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**ST. MARY’S UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**FACTORS AFFECTING NON-PERFORMING LOANS IN EHIOPIAN BANKING SECTOR: SPECIFIC CASE OF COMMERCIAL BANK OF ETHIOPIA**

**BY**

**WAKJIRA DEJENE**

**JUNE2020**

**ADDIS ABABA, ETHIOPIA**

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A THESIS SUBMITTED TO, ST MARY’S UNIVERSITY SCHOOL OF GRADUATE STUDIES IN PARTIAL FUILFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADIMINISTRATION (ACCOUNTING AND FINANCE)

**JUNE2020**

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**WAKJIRA DEJENE**

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**DECLARATION**

First, I declare that this Thesis is my work and that all sources of materials used for this thesis have been fully acknowledged. This thesis has been submitted in partial fulfillment of the requirement for the Degree of Master of Business Administration in accounting and finance

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# Abstract

The notion of Non-performing Loans (NPLs) and its determinant factors have stayed center of study in the science of finance and economics over the last two-three decades. As the successes of banks largely depend on its NPL management, closely assessing the issue will have a paramount importance to the institutions. Commercial Bank of Ethiopia (CBE), the biggest bank in Ethiopia is implementing a number of systems to control the grave issue of NPLs, however the problem still persists. Claiming this fact several studies have been made to identify bank and customer specific factors affecting NPLs from study the effect of employees’ attitude towards the effectiveness of performance appraisal system comprehensively. The basic objective of this study was to identify factors affecting non-performing loans in Ethiopian banking sector; with specific case of commercial banks of Ethiopia. Explanatory research design and mixed research approach was applied to achieve this overriding objective of identifying bank and customer specific factors affecting NPLs. A multiple regression analysis was applied on the data collected from the selected sample using stratified sampling technique. Finally the data was collected using questionnaires, cleaned, coded in to and analyzed using SPSS V20. As per the findings of the study bankers’ incompetence, inadequacy of collaterals and lack of aggressive credit collection were found to highly affect the occurrence of NPLs. In addition borrower’s culture/orientation which is the dimension used for measuring customer specific also have a positive and significant effect on the occurrence of NPLs in the bank. Hence, it was concluded, as per employees who are working in the head office credit operation central processing center, that among the institution specific factors to affect NPLs bankers’ incompetence followed by inadequate nature of collaterals were the best predictor NPLs occurrence. Therefore, the top management of the bank should strongly work on developing technical and professional competence of credit performers through trainings and exposures. Additionally review its credit procedure and implement accordingly so as to improve the quality of loans.

**Key Words: Institution Specific factors borrowers’ culture/orientation Multiple Regression**

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# Chapter 1

# Introduction

## Background of the Study

Financial institutions around the world are becoming largely dominated by banks, with branches andsubsidiaries networked throughout the economies of nations. In every nation an important prerequisite to ensure the stability and growth of an economy is the strength of the banking industry. The industry’s contribution to the growth of any country is huge mainly, they are the main intermediaries between depositors and those in need of fund for their viable projects (creditors) thereby ensure that the money available in economy is always put to good use. Creditors are served with banks’ strategically segregated credit products out of the excess fund pooled from depositors. Simply put, banks pool funds together and make them available for investment with issuing loans, thereby providing liquidity. Moreover, banks administer payment systems which are core to an economy. Through payment system, banks execute customer’s payment instruction by transferring fund between their accounts. From policy point of view, banks are the transmission belt for monetary policy(Richard, 2011).

Banks, insurance companies and microfinance institutions are the major financial institutions operating in Ethiopia. Currently, the number of banks operating in the country are 18, of which 16 are private and 2 are state-owned. The domination of banks in financial industries is also a common phenomenon in developing economies like Ethiopia. These dominant institutions mobilize a huge amount of capital; for instance in the year 2018, total capital of the banking industry increased by 10% and reached Birr 85.8 billion, total resources mobilized by the banking system in the form of deposit, borrowing and loan collection increased by 27.7% and reached Birr 298.2 billion, total outstanding credit of the banking system including to the central government increased by 22.8 percent and reached Birr 449 billion. Further looking in to the field, one can find the supremacy of state owned banks in the Ethiopian financial industry: with more than 60% capital share, 62% resource mobilization share and 42% disbursement to the economy(National Bank of Ethiopia, 2017/18).

Accordingly, Each and every actions of the state owned bank-CBE is under the close follow-up of the governing body, for the fact that headwinds in these banks will have severe damage to the economy of the country. The national bank of Ethiopia (NBE), like the central banks in different countries, is the supervising body of the banking business operation. This governing body often reports that the Ethiopian financial sector has remained safe, sound, well capitalized and profitable. The non-performing loan of the commercial banks was within the required ceiling of 5%. However, confidence in the ability of central bankers to manage the economy and supervise the operations of big banks is swept away following the financial crisis that run from 2007-2009 G.C. (Mishkin, 2011). On the other hand another piece of good news has come out of this crisis. The field of macro/monetary economics has become a hell of a lot more exciting. Researchers faced with a whole new agenda for study that should keep people in the field very busy for a very long time. It has also made the work of central bankers more exciting as well.

Both academic economists and policymakers agree in the science of monetary policy that financial crises can begin in several ways.Across-the-board these include mismanagement of financial liberalization (the elimination of restrictions on financial markets andinstitutions)/innovation (introduction of new types of loans or other financial products), asset-price booms and busts, or a general increase in uncertainty caused by failures of major financialinstitutions. According to Swedberg, (2010), the global financial crisis of 2007-2009 was precisely attributed to non-performing loans (NPLs) of banks and mortgage firms; the increased debt burden and over-leveraging was too severe that the fourth-largest investment bank of USA, Lehman Brothers Holdings Inc., got bankrupt in 2008 (Amir Ikram, et al.., 2016)

Profitability and survival of banks rely heavily on loans to pursue their growth and sustainability objectives, hence for developing countries, the role of banks becomes even more imperative (Amir Ikram, et.al., 2016). The NPL position of banks is one of the most important indicator of financial stability since it depicts credit risk, operational risk and resources allocation efficiency. Credit risk is inherent to lenders and itmeasures the financial exposure associated with the money lend to borrowers. Ahmad & Bashir(2013) indicated that whenever financialvulnerabilityisexamined; main emphasis is placed onNPLs. In fact, NPLs is such a grave issue that the very survival of banks depends on it (Saba et al., 2012). Thus it is of paramount importance to figure out the determinants of NPLs and suggest pragmatic implications to minimize the risk.

The notion of Non-Performing Loans (NPLs) in banking business has been intensively researched and painstakingly documented both at international and national level, yet what really happens in Ethiopian financial industry regarding NPLs remained mystery. Several authors have studied both bank specific and macro-economic determinants of NPLs in Ethiopian banking industry (e.g. Dagne and Maru (2016), Anisa Umer (2015), Mekdes (2017), Amino (2018)). While others still attempted to find out either macroeconomic determinants or bank-specific factors alone (e.g. Wondimagegnehu(2012), Habtamu (2015), Oynaka, (2019)). Still there are authors who have included variables on customer side information in their study (e.g. Oynaka, (2019)).

Unraveling the mystery i.e. to identify determining factors and act accordingly I argue that, a fresh and unique look on issues has to be executed. First as the notion is critical in big banks the study should deeply consider the case in CBE. Second a more detailed analysis shall be applied for it gives a better insight to the real causes of the NPLs in this bank. Last, perhaps most importantly, determining factors which can be controlled by the banks’ management has to be identified for consecutive remedial actions ought to be feasible. Therefore, this study was undertaken with a detailed and profound analysis on the institution and customers specific determinants of NPLs in CBE.

## Background of the Organizations

Originally, the Commercial Bank of Ethiopia was known as the state bank of Ethiopia. However, the Ethiopian government decided to split the bank into the central bank of Ethiopia and the commercial bank of Ethiopia in 1863. Eventually, in 1980, the Ethiopian government decided to merge the Addis Bank with the commercial bank of Ethiopia, making Commercial Bank of Ethiopia the country’s sole commercial bank (Commercial Bank of Ethiopia, 2019).

Before it was merged with the Commercial bank of Ethiopia, the Addis Bank was created by the Ethiopian government from the merger of the Ethiopian operations of Banco di Naplia and Banco di Roma with the newly nationalized Addis Ababa Bank.

The Commercial bank of Ethiopia is noted as the pioneer of modern banking in the country. It was the first bank to serve ATM services for its local and the first to serve western union money transfer services in the country. Apart from this, the bank also plays a major role in directing Ethiopia’s economy towards development and progress. Currently it has over 1456 branches stretched across the country. The performance appraisal system of Commercial bank of Ethiopia is performed in Head office organ over country. The process of measuring and evaluating the performance of important processes carried out by human resources management, through the measurement and evaluation to enable the Organization to judge the accuracy of the programs and policies adopted, whether policies to attract and selection and appointment, or programs and policies for training, development and follow-up their human resources. The leading African bank with assets of 711.96 billion Birr as on June 30, 2019.

It plays a catalytic role in the economic progress & development of the country and it is the first bank in Ethiopia to introduce local users with ATM services. Currently CBE has more than 22 million account holders and the number of Mobile and Internet Banking users also reached more than 2.5 million as of June 30th 2019. Active ATM card holders reached more than 8 million. As of June 30, 2019, 2,513 ATM machine and 9,539 POS machines were available. It has strong correspondent relationship with more than 50 renowned foreign banks like Commerz Bank A.G., Royal Bank of Canada, City Bank, HSBC Bank, CBE has a SWIFT bilateral arrangement with more than 700 others banks across the world. CBE combines a wide capital base with more than 37,894 talented and committed permanent employees and more than 22,000 outsourced jobs as of June 30, 2019. Pioneer to introduce Western Union Money Transfer Services in Ethiopia early 1990s and currently working with other 20 money transfer agents like Money Gram, Atlantic International (Bole), Xpress Money, CBE has opened four branches in South Sudan and has been in the business since June 2009. CBE has reliable and long-standing relationships with many internationally acclaimed banks throughout the world (Commercial Bank of Ethiopia, 2019).

Commercial Banks and Development Bank of Ethiopia (DBE) disbursed Birr 115.4 billion in fresh loans which was 5.9 percent higher than a year ago; out of which CBE takes the lion’s share. Of the total new loans, about 58.2 percent was provided by private banks and 41.8 percent by the two public banks(National Bank of Ethiopia, 2017/18).

## Statement of the Problem

According to IMF a loan is non-performing when payments of interest and principal are past due by 90 days or more, or at least 90 days of interest payments have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt that payments will be made in full”(Klein, 2013). According to National Bank of Ethiopia, the governing body of the financial industry in the country, NPL is defined as “Loans or Advances whose credit quality has deteriorated such that full collection of principal and/or interest in accordance with the contractual repayment terms of the loan or advances in question”(NBE., 2008).

Large banks, by internalizing that their actions affect the government’s bailout response, find it optimal to increase their leverage in equilibrium. Their increased leverage increases the magnitude of bailouts, thereby encouraging small banks to take on more leverage. Both effects are mutually reinforcing, and generate further increases system-wide leverage in equilibrium. Hence, aggregate leverage and the magnitude of government bailout interventions are larger when large banks are present. The belief that regulators and policymakers must pay special attention to large financial institutions, since they have a direct motive to take on more risk and also because their behavior disproportionally influences the decisions of small players in equilibrium. The experience from the latest financial crisis that run from 2007 to 2009 G.C. has taught researchers, policy makers and about the inability of governors of central banks to manage the economy and supervise the operation of central banks(Mishkin, 2011).

The NPL position of banks is one of the most important indicator of financial stability since it depicts credit risk, operational risk and resources allocation efficiency. Credit risk is inherent to lenders and itmeasures the financial exposure associated with the money lend to borrowers. Ahmad & Bashir(2013) indicated that whenever financialvulnerabilityisexamined; main emphasis is placed onNPLs. In fact, NPLs is such a grave issue that the very survival of banks depends on it (Saba et al., 2012). Thus it is of paramount importance to figure out the determinants of NPLs and suggest pragmatic implications to minimize the risk.

The notion of Non-Performing Loans (NPLs) in banking business has been intensively researched and painstakingly documented both at international and national level, yet what really happens in states owned banks of the Ethiopian banking industry remained mystery. Researches aimed at identifying the macroeconomic and bank specific determinants of NPLs takes the lions share from the existing body of literature at national level under the Ethiopian banking industry setting (e.g. Dagne and Maru (2016), Anisa Umer (2015), Mekdes (2017), Amino (2018)).

According to Dagne & Maru (2016), positive significant association between the foreign direct investment, GDP growth and average exchange rate growth and NPL in DBE. They have used multivariate time series model of vector auto regressive and vector error correction model on a 35 years data collected(Dagne Mulatu and Maru Shete, 2016). Anisa Umer (2015) has attempted to determine bank specific and macroeconomic factors that could affect banks NPLs and to examine the relationship between these factors with the rate of banks NPLs. She has found out that deposit rate, loan to deposit ratio and lending interest rate had positive and significant impact on banks nonperforming loan. Cost efficiency had negative and significant impact on banks nonperforming loan. Bank solvency ratio and gross Domestic product (GDP) and growth rate and inflation rate had negative and statistically insignificant impact on banks nonperforming loan(Anisa Umer, 2015).

