

Mekelle University
College of Business and Economics
Department of Accounting and Finance



Factors affecting the performance of non-performing loans (NPL);
case study of selected ten districts in Addis Ababa and Head office of
Commercial Bank of Ethiopia

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Mekelle University
College of Business and Economics
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(NPL); case study for selected ten districts in Addis Ababa
and Head office of Commercial Bank of Ethiopia

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Declaration

I, the undersigned, declare that this thesis entitled” Factors affecting the performance of non-performing loans (NPL); case study for selected ten districts in Addis Ababa and Head office of Commercial Bank of Ethiopia”, 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 purpose of earning Masters of Art (MA) in Accounting and Auditing.

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This is to certify that this thesis entitled “Factors affecting the performance of non-performing loans (NPL); case study for selected ten districts in Addis Ababa and Head office of Commercial Bank of Ethiopia”, is a legitimate work of Dagne G/Michael, who has carried out this research work under our guidance. I certify, further, that the work reported here is not taken from part of any project report or thesis on the basis of which a masters or award was discussed before on this or other researchers; all materials used and works of others are duly acknowledged.

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Endorsement

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July, 2025

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Abbreviations and Acronyms

ATM	Automation Teller Machine
BCBS	Basel Committee on Banking Supervision
BO	Borrower's orientation
BSP	Bank Size and Performance
CA	Credit Appraisal
CAR	Capital Asset Ratio
CBE	Commercial Bank of Ethiopia
CCM	Credit Collection Methods
CM	Credit Monitoring
COL	collateralized lending
CT	Credit Term
EPU	Economic policy uncertainty
GDP	Gross Domestic Product
IFB	Interest Free Banking
IMF	International Monetary Fund
INF	Inflation
LIQ	Liquidity
NBE	National Bank of Ethiopia
NPLs	Non-Performing Loans
RCG	Rapid credit growth
ROA	Return On Asset

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Abstract

The growth and sustainability of financial institutions is dependent on how they manage non-performing loans, otherwise, it negatively affects their profitability, liquidity and asset quality, and hence performance will decline through time. In line with this, the current study has examined factors affecting non-performing loans in the case of selected ten districts in Addis Ababa and Head Office of Commercial Bank of Ethiopia. The study adopted a cross-sectional descriptive survey design by applying both quantitative and qualitative approaches. The primary data were collected from 154 employees through questionnaire and 10 credit managers via interview by applying both stratified (to include a respondent from kindly each loan department unit) and lottery (to select a respondent from the first strata) sampling methods. The findings on the descriptive analysis depict that factors significant effect/influence on the performance of NPL in the bank industry. Likewise, the study found that some factors have vital influence on the performance of NPL; whereas, others like Bank size and performance (BSP), Credit Appraisal (CA) and Credit monitoring (CM) have moderate effect the performance of NPL. Moreover, the study found that all the factors except Credit Monitoring (CM) have significant effect on the performance of NPL in the bank.

Finally, the study recommended that the problems on NPL status can be resolved by securing additional collateral, sellout/buyout of loan to/from other banks, changing the form of loan partially or fully, enforcing additional conditions/covenants, replacement/improvement of the management, reduction of overdraft to a lower limit and approve additional finance if there are appropriate and concrete justifiable reasons.

Key Words: Factors, Non-performing Loans (NPL), Commercial bank of Ethiopia

Chapter One: Introduction

1.1. Background of the Study

Banking institutions play a vital role in the financial system. There have been many experiences of financial crises associated with deteriorating asset quality in the banking sector, especially the building-up of non-performing loans. One of the primary sources of banking activities is lending; the significant credit expansion by financial institutions during the two decades before the global financial crisis of 2007–2009 was a defining feature of those years (Keshani & Jayatilake, 2021). Non-performing loans (NPLs) are the most commonly used metric for assessing credit risk (Espinoza & Prasad, 2010). This indicator reflects the risk that underlying cash flows from loans held by financial institutions may not be fully repaid and is related to the quality of bank assets. Numerous earlier empirical investigations demonstrate that bank failure is typically caused by a high amount of NPLs (Keshani & Jayatilake, 2021).

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 (NBE) (2009), the governing body of the financial industry in the country, NPL means loans 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 advance is in question. For short term loans are non-performing when principal and /or interest is due and uncollected for 90 (Ninety) consecutive days or more beyond the scheduled payment date or maturity; medium- and long-term loans are non-performing when principal and/or interest is due and uncollected for 12 (twelve) consecutive months or more beyond the scheduled payment date or maturity (NBE Directives No.SBB/52/2012).

Similarly, a major challenge facing the banking sector is the prevalence of non-performing loans (NPLs). The high incidence of such loans has been identified as a factor that limits the effectiveness of the banking sector in promoting economic growth in many countries (Boudriga, Taktak & Jellouli, 2010). A healthy financial system promotes economic growth, but a weak financial system grappling with non-performing loans and insufficient capital could undermine growth. Hence, at the heart of credit market friction (Bernanke & Gertler, 1989; Guerrieri & Lorenzoni, 2017) are non-performing loans (NPLs), which are viewed as a

source of financial pollution that negates social utility in an economy. The significance of non-performing loans is mainly due to the vulnerability of these usually non-diversified economies to external shocks and macroeconomic instability. At a micro level, bank bankruptcy is usually preceded by a build-up of non-performing loans at a systemic level, and banking crises are also preceded by a substantial accumulation of non-performing loans (Jiménez, Ongena, Peydró & Saurina, 2017). This vulnerability can be further exacerbated by the structure of the banking system in sub-Saharan Africa, which is dominated by a few large banks. Bankruptcy or insolvency involving even one major player can have a spiral effect on the entire system in the country. While the definition of non-performing loans (NPLs) is not uniform across countries, in the global financial stability report of the International Monetary Fund (IMF), a general definition encompasses several formulations (IMF, 2004). According to the IMF definition, a loan is deemed to be non-performing if payments (principal and/or interest) due have not been paid for at least 90 days.

The problem of NPLs in the financial sector has been a matter of concern for all economies and resolution of NPLs has become synonymous to functional efficiency of financial intermediaries (Swamy, 2012; Keshani & Jayatilake, 2021). Counterparty risk, being an important risk in the financial system more particularly of the banking system, poses a bigger challenge in order to achieve financial stability of the bank. Counter-party risk is an outcome directly related to the Non-Performing Loans (NPLs) of a financial institution. Even though NPLs are permanent phenomenon in the balance sheets of the financial institutions, if not contained properly, they eventually lead to crisis that can pose big threats of contagion that can engulf the financial health of the system (Keshani & Jayatilake, 2021). As per the Global Financial Stability Report of International Monetary Fund, (IMF, 2004), identifying and dealing with distressed assets, and recapitalizing weak but viable institutions and resolving failed institutions are stated as the two of the three important priorities which directly relate to NPLs.

According to Negalign (2019), lending is not an easy task for banks because it involves risk of non-repayment which in banking terminology labeled as non-performing loans. Non-performing loans are closely associated with banking crises. The reason given by different banks vary according to their less quality asset performed, but in common, there are internal and external factors that cause it. This means that even if default is random and influenced by unpredictable behavior or it is influenced by certain factors in a specific situation needs an empirical investigation. This close observation would aid all financial institutions to manipulate their credit program for the better.

One of the commercial banks who affected by the performance of NPL is the commercial bank of Ethiopia. The history of Commercial Bank of Ethiopia dates back to the establishment of the State Bank of Ethiopia in 1942. However, the Ethiopian government decided to split the bank into the central bank of Ethiopia and Commercial Bank of Ethiopia was legally established as a share company in 1963. 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. 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.

After 82 years of service since its establishment in 1942, the Commercial Bank of Ethiopia (CBE) remained the largest commercial bank in the country with a total assets of CBE reached Birr 1.4 trillion growing by 9.9% since June 30, 2023, while the Bank's liabilities amounted to Birr 1.4 trillion showing a 9.8% With the 20.0% growth it accomplished, the Bank's capital reached Birr 74.6 billion by June 30, 2024. (CBE Annual Performance Report 2023/24).

The Commercial bank of Ethiopia is noted as the pioneer of modern banking in the country and it is well acknowledged for its catalytic role in the nation's economic progress and development. 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. Complementing this with Nedaj App (Powered by CBE Birr), its mobile banking application, CBE-Birr, and internet banking services together with a 24/7 contact center service. CBE provides a broad range of financial products and services in retail, wholesale, and interest-free banking services and it also has wide network coverage of correspondent banking relationships across the globe. (CBE Annual Report, 2023/24).

Currently, Commercial Bank of Ethiopia has more than 45 million account holders in its, 1942 branches (155 dedicated IFB branches) and two subsidiary branches in South Sudan and Djibouti, the number of Mobile and Internet Banking users also reached more than 6.6 million and 37k respectively. Active ATM card holders reached more than 8.3 million and 17 million CBE Birr users.

During 2023/24 FY Birr 218.2 billion was disbursed, meeting 104.5% of the annual target and the total disbursement made in the current fiscal year so far represents 44.4% increase

compared to the disbursement made in last year's same period. Commercial Banks disbursed Birr 115.4 billion in fresh loans which was 5.9 percent higher than a year ago. During the 2023/24 FY, loan with a principal amount of 13.092 billion fell into the NPL category and represent 6% of the disbursement made (CBE Annual Report 2023/24). This NPL status needs further assessment and re-assessment to investigate why it occurred and what factors are affecting its performance.

1.2. Statement of the Problem

Loan represents the major part of bank's assets and contributes significantly to income of commercial banks (Hiwet, 2016). The economic development of a nation and stability of banking system are invariably interrelated. According to Bangagnan (2021), banking sector performance is usually reflected in an increase in the profitability ratio of a company which shows that the ability of banks to obtain very high profits. The level of bank profitability can be measured by return on assets (ROA) which illustrates the power of banks to generate profits by utilizing assets effectively and efficiently. Typically, 85% of commercial banks income comes from interest on loans (Upal, 2009). Particularly to Ethiopian commercial banks, loan is the main function and vital source of revenue i.e., from total revenue, interest income take a lion share. According to the financial data of Zemen Bank, Dashen Bank and Abyssinia Bank for the period ending 2016 interest income comprises the highest percentage share amounting to 52%, 56 % and 67.2% of total revenue respectively (Hiwet, 2016). This credit creation and loan disbursement process exposes the banks to high default risk which might lead to financial distress including bankruptcy. Other factors that can have an impact on the level of bank profitability aside from non-performing loans are the level of liquidity, capital adequacy ratio, gross domestic product (GDP) and bank size (BS) (Bangagnan, 2021).

Similarly, a very important indicator of the financial risks of the commercial banks is credit risk, which is directly connected with the level of NPLs (Ali & Iva, 2013). This is because Non-Performing Loan (NPL) has been crucial factor these days in terms of banking sector sustainability and profitability (Keshani & Jayatilake, 2021). These NPLs also indicate the borrowers are not paying their principal and interest properly as per their payment schedule, unable to meet their current financial obligation when borrowers fail to repay their loan amount. It is considered as one of the major causes of financial crises (banking failure) and impairs the profitability of the bank. Thus, NPLs are likely to hamper economic growth and reduce economic efficiency. Besides, international experience shows that if non-performing assets (NPA) is not managed properly; it will lead to banking failures and nationwide

financial fragility (Espinoza & Prasad, 2010). Hence, regular monitoring of loan quality is thus essential to ensure a sound financial system and possibly provides an early alarm to regulatory authorities of banking system (Prasanna et al., 2014).

