



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF BUSINESS ADMINISTRATION

**The effect of Loan Monitoring Practices on Loan
Repayment Performance: Evidence from Selected
Ethiopian Private Banks**

**A THESIS SUBMITTED TO THE DEPARTMENT OF BUSINESS
ADMINISTRATION IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MBA**

By: Yanit Ketema

June, 2026
Addis Ababa, Ethiopia



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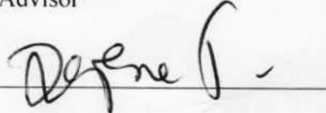
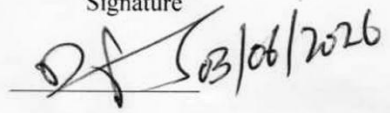
June, 2026

Addis Ababa, Ethiopia

Approval statement

APPROVED BY BOARD OF EXAMINERS

This is to certify that the thesis entitled “The effect of Loan Monitoring Practices on Loan Repayment Performance: Evidence from Selected Ethiopian Private Banks”, submitted by Yanit Ketema, has been carried out under my supervision and is hereby approved as fulfilling the requirements for the degree of Master of Business Administration (MBA) at Addis Ababa University, College of Business and Economics, Department of Business Administration.

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Declaration

I, Yanit Ketema, hereby declare that this thesis entitled “The effect of Loan Monitoring Practices on Loan Repayment Performance: Evidence from Selected Ethiopian Private Banks” is my original work. It has not been submitted to any other university or institution for the award of any degree or diploma.

In the study, all sources of materials used have been appropriately acknowledged as required under standard academic conventions. The author affirms that the research was conducted in full compliance with Addis Ababa University's ethical guidelines, and all forms of assistance provided during the research process shall be properly acknowledged.

Yanit Ketema

Signature: 

Date: June, 15, 2026

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Abstract

This study evaluates the impact of post-disbursement monitoring practices on loan repayment performance within the Ethiopian private banking sector, focusing on Awash Bank S.C. and Dashen Bank S.C. It addresses the critical operational challenge of credit risk management by assessing how different monitoring methods influence credit recovery. An explanatory, cross-sectional research design was deployed, utilizing a quantitative approach to analyze survey data collected from credit professionals. Diagnostic tests were conducted to verify data integrity prior to executing ordinary least squares multiple linear regression and analysis of variance. The empirical model demonstrated high explanatory power, accounting for a substantial majority of the variance observed in loan repayment performance. The regression analysis revealed that active loan covenant tracking serves as the primary engine for credit discipline, exhibiting the strongest positive predictive power. Collaborative borrower advisory services also share a significant positive relationship with portfolio quality. Conversely, static internal credit risk ratings show a non-significant independent effect on active recovery, while tracking financial statement timeliness yields an unexpected inverse relationship with repayment success, exposing a reliance on administrative compliance schedules rather than substantive cash-flow verification. Based on these insights, it is suggested that private banks transition toward automated dynamic covenant compliance systems and build dedicated business development advisory units to proactively minimize defaults. Furthermore, internal grading frameworks could be re-engineered from static pre-disbursement baselines into real-time behavioral scoring models driven by live account activities.

Keywords: *Post-Disbursement Monitoring, Loan Repayment Performance, Private Banks, Covenant Compliance, Borrower Advisory Services, Ethiopia, Credit Risk Management, Multiple Linear Regression.*

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Acronym

- **ANOVA:** Analysis of Variance
- **BOD:** Board of Directors
- **CRM:** Credit Risk Management
- **EWS:** Early Warning System
- **GDP:** Gross Domestic Product
- **IT:** Information Technology
- **KPI:** Key Performance Indicator
- **MSMEs:** Micro, Small, and Medium Enterprises
- **NBE:** National Bank of Ethiopia
- **NPL:** Non-Performing Loan
- **PDM:** Post-Disbursement Monitoring
- **RBV:** Resource-Based View
- **ROA:** Return on Assets
- **ROE:** Return on Equity
- **SPSS:** Statistical Package for the Social Sciences

CHAPTER ONE

1. INTRODUCTION

1.1 Background of the study

Within the global commercial banking ecosystem, the operational lifecycle of a credit facility was structurally divided into ex-ante underwriting and ex-post management (Nguyen, 2021). Historically, banking institutions heavily concentrated their resources on the initial pre-disbursement appraisal stage, focusing primarily on upfront collateral evaluation, creditworthiness checks, and baseline risk scoring to mitigate potential default exposure (Agyepong, 2015; Nguyen, 2021). However, contemporary financial literature established that a rigorous initial credit appraisal alone could not guarantee successful loan recovery or protect asset quality over time (Agyepong, 2015). Once credit funds were released into a borrower's account, lender-borrower dynamics experienced a major operational shift, causing vulnerabilities related to information asymmetry, unpredictable market conditions, and moral hazard risks to expand significantly (Mishra & Patel, 2025; Nguyen, 2021).

