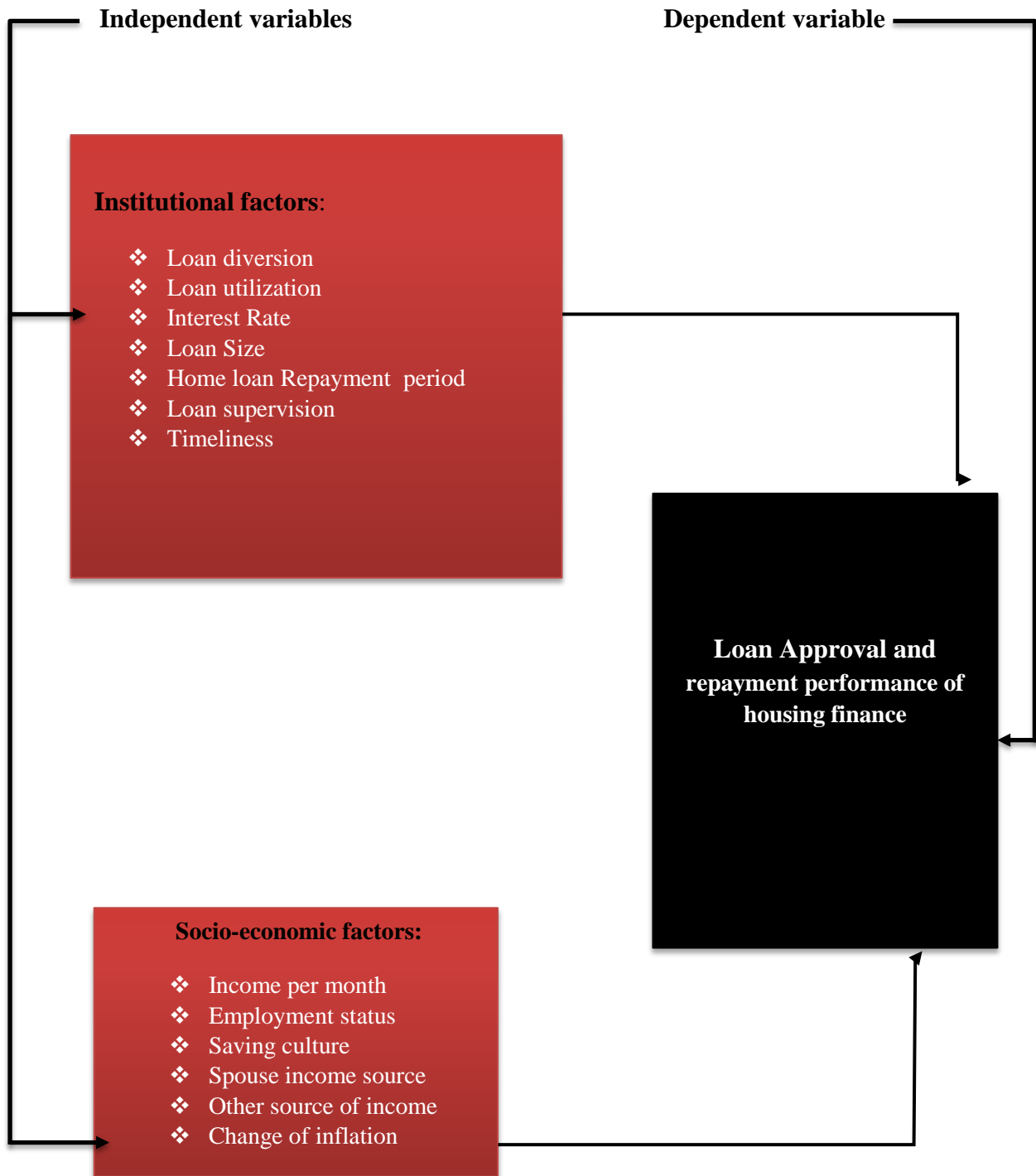
Inflation is the scourge of the modern economy. It is one of the primary persistent threats that will undermine or even destroy decades of economic growth if unleashed and not curbed. It is feared by central bankers globally and forces the execution of monetary policies that are inherently unpopular. It makes some people unfairly rich

and impoverishes others. It is the inflation rate is the percentage increase in prices over a period of time (Zeller and Sharm, 2008)

2.5 Conceptual framework of the study

According to (Cresswell, 2003) indicates that a conceptual framework is a diagram that elucidates the main concepts being studied and the relationship among the variables. The conceptual framework provides a visual presentation on what the study is all about and the expected outcome of the study based on theory and previous studies that are similar to the study in question. The conceptual framework that will be applied in this study is presented in Figure 2.1. The conceptual framework indicates that the independent variables that are expected to have an effect on the dependent variable.

Figure 2. 1 - the conceptual framework



(Source: researcher's own based on his reading)

CHAPTER THREE

3 RESEARCH DESIGN AND METHDODOLOGY

3.1. Introduction

In this Chapter, the study identified the procedures and techniques that were used in the collection, processing and analysis of data. This chapter focused on the research methodology and design used, the target population of the study, the sampling design and the sample, the data collection instruments and the data analysis techniques used.

3.2. Research methodology

The researcher used mixed methods, which include both quantitative and qualitative techniques. The mixed method was considered to be very efficient in answering research questions.

3.3. Research design

The research design 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 and Schindler, 2003). The researcher adopted descriptive and explanatory research design in order to analyze the topic thoroughly. Descriptive research design was preferred because it enabled the researcher to collect data, describe the state of affairs and answer questions concerning the subject of study. Descriptive research determines and reports the way things are and also helps a researcher to describe a phenomenon in terms of attitude, values and characteristics (Mugenda and Mugenda, 1999). According to Orodho (2003), descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. And the researcher used explanatory research design because it could identify the relationship between two or more variables. And its great advantage is that it was flexible and adaptable to change. The relationship between inter dependents and the relationship between dependent and independent variables clearly discussed to address the objective of the research.

3.3 Sampling design

The target population of this study was borrower of housing loan and employees of Zemen bank sc. that were found in Addis Ababa city. The sampling design employed was purposive sampling method. Thus, Addis Ababa City was purposively selected because this capital city was expanding rapidly resulting huge housing needs and housing finance. The sample would be selected from the total population of 655. This population consisted 18 employees directly involved with credit activities and 637 housing loan borrowers. The borrowers have four categories” “staff”, “consumer”, “commercial” and “real estate have a total of 333 borrowers, 266 borrowers, 20 borrowers and 18 borrowers respectively. The researcher not used statistical formula to determine the sample size. This is because the sample size obtained by using statistical formula was very large. In this regard, taking the available resource, time and budget into account, the researcher set a sample size of 60 borrowers based on the ratio of the total borrowers in each category to the total borrowers and all 18 employers of Zemen bank Sc. from the total population. As a result the number of samples selected from “staff”, “consumer”, “commercial” and “real estate are 31, 25, 2 and 2 borrowers respectively.

The researcher was used stratified sampling with simple random sampling techniques to select the sample from the borrowers and judgmental sampling technique to select the required sample from employees of Zemen bank Sc. Because it enabled the researcher to select appropriate professionals that fit his questions and to get accurate sufficient information. From different departments, the credit department would be purposively selected to ensure that the staffs who deal directly with loans are significantly represented. By using this technique employees of Zemen bank Sc. who were believed to have sufficient knowledge and familiarity with the credit activities were selected

The researcher used 60 borrowers and 18 employees of the bank as a sample based on the following data

Table 3. 1 Housing loan borrowers

Housing loan Borrowers category	Number of borrowers	Sample for each category
Staff	333	$333/637*60 = 31$
Consumer	266	$266/637*60 = 25$
Commercial	20	$20/637*60 = 2$
Real estate	18	$18/637*60 = 2$
Total	637	60

(Source: inquiry from the bank)

Table 3. 2 Number of employees

Department	Number of employees	Number of sample
Credit department	18 employees	18 employees

(Source: inquiry from the bank)

3.4. Type and sources of data

The housing finance is a complex business which can be studied in a number of different ways. In this study the researcher used both primary and secondary data. As a result, the data were collected from primary and secondary sources of data respectively. Primary data was obtained from the respondents, while secondary data was sourced from published works like records at the Bank. Secondary data used in this research are; records, magazine and the internet.

3.5. Data collection instruments

For conducting this study, the researcher used different methods of data collection. The primary data for this study were collected through questionnaire. The researcher used this method of data collection since it was cost effective and it gives enough time to respondents. The questionnaire would contain both open ended and close ended questions. The secondary data would be collected through verifying the available documents and manuals of the bank.

3.6. Data analysis

After administering and scoring research tools and scripts, data would be collected and organized. The collected data are known as raw data. The raw data are meaningless unless certain statistical treatment is given to them. In this study the collected data would be analyzed using descriptive statistics analysis and econometric regression model. The descriptive analysis would used to summarize the data that would be collected from the respondents

3.7. Model specification

The dependent variable, approval and recovery performance of housing finance is measured by the number of factors.

Loan repayment performance of housing finance, Loan repayment (LR) = for the n^{th} borrowers (If LR=1, borrowers repaying loan within due date and If LR=0 borrowers not repay loan fully on time).

Maddala 1987 states that for the analysis of the fixed effects model, the logit model is the appropriate one. The reason of his choice of logit in the fixed effects cannot be justified by anything but convenience.

Based on the above variables, if the cumulative distribution of μ was logistic it can have what was known as the logit model. In this case

$$F(z_t) = \frac{\exp(z_t)}{1 + \exp(z_t)} \dots \dots \dots (3.1)$$

Hence;

$$\log \frac{F(z_t)}{1-F(z_t)} = z_t \dots \dots \dots (3.2)$$

Note that for the logit model

$$\log \frac{p_1}{1-p_t} = \beta_0 + \sum_{j=1}^k \beta_j x_{ij} \dots \dots \dots (3.3)$$

The left hand side of this equation is called the log-odds ratio. Thus the log- odds ratio is a linear function of the explanatory variables. So the study will be conducted by using the Logit model that was a regression model of

$$y = \sum_{j=1}^k \beta_j x_{ij} + \mu \dots \dots \dots (3.4)$$

Where “y” is dependent variables, “ x_{ij} ” is explanatory variables and “ μ ” error term.

In this, what was observed is a dummy variable “y” defined by: $y = 1$ if $y > 0$ and $y = 0$ if otherwise (Maddala, 1992).

Hence, the probability of cumulative distribution function of the repayment performance of borrowers is explained as follows:

$$LR = \beta_0 + \beta_1 AHHN + \beta_2 SAVCUL + \beta_3 EMPSTS + \beta_4 LOANSIZE + \beta_5 INCFMOTH + \beta_6 U \\ NAVSI + \beta_7 IR + \beta_8 INFLRT + \beta_9 SCHEDLR + \beta_{10} TMLNES + \beta_{11} SPRVSN + \beta_{12} LANUT + \\ \beta_{13} LDIVER + \mu \text{-----} (3.5)$$

CHAPTER FOUR

4. DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.1. Introduction

This chapter presents the findings of the study, analysis of data and presentations of major findings. For the purpose of demonstrating the relationship among the various variables, the data was presented in the form of tables, frequencies and percentages where applicable.

4.2. Response Rate

The study targeted a sample size of 78 respondents from which 74(58 borrowers and 16 credit department employees) filled in and returned the questionnaires making a response rate of 94.87%. This response rate was excellent and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

4.3. Reliability test

The researcher sought to assess the reliability of data of the sample taken in respect of the various variables in the study. The purpose of reliability test was to assess whether the sample was obtained from a normally distributed population. There are several methods of assessing the reliability and normality test of data distributed.

Preliminary analyses were conducted to indicate if there were any violations of the assumptions of normality, and reliability test was conducted. The total number of complete feedback received was 58 sample populations. In order to confirm the reliability to the data, Cronbach's Alpha was calculated for the variables. Since, Cronbach's alpha was a measure of internal consistency, how closely related a set of items was as a group. It was considered to be a measure scale of reliability. The reliability of the questionnaire was tested using the Cronbach's Alpha correlation coefficient with the aid of SPSS software. According to George and Mallery (2003) Cronbach Alpha values greater than 0.7 were regarded as satisfactory for reliability assessment. Thus, the Cronbach alpha value of this data was 0.851 which were above the average of 0.7 and considered good.

Table 4. 1 the reliability test of data (Cronbach’s Alpha).

Reliability Statistics	
Cronbach's Alpha	N of Items
.851	37

Source: Own survey, 2022

4.4 Descriptive Statistics Analysis

4.4.1. Credit approval status of borrowers

Table 4. 2 Credit approval status of borrowers

Variable	Category	Rejected	Approved	Total
Does your loan size is approved as per your requirement stated in loan application	Yes	0	34	34(58.6%)
	No	24	0	24(41.4%)

Sources: own data survey, 2022

As depicted on the above table, from the total (58) loan application of borrowers, 34(58.6%) loan is approved as requested and 24(41.4%) is not approved as requirement stated in loan application. This implies that from the total respondents of 58, for 24(41.4%) of respondents’ loan application was approved partially which was considered as rejected.

4.4.1.1 Demographic profile of respondents with respect to loan approved and rejected

Table 4. 3 Demographic profile of respondents with respect to loan approved and rejected

Variables	Category	Rejected	Approved	Total	Chi-square test
Sex	Male	20(34.5%)	26(44.8%)	46(79.3%)	0.404
	Female	4(6.9%)	8(13.8%)	12(20.7%)	
Age	25-35	20(34.5%)	24(41.4%)	44(75.9%)	1.346
	35-45	2(3.4%)	6(10.3%)	8(13.8%)	
	45-60	2(3.4%)	4(16.9)	6(10.3%)	
	Above 60	0(0%)	0(0%)	0(0%)	
Marital status	Single	16(27.6%)	16(27.6%)	32(55.2%)	3.033
	Married	8(13.8%)	16(27.6%)	24(41.4%)	
	Divorced	0(0.0%)	2(3.4%)	2(3.4%)	
Educational level	Above Diploma	18(31.0%)	28(48.3%)	46(79.3%)	7.334
	Diploma	2(3.4%)	4(6.9%)	6(10.3%)	
	High school(9-12)	2(3.4%)	0(0.0%)	2(3.4%)	
	Grade 1-8	0(0.0%)	2(3.4%)	2(3.4%)	
	Illiterate	2(3.4%)	0(0.0%)	2(3.4%)	
Occupation	Government employees	0(0.0%)	6(10.3%)	6(10.3%)	7.352
	Professionals	4(6.9%)	4(6.9%)	8(13.8%)	
	Working in private companies	18(31.0%)	24(41.4%)	42(72.4%)	
	Business / Self-employed	2(3.4%)	0(6.9%)	2(3.4%)	

Sources: own data survey, 2022

According to table 4.3, respondents were grouped according to their sex into 2 categories as male and female. It is concluded that from the total of 58 respondents, (79.3%) was male respondents and (20.7%) was female respondents. From this information, we can understand that both male and female involve in loan application even though males have constituted greater share.