Non-performing loans generally occur because the debtor cannot pay the interest and principal of the loan so that the profit of a bank is reduced (Espinoza & Prasad, 2010). This will affect the level of profitability if the non-performing loans of a bank are higher than there will be a decrease in the level of income, which means there is a negative influence between non-performing loans on profitability. Shiyonzo and Malenya (2020), in their study argued that the non-performing loans are one of the major causes of the economic stagnation problems and the current study aimed to examine the influence of collection effort on non-performing loans in DTSS in Kakamega County.

Several studies have been conducted on the factors affecting the performance of non-performing loans (NPLs) in the banking industry such as Menicucci and Paolucci (2016), in their study found that bank size has a positively affects and significantly influences bank profitability. This means that non-performing loans (NPLs) reduce banks' earnings and cause losses, which weighs on their soundness. Banks with high levels of non-performing loans are also unable to lend to households and companies. Other researchers' Yahaya, Shagari and Mohammed (2022), in their study revealed that increasing the capital level of the banks and keeping the non-performing loan within the barest minimum improved a bank's effectiveness.

The study conducted by (Billy, 2016) argued that weak credit assessment was a contributing factor, and most banks were looking at a substantial rise of nonperforming loans in Kenya. Fawad and Taqadus (2017) recommended a further study on credit Monitoring practices of monitoring practices on loan nonperformance among micro lending entities. Alihodžić and Ekşi (2018) described the quality of the credits as another important factor of the bank credit affecting the performance of NPL. This means that the quality of loans, deposit clients and the banks cost index are closely correlated with the bank loans. Rapid credit growth may lead to an adverse selection, and may be associated with reduced credit quality as risk taking intensifies during such periods, adversely affecting the level of non-performing loans (Erdoğan and Abazi, 2014). This implies that bank failures come with massive effects of the factors and costs not only to Banks but also to the economy as a whole. This, being the immediate reason of Banking crisis occurrences at various times indicates that assessment of non-performing loans and implementation of controlling mechanisms to avoid their occurrence is a continuous process which should be improved from time to time (Negalign, 2019).

To resolve such NPL problems, the study by (Ermiyas, 2020) recommended that the banks must develop a strong credit assessment and follow up to facilitate the control of NPL status of Loans and improve its service delivery. Yahaya, Shagari and Mohammed (2022) also advised that the study will enrich the knowledge of bank management in terms of understanding bank size association with financial performance. It can also instill confidence among members of bank management to always explore other means of improving the performance of their banks, not just only focusing on increasing the size of the bank. Finally, bank customers will generally appreciate the findings of this study as it will change the perception that they have always held that larger banks perform better when compared to their smaller counterparts. Hiwot (2019), in her study recommended that Loan growth, business profit margin, loan to deposit ratio and deposit interest rate were significant driver of NPLs, hence focusing and engendering the institution alongside these indicators could reduce the probability of NPL in Ethiopian private commercial banks.

Moreover, banks should pay attention to the loans provided and identify at an early stage the loans that are likely to become non-performing (Katsampoxakis & Basdekis, 2022). Thus, they are obliged to settle a proper monitoring system so to be able to early identify the case a borrower is facing financial difficulties and is likely to default. This mechanism will assist banks to obtain all necessary tools in order to prevent the process of ending up to non-performing loans. In addition, banks should develop an advanced risk analysis mechanism in order to avoid providing risky loans, especially when the conditions are not met. It is necessary to assess borrowers' solvency and be applied reliable credit criteria in order to ensure borrowers' creditworthiness and the timely repayment of loans provided.

Currently, the NPLs ratio of commercial bank of Ethiopia for the last three years from 2021/22 to 2023/2024 was 5.9%, 5.4% and 4.6% respectively with includes public credit. The average NPLs ratio of commercial bank of Ethiopia for the last three years from 2021/22 to 2023/2024 was at 5.3% which greater than 5% according to NBE requirement of NPL ratio(CBE Annual Performance Report, 2022/23 and 2023/24; NBE, 2014). Even if the NPL ratio for the mentioned fiscal years showed the reduction in percentage, the bank still held huge amount of NPL. Therefore, the percentage verse amount decrement was not sufficient in relation to the huge amount held and also in term of loan disbursement by sectors, NPL ratios are not reduced for all.

Similarly, the studies have been conducted that only considered some factors even if a number of factors have affected the performance of NPL in commercial bank. This means

that several researchers did not include all the factors: collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Collection methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG) and Borrower's orientation (BO) to assess the performance of NPL in the banking industry. Therefore, the intended purpose of this study was to examine the factors affecting the performance of NPL for selected ten districts in Addis Ababa and Head office of Commercial bank of Ethiopia by considering the factors; collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Collection methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG) and Borrower's orientation (BO). This is due to the study will help in bridging the knowledge gap by identifying the factors that cause non-performing loans and facilitate appropriate measures to avoid NPL occurrence in commercial bank of Ethiopia.

1.3. Research Questions

In order to examine factors affecting non- performing loans in selected ten districts in Addis Ababa and head office of commercial bank of Ethiopia, the following research questions are raised and answered in this thesis work.

- What are the major factors affecting non-performing loans at commercial bank of Ethiopia?
- How do the factors; collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Collection Methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG), Borrower's orientation (BO) and Credit Monitoring (CM) affect(magnitude and sign of effect) the performance of NPL in CBE?

1.4. Objectives of the Study

1.4.1. General Objective

The general objective of this study was to examine the factors affecting non-performing loans for selected ten districts in Addis Ababa and head office of Commercial Bank of Ethiopia.

1.4.2. Specific Objectives

Based on the above-mentioned general objective, the specific objectives were set as follows:

- To identify the main factors affecting the performance of non-performing loans for selected ten districts in Addis Ababa and head office of Commercial Bank of Ethiopia.
- To assess the effect (magnitude and sign of effect) of the factors; collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Collection methods (CCM),

Bank size and performance (BSP), Rapid credit growth (RCG), Borrower's orientation (BO) and Credit Monitoring (CM) affecting on the performance of NPL in CBE.

1.5. Significance of the Study

NPLs are one of the most crucial causes of the economic stagnation troubles, as they cause financial crisis if the issues are left unresolved. Therefore, in order to minimization of NPL is a necessary condition for improving economic growth. The first step to be overcome a problem to identify the root causes of NPLs in commercial bank of Ethiopia. The main findings from the present study would to contribute to the understanding and analysis of factors affecting non-performing loans, added new knowledge and to set effective and efficient credit management tools in Commercial bank of Ethiopia. This finding of the research also gives important suggestions for the performers in dealing with NPLs management.

Moreover, the study narrows the gap regarding the determinants of NPLs by utilizing both bank and borrowers specific variables and also through identify the macroeconomic occurrence factors well. Finally, the finding of this study initiates the researcher for further studies and serves as a reference for other researchers in related area.

1.6. Scope 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.

Conceptually, the factors that affect Non-performing loans financed by the Bank of Commercial Bank of Ethiopia , Head office credit department was studied by identifying some institution related factors like, Collateralized Lending, Credit Terms, Credit Appraisal, Credit Monitoring, Credit Collection, Bank size and Performance, Rapid Credit Growth and Borrower's Orientation variables be considered for this study.

Methodologically, the study used quantitative research approach. The rationale behind using approach is because of its most appropriateness to address the research questions by using quantitative data. The common technique of collecting quantitative data is the survey method. The major data collection instrument to collect data was questionnaire.

Geographically, the Commercial Bank of Ethiopia is a very large business organization

owned by government having more than 1942 branches (155 dedicated IFB branches) in the country. Both structurally and functionally the credit operations of the bank are coordinated work on thirty three (33) district office level for small and Micro customers with head office credit department for corporate customers. Since these credit department and some ten district offices credit divisions are located in Addis Ababa, the researcher has explained the notion raised by focusing the credit department due to time constraint.

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.

1.7. Limitation of the study

The main purpose of this study was to determine the organization and borrowers' major specific factors causing non-performing loans in the commercial bank of Ethiopian whereas others banking industry and macroeconomic variables were not considered for comparison, logical reasoning and others relevant justifications. Commercial Bank of Ethiopia has head office and thirty three districts offices recruit borrower customers through branches which provide credit services across the country, however due to time and resource limitation the current study was restricted to the head office credit department.

Additionally, the departments considered in the study which are currently structured to perform the credit service are credit appraisal, credit operation, Credit collection and credit monitoring. Lastly, other issues like politics and procedures are ignored for the ultimate purpose of conducting this study if for academic qualification.

1.8. Organization of the study

This research 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 of the study, limitation of the study and organization of the paper. Chapter two provides a literature review informing the reader of what is already known in this area of study. Chapter three discusses the research methodologies employed in the study, including, research design and approach, target population and sample size, sampling technique, data source and collection method, procedure of data collection, method of data analysis, Model specifications and Ethical

considerations. Chapter four, deals with results and detail discussion of the findings of the study. Finally, chapter five presents conclusions and recommendations drawn from the findings and future works of the study.

Chapter Two: Related Literature Review

2.1. Overview of Non- performing Loan (NPL)

A non-performing loan (NPL) is a loan that is in default due to the fact that the borrower has not made the scheduled payments for a specified period (Espinoza & Prasad, 2010; Katsamposakis & Basdekis, 2022; Keshani & Jayatilake, 2021). Although the exact elements of nonperforming status can vary depending on the specific loan's terms, "no payment" is usually defined as zero payments of either principal or interest (Fofack, 2005).

The Institute of International Finance working group on loan quality divided the loans into five groups: standard, watch, substandard, doubtful, and loss. The last three categories were identified as NPLs, which means that payment of principal and/or interest is overdue more than 90 days, 180 days, and 365 days (Espinoza & Prasad, 2010). The International Monetary Fund (IMF) (2004) defines loans as NPLs when (a) payments of principal and interest are past due by 90 days or more; (b) interest payments equal to 90 days interest or more have been capitalized (reinvested into the principal amount), refinanced, or rolled over (payment delayed by agreement); or (c) evidence exists to reclassify them as NPLs even in the absence of a 90-day past due payment, for instance, when the debtor files for bankruptcy after classifying the loan as NPLs.

Moreover, the Basel Committee on Banking Supervision (BCBS) (2006) also defines NPLs as when “a default is considered to have occurred concerning a particular obligor when either or both of the two following events have taken place. The obligor is past due more than 90 days on any material credit obligation to the banking group. Overdrafts will be considered as being past due once the customer has breached an advised limit or been advised of a limit smaller than current outstanding”. According to the International Monetary Fund (IMF, 2021), Any loan in which the interest and principle payments are 90 days or more past due, or in which the interest payment has been capitalized, refinanced, or postponed by arrangement, or in which the fees are less than 90 days past due, is considered a non-performing loan (NPL).

Basha and Ramaratnam (2016) defined NPL (also called Non-Performing Assets) as the assets of the banks which don't perform (that is – don't bring any return) are called Non-Performing Assets (NPA) or bad loans. According to them bank's assets are the loans and advances given to customers. If customers don't pay either interest or part of principal or both, the loan turns into bad loan. Likewise, Under the Ethiopian banking business directive, NPLs 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” (NBE,SBB/43/, 2008). Further, it was defined in the directive as: “Loans or advances with pre-established repayment programs are nonperforming when principal and/ or interest is due and uncollected for ninety consecutive days or more beyond the scheduled payment date or maturity”.

In the wider sense, according to Fofack (2005), NPLs consist of sub-performing loans; such loans are not fully defaulted but are in arrears between 60–90 days. In addition, there is a watch list loan, and those loans are not expected to default directly. Lastly, non-strategic loans, which are not considered a bank's core activities for strategic reasons, can be part of NPLs. However, we will focus on the narrow sense when we synthesize the literature. Following the work of, these are the most agreed-upon definitions of bad loans in the literature.