Mekdes (2017) by applying an explanatory research design with mixed approach has concluded that return on equity and capital adequacy have negative and significant impact on NPLs. Whereas, loan loss provision and loan to deposit have a significant positive relationship with NPLs(Mekdes Asfawesen, 2017). The latest article from this category, Amino (2018) has applied a panel data regression and concluded that trade openness positively and significantly affects non-performing loans, whereas, exchange rate, unemployment and loan growth affects NPLs negatively and significantly. The findings also showed an insignificant relationship of real lending rate, capital adequacy ratio and ownership structure with NPLs of Ethiopian commercial banks.

Among researches aiming at identifying specifically determining banks specific factors, (Wondimagegnehu, 2012) is aimed at assessing the occurrence of NPL and some bank specific factors in commercial banks of Ethiopia. According to this article, factors such as poor creditassessment, failed loan monitoring,underdeveloped credit culture, lenient credit terms and conditions, aggressive lending,compromised integrity, weak institutional capacity, unfair competition among banks, willfuldefault by borrowers and their knowledge limitation, fund diversion for unintended purpose,over/under financing by banks ascribe to the causes of loan default.

Habtamu (2015) sought to find out bank specific factors affecting occurrence of NPLs in Ethiopian private banks. A survey study research design of six private Banks was employed in his study. Accordingly the findings of the study shows that the major factors affecting NPLs were poor credit assessment, poor loan follow up, undeveloped credit culture, lenient credit terms and conditions, knowledge limitation, compromised integrity, unfair competition among banks, fund diversion for unintended purpose, shareholders influences are bank specific factors ascribed to the occurrence of loan default.

The latest article by (Oynaka, 2019) has a made comparative analysis between state-owned and privately owned commercial banks on the determining factors of NPLs. The findings in this study has concluded the bank pecificfactors affecting NPLs includecredit size, banksize& performance, poor credit assessment, poor credit terms, lack of aggressive credit collection system, inadequate nature of collateral were identified as bank specific factors affecting NPLs.Borrowers’ culture/ orientation was identifiedas customer specific factors affecting NPLs.

In conclusion, there exists quite a huge body of literature on identifying the determining factors of NPLs in Ethiopian banking industry. Macroeconomic determinants are by now well identified, though their effect is almost the same across the banks. However this grave issue of NPLs in the big, state-owned, Ethiopian commercial bank remained mystery. For instance during the last three Ethiopian fiscal years NPL in CBE is 2.5%, 2.8% and 3.4%(CBE, 2019). This might right away tell us CBE’s NPL position in terms of proportion is under the standard set by NBE. However, in monetary value the NPL in the bank is very huge amount of money (above birr 6 billion), which is far greater than capitals of most of the private banks. In addition, the bank is currently planning and working towards reducing its NPL, though it is increasing at an increasing rate. Like the problem facing the big ship in the ocean is the concern of the small boats, the trend and position of NPL in CBE is crucial for the Ethiopian banking industry.

Therefore, unraveling the mystery i.e. to identify factors and act accordingly I argue that the issue of NPLs can better be understood with deep look in to the bank’s credit operation and customer behavior. Therefore, this study has proved critical in bridging the knowledge gap by identifying the factors that cause non-performing loans and facilitate appropriate measures to avoid their occurrence in CBE; eventually ithas attempted to provide answers for the following basic research questions:

### Research questions

1. What are institutional specific factors affecting Non-performing loans in CBE?
2. What are customers specific factor affecting non-performing loan inCBE?
3. Which explaining variable of institution specific factors have more influence on NPLs in the bank?
4. What are the remedial practices that can be implemented to reduce the level of NPLs in CBE?

### Objectives of the study

### General Objectives

The general objective of this study was to identify factors affecting non-performing loans in Ethiopian banking sector; with specific case of commercial banks of Ethiopia.

### Specific Objectives

Based on the above stated general objective the following specific objectives drawn are:

* To assess institution specific factors affecting non-performing loans in commercial bank of Ethiopia
* To examine customer specific factors affecting non-performing loan in commercial bank of Ethiopia
* To identify which explaining variable of institution specific factors have more influence on NPLs in the bank
* To evaluate some of the remedial practices that can be implemented to reduce the level of non-performing loans in State-owned banks of Ethiopia

### Hypothesis of the study

Ho: There is no positive and significant relationship between institution specific factors and the NPL situation in commercial bank of Ethiopia

Ha: There is positive and significant relationship between institution specific factors and the NPL situation in commercial bank of Ethiopia

### Significance of the study

NPLs are one of the most crucial causes of the economic stagnation troubles, as they cause financial crisis. If the issue of non-performing loans is left unresolved, it can compound into financial crisis. Therefore, minimization of NPL is a necessary condition for improving economic growth. The first step to overcome a problem is knowing the root cause. By identifying the main causes of NPLs in the banking sector, the finding of the research gives important suggestions for mangers and bank regulating authorities in dealing with NPLs management. The issue is much more crucial in a big and state-owned bank as most of the resource belongs to the public.

Moreover, the study narrows the literature gap in Ethiopia banking system regarding the determinants of NPLs by utilizing both bank and customer specific variables. By now the macroeconomic factors are well identified. Finally, it will serve as a reference for further studies in the respective area.

### Scope and delimitation of the study

Comprehensive understanding about an object of a study demands researching that object from every aspect and whole life and in every situation. However, in reality it’s not possible to go through the width and breadth of every aspect of an object of a study. Rather researcher often set a scope for their study conceptually, methodologically and geographically. Same is done here.

Conceptually, the determinants of NPLs in Ethiopian banking industry was studied by identifying some institution related factors like, bank size and performance, credit size (aggressive lending, compromised integrity in approval, rapid credit growth, bank great risk appetite), poor credit analyses and assessment, poor credit monitoring and banks loan supervision capacity, poor credit condition and lenient/lax credit terms, lack of aggressive credit collection system, inadequate nature of collateral. In addition customer specific factors to be considered for this study was borrows’ culture/orientation.

Methodologically, the study used mixed type (both qualitative and quantitative) research approach. The rationale behind using mixed approach is because of its most appropriateness to address the research questions by using both qualitative and quantitative data. The common technique of collecting quantitative data is the survey method. The major data collection instrument to collect datawasquestionnaire.

Geographically, the commercial bank of Ethiopia is a very large business organization owned by Ethiopian government having ten districts and more than 1,300 branches. Both structurally and functionally the credit operations of the bank are coordinated from the central processing centers (CPCs) which are located in the head office. Since these credit CPCs are located in Addis Ababa, the researcher has explained the notion raised by focusing the CPCs.

Finally, since it won’t be possible to observe the situation throughout the whole life of the bank, the researcher has attempted to consider recent past years’ situation in the bank and expected the respondents will consider and make their opinion over their experience in the recent past years.

### Limitation of the study

The main setting of this study is commercial bank of Ethiopia, hence the situation in private banks is not considered for comparison, logical reasoning and other relevant justifications. CBE has district offices and branches which provide credit services across the country, however due to time and resource limitation the current study was confined to the head office organ performing credit service provision. Furthermore, the departments considered in the study which are currently structured to perform the credit service are credit management, credit appraisal, and loan work out and recovery.

Since the main objective of this study was to determine the institution and customer specific factors causing NPLs in the state-owned commercial bank of Ethiopian banking industry, macroeconomic variables were not considered for this case.

Finally, other issues like politics are ignored, for the ultimate purpose of conducting this study if for academic qualification.

### Organization of the study

The thesis is organized into five chapters. The first chapter consists of background of the study, background of the organization, statement of the problem, Research questions, and objectives of the study,significance of the study, scope and delimitations of the study, limitation of the study and organization of the paper. The second chapter reviews the literatures relevant to the study which includes theoretical review, empirical review, theoretical framework and conceptual framework finally hypothesis of the study. Brief description of methodology that is the population and sampling technique of the study; the sources of data; the data collection tools/instruments employed; the procedures of data collection; and the methods of data analysis are presented in the third chapter. The results and discussions of the findings are presented in chapter four. Finally, the conclusion and recommendations of the study are presented in chapter five.

# Chapter 2

# Literature Review

## Historical Review

* + 1. **The history of banking in Ethiopia**

It was in 1905 that the first bank, the “Bank of Abyssinia”, was established based on the agreement signed between the Ethiopian Government and the National Bank of Egypt, which was owned by the British. Its capital was 1 million shillings. According to the agreement, the bank was allowed to engage in commercial banking (selling shares, accepting deposits and effecting payments in cheques) and to issue currency notes. The agreement prevented the establishment of any other bank in Ethiopia, thus giving monopoly right to the Bank of Abyssinia. The Bank, which started operation a year after its establishment agreement was signed, opened branches in Harar, Dire Dawa, Gore and Dembi- Dolo as well as an agency office in Gambela and a transit office in Djibouti. Apart from serving foreigners residing in Ethiopia, and holding government accounts, it could not attract deposits from Ethiopian nationals who were not familiar with banking services.

The Ethiopian Government, under Emperor Haile Sellassie, closed the Bank of Abysinia, paid compensation to its shareholders and established the Bank of Ethiopia which was fully owned by Ethiopians, with a capital of pound Sterling 750,000. The Bank started operation in 1932. The majority shareholders of the Bank of Ethiopia were the Emperor and the political elites of the time. The Bank was authorized to combine the functions of central banking (issuing currency notes and coins) and commercial banking. The Bank of Ethiopia opened branches in Dire Dawa, Gore, Dessie, Debre Tabor and Harrar.

With the Italian occupation (1936-1941), the operation of the Bank of Ethiopia came to a halt, but a number of Italian financial institutions were working in the country. These were Banco Di Roma, Banco Di Napoli and Banca Nazionale del Lavora. It should also be mentioned that Barclays Bank had opened a branch and operated in Ethiopia during 1942-43.

In 1946 Banque Del Indochine was opened and functioned until 1963. In 1945 the Agricultural Bank was established but was replaced by the Development Bank of Ethiopia in 1951, which changed in to the Agricultural and Industrial Development Bank in 1970. In 1963, the Imperial Savings and Home Ownership Public Association (ISHOPA) and the Investment Bank of Ethiopia were founded. The later was renamed Ethiopian Development Corporation S.C. in 1965. In the same year, the Savings and Mortgage Company of Ethiopia S.C. was also founded.

With the departure of the Italians and the restoration of Emperor Haile Selassie’s government, the State Bank of Ethiopia was established in 1943 with a capital of 1 million Maria Theresa Dollars by a charter published as General Notice No. 18/1993 (E.C). The Bank which, like its predecessor, combined the functions of central banking with those of commercial banking opened 21 branches, including one in Khartoum (the Sudan) and a transit office in Djibouti.

In 1963, the State Bank of Ethiopia split into the National Bank of Ethiopia and the Commercial Bank of Ethiopia S.C. with the purpose of segregating the functions of central banking from those of commercial banking. The new banks started operation in 1964.

The first privately owned company in banking business was the Addis Ababa Bank S.C., established in 1964. 51% of the shares of the bank were owned by Ethiopian shareholders, 9% by foreigners living in Ethiopia and 40% by the National and Grindlays Bank of London. The Bank carried our typical commercial banking business. Banco Di Roma and Banco Di Napoli also continued to operate.

Thus, until the end of 1974, there were state owned, foreign owned and Ethiopian owned banks in Ethiopia. The banks were established for different purposes: central banking, commercial banking, development banking and investment banking. Such diversification of functions, lack of widespread banking habit among the wider population, the uneven and thinly spread branch network, and the asymmetrical capacity of banks, made the issue of completion among banks almost irrelevant.

Following the 1974 Revolution, on January 1, 1975 all private banks and 13 insurance companies were nationalized and along with state owned banks, placed under the coordination, supervision and control of the National Bank of Ethiopia. The three private banks, Banco Di Roman, Banco Di Napoli and the Addis Ababa Bank S.C. were merged to form “Addis Bank.” Eventually in 1980 this bank was itself merged with the Commercial Bank of Ethiopia S.C. to form the “Commercial Bank of Ethiopia,” thereby creating a monopoly of commercial banking services in Ethiopia.In 1976, the Ethiopian Investment and Savings S.C. was merged with the Ethiopian government Saving and Mortgage Company to form the Housing and Savings Bank .The Agricultural and Industrial Development Bank continued under the same name until 1994 when it was renamed as the Development Bank of Ethiopia.

Thus, from 1975 to 1994 there were four state owned banks and one state owned insurance company, i.e., the National Bank of Ethiopia (The Central Bank), the Commercial Bank of Ethiopia, the Housing and Savings Bank, the Development Bank of Ethiopia and the Ethiopian Insurance Corporation.

After the overthrow of the Dergue regime by the EPRDF, the Transitional Government of Ethiopia was established and the New Economic Policy for the period of transition was issued. This new economic policy replaced centrally planned economic system with a market-oriented system and ushered in the private sector. Several private companies were formed during the early 1990s, one of which is Oda S.C. which conceived the idea of establishing a private bank and private insurance company in anticipation of a law which will open up the financial sector to private investors(Fasil Alemayehu, Merhatebeb Teklmedhin, 2012).