According to the descriptive statistics in Table 4.3, age of respondents was categorized in to four. From the total of 58 respondents 75.9% of respondents were belongs between the age of 35-45 years, 10.3% of respondents were belongs between the age of 45-60 years and no respondents were found above age of 60 years. This implies that the borrowers with the age between 25-35 were accepted/approved than borrowers above the age of 35 years.

The survey on the educational level of the borrowers shows that, 3.4% of respondents were illiterate, 3.4% of respondents were grade 1-8; 3.4% of respondents were high school; 10.3% respondents were diploma and the remaining 46(79.3%) of respondents were above diploma. The rejection rate decreases as the level of education increases, with the lowest grade being highly rejected and the most accepted were the borrowers who have completed diploma and above. It can be concluded that, the loan is approved for well-educated borrowers than illiterate borrowers. Therefore, these inferred that as the level of education increase the loan approval rate increase and as the level of education decrease the loan approval rate decrease

Marital status

According to the descriptive statistics in table 4.3, the respondent's marital statuses were grouped into 3 categories as single, marriage and Divorced. It is shown that 55.2% of respondents was single, 41.4% of respondents was married and 3.4%) of respondents was divorced. Thus, these inferred that borrowers who have married and single were highly accepted than those of divorced borrowers.

Occupation

According to the descriptive statistics in Table 4.3, respondent's occupation were grouped into 4 categories as Government employees, Professionals, Working in private companies and Business / Self-employed. As depicted in table, 10.3% of respondents were Government employees, 13.8% of respondents were Professionals and 72.4% of respondents were working in private companies and 3.4% of respondents were Business / Self-employed. Thus, these shown that there were some occupations that banks prefer. Therefore, these inferred that borrowers working in private companies and Professionals were more preferred and accepted than Government employees and Business / Self-employed for loan approval of housing finance.

4.4.1.2 Time taken for loan processing and type of collateral pledged.

Table 4. 4 Time between a loan application to loan approval and type of collateral pledged.

Variable	Category	Rejected	Approved	Total	Chi-square
Does your home loan released on time	Yes	17(29.3%)	30(51.7%)	47(81.0%)	2.772
	No	7(12.1%)	4(6.9%)	11(19.0%)	
In what extent you satisfied with the time taken to process your loan	Dissatisfied	4(6.9%)	2(3.4%)	6(10.3%)	1.766
	Neutral	8(13.8%)	13(22.4%)	21(36.2%)	
	Satisfied	12(20.7%)	19 (32.8%)	31(53.4%)	
What type of security was given for your loan	That home	21(11.7%)	27(38.1%)	48(82.8%)	6.210
	Another	3 (5.2%)	1(1.7%)	4(6.9%)	
	Property personal guarantee	0(0.0%)	6(10.3%)	6(10.3%)	

Sources: own data survey, 2022

As shown in table 4.4, 81.0% of respondents said home loan released on time. On the other hand, 19.0 % of respondents said loan was not released on time. And also as depicted in above table 4.3 on the time taken to process home loan, 10.3 % of respondents were dissatisfied; 36.2% of respondents were neutral and 53.4% of respondents were satisfied. From these the researcher concluded that the majority of borrowers were satisfied on the time taken to process the home loan by the bank.

The above table also shows the response of respondents regarding the types of security that given for loan to their banks for Loan Approval with this regard 82.8% of respondents said extremely that home, 6.9%) of respondents said another Property and 14.6% of respondents said personal guarantee. Generally, these inferred that the borrowers were satisfied on the time taken to process the home loan by financial institution and the collateral asked by financial institution was home itself and personal guarantee.

4.4.1.3 Loan approval stage of housing finance

Table 4. 5 Loan approval stage of housing finance

Variable	Category	Rejected	Approved	Total
Home loan application	Very dissatisfied	1(1.7%)	1(1.7%)	2(3.4%)
	Dissatisfied	1(1.7%)	1(1.7%)	2(3.4%)
	Neutral	6(10.3%)	2(3.4%)	8(13.8%)
	Satisfied	14(24.1%)	24(41.4%)	38(65.5%)
	Very satisfied	2(3.4%)	6(10.3%)	8(13.8%)
Credit processing	Very dissatisfied	1(1.7%)	1(1.7%)	2(3.4%)
	Dissatisfied	0(0.0%)	2(3.4%)	2(3.4%)
	Neutral	4(6.9%)	6(10.3%)	10(17.2%)
	Satisfied	16(27.6%)	16(27.6%)	32(55.2%)
	Very satisfied	3(5.2%)	9(15.5%)	12(20.7%)
Due diligence assessment	Very dissatisfied	0(0.0%)	0(0.0%)	0(0.0%)
	Dissatisfied	2(3.4%)	6(10.3%)	8(13.8%)
	Neutral	16(27.6%)	17(29.3%)	33(56.9%)
	Satisfied	6(10.3%)	9(15.5%)	15(25.9%)
	Very satisfied	0(0.0%)	2(3.4%)	2(3.4%)
Credit appraisal	Very dissatisfied	1(1.7%)	1(1.7%)	2(3.4%)

study	Dissatisfied	6(10.3%)	5(8.6%)	11(19.0%)
	Neutral	4(6.9%)	11(19.0%)	15(25.9%)
	Satisfied	8(13.8%)	14(24.1%)	22(37.9%)
	Very satisfied	5(8.6%)	3(5.2%)	8(13.8%)
Credit documentation	Very dissatisfied	2(3.4%)	0(0.0%)	2(3.4%)
	Dissatisfied	1(1.7%)	1(1.7%)	2(3.4%)
	Neutral	3(5.2%)	7(12.1%)	10(17.2%)
	Satisfied	14(24.1%)	18(31.0%)	32(55.2%)
Valuation of collateral	Very satisfied	4(6.9%)	8(13.8%)	12(20.7%)
	Very dissatisfied	3(5.2%)	1(1.7%)	4(6.9%)
	Dissatisfied	4(6.9%)	5(8.6%)	9(15.5%)
	Neutral	3(5.2%)	4(6.9%)	7(12.1%)
Underwriting and closing	Satisfied	12(20.7%)	22(37.9%)	34(58.6%)
	Very satisfied	2(3.4%)	2(3.4%)	4(6.9%)
	Very dissatisfied	0(0.0%)	4(6.9%)	4(6.9%)
	Dissatisfied	1(1.7%)	5(8.6%)	6(10.3%)
	Neutral	16(27.6%)	20(34.5%)	36(62.1%)
	Satisfied	5(8.6%)	5(8.6%)	10(17.2%)
	Very satisfied	2(3.4%)	0(0.0%)	2(3.4%)

Sources: own data survey, 2022

The above table shows the responses of respondents regarding the loan approval stage of housing finance on different variables. Based on the data shown on **home loan application** 3.4% of respondents were very dissatisfied; 3.4% of respondents were dissatisfied; 13.8% of respondents were neutral; 65.5% of respondents were satisfied; 65.5% of respondents were very satisfied on the loan application process or stage of loan approval. The frequency of the respondent was implied that majority of respondents were satisfied on home loan application stage of loan approval of housing finance

Based on the data shown on **credit processing**, 3.4% of respondents were very dissatisfied; 3.4% of respondents were dissatisfied; 17.2% of respondents were neutral; 55.2% of respondents were satisfied; 20.7% of respondents were very satisfied on the loan application process or stage of loan approval. The frequency of

the respondent was implied that majority of respondents were satisfied on credit processing stage of loan approval of housing finance.

Based on the data shown on **due diligence assessment**, 13.8% of respondents were dissatisfied; 56.9% of respondents were neutral; 25.9% of respondents were satisfied; 3.4% of respondents were very satisfied on the loan application process or stage of loan approval. The frequency of the respondent was implied that majority of respondents were satisfied on due diligence assessment stage of loan approval of housing finance.

In Credit appraisal study:- As indicated in table above, 3.4% of respondents were very dissatisfied; 19% of respondents were dissatisfied; 25.9% of respondents were neutral; 37.9% of respondents were satisfied and 13.8% of respondents were very satisfied on credit appraisal stage of loan approval. The frequency of the respondent was implied that 37.9% and 25.9% of respondents were satisfied and neutral respectively on Credit appraisal study stage of loan approval of housing finance.

Credit Documentation: - As indicated in table above, 2.3% of respondents were very dissatisfied; 2.3 % of respondent were dissatisfied; 17.2% of respondent were neutral; 55.2% of respondent were satisfied; 20.7% of respondents were very satisfied on the process or stage of loan approval. The frequency of the respondent was implied that 55.2% and 20.7% of respondents were satisfied and very satisfied respectively on Credit Documentation stage of loan approval of housing finance

Valuation of Collateral: - As indicated in table above, 6.9% of respondents were very dissatisfied; 15.5% of respondents were dissatisfied; 12.1% of respondents were neutral; 58.6% of respondents were satisfied; 6.9% of respondents were very satisfied on the process or stage of loan approval. The frequency of the respondent was implied that 58.6% and 15.5% of respondents were satisfied and dissatisfied respectively on Valuation of Collateral stage of loan approval of housing finance.

Underwriting and closing: - As indicated in table above, 6.9% of respondents were very dissatisfied; 10.3% of respondents were dissatisfied; 62.1% of respondents were neutral; 17.2% of respondents were satisfied; 3.4% of respondents were very satisfied on the process or stage of loan approval. The frequency of the respondent was implied

that 62.1% and 17.2% of respondents were neutral and satisfied respectively on Valuation of Collateral stage of loan approval of housing finance

These inferred that the respondents (borrowers) were not satisfied on the loan approval stages. Because, the majority of respondents said neutral and dissatisfied

4.4.1.4 Demographic profile such as sex, age, education, position of employee of bank

Table 4. 6 Demographic profile such as sex, age, education, position of employee of branches

Variables	Category	Frequency	Percent
Sex of employee	Female	4	25%
	Male	12	75%
Age employee	20-30 year	2	12.5%
	30-35 years	9	56.3%
	35-45 years	5	31.2%
	Above 45 years	0	0
Educational level	Diploma	0	0%
	Degree	4	25%
	Master's degree	12	75%
Position of employee	Director credit department	1	6.3%
	Manager	1	6.3%
	Credit analyst	8	50%
	Credit officer	6	37.4%

Sources: own data survey, 2022

Sex and age of employee:- As indicated in table 4.6. above, from 16 of respondents(employees), 4 (25%) were female and 12 (75%) were male respondents and that respondents(employees) categorized into 4 age groups from that 12.5% of respondents were belong between 20-30 years, 56.3% of respondents were found the age between 30-35years, 31.2 of respondents were found the age between age 35-45 years. This implies that majority of respondents (employees) were male; the majority of respondent's age were found between the age group of 30-35 years and 35-45 years

Education: - As indicated in table 4.6 above, the education of the employee categorized into three levels such as diploma, degree and Master’s degree. From 16 respondents of employee 25% of respondents were degree and 75% of respondents were Master’s degree therefore, the majority of respondents of employee were degree holder.

Position of employee: - As indicated in table 4.6 above, the position of employee was categorized into four positions; 6.3% of respondents credit director; 6.3% of respondent credit manager 50% of respondents were credit analyst and the rest 25% of respondents were credit officer on credit department of the bank. This implies that the majority of employees were credit officer and credit analyst.

4.4.1.5 The major documents needed for the loan approval of housing finance.

Table 4. 7 the major documents needed for the loan approval of housing finance

Loan documents needed for home loan	Ranking	N
Identification Documents	1	14(87.5%)
Mortgage statements	2	13(81.3%)
Income and Employment history	3	12(75%)
Self-employment document	4	13(81.3%)
Bank account statement	5	11(68.8%)
Property valuation	6	14(87.5%)
Tax documents	7	10(62.5%)

Sources: own data survey, 2022

As depicted on the above table 4.7, 87.5% of respondent rank identification documents in the first as major documents needed for the loan approval of housing finance; 81.3% of respondents rank Mortgage statements as second documents needed for the loan approval of housing finance; 75% respondents rank Income and Employment history as third documents needed for the loan approval of housing finance, 81.3% of respondents rank Self-employment document as fourth documents needed for the loan approval of housing finance, 68.8% of respondents rank Bank account statement as fifth documents needed for the loan approval of housing finance, 87.5% of respondents rank Property valuation as sixth documents needed for the loan approval of housing finance and 62.5% of respondents rank Tax documents as seventh

documents needed for the loan approval of housing finance. This implies that those above mentioned home loan documents were needed for home loan approval.

4.4.1.6 Timelines and loan assessments practice

Table 4. 8 Timeliness of loan processing and ways of loan assessments practice for loan approval

	Category	Frequencies	Percent
How long does it take a customer to Approval of housing Loan from your Bank	1. 2-4 weeks	12	75%
	2. 4-6 weeks	4	25%
The ways of loan assessments practice for loan approval	3. 6-8 weeks	0	0%
	4. 8-10 weeks	0	0%
	Gather socio- economic factors	0	0%
	Take guarantees	9	56.3%
	Person to person collateral	0	0%
	Other(all)	7	43.8%

Sources: own data survey, 2022

As depicted on the above table 4.8, from total of 16 respondents 75% were responded 2-4 weeks for length of time a customer takes to Approval of housing Loan; 25% of employee responded 4-6 weeks for length of time a customer takes to Approval of housing Loan

According to the above table 4.8, From 16 respondents 56.3% of respondents were responded Gather socio- economic factors for the ways of loan assessments practice of loan approval; the remaining 43.8% of respondents were responded all the three(gather socio- economic factors, take guarantees and personal guarantee) for the ways of loan assessments practice of loan approval. This implies that the bank take all the three factors for the ways of loan assessments practice of loan approval of housing finance.