However, the definition of NPLs may vary across countries, but the concept is relatively similar the world over. Non-performing loans are also called as “bad loans” because they have little chance of being paid off (Katsampoxakis & Basdekis, 2022). For the borrower, debt deriving from a non-performing loan makes it difficult to get access to new financing in order to invest, while it cuts off lender's possibility to provide new loans. A loan is not considered anymore as non-performing, whether it is renegotiated and settled or paid off over 90 days past due.

Finally, according to Keshani and Jayatilake (2021), the banks classify the loan as NPLs and, depending on domestic accounting regulations; it becomes “bad debt.” There are significant differences in the treatment of NPLs, which might not correctly depict the problem's scope. The reported NPLs can be overstated or understated by regions, countries, and individual banks. The following factors influence various NPL interpretations including whether or not restructured loans need to be recognized as NPLs, whether collateral is considered when granting a loan, whether NPLs are listed as fully or partially overdue in terms of outstanding value and whether banks must downgrade every loan (Fofack, 2005; Espinoza & Prasad, 2010).

2.2. Causes of Non-Performing Loans (NPLs)

Several researchers and scholars described their own cause of NPL in the banking industry such as Mazreku et al. (2018), in their study states that problem loans have generated considerable academic and policy attention in recent years, fueled in part by the aftermath of the 2008-2009 economic crisis and subsequent credit crunch. Problem loans, referred to as non-performing loans (NPL), are loans which are not paid in the structured time period as set in the contract between the borrower and the bank. Ermiyas (2020) states that weak credit risk valuation would leads to high non-performing loan these mean that the loan analysis's and appraisal lack accurate and suitable valuation to reasonably determine the viability and future prospect of the investment/business. Mingaleva, Zhumabayeva and Karimbayeva (2014) states that sudden growth of NPL volume became one of the up-to-date problems of bank sector in late 2000s. Analysis of macroeconomic values of development of Eastern, Central and South Europe, CIS-countries showed that before financial crisis of 2007-2008 the situation with credit portfolios in most countries of the world were rather stable. However world financial crisis changed situation seriously in financial sector - the average quality of bank assets has deteriorated greatly and a number of general problems of development became clear.

Ermiyas (2020) states that the problem of non-performing loans is seen as a burden on any country's economy or financial institution and putting downward pressure on its growth. This is because the role of banks as financial intermediaries does not function properly due to the problem of non-performing loans (NPLs). Likewise, the accumulation of nonperforming loans is generally attributable to a number of factors, including 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 (Goldstein & Turner, 1996). In a context of low equity and absence of diversification, terms of trade deterioration and interbank loans played a key role in the accumulation of nonperforming loans. The latter also increased the risks and prospects of moral hazard. Moral hazard in the banking sector context refers to the adverse incentives created by the prospects of implicit coverage of banks losses by governments. It can be particularly high when banks' capitalization is low; in such cases, it often leads to adoption of imprudent lending strategies with direct implications for banks' loans portfolios which tend to be heavily skewed toward high risk projects (Morris & Turner, 1996). When these projects are owned by investors and entrepreneurs directly or indirectly connected with the lenders, the financial transaction is termed as insider lending (Fofack, 2005).

The study by (Bridge, 1998) states that most of the bank failures were caused by non-performing loans. Arrears affecting more than half the loan portfolios were typical of the failed banks. Many of the bad debts were attributable to moral hazard: the adverse incentives on bank owners to adopt imprudent lending strategies, in particular insider lending and lending at high interest rates to borrowers in the riskiest segments of the credit markets (Fofack, 2005). Based on the views of Bridge (1998), the main causes of NPL include the following;

2.2.1. Insider Lending

According to Bridge (1998), the single biggest contributor to the bad loans of many of the failed local banks was insider lending. In at least half of the bank failures, insider loans accounted for a substantial proportion of the bad debts. Most of the larger local bank failures in Kenya, such as the Continental Bank, Trade Bank and Pan African Bank, involved extensive insider lending, often to politicians. The threat posed by insider lending to the soundness of the banks was exacerbated because many of the insider loans were invested in speculative projects such as real estate development, breached large-loan exposure limits, and were extended to projects which could not generate short-term returns (such as hotels and shopping centers), with the result that the maturities of the bank's assets and liabilities were imprudently mismatched. He sets three forces behind insider lending and lists them as political pressure, under-capitalization and over concentration in ownership.

2.2.2. High Interest Rates

In the study the second major factor contributing to bank failure was lending, at high interest rates, to borrowers in high-risk segments of the credit market. This involved elements of moral hazard on the part of both the banks and their borrowers and the adverse selection of the borrowers (Fofack, 2005). It was in part motivated by the high cost of mobilizing funds. Murthy et al. (2017) have observed the customers' living standards; customers' income, bank interest rate and the country's economy to examine how these economic factors contribute to the formation of non-performing loans (NPL) of commercial banks in Malaysia. This study has revealed that interest rates significantly affected NPL's level. An increase in NPLs may cause banks to increase their lending interest rates to compensate for their decreasing profit levels (Levent & Ezanoglu, 2022). In this case, the NPL rates of banks which make their loan conditions more difficult decreases; however, it can adversely affect the sectors needing funds.

2.2.3. Liquidity Support and Prudential Regulation

The third most important factor is liquidity support and prudential regulation. The willingness of the regulatory authorities to support distressed banks with loans, rather than close them down, was probably an important contributor to moral hazard. Once the bad loan problem of the private sector settles, the real economy gradually regains strength and returns to a path of sustainable growth. This due to solving the bad loan problem is indispensable to the recovery of an economy (Morakinyo & Sibanda, 2016).

The problem of NPL's is widespread. Nishimura, Kazuhito and Yukiko, (2001) state that one of the underlying causes of Japan's prolonged economic stagnation is the nonperforming or bad loan problem. They explain that some of the loans made to companies and industries by financial institutions during the bubble era became non-performing when the bubble burst (Fofack, 2005). This delayed structural reform and prevented the financial intermediary system from functioning properly.

2.2.4. Inadequate management of credit risk

Fernández, Jorge and Saurina (2000), in their study state that the growth of bank credit in Spain and its prudential implications is an ever-present item on the agenda of banking supervisors, since most banking crises have had as a direct cause the inadequate management of credit risk by institutions. They further assert that even though bank supervisors are well aware of this problem, it is however very difficult to persuade bank managers to follow more prudent credit policies during an economic upturn, especially in a highly competitive environment. The study by (Fernández et al., 2000) claimed that even conservative managers might find market pressure for higher profits very difficult to overcome.

2.2.5. Economic mismanagement and political interference

According to Gorter and Bloem (2002), non-performing loans are mainly caused by an inevitable number of wrong economic decisions by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, etc.). Under such circumstances, the holders of loans can make an allowance for a normal share of non-performance in the form of bad loan provisions, or they may spread the risk by taking out insurance. Likewise, according to Kroszner (2002), non-performing loans are closely connected to financial crises. The NPL creates a vicious impact on banking survival and growth and contributes to bank failures not properly handled. If banks' disposal amounts of non-performing loans exceed their profit, this will decrease the net worth of banks and decrease their risk-taking ability, making it difficult

to invest funds in risky projects (Espinoza & Prasad, 2010; Richard, 2011).

Moreover, according to Fofack(2005), the presence of a significant number of non-performing loans can have severe implications for banks like interest Income Erosion: NPLs erode a bank's interest income, leading to financial losses and reduced ability to lend, Profitability Plunge which depicts the existence of NPLs lowers a bank's profits and concurrently heightens its risk exposure, potentially leading to financial instability, Capital Drain which means that NPLs can deplete a bank's capital, impacting its ability to maintain a healthy Capital Adequacy Ratio, absorb losses, and meet regulatory requirements and Credit Rating Downgrade meaning that a high NPL ratio can adversely affect a bank's credit rating, impacting its ability to raise funds at favorable rates.

Non-performing loan (NPL) is a major problem in the banking industry. Bhattarai (2017) revealed that the NPL, CAR, LIQ have significant and negatively associated with ROE. Similarly, size has a significant and positive association with ROE. The INF has a positive but insignificant result with ROE. The study concluded that among study variables NPL, CAR, LIQ, and bank size have a major role to determine profitability. The INF does not significantly affect profitability. However, the effect of non-performing loans on profitability is very strong. The bankers have sincerely taken for the over 90-day dues. It has a rational effect on the national economy also.

According to basic economics, if demand exceeds supply, prices will rise, thus decreasing demand or increasing supply until demand and supply are in equilibrium; thus, if prices do their job, rationing will not exist (Richard, 2011; Chi & Li, 2017). However, credit rationing does exist. Stieglitz and Weiss (1981) demonstrated that even in equilibrium, credit rationing will exist in a loan market. Credit rationing is defined as occurring either (a) among loan applicants who appear identical, and some do and do not receive loans, even though the rejected applicants would pay higher interest rates; or (b) there are groups who, with a given credit supply, cannot obtain loans at any rate, even though with larger credit supply they would. A model is developed to provide the first theoretical justification for true credit rationing. The amount of the loan and the amount of collateral demanded affect the behaviour and distribution of borrowers. Consequently, faced with increased credit demand, it may not be profitable to raise interest rates or collateral; instead, banks deny loans to borrowers who are observationally indistinguishable from those receiving loans (Chi & Li, 2017).

It is not argued that credit rationing always occurs, but that it occurs under plausible assumptions about lender and borrower behaviour. In the model, interest rates serve as screening devices for

evaluating risk. Interest rates change the behaviour (serve as incentive mechanism) for the borrower, increasing the relative attractiveness of riskier projects; banks ration credit, rather than increase rates when there is excess demand. Banks are shown not to increase collateral as a means of allocating credit; although collateral may have incentivizing effects, it may have adverse selection effects (Bhul et al., 2016).

NPLs have been found to be affected by macro variables, such as GDP growth, unemployment and inflation, and bank-related variables, such as bad management and market structure (Beck et al., 2015; Anastasiou et al., 2016). Economic policy uncertainty (EPU), which can be defined as the difficulty faced by economic agents in predicting the future course of fiscal, monetary, regulatory and trade policy, has recently been found to affect credit risk as the frequent and vague changes to economic policies may lead to misallocation of banks' credit resources or deterioration of borrower firms' operations (Chi and Li, 2017). Louzis et al (2012) shows that NPLs in the Greek banking system can be explained mainly by macroeconomic variables (GDP, unemployment, interest rates, public debt) and management quality. Kauko (2012) presents empirical results concerning the statistical interrelationship of the current account and the development of the amount of NPLs in the recent financial crisis, which focus is on macroeconomic factors, not on the usefulness of banking sector solvency and liquidity under adverse conditions.

In conclusion, at the theoretical level, there are two approaches suggesting different factors that can influence nonperforming loans (Bangagnan, 2021). The first approach shows that non-performing loans are tied to conditions in the economy. Indeed, during booms, the financial profile of borrowers improves, asset prices rise, and this euphoric situation paves the way for increased demand for credit (Gertler & Bernanke, 1989; Pesaran, 2006; Bangagnan, 2021). In contrast, the second approach considers that the increase in nonperforming loans is linked to the distinctive characteristics of the banking sector and to the political choice of individual banks, which exert a decisive influence on the increase in nonperforming loans (Berger & De Young, 1997; Keeton et al., 2003; Minh et al., 2020; Bangagnan, 2021; Katsamposakis & Basdekis, 2022; Kumar, 2023; Rana, 2023).

2.3. Empirical evidence on factors affecting the performance of NPL

Different researchers and scholars identified different factors affecting the performance of NPL in commercial banks such as Minh et al. (2020), in their study indicated that NPLs were positively affected by its lag of the previous year, capital structure, and interest rate.