Consequently, post-disbursement loan monitoring functioned as a continuous, systematic oversight mechanism designed to ensure that the borrowing entity maintained full contractual compliance and retained its financial cash-flow generation capabilities (Mishra & Patel, 2025; Nguyen, 2021). As observed in foundational banking literature, commercial banks served as authorized delegated monitors of depositor capital; their unique institutional value rested upon their capacity to actively supervise borrower actions over the entire active lifespan of a debt contract (Nguyen, 2021).

This continuous oversight involved multiple, interrelated operational practices (Nguyen, 2021). These practices included tracking specific legal loan covenants to preserve contractual discipline, checking financial statement timelines to maintain a current view of borrower liquidity, updating internal credit risk ratings to reflect live behavioral profiles, and extending relational borrower advisory services to build client operational stability (Nguyen, 2021).

Post-disbursement tracking was essential because a borrower's risk profile remained highly fluid and exposed to both macro-environmental volatility and internal operational adjustments after the loan was granted (Mishra & Patel, 2025; Nguyen, 2021). When credit monitoring frameworks were executed effectively, they generated

real-time early warning flags that allowed relationship managers to intervene and coordinate proactive adjustments before structural distress led to an outright payment default (Mishra & Patel, 2025).

Conversely, treating post-disbursement tracking as a passive, administrative ritual created severe operational blind spots for lenders, leaving credit portfolios vulnerable to sudden asset quality deterioration and rising non-performing loan ratios (Mishra & Patel, 2025). In developing economies characterized by high market volatility, establishing a dynamic post-disbursement monitoring framework served as an essential operational safeguard to protect institutional portfolio health, support regulatory compliance, and secure overall system-wide financial stability.

The banking sector was remaining at the forefront of the global economy. Still, it was always been susceptible to the many risks associated with extending credit to customers (Saunders & Cornett, 2023). Of all the potential credit risks, borrower defaults were posing the greatest threat to the financial stability of private institutions (Basel Committee, 2021).

The Financial Intermediation Theory argue that by acting as the "delegated monitor" for all loan activity, banks can mitigate adverse selection and moral hazard (Diamond, 1984). Banks monitor loans; monitoring becomes a strategic necessity to ensure loans are spent for their intended purpose and produces positive economic results (Mishkin, 2022). In addition, academics show that different forms of monitoring; whether it's tracking covenants or performing on-site inspections improve borrower behavior via enhanced signals (Akerlof, 1970).

the drafted In Sub-Saharan Africa, the economic crisis continue to be driven by the ineffectiveness of institutions throughout this region; coupled with the lack of transparency, this was only exacerbate the difficulties borrowers have repaying their loans.

Research done within the region demonstrates that banks using the "relationship banking" strategy are better at monitoring their borrowers; because of this, they report substantially lower levels of NPLs. Comparatively, banks that use only collateral-based lending are not nearly as effective in reducing their level of NPLs as those using "relationship banking" (Institute for the Study of Banking, 2022). In the context of the Ethiopian banking sector, it has experienced significant growth since liberalizing in the early 1990s.

Nevertheless, it continues to operate in a highly controlled regulatory environment (Geda, 2021). The National Bank of Ethiopia imposes many restrictions on banks. For example, it was requiring banks to abide by its Directive 43 of 2008 which require them to implement a more stringent system for asset classification and provision to protect depositor funds (NBE, 2008).

Despite the various regulations of the private banking sector in Ethiopia, internal monitoring practice remain inconsistent among some banks (e.g., Bekele, 2022); while some banks are implementing modern credit risk management systems and may use automated tools, others may continue with traditional manual follow-up processes and are likely to be less successful in identifying signs of financial distress (e.g., Taye, 2023) due to macroeconomic volatility and changing interest rates (e.g., Daba, 2024). Therefore, there exists a considerable gap in knowledge about the specific monitoring dimensions that was most effective in facilitating loan repayment in the private sector in Ethiopia (Worku, 2022).