4.4.1.7 Loan utilization and nature of the collateral or assurance to be provided to secure loan for housing

Table 4. 9 Loan utilization and nature of the collateral or assurance to be provided to secure loan for housing.

	Category	Frequency	Percent
Does loan Officers make follow up to ensure the loan is utilized for the intended purpose only	Yes	16	100%
	No	0	0%
Nature of the collateral or assurance to be provided to secure loan for housing	The house for which loan is given itself	14	87.5%
	Providing independent assurance	0	0%
	Another house or real state(if any)	2	12.5%

Sources: own data survey, 2022

According to the above table 4.9, From 16 respondents 100% of respondents were responded yes for loan Officers make follow up to ensure the loan is utilized for the intended purpose. 87.5% of respondents were responded the house for which loan is given itself for the nature of the collateral or assurance to be provided to secure loan for housing; the remaining 12.5% of respondents were responded another house or real state for the nature of the collateral or assurance to be provided to secure loan for housing. This implies that the bank use the house for which loan are given itself and another house or real state for the nature of collateral or assurance to be provided to secure loan for housing.

4.4.1.8 Reasons for loan Approval of housing finance.

Table 4. 10 Reasons for loan Approval of housing finance

Reasons for loan Approval of housing finance	Ranking	N
Average Income of household	1	15(93.8%)
Collateral pledged	2	14(87.5%)
Repayment period	3	14(87.5%)
Interest rate	4	12(75%)
Applicant eligibility	5	12(75%)
Employment status	6	14(87.5%)
Borrower spouse have income source	7	11(68.8%)

Sources: own data survey, 2022

As depicted on the above table 4.10, 93.8% of respondent(employee) rank Average Income of household in the first as major reasons for loan approval of housing finance; 87.5% of respondents(employee) rank collateral pledged as second reasons for loan approval of housing finance; 87.5% respondents(employee) rank Repayment period as third reasons for loan approval of housing finance, 75% of respondents(employee) rank Interest rate as fourth reasons for loan approval of housing finance, 75% of respondents(employee) rank Applicant eligibility as fifth reasons for loan approval of housing finance, 87.5% of respondents(employee) rank Employment status as sixth reasons for loan approval of housing finance and 68.8% of respondents(employee) rank Borrower spouse have income source as seventh reasons for loan approval of housing finance. This implies that average household income, collateral pledged, repayment period and the like were major factors for home loan approval.

4.4.1.9 Reasons for loan rejection of housing finance.

Table 4. 11 Reasons for loan rejection of housing finance

Reasons for loan rejection of housing finance	Ranking	N
Saving culture of household	1	15(93.8%)
Average Income of household	2	14(87.5%)
Employment status	3	13(81.3%)
Borrower spouse loss income source	4	14(87.5%)
Credit History	5	11(68.6%)
Collateral pledged	6	13(81.3%)
Loan Size requested	7	13(81.3%)

Sources: own data survey, 2022

As depicted on the above table 4.11, 93.8% of respondent(employee) rank Saving culture of household in the first as major reasons for loan rejection of housing finance; 87.5% of respondents(employee) rank Average Income of household as second reasons for loan rejection of housing finance; 81.3% respondents(employee) rank Employment status as third reasons for loan rejection of housing finance, 87.5% of respondents(employee) rank Borrower spouse loss income source as fourth reasons for loan rejection of housing finance, 68.6% of respondents(employee) rank Credit History as fifth reasons for loan rejection of housing finance, 81.3% of respondents(employee) rank Collateral pledged as sixth reasons for loan rejection of housing finance, 81.3% of respondents(employee) rank Loan Size requested as seventh reasons for loan rejection of housing finance. This implies that the saving culture of household, average income of household, employment status and the others mentioned above were the major reasons for loan rejection of housing finance.

4.4.2 Repayment performance of housing finance

4.4.2.1 Repayment performance of borrowers

Table 4. 12 Repayment performance of borrowers

Variable	Category	Defaulted	Non-default	Total
Did you repay loan to your	Yes	0	44	44(75.9%)
	No	14	0	14(24.1%)

bank on time

Sources: own data survey, 2022

The loan repayment statuses of the borrowers were taken as the primary way to the borrowers into defaulted and paid (non-defaulted). Accordingly, it is evident from table 4.12 that 75.9% of the sample respondents were non-defaulter for their installments while 24.1% of the sample respondents were defaulted. This implies that those borrowers categorized under defaulter, 24.1% of the sample respondents were included those who not paid as per schedule agreed, delayed and paying with penalties. The high proportion of defaulters is a cause of concern.

4.4.2.2 Continuous variables such as Family size, dependent family members, and out of total family size members who have income sources

Table 4. 13 Continuous variables such as Family size, dependent family members, out of total family size members who have income sources.

Variable	Category	Defaulter	Non- default	t-value	Remark
Family size	Maximum	7	12	10.310	It is >2
	Minimum	1	0		
	Mean	2.07	4.09		
	Std. Deviation	1.730	2.735		
Dependent family members	Maximum	2	4	6.153	It is >2
	Minimum	0	0		
	Mean	0.43	1.00		
	Std. Deviation	0.756	1.121		
Out of total family size number of members who have income sources.	Maximum	5	12	6.995	It is >2
	Minimum	0	0		
	Mean	1.29	2.86		
	Std. Deviation	1.383	2.914		

Sources: own data survey, 2022

Regarding the **Family size** of the borrower's, out of the total sample borrowers, as depicted on table 4.13, the minimum Family size of the defaulted borrowers were 1 and the maximum Family size of the defaulted borrowers were 7, and the minimum Family size of non-defaulted borrowers and maximum Family size of non-defaulted borrowers were 0 and 12 respectively. The total mean Family size of the borrowers was 3.60.

Regarding **dependent family members** of the borrower's, out of the total sample borrowers, as depicted on table 4.13, the minimum dependent family members of the defaulted and non-defaulted borrowers were 0 ; the maximum dependent family members of the defaulted borrowers were 2, and the maximum dependent family members of non-defaulted borrowers were 4. The total mean of dependent family members of the borrowers was 0.86.

Regarding borrower's **family member's income sources**, out of the total sample borrowers, as depicted on table 4.13, the minimum number of family members who have income sources of the defaulted and non-defaulted borrowers were 0; the maximum number of family members who have income sources of the defaulted borrowers were 5, and the maximum number of family members who have income sources of non-defaulted borrowers were 12. The total mean of number of family members who have income sources was 2.48. This implied that all continues variables were statistically significance association with loan repayments at t-value greater than two.

4.4.2.3 Average income per month and income from other sources per month

Table 4. 14 Average income per month and income from other sources per month

Variable	Category	Defaulters	Non-default	Total	Chi-square test
Household income per Month	<5,000	2(3.4%)	0(0.0%)	2(3.4%)	6.815
	5000-15000	4(6.9%)	18(31.0%)	22(37.9%)	
	15,000-20,000	2(3.4%)	8(13.8%)	10(17.2%)	
	>20,000	6(10,3%)	18(31.0%)	24(41.4%)	
Have you monthly Income from other sources	Yes	5(8.6%)	16(27.6%)	21(36.2%)	0.002
	No	9(15.5%)	28(43.3%)	37(63.8%)	
Income from other Sources per month	<5000	3(14.3%)	0(0.0%)	3(14.3%)	13.125
	5000-15000	1(4.8%)	7(33.3%)	8(38.1%)	
	15000-20000	2(9.5%)	0(0.0%)	2(9.5%)	
	>20000	1(4.8%)	7(33.3%)	8(38.1%)	

Sources: own data survey, 2022

According to the descriptive statistics in Table 4.14 from the total of 58 respondents, borrowers/respondents were categorized based on their monthly average income into 4 as below 5000, 5000-15000, 15000-20000 and above 20000. It is inferred that 3.4% of respondents were earn monthly average income of below 5000; 37.9% of respondents were earn monthly income of 5,000-10,000; 17.2% of respondents were earn monthly income of 10,000-20,000 and 41.4% of respondents were earn monthly income of above 20,000.

According to the survey result shown on table 4.14, borrowers that had other source of income were 36.2% of respondents and 63.8% of them are borrowers who have no other source of income.

According to the descriptive statistics in Table 4.14 from the total of 58 respondents, borrowers/respondents were categorized into 4 based on their monthly income from other sources as below 5000, 5000-15000, 15000-20000 and above 20000. It is inferred that 14.3% of respondents were earner of below 5,000 monthly incomes; 38.1% of respondents were earn of 5,000-10,000 monthly income; 9.5% of respondents were earn of 10000-20000 monthly income and 38.1% of respondents were earner of above 20,000 monthly incomes. This implies those borrowers whose average house hold income were above 5,000 had income from other sources were non defaulter than those below 5,000 and had no income from other sources.

4.4.2.4 Factors that affect loan repayment performance of housing finance

Table 4. 15 the factors affecting loan repayment performance of housing finance

Variable	Category						Chi-square test
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Saving culture	Defaulter	1(1.7%)	2(3.4%)	2(3.4%)	6(10.3%)	3(5.2%)	3.153
	Non-default	1(1.7%)	2(3.4%)	13(22.4%)	19(32.8%)	9(15.5%)	
	Total	2(3.4%)	4(6.9%)	15(25.9%)	25(43.1%)	12(20.7%)	
Employment status	Defaulter	0(0.0%)	4(6.9%)	5(8.6%)	3(5.2%)	2(3.4%)	11.830
	Non-default	4(6.9%)	1(1.7%)	12(20.7%)	21(36.2%)	6(10.3%)	
	Total	4(6.9%)	5(8.6%)	17(29.3%)	24(41.4%)	8(13.8%)	

Loan supervision	Defaulter	1(1.7%)	2(3.4%)	7(12.1%)	4(6.9%)	0(0.0%)	6.424
	Non-default	5(8.6%)	4(6.9%)	11(19.0%)	12(20.7%)	12(20.7%)	
	Total	6(10.3%)	6(10.3%)	18(31.0%)	16(27.6%)	12(20.7%)	
Loan size	Defaulter	0(0.0%)	3(5.2%)	4(6.9%)	6(10.3%)	1(1.7%)	4.248
	Non-default	0(0.0%)	5(8.6%)	8(13.8%)	16(27.6%)	15(25.9%)	
	Total	0(0.0%)	8(13.8%)	12(20.7%)	22(37.9%)	16(27.6%)	
Family Members Education and other expenses	Defaulter	0(0.0%)	2(3.4%)	4(6.9%)	6(10.3%)	0(0.0%)	3.641
	Non-default	2(3.4%)	2(3.4%)	9(15.5%)	17(29.3%)	16(27.6%)	
	Total	2(3.4%)	4(6.9%)	13(22.4%)	23(39.7%)	16(27.6%)	
Sudden drop in Average Household Income	Defaulter	0(0.0%)	2(3.4%)	4(6.9%)	6(10.3%)	2(3.4%)	3.992
	Non-default	2(3.4%)	5(8.6%)	14(24.1%)	9(15.5%)	14(24.1%)	
	Total	2(3.4%)	7(12.1%)	18(31.0%)	15(25.9%)	16(27.6%)	
Unavailability of spouse's income source	Defaulter	1(1.7%)	0(0.0%)	5(8.6%)	5(8.6%)	3(5.2%)	0.568
	Non-default	6(10.3%)	0(0.0%)	16(27.6%)	15(25.9%)	7(12.1%)	
	Total	7(12.1%)	0(0.0%)	21(36.2%)	20(34.5%)	10(17.2%)	
Interest rate	Defaulter	1(1.7%)	1(1.7%)	7(12.1%)	2(3.4%)	3(5.2%)	9.721

	Non-default	2(3.4%)	7(12.1%)	6(10.3%)	20(34.5%)	9(15.5%)	
	Total	3(5.2%)	8(13.8%)	13(22.4%)	22(37.9%)	12(20.7%)	
Loan diversion	Defaulter	0(0.0%)	2(3.4%)	6(10.3%)	3(5.2%)	3(5.2%)	6.160
	Non-default	4(6.9%)	4(6.9%)	7(12.1%)	18(31.0%)	11(19.0%)	
	Total	4(6.9%)	6(10.3%)	13(22.4%)	21(36.2%)	14(24.1)	
Loan utilization	Defaulter	0(0.0%)	0(0.0%)	2(3.4%)	7(12.1%)	5(8.6%)	2.645
	Non-default	0(0.0%)	6(10.3%)	6(10.3%)	15(25.9%)	17(29,3%)	
	Total	0(0.0%)	6(10.3%)	8(13.8%)	22(37.9%)	22(37.9%)	
Celebration of Religious, Cultural and other ceremonies	Defaulter	1(1.7%)	1(1.7%)	10(17.2%)	2(3.4%)	0(0.0%)	1.833
	Non-default	1(1.7%)	3(5.2%)	28(48.3%)	10(17.2%)	2(3.4%)	
	Total	2(3.4%)	4(6.9%)	38(65.5%)	12(20.7%)	2(3.4%)	
Change of inflation in the economy	Defaulter	0(0.0%)	2(3.4%)	1(1.7%)	6(10.3%)	5(8.6%)	0.125
	Non-default	0(0.0%)	6(10.3%)	3(5.2%)	17(29.3%)	18(31.0%)	
	Total	0(0.0%)	8(13.8%)	4(6.9%)	23(39.7%)	23(39.7%)	

Sources: own data survey, 2022

As depicted in the above table 4.15, 20.7% of respondents' reply were strongly agree that saving culture ensure Loan repayment performance, 43.1% of respondents were reply agree, 6.9% of respondents were reply neutral, 25,9% of respondents were reply disagree and 3.4% of respondents were reply strongly disagree that saving culture of borrower affect loan repayment.

As depicted in the above table 4.15., 13.8% of respondents' reply were strongly agree that employment status ensures loan repayment performance, 41.4% of respondents were reply agree, 1.7% of respondents were reply disagree and 24.1% of respondents were reply neutral and 6.9% of respondents were reply strongly disagree that employment status ensures loan repayment performance. On the other hand, in the above table 4.15, 20.7% of respondents' reply were strongly agree that loan supervision ensures Loan repayment performance, 27.6% of respondents were reply agree, 10.3% of respondents were reply disagree and 31.0% of respondents were reply neutral and 10.3% of respondents were reply strongly disagree that loan supervision affect loan repayment.