Additionally, returns on asset, inflation rate, and credit growth were found to have negative impacts on NPLs. However, impacts of firm size and gross domestic product were not found across the models. Similarly, the study by (Rana, 2023) investigates the factors affecting Non-Performing Loans of Commercial Banks of Nepal during the period from 2012/13 to 2021/22. The result shows Bank size has negative effect and significant on NPL which means as bank size increases the level of NPL decreases. However, ROA, ROE, Liquidity, CAR and LDR have insignificant effect on NPL. Therefore, commercial banks should be focused on increasing bank size so that they diversify the portfolio of assets to reduce the size of NPL. The research by (Harimurti, Pandoyo & Sofyan, 2022) analyze the influence of macroeconomic factors projected by inflation and bank-specific factors used, namely Return on Asset, Equity to Asset Ratio, and Bank Size on Non-Performing Loan of State Owned Banking for the period 2017-2021. Return on Assets has a significant negative effect on Non-Performing Loans. Equity to Asset Ratio and bank size have a significant positive effect on Non-Performing Loans; whereas, inflation has a positive effect on Non-Performing Loans.

On the other hand, the study by (Katsampoxakis & Basdekis, 2022) described Non-performing loans (NPL) as a major importance issue that banks need to keenly consider for banking system's viability and economies sustainability, as banking sector's stability is the foundation of macroeconomic policy. According to empirical results unemployment, lending interest rates and household consumption expenditure affect in positive statistically significant way non-performing loans. The nonperforming loans in strong economies didn't overcome their average even after the outbreak of global financial crisis, in contrary to weaker economies. Thus, it is derived a strong linkage between healthy banking systems and robust economies. Another study by (Kumar, 2023), concluded that the macroeconomic factors and managerial efficiency, along with lending policy, have a significant impact on the nonperforming loans of the Nepalese commercial banks. The study by (Mahyoub & Mohd Said, 2021) finding reveals that capital adequacy ratio is a significant factor in influencing the sample banks' level of non-performing loans. All other bank-specific factors employed in the analysis were found to be insignificant. The study by (Khan, Siddique and Sarwar, 2020) show that the operating efficiency and profitability indicators have a negative association with NPLs but were statistically significant, while capital adequacy and income diversification have a negative association with NPLs but were statistically insignificant. Mazreku et al. (2018), study show that GDP growth and inflation are both negatively and significantly correlated with the level of NPLs, while unemployment is positively-related to NPLs. These results have important implications for banking stability within transition

countries, and the role of macroeconomic policies in this regard.

Moreover, Bangagnan (2021), in his study found those factors such as the ratio of loans to total bank assets (RPA) return on assets (ROA) and the ratio of loans to deposits (RCD) increase nonperforming loans from CEMAC banks. The research conducted by (Alnabulsi, Kozarević & Hakimi, 2022) indicates that the level of non-performing loans is more sensitive to bank specifics than macroeconomic factors. When it comes to macroeconomic factors, macroeconomic environment and institutional quality significantly affect the level of NPLs. However, no significant effect has been detected regarding the impact of the COVID-19 pandemic.

Keshani and Jayatilake (2021), in their study revealed that customer relating factors also reflect in case of nonperforming loans and there are some new factors were also found as Institutional related factors. Some moderate mechanisms also found to implement for all the financial companies and Banks. The study by (Sthembiso, 2022) examines the macro-economic and bank-specific factors affecting non-performing loans in commercial banks. It was found from the estimation that the liquidity ratio, capital adequacy ratio and inflation rate significantly affect non-performing loans. As a result, He advised that banks depend not only on their ability to achieve the capital adequacy ratio, but also guarantee that loans are thoroughly scrutinized before being issued to beneficiaries. Hiwot (2019), in her study on the determinants of non-performing loans ought to establish the effect of microeconomic variables (deposit interest rate, exchange rate and annual inflation rate), bank specific (loan to deposit ratio, and loan growth rate) and borrower specific characteristics characteristic (business profit margin). The findings of the study show that business profit margin, deposit interest rate, loan growth rate, and loan to deposit ratio were statistically significant factors in influencing private banks' NPLs. On the other hand, variables like exchange rate and inflation rate were found to be statistically insignificant.

The study by (Sirak, 2016) investigates the factors affecting Non-Performing Loans of Commercial Bank of Ethiopia during the period from 2002 to 2015. The results obtained from regression output indicated that among the studied variables, loan to deposit ratio; financial performance measured in terms of return on equity; and capital adequacy were found to be statistically significant determinant of NPLs. On the other hand, loan growth, cost efficiency and bank size were statistically insignificant in affecting NPL. The findings from the interview result indicates that, variables such as poor credit risk assessment, focusing on collateral based lending, poor loan monitoring and follow-up, poor banker's skill in dealing

with lending matters, undiversified loan products, short loan life and lack of credit advisory practices were also the bank specific factors that affect NPLs of CBE. The study suggests that focusing on these NPL indicators could further reduce the probability of default while extending credit in the future. Further studies were recommended by including macroeconomic and other bank specific variables; and by increasing the sampled periods.

The research conducted by (Negalign, 2019) identified the factors affecting non-performing loans in commercial banking sector; in public and private banks of the study area. The results of the study indicated Bank specific factors include Bank size and performance, credit size, poor credit assessment, poor credit terms, lack of aggressive credit collection system, inadequate nature of collateral were identified as bank specific factors affecting NPLs. On the other hand unwillingness of borrower to pay back loan, customers funds diversion for unexpected purpose were identified as customer specific factors affecting NPLs. Hence, it is suggests the stakeholders in the credit system including the banks and government must implement policies to reduce the occurrence of loan default that will facilitate the minimization of the internal as well as external factors that precipitate NPLs. Likewise, Suhaila et al. (2023), in their study indicates that bank size, unemployment rate, and gross domestic product significantly impact the NPLs in the Malaysian Commercial Banks industry.

Shiyonzo and Malenya (2020), in their study argued that the non-performing loans are one of the major causes of the economic stagnation problems and the current study aimed to examine the influence of collection effort on non-performing loans in DTSs in Kakamega County. Inferential results revealed that collection force affected non-performance loans. Collection force negatively affected non-performance loans of DTS in Kakamega County. The study recommended that DTSs should involve credit/field officers and customers in formulating customized credit collection policies that positively attract customers as this would reduce loan delinquency, improve market share and consequently influence nonperforming loans.

Kumar (2024), in his study states that the operations of banks are significantly shaped by non-performing loans (NPLs), which have an impact on risk management, financial stability, and the profitability and efficiency of commercial banks. The research findings indicate that the level of non-performing loans in Nepalese commercial banks is significantly influenced by certain criteria related to the borrowers. The study by (Atieno, Ayuma & Ngari, 2022) determines the effectiveness of credit appraisal on management of Non-Performing Loans in

Kenyan Commercial Banks. The findings revealed that credit appraisal had a positive and significant effect on the management of Non-performing Loans. Based on the new findings, the management of commercial banks and policymakers should develop effective credit appraisal strategies, policies and techniques that make borrowing affordable hence attracting credit-worthy borrowers to the banks.

Negera (2012), in his study states that the reasons for nonperforming loans include poor credit supervision, poor credit appraisal, flawed loan surveillance, immature credit heritage, lax credit contract terms, assertive lending, malfunctioning administrative frameworks, monopolistic practices among financial institutions, deliberate nonpayment by customers with their limited understanding, misappropriation of funds and inadequate financing by lenders. Jacob, Maingi and Dennis (2023), in their studies point to nonperforming loans as one of the main problems facing microfinance institutions in Kenya, which has led to reduced profitability and institutional collapse in some cases. Noncompliance with credit monitoring and loan policy provisions have been cited as some of the factors leading to increased nonperforming loans. The study found that there was a positive significant effect of credit monitoring practice. Based on the findings of the study, the researcher recommends that microfinance entities should strengthen credit-monitoring practices to minimize debt writing off and loan nonperformance.

Similarly, Pasha and Khemraj (2019) investigated the factors that contribute to nonperforming credit. Their findings indicate that Gross domestic product and non-performing loans are negatively associated, indicating that a strengthening of the productive sector corresponds to a decline in defaulting loans. Financial organizations that price their loans significantly higher than normal and lend without restrictions stand high chances of loan failure. Hence, credit Monitoring minimize nonperforming loans. Similarly, Ermiyas (2020), in his study found that poor risk assessment and poor monitoring/follow-up as the major reasons for the occurrence of loan default/ non-performing loan followed credit culture /orientation and interest rate. The study suggests that much attention should be given to proper credit assessment and risk management techniques, introducing and implementation of an aggressive debt collection policy, and strong loan follow-ups. Besides, the bank should exert additional effort to better manage its NPL position.

Ademola (2024), in his study investigated the effect of loan terms and borrowers' behavior on NPLs in Nigeria's Microfinance banks. The results indicated that high interest rates and short repayment periods were positively linked to the increase in NPLs, meaning that borrowers

have difficulties with high borrowing costs and tight repayment schedules. Moreover, rigid conditions of the loans further increased the level of NPLs due to lack of borrower flexibility. Overleveraging and loan diversion also proved to be significant enhancers of NPLs, while financial literacy turned out to reduce default risks. The study emphasizes the need to adopt flexible loan conditions and make sure clients are more financially literate, which would reduce default rates and increase sustainability for MFBs. These findings have important implications for policymakers and financial institutions concerned with enhancing the resilience of the microfinance sector in Nigeria. Rajan and Dhal (2016) utilize panel regression analysis to report that favorable macroeconomic conditions (measured by GDP growth) and financial factors such as maturity, cost and terms of credit, banks size, and credit orientation impact significantly on the NPLs of commercial banks in India.

Yahaya, Shagari & Mohammed (2022), in their research states that bank size is one of the vital internal determinants of banking performance, although scholars hold contradictory views on bank size and its influence on performance. The finding revealed a significant and negative association between bank size and its financial performance. However, the smaller banks performed better when compared to their larger counterparts in the region. These findings seem to suggest that banks keep their capital level on the high side and minimize the rate of their non-performing loans in order to achieve more excellent banking performance within the region.

Alihodžić and Ekşi (2018), in their paper assessed the endogenous and exogenous factors that affect the credit growth rate of some Western Balkan countries (Bosnia and Herzegovina, Croatia and Serbia) and the credit policy in Turkey will be investigated through a multiple regression analysis. The credit growth rate will be used as the dependent variable while the rate of the nonperforming loans along with the growth rate of the deposit, the return of equity and the real growth rate of the gross domestic product will be used as independent variables. The result of the regression analysis showed that there is a reverse relationship between the rate of the non-performing loans and the credit growth rate for all the observed countries. The high share of problematic loans in total loans relatively reflects in a negative way the overall tendency of the banks towards taking risks and credit growth. It reduces the profitability of the banking sector and increases the systemic risk as well.

In conclusion, the study concluded that there are several factors affecting the performance of NPL in Commercial banks. Some researchers used the secondary data to assess the factors affecting NPL performance; a few used primary data; whereas, others used both primary and

secondary data sources to investigate the factors affecting the performance of NPL. However, the researcher used primary data sources to examine the influence of the factors; Credit terms, Credit Monitoring, Credit Appraisal, Collateralized lending, Credit collection Methods, Banks size and Performance, Borrowers' orientation and Rapid credit growth on the performance of NPL in commercial banks.

2.4. Conceptual framework of the study

The conceptual framework indicates the crucial process, which is useful to show the direction of the study. The conceptual framework (Figure 2.1) outlines the relationship between dependent (performance of non-performing loans) and independent variables (Factors affecting: Credit terms, Credit Monitoring, Credit Appraisal, Collateralized lending, Credit collection Methods, Banks size and Performance, Borrowers' orientation and Rapid credit growth).