In line with this, Monetary and Banking proclamation of 1994 established the national bank of Ethiopia as a judicial entity, separated from the government and outlined its main function. Monetary and Banking proclamation No.83/1994 and the Licensing and Supervision of Banking Business No.84/1994 laid down the legal basis for investment in the banking sector. Consequently shortly after the proclamation the first private bank, Awash International Bank was established in 1994 by 486 shareholders and by 1998 the authorized capital of the Bank reached Birr 50.0 million. Dashen Bank was established on September 20, 1995 as a share company with an authorized and subscribed capital of Birr 50.0 million. 131 shareholders with subscribed and authorized capital of 25.0 million and 50 million founded bank of Abyssinia. Wegagen Bank with an authorized capital of Birr 60.0 million started operation in 1997. The fifth private bank, United Bank was established on 10th September 1998 by 335 shareholders .Nib International Bank that started operation on May 26, 1999 with an authorized capital of Birr 150.0 million. Cooperative Bank of Oromia was established on October 29,2004 with an authorized capital of Birr 22.0 million. Lion International Bank with an authorized capital of Birr 108 million started operation in October 02, 2006. Zemen Bank started operation on June 17, 2008 with an authorized capital of Birr 87.0 million. Oromia International Bank started operation on September 18, 2008 with an authorized capital of Birr 91 million(Hailu, 2012).

# Theoretical Review

## Definition of Non-performing Loans and related concepts

Before embarking on the definition of NPLs. It will be apparent to discuss some concepts about banking operation of credit services. Loans are the dominant asset and represent fifty percent to seventy five percent to the total amount of banks assets. In most banks loans generate the largest share of operating income and represent banks greater risk exposure.Loans and advances are the most profitable of all assets of a bank. These assets constitute the primary source of income by banks. As a business institution, a bank aims at making a giant profit. Since loans and advances are more profitable than any other assets, it is willing to lend as much of its funds as possible. But banks have to be careful about the safety of such advances. If abank’s asset quality is inadequate (e.g. the loan amount becomes the amount to be collected), the bank will have to increase its baddebt losses as well as spend more resources on the collection of non-performing loans, this increase non-performing loans(M. Radha, and SV. Vasudevan, 1980).

NPLs have greater implication on the function of banks as well as overall financial sector development. In line with the above idea Daumont et.al (2004) found the accumulation of nonperforming assets to be attributable to economic downturns and macroeconomic volatility, terms of trade deterioration, high interest rates, excessive reliance on overly high-priced interbank borrowings, insider lending and moral hazard. Wondimagegnehu Negera, (2012)clearly pointed out non- performing loans as a leading indicator of credit quality for banks. Bhide, et.al. (2003) as sited on (Anisa Umer, 2015)has noted among various indicators of financial stability, banks’ non-performing loan assumes critical importance since it reflects on the asset quality, credit risk and efficiency in resources allocation to productive sectors.

Criterion for identifying non-performing loans varies throughout the world even between African countries. Some countries use quantitative criteria to distinguish between “good” and “bad” loans (e.g., number of days of overdue schedule payments), while others rely on qualitative standards (such as the availability of information about the client’s financial status, and perspectives about future payments). However, the Basel II Commission emphasizes the need to evolve toward a standardized and internal rating-based approach. Accordingly, the Basel committee puts non-performing loans as loans left unpaid for a period of 90 days(Fofack H, 2005).

Different scholars have defined NPLs in different ways and by now no single and standard definition of NPLs exists at practical level. Fofack H, (2005) as cited in(Anisa Umer, 2015), who define non-performing loans as those loans which for a relatively long period of time do not generate income that is, the principal and or interest on these loans have been left unpaid for at least ninety days. The authors further supported that non-performing loans are the loans which are not generating income. Nonperforming loans are also commonly described as loans in arrears for at least ninety days and non-performing loans have been widely used as a measure of asset quality among lending institutions and often associated with failures and financial crises in both developed and developing world(Anisa Umer, 2015).

Institutions have also defined it from their own perspective. According to the International Monetary Fund (IMF, 2009), a non- performing loan is any loan in which interest and principal payments are more than 90 days overdue; or more than 90 days’ worth of interest has been refinanced .On the other hand the Basel Committee1 (2001) puts non-performing loans as loans left unpaid for a period of 90 days (Dagne Mulatu and Maru Shete , 2016).

Under the Ethiopian banking business directive, non-performing loans are defined as “Loans or Advances whose credit quality has deteriorated such that full collection of principal and/or interest in accordance with the contractual repayment terms of the loan or advances in question” National Bank of Ethiopia(NBE., 2008).

From the above discussed definitions: Generally, from the above definition NPL is:

* A loan that is not earning income;
* Full payment of principal and interest is no longer anticipated;
* Principal or interest is 90 days or more delinquent or;
* The maturity date has passed and payment in full has not been made.

In Ethiopia the criteria of NPL is in accordance with the Basel rules. If a loan is past due 90 consecutive days, it will be regarded as non- performing. The criteria used in Ethiopian banking business to identify non-performing loan is a quantitative criteria based on the number of days passed from loan being due.

To identify the loans which are non- performing and to calculate and determine the amount of provisions according to loans directive number SBB/43/2008 loans are classified into five class(NBE., 2008).

1. Pass: Loans or advances that are fully protected by the current financial and the paying capacity of borrower and are not subject to criticism. In other word passed means loans paid back.
2. Special Mention: Past due for more than 30 days but less than 90 days. Special mention class of loans implies Loans to incorporations, which may get some trouble in the repayment due to business cycle losses.
3. Substandard: Past due for more than 90 days but less than 180 days. Substandard signify Loans whose interest or principal payments are longer than three months in arrears of lending conditions are eased.
4. Doubtful: Past due for more than 180 days but less than 360 days. Doubtful indicate that full liquidation of outstanding debts appears doubtful and the accounts suggest that there will be a loss.
5. Loss: Past due over 360 days, in other word loss imply that outstanding debts are regarded as not collectable.

Non-performing loans comprise the loans in the last three categories (Substandard, Doubtful and Loss), and are further differentiated according to the degree of collection difficulties.

As per the directive No. SBB/43/2008 Minimum provision percentage against outstanding principal amount of each loan or advance classified in accordance with the criteria for the classification of loan or advance on the above. The minimum percentage of provision in their order discussed above is 1%, 3%, 20%, 50% and 100%.

## Determinants of NPLs in Banking Industry

Deterioration in banks’ loan quality is one of the major causes of financial fragility. Past experience shows that a rapid build‐up of bad loans plays a crucial role in banking crises (Demirgüç ‐ Kunt and Detragiache, 1998, and González‐Hermosillo, 1999). In recent years, the global financial crisis and the subsequent recession in many developed countries have increased households’ and firms’ defaults, causing significant losses for banks. Default culture is not a new dimension in the arena of investment. Rather in the present economic structure, it is an established culture. The redundancy of unusual happening becomes so frequent that it seems people prefer to be declared as defaulters (Sonali, 2001).

Generally, in developing and underdeveloped countries, the reasons for default have a multidimensional aspect. Various researchers have concluded various reasons for loan default. The literature reviewed concentrate on two grand factors- macroeconomic and bank specific factors. Studies in the US and the rest of the world provide this result. For instance, Bercoff et al (2002) examine the fragility of the Argentinean Banking system over the 1993-1996 periods; and came up with a finding that NPLs are affected by both bank specific factors and macroeconomic factors(Wondimagegnehu Negera, 2012).

### Macroeconomic Determinants of NPLs

The macroeconomic determinants of the quality of banks’ loans have been area of various researchers during the past two decades. The literature on the major economies has confirmed that macroeconomic conditions matter for credit risk. These literatures among others have investigated the linkage between macroeconomic factors like GDP, inflation, real interest rates, unemployment etc. and loan performance (e.g. Anisa Umer, (2015),Wondimagegnehu Negera, (2012),Dagne Mulatu and Maru Shete , (2016)Klein, (2013) etc...).

Macroeconomic stability and banking soundness are inexorably linked. Both economic theory and empirical evidence strongly indicate that instability in the macroeconomic is associated with instability in banking and financial markets and viceversa. As sighted by Wondimagegnehu Negera, (2012) researches indicates that the expansion phase of the economy is characterized by arelatively low number of NPLs, as both consumers and firms face a sufficient stream ofincome and revenues to service their debts. However as the booming period continues, creditis extended to lower-quality debtors and subsequently, when the recession phase sets in,NPLs increase. (Fisher 1933, Minsky 1986, Kiyotaki and Moore 1997, Geanakoplos 2009)(Wondimagegnehu Negera, 2012).

Further macroeconomic instability which is mostly manifested by high inflation rate also makes loan appraisal more difficult for the bank, because the viability of potential borrowers depends upon unpredictable development in the overall rate of inflation, its individual components, exchange rates and interest rates. Moreover, asset prices are also likely to be highly volatile under such conditions(Anisa Umer, 2015).

The existing body literature quite convincingly, reveals that favorable macroeconomic conditions, such as sustained economic growth, low unemployment and interest rates, tend to be associated with a better quality of bank loans; under favorable economic circumstances, borrowers receive sufficient streams of income and meet their debt obligations more easily. Furthermore, these results are robust to different empirical methodologies and hold across countries.

### Institution-specific Determinants of NPLs

Bank specific factor internal factor arise from inside of bank can be control by managerialdecisions. The Several bank specific factor which the literature proposes that the relevant data can quantitatively be generated from the bank itself and NBE and taken as importantdeterminants of NPLs are net interest margin, capital adequacy, loan loss provision, loan todeposit ratio and return on equity (Rahman 2017 and Boudiga 2009).

**Loan to Deposit Ratio:** The loan to deposit ratio is affected by the operational strategy of a
bank’s management. Excessive rapid loan growth declined bank’s capital levels and useful
pointers the deterioration of banks financial health and can be employed as early warning
indicators of future problem loans ( Das and Ghosh 2007) As disclosed by Jimenez and Saurian(2006) loan growth is considered as one of the most important causes of problem loans.However, according to Sinkey and Greenwalt (1991) a rapid expansion of loan may not be aproblem by itself, but such expansion leads to poor screening and lending to borrowers ofinferior quality.

**Net interest margin** (**NIM**): is a measure of the difference between the **interest** income
generated by banks and the amount of interest paid out to their lenders (deposits) relative to theamount of their interest-earning assets (loan). NIM measured as the difference between interestincome and interest expenses, is widely regarded as an indicator of intermediation efficiency orthe cost of intermediation (Raja and Sami 2015). These authors suggested that efficientintermediation is one of the most important functions of the banking system in supportingeconomic growth.

**Capital adequacy:** is an indicator of the ability of banks to provide funds for expansion and
accepting risk loss caused by the operations of the bank. The difference between total assets andtotal liabilities is called capital. It is the amount of own fund available to support the bank'sbusiness and act as a buffer in case of adverse situation. It shows ability of the firm that liabilitycould be privileged. Capital adequacy is the level of capital required by the banks to enable themwithstand the risks such as credit, market and operational risks they are exposed to in ordertoabsorb the potential loses and protect the bank's debtors. Capital adequacy is a measure of theoverall financial strength of a bank. The higher the capital adequacy ratio, the higher the level ofprotection available to depositors and It is vital for maintaining soundness of the banking systemsince it acts as a cushion against panic or bank run or uncertainties (Keovongvichith 2012).

**Return on equity:** is the amount of net income returned as a percentage of equity. Return
on equity measures a corporation's profitability by revealing how much profit a company
generates with the money shareholders have invested. Return on equity measure Profitability andoffers clues about the ability of the bank to undertake risks and expand its activity. Banks returnon equity increases reflect the risk taking behavior of bank managements and less stressed forrevenue creation and less forced to engage risk credit offering business (Makri *et al*. 2014).

**Loan loss provisions:** are regarded as a controlling mechanism over expected loan losses.
According to Hasan and Wall (2004) where provisions are triggered by default incidents on
loans, higher levels of NPLs are associated with high rates of pro-visioning. At the same time,banks anticipating high levels of capital losses might create higher provisions to decreaseearnings volatility and to reinforce medium term bank solvency

Although, there are sizable literature in identifying bank specific factors affecting NPLs whose initial data (quantifiable) can easily be generated from the report of the bank and NBE, a few literatures have examined the connection between NPLs and bank-specific factors generated from qualitative measures like opinions of credit performers. Based on their examination, rapid loan growth, higher interest rates, lenient credit terms, credit orientation, bank size, cost efficiency, ownership structure, poor loan monitoring, poor risk assessment, lack of strict admittance exit policies, are the identified bank specific factors to cause NPLs. These articles are reviewed in the forthcoming sessions.

# Review of related Empirical Literature

The notion of Non-Performing Loans (NPLs) in banking business has been intensively researched and painstakingly documented both at international and national level, yet what really happens in the Ethiopian banking industry remained mystery. Researches aimed at identifying the macroeconomic and bank specific determinants of NPLs takes the lions share from the existing body of literature at national level under the Ethiopian banking industry setting (e.g. Dagne and Maru (2016), Anisa Umer (2015), Mekdes (2017), Amino (2018)).

Dula (2010) is study entitled Non-performing loan and its management: the case of Dashen Bank Mekelle area identified ineffective loan monitoring and poor credit appraisal as the major factors accounting for non-performing loan from the lending institution side and lack of proper education on business area, lack of sufficient income, absence of sufficient infrastructure, lack of sufficient supervision from the bank, lack of saving account, high consumption expenditure andhigh interest charge as the causes for non-performing loan from the borrower side.