As depicted in the above table 4.15, 27.6% of respondents reply were strongly agree that the loan size ensures Loan repayment performance, 37.9% of respondents were reply agree, 13.8% of respondents were reply disagree and 20.7% of respondents were reply neutral that loan size affect loan repayment and in the above table 4.15, 20.7% of respondents reply were strongly agree that the interest rate affect Loan repayment performance, 37.9% of respondents were reply agree, 13.8% of respondents were reply disagree, 22.4% of respondents were reply neutral 5.2% of respondents were reply strongly disagree that interest rate affect loan repayment and also in the above table 4.15, 27.6% of respondents reply were strongly agree that family member's education and other expense affect Loan repayment performance, 17.2% of respondents were reply agree, 6.9% of respondents were reply disagree and 22.4% of respondents were reply neutral and 3.4% of respondents were reply strongly disagree that family member's education and other expense affect loan repayment performance

As depicted in the above table 4.15, 27.6% of respondents reply were strongly agree that sudden drop in average household income affect Loan repayment performance, 25.9% of respondents were reply agree, 12.1% of respondents were reply disagree and 31% of respondents were reply neutral and 3.4% of respondents were reply strongly disagree that sudden drop in average household income affect Loan repayment performance and in the above table 4.15, 17.2% of respondents reply were strongly agree that unavailability of spouse's income source affect loan repayment performance, 34.5% of respondents were reply agree, 36.2% of respondents were

reply neutral and 12.1% of respondents were reply strongly disagree that unavailability of spouse's income source affect loan repayment performance.

As depicted in the above table 4.15, 24.1% of respondents reply were strongly agree that loan diversion affect loan repayment performance, 36.2% of respondents were reply agree, 10.3% of respondents were reply disagree and 22.4% of respondents were reply neutral and 6.9% of respondents were reply strongly disagree that loan diversion affect loan repayment performance and in the above table 4.15, 37.9% of respondents reply were strongly agree that loan utilization affect loan repayment performance, 37.9% of respondents were reply agree, 13.8% of respondents were reply neutral and 10.3% of respondents were reply disagree that loan utilization affect loan repayment performance.

As depicted in the above table 4.15, 39.7 % of respondents reply were strongly agree that change of inflation in the economy affect loan repayment performance, 39.7% of respondents were reply agree, 13.8% of respondents were reply disagree and 6.9% of respondents were reply neutral that change of inflation in the economy affect loan repayment performance and in the above table 4.15, 20.7% of respondents reply were agree that Celebration of Religious, Cultural and other ceremonies ensures Loan performance, 3.4% of respondents were reply strongly agree, 6.9% of respondents were reply disagree and 65.5% of respondents were reply neutral and 3.4% of respondents were reply strongly disagree that Celebration of Religious, Cultural and other ceremonies affect loan repayment.

4.4.2.5 loan supervision and procedures of the bank supervises for repayment.

Table 4. 16 Employee response on loan supervision and procedures their bank supervises for repayment.

Employee response			
	Category	Frequency	Percent
Have you ever been supervised for loan repayment and loan Utilization of borrowers	Yes	16	100%
	No	0	0%
In What procedures you supervise	Home to home supervision	4	25%
	Group wise of supervision	9	56.2%
	Representative Wise supervision	3	18.8%

Sources: own data survey, 2022

The survey as indicated on table 4.16, 100% of respondents (employees) were responded as they were supervising for loan repayment and loan Utilization of borrowers. From the total 16 of selected employees, 25% of respondents (employees) were responded Home to home supervision for procedures they supervise their borrowers; 56.2% of respondents (employees) were responded Group wise of supervision for procedures they supervise their borrowers. On the other hand, as depicted on the above table 4.16, 18.8 of respondents (employees) were responded representative wise supervision for procedures they supervise their borrowers.

4.4.2.6 Employees perception on loan Supervision

Table 4. 17 Employees perception on loan Supervision

Supervision statements	Employee response		
	Category	N	%
The credit staffs of the bank are always ethical in the execution of their duties	Disagree	2	12.5%
	Neutral	0	0%
	Agree	8	50%
	Strongly agree	6	37.5%
Management is always involved and are cooperative in ensuring customers receive their loans in time.	Disagree	2	12.5%
	Neutral	4	25%
	Agree	4	25%
	Strongly agree	6	37.5%
There is always information flow concerning credit operations amongst staff	Disagree	4	25%
	Neutral	2	12.5%
	Agree	7	43.8%
	Strongly agree	3	18.7%
Bank auctioneers are closely supervised to ensure as they give true value of the collaterals	Disagree	2	12.5%
	Neutral	7	43.8%
	Agree	5	31.3%
	Strongly agree	2	12.5%
Staff are usually trained on causes and measures to reduce customers defaulting on loans	Disagree	0	0%
	Neutral	5	31.3%
	Agree	8	50%
	Strongly agree	3	18.7%
Staff always adhere to the approved credit policies and procedures	Disagree	2	12.5%
	Neutral	7	43.8%
	Agree	5	31.3%
	Strongly agree	2	12.5%
The credit staffs of the bank are always committed and honest in all their actions	Disagree	2	12.5%
	Neutral	2	12.5%
	Agree	6	37.5%
	Strongly agree	6	37.5%
Staffs always integrate credit risk management into planning at all levels	Disagree	2	12.5%
	Neutral	2	12.5%
	Agree	5	31.2%
	Strongly agree	7	43.8%

Sources: own data survey, 2022

From the above table 4.17, 50% of respondents (employees) reply were agree that the credit staffs of the bank are always ethical in the execution of their duties, 12.5 % of respondents (employees) reply were disagree that the credit staffs of the bank are always ethical in the execution of their duties and 37.5 % of respondents (employees) reply were strongly disagree on that the credit staffs of the bank are always ethical in the execution of their duties.

From the above table 4.17, 25% of respondents(employees) reply were agree that Management is always involved and are cooperative in ensuring customers receive their loans in time; 37.5% of respondents(employees) reply were strongly agree that Management is always involved and are cooperative in ensuring customers receive their loans in time; 25 % of respondents(employees) reply were neutral on that Management is always involved and are cooperative in ensuring customers receive their loans in time and 12.5% of respondents(employees) reply were disagree on that Management is always involved and are cooperative in ensuring customers receive their loans in time

From the above table 4.17, 43.8% of respondents (employees) reply were agree and 18.7 % of respondents (employees) reply were strongly agree on that there is always information flow concerning credit operations amongst staff; 12.5% of respondents (employees) reply were neutral on that there is always information flow concerning credit operations amongst staff and 25% of respondents (employees) reply were disagree on that there is always information flow concerning credit operations amongst staff.

From the above table 4.17, 31.3% of respondents (employees) reply were agree and 12.5% of respondents (employees) reply were strongly agree on that Bank auctioneers are closely supervised to ensure as they give true value of the collaterals; 43.8% of respondents (employees) reply were neutral on that Bank auctioneers are closely supervised to ensure as they give true value of the collaterals and 12.5% of respondents (employees) reply were disagree on that Bank auctioneers are closely supervised to ensure as they give true value of the collaterals.

From the above table 4.17, 50% of respondents (employees) reply were agree and 18.7% of respondents (employees) reply were strongly agree on that staff are usually trained on causes and measures to reduce customers defaulting on loans; 31.3% of

respondents (employees) reply were neutral on that staff are usually trained on causes and measures to reduce customers defaulting on loans

From the above table 4.17, 31.3% of respondents (employees) reply were agree and 12.5% of respondents (employees) reply were strongly agree on that staff always adhere to the approved credit policies and procedures; 43.8% of respondents (employees) reply were neutral on that staff always adhere to the approved credit policies and procedures and 12.5% of respondents (employees) reply were disagree on that staff always adhere to the approved credit policies and procedures.

From the above table 4.17, 37.5% of respondents (employees) reply were agree and 37.5% of respondents (employees) reply were strongly agree on that the credit staffs of the bank are always committed and honest in all their actions; 12.5% of respondents (employees) reply were neutral on that the credit staffs of the bank are always committed and honest in all their actions and 12.5% of respondents (employees) reply were disagree on that the credit staffs of the bank are always committed and honest in all their actions.

From the above table 4.17, 31.2% of respondents (employees) reply were agree and 43.8% of respondents (employees) reply were strongly agree on that staffs always integrate credit risk management into planning at all levels; 12.5% of respondents (employees) reply were neutral on that staffs always integrate credit risk management into planning at all levels and 12.5% of respondents (employees) reply were disagree on that staffs always integrate credit risk management into planning at all levels.

4.4.2.7 Reason for Becoming Default

Table 4. 18 Reasons for becoming default

Variable		Ranking	N
Reasons for becoming default	Improper utilization of loan	1	18(31%)
	Have outstanding loan from other financial institution	2	16(27.5%)
	Loan diversion	3	15(25.8%)
	Adverse selection and moral hazard	4	10(17.2%)

Sources: own data survey, 2022

Among the 58 sample borrowers, as shown on the table 4.18 above, 31% of respondent rank improper utilization of loan in the first as reasons for becoming default; 27.5% of respondents rank having outstanding loan from other financial institution as second reasons for becoming default; 25.8% and 17.2% of respondents rank loan diversion and Adverse selection and moral hazard on third and fourth respectively as reasons for becoming default.

4.4.3 Chi-square test for Demographic factors

Chi-square test shows the results χ^2 & p-value to test the association between loan repayment status of the borrowers and borrower demographic variables such as sex, educational level, residence place, marital status, monthly income and primary source of income.

Table 4. 19 Chi-square test for Demographic factors

Variable	Category	Default	Non default	Total	χ^2 & P- value
Sex	Male	10(17.2%)	36(62.1%)	46(79.3%)	$\chi^2=0.699$ P=0.403
	Female	4(6.9%)	8(13.8%)	12(20.7%)	
Age	25-35	11(19.0%)	33(56.9%)	44(75.9%)	$\chi^2=0.204$ P=0.903
	35-45	2(3.4%)	6(10.3%)	8(13.8%)	
	45-60	1(1.7%)	5(8.6%)	6(10.3%)	
	Above 60	0(0.0%)	0(0.0%)	0(0.0%)	
Educational level	Above Diploma	10(17.2%)	36(62.1%)	46(79.3%)	$\chi^2=2.519$ P=0.641
	Diploma	2(3.4%)	4(6.9%)	6(10.3%)	
	Grade 9-12	1(1.7%)	1(1.7%)	2(3.4%)	
	Grade 1-8	1(1.7%)	1(1.7%)	2(3.4%)	
Marital status	Single	7(12.1%)	25(43.1%)	32(55.2%)	$\chi^2=0.830$ P=0.660
	Marriage	6(10.3%)	18(31.0%)	24(41.4%)	
	Divorced	1(1.7%)	1(1.7%)	2(3.4%)	
Household income	Below 5000	2(3.4%)	0(0.0%)	2(3.4%)	$\chi^2=18.188$ P=0.042
	5000-10000	0(0.0%)	22(37.9%)	22(37.9%)	
	10000-20000	2(3.4%)	8(13.8%)	10(17.2%)	
	>20000	3(5.2%)	21(36.2%)	24(41.4%)	
Occupation	Government employees	2(3.4%)	4(6.9%)	6(10.3%)	$\chi^2=4.430$ P=0.219
	Professionals	2(3.4%)	6(10.3%)	8(13.8%)	
	Working in private companies	3(5.2%)	39(67.2%)	42(72.4%)	
	Business / Self-employed	0(0.0%)	2(3.4%)	2(3.4%)	

Sources: own data survey, 2022

Sex

According to the descriptive statistics of table 4.19 from the total of 58 respondents, they were grouped into 2 categories as male and female shown in table 4.19. It is inferred that out of female borrowers 4(6.9%) of them were default and 8(13.8%) of were paid their installment. out of male borrowers 10(17.2%) of them were default and 36(62.1%) of them were paid their installment. The proportion of the defaulters were the highest 19.0%, in the average age group of 25 –35, followed by 3.4% from the average age group of 36-45. The lowest rate of defaulters belonged to the average age group of >45years.

Educational level

Education is one of the key variables that influence the behavior and attitude of borrowers in loan repayment. It was assumed that the higher the educational status, the better would be the knowledge and awareness level on efficient utilization of loan. As indicated in table 4.19, 79.3% and 10.3% of respondent's level of education were above diploma and diploma respectively. 3.4% and 3.4% of respondent's level of education were grade 9-12 and grade 1-8 respectively.

The default rate decreases as the level of education increases, with the low grade educational level was highly defaulted and borrowers who have completed diploma and above were in good status on loan repayment performance. Therefore, the researcher concluded that, the literate borrowers were well informed and acted responsibly by repaying their loan on time than illiterate borrowers.

Marital status

According to the descriptive statistics in table 4.19 from the total of 58 respondents, Respondents were grouped into 3 categories as single, marriage and divorce. It is inferred that 55.2% was single respondents, 41.4% was marriage respondents and 3.4% was divorced respondents. Majority of respondents were single for both default and paid.

Occupation

According to the descriptive statistics in table 4.19, the total of 58 respondents, their occupation were grouped into 4 categories as Government employees, Professionals, Working in private companies and Business / Self-employed. It is shown that 10.3% of respondents were Government employees, 13.8% of respondents were Professionals and 72.4% of respondents were working in private companies and 3.4% of respondents were Business / Self-employed. Thus, these imply that Government employees and Professional borrowers were better in loan repayment performance than borrowers working in private companies and Business / Self-employed.

It is interpreted from the above table, 4.19, the chi-square value is $(x^2) = 0.699$ and significance value (p), $p = 0.403$ for the chi-square test between sex and loan default status.

It is evident that the p-value is greater than 0.05 hence there is no significant association between sex and loan recovery performance. This means there is no statistically significant relationship between sex and loan recovery performance.

It is interpreted from the above table, 4.19, the chi-square value is $(x^2) = 0.204$ and significance value (p), $p = 0.903$ for the chi-square test between age and loan default status. It is evident that the p-value is greater than 0.05 hence there is no significant association between age level and loan repayment performance. This means there is no statistically significant relationship between age and loan repayment performance.