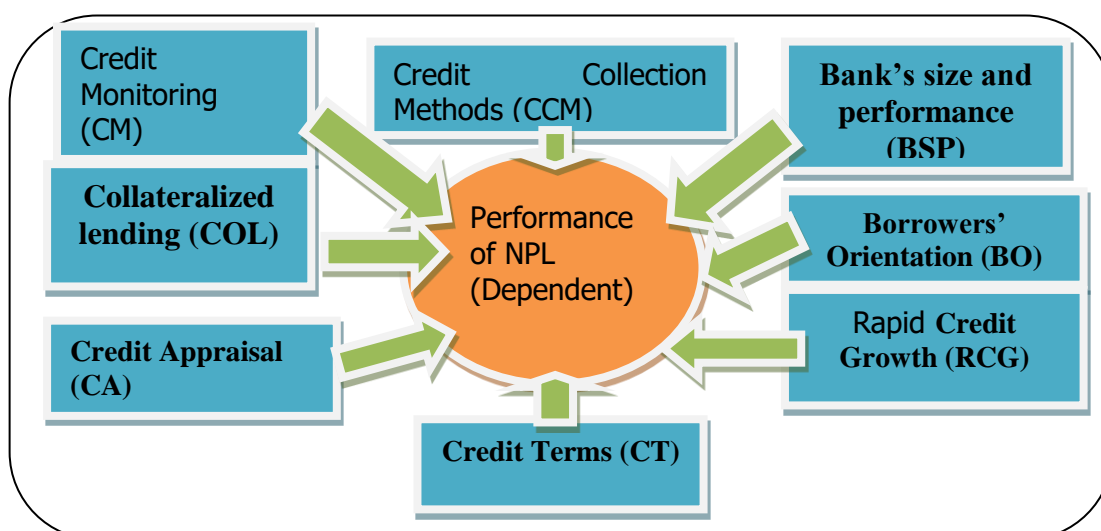


Figure 2-1: Conceptual framework

Sources: Adopted by the Researcher

Chapter-Three: Research Methodology

Introduction

This chapter presents details of the research methodology. This consisted of research design, research approach, data type and source, data collection procedure and tools, population and sample frame, sampling method and size, methods of data analysis and model specification of the study.

3.1. Research Design

A research design is a master plan that specifies the methods and procedures for collecting and analyzing the needed information (Zikmund, Babin, Carr & Griffin, 2009). A research design provides a framework or plan of action for the research. It is useful to determine which research approach is being implemented when conducting research. As the overall purpose of the study is to investigate the factors that affect the performance NPLs of Commercial Bank of Ethiopia, and the study is intended to examine the statistical relationship between the dependent and independent factors and the problem, there are perhaps several other factors that influence NPL apart from the variables identified in the study. Therefore, a cross sectional descriptive research design is adopted.

3.2. Research Approach

In order to achieve the objectives of the research under this study, the research approach to be chosen was a mixed research approach which combines both qualitative and quantitative data.

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 and has given popularity to the mixed research design. The use of mixed methods gives an advantage of multiple forms of data drawing on all possibilities statistical, text analysis and interpretation. In addition, it helps to better understand a research problem by meeting broad numeric trends from quantitative research and the detail of qualitative research.

3.3. Data Type and Source

This study used both primary data and secondary sources, with regard to the sources of data. Primary data was collected from a sample of employees of the credit department through closed ended questionnaires about the factors affecting the performance of non-performing loan. Moreover, the secondary sources were collected from the National bank of Ethiopia (NBE's) and Commercial Bank of Ethiopia's annual reports, procedures, manual and website and other related literature.

3.4. Data Collection Procedure and Tools

In this study, the main tool for data collection was semi-structured questionnaire. This primary source of data was collected from employees of the sample at the credit processing head offices credit and selected ten districts office in Addis Ababa credit processing units of CBE. The primary data collection instrument was closed ended questionnaires that were divided in two parts. The first part of the questions was designed to get information on the demographics of the respondents or respondent profile such as sex, age, and marital status, level of education and years of experience in the bank. The second part the questions are designed to get information from respondents were requested to respond their level of agreement towards thirty-five (35) questions constructed to show items related to the factors affecting nonperforming loans using a five-points Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) for each of the questionnaires. Similarly, 6 (six) interview questions were also prepared and distributed to selected 10 credit managers of the bank.

3.5. Population and Sample frame

Commercial bank of Ethiopia has 1 head office organ, 3 regional office, 33 districts and 1942 branches. The bank credit operation processes have been performing at head office credit processing units and district credit processing unit's level only. District offices credit

processing units have their own credit approval discretionary limit and above district credit limit all credit operations have being processed at the head office level. Population represents the group or the individuals to whom the survey applies. The target pollution of the study was 649 employees of the bank in credit areas (Table 3.1). Sample frame is the listing of all units in the population from which the sample is drawn or selected. Thus, the population for this study was the whole permanent employees who are working in the credit operation, credit appraisal, credit collection and credit monitoring units in the head office credit processing units, and selected ten districts in Addis Ababa credit processing units of CBE.

Table 3-1: Summary of target population of the study

S.N	Position	Total number of employees
1	Associate Credit Appraisal Officer	43
2	Associate Credit Operation Officer	20
3	Collateral Valuator	41
4	Credit Administrator	55
5	Credit Appraisal Expert	68
6	Credit Appraisal Officer	66
7	Credit Monitoring Officer	18
8	Credit Operation Officer	39
9	Junior Collateral Valuator	26
10	Junior Credit Appraisal Officer	22
11	Junior Engineer	27
12	Loan Collection Officer	19
13	Loan Workout Officer	15
14	Senior Credit Monitoring Officer	18
15	Senior Credit Operation Officer	17
16	Senior Loan Collection Officer	23
17	Senior Loan Workout Officer	13
18	Team Leader - Appraisal	33
19	Team Leader - Collection	27
20	Team Leader - Monitoring	29
21	Team Leader - Operation	30
Total		649

3.6. Sampling Methods and Sample Size

As mentioned above, the total population in this study area was 649 permanent employees who are working in the credit operation, credit appraisal, credit collection and credit monitoring units in the head office credit processing units, and thirty three districts credit processing units of CBE. It is a bit expensive in terms of money and time to collect data from all these employees, so that the study must determine sample which is representative for the total population. In this study a stratified sampling technique was applied, since all units working credit processing units in the head office and selected ten districts in Addis Ababa credit processing units of CBE have to be covered with good representation. Therefore, 160 respondents were selected from each position randomly based on a lottery method (Table 3.2). Accordingly, all the lists of employees are numbered on separate slip of papers with the same size, shape and color, and are folded and mixed up in a drum/box of contain for each department/category. Then, a blindfold selection is made to select required number slips to arrive at the desired sample size for each category and add each selected samples to bring the total sample size under the study. This helps the researcher to increase the quality of the research due to the opinions of employees from different positions is included.

Table 3-2: Summary of Sample size of the study

S.No	Job	Total
1	Associate Credit Appraisal Officer II	6
2	Credit Appraisal Expert	16
3	Credit Appraisal Officer	14
4	Credit Appraisal Sector Specialist	12
5	Credit Monitoring Officer	4
6	Credit Operation Officer	12
7	Junior Credit Appraisal Officer	7
8	Senior Credit Appraisal Sector Specialist	6
9	Senior Credit Monitoring Officer	7
10	Senior Credit Operation Officer	6
11	Senior Loan Collection Officer	6
12	Senior Loan Workout Officer	4
13	Team Leader - Operation	9
14	Team Leader - Appraisal	12
15	Team Leader - Monitoring	12
16	Team Leader - Collection	9
17	Associate Collateral Valuator I	3
18	Collateral Valuator	9
19	Junior Collateral Valuator	4
Total		160

3.7. Method of Data Analysis

After information is gathered through the pre-set methods, it was encoded, processed, analyzed and the quantitative data that was collected and processed using Stata Ver. 13.As

this study mainly focus on examining the factors affecting NPLs in commercial bank of Ethiopia, the researcher used descriptive and econometric methods of analysis to study the credit performers' attitudes towards institution and customer related factors affecting of NPLs in commercial bank of Ethiopia. The descriptive analysis was used to analyze the data expressed in quantitative form (Frequency, Percent, Mean and Standard deviation) like demographic characteristics and the factors affecting the performance of NPL. The econometric analysis consisted of the bivariate correlation and linear regression analysis methods, which help to examine the relationship between the dependent (performance of NPL) and independent (factors affecting) variables.

3.8. Model Specification

Different Researchers used different models to examine the factors affecting the performance of NPL in banking industry, However, the researcher used the eight factors; collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Monitoring (CM), Credit Collection methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG) and Borrower's orientation (BO) as independent variables to assess their effect on the performance of Non-performing Loans (NPL) in Commercial bank of Ethiopia (CBE). Accordingly, Performance of NPL = f (collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Monitoring (CM), Credit Collection methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG) and Borrower's orientation (BO)). This implies that the mathematical model was expressed as follows.

$PONPL = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \epsilon$; where PONPL = Performance of NPL, X_1 = Collateralized Lending, X_2 = Credit terms, X_3 = Credit Appraisal , X_4 = Credit Monitoring, X_5 = Credit Collection Methods, X_6 = Bank size and Performance, X_7 = Rapid Credit Growth and X_8 = Borrowers Orientation and α is the constant term, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ and β_8 are coefficient of the independent variables and ϵ is the error term of the regression model. The error term shows the standard errors found during the regression data manipulation process. It is the collection of the errors made during data processing in estimating the results of the regression model. This error term always happened whenever we use the unstandardized coefficient estimations of the regression model.

3.9. Ethical Considerations

In conducting this study, ethical issues were primarily considered. Before conducting the data collection, all the necessary information about the study was provided to the sample

respondents, i.e. who will conduct the study, for what purpose, and the like. This helped them to decide whether to participate in this study or not. They were also notified that their participation in the study is voluntary; they were not harmed as a result of their participation or non-participation in the study. They were also aware that anonymity and confidentiality of their response would be guaranteed.

Chapter Four: Results and Discussion

Introduction

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 Stata V.13. 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. This chapter consisted of five sections. The first section deals with the response rate of the study. The second section presents the demographic characteristics of respondents. The third section discusses with the descriptive analysis of the factors affecting the performance of NPL. The fourth section deals with correlation analysis of the study. Finally, the fifth section deals with the regression analysis of the study.

4.1. Response Rate

The questionnaire was distributed among bankers which related to the credit departments/units at the selected ten districts in Addis Ababa and head office including credit collection, credit monitoring, credit appraisal and credit operation in CBE. The questionnaire was physically distributed to 160 employees who related with credit department/units. Out of 160 questionnaires 154 were completed and returned. So, the overall response was 96.3 % which is good (see Table 4.3 below). As a result, the analysis is made on the valid number of

responses.

Table 4-3: Summary of Response rate

S.No	Items	Remark
1	Sample size	160
2	Completed and returned questionnaires	154
3	Response rate	96.3%

4.2. Demographic Characteristics of the Respondent

Table 4-4: Demographic Profiles of Respondents

Category	Description	Frequency	Percentage	
			Valid	Cumulative
Sex	Male	99	64.3	64.3
	Female	55	35.7	100
	Total	154	100	-
Marital Status	Single	22	14.3	14.3
	Married	132	85.7	100
	Divorced	0	0	0
	Total	154	100	-
Educational level	Diploma	0	0	0
	Degree	96	62.3	62.3
	Masters	58	37.7	100
	Other	0	0	0
	Total	154	100	100
Working Experience	Less than 1 year	0	0	0
	1 year – 5 years	20	13	13
	6 years – 10 years	25	16.2	29.2
	11 years – 15 years	41	26.6	55.8
	16 years – 20 years	45	29.2	85
	21 years or longer	23	15	100
	Total	154	100	-

Table 4.4 shows the demographic characteristics of respondents in terms of Sex, Marital status, Educational level and Year of experience. Accordingly, out of 154 respondents, 99

(64.3%) were the male respondents; while the female counter parts accounts for 55 (35.7%). This shows that credit departments/units of most of the employees are dominated by male employees. In terms of Marital status, out of the total 154 respondents, 132 (85.7%) were not married (single) and the rest 22 (14.3%) were married. This shows that majority of the respondents were not married.