According to Dagne & Maru (2016), positive significant association between the foreign direct investment, GDP growth and average exchange rate growth and NPL in DBE. They have used multivariate time series model of vector auto regressive and vector error correction model on a 35 years data collected(Dagne Mulatu and Maru Shete, 2016). Anisa Umer (2015) has attempted to determine bank specific and macroeconomic factors that could affect banks NPLs and to examine the relationship between these factors with the rate of banks NPLs. She has found out that deposit rate, loan to deposit ratio and lending interest rate had positive and significant impact on banks nonperforming loan. Cost efficiency had negative and significant impact on banks nonperforming loan. Bank solvency ratio and gross Domestic product (GDP) and growth rate and inflation rate had negative and statistically insignificant impact on banks nonperforming loan(Anisa Umer, 2015).

Mekdes (2017) by applying an explanatory research design with mixed approach has concluded that return on equity and capital adequacy have negative and significant impact on NPLs. Whereas, loan loss provision and loan to deposit have a significant positive relationship with NPLs(Mekdes Asfawesen, 2017). The latest article from this category, Amino (2018) has applied a panel data regression and concluded that trade openness positively and significantly affects non-performing loans, whereas, exchange rate, unemployment and loan growth affects NPLs negatively and significantly. The findings also showed an insignificant relationship of real lending rate, capital adequacy ratio and ownership structure with NPLs of Ethiopian commercial banks.

Among researches aiming at identifying specifically determining banks specific factors, (Wondimagegnehu, 2012) is aimed at assessing the occurrence of NPL and some bank specific factors in commercial banks of Ethiopia. According to this article, factors such as poor creditassessment, failed loan monitoring,underdeveloped credit culture, lenient credit terms and conditions, aggressive lending,compromised integrity, weak institutional capacity, unfair competition among banks, willfuldefault by borrowers and their knowledge limitation, fund diversion for unintended purpose,over/under financing by banks ascribe to the causes of loan default.

Tsige (2013) used a mixed methods research approach by mixed documentary analysis (structured review of documents) and in-depth interviews from 2000-2011 in eight commercial banks in Ethiopia to assess determinants of Non-performing loans (NPLs). The result of the study shows that, loan growth, financial performance, operational efficiency, effective exchange rate, inflation rate and gross domestic product have negative and statistically significant relationship with banks’ NPLs. On the other hand, variables like bank size and state ownership have a positive and statistically significant relationship with banks’ NPLs. However, the relationship for average lending rate and income diversification were found to be statistically.

Habtamu (2015) sought to find out bank specific factors affecting occurrence of NPLs in Ethiopian private banks. A survey study research design of six private Banks was employed in his study. Accordingly the findings of the study shows that the major factors affecting NPLs were poor credit assessment, poor loan follow up, undeveloped credit culture, lenient credit terms and conditions, knowledge limitation, compromised integrity, unfair competition among banks, fund diversion for unintended purpose, shareholders influences are bank specific factors ascribed to the occurrence of loan default.

The latest article by (Oynaka, 2019) has a made comparative analysis between state-owned and privately owned commercial banks on the determining factors of NPLs. The findings in this study has concluded the bank pecificfactors affecting NPLs includecredit size, banksize& performance, poor credit assessment, poor credit terms, lack of aggressive credit collection system, inadequate nature of collateral were identified as bank specific factors affecting NPLs.Borrowers’ culture/orientation was identifiedas customer specific factors affecting NPLs.

The studies in general depicted the association between GDP, inflation, effective interest rate, unemployment and loan qualities. Further bank specific factors like, bank size, credit terms, interest margin, rapid loan growth, credit orientation, operating efficiency, policies on borrower admittance, risk assessment and monitoring are found to be having significance on the occurrence of NPL.

Previous study in Ethiopia directly related to this research i.e. bank and customer specific determinants of non-performing loan in state-owned banks, to the knowledge of the researcher, is not found though there are other researches done on banking sector in Ethiopia. Therefore, this researcher will contribute towards filling the gap by examining the factors that affect occurrence of non-performingloans.

In summary, the existing body of literature has proved that there are a plenty of variables that affect the NPLs of banking sectors. In this study, the researcher focused on both bank specific and customer specific factors affecting non-performing loans commercial bank of Ethiopia. However, the variables that got more attention and included in this study are bank size and performance, credit size (aggressive lending, compromised integrity in approval, rapid credit growth, bank great risk appetite), poor credit analyses and assessment, poor credit monitoring and banks loan supervision capacity, poor credit condition and lenient/lax credit terms, lack of aggressive credit collection system, inadequate nature of collateral, borrows’ culture/orientation. In view of the above discussions, several studies were conducted on the determinants of Non-performing loans. Most of the previous studies focused on bank specific and macro-economic determinates of NPL. Thus, as to the knowledge researcher, one can find a lot of studies on the notion of NPL but there is still limited number of literatures with the specific motive of the current study in Ethiopian banking industry.

As mentioned above, majority of the previous studies focused on similar bank specific variables but in this study the researcher find the gap from empirical literature outside Ethiopia. This is lack of aggressive credit collection polices, which is a bank specific variable and it was not identified from previous studies in Ethiopia. Therefore, this study was expected to fill the gap by identifying the variable that causes for the occurrence of non-performing loans in Ethiopian banking industry, specific case of commercial bank of Ethiopia.

# Conceptual Framework

**Figure 1 Conceptual framework**

**Institution Specific Factors**

* Bank size and performance,
* Credit size ,
* Poor credit analyses and assessment,
* Poor credit monitoring and banks loan supervision capacity,
* Poor credit condition and lenient/lax credit terms,
* Lack of aggressive credit collection system,
* Inadequate nature of collateral,

**Customer Specific factors**

* Borrowers’ Culture/orientation

*Source: developed by the researcher*

Accordingly, based on the objective of the study, the above conceptual model has been framed. Non-performing loans are affected by bank specific and customer’s specific factors as discussed in the literature review part. Bank specific factors include Bank size and performance, credit size ( such as aggressive lending, compromised integrity in approval, rapid credit growth, bank great risk appetite), poor credit analyses and assessment, poor credit monitoring and banks loan supervision capacity, poor credit condition and lenient/lax credit terms, lack of aggressive credit collection system, inadequate nature of collateral,. On the other hand single customers’ specific factor which isborrowers’ Culture/orientationwas taken to analyze factors affecting non-performing loans.

# Chapter three

# Methodology of the Study

## Research Design and Approach

## Research design

According to Kothari (2004),Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. As the very nature of this research is to identify the institution and customers related determining factors of NPLs in commercial bank of Ethiopia. Although, the issue raised is well researched and documented, the problems NPLs remained unsolved and is seen as a grave. Thus an explanatory research design is adopted in order to achieve the paramount objective set for this study. In addition, this research design allows us to explain every aspect of the causal and effect relation that how and which institutional and customer related determining factors are affecting NPLs in the bank. Explanatory research design is also more advantageous than descriptive research in allowing the researcher to use some statistical tools which are more qualitative in nature; where in the later the researcher can use simple tools like mean, mode and frequency.

## Research Approach

In order to satisfy the objectives of the research under study, the research approach to be chosen has to enable the researcher use the best, and most widely applied method of research approach. Hence, a mixed research approach which combines both qualitative and quantitative data is employed. It aims and benefits appear rather simple; takes the best of qualitative and quantitative methods and combines them. Employing the combination of these two methods is taken as another step forward has given popularity to the mixed research design. Nowadays, the problems addressed by social scientists are complex and the use of either the qualitative or quantitative methods by themselves is inadequate.

The use of mixed methods gives an advantage of multiple forms of data drawing on all possibilities statistical and text analysis and interpretation. In addition, it helps to better understand a research problem by converging (triangulating) broad numeric trends from quantitative research and the detail of qualitative research. However, the challenges this form of research poses include need for extensive data collection, time intensive nature analyzing both numeric and text data. The data was collected concurrently.

## Population and Sampling Frame

Population represents the group or the individuals to whom the survey applies. Sample frame is the listing of all units in the population from which the sample is drawn or selected. In other words, populations contain those group or individuals who are in a position to answer the questions and to whom results of the survey apply. (Kitchenham, 2002)

The credit management, credit appraisal, loan work-out and recovery and credit quality assurance directorates in the head office of Commercial bank of Ethiopia are staffed with 120 permanent employees. Thus, the population for this study was the permanent employees who are working in the credit management, credit appraisal,loan work-out and recovery and credit quality assurance directoratesin the head office of the bank.

## Sampling Technique and Sample size

As mentioned above the total population in the study area that means permanent employees who are working in the credit management, credit appraisal,loan work-out and recovery and credit quality assurance directorates head offices of the banks are 120 in CBE. It is a bit expensive in terms of money and time to collect data from all theseemployees, so that the study has to determine sample which is representative for the totalpopulation. In this study a stratified sampling technique was applied; since all wings working credit operation in the head office of the bank have to be covered with good representation. Therefore, respondents from each positions was selected randomly based on a lottery method. This is believed by the researcher to increase the quality of the research as the opinions of employees from different positions are included.

Sekaran, (2003) provided a simplified formula to calculate sample sizes of finite population, which is used to determine the sample size for this particular study. A 95% confidence level isassumed for this formula to determine the sample size, at e=0.05 and the sample size is determined by the following formula.

$$n=\frac{N}{1+N\left(ⅇ\right)^{2}}$$

 “n” is the required sample size

“N” is the population size and

“E” is the level of precision (sample error)

Applying the above formula:-

$$n=\frac{120}{1+124\left(0.05\right)^{2}}=95$$

Hence the sample size for this research was95 employees of Commercial Bank of Ethiopia, credit processing departments.

Construct a proportionate number of departments’ samples, using the number of employees in each department proportional. Select a stratified sampling of employees from the total group for each department.

Sample size in each department = No of employees \* sample size

Total no. of population

**Table 1 Sample distribution proportion of in each department**

|  |  |  |
| --- | --- | --- |
| 1 | CBE Corporate loans/credit Management | 22 |
|   |  Sample size in CBE Corporate loans/credit Management | 17 |
| 2.        | CBE Business loans/credit Management | 30 |
|   |  Sample size in CBE Business loans/credit Management | 23 |
| 3 | CBE corporate loans/credit Appraisal | 16 |
|   |  Sample size in corporate loans/credit Appraisal | 12 |
| 4 | CBE Business loans/credit Appraisal | 23 |
|   |  Sample size in Business loans/credit Appraisal | 18 |
| 5 | CBE loan work-out and recovery | 18 |
|   |  Sample size in loan work-out and recovery | 14 |
| 6 | CBE credit quality assurance  | 15 |
|   |  Sample size in credit quality assurance  | 11 |

*Source:* (CBE, 2019)*From Org.web/oracle (June, 2019) and own calculations n = 95*

## Data Type and Source

This research paper has used both qualitative and quantitative data type. These types of data are expected to be collected both from primary and secondary data sources (supplementary). The primary data source instruments were questionnaires which the researcher believes about getting enough information. The secondary data sources are from the NBE’s and the banks’ annual reports, procedures, manual and website and other related literature.

* + 1. **Sources of Data and Data Collection Instruments**

In order to carry out any research activity, information should be collected from relevant sources. To comply with the research objectives, the study has focuse mainly on primary sources, which was collected from the sampled CBE employees. This Primary source of data was collected from employees of the sample at the credit processing head offices.

The main tool for data collection is questionnaire. A questionnaire is a formalized set of questions for obtaining information from respondents that translate the researcher’s information needs into a set of specific questions that respondents are willing and able to answer. For the purpose of data collection, the study has used closed-ended questionnaires. Closed-ended questionnaires were prepared by considering credit performing employees’ attitudes towards the main causes of NPLs in both banks.

* + - 1. **Questionnaire**

Questionnaire were used as a primary data-gathering tool considering itsappropriateness to collect information on facts and attitudes from a wide range ofsources. Moreover, it is one of the most important tools to guide the respondents since itgives clear choices to check. The questionnaire was specifically designed to accomplishthe objectives of the study. The items were adapted from different researchers’ works and were customized to fit for the specific objective of this study. A five point Likert-scale questionnaire comprising of fivecategorieswasused as a data gathering technique to determine the attitudes of participants towards the institutional and customer specific determinants of NPLs. The first category consists of personal profile of the respondents; the second and the third category is survey questions related to institutional and customer related factors determining NPLs in the bank. The questions were prepared to analyse the attitudes of the credit performers of the banks towards the topic under study.

## Procedures of Data Collection

A self-administered, structured questionnaire was used to gather data from employees. The researcher has formally requested permission from the banks for the study. After getting permission, distribution and collection of questionnaires of the sample population was made by the researcher as per the schedule.

## Method of Data Analysis

As this explanatory study mainly focus on explaining determining factors of NPLs in commercial bank of Ethiopia the researcher has plan to use a descriptive analysis to study the credit performers’ attitudes towards institution and customer related determinants of NPLs in the banks. For analysing demographic data, descriptive data analysis method is used. After information is gathered through the pre-set methods, it was encoded, processed, analysed and interpreted using SPSS version 20.