It is interpreted from the above table, 4.19, the chi-square value is $(x^2) = 0.830$ and significance value (p), $p = 0.660$ for the chi-square test between marital status and loan default status. It is evident that the p-value is greater than 0.05 hence there is no significant association between marital status and loan repayment performance. This means there is no statistically significant relationship between marital status and loan repayment performance

It is interpreted from the above table, 4.19, the chi-square value is $(x^2) = 2.519$ and significance value (p), $p = 0.641$ for the chi-square test between educational level and loan default performance. It is evident that the p-value is greater than 0.05 hence there is no significant association between educational level and loan repayment performance. This means there is no statistically significant relationship between educational level and loan repayment performance.

It is interpreted from the above table, 4.19, the chi-square value is (χ^2) = 6.815 and significance value (p), $p = 0.078$ for the chi-square test between average household income and loan default status. It is evident that the p-value is greater than 0.05 hence; there is no significant association between household income and loan repayment performance. This means there is no statistically significant relationship between household income and loan repayment performance.

It is interpreted from the above table 4.19, that the chi-square value is (χ^2) = 4.430 and significance value (p), $p = 0.219$ for the chi-square test between occupation and loan default performance. It is evident that the p-value is greater than 0.05 hence; there is no significant association between occupation and loan repayment status. This means there is no statistically significant relationship between occupation and loan repayment performance.

4.4.4 Factors that affect loan recovery performance of housing finance χ^2 and p-value.

Table 4. 20 Factors that affect loan recovery performance of housing finance χ^2 and p-value

Variable	Category	Default	Non default	Total	χ^2 & P- value
Saving culture	Strongly Disagree	1(1.7%)	1(1.7%)	2(3.4%)	$X^2=3.153$ P= 0.533
	Disagree	2(3.4%)	2(3.4%)	4(6.9%)	
	Neutral	2(3.4%)	13(22.4%)	15(25.9%)	
	Agree	6(10.3%)	19(32.8%)	24(41.4%)	
	Strongly agree	3(5.2%)	9(15.5%)	12(20.7%)	
Suitability of home loan repayment schedule	Yes	11(19.0%)	35(60.3%)	46(79.3%)	$X^2=0.006$ P= 0.938
	No	3(5.2%)	9(15.5%)	12(20.7%)	
Employment status	Strongly Disagree	0(0.0%)	4(6.9%)	4(6.9%)	$X^2=11.830$ P=0.019
	Disagree	4(6.9%)	1(1.7%)	5(8.6%)	
	Neutral	5(8.6%)	12(20.7%)	17(29.3%)	
	Agree	3(5.2%)	21(36.2%)	24(41.4%)	
	Strongly agree	2(3.4%)	6(10.3%)	8(13.8%)	
Loan size	Strongly	0(0.0%)	0(0.0%)	0(0.0%)	$X^2=4.248$

	Disagree				P=0.236
	Disagree	3(5.2%)	5(8.6%)	8(13.8%)	
	Neutral	4(6.9%)	8(13.8%)	12(20.7%)	
	Agree	6(10.3%)	16(27.6%)	22(37.9%)	
	Strongly agree	1(1.7%)	15(25.9%)	16(27.6%)	
Spouse's income source	Strongly Disagree	1(1.7%)	6(10.3%)	7(12.1%)	X ² =0.568 P= 0.904
	Disagree	0(0.0%)	0(0.0%)	0(0.0%)	
	Neutral	5(8.6%)	16(27.6%)	21(36.2%)	
	Agree	5(8.6%)	15(25.9%)	20(34.5%)	
	Strongly agree	3(5.2%)	7(12.1%)	10(17.2%)	
Interest rate	Strongly Disagree	1(1.7%)	2(3.4%)	3(5.2%)	X ² =9.721 P= 0.045
	Disagree	1(1.7%)	7(12.1%)	8(13.8%)	
	Neutral	7(12.1%)	6(10.3%)	13(22.4%)	
	Agree	2(3.4%)	20(34.5%)	22(37.9%)	
	Strongly agree	3(5.2%)	9(15.5%)	12(20.7%)	
Changes of Inflation in the economy	Strongly Disagree	0(0.0%)	0(0.0%)	0(0.0%)	X ² =0.125 P= 0.989
	Disagree	2(3.4%)	6(10.3%)	8(13.8%)	
	Neutral	1(1.7%)	3(5.2%)	4(6.9%)	
	Agree	6(10.3%)	17(29.3%)	23(39.7%)	
	Strongly agree	5(8.6%)	18(30.0%)	23(39.7%)	
Timeliness of loan release	Yes	3(5.2%)	8(13.8%)	11(19.0%)	X ² = 0.073 P= 0.787
	No	11(19.0%)	36(62.1%)	47(81.0%)	
Supervision	Yes	7(12.1%)	20(34.5%)	27(46.6%)	X ² =0.088 P= 0.766
	No	7(12.1%)	24(41.4%)	31(53.4%)	
Utilization of loan	Strongly Disagree	0(0.0%)	0(0.0%)	0(0.0%)	X ² =2.645 P=0.450
	Disagree	0(0.0%)	6(10.3%)	6(10.3%)	
	Neutral	2(3.4%)	6(10.3%)	8(13.8%)	
	Agree	7(12.1%)	15(25.9%)	22(37.9%)	
	Strongly agree	5(8.6%)	17(29.3%)	22(37.9%)	
Loan diversion	Yes	13(22.4%)	41(70.7%)	54(93.1%)	X ² = 0.002 P= 0.967
	No	1(1.7%)	3(5.2%)	4(6.9%)	

Sources: own data survey, 2022

From the above table 4.20, 43.1% of respondent's reply were Agree that Saving culture ensures Loan performance, 20.7% of respondents were reply strongly agree, 6.9% of respondents were reply Disagree and 25.9 % of respondents were reply neutral and 3.4% of respondents were reply strongly disagree that saving culture of household affect loan repayment. On the other hand, From the above table 4.20., 41.4 % of respondents' reply were Agree that Employment status ensures Loan performance, 13.8% of respondents were reply strongly agree, 8.6% of respondents were reply Disagree and 29.3% of respondents were reply neutral and 6.9% of respondents were reply strongly disagree that Employment status of household affect loan repayment.

From the above table 4.20, 37.9% of respondents' reply were Agree that loan size ensures Loan performance, 27.6% of respondents were reply strongly agree, 13.8% of respondents were reply Disagree and 20.7% of respondents were reply neutral on that loan size affect loan repayment.

From the above table 4.20, 34.5% of respondents' reply were Agree that availability of Spouse's income source ensures Loan performance, 17.2% of respondents were reply strongly agree, 36.2% of respondents were reply neutral and 12.1% of respondents were reply strongly disagree that availability of Spouse's income source affect loan repayment. From the above table 4.20., 37.9% of respondents' reply were Agree that interest rate ensures Loan performance, 20.7% of respondents were reply strongly agree, 13.8% of respondents were reply Disagree and 22.4% of respondents were reply neutral and 5.2% of respondents were reply strongly disagree that interest rate affect loan repayment.

According to the above table 4.20, 39.7% of respondents' reply were Agree that Changes of Inflation in the economy ensures Loan performance, 39.7% of respondents were reply strongly agree, 13.8% of respondents were reply Disagree and 6.9% of respondents were reply neutral that Changes of Inflation in the economy affect loan repayment.

Among the 58 sample borrowers, 6.9% of them divert their loans partially or fully from the intended purpose. The loan repayment performance of the borrowers in relation with loan diversion as expressed on table 4.20 shows that, 5.2 % of the sample borrowers who divert their loan were not default and among the sample

borrowers who did not divert their loan, 70.7% of them were also not defaulted. On the other hand, as expressed on the above table 4.20, 1.7% of the sample borrowers who divert their loan were defaulted and among the sample borrowers who did not divert their loan, 22.4% of them were also defaulted.

The survey as indicated on table 4.20, 46.6% of respondents were supervised and 53.4% of respondents responded as they were not supervised. From the total 31(53.4%) of borrowers who were not supervised for home loan recovery, 12.1% were defaulted and 41.4% were non-default. On the other hand, as expressed on the above table 4.20, 34.5% of the sample borrowers who were supervised for home loan repayment performance were not defaulted and among the sample borrowers who were supervised, 12.1% of them were defaulted.

The survey as indicated on table 4.20, 79.3% of respondents' state that the loan repayment period was suitable and 20.7% of respondents responded as it was not suitable. From the total of 12 borrowers who responded that the loan repayment schedule is not suitable for home loan, 3(5.2%) of total respondent were defaulted and 9(15.9% are non-default. Therefore, it is possible to conclude that the loan diversion from the intended purpose, supervision and suitability of home loan repayment schedule ensures the recovery performance of housing finance.

As indicated in Table 4.20, chi-square test shows that the relationship between dependent variable and independent variables (Employment status and interest rate have become strongly significant at p value of less than 0.05, while the remaining variables were not significant).

It is interpreted from the above table 4.20, the chi-square value is $(x^2) = X^2=11.830$ and significance value (p), =0.019 for the chi-square test between employment status and loan default status. It is evident that the p-value is less than 0.05 hence; there is significant association between employment status and loan repayment performance. This means there is statistically significant relationship between employment status and loan repayment performance.

It is interpreted from the above table 4.20, the chi-square value is $(x^2) = 9721$ and significance value (p), $p = 0.045$ for the chi-square test between interest rate and loan default status. It is evident that the p-value is less than 0.05 hence; there is a

significant association between interest rate and loan repayment performance. This means there is statistically significant relationship between interest rate and loan repayment performance.

4.4.5 Other factors that determine loan approval and repayment performance

4.4.5.1 What are the other factors that determine loan approval of housing finance?

Low-income consumers perceive to be high-risk borrowers because it is assuming their income is inadequate and that makes it difficult for them to regularly service loans. They further added that this is compounded by the higher interest rates charged to credit available to low-income earners because of the higher risk of default associated with such group of people.

They viewed also low income borrowers are in poor position to provide collateral and therefore financial institutions sometimes deny them access to subsequent loans. However, they also failed to explain how to determine the credit worthiness of a borrower. On the other hand, there is an imbalance between the market price of the house and the bank estimation value, and liquidity problem of the bank.

Having inadequate credit policies is also factors to determine the credit worthiness of prospective borrowers. They said that banks have failed in determining the credit worthiness of borrowers because officers fail to comply with lending policies. Low staff morale and bank officers' exposure to fraud also affect loan officers' decision in determining the credit worthiness of borrowers. They supposed that fraudulent practices during the appraisal process leads to off-balance sheet operations. These fraudulent practices happen when officers realize that their loan assessment system is weak and hence have nothing to fear.

4.4.5.2 What are the other factors that determine loan recovery performance of housing finance?

According to the qualitative assessment of the result, respondents agreed on the economic problem of the country are the main reason for uncollectible of Loan. As the respondent states, borrowers are exposed to inflation due to the alarming price increased this price rise creates the customers not to finish their project and lead them not to relay their obligation on a specific period of time.

According to the researcher collected data respondent said that some customer diverts the money they borrowed for specified purpose to other business like to their personal consumption

Lack of willingness to pay loans coupled with diversion of funds by borrowers, willful negligence and improper appraisal by credit officers. In addition, corporate loan default increases as real gross domestic product decline, and that the exchange rate depreciation directly affects the repayment ability of borrowers. The major causes of loan default as loan shortages, delay in time of loan delivery, high interest rate, age of borrower, poor supervision, political situation of the country and undue government intervention with the operations of government sponsored credit programs. Moreover, family size, family living expenses and sustainability of borrowers' income were some of the factors that can influence the repayment capacity of borrower.

According to respondents, inadequate financial analysis is another cause of loan default. This is when in the loans department the officers do not take a careful study of the applicants to ensure that he/she has a sound financial base such that the risk of loss is mitigated in case of default.

Poor business practice is another cause; there are weaknesses of the borrower over which the lender has little control. Management of the business is also an essential part that needs to be emphasized. You find that many borrowers lack the technical skills like keeping records and checking on the business performance until the time of paying back the loan. This is usually hard because they never plough back the profits leading to loan default in the long run.

Some of the factors that lead to loan default include; inadequate or non-monitoring of borrower by banks, delays by banks in processing and disbursement of loans, diversion of funds, over-concentration of decision making, where all loans are required by the bank to be sanctioned by Area/Head Offices

4.4.5.3 What Measures do you suggest to Control Loan Default?

They view that, lenders devise various institutional mechanisms aimed at reducing the risk of loan default. These include pledging of collateral, third-party credit guarantee, use of credit rating and collection agencies, etc.).

States that bad loans can be restricted by ensuring that loans are made to only borrowers who are likely to be able to repay, and who are unlikely to become insolvent. Credit analysis of potential borrowers should be carried out in order to judge the credit risk with the borrower and to reach a lending decision.

Loan repayments should be monitored and whenever a customer defaults action should be taken. Thus banks should avoid loans to risky customers, monitor loan repayments and renegotiate loans when customers get into difficulties. Need a monitoring system that highlights repayment problems clearly and quickly, so that loan officers and their supervisors can focus on delinquency before it gets out of hand.

They suppose that proper and adequate appraisal is a key to controlling or minimizing default. Since this is the basic stage in the lending process. The appraisal stage is the heart of a high quality portfolio. This includes diagnosing of the business as well as the borrower. Before beginning the process of collecting information on the client for the purpose of determining credit limits, the loan officer should have specific information available which will guarantee that the data and figures provided by the client. To control default banks should also carefully examine the monitoring and control stage in the lending process; many of the agonies and frustrations of slow and distressed credits can be avoided by good loan supervision which helps in keeping a good loan good.

4.5 Binary Logistic Regression Model

Taking approval and recovery performance of housing finance as a dependent variable has high correlation with other independent variables. According to Chandon, (2003) for a high degree of correlation, which leads to better estimate and prediction, the coefficient of estimation R^2 must have a high value. In this case, as mentioned in below table 4.23 provide the correlation coefficient, which indicated the strength of the relationship between the combination of the independent variables in the model and the dependent variables.

4.5.1 Assumptions of Logistic Regression

The logistic regression model is not test free. For the efficient use of logistic regression, the following assumptions should have considered.