In terms of educational background, out of total 154 respondents, 96(62.3%) respondents were university first degree holders and the remaining 58 (37.7%) had master's. Depending on this response of education levels the distributions showed most of the bankers have first degree, which depicts that the credit department is highly qualified. Finally, the same table also summarizes the years of service of the respondents in CBE. As a result, the majority 45 (29.2%) respondents had between 16 - 20 years of experience in their current Bank, 41 (26.6%) of the respondents served for 11-15 years and the rest 25 (16.2%) for 6 - 10 years. Therefore, based on the data obtained most of the CBE of the employees in the credit Department were male, single, first-degree holders and served the bank from 16- 20 years.

4.3. Descriptive Analysis of the factors affecting NPL-performance

Table 4-5: Summary of the Descriptive Results

No.	Descriptions	N	Mean	St. Deviation
1	Collateralized Lending (CL)		3.84	0.66
1.1	Collateralized loans perform well help to protect default	150	4.14	1.09
1.2	Most of the time non-collateralized loans are defaulted	151	3.76	1.36
1.3	May bank provides loan to customers with strong collateral	146	3.88	1.28
1.4	The Bank can seize the collateral to recoup from its losses	149	3.78	1.38
1.5	The bank makes continuous follow up on the collateral	148	3.78	1.39
2	Credit Terms (CT)		4.21	0.63
2.1	Loans with high interest rate charging tend to turn to NPL	151	4.17	1.10
2.2	Lenient / lax credit term cause loan default	148	4.48	0.76

2.3	Borrowers default because they don't understand credit terms well	147	3.57	1.56
2.4	Interest charged on loan affects the performance of loans	147	4.67	1.04
3	Credit Appraisal (CA)		4.17	0.34
3.1	Bank's great risk appetite and poor risk assessment would lead to loan defaults	150	4.11	1.07
3.2	Bank Lacks of experienced staff on credit appraisal is cause for NPL	150	4.00	1.08
3.3	Credit performers in the bank have autonomous power in appraising and selecting projects	148	4.05	0.89
3.4	The borrowers, which are admitted by compromising the assessment conditions usually are default	154	4.05	0.98
3.5	If the bank knows about the customers' previous credit history, it will lead to high loans quality	154	4.14	1.14
3.6	The Bank considers the five 5cs during credit risk assessment	154	4.18	0.55
3.7	Lax policy and procedures used for credit assessment contribute to our failure	141	4.69	0.73
4	Credit Monitoring (CM)		4.10	0.53
4.1	Strict monitoring and Controlling of project performance lead to high loans quality	148	4.05	1.03
4.2	Poorly assessed and advanced loans may perform well if properly monitored	138	4.40	0.95
4.3	Bank undertake comprehensive follow ups on tracking credit scores, keeping customers up to date and indicate early warning to defaulters	146	4.05	0.87
4.4	May bank is successful in managing non-performing loans	150	3.91	1.44

4.5	Properly monitoring of a weak loan and advance can decrease the chances of its default	151	4.34	0.59
4.6	The credit monitoring is directly related with the occurrence of NPLs	149	3.97	1.14
4.7	If the bank spends more on credit monitoring, it can lower the level of NPLs	138	3.96	1.20
5	Credit Collection Methods (CCM)		4.00	0.69
5.1	Poor credit policies and procedure keep on loan cause to NPL	152	3.96	0.94
5.2	Everyone in bank is responsible and committed to deal with NPL	150	4.31	0.97
5.3	No serious action will be taken against borrowers not to repay the loan	150	4.31	0.61
5.4	Length of repayment period and any special terms related to collection period of the firm lead to loan default	148	3.36	1.50
6	Bank size and performance (BSP)		4.31	0.52
6.1	Having large number of borrowers causes loan default	153	4.35	0.88
6.2	The growth bank in size comes growth on NPL	154	4.28	0.64
7	Rapid Credit Growth (RCG)		4.03	0.43
7.1	Giving loans aggression to the large numbers of borrowers can lead to higher NPLs.	152	4.23	0.88
7.2	There are more chances of high NPL if advancement of credit by bank is increase	149	3.96	0.96
7.3	It can lead to loan defaults, if integrity in lending is compromised	150	3.87	0.96
8	Borrower's Orientation (BO)		3.87	0.56
8.1	There is a relationship between loan default and borrower's culture	154	3.93	0.93
8.2	Loan default in some area is ascribed to the culture of the borrowers	153	3.99	0.97

8.3	Society's cultural development leads to good loan performance	152	3.66	0.94
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Table 4.5 depicts the mean and standard deviation of the variables of the variables of collateralized lending based the 5-likert scale and average of each question responses are interpreted based on these likert scales whether the mean score approaches to 1, 2, 3, 4 or 5. As a result, respondents slightly strongly agree with the collateralized loans perform well help to protect default (mean = 4.14 & S.D = 1.09); whereas, respondents almost agree with my bank provides loan to customers with strong collateral (Mean = 3.88 & S.D = 1.28), the bank can seize the collateral to recoup from its losses(Mean = 3.78 & S.D = 1.38) and the bank makes continuous follow up on the collateral (Mean = 3.78 & S.D = 1.39) and most of the time non-collateralized loans are defaulted (mean = 3.76 & S.D = 1.36). Moreover, the average score of Collateralized lending is 3.84 with standard deviation of 0.66. This implies that most respondents almost agree with the performance of the variables of collateralized lending affecting the NPL performance of the bank. This is due to most of mean scores approaches to 4(agree) as compared to the other listed likert-scales. In contrast to this finding, Ermiyas (2020), in his study states that collateral is considered as a means guarantee the availed loan in time of default and is considered a secondary source of repayment next to regular and timely repayment from proper running of business/income. Other researchers like Atieno, Ayuma and Ngari (2022) states that the collateral security covers and establishes if the income can sustain the sought loan when the lender appraises the borrower's payment history.

Table 4.5 also represents that the mean and standard deviation of credit terms of the bank. Accordingly, respondents almost strongly agree with Interest charged on loan affects the performance of loans (Mean = 4.67 & S.D = 1.04) and Lenient / lax credit term cause loan default (Mean = 4.48 & S.D = 0.76); whereas, they slightly strongly agree with loans with high interest rate charging tend to turn to NPL (Mean = 4.17 & S.D = 1.10). Respondents also slightly agree with Borrowers default because they don't understand credit terms well (Mean = 3.57 & S.D = 1.56). The average mean score of Credit Terms is 4.21 with standard deviation of 0.63. This result shows that most respondents above almost strongly agree (most results approaching to 5) on the performance of the variables of Credit terms to assess the performance of NPL in the bank. In contrast to this finding, Ermiya (2020), in his study states that awareness for borrower should be created regarding the loan term and condition and they should be in a close contact and supervision and communicate with the loan officer when they get difficulty on meeting obligation.

The same Table 4.5 represents that the mean and standard deviation of the variables of credit appraisal. Hence, respondents almost strongly agree with Lax policy and procedures used for credit assessment contribute to our failure (Mean = 4.69 & S.D = 0.73); whereas, they agreed with Bank's great risk appetite and poor risk assessment would lead to loan defaults (Mean = 4.11 & S.D = 1.07), lacks of experienced staff on credit appraisal is cause for NPL (Mean = 4.00 & S.D = 1.08), credit performers in the bank have autonomous power in appraising and selecting projects (Mean = 4.05 & S.D = 0.89), the borrowers, which are admitted by compromising the assessment conditions usually are default (Mean = 4.05 & S.D = 0.98), if the bank knows about the customers' previous credit history, it will lead to high loans quality (Mean = 4.14 & S.D = 1.14) and the bank considers the five 5cs during credit risk assessment (Mean = 4.18 & S.D = 0.55). Moreover, the average mean score of Credit Appraisal is 4.17 with standard deviation of 0.34. This implies that most respondents agreed (most mean score approaches to 4) with the performance of the variables of credit appraisal to examine the performance of such variable on NPL. Credit appraisal is the assessment of the creditworthiness of a prospective borrower and his intention to repay the loan (Dudhe, 2017). Shiyonzo and Malenya (2020) Robust collection efforts such as formulation of sound credit collection strategies, enforcement of loan recovery, improvement in staff incentives and regular reviews in regard to collection policies would reduce nonperforming loans. Atieno, Ayuma and Ngari (2022) recommended that the problems associated with loan repayment ought to be identified at an early stage to safeguard commercial banks against potential losses. This is due to the success of commercial banks largely depends on the effectiveness of their appraisal techniques in reducing NPLs and generating income from interest on loans extended to borrowers.

Similar Table 4.5 represents that the mean and standard deviation of credit monitoring. Accordingly, respondents almost agree with everyone in bank is responsible and committed to deal with NP (Mean = 4.31 & S.D = 0.97), No serious action will be taken against borrowers not to repay the loan (Mean = 4.31 & S.D = 0.61) and poor credit policies and procedure keep on loan cause to NPL (Mean = 3.96 & S.D = 0.94); whereas, they slightly agree with the length of repayment period and any special terms related to collection period of the firm lead to loan default (Mean = 3.36 & S.D = 1.50). Besides, the average mean score of Credit Monitoring is 4.10 with standard deviation of 0.53. This implies that most respondents almost agree with the performance of the variables of credit monitoring to assess their influence on the performance of NPL. Similarly, Ermiyas (2020), in his study recommended that consistent and appropriate follow up and monitoring of a loan would have

constructive result on Non-Performing Loans. Thus, unable to undertake out proper credit risk assessment would lead to lost any or all of the captioned issues, which has a probability for the creation of Non-performing loan. Hence, there is inclination that the borrower will repay loans if they are properly monitored and follow up.

Table 4.5 depicts the mean and standard deviation of the variables of credit collection methods. For this case, respondents almost agree with the poor credit policies and procedure keep on loan cause to NPL (mean = 3.96 & S.D = 0.94), everyone in bank is responsible and committed to deal with NPL (mean = 4.31 & S.D = 0.97) and no serious action will be taken against borrowers not to repay the loan (mean = 4.31 & S.D = 0.61); whereas, respondents slightly agree with the length of repayment period and any special terms related to collection period of the firm lead to loan default (mean = 3.36 & S.D = 1.50). Besides, the average mean score of credit collection methods is 4.00 with standard deviation of 0.69. This implies that most respondents agree (most mean score approaches to 4) with the performance of the variables of credit collection methods on NPL status of the bank. Shiyonzo and Malenya (2020), in their study recommended that DTSSs should involve credit/field officers and customers in formulating customized credit collection policies that positively attract customers as this would reduce loan delinquency, improve market share and consequently influence non-performing loans.

The same Table 4.5 indicates the mean and standard deviation of the variables of bank size and performance. As a result, respondents slightly strongly agree with having large number of borrowers causes loan default (Mean = 4.35 & S.D = 0.88) and the growth bank in size comes growth on NPL (Mean = 4.28 & S.D = 0.64). Furthermore, the average mean score of Bank size and performance is 4.31 with standard deviation of 0.52. This shows that all respondents slightly strongly agree with the performance of the variables of bank size and performance to recognize their influence on the performance of NPL in the bank. Yahaya, Musa and Olakunle Jayeola (2021), in their study exposes the danger inherent in working with high NPLs to bank management to be cautious and take proactive measures that will keep their NPLs within the barest minimum. Accordingly, clients will also learn from this study in understanding that banks with high NPLs are likely to face liquidity problems, therefore need to avoid them in order not to be a victim of distress in the bank they operate with.