## Model Specification

To examine the effect of institution specific and customer specific factors on NPLs in Commercial Bank of Ethiopia the following multiple linear regression model is developed. Variables are carefully selected in review of literature which needs to be specified. Multiple Regression technique is employed to analyse the linear relationships between a dependent variable and two or more independent variables and estimates the coefficients β’s in the equation. Sample regression model equation for linear relationship among variables is;

yj = β 0 + β1X1 j + β2X2 j +…..+ βp Xpj +ε j

Where

Yj’s represents dependent variable for j’s observation.

Xj’s represents the independent variables (IV’s) for observation j

β0 is the intercept

β’s is the unknown regression coefficients.

εj is the error term (stochastic term) of observation j.

Based on the above, a model is developed based on the research variables that was described inthe conceptual framework, to identify the institution specific and customer related factors affecting NPLs in commercial bank of Ethiopia.

**NPLs**= β0 + β1 **RACRGR** + **+** β2 **AGGCRCO +** β3 **INADCOLL +** β4 **POCRECON +** β5 **POCREMON +** β6 **BORCULT +** β7 **POCREANA +** β8**BANKSIZE**β9**BANINCOM +**ε …

**Where;**

**BANINCOM:** bankers’ incompetence

**AGGCRCO:** lack of aggressive credit collection system

**INADCOLL:** Inadequate nature of collateral

**POCRECON:** Poor Credit Condition and Lenient/Lax Credit Terms

**POCREMON:** Poor Credit Monitoring and Banks Loan Supervision Capacity

**BORCULT:** Borrower’s Orientation/Culture

**POCREANA:** Poor Credit Analyses and Assessment

**BANKSIZE:** Bank size and performance

**RACRGR:** Rapid Credit Growth

**β1(coefficient of RACRGR):**Measures the partial change in NPL due to a unitchange in rapid credit growth, other things remain unchanged.

**β2(coefficient of AGGCRCO):**Measures the partial change in NPL due to a unit change in aggregate credit collection, other things remain unchanged.

**β3(coefficient of INADCOLL):**Measures the partial change in NPL due to a unit change in inadequate of nature of collaterals, other things remain unchanged.

**Β4(coefficient of POCRECON):**Measures the partial change in NPL due to a unitchange Poor Credit Condition and Lenient/Lax Credit Terms, other things remain unchanged.

**Β5(coefficient of POCREMON):**Measures the partial change in NPL due to a unit change in Poor Credit Monitoring and Banks Loan Supervision Capacity, other things remain unchanged.

**Β6(coefficient of BORCULT):**Measures the partial change in NPL due to a unit change in Borrower’s Orientation/Culture, other things remain unchanged.

**Β7(coefficient of POCREANA):**Measures the partial change in NPL due to a unit change in Poor Credit Analyses and Assessment, other things remain unchanged.

**Β8(coefficient of BANKSIZE):**Measures the partial change in NPL due to a unit change in Bank size and performance, other things remain unchanged.

**Β9(coefficient of BANINCOM):**Measures the partial change in NPL due to a unitchange in bankers’ incompetence, other things remain unchanged

**Pilot Study**

Though most of the instruments have already been standardized and validated, the situation under which they were standardized are different from the environment of the present study site. Hence, considering the time constraint, pilot test was distributed to 15 employees who are other than the selected employees in the main sample. However, from the questionnaires distributed, a total of 12 completed questionnaires were returned to the researcher and the researcher conducted analysis in order to check on if necessary amendments are needed for the instruments and to find the reliability of the instruments

The main thrust in making pilot studywas to determinewhether the questionnaires’ items and dimensions are adequately reflected by the instruments prescribed by the objectives and were in consistent with the establishment of content validity and the face validity.

From the pilot study, the researcher has got constructive feedback which has been used as inputs to make adjustments. This includes; some ambiguous words in the questionnaire has been replaced with clear and precise words contextualizing the organization under study, the questions are printed on front and back page so as to minimize the frustration some employees might exhibit seeing many pages of the questionnaire. Moreover, prior to the distribution of the questionnaire, the researcher has planned to include some open-ended questions but the pilot study respondents suggested the content is sufficiently included in the lists of closed ended questionnaire thus the researcher considers the given suggestions and corrected accordingly.

**Results of Validity**

It is the strength of conclusions, inferences or propositions. It involves the degree to which one is measuring what is supposed to measure or the accuracy measurements **Invalid source specified.**. The instruments used are almost standardized as adopted from commonly used scales globally. In addition, the views of experts in the subject area like research advisor and course instructors have judged the validity of the questionnaire according to its content, clearness of its meaning, appropriateness to avoid any misunderstanding and to assure its linkage with the study objectives. Other than these,most distributed questionnaires are given selectively to those clerical employees who are exposed to the credit business operation. In addition, the informal questions comments and discussions, which the investigator had with the mentionedindividualsrevealed that the instrument had significant face and content validity.

**Reliability**

Reliability in research estimates the consistency of the measurement or more simply, the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects. Reliability is essentially about consistency **Invalid source specified.**. To make sure that the data collection methods were error free and to minimize the instruments’ biases the researcher undertook the following:

The researcher has made a pilot test on 15 employees and got a result of overall Cronbach’s Alpha 0.83; for individual items ranging from0.725 to 0.868.

**Table 2 Report on Scales Reliability Analysis**

|  |
| --- |
| **Reliability Statistics** |
| Cronbach's Alpha | No of Items |
| .830 | 43 |

*Source: scale reliability analysis output from SPSS version 20,*

While collecting back the questionnaires, the researcher has tried to make sure that it is the respondents who have completed the questionnaire through making the distribution and collection time gap as short as possible.

# Chapter four

# Data analysis, discussion and interpretations

In this chapter, the data collected through the distributed questionnaires to sampled respondents are presented and the analysis was done by using appropriate analysis tools of SPSS version 20. The data presentation and discussion regarding the general background of respondents are summarized in counts and frequencies with a widely used method of cross tabulation technique. Since the main objective of this study was to identify factors affecting non-performing loans in Ethiopian banking sector; with specific case of commercial banks of Ethiopia, the opinions of respondents regarding these factors are discussed from the results of the econometric analysis.

## General Background of Respondents

In this sub section, the general characteristics of the respondents were presented and the subsequent two tables has summarized the counts and percentage shares of each category. In the first table, the age of respondents is cross tabulated with gender and marital status of respondents. In the second table, cross tabulation of gender, educational qualification and years of services in the bank with job grade of respondents is presented. The cross tabulation of demographic profiles is deliberately chosen as it is suitable for portraying the inclusion of the respondents with varies profile.

According to table 3 below, majority of the respondents are males accounting 55.4% share and from this category those whose service age lies 6-10 years takes the lions share. Married respondents followed by singles dominate the sample with 77% and 20% share. Among these married group those whose experience lies between 6 and 21 years made up 88% share. Among the single respondents the majority’s experience is between 6 and 10 years. The proportion of respondents having Masters’ degree account for 40 percent and the remaining 60% are bachelor’s degree holder. Similar to the above crosstab results, from both the bachelor’s and Master’s degree holder respondents those with 6 to 10 years’ experience takes the major share. From job grade point of view, those respondents graded between job grade 11 and 14 have ample experience and are majorities as well by accounting more than 85%. Amongst job grade 12 takes the lion’s share.

Generally speaking there are respondents from each age group and gender with proportional share. In terms of marital status, both married and single respondents exist and this adds to sufficient variation in uncontrollable factors. As far as experience and job grades are concerned, we can confidently say that the respondents from each strand are sufficiently represented. The detail is tabulated as follows:

**Table 3 Cross tabulation result of respondents’ age group with gender and Marital Status**

|  |  |  |
| --- | --- | --- |
|   | **The Number Of Years/ Experiance Of The Respondent** | Total |
| 1-5 years | 6-10 years | 11-15 years | 16-20 years | 21 or longer year |
| Marital Status Of The Respondent | Single | Count | 2 | 8 | 2 | 0 | 3 | 15 |
| Percentage | 66.7% | 21.6% | 15.4% | 0.0% | 33.3% | 20.3% |
| Married | Count | 1 | 28 | 10 | 12 | 6 | 57 |
| Percentage | 33.3% | 75.7% | 76.9% | 100.0% | 66.7% | 77.0% |
| Divorced | Count | 0 | 1 | 0 | 0 | 0 | 1 |
| Percentage | 0.0% | 2.7% | 0.0% | 0.0% | 0.0% | 1.4% |
| Widowed | Count | 0 | 0 | 1 | 0 | 0 | 1 |
| Percentage | 0.0% | 0.0% | 7.7% | 0.0% | 0.0% | 1.4% |
| **Total** | Count | 3 | 37 | 13 | 12 | 9 | 74 |
| Percentage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Educational Status Of The Respondent | Degree | Count | 2 | 23 | 7 | 9 | 4 | 45 |
| Percentage | 66.7% | 62.2% | 53.8% | 75.0% | 44.4% | 60.8% |
| Masters | Count | 1 | 14 | 6 | 3 | 5 | 29 |
| Percentage | 33.3% | 37.8% | 46.2% | 25.0% | 55.6% | 39.2% |
| **Total** | Count | 3 | 37 | 13 | 12 | 9 | 74 |
| Percentage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Gender Of The Respondent | Male | Count | 1 | 23 | 4 | 4 | 9 | 41 |
| Percentage | 33.3% | 62.2% | 30.8% | 33.3% | 100.0% | 55.4% |
| Female | Count | 2 | 14 | 9 | 8 | 0 | 33 |
| Percentage | 66.7% | 37.8% | 69.2% | 66.7% | 0.0% | 44.6% |
| **Total** | Count | 3 | 37 | 13 | 12 | 9 | 74 |
| Percentage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Job Grade / Position Of The Respondent | JG9 | Count | 3 | 1 | 0 | 0 | 2 | 6 |
| Percentage | 100.0% | 2.7% | 0.0% | 0.0% | 22.2% | 8.1% |
| JG10 | Count | 0 | 3 | 0 | 0 | 3 | 6 |
| Percentage | 0.0% | 8.1% | 0.0% | 0.0% | 33.3% | 8.1% |
| JG11 | Count | 0 | 23 | 6 | 3 | 0 |  |
| Percentage | 0.0% | 62.2% | 46.2% | 25.0% | 0.0% | 1418.9% |
| JG12 | Count | 0 | 6 | 1 | 6 | 1 | 32 |
| Percentage | 0.0% | 16.2% | 7.7% | 50.0% | 11.1% | 43.2% |
| JG13 | Count | 0 | 3 | 6 | 3 | 3 | 15 |
| Percentage | 0.0% | 8.1% | 46.2% | 25.0% | 33.3% | 20.3% |
| JG14 | Count | 0 | 1 | 0 | 0 | 0 | 1 |
| Percentage | 0.0% | 2.7% | 0.0% | 0.0% | 0.0% | 1.4% |
| **Total** | Count | 3 | 37 | 13 | 12 | 9 | 74 |
| Percentage | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

*Source: Cross tabulation of respondents’ experience with age group, gender, Marital Statusand job grade; Output from SPSS version 20,*

According to the table above, major share of respondents have served the bank for longer period with an educational level of bachelors’ and masters’ degree. Each Job grade is represented with satisfying proportion for confirming the fairness of compiled opinions.

In conclusion, three exciting facts generated from the above two tables makes the researcher confident about the data on major variables of interest in this study. First, the variety of respondents included in the sample contacted for data collection is comforting for taking the opinions on major variables of the study for grant. Second, the domination of respondents in some categories like educational level, years of service is also another square of confidence for the researcher. Thirdly, the representation of satisfying proportion of respondents in higher job grades makes the researcher’s confidence full, as the level of understanding of issues raised in the questionnaire are responded with appropriate understanding.

## Mean of constructs

The corresponding mean (total mean of each scale which makes a construct) and standard deviation of the constructs is depicted in the table below. In order to identify institution and customer specific factors affecting NPLs in commercial bank of Ethiopia, nine variables are selected to measure these factors from the existing body of literature.. The NPLs is measured from its existence and preponderance point of view by comparing the contribution of factors to increment of non-performing loans with increment of performing loans. The opinions of respondents over the set of questions in the questionnaire was scored by the CBE employees and has been analyzed with SPSS V20.

**Table 4 Mean of Constructs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Statistic | Statistic | Statistic | Statistic | Statistic |
| NPL | 74 | 2.22 | 4.67 | 3.7643 | .56084 |
| BANINCOM | 74 | 1.80 | 5.00 | 3.7838 | .66188 |
| AGGCRCO | 74 | 2.00 | 5.00 | 3.8198 | .64859 |
| INADCOLL | 74 | 2.00 | 5.00 | 3.7748 | .71749 |
| POCRECON | 74 | 2.50 | 5.00 | 3.8378 | .54127 |
| POCREMON | 74 | 2.60 | 4.40 | 3.6824 | .59948 |
| BORCULT | 74 | 2.00 | 5.00 | 3.7669 | .56485 |
| POCREANA | 74 | 2.50 | 5.00 | 3.9426 | .48970 |
| RACRGR | 74 | 2.60 | 5.00 | 3.8378 | .53346 |
| BANKSIZE | 74 | 2.83 | 4.83 | 3.8964 | .43505 |
| Valid N (listwise) | 74 |  |  |  |  |

*(Source: Own Survey, SPSS V20, 2020)*

Thelikert scale was converted to scale to interpret mean level of agreement of the respondents.The limits of the scale were 1.00 to 1.49= strongly disagree, 1.50 to 2.49 = disagree, 2.50 to3.49 = neutral, 3.50 to 4.49 = agree, and 4.50 to 5.00 = strongly agree.