1. Logistic regression assumes meaningful coding of the variables. Logistic coefficients were difficult to interpret if not coded meaningfully. The convention for binomial logistic regression is to code the dependent class of interest as 1 and the other class as 0.
2. The groups must be mutually exclusive and exhaustive; a case can only be in one group and every case must be a member of one of the groups.
3. Larger samples are needed than for linear regression because maximum likelihood coefficients are large sample estimates.
4. The logit regression equation should have a linear relationship with the logit form of the dependent variable.
5. The dependent variable must be categorical.
6. Logistic regression does not assume a linear relationship between the dependent and independent variables.
7. Absence of multi co-linearity

Binary logistic regression analysis is used to estimate the probability that one of the two events occurs i.e. default or non-default by the borrowers. To construct the model, best subset of metrics namely: income from other sources, household income, spouse income source, saving culture, employment status, loan utilization, loan supervision, Interest rate, loan diversion, home loan repayment period, loan size, changes of inflation in the economy and timeliness of loan release, (13) are taken as the independent variables to be regressed against Loan repayment status. A summary of the binary logistic regression output is explained in the following tables.

4.5.2 Model Summary

Table 4. 21 Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	50.487 ^a	.209	.313

Source: own survey data computed from the field 2022

Enter regression method is used in the process, starts with a model that doesn't include any of the predictors. At each step, the predictor with the largest score statistic whose significance value is less than 0.05 is added to the model. The variables left out of the analysis at the last all have significance values larger than 0.05, so more variables are added. From the output of the forward step wise regression reported in table 4.21 and 4.22 it is evident that variables income from other sources, employment status, spouse income source, interest rate, inflation rate and loan utilization are significant while all other variables are insignificant hence removed from the regression model.

It is further observed from the tables 4.21 and 4.22 that the variables chosen by the forward stepwise method have significant changes in -2 Log Likelihood the coefficient of determination R^2 summarizes the proportion of variance in the dependent variable associated with the predictor (independent) variables.

Table 4.21 provides the Pseudo R square statistics. There are two measures, Cox & Snell and Nagelkerke. In this case Cox & Snell is 0.209, and Nagelkerke is 0.313. The Cox& Snell R square indicate that 20.9% of the variation in a loan defaulter or non-defaulter could be explained by variables such as income from other sources, employment status, spouse income source, interest rate, inflation rate and loan utilization.

The chi-square table 4.22 shows that the variables added into the model shows a significant change. The difference in the -2LL for the complete model and -2LL for the constant only model is 13.622, which is the chi-square value shown in table 4.23. There exists a significant difference in the coefficients for the complete model and the constant only model

4.5.3 Variables in equation

From the total of thirteen independent variables to influence the loan repayment status of borrowers, six were found statistically significant. The maximum likelihood estimates of the logistic regression model show that income from other sources, employment status, spouse income source, interest rate, inflation rate and loan utilization. were important factors influencing loan repayment performance of the housing finance in the study (statistical significant variables).

Income from other sources (INCFMOTH):

The result of odd ratio shown that income from other sources has positive and significant influence on loan repayment status at 5% significant level. The possible explanation is that the odds ratio favoring loan repayment status is increased by a factor of 3.000 % and borrowers who had income from other sources accepted (approved loan) and more likely to repay their loans on time. Therefore, the null hypothesis rejected and the alternative hypothesis accepted.

Employment status (EMPSTS):

The result of odd ratio shown that Employment status has positive and significant influence on loan repayment status at 5% significant level. Employment status influences the probability of loan repayment performance and the odds ratio favoring loan repayment status is increased by a factor of 3.309%. The economically active person with respect to his or her employment, the loan non-default performance is increased than the borrowers who belong to economically inactive person with respect to his or her employment. Study has also proven that employment status affects repayment Performance; from this it is possible to say that the loan repayment status was influenced by the employment status of the borrower. Therefore, the null hypothesis rejected and the alternative hypothesis accepted.

Interest rate (IR):

The result of odd ratio shown that this variable was found to have a negative and significant impact on the loan repayment status at 5% significance level. The negative sign implies that in case of interest rate, the odds ratio favoring loan repayment status is decreased by a factor of 3.965%, and interest rate was also found as essential and significant determinant of loan repayment rate negatively. Therefore, the null hypothesis rejected and the alternative hypothesis accepted.

Unavailability of spouse income source (UNAVSI):

The result of odd ratio shown that unavailability of spouse income source has negative and significant influence on loan repayment status at 5% significant level. The possible explanation is that the odds ratio favoring loan repayment status is decreased by a factor of 0.039% and borrowers who have spouse income source were

more likely to repay their loans. Therefore, the null hypothesis rejected and the alternative hypothesis accepted.

Change of inflation (INFLRT):

The result of odd ratio shown that change of inflation has negative and significant impact on the loan repayment status at 5% significance level. The negative sign implies that in case of inflation, the odds ratio favoring loan repayment status is decreased by a factor of 2.359%, and change of inflation was also found as essential and significant determinant of loan repayment rate negatively. This means, the borrower forced to divert the higher portion of income for consumption increases default rate. Therefore, the null hypothesis rejected and the alternative hypothesis accepted.

Loan utilization (LOANUT):

The result of odd ratio shown that loan utilization has strongly significant at 5% significance level influence on loan repayment performance in the study. This result shows positive relationship with the dependent variable and the odds ratio favoring loan repayment status is increased by a factor of 0.128%. Moreover, loan utilized for borrower can generate additional income because credit is one of the fundamental inputs for development if properly utilized for the intended or productive purpose. Therefore, the null hypothesis rejected and the alternative hypothesis accepted.

Table 4. 22 Variables in equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for	
							EXP(B)	
							Lower	Upper
AVHHN	-.546	.593	.848	1	.357	.579	.181	1.852
SAVCUL	.324	.492	.436	1	.509	1.383	.528	3.625
EMPSTS	1.197	.549	4.756	1	.029	3.309	1.129	9.700
LOANSIZE	1.031	.901	1.308	1	.253	2.803	.479	16.400
INCFMOTH	1.099	1.009	1.185	1	.027	3.000	.415	21.686
UNAVSI	-1.173	.648	3.282	1	.050	.309	.087	1.101
IR	-1.378	.638	4.656	1	.031	3.965	1.135	13.860
INFLRT	-.858	.533	2.590	1	.018	2.359	.829	6.708
SCHEDLR	.196	1.038	.036	1	.850	1.216	.159	9.305
TMLNES	.384	.984	.152	1	.697	1.468	.213	10.104
SPRVSN	.157	.970	.026	1	.871	1.171	.175	7.830
LOANUT	2.054	.945	4.728	1	.030	.128	.020	.817
LDIVER	1.535	1.966	.610	1	.435	4.643	.098	218.965
Constant	-1.127	3.405	.109	1	.741	.324		

a. Variable(s) entered on step 1: AVHHN , SAVCUL , EMPSTS , LOANSIZE , INCFMOTH , UNAVSI , IR , INFLRT , SCHEDLR , TMLNES , SPRVSN , LOANUT , LDIVER.

Source: own survey data computed from the field 2022

4.5.4 Omnibus Tests of Model Coefficients

Table 4. 23 Omnibus Tests of Model Coefficients

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	13.622	13	.401
	Block	13.622	13	.401
	Model	13.622	13	.401

Source: own survey data computed from the field 2022

4.5.5 Hosmer and Lemeshow Test

Table 4. 24 Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	2.691	8	.952

Source: own survey data computed from the field 2022

Goodness of fit statistics is provided in table 4.24. The output of the test is used to determine whether the model adequately describes the data. Hosmer-Lemeshow statistic demonstrates that the significance value is greater than 0.05, hence the model adequately fits the data.

Table 4. 25 Variables in the Equation

Variables in the Equation							
		B	S.E.	Wald	Df	Sig.	Exp(B)
Step	Constant	1.145	.307	13.927	1	.000	3.143
0							

Source: own survey data computed from the field 2022

4.5.6 Multi Co linearity test for Binary Logit

We say that there is multi collinearity problem in an equation when there is correlation between variables employed in the regression model (when the assumption that $cov(x_1, x_2) = 0$ is violated). That is the existence of a ``perfect`` or exact linear relationship among some or all explanatory variables of a regression model (Gujarati, 1995). The inter correlation between the two variables can be measured by the partial correlation coefficient between one variable with another variable. As a rule of thumb, if the correlation coefficient between the two independent variables is greater than 0.8, one can conclude that there is a serious problem of multi collinearity. Accordingly, the test result shows that the correlation coefficient between all variables under consideration is less than 0.8 (*please refer table 4.26 below*) implying that the explanatory variables can separately contribute to the variation in the dependent variable.

The contingency coefficient, which measures the association between various discrete variables based on the chi-square, were computed in order to check the degree of association among the discrete explanatory variable or the existence of Multi Col linearity problem. The decision rule for contingency coefficient state that when its value approaches 1, there is a problem of association between the discrete variable, i.e. the value of contingency coefficients ranges between 0 and 1, with zero indicating no association between the variables and the values close to 1, indicating a high degree of association. Contingency coefficients (CC) were used to test multi co linearity problem for dummy variables is;

$$CC = \sqrt{\frac{x^2}{N - x^2}}$$

Table 4. 26 Contingency Coefficients result for discrete variables in binary logistic model

	AVHHN	SAV CUL	EMPST S	LOANSI ZE	INCFMOTH	UNAVSI	IR	SCHE DLR	TMLNES	SPRVS N	LOANUT	LDIVER	AVHHN
AVHHN	1.000	-.138	-.342	-.318	-.524	.630	-.572	-.160	.057	-.051	-.289	.040	.254
SAVCUL	-.138	1.000	-.089	-.103	-.127	-.297	.336	.102	.039	-.025	-.057	-.050	.057
EMPSTS	-.342	-.089	1.000	.330	.231	-.492	.395	.235	-.166	-.025	.232	-.566	.072
LOANSIZE	-.318	-.103	.330	1.000	.392	-.259	.341	.306	.084	-.132	.164	-.307	.011
INCFMOTH	-.524	-.127	.231	.392	1.000	-.370	.379	.216	.288	.045	.089	-.133	-.195
UNAVSI	.630	-.297	-.492	-.259	-.370	1.000	-.773	-.113	.065	-.017	-.297	.296	-.071
IR	-.572	.336	.395	.341	.379	-.773	1.000	.245	.101	.187	.026	-.387	.131
INFLRT	-.160	.102	.235	.306	.216	-.113	.245	1.000	.139	.126	-.060	-.653	.343
SCHEDLR	.057	.039	-.166	.084	.288	.065	.101	.139	1.000	.062	-.442	.063	-.025
TMLNES	-.051	-.025	-.025	-.132	.045	-.017	.187	.126	.062	1.000	-.080	-.072	-.061
SPRVS	-.289	-.057	.232	.164	.089	-.297	.026	-.060	-.442	-.080	1.000	-.124	.164
LOANUT	.040	-.050	-.566	-.307	-.133	.296	-.387	-.653	.063	-.072	-.124	1.000	-.584
LDIVER	.254	.057	.072	.011	-.195	-.071	.131	.343	-.025	-.061	.164	-.584	1.000

Source: own survey data computed from the field 2022

The correlation results reveal that there was no problem of association among the discrete explanatory variable. After checking of Multi-Collinearity problems model analysis was conducted. The logit model was employed in this study to estimate the

effects of the expected independent variables on loan repayment performance. Therefore, the result of contingency coefficient indicates that there are no problems of association between discrete or dummy variables.

4.5.7 Hypothesis Test

4.5.7.1 Hypothesis 1

Ho: income from other sources has no significant impact on repayment performance of housing finance

The result shows that income from other sources has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis rejected and the alternative hypothesis accepted.

4.5.7.2 Hypothesis 2

Ho: house hold income per month has no significant impact on repayment performance of housing finance.

The result shows that house hold income per month has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis accepted.

4.5.7.3 Hypothesis 3

Ho: employment status has no significant impact on repayment performance of housing finance.

The result shows that employment status has significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis rejected and the alternative hypothesis accepted.

4.5.7.4 Hypothesis 4

Ho: Interest rate has no significant impact on repayment performance of housing finance.

The result shows that Interest rate has significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis rejected and the alternative hypothesis accepted.

4.5.8.5 Hypothesis 5

Ho: timeliness has no significant impact on loan repayment performance of housing finance

The result shows that timeliness has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis accepted.

4.5.7.6 Hypothesis 6

Ho: loan utilization has no significant impact on loan repayment performance of housing finance

The result shows that loan utilization has significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis rejected and the alternative hypothesis accepted.

4.5.7.7 Hypothesis 7

Ho: loan diversion has no significant impact on loan repayment performance of housing finance

The result shows that loan diversion has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis accepted.

4.5.7.8 Hypothesis 8

Ho: loan supervision has no significant impact on loan repayment performance of housing finance

The result shows that loan supervision has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis accepted.

4.5.7.9 Hypothesis 9

Ho: saving culture has no significant impact on loan repayment performance of housing finance

The result shows that saving culture has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis accepted.

4.5.7.10 Hypothesis 10

Ho: change of inflation in the economy has no significant impact on loan repayment performance of housing finance

The result shows that change of inflation in the economy has significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis rejected and the alternative hypothesis accepted.

4.5.7.11 Hypothesis 11

Ho: home loan repayment period has no significant impact on recovery performance of housing finance

The result shows that home loan repayment period has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis accepted.

4.5.7.12 Hypothesis 12

Ho: loan size has no significant impact on repayment performance of housing finance

The result shows that loan size has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis accepted.

4.5.7.13 Hypothesis 13

Ho: spouse income source has no significant impact on loan repayment performance of housing finance

The result shows that spouse income source has no significant impact on repayment performance of housing finance. Based on the premises, the null hypothesis rejected and the alternative hypothesis accepted.