Table 4.5 also represents that the mean and standard deviation of rapid credit growth. Accordingly, respondents almost agree with giving loans aggression to the large numbers of borrowers can lead to higher NPLs (Mean = 4.23 & S.D = 0.88), there are more chances of

high NPL if advancement of credit by bank is increase (Mean =3.96 & S.D = 0.96) and it can lead to loan defaults, if integrity in lending is compromised (Mean = 3.87 & S.D = 0.96). Besides, the average mean score of rapid credit growth is 4.03 with standard deviation of 0.43. This implies that respondents almost agreed with all the variables of rapid credit growth to assess their influence on the performance of NPL.

Finally, Table 4.5 also represents that the mean and standard deviation of borrowers' orientation. Accordingly, respondents almost agree with there is a relationship between loan default and borrower's culture (Mean = 3.93 & S.D = 0.93), loan default in some area is ascribed to the culture of the borrowers (Mean = 3.99 & S.D = 0.97) and society's cultural development leads to good loan performance (Mean = 3.66 & S.D =0.94). Furthermore, the average mean score of Borrower's orientation variables is 3.87 with standard deviation of 0.56. This implies that respondents almost agree with the performance of all variables of the borrowers' orientation in assessing their effect on the performance of NPL.

The interview result to higher officials classifies the factors as the external and internal factors. The external factors include 1) Business cycle: the expansion phase of the economy is characterized by a relatively low number of NPLs. However as the booming period continues, credit is extended to lower-quality debtors and subsequently, when the recession phase sets in, NPLs increase. 2. Unemployment rate: Increases in unemployment may signal a decrease production as a consequence of a drop in effective demand. This may lead to a decrease in revenues and a fragile debt condition. Finally, macroeconomic instability (Inflation, interest rate, Exchange rate etc.): The probability that firms will make losses rise; as does the probability that they will earn windfall profits. These factors also include political, social, technological, environmental (ecological) and legal etc. On the other hand, the Internal/ Bank specific factors: include 1) rapid credit growth: excessive lending explains loan loss rate. 2) High interest rate: Inappropriate loan pricing (For Banks changing differentiated interest rate), High interest rate impairs Business profitability. 3) Lenient Credit Terms: Terms and conditions set during loan sanctioning have the detrimental factors. Credit managers reacted to competition from other bankers and that this competition might have encouraged a weaker lending standard that leads to loan defaults. 4) Poor loan follow up (Monitoring): Some of the loans defaults ascribe to lower level of attention given to borrowers. More banks lose money because they do not monitor their borrower's property, and fail to recognize warning signs early enough and 5) Poor Risk Assessment: Risk, and the ways, in which it can be identified, quantified and minimized, is key concerns for a bank's management etc.

Similarly, the interviewees also described the challenges for effective management of NPL including week credit risk assessment and monitoring, inadequate pre-loan appraisal and poor post-disbursement monitoring, insufficient borrower profiling and lack proper feasibility studies contribute to granting loans to high-risk borrowers, inefficient legal and judicial systems, lengthy and bureaucratic court processes delay enforcement of collateral or recovery, inconsistent enforcement of legal decisions reduces the bank’s ability to recover debts promptly, lack of adequate collateral or enforceable security, some borrowers fail to provide sufficient or easily realizable collateral. In some cases, collateral documentation is incomplete or legally flawed, making enforcement difficult and poor customer financial discipline. Moreover, borrowers often default due to poor financial management, weak business performance, or diversion of funds. Some clients also lack commitment to repayment once the loan is disbursed, especially when they perceive weak follow-up of the loan and advance repayments.

4.4. Correlation Analysis

Correlation is a bi-variate analysis that measures the strength of association between two variables and the direction of the relationship. Specifically, in terms of the strength of the relationship, the value of the correlation coefficient varies between +1 and -1. For instance, a value of ± 1 indicates a perfect degree of association between the two variables. On the other hand, as the correlation coefficient value goes towards 0, the relationship between the two variables will be weaker. Additionally, the sign of the coefficient indicates direction of the relationship a + sign indicates a positive relationship and a – sign indicates a negative relationship. This means that it is given by the sign of the correlation coefficient - the Pearson Correlation. In the example above, the correlation between age and anxiety is negative (as one increase, the other decreases).

Table 4-6: Summary of Correlation Analysis Results

Performance of NPL (PONPL)	Performance of NPL	
	Pearson Correlation	1
	Sig. (2-tailed)	
collateralized lending (COL)	Pearson Correlation	-.522**
	Sig. (2-tailed)	0.000
Credit Terms (CT)	Pearson Correlation	-.161*

	Sig. (2-tailed)	0.046
Credit Appraisal (CA)	Pearson Correlation	.444**
	Sig. (2-tailed)	0.000
Credit Monitoring (CM)	Pearson Correlation	.426**
	Sig. (2-tailed)	0.000
Credit Collection methods (CCM)	Pearson Correlation	.792**
	Sig. (2-tailed)	0.000
Bank size and performance (BSP)	Pearson Correlation	.493**
	Sig. (2-tailed)	0.000
Rapid credit growth (RCG)	Pearson Correlation	0.139
	Sig. (2-tailed)	0.086
Borrower's orientation (BO)	Pearson Correlation	.518**
	Sig. (2-tailed)	0.000

Table 4.6 depicts that the correlation results of the factors affecting NPL performance of CBE with the highest relationship between Credit Collection methods(CCM) ($r = .792$ & $P = 0.000$) and NPL performance followed by collateralized lending(COL) ($r = -.522$ & $P = 0.000$),Borrower's orientation(BO)($r = 0.518$ & $P = 0.000$), Bank size and performance(BSP)($r = .493$ & $P = 0.000$), Credit Appraisal (CA) ($r = .444$ & $P = 0.000$), Credit Monitoring(CM) ($r = .426$ & $P = 0.000$),Credit Terms(CT) ($r = -.161$ & $P = 0.046$) and Rapid credit growth(RCG) ($r = 0.139$ & $P = 0.086$). This implies that there is positive, strong and significant correlation between CCM and OB, and the performance of NPL, positive and moderate association between BSP, CA, CM and the performance of NPL; whereas positive and weak relationship between RCG and the performance of NPL. On the other hand, there is strong negative relationship between COL and performance of NPL, whereas, there is negative and weak relationship between credit terms and the performance of NPL. Moreover, the significance level of the correlation analyses indicates all p-values except rapid credit growth are less than or equal to 0.05, which indicates that all but RCG have significant association with the performance of NPL for selected ten districts in Addis Ababa and Head office of Commercial Bank of Ethiopia.

4.5. Regression Analysis

Regression analysis deals with the way one variable changes (Y) based on how one or more other variables change (X1 and X2 etc.). If we are interested in how gold prices (Y) might vary as a function of the price of a barrel of oil (X1), then this kind of relationship is called simple regression or simple linear regression. If we are interested in how gold prices (Y) vary as a function of the price of a barrel of oil (X1), the Dow Jones Industrial Average (X2), and, perhaps, additional variables then the investigation of these relationships are called multiple regression analysis.

Table 4-7: Summary of Regression Analysis Results

```
. regress PONPL COL CT CA CM CCM BSP RCG BO, beta
```

Source	SS	df	MS		Number of obs =	154
Model	269431.52	8	33678.94		F(8, 145) =	139.88
Residual	34910.9803	145	240.765381		Prob > F =	0.0000
					R-squared =	0.8853
					Adj R-squared =	0.8790
Total	304342.5	153	1989.16667		Root MSE =	15.517

PONPL	Coef.	Std. Err.	t	P> t	Beta
COL	-31.2527	2.417096	-12.93	0.000	-.4599218
CT	-6.207093	2.427404	-2.56	0.012	-.0872457
CA	30.81209	5.305924	5.81	0.000	.2332545
CM	-6.850802	3.6878	-1.86	0.065	-.0813361
CCM	33.32897	2.891458	11.53	0.000	.5157773
BSP	19.95056	4.153478	4.80	0.000	.2344768
RCG	-24.18746	3.58646	-6.74	0.000	-.2354849
BO	10.83847	3.027763	3.58	0.000	.1365975
_cons	-40.48752	23.38714	-1.73	0.086	.

The R Square value represents the percentage of variance accounted for in the dependent variable (NPL Performance) set of eight independent variables (collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Monitoring (CM), Credit Collection methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG) and Borrower's orientation (BO)). In other words, Table 4.7 shows approximately 88.5% of the variance or changes in the value of the performance of NPL can be accounted for by the confluence of the eight independent variables; whereas, the remaining 11.5% were explained by other extraneous variables.

ANOVA tells us whether the eight main regression coefficients were significantly different than zero. Of primary interest is the F value and its significance level. If the eight main regression coefficients were close to zero, then the F value would be approximately 1.00. In order to be statistically significant, the significance level must be less than the conventional level of statistical significance (i.e., .05 – 0.00). In the present case, the obtained F = 139.88 is statistically significant. Statistical convention dictates that one reports the lowest significance

level possible. In a write-up of the present results so far, it would appear like this: the regression equation indicated that all factors were significantly fitted to the value of the NPL performance, $R\text{-Square} = .885$ and $\text{Adjusted R Square} = .879$, $F(8, 145) = 139.88$, $p < .000$.

The B column under Coefficients (un-standardized) gives the actual value that would be multiplied against the specific values of the independent variables to make a prediction of the dependent variable. However, the B weights are not very useful in understanding the relative importance of the independent variables. These weights will be more interpretable if the dependent and independent variables have been standardized into Z scores with a mean of 0.00 and a standard deviation of 1.00. These standardized values appear in the Beta column under Beta (Standardized) Coefficients. The Beta weights can be read like typical correlation coefficients.

Therefore, it can be seen that Credit Collection Method's (CCM) Beta weight of .52 appears to be the strongest of the eight factors in the prediction of the performance of NPL. Next, examine the significance of the t values to see whether CCM's Beta weight is significantly different than zero. For CCM, the $t = 11.53$, and the significance level for CCM's Beta weight is .000, which is less than the conventional level of significance (.05). Thus, it can be concluded that CCM has a strong, positive and significant predictor of the performance of the NPL in the bank. Remarkably, the COL (Collateralized lending) Beta value (-.46) represents a moderate and negative relationship with the performance of NPL and it was statistically significant ($p = .000$).

On the other hand, the Beta value for the RCG (Rapid Credit Growth) Beta value (-.24) signifies a weak and negative relationship with the performance of NPL and it was statistically significant ($p = .000$). The BSP (Bank size and Performance) Beta value (.234) represents a weak and positive relationship with the performance of NPL and it was statistically significant ($p = .000$). The CA (Credit Appraisal) Beta value (.233) denotes a weak and positive relationship with the performance of NPL and it was statistically significant ($p = .000$). The BO (Borrowers' Orientation) Beta value (.14) represents a weak and positive relationship with the performance of NPL and it was statistically significant ($p = .000$). The CT (Credit Terms) Beta value (-.087) represents a weak and negative relationship with the performance of NPL and it was statistically significant ($p = .012$). Finally, the CM (Credit Monitoring) Beta value (-.081) denotes a weak and negative relationship with the performance of NPL and it was statistically insignificant ($p = .065$). This implies that the seven factors; collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA),

Credit Collection methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG) and Borrower's orientation (BO) have significant effect on the performance of NPL; whereas, the Credit Monitoring (CM) has insignificant influence on the performance of NPL.