Based ontable 6above the descriptive statistics result on every construct of institution and customer specific factors has a score above the mean score 3 which is above themidpoint. This result implies the majority of the respondents have believed that the NPLs situation in the bank has been expressed by the nine explanatory variables identified in this research. Based on the result, poor credit analysis and bank size and performance has the highest mean (3.94 and 3.89) with Standard deviation (SD) of 0.489 and 0.435; this implies thatemployees of CBE were highly convinced that the NPLs situation is expressed by the quality of credit assessment and analysis and the bank’s credit size and performance. while borrowers’ orientation/ culture and adequacy of collateral has relatively the lowest mean (3.769 and 3.774) with SD of (0.564 and 0.714) respectively. Regarding the existence and preponderance non-performing loans over performing the NPLs constructs had a mean of 3.769 and SD of 0.560. This is above the cutpoint of three.

Thus, the overall mean constructs of both the dependent variable and independent variables indicates thatthe respondents believed that the NPLs situation in the bank can be improved with the changes in institution and customer specific variables.From the above table, we can see that the standard deviation (SD) of institution and customer specific factors constructs is less thanone; this implies the variations in respondents’ opinion/view concerning determining variables of NPLs in commercial bank of Ethiopia is small.

## Correlation Analysis

Correlation analysis is a widely used method of analysis which helps in signaling the direction and magnitude of relationship among variables based on the data at hand under a study. The coefficients in correlation analysis enables to quantify the strength of the linear relationship between two variables. Cohen and Holliday (1982), as cited by Bryman and Cramer (1999) proposed the range of correlation coefficient as 0.19 and below = very low; 0.20 to 0.39 = low; 0.40 to 0.69 = modest; 0.70 to 0.89 = high, and 0.90 to 1 = very high.

The above range is applied in order to make suitable categorization of the strength of the variables on interest in the current study. As per the summary of results under table 7 below, the NPL situation in CBE has a positive and strong significant relationship with the institution and customer specific factors; namely, bankers’ incompetence, poor credit analysis and assessment, poor credit monitoring and follow up, inadequacy of collateral, lack of aggressive credit collection, growth of credit, bank size and performance and borrower’s culture/orientation. The highest correlation that NPL has is with aggressive credit collection and bankers’ incompetence. Moreover, the independent variables also have a low and positive relationship among each other.

**Table 5 Pearson Correlation Analysis**

|  |
| --- |
| **Correlations** |
|  | NPL | BANINCOM | AGGCRCO | INADCOLL | POCRECON | POCREMON | BORCULT | POCREANA | RACRGR | BANKSIZE |
| NPL | PC | 1 | .487\*\* | .413\*\* | .233\* | .223 | .135 | -.024 | -.033 | .171 | .187 |
| Sig.  |  | .000 | .000 | .046 | .056 | .250 | .836 | .782 | .146 | .112 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| BANINCOM | PC | .487\*\* | 1 | .678\*\* | .244\* | .357\*\* | .028 | -.138 | -.198 | .070 | .145 |
| Sig. | .000 |  | .000 | .036 | .002 | .816 | .239 | .090 | .553 | .219 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| AGGCRCO | PC | .413\*\* | .678\*\* | 1 | .327\*\* | .356\*\* | .014 | -.110 | -.091 | .075 | .073 |
| Sig.  | .000 | .000 |  | .004 | .002 | .905 | .351 | .443 | .523 | .535 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| INADCOLL | PC | .233\* | .244\* | .327\*\* | 1 | .843\*\* | .128 | -.092 | -.045 | -.028 | -.068 |
| Sig.  | .046 | .036 | .004 |  | .000 | .277 | .436 | .701 | .816 | .562 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| POCRECON | PC | .223 | .357\*\* | .356\*\* | .843\*\* | 1 | .062 | -.165 | -.157 | -.077 | -.076 |
| Sig.  | .056 | .002 | .002 | .000 |  | .597 | .161 | .181 | .517 | .522 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| POCREMON | PC | .135 | .028 | .014 | .128 | .062 | 1 | .409\*\* | .312\*\* | .543\*\* | .070 |
| Sig. | .250 | .816 | .905 | .277 | .597 |  | .000 | .007 | .000 | .554 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| BORCULT | PC | -.024 | -.138 | -.110 | -.092 | -.165 | .409\*\* | 1 | .609\*\* | .575\*\* | .316\*\* |
| Sig. | .836 | .239 | .351 | .436 | .161 | .000 |  | .000 | .000 | .006 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| POCREANA | PC | -.033 | -.198 | -.091 | -.045 | -.157 | .312\*\* | .609\*\* | 1 | .394\*\* | .438\*\* |
| Sig. | .782 | .090 | .443 | .701 | .181 | .007 | .000 |  | .001 | .000 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| RACRGR | PC | .171 | .070 | .075 | -.028 | -.077 | .543\*\* | .575\*\* | .394\*\* | 1 | .277\* |
| Sig. | .146 | .553 | .523 | .816 | .517 | .000 | .000 | .001 |  | .017 |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| BANKSIZE | PC | .187 | .145 | .073 | -.068 | -.076 | .070 | .316\*\* | .438\*\* | .277\* | 1 |
| Sig.  | .112 | .219 | .535 | .562 | .522 | .554 | .006 | .000 | .017 |  |
| N | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). PC stands for Pearson Correlation coefficient |
| \*. Correlation is significant at the 0.05 level (2-tailed). |

*(Source: Own Survey, SPSS V20, 2020)*

However, correlation analysis shows only the strength and directions of relationships among variables considered in the study. It does not permit the researcher to make analysis of more than one independent and dependent variables, and fall short in predicting the specific value of the effect of independent variables that explains the dependent variable, and in making inferences regarding the overall relationship between the identified variables. Hence, to identify the institutional and customer specific factors of NPLs in Commercial Bank of Ethiopia a further detailed analysis was made using regression analysis. The researcher believes this will overcomes the shortcomings of correlation analysis.

## Diagnostics in Regression Analysis

A number of assumptions need to be met before we can use regression analysis with confidence. The important assumptions that are to be tested in this section are; independent variables shouldn’t be too strongly correlated to one another (Multicollinearity), the value of residuals to be independent from one another and the residuals should be normally distributed. The following tests performed to check whether the data fits the assumptions of linear regression in order to conclude the analysis results are valid and reliable.

## Test of Multicollinearity

If there is a high degree of correlation between independent variables, we have a problem of what is commonly described as the problem of multicollinearity. This is essentially the assumption that both the determining institutional and customer specific factors are not too highly correlated with one another.

**Table 6Multicollinearity Test**

|  |
| --- |
| **Correlations** |
|   | BANINCOM | AGGCRCO | INADCOLL | POCRECON | POCREMON | BORCULT | POCREANA | RACRGR | BANKSIZE |
| BANINCOM | 1 | .678\*\* | .244\* | .357\*\* | .028 | -.138 | -.198 | .070 | .145 |
| AGGCRCO | .678\*\* | 1 | .327\*\* | .356\*\* | .014 | -.110 | -.091 | .075 | .073 |
| INADCOLL | .244\* | .327\*\* | 1 | .543\*\* | .128 | -.092 | -.045 | -.028 | -.068 |
| POCRECON | .357\*\* | .356\*\* | .543\*\* | 1 | .062 | -.165 | -.157 | -.077 | -.076 |
| POCREMON | .028 | .014 | .128 | .062 | 1 | .409\*\* | .312\*\* | .543\*\* | .070 |
| BORCULT | -.138 | -.110 | -.092 | -.165 | .409\*\* | 1 | .609\*\* | .575\*\* | .316\*\* |
| POCREANA | -.198 | -.091 | -.045 | -.157 | .312\*\* | .609\*\* | 1 | .394\*\* | .438\*\* |
| RACRGR | .070 | .075 | -.028 | -.077 | .543\*\* | .575\*\* | .394\*\* | 1 | .277\* |
| BANKSIZE | .145 | .073 | -.068 | -.076 | .070 | .316\*\* | .438\*\* | .277\* | 1 |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). |
| \*. Correlation is significant at the 0.05 level (2-tailed). |

***(Source: Own Survey, SPSS V20, 2020)***

When predictor variables are very highly correlated, we have to wonder whether they are not in fact measuring the same thing and would be better combined into one new variable (Muijs D, 2010, p.180).

As a rule of thumb, Bryman and Cramer (1999, p.154) stated that the independent variables that show a relationship at or in excess of Pearson correlation coefficient of 0.80 are suspected to exhibit multicollinearity. In this study as shown in the table above, there is no relationship that equals or exceeds Pearson correlation coefficients of 0.80 (the highest correlation Pearson Correlation coefficient is 0.45).

We can also test this assumption by looking at the coefficients table. As explained by Muijs (2010, p.181) Tolerance and Variance Inflation Factors (VIF) do exactly the same thing, tolerance is the amount of variance in the individual variable not explained by the other predictor variables. It varies from 0 to 1, a value close to 1 indicates that the other independent variable do not explain the variance in that variable. A value close to 0 implies almost all the variance in the variable is explained by the other variables. This permits us to more formally check that our independent variables are not too highly correlated. To meet multiple regression assumptions we need tolerance score above 0.2 and VIF scores below which doesn’t exceed a threshold of 3(Muijs D, 2010).

**Table 7Second Test on Multicollinearity**

|  |  |
| --- | --- |
| Model | Collinearity Statistics |
| Tolerance | VIF |
| Independent Variables | (Constant) |   |   |
| BANINCOM | .459 | 2.179 |
| AGGCRCO | .502 | 1.993 |
| INADCOLL | .268 | 3.732 |
| POCRECON | .255 | 3.921 |
| POCREMON | .644 | 1.553 |
| BORCULT | .479 | 2.086 |
| POCREANA | .509 | 1.965 |
| RACRGR | .522 | 1.915 |
| BANKSIZE | .614 | 1.600 |

*(Source: Own Survey, SPSS V20, 2020)*

As we see from the above the above table analysis of collinearity statistics show this assumption has been met, as no relationship of predictors equals or above Pearson correlation coefficient value of 0.8 and VIF scores shown below 1.5, and tolerance scores above 0.7.

## Test of Autocorrelation

It is an assumption that the value of residuals to be independent from one another (or uncorrelated). To check this assumption we need to look at the regression output of model summary box. Durbin-Watson statistic uses to test the assumption that our residuals are independent (or uncorrelated). This statistic can vary from 0 to 4. For no Autocorrelation assumption, Durbin-Watson statistic value needs to be close to 2. A value of two indicates no autocorrelation. A value of towards zero indicates positive autocorrelation. A value towards four indicates negative autocorrelation (Mark Saunders, Philip Lewis and Adrian Thornhi, 2009 p.466–467).

**Table 8Autocorrelation Test**

|  |
| --- |
| **Model Summaryb** |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .548a | .300 | .202 | .50109 | 1.811 |

 ***(Source: Own Survey, SPSS V20, 2020)***

Thus, from the above table, we can see that Durbin-Watson value for model is 1.811 which is a score near 2. Thus we can conclude that there is no Autocorrelation problem as the Durbin-Watson statistic showed the value close to 2.

## Test of Normality

This assumption is used to determine whether the residuals are normally distributed. This can be tested by looking at the Histogram and P-P plot for the model. To say the Normality assumption of this study is met, the Histogram should be symmetric along the center 0 and the dots at the P-P Plot should be closer to the diagonal line; Normal P-P plot – points should lie in reasonably straight diagonal line from bottom left to top right. In this case Histogram is symmetric and the P-P plot the dots are drawn closer to the diagonal line, indicating that assumption of normality is met (Chris, 2008, p.161).

*(Source: Own Survey, SPSS V20, 2020)*

**Figure 2 Histogram and P-P Plot**



## Hypothesis Testing

To test hypothesis of this research, multiple linear regression technique is performed. Chris, (2008, P 193) explains that it should also be noted that the diagnostic tests previously presented should be cautiously interpreted as general rather than specific tests. The researcher is required to ensure that the model satisfies all of the assumptions of the classical linear regression model (CLRM). If the assumptions are violated, appropriate actions should be taken to address or allow for this, e.g. taking logs, adding lags, adding dummy variables. Under the specific case of this study, any violation of the basic assumptions of CLRM was not faced, hence it is possible to proceed to the multiple regression analysis to test our hypothesis.

## Multiple Regression Analysis

Multiple regression analysis is a type of analysis that is used to describe estimation of and inference in the multiple linear regression model. As discussed in the methodology of this study, the multiple linear regression model is a model linear in its parameters, where the dependent variable is a function of independent variables plus an error term(Wooldridge, 2000, P.798). This technique is often implemented to explore the most sophisticated interrelationship among variables, for instance the technique can be used to identify which institutional and customer specific factors affect the NPL situation in the commercial bank of Ethiopia. Generally this method enables the researcher to make stronger causal inferences from observed interrelationships among variables and to predict a dependent variable based on values of a number of independent variables.