4.5.7 Measure of goodness of fit in the logistic regression model

Table 4. 27 Measure of goodness of fit in the logistic regression model (Classification A Table^{a,b})

Table 4.27. Classification A Table^{a,b}					
Observed			Predicted		
			Loan repayment performance of housing finance		Percentage Correct
			Default	Non-default	
Step 0	Loan repayment performance of housing finance	Default		14	.0
		Non-default		44	100
	Overall Percentage				75.9
a. Constant is included in the model.					
b. The cut value is .500					

Sources: Compiled from SPSS output survey data, 2022

Table 4. 28 Measure of goodness of fit in the logistic regression model (Classification B Table^a)

Table 4.28. Classification B Table^a					
Observed			Predicted		
			Loan repayment performance of housing finance		Percentage Correct
			Default	Non-default	
Step 1	Loan repayment performance of housing finance	Default	5	9	35.7
		Non-default	2	42	95.5
	Overall Percentage				81.0
a. The cut value is .500					

Sources: Compiled from SPSS output survey data, 2022

The other measure of goodness of fit in the logistic regression model is checked by observing the value in the prediction table to verify whether the model correctly predicts or not. The fit is said to be good if the overall correct prediction rate exceeds 50% (Shewhart and Wilks, 2013). Classification table is a simple tool which indicates how good the model is at predicting the outcome variables. To characterize our model as useful, the overall percentage accuracy rate produced in the classification table at step "0" and at step "1" or over all is compared. (refer table 4.27 and 4.28 above).

Accordingly, the results indicate that the overall accuracy rate computed step"0" was 75.9% and the accuracy rate computed in step"1" was 81.0% at the cut value of 0.5 above (Table 4.27 and 4.28). Hence, the criteria for classification of accuracy are satisfied. Generally, the higher the overall percentage of correct predictions in this case 81.0% shows a better fit of the binary logistic regression model.

Table 4. 29 Variables that affects loan repayment performance

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
AVHHN	-.546	.593	.848	1	.357	.579	.181	1.852
SAVCUL	.324	.492	.436	1	.509	1.383	.528	3.625
EMPSTS	1.197	.549	4.756	1	.029	3.309	1.129	9.700
LOANSIZE	1.031	.901	1.308	1	.253	2.803	.479	16.400
INCFMOTH	1.099	1.009	1.185	1	.027	3.000	.415	21.686
UNAVSI	-1.173	.648	3.282	1	.050	.309	.087	1.101
IR	1.378	.638	4.656	1	.031	3.965	1.135	13.860
INFLRT	.858	.533	2.590	1	.018	2.359	.829	6.708
SCHEDLR	.196	1.038	.036	1	.850	1.216	.159	9.305
TMLNES	.384	.984	.152	1	.697	1.468	.213	10.104
SPRVSN	.157	.970	.026	1	.871	1.171	.175	7.830
LOANUT	2.054	.945	4.728	1	.030	.128	.020	.817
LDIVER	1.535	1.966	.610	1	.435	4.643	.098	218.965
Constant	-1.127	3.405	.109	1	.741	.324		

a. Variable(s) entered on step 1: AVHHN , SAVCUL , EMPSTS , LOANSIZE , INCFMOTH , UNAVSI , IR , INFLRT , SCHEDLR, TMLNES , SPRVSN , LOANUT , LDIVER.

Source: computed from the field survey data 2022

B= regression coefficient, SE=standard error, Sig. =significance, EXP (B) =odds ratio, EMPSTS =employment status, INCFMOTH =income from other source, UNAVSI =unavailability of spouse income, IR= interest rate, INFLRT= change of inflation, LOANUT =loan utilization,

Number of observation = 58, level of significant at = 5%.

The value 'B' in Table 4.13 refers to the log-odds of a borrower being a defaulter. The logistic regression equation developed using this output is:

$$\text{Odds} = \frac{p}{1-p} = e^{\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_p x_p} \quad (1)$$

Taking the logarithms of both side

$$\text{Ln} \frac{p}{1-p} = \text{Ln} \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_p x_p \quad (2)$$

$$Y = \alpha + \sum_{i=1}^k \beta_i X_i + \mu \quad (3)$$

$$\text{Logit (LA)} = \beta_0 + \beta_1 \text{EMPSTS} + \beta_2 \text{INCFMOTH} + \beta_3 \text{UNAVSI} + \beta_4 \text{IR} + \beta_5 \text{INFLRT} + \beta_6 \text{LOANUT}$$

$$\text{LA} = -1.127 + 1.197 \text{EMPSTS} + 1.099 \text{INCFMOTH} - 1.173 \text{UNAVSI} - 1.378 \text{IR} - 0.858 \text{INFLRT} + 2.054 \text{LOANUT}$$

Discussion on Significant Explanatory Variables

Out of the **thirteen** independent variables to influence the loan repayment status of borrowers, six were found statistically significant. The maximum likelihood estimates of the logistic regression model shows that employment status (EMPSTS), income from other source(INCFMOTH), unavailability of spouse income (UNAVSI), interest rate (IR), inflation rate(INFLRT) and loan utilization (LOANUT) were important factors influencing loan repayment performance of the borrowers in the study area (statistical significant variables). In what follows, the results of model estimates are interpreted in relation to each of statistically significant variables.

Employment status (EMPSTS):

The result of odd ratio shown that Employment status has positive and significant influence on loan repayment status at 5% significant level. Employment status influences the probability of loan repayment performance and the odds ratio favoring loan repayment status is increased by a factor of 3.309%. The economically active person with respect to his or her employment, the loan non-default performance is increased than the borrowers who belong to economically inactive person with respect to his or her employment. Study has also proven that employment status affects repayment Performance; from this it is possible to say that the loan repayment status was influenced by the employment status of the borrower.

Income: - Income has positive and significant influence on loan repayment status at 5% significant level. The possible explanation is that borrowers who had higher ratio received high loan relative to economic status without considering annual income and production. Indirectly, this result reveals that the borrowers who had higher annual income were more likely to repay their loans on time (Million Sileshi, Rose Nyikal and Sabina Wangia(No.11, 2012) This result is supported by a study done by Retta (200), Abebe (2011) and a study conducted by Njoku and Odii indicated that income was determined to be inversely related to loan repayment (Njoku and Odii 1991).

Unavailability of spouse income source (UNAVSI):

The result of odd ratio shown that unavailability of spouse income source has negative and significant influence on loan repayment status at 5% significant level. The possible explanation is that the odds ratio favoring loan repayment status is decreased by a factor of 0.039% and borrowers who have spouse income source were more likely to repay their loans.

Interest rate (IR):

The result of odd ratio shown that this variable was found to have a negative and significant impact on the loan repayment status at 5% significance level. The negative sign implies that in case of interest rate, the odds ratio favoring loan repayment status is decreased by a factor of 3.965%, and interest rate was also found as essential and significant determinant of loan repayment rate negatively.

interest rate has positive and significant influence on loan repayment status at 1% significant level. The logistic regression shows that as the interest influences the probability of loan repayment status negatively.

Change of inflation (INFLRT):

The result of odd ratio shown that change of inflation has negative and significant impact on the loan repayment status at 5% significance level. The negative sign implies that in case of inflation, the odds ratio favoring loan repayment status is decreased by a factor of 2.359%, and change of inflation was also found as essential and significant determinant of loan repayment rate negatively. This means, the borrower forced to divert the higher portion of income for consumption increases default rate.

Loan utilization (LOANUT):

The result of odd ratio shown that loan utilization has strongly significant at 5% significance level influence on loan repayment performance in the study. This result shows positive relationship with the dependent variable and the odds ratio favoring loan repayment status is increased by a factor of 0.128%. Moreover, loan utilized for borrower can generate additional income because credit is one of the fundamental inputs for development if properly utilized for the intended or productive purpose.

CHAPTER FIVE

5. SUMMARY, CONCLUSIONS AND RECOMMENDES

5.1. Summary of findings

The main objective of this study is to investigate determinants of approval and repayment performance of housing finance in case of Zemen Bank S.C. Specifically, the paper is intended to evaluate the effect of demographic, institutional and socio-economic factors. In this study primary data sources were mostly used to analyze the determinants of approval and recovery performance of housing finance. To this end, a binary logit model was adopted to determine as to whether the several explanatory variables, as hypothesized in the paper, have much to do with the approval and repayment performance of housing finance.

Data and information for the study were collected from 58 respondents (borrower) and 18 respondents (employees) of Zemen Bank S.C. The study resulted that from the total of 58 respondents (borrowers), 44 (41.4%) of the respondents' loan request were rejected and 34(58.6%) of respondents (borrowers) loan request were approved. From total of 58 respondents (borrowers), 14 (24.1%) of respondents (borrowers) were non-defaulters, whereas the rest 44 (75.9%) were defaulters.

As the borrower's level of education increase the loan approval rate increase and as the level of education decrease the level of loan approval rate decrease and borrowers who have marriage were highly accepted than those non-marriage borrowers. Private sector employed and Professionals borrowers were more preferred and accepted than borrowers working in government sector employed and Business / Self-employed for loan approval of housing finance. According to the respondent idea on loan approval stage of housing finance were not well known by the respondents (borrowers). Because, they do not give supportive idea for justifications on stage of loan approval of housing finance (neutral response)

From 18 respondents of employee on major documents needed for the loan approval of housing finance, majority of respondents rank Identification Documents, Mortgage statements, Income and Employment history, Self-employment document and Bank account as first, second, third, fourth and fifth respectively and providing independent assurance and the house for which loan are given itself were used for the nature of collateral or assurance to be provided to secure loan for housing.

From 18 respondents of employee on reasons for loan approval of housing finance majority of respondents ranks average Income of household, Collateral pledged, Repayment period, Interest rate, Applicant eligibility, Employment status and spouse income source as first, second, third, fourth, fifth, sixth and seventh respectively and on reasons for loan rejection of housing finance majority of respondents (employees) ranks saving culture of household, average Income of household, employment status, spouse loss income source, credit History, collateral pledged and loan Size requested as first, second, third, fourth, fifth, sixth and seventh respectively.

The default rate decreases as the level of education increases, with the illiterates being the highest defaulters and non-defaulters were the borrowers who have well educated. According to the descriptive statistics from the total of 58 respondents (borrowers), and 18 respondents (employees) were grouped according to sex categorized into 2 categories as male and female and according their age categorized into 4.

According to the chi-square test and p-value, the analysis of the study shown that the independent/explanatory variables, which were hypothesized to determine the repayment performance of housing finance, six were statistically significant in explaining the loan performance and seven were not significant. These variables include employment status, income from other source, spouse income source, interest rate, change of inflation and loan utilization has significant impact on repayment performance. In contrast, the remaining average household income, loan diversion, loan size, saving culture, timeliness of loan release, supervision and home loan repayment period were less powerful and had no significant impact on loan repayment performance.

Employment status had positive and statistically significant at 5% significance level related to loan repayment performance. This result shown that, the economically

active person with respect to his or her employment was non-default performance and economically inactive person with respect to his or her employment were defaulter.

Interest rate had negative and statistically significant at 5% significance level related to Loan repayment performance. This result revealed that interest rate was also found as essential and significant determinant of loan repayment rate negatively.

Unavailability of spouse income source was negatively and statistically significant at 5% significance level related to loan repayment performance. This result shown that housing loan borrowers, who have spouse income source were more likely to repay their loans.

Change of inflation had negative and significant impact on the loan repayment status at 5% significance level. The negative sign implies that in case of inflation, the odds ratio favoring loan repayment status is decreased by a factor of 2.359%,

Proper utilization of loan was positively and statistically significant at 5% significance level related to loan repayment performance. This result shown that housing loan borrowers whose loans were properly utilized were successfully performed (non-default) and those whose loans were improperly utilized were not successful (default).

Another variable is income from other source, which had statistically significant at 5% significance level and had positive influence on the successful loan repayment performance. This is because housing borrowers who have income from other source have more likely repay loan.

5.2. Conclusion

Based on the findings it can be concluded that difficulty in submitting documents needed for home loan were identification documents, mortgage statements, income and employment history, self-employment document, bank account and the factors that leads to loan rejection were saving culture of household, average Income of household, employment status, spouse loss income source, credit history, collateral pledged and loan size requested. And also it can be concluded that employment status, income from other source, unavailability of spouse income source, interest rate, and change of inflation and loan utilization has significant impact on repayment

performance; which means any increase or decrease on the value of these variables leads to an increase or decrease on repayment performance of housing finance. The employment status, income from other source and loan utilization significant variables had positive relationship with loan recovery performance. While interest rate and change of inflation unavailability of spouse income source had negative relationship with loan repayment performance of the housing finance. Many of the variables are interrelated and interdependent. That means the existence of one variable affect the other variables both positively or negatively. As a result, the interdependence of most of the variables leads the bank in to success or failure. If they are positively interrelated, the variables may lead the bank into success and if they are negatively interrelated, they will affect the bank success adversely.

5.3. Recommendations

After analyzing result obtained from responses on questionnaires gathered from the borrowers and bank employees and comparing with the theoretical framework in various literatures, the following recommendations are made by researcher to improving the loan approval and repayment performance of housing finance.

The major items like amount of loan requested to borrow; the purpose for loan is requested, and repayment capacity should be presented by borrower and since the necessary documents needed for the loan approval of housing finance were identification documents, mortgage statements, income and Employment history, self-employment document, bank account statement and others; the researcher recommended that borrowers may prepare and met those documents before loan request.

The reasons for loan rejections of housing finance were saving culture of household, average Income of household, employment status, borrower spouse loss income source, credit history, collateral pledged and loan size requested; borrowers should fulfill his/her role for loan approval of housing finance as required. Therefore, the researcher recommended that borrowers if they score good credit history, if they have good saving culture, should be economically active person with respect to his or her employment, they have collateral needed for guarantee of loan requested and request possible loan size permitted it is better for getting acceptance.

The age of the borrowers was not significant to influence repayment performance; the study implied that borrowers between 35-45 years slightly had better repayment

performance than below and above. Therefore, the bank may exert its effort on identifying the problem of youngsters rather than excluding them from the service.

Having income per month from diversified sources and borrower whose spouse has income source are more helpful for borrowers to repay their loan on time. Household income per month had positively correlated with Loan repayment performance. Therefore, the researcher recommended that the banks to be focus on borrowers who have income per month and whose spouse's has income source during loan approval.

Interest rate had negatively correlated with Loan repayment performance. Interest rate of housing finance is very higher; it is may be due to operating cost. In order to reduce operational cost as well as to reduce the interest rate, the researchers suggest application of cost effective and modern technologies, which support the bank to reduce different costs and charge proper interest rate.