In contrast to these findings, Atieno, Ayuma and Ngari (2022) found that Credit Appraisal has a positive and significant effect on NPLs. Jacob, Maingi and Dennis (2023), in their research demonstrated that there exists a significantly strong positive effect of credit monitoring practice on loan nonperformance among Microfinance institutions in Nairobi County, Kenya. This shows that credit monitoring practices are of high importance, hence need to practice them. Similarly, Shiyonzo and Malenya (2020), in their study concluded that collection efforts have significant negative effect on non-performing loans in DTSS in Kakamega County. Finally, Yahaya, Musa and Jayeola (2021), in their study found that NPLs are significant and negatively associated with bank performance in the selected countries.

Chapter Five: Conclusions and Recommendations

Introduction

The main objective of this research was to identify the factors affecting the performance of NPL for selected ten districts in Addis Ababa and Head office of Commercial Bank of Ethiopia (CBE). This chapter consists of conclusions and the recommendations drawn from the findings and future works of the study.

5.1. Conclusions

Based on the findings of the study, the researcher concluded the following.

- ✓ From the descriptive analysis, it could be concluded that respondents almost agree with all the variables of the eight factors affecting the performance of NPL in CBE. This implies that the factors; collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Collection methods (CCM), Bank size and performance (BSP),

Rapid credit growth (RCG). Credit Monitoring (CM) and Borrower's orientation (BO) are important predictors of the performance of NPL in the bank.

- ✓ The correlation analysis depicts that the factors Credit Collection methods (CCM) and Borrowers' Orientation (OB) have positive, strong and significant relationship with the performance of NPL; whereas, there is positive, significant and moderate association between Bank size and performance (BSP), Credit Appraisal (CA), Credit monitoring (CM) and the performance of NPL in the bank. Likewise, there is positive, significant and weak relationship between rapid credit growth (RCG) and Performance of NPL. On the other hand, there is negative, significant and strong relationship between Collateralized lending (COL) and Performance of NPL, whereas, there is negative, significant and weak relationship between Credits terms (CT) and the performance of NPL. Finally, there is weak, insignificant and positive relationship between rapid credit growth (RCG) and the performance of NPL.
- ✓ The regression analysis revealed that 88.53% of the variation in the performance of NPL was explained by the eight factors: collateralized lending (COL), Credit Terms (CT), Credit Appraisal (CA), Credit Collection methods (CCM), Bank size and performance (BSP), Rapid credit growth (RCG). Credit Monitoring (CM) and Borrower's orientation (BO); whereas the rest 11.47% of the variation was explained by other extraneous variables. Moreover, all except credit monitoring (CM) have significant effect on the performance of NPL for selected ten districts in Addis Ababa and Head office of CBE. As a result, these seven factors are important determinants affecting the performance of NPL.
- ✓ Finally, the study concluded that credit risk assessment and monitoring, inadequate pre-loan appraisal, poor post-disbursement monitoring, insufficient borrower profiling, lack proper feasibility studies contribute to granting loans to high-risk borrowers, inefficient legal and judicial systems, lengthy and bureaucratic court processes delay enforcement of collateral or recovery, inconsistent enforcement of legal decisions reduces the bank's ability to recover debts promptly, lack of adequate collateral or enforceable security, failure to provide sufficient or easily realizable collateral, incomplete collateral documentation or legally flawed, making enforcement difficult and poor customer financial discipline. Moreover, borrowers often default due to poor financial management, weak business performance, or diversion of funds. Some clients also lack commitment to repayment once the loan is disbursed, especially when they perceive weak follow-up of consequences.

5.2. Recommendations

Based on the findings and conclusions indicated above, the bank shall consider the following recommendations to meet NBE requirements of NPL ratio, improve the performance of NPL and continue business development.

- ✓ The management of the banks must exhaustively discharge their duties and responsibilities of NPL reduction activities.
- ✓ The concerned bodies of commercial banks must revised policy, procedure, framework, and guidelines which related to credit management process, better to work aggressively on oversight and monitoring activities, regularly evaluated the status of NPL performance. Besides, there need to forward action plan for the identified performance gaps to the respective organs.
- ✓ The factors Credit Collection methods (CCM) and Borrowers' Orientation (OB) have vital determinant factors influencing the performance of NPL in the bank. Hence, the bank should consider these factors during the non-performing loan reduction policy development and implementation.
- ✓ All credit area employees must perform their daily working activities in compliance with the bank policy and procedure to improve the performance of NPL. They have also to update their awareness by reading the bank policy and procedure and participating in training sessions, workshops and group discussions to reduce the status of NPL in the bank.
- ✓ The bank should improve the credit risk assessment and monitoring techniques, adopt adequate pre-loan appraisal and post-disbursement monitoring, have sufficient borrower profiling and proper feasibility studies contribute to granting loans to high-risk borrowers, have efficient legal and judicial systems, lengthy and bureaucratic court processes of collateral or recovery, have consistent enforcement of legal decisions reduces the bank's ability to recover debts promptly, have adequate collateral or enforceable security, provide sufficient or easily realizable collateral, have complete collateral documentation or legally flawed, making enforcement easy and enhance customer financial discipline.
- ✓ As per the NBE directive SBB/69/2018 a bank shall establish loan workout and recovery team to manage the NPLs. The Non-performing Loans Management Strategies should include the amicable resolution (workout), legal proceedings and write off and Post write off follow up. These amicable resolutions include undertaken provided recovery is found promising, loan workout negotiation points, the

borrower's/guarantor's proposal for repaying his/her/its debt, source and capacity of repayment (down payment and periodic repayments), settlement conditions, collateral and tenure/duration of restructuring or rescheduling a loan.

- ✓ Finally, the problems on the management of NPL can be resolved by restructuring-changing the tenure and mode of repayment, securing additional collateral/change of collateral including a personal guarantee by owners/shareholders, cross-collateralizing multiple loans, voluntary liquidation of collateral already held, sellout/buyout of loan to/from other banks, changing the form of loan partially or fully, transfer of the loan to another potential borrower, enforcing additional conditions/covenants, voluntary sale of other assets for loan repayment, replacement or improvement of the management, assigning a co-manager or a controlling staff, reduction of overdraft to a lower limit and approve additional finance if there are appropriate and concrete justifiable reasons.

5.3. Future works of the study

This study was conducted based on a data collected merely from the permanent employees of the bank who are working in the head office and selected ten districts credit units areas in Addis Ababa city only which will affect the applicability of recommendation forwarded on conclusions drawn across the bank. The situation in credit units' district offices out of Addis Ababa city and all branches are not covered due to time, cost and others constraints; hence future studies shall collect data from the different segments of the bank. Likewise, the study only focused on primary data and internal factors affecting the performance of Non-performing loans (NPLs). Hence, the future study should consider the secondary data sources as well as the external factors like the financial ratios affecting the performance of NPL in commercial banks. Finally, the study revealed that 11.47% of the variation in the performance of NPL was explained by other extraneous factors. Hence, the future study should extend the likert scales, include other more factors and use another research design and approaches to assess the performance of NPL in financial institutions in Ethiopia.

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Appendices

Appendix-I: Questionnaire for credit sector of selected ten districts in Addis Ababa & head office employees of CBE

Mekelle University
College of Business and Economics
Masters of Art in Accounting and Auditing Program

Dear Respondents,

The main purpose of this questionnaire is designed to collect data for the research entitled “Factors affecting non-performing loans - the case of selected ten districts in Addis Ababa and head Office of Commercial Banks of Ethiopia”. The information that you offer me with this questionnaire will be used as a primary data in my study and also the outcome of the study will be used in order to suggest possible solutions for problems identified while conducting the study for partial fulfillment of the requirements of the Masters of Art (MA) in Accounting and Auditing. The researcher kindly request your contribution in filling the questionnaire through provide reliable information and genuine response. The researcher wants to assure you that this research is only for academic purpose authorized by the Mekelle University College of Business and Economics. No other person will have to access this collected data. Finally, the researcher would like to express his deep appreciation for your contribution in filling the questionnaire generous time, honest and prompt responses.

General Direction;

- There is 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.
- For any additional opinions; please don't hesitate to write short and brief answers space is provided below at the end.

Thank you very much for your time and cooperation!

A. Demographic Profiles of Respondents

1. Gender; A. Male B. Female
2. Marital Status; A. Single B. Married C. Divorced
3. Educational Qualification; A. Diploma B. Degree C. Masters, Other (Please specify)
4. 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

B. Perception Checklist on factors affecting the performance of NPLs

General Instruction: Please tick (X) ONLY one answer for each statement based on the scale below; Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5).

	Descriptions	1	2	3	4	5
1	Collateralized Lending (COL)					
1.1	Collateralized loans perform well help to protect default					
1.2	Most of the time non collateralized loans are defaulted					
1.3	May bank provides loan to customers with strong collateral					
1.4	The Bank can seize the collateral to recoup from its losses					
1.5	The bank makes continuous follow up on the collateral					
2	Credit Terms (CT)					
2.1	Loans with high interest rate charging tend to turn to NPL					
2.2	Lenient / lax credit term cause loan default					
2.3	Borrowers default because they don't understand credit terms well					
2.4	Interest charged on loan affects the performance of loans					
3	Credit Appraisal (CA)					
3.1	Bank's great risk appetite and poor risk assessment would lead to loan defaults					
3.2	Bank Lacks of experienced staff on credit appraisal is cause for NPL					
3.3	Credit performers in the bank have autonomous power in appraising and selecting projects					
3.4	The borrowers, which are admitted by compromising the assessment conditions usually are default					
3.5	If the bank knows about the customers' previous credit history, it will lead to high loans quality					
3.6	The Bank considers the five 5cs during credit risk assessment					

3.7	Lax policy and procedures used for credit assessment contribute to our failure					
4	Credit Monitoring (CM)					
4.1	Strict monitoring and Controlling of project performance lead to high loans quality					
4.2	Poorly assessed and advanced loans may perform well if properly monitored					
4.3	Bank undertake comprehensive follow ups on tracking credit scores, keeping customers up to date and indicate early warning to defaulters					
4.4	May bank is successful in managing non-performing loans					
4.5	Properly monitoring of a weak loan and advance can decrease the chances of its default					
4.6	The credit monitoring is directly related with the occurrence of NPLs					
4.7	If the bank spends more on credit monitoring, it can lower the level of NPLs					
5	Credit Collection Methods (CCM)					
5.1	Poor credit policies and procedure keep on loan cause to NPL					
5.2	Everyone in bank is responsible and committed to deal with NPL					
5.3	No serious action will be taken against borrowers not to repay the loan					
5.4	Length of repayment period and any special terms related to collection period of the firm lead to loan default					
6	Bank's Size and Performance (BSP)					
6.1	Having large number of borrowers causes loan default					
6.2	The growth bank in size comes growth on NPL					
7	Rapid Credit Growth (RCG)					
7.1	Giving loans aggression to the large numbers of borrowers can lead to higher NPLs					
7.2	There are more chances of high NPL if advancement of					

	credit by bank is increase					
7.3	It can lead to loan defaults, if integrity in lending is compromised					
8	Borrower's Orientation (BO)					
8.1	There is a relationship between loan default and borrower's culture					
8.2	Loan default in some area is ascribed to the culture of the borrowers					
8.3	Society's cultural development leads to good loan performance					

If you have any additional comment

Appendix-II: Interview Questions for Higher Credit officials of the selected ten districts in Addis Ababa and head office of CBE.

1. Describe the concepts of Non-performing loans (NPL)? _____

2. Do you have any NPL status in your Loans and Advance? How do you solve such status?

3. Explain the main factors affecting the performance of NPL in your bank? _____

4. Describe the challenges for the effective settlements of the NPL status of your loans and advances? _____

5. Explain the strategies you have followed to minimize the NPL status of your bank?

6. Comments (if any) _____