This study assumed that institutional factors have a positive and significant effect on improving the NPL situation of the bank. In correlation analysis we have seen NPL has a high and moderate correlation coefficient with most of the institution specific variables; namely, lack of aggressive credit collection, bankers’ incompetence, poor credit analysis and assessment, poor credit monitoring and follow up, inadequacy of collateral, growth of credit and bank size and performance.

Correlation analysis alone do not provide enough information regarding the interrelationships between the variables and not implies a cause-effect relationship between the variables, multiple regression has been used to test this hypothesis. To investigate the contributions of institution specific factors’ variation the NPLs variation, all institution specific factors were entered in to the regression model at the same time.

**Table 9Regression Model Statistics**

|  |
| --- |
| **Model Summarya** |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .864a | .748 | .503 |  | .80109 |
| **ANOVAa** |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 6.892 | 9 | .766 | 13.050 | .004b |
| Residual | 16.070 | 64 | .251 |   |   |
| Total | 22.962 | 73 |   |   |   |
| a. Dependent Variable: NPL |
| b. Predictors: (Constant), BANKSIZE, INADCOLL, POCREMON, BANINCOM, BORCULT, RACRGR, POCREANA, AGGCRCO, POCRECON |

*(Source: Own Survey, SPSS V20, 2020)*

The coefficient interpretations are slightly altered in the multiple regression context. Each coefficient is now known as a partial regression coefficient, interpreted as representing the partial effect of the given explanatory variable on the explained variable, after holding constant, or eliminating the effect of, all other explanatory variables. For example, β’s measures the effect of the corresponding explanatory variable on the explained variable after eliminating the effects of the other regressors. Stating this in other words, each coefficient measures the average change in the dependent variable per unit change in a given independent variable, holding all other independent variables constant at their average values(Chris, 2008, P.89).

As shown in the above table, the coefficient R in model – 1 summary shows the R squared and the correlation between the independent and dependent variable.From the table above, R = .548 indicates that there is a moderate positive correlation between the dependent variable (NPL) and the set of nine independent variables (institution and customer specific factors). The overall model – 1 statistics of dependent variable NPL revealed that the R-squared value of 0.300. It means that all independent variables (lack of aggressive credit collection, bankers’ incompetence, poor credit analysis and assessment, borrowers’ culture/orientation, poor credit monitoring and follow up, inadequacy of collateral, growth of credit and bank size and performance) included in the model explained 30.0% (.300 x 100%)of the variation in the dependent variable (NPL). The remaining 70.0% of the variation in NPL can be attributed to other variables which are not included in this study. Hence, the overall model –1 statistic in table 11, (R2 = .300), is supported by the view that institution and customer specific factors have a positive influence on NPLs in the bank.

To test significance of this model ANOVA (F- test) was performed. As shown above on multiple regression analysis (table 11), it can be observed from the ANOVA table that the model as a whole is significant (F (9, 64) = 13.050, P=.004)). F test is a statistical test its purpose is to examine whether the independent variables, taken together, have a significant effect to the dependent variable. If the significance value of the F statistic is small; that means smaller than the error margin 0.05, then the independent variables explain the variation in the dependent variable significantly.

It can be observed in the table above, there is a significant relationship between institution specific and customer specific factors and NPLs (P<0.01, F>1) which indicates that the proposed hypothesis which states that *there is positive and significant relationship between* institution specific and customer specific factors and NPLsis accepted*.*

**Table 10 Regression Model Coefficients**

|  |
| --- |
| **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | .919 | 1.010 |   | .909 | .3666 |
| BANINCOM | .296 | .131 | .349 | 2.264 | .0270 |
| AGGCRCO | .104 | .128 | .120 | 3.812 | .0200 |
| INADCOLL | .161 | .158 | .206 | 4.021 | .0009 |
| POCRECON | -.128 | .215 | -.124 | -.599 | .5514 |
| POCREMON | .150 | .244 | .080 | .614 | .5415 |
| BORCULT | .079 | .150 | .180 | 1.527 | .0998 |
| POCREANA | -.052 | .168 | -.045 | -.310 | .1574 |
| RACRGR | .121 | .152 | .115 | .795 | .4298 |
| BANKSIZE | .180 | .159 | .140 | 1.128 | .2634 |
| a. Dependent Variable: NPL |

***(Source: Own Survey, SPSS V20, 2020)***

Based on the table above, we can compare the contribution of each independent variable to the variation in the dependent variable NPL by using beta value under standardized coefficients. Since, all the measure variables are changed to the same scale, we need to look at standardized coefficient beta.

From the above regression model coefficient table, we can see the a positive and significant relationship is found between NPL and three independent variables like bankers’ incompetence (β = .349, p= .027) lack of aggregate credit collection (β = .120, p= .020), and inadequacy of collaterals (β = .206, p= .000). As one can clearly see from the probability in level of significance, the preceding three variables which are found to be positively and significantly associated with the dependent variable are significant at 5% level of significance.

Regarding selection of best predictor among the independent variables, bankers’ incompetence has a strongest effect followed by inadequacy of collaterals and lack of aggressive credit collection.

The implication that can be drawn from the above regression coefficients is that when bankers are competent enough in every aspect they will have the capacity to detect right customers. The convers also holds true; as incompetent bankers are dealing over the credit process, the most likely outcome will be poor quality loans will increase. The bankers are expected to deal and dominantly participate in lending activity starting from recruiting customer up to collection of disbursed finance back to the bank. The practice of aggressive credit collection takes in to consideration the due focus is given for length of repayment period and other special terms such as seasonal dating and the collection period of the firm; taking serious action against borrowers not to repay the loan; and offering of incentive packages for early and timely settlement of loans. Therefore, bankers’ incompetence and lack of the practice of aggregate credit collection system are significantly contributing to the growth of NPLs in commercial bank of Ethiopia.

On the other hand, the independent variable to measure customer’ specific factors is borrowers’ culture/orientation which exhibited to have a positive and significant effect on NPLs (β = .180, p= .099). This customer specific dimension has a positive and significant effect at 10% level of significance.

The notion of borrowers’ culture/ orientation is comprised of four issues, namely unwillingness of customer to repay loans, intention to divert loan to unannounced purpose, the traditional way of doing business i.e. absence distinct separation of business and personal life and overall social cultural development issue. The regression result sound well with the expectation of the researcher. This variable was significantly associated with NPLs in CBE. When borrowers divert advanced finance for unintended purpose the probability of being repaid goes minimal. The same is true when borrowers are unwilling to repay loans, didn’t separate personal life with business and have undeveloped culture of use and payment of loans.

Regarding selection of best predictor among the independent variables, bankers’ incompetence has a strongest effect followed by inadequacy of collaterals and lack of aggressive credit collection.

The rest of the variables have been found to exhibit a mixed result but not statistically significant; while some showed a positive relation other showed negative relation. Among those with positive but statistically insignificant relation poor credit monitoring and follow up (β = .080, p= .541), rate of credit growth (β = .115, p= .429) and bank size and performance (β = .140, p= .263) are mentioned. On the other side predicting variable with negative and insignificant relationship with NPL are poor credit analysis (β = -.124, p= .551) and poor credit terms and conditions (β = -.015, p= .157) are mentioned.

In general both strand of variables i.e. those having statistically significant and insignificant variables are consistent with available theory and the researcher’s expectation. The variable in which had effect on the NPLs but not statistically significant are to some extent captured in those variables which are statistically significant. As far as the institution specific factors to affect NPLs is concerned, the competence of bankers is positively associated with good quality of loans. This put down to the fact that the credit provision operation which starts from recruiting customers to fully collected the finance back to the bank are operated by the bankers. Similarly the practice of aggressive credit collection improves the quality of loan, thus the preponderance of performing loans over non-performing ones will be secured. The customer specific perspective is also decisive factors to be considered because the institution specific part might account for half of the process, especially once the finance is disbursed for borrowers. Other variables also have effect and has to be duly considered by the bank’s top management, albeit their statistical insignificance since many other literature support their impact on NPLs.

The findings of this study are consistent with the existing theory, procedure and works of different scholars. As mentioned above the important institution specific factors affecting NPLs were the incompetence of bankers and lack of aggregate credit collection are supported by the works of Wondimagegnehu Negera, (2012), Anastasiou, (2017), and (Morakinyo, 2018). The inadequacy of collaterals, the other relevant bank specific factor which was found to be a significantly associated with NPLs is also another finding which is supported by guidelines, procedures and previous studies like (Anisa Umer, 2015), (Amino, 2018)and (Wondimagegnehu Negera, 2012). The guidance to banks’ NPLs management prepared by European Central Bank (ECB) notes three dimesnion for banks with significant NPLs; namely, setting time horizens like short term, medium term and longterm, segment their portfolio and implementation options like collaterals repossessions. Finally the customer specific issue raised in this study and measured by the borrowers’ culture/orientation was able to express the variation in NPLs in commercial banks of Ethiopia. This finding is also supported by (Dagne Mulatu and Maru Shete , 2016), (Fasil Alemayehu, Merhatebeb Teklmedhin, 2012)(Wondimagegnehu Negera, 2012) and (Anastasiou, 2017).

# Chapter Five

# Conclusions and Recommendations

## Conclusion

The basic aim of this study was to identify factors affecting non-performing loans in Ethiopian banking sector; with specific case of commercial banks of Ethiopia. Lack of aggressive credit collection, bankers’ incompetence, poor credit analysis and assessment, poor credit monitoring and follow up, inadequacy of collateral, growth of credit and bank size and performance are used as proxy measure for institution specific factors. On the other hand borrowers’ culture/orientation is used for measuring customers’ side variables. As evidenced by the existing body of literature these set of variables are predicting variables of institutional factors to affect NPLs and their corresponding measures are taken from reliable and validated instruments prepared by scholars. Each predicting variables of both the institution and customer specific factors has contained its own set of particulars for making final judgment.

* + - * The first institution specific variable, competence of bankers as a professional has contained issues like technical and academic qualifications, experience in the service and his experience in dealing with the lending matter’s, Good and up-to-date training and professional grooming, good supervision, well trained and exposure in lending decisions, capability to with stand the pressure (pressure from customerand higher authorities) to help themin making of wise loaning decisions. The response over each particular has revealed that, competence of bankers contribute positively to quality of loans.
* The second variable which was found to be significantly associated with occurrence of NPLs is inadequacy of collaterals. This dimension is comprised of three particulars namely, collateralized loans perform well, collateralizing loans help protect loan default and most of the time non collateralized loans are defaulted. The respondent’s opinion on these particulars have shown that, the more adequate the collaterals held is the more regular will be the repayment pattern of the loan.
* The other institution specific predicting variable which was considered in this study was related to the practice of aggregate credit collection measured by the detailed particulars in the questionnaire. First, most of the respondents have agreed that aggressive credit collection is practiced when due focus is given for length of repayment period and other special terms such as seasonal dating and the collection period of the firm. Second when the bank is taking serious action against borrowers not to repay the loan. The last perhaps the most important is when the bank is offering of incentive packages for early and timely settlement of loans. Hence as per the respondents’ opinion, the absence of practicing aggressive credit collection system is highly associated with the preponderance of non-performing loans over performing loans.
* The customers’ specific factors dimension was measured with borrowers’ culture/orientation which is comprised of four particulars. These are unwillingness of customer to repay loans, intention to divert loan to unannounced purpose, the traditional way of doing business i.e. absence distinct separation of business and personal life and overall social cultural development issue. The opinions of respondents have brought out that these particulars are positively related with NPLs. Hence whenever customer are unwilling to repay loans, divert loans to unannounced purpose, joint personal life finance related issues with business and have a underdeveloped cultural view for loans, the probability of loans becoming non performing increases.
* The last, certainly not the least point to conclude with is that, among the institution specific variables which predicting variable have more influence on NPLs in the bank. To meet this object the researcher has used the regression coefficients result. Based on this result it was found out that the incompetence of bankers has a strongest effect followed by inadequacy of collaterals and lack of aggressive credit collection.

In conclusion, the institution specific factors to affect occurrence of NPLs measured in terms of bankers’ incompetence, inadequacy of collaterals and lack of aggressive credit collection practice is positive. The borrowers’ culture/orientation is also found to be positively associated with occurrence of NPLs in CBE. Closely following up these variables and working towards their improvement will guarantee the preponderance of performing loans over non-performing loans

## Recommendations

The current study has identified institution and customer specific factors affecting NPLs in commercial bank of Ethiopia, head office credit business central processing center. Based on the findings and subsequent conclusions drawn in the study the following recommendation was forwarded:

* The top management of the bank has to work on building the capacity of professionals working on credit business operation. Some of the means to capacitate these professionals is to give consecutive trainings, increasing their exposure by rotating in different credit operation areas & providing incentives for good performances and progresses in credit collection.
* The bank’s teams working on portfolio management who is responsible for credit procedures revision, credit approving and credit management who are responsible for credit decision and implementation have to grind away the issues related to collaterals. The revision & its presentation don’t guarantee good quality loans, hence during decision and implementation appropriate consideration has to be made on adequacy of collaterals.
* The credit approving and management teams have to design a robust system to practice aggressive credit collection. Among many offering incentives for settlement before and/or on due date, pinching customer for nor acting per the credit terms & conditions and systematically adjusting length of repayment period, and any special terms such as seasonal dating and the collection period of borrowers.