Loan diversion was negatively correlated with Loan repayment performance. This means, diverting loan into non-income generating activities increases default rate. Therefore, it is recommended that the bank should give attention to continuous follow-up to support the borrowers by working with different concerned bodies. And also loan utilization was positively correlated with the loan repayment performance of housing finance. Therefore, the researcher recommended that borrowers should utilize properly their loan only on the intended purpose that was only on housing purpose. Therefore, the Bank may improve its loan processing system by putting in place an effective monitoring and evaluations system.

The bank may provide sufficient amount of loan size requested to the intended purpose, through a detailed analysis and based on current market situation. Because in case of insufficiency in the loan amount sanctioned, the borrower tends to divert the fund and borrow the deficit fund at a higher interest rate from money lenders which cause default.

Conducting best business visits has also a direct bearing on loan repayment performance. In other words, implementing effective and efficient follow-up/supervision system and practices should be considered as a major part of credit activity because a borrower who gets robust and continuous information and technical advices from the Bank is more likely to be successful. Thus, the credit officer/

professionals should give more emphasis on supervision or follow-up in order to provide pertinent information and technical support for the success of repayment.

To reinforce the quality of supervision visits, the Bank should install effective monitoring and evaluation mechanisms to measure the output of each and every business visit. Therefore, the bank may develop a strong credit assessment and follow up to facilitate the control of default status of Loans and improve its service delivery, provide loan advisory service before and after the Loan to the borrowers to create awareness in the mind of the borrower and also after extending the loan, the bank should be follow the borrower how they use their fund. And also give advice about the work and consult them how to use their fund properly to improve the loan collection performance.

Finally, the researcher recommended that the bank may consider the significant variables such as employment status, income from other source, unavailability of spouse income source, interest rate, and change of inflation and loan utilization as basis for loan approval and to minimize loan default.

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Appendix I

i. Questionnaire for borrowers



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE

Dear Participant,

My name is Mihretu Bayeh. I am a postgraduate student at Addis Ababa University in the field of Accounting and Finance undertaking a research on “determinants of approval and Repayment performance of housing finance in Addis Ababa in case of Zemen Bank SC” Which is a requirement for the award of the Degree of Master of science in Accounting and Finance. I am therefore requesting your assistance to fill the attached questionnaires. Completion of the questionnaire will take approximately 10 minutes, and all questions can be answered by following the simple instructions as indicated on the questionnaire. All responses are anonymous, there are no incorrect answers. The information given will be handled confidentially, and will be used only for academic purpose.

Yours faithfully,

Mihretu Bayeh

Notice:

- No need of writing your name.
- Make tick (✓) for questions that have an alternative.

No.	Loan documents needed for home loan	Rank
1	Identification Documents	
2	Mortgage statements	
3	Income and Employment history	
4	Statement of personal asset	
5	Tax / License documents	
6	Bank account statement	
7	Self-employment document	
8	Property valuation	

13. Does your home loan released on time? 1. Yes 0.No

14. In what extent you satisfied with the time taken to process your loan?

1. Dissatisfied 2. Neutral 3. Satisfied

15. Does your loan size is approved as per your requirement stated in loan application?

1. Yes 0. No

16. If your loan size is not approved as per your requirement stated in loan application, where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)

1. From friends and families 2. Private lenders 3. Employer

4. Others (Please specify)

17. What type of security (collateral) was given for your loan?

1. That home 2. Another Property 3. Personal guarantee

4. Others (Please specify)

18. What is your opinion on the following loan approval stage of housing finance with respect to your satisfaction? For each of the following, please tick (√) where applicable the extent to which you agree scale.

Loan approval stage of housing finance	1	2	3	4	5
	Very Dissatisfi	Dissati sfied	Neutral	Satisfied	Very Satisfied

		ed				
1	Home loan application					
2	Credit processing					
3	Due diligence Assessment					
4	Credit appraisal study					
5	Credit Documentation					
6	Valuation of Collateral					
8	Underwriting and closing					

LOAN REPAYMENT STATUS

1. Did you repay loan to your bank on time? 1. Yes 0. No
2. If you are now on paying your home loan in which of the following you pay your loan?
 1. As per the schedule agreed
 2. Delay and paying with penalties
 3. Completely defaulted
 4. If any Other.....
3. The listed below are the major factors affecting your loan repayment performance of housing finance? For each of the following, please tick (√) where applicable the extent to which you agree scale.

Factors	1	2	3	4	5
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Saving culture					
Employment status					
Loan supervision					
Loan Size					
Family Members Education and other expenses					
Sudden drop in Average					

Household Income					
Unavailability of Spouse's income source					
Interest rate					
Loan diversion					
Financial shocks					
Loan utilization					
Celebration of Religious, Cultural and other ceremonies					
Changes of Inflation in the economy					

4. Does the loan repayment schedule of housing finance Suitable? 1. Yes 0. No

5. Please **rank** the reasons for Loan Default

No.	Reasons for Becoming Default	Rank
1	Low supervision by the loan officer of your bank	
2	Weak legal enforcement for defaulter's	
3	Improper utilization of loan	
4	Have outstanding loan from other financial institution	
5	Corruption tendencies inform of bribes, embezzlement, fraud, etc	
6	Loan diversion	
7	Adverse selection and moral hazard	

6. Have you ever been supervised by loan officers for loan repayment?

1. Yes 0. No

7. Did you use the entire loan for the intended purpose that means did you utilize the entire loan properly? 1. Yes 0. No

Open End Questions

1. What are the challenges and other factors that determine loan approval of housing finance??

.....

2. What are the challenges and other factors that determine loan recovery performance of housing finance?

-----What Measures do you suggest to Control Loan Default?

Thank you!!!

ii. Questionnaire for Employees



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE

Dear Participant,

My name is Mihretu Bayeh. I am a postgraduate student at Addis Ababa University in the field of Accounting and Finance undertaking a research on “determinants of approval and Repayment performance of housing finance in Addis Ababa in case of Zemen Bank SC” Which is a requirement for the award of the Degree of Master of science in Accounting and Finance. I am therefore requesting your assistance to fill the attached questionnaires. Completion of the questionnaire will take approximately 10 minutes, and all questions can be answered by following the simple instructions as indicated on the questionnaire. All responses are anonymous, there are no incorrect answers. The information given will be handled confidentially, and will be used only for academic purpose.

Yours faithfully,

Mihretu Bayeh

Notice:

- No need of writing your name.
- Make tick (✓) for questions that have an alternative.
- Please write brief answer for these questions that have no choice.

Thank you in advance!

Questionnaire for Employees

Section A. General Background

1. Sex 1= Male 0= Female
2. What is your age? 1. 20-30 2. 30-35 3. 35-45 4. Above 45
3. What is the level of education?
 1. Diploma 2. Degree 3. Master's Degree 4. Any other.....
4. Position in your bank: 1. Director credit department 2. Manager 3. Credit analyst 4. Credit officer

Section B. Questions related to Loan Approval

1. What are the major documents needed for the loan approval of housing finance? Please rank them.

No.	Loan documents needed for home loan	Rank
1	Identification Documents	
2	Mortgage statements	
3	Income and Employment history	
4	Tax documents	
5	Bank account Statement	
6	Self-employment document	
7	Property valuation	

2. How long does it take a customer to Approval of housing Loan from your Bank?
 1. 2-4 weeks 2. 4-6 weeks 3. 6-8 weeks 4. 8-10 weeks 5. Above 10 weeks
3. What are the ways of loan assessments practice for loan approval?
 - 1) Gather socio- economic factors
 - 2) Take guarantees
 - 3) Person to person collateral
 - 4) Any other.....

4. Does loan Officers make follow up to ensure the loan as utilized for the intended purpose only?

1. Yes 0. No

5. What ought to be the nature of the collateral or assurance to be provided to secure loan for housing?

1. The house for which loan is given itself 2. Providing independent assurance

3. Another house or real state (if any)

4. Other (please specify _____)

6. Which of the followings are reasons for loan Approval of housing finance? Please rank.

The reasons for loan approvals	Rank
Saving culture of household	
Average Income of household	
Employment status	
Borrower spouse have income source	
Work experience of borrower with his/her current company	
Relationship with bank	
Credit History	
Applicant eligibility	
Collateral pledged	
Loan Size requested	
Personal Guarantee	
Repayment period	
Interest rate	
Financial regulation	
Purpose of the loan whether for under-construction house or buying a ready-to-move house	

7. Which of the followings are reasons for loan rejection of housing finance? Please rank.

The reasons for loan rejections	Rank
Saving culture of household	
Average Income of household	
Employment status	
Borrower spouse loss income source	
Work experience of borrower with his/her current company	
Borrower Relationship with bank	
Credit History	
Housing price	
Applicant eligibility	
Collateral pledged	
Loan Size requested is too high	
Property right	
Duration of loan	
Interest rate	
Purpose of the loan whether for under-construction house or buying a ready-to-move house	

Loan Supervision and repayment

8. Have you ever supervise for loan repayment and loan Utilization of borrowers?

1. Yes 0. No

9. If yes? In What procedures you supervise?

- 1) Home to home supervision
2) Group wise of supervision
3) Representative Wise supervision

10. Please indicate your perception on Supervision of your bank

Supervision statements	1	2	3	4	5
	Strongly disagree	disagree	Neutral	Agree	Strongly Agree

1	The credit staffs of the bank are always ethical in the execution of their duties					
2	Managements are always involved and cooperative in ensuring customers get disbursement of loans in time.					
3	There is always information flow concerning credit operations amongst staff					
4	Bank engineer are closely supervised to ensure as they give true value of the collaterals					
5	Staff are usually trained on causes and measures to reduce customers defaulting on loans					
6	Staff always adhere to the approved credit policies and procedures					
7	The credit staffs of the bank are always committed and honest in all their actions					
8	Staffs always integrate credit risk management into planning at all levels					

Open end questions

1. What are the challenges and other factors that determine loan approval of housing finance??

.....

2. What are the challenges and other factors that determine loan repayment performance of housing finance?

3. What Measures do you suggest to Control Loan Default?

Thank you!!!

APPENDIX II

i. Tests of the model

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	50.487 ^a	.209	.313

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	13.622	13	.401
Step 1 Block	13.622	13	.401
Model	13.622	13	.401

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	2.691	8	.952

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	1.145	.307	13.927	1	.000	3.143

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.851	.843	37

Correlation matrix

	Constan t	AVHHN	SAVCUL	EMPSTS	LOANSI ZE	INCFMO TH	UNAVS I	IR	SCHED LR	TMLNES	SPRVS N	LOAN UT	LDIV ER
AVHHN	1.000	-.138	-.342	-.318	-.524	.630	-.572	-.160	.057	-.051	-.289	.040	.254
SAVCUL	-.138	1.000	-.089	-.103	-.127	-.297	.336	.102	.039	-.025	-.057	-.050	.057
EMPSTS	-.342	-.089	1.000	.330	.231	-.492	.395	.235	-.166	-.025	.232	-.566	.072
LOANSIZE	-.318	-.103	.330	1.000	.392	-.259	.341	.306	.084	-.132	.164	-.307	.011
INCFMOTH	-.524	-.127	.231	.392	1.000	-.370	.379	.216	.288	.045	.089	-.133	-.195
UNAVSI	.630	-.297	-.492	-.259	-.370	1.000	-.773	-.113	.065	-.017	-.297	.296	-.071
IR	-.572	.336	.395	.341	.379	-.773	1.000	.245	.101	.187	.026	-.387	.131
INFLRT	-.160	.102	.235	.306	.216	-.113	.245	1.000	.139	.126	-.060	-.653	.343
SCHEDLR	.057	.039	-.166	.084	.288	.065	.101	.139	1.000	.062	-.442	.063	-.025
TMLNES	-.051	-.025	-.025	-.132	.045	-.017	.187	.126	.062	1.000	-.080	-.072	-.061
SPRVS	-.289	-.057	.232	.164	.089	-.297	.026	-.060	-.442	-.080	1.000	-.124	.164
LOANUT	.040	-.050	-.566	-.307	-.133	.296	-.387	-.653	.063	-.072	-.124	1.000	-.584
LDIVER	.254	.057	.072	.011	-.195	-.071	.131	.343	-.025	-.061	.164	-.584	1.000

ii. Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
AVHHN	-.546	.593	.848	1	.357	.579	.181	1.852
SAVCUL	.324	.492	.436	1	.509	1.383	.528	3.625
EMPSTS	1.197	.549	4.756	1	.029	3.309	1.129	9.700
LOANSIZE	1.031	.901	1.308	1	.253	2.803	.479	16.400
INCFMOTH	1.099	1.009	1.185	1	.027	3.000	.415	21.686
UNAVSI	-1.173	.648	3.282	1	.050	.309	.087	1.101
IR	-1.378	.638	4.656	1	.031	3.965	1.135	13.860
INFLRT	-.858	.533	2.590	1	.018	2.359	.829	6.708
SCHEDLR	.196	1.038	.036	1	.850	1.216	.159	9.305
TMLNES	.384	.984	.152	1	.697	1.468	.213	10.104
SPRVSN	.157	.970	.026	1	.871	1.171	.175	7.830
LOANUT	-2.054	.945	4.728	1	.030	.128	.020	.817
LDIVER	1.535	1.966	.610	1	.435	4.643	.098	218.965
Constant	-1.127	3.405	.109	1	.741	.324		

a. Variable(s) entered on step 1: AVHHN , SAVCUL , EMPSTS , LOANSIZE , INCFMOTH , UNAVSI , IR , INFLRT , SCHEDLR , TMLNES , SPRVSN , LOANUT , LDIVER.

iii. Goodness of fit

Classification Table^{a,b}

	Observed	Predicted			
		Loan repayment performance of housing finance		Percentage Correct	
		Default	Non-default		
Step 0	Loan repayment performance of housing finance	Default	0	14	.0
		Non-default	0	44	100.0
	Overall Percentage				75.9

a. Constant is included in the model.

b. The cut value is .500

Classification Table^a

	Observed	Predicted			
		Loan repayment performance of housing finance		Percentage Correct	
		Default	Non-default		
Step 1	Loan repayment performance of housing finance	Default	5	9	35.7
		Non-default	2	42	95.5
	Overall Percentage				81.0

a. The cut value is .500