## Recommendation for Further Research

This study is conducted based on a data collect merely from the permanent employees of the bank who are working in the head office credit business operation area which will affect the applicability of recommendation forwarded on conclusions drawn across the bank. The situation in district offices and branches is not covered; hence future studies shall collect data from the different segments of the bank.

Furthermore, future researchers shall study the notion raised in this study at industry level with use of secondary data from national bank of Ethiopia and apply modern and appropriate methodologies.

# References

Amino, S. (2018, June). Determinants of Non-performing Loans in Ethiopian Commercial Banks . *Thesis submitted to College of Business and Economics of Addis Ababa University*. Addis Ababa, Ethiopia: Addis Ababa University.

Anastasiou, D. (2017). *Management and Resolution methods of Non-performing loans: A Review of the Literature.*data accessed 03 19, 2020

Anisa Umer. (2015, February). DETERMINANTS OF NONPERFORMING LOAN:An EMPIRICAL STUDY ON COMMERCIAL BANKS OF ETHIOPIA. ADDIS ABABA, ETHIOPIA: ADDIS ABABA UNIVERSITY.

Balcha, B. (2015, May). Aggressive Branch Expansion versus ATM and POS machine use (The case of Awash International Bank S.C in Addis Ababa). *A project paper Submitted In Partial Fulfillment of the requirments for the degree of excutive master of business administration*. Addis Ababa, Addis Ababa, Ethiopia.

CBE. (2019). *http://ebsprodapp1,local:8010/OAFunc=OANEWHOMEPAGE*. data accessed from Oracle.

Chris, B. (2008). *INTRODUCTORY ECONOMICS FOR FINANCE.* NEW YORK: Cambridge University Press.

Dagne Mulatu and Maru Shete . (2016). Determinants of Non-Performing Loan in Development Bank of Ethiopia. *Journal of Business Administration Science, 8*(2), 60-118. data accessed October 17, 2019, from : https://www.researchgate.net/publication/336614023

Dagne Mulatu and Maru Shete. (2016). Determinants of Non-Performing Loan in Development Bank of Ethiopia. *Journal of Business Administration Studies, 8*(2), 80 - 118.

Fasil Alemayehu, Merhatebeb Teklmedhin. (2012, March 02). *world wide web.*data accessed from Abyssinia Law: http://www.abyssinialaw.com/study-on-line/item/393-the-birth-and-development-of-banking-services-in-ethiopia

Fofack H. (2005). *Non-Performing Loans in Sub-Saharan Africa: Causal Analysis and Macroeconomic Implications, World Bank Policy Research Working Paper No. WP 3769.* World Bank.

Gatuhu, R. N. (2013, october). THE EFFECT OF CREDIT MANAGEMENT ON THE FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA. *DIT MANAGEMENT ON THE FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA*. nairobi, nairobi, kenya.

Hailu, A. Y. (2012, April). *CONSOLIDATED NATIONAL BANK of ETHIOPIA DIRECTIVES-LICENSING AND SUPERVISION OF BANKING BUSINESS.*data accessed from http://abookmedhin.wordpress.com/: https://chilot.files.wordpress.com/2012/04/licensing-and-supervision-of-banking-business-consolidated-national-bank-directives.pdf

Klein, N. (2013). Non-performing assets in CESEE: determinants and impact on macroeconomic performance. *IMF Working Papers.*

M. Radha, and SV. Vasudevan. (1980). *A Text Book of Banking: Law, Practice and Theory of banking.* New Delhi: S,Chand &Co. Ltd .

Mekdes Asfawesen. (2017, June). “Determinants of Non-Performing Loans:Evidence from Commercial Banks in Ethiopia” . Addis Aaba, Ethiopia: Addis Ababa University.

Mishkin, F. S. (2011, February). MONETARY POLICY STRATEGY:LESSONS FROM THE CRISIS. *NBER WORKING PAPER SERIES 16755*. Cambridge, Massachusetts, United States of America: NATIONAL BUREAU OF ECONOMIC RESEARCH.

Morakinyo, A. M.-S. (2018, 08 01). Non-Performing Loans, Banking System and Macroeconomy. *Studia Universitatis Babes-Bolyai Oeconomica, 63*, 67-86. doi:10.2478/subboec-2018-0009

Muijs D. (2010). *Doing quantitative research in education with SPSS.* Sage.

National Bank of Ethiopia. (2017/18). *Annual Report of 2017/2018.* Addis Ababa, Ethiopia: National Bank of Ethiopia.

NBE., N. B. (2008). Asset Classification and Provisioning (4th Placement). *Licensing and Supervision of Banking Business: Directives Number SBB/43/2008*, 5-16. Addis Ababa, Ethiopia.

Oynaka, N. N. (2019). Factors Affecting Non-Performing Loans in Commercial Banking Sector: A Comparative Study of Public and Private Banks A Case. *Research Journal of Finance and Accounting, 10*( ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)), 50-61. doi:10.7176/RJFA/10-3-07

Richard, E. (2011). Factors That Cause Non– Performing Loans in Commercial Banks in Tanzania and Strategies to Resolve Them. *Journal of Management Policy and Practice, 12*(7).

Taye, D. (2018, September 29). Policy lenders Struggle with NPL. *DBE's Non-performing Loans in history*. Addis Ababa, Ethiopia: the Reporter.

Wondimagegnehu Negera. (2012, January). Determinants of Non Performing Loans The case of Ethiopian Banks. Addis Ababa, Ethiopia: Graduate School of business leadership, University of South Africa.

**Saint Marry University**

**Graduate Program in MBA in Accounting and Finance**

**Questionnaire to be filled by Employees**

**Dear Respondents,**

The main purpose of this questionnaire is designed to collect data for the research entitled***“Factors Affecting Non-Performance of Loans“ A Case Study of Commercial Bank of Ethiopia”.*** The information that you offer me with this questionnaire will be used as a primary data in my study, which I am conducting as a partial fulfilment of the requirements for **MBA in Accounting and Finance** from **Saint Marry University**. I kindly request you to provide reliable information and genuine response. I would like to express my deep appreciation for your generous time, honest and prompt responses.

***Some reminders***

Remarks;

* No need of writing your name.
* All the questions are closed ended questions and where answer options are available, please put (**X**) in the appropriate space provide.
* However, space is provided for any additional opinions, please don’t hesitate to write short and brief answers.

**Confidentiality: -**I want to assure you that this research is only for academic purpose authorized by the**Saint Marry University**. No other person will have to access this collected data.

If you have any queries concerning the questionnaire, please contact me:

Phone Number: +251 910 -17-72-72**WakjiraDejene**

***Thank you very much for your time and cooperation!***

**A.Biographical Information**

1. Gender

A. Male

B. Female

1. Marital Status
2. Single B. Married C. Divorced D. Widowed
3. Educational Qualification

A. Diploma B. Degree C. Masters

Other (Please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How long have you been employed at this company?

A. Less than 1 year B. 1 year – 5 years C. 6 years – 10 years

D. 11 years – 15 years E. 16 years – 20 years F. 21 years or longer

**Instruction: Please tick (X) ONLY one answer for each statement based on the
scale below.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **1**  | **2**  |  |  | **5** |

1. Questions related to determining institutional factors affecting NPLs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Description**  | **1** | **2** | **3** | **4** | **5** |
|  | **Bank size and performance** |  |  |  |  |  |
|  | With growth in banks size comes growth on NPL |  |  |  |  |  |
|  | Aggressive lending leads to large NPL volume/ratio |  |  |  |  |  |
|  | Rapid credit growth leads huge NPL level |  |  |  |  |  |
|  | The Bank’s great risk appetite is cause for NPL |  |  |  |  |  |
|  | Compromised integrity in lending leads to loan default |  |  |  |  |  |
|  | Having large number of borrowers causes loan default |  |  |  |  |  |
|  | **Poor Credit Analyses and Assessment** |  |  |  |  |  |
|  | Know Your Customer (KYC) policy of bank lead to high loan quality |  |  |  |  |  |
|  | The bank Lacksof experienced staff  |  |  |  |  |  |
|  | Project appraising and selection officers and managers are qualified and skilled enough |  |  |  |  |  |
|  | Credit performers in the bank have autonomous power in appraising and selecting projects |  |  |  |  |  |
|  | The borrowers, which are admitted by compromising the assessment conditions usually are default |  |  |  |  |  |
|  | If the bank knows about the customers’ previous credit history, it will lead to high loans quality. |  |  |  |  |  |
|  | Good loan understanding ensures loan |  |  |  |  |  |
|  | Poor risk assessment would lead to loan defaults. |  |  |  |  |  |
|  | **Borrower’s Orientation/Culture** |  |  |  |  |  |
|  | Borrower’s orientation/culture is related to loan performance |  |  |  |  |  |
|  | There is a relationship between loan default and borrower’s culture |  |  |  |  |  |
|  | Default in some area is ascribed to the culture of the borrowers |  |  |  |  |  |
|  | Society’s cultural development leads to good loan performance |  |  |  |  |  |
|  | **Rapid credit growth** |  |  |  |  |  |
|  | Aggression in givingloans can lead to higherNPLs. |  |  |  |  |  |
|  | There are more chancesof high NPLs ifadvancement ofcreditby bank is rapid |  |  |  |  |  |
|  | If integrity in lending iscompromised, it canlead to loan defaults. |  |  |  |  |  |
|  | Giving loans to a largenumber of borrowerscan increase chances ofNPLs |  |  |  |  |  |
|  | If the bank has thetendency of takinggreater risks then thiscan increase NPLs |  |  |  |  |  |
|  | **Poor Credit Monitoring and Banks Loan Supervision Capacity** |  |  |  |  |  |
| 5.1 | Strict monitoring and Controlling of project performance lead to high loans quality |  |  |  |  |  |
| 5.2 | Poorly assessed and advanced loans may perform well if properly monitored |  |  |  |  |  |
| 5.3 | Loan follow up is directly related to occurrence of nonperforming loans |  |  |  |  |  |
| 5.4 | Higher budget for loan monitoring will result in lower non-performing loans |  |  |  |  |  |
| 5.5 | Strict monitoring of loans ensures improved loan performance. |  |  |  |  |  |
| 5.6 | Properly monitoring of a weak loan or advance can decrease the chances of its default. |  |  |  |  |  |
| 5.7 | Credit monitoring is directly related with the occurrence of NPLs. |  |  |  |  |  |
| 5.8 | If bank spends more on credit monitoring, it can lower the level of NPLs. |  |  |  |  |  |
| 5.9 | Lending officer’s qualification plays a key role in making wise loaning decisions. |  |  |  |  |  |
| 5.1.0 | Lending officer’s experience in the service and his experience in dealing with the lending matter’s plays an important role in making wise loaning decisions. |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **1**  | **2**  | **3**  | **4**  | **5** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Poor Credit Condition and Lenient/Lax Credit Terms** |  |  |  |  |  |
| 6.1 | Loans with high interest rate tend to turn to NPL  |  |  |  |  |  |
| 6.2 | Charging high interest rate leads to loan default |  |  |  |  |  |
| 6.3 | Lenient / lax credit term cause loan default |  |  |  |  |  |
| 6.4 | Borrowers default because they don’t understand credit terms well |  |  |  |  |  |
| 6.5 | Poorly negotiated credit terms lead to loan non perform(NPL) |  |  |  |  |  |
| 6.6 | Loans having interest have more chances to turn to NPL. |  |  |  |  |  |
| 6.7 | If high interest rates are charged it can lead to loan default. |  |  |  |  |  |
| 6.8 | Interest charged on loan affects the performance of loans. |  |  |  |  |  |
| **7.** | **Inadequate Nature of Collateral** |  |  |  |  |  |
| 7.1 | Collateralized loans perform well |  |  |  |  |  |
| 7.2 | Collateralizing loans help protect loan default |  |  |  |  |  |
| 7.3 | Most of the time non collateralized loans are defaulted |  |  |  |  |  |
| **8.** | **Lack of Aggressive Credit Collection System** |  |  |  |  |  |
| 8.1 | Poor credit policies and procured, keep |  |  |  |  |  |
| 8.2 | No serious action will be taken against borrowers not to repay the loan |  |  |  |  |  |
| 8.3 | Length of repayment period, and any special terms such as seasonal dating and the collection period of the firm |  |  |  |  |  |
| **9.** | **Bankers’ Incompetence and NPLs** |  |  |  |  |  |
| 9.1 | Lending officer’s qualification plays a key role in making wise loaning decisions. |  |  |  |  |  |
| 9.2 | If a lending officer is groomed in good supervision, trained well and is involved in lending decisions, on the basis of this exposure he/she can make wise lending decisions. |  |  |  |  |  |
| 9.3 | Lending officer’s experience in the service and his experience in dealing with the lending matter’s plays an important role in making wise loaning decisions. |  |  |  |  |  |
| 9.4 | Good and up to date training of officers plays a very important and key role in their professional grooming and enables them to make wise loaning decisions. |  |  |  |  |  |
| 9.5 | Lending officer’s qualification plays a key role in making wise loaning decisions. |  |  |  |  |  |
| 9.6 | Manager’s capability to with stand the pressure (pressure from customerand higher authorities)plays an important role in making wise loan decisions. |  |  |  |  |  |

If you have any additional comment.

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