As such, this research was provide empirical evidence to determine the effects of the monitoring practices on loan repayment performance; obtaining such knowledge can support the sustainability of the Ethiopian financial system

1.2 Statement of the problem

The main idea of this research project is to study how effective post disbursement monitoring is in helping the financial stability of commercial banks (Basel Committee, 2021). All around the world, banks faced with ever-increasing levels of "information asymmetry," with little to no post disbursement surveillance, which was increase the likelihood of moral hazard and result in large amounts of loans defaulting (Stiglitz & Weiss 1981; New York Fed, 2024). Evidence from studies conducted in developed areas was indicate that increasing the number of times that the bank visits the borrower and requesting information from the borrower result in at least a 15% reduction in delinquency rates in developed areas (Federal Reserve; 2024). Studies from Kenya and Nigeria show that having better loan monitoring methods, such as going to the borrower and assessing their business or training the borrower on how to operate their business, increase the likelihood of making repayments by statistically significant amounts, with coefficients of 2.327 or greater (ARC Journals; 2021; Enoch et al.; 2021). However, in the Ethiopian context, private lending institutions operate in a weak credit environment that the National Bank of Ethiopia (NBE) has mandated

that a nonperforming loan (NPL) ratio must be less than 5% in order to avoid systemic failure (NBE, 2024; Fortune, 2025).

The core operational problem lies within the visible breakdown of internal bank tracking systems once a commercial loan enters its active repayment lifecycle. Private commercial banks will continue to experience severe asset deterioration because their post-disbursement monitoring frameworks function primarily as passive, administrative checklist routines rather than dynamic risk-mitigation tools. Specifically, credit risk departments were struggle with a rigid enforcement of loan covenants, which fails to trigger early warning interventions before a borrower falls into financial distress. Furthermore, the reliance on the mere chronological timeliness of financial statement submissions will accidentally obscure severe underlying cash-flow deficiencies, while static internal credit risk ratings will fail to reflect the live, behavioral volatility of a borrower's account activity. Without integrating supportive borrower advisory services to actively strengthen client capacity, these fragmented monitoring practices will directly contribute to rising non-performing loan ratios, threatening the overall portfolio quality and financial stability of the institutions.

Even though there are successes across the globe and regionally, the particular issue in Ethiopia are the high level of loan misappropriation and the apparent lack of administrative follow-up on loan disbursements (Abate; 2021; Berhanu 2024).

The most recent statistics show that in significant areas of Ethiopia, almost 45% of borrowers do not make their credit repayments according to the terms of their contract, which is primarily due to inadequate levels of support via advisory visits and lack of sufficient oversight. This research fill the need to understand the "passive" behavior of credit departments within the private banking sector of Ethiopia, who are too often more interested in approving loans than actively monitoring loan performance (Bekele, 2022; Tadesse, 2024).

The research identify a significant knowledge gap between the previous macroeconomic studies conducted on Ethiopia, which concentrated on such external influences as inflation and currency fluctuations, versus internal monitoring dimensions, such as "site inspections" and "covenant tracking" (Worku, 2022; Demssie & Kassaye, 2025). Therefore, this research providing an empirical basis to demonstrate how these internal monitoring dimensions function as the principal drivers of repayment success. The aim of the research was to identify which methods of monitoring result in the highest recovery rates, providing a basis for determining

how Ethiopian private banks can continue to operate in an increasingly competitive and risky finance industry (Zewde, 2024).

1.3 Objective of the study

1.3.1 General objective of the study

The general objective of this study is to analyze the effect of loan monitoring practices on the loan repayment performance of selected Ethiopian private banks.

1.3.2 Specific objective of the study

To achieve the general objective, the study was pursuing the following specific goals:

1. To evaluate the effect of loan covenant monitoring on the loan repayment performance of selected Ethiopian private banks.
2. To examine the impact of financial statement analysis on the timely recovery and overall quality of the credit portfolio.
3. To assess the influence of credit risk rating/grading accuracy on the effectiveness of loan repayment performance.
4. To investigate the contribution of borrower advisory services toward improving loan repayment outcomes and reducing default rates.

1.4 Significant of the study

This study will provide a multi-layered contribution to the Ethiopian financial landscape by delivering evidence-based insights into risk mitigation. The practical, regulatory, and academic value of this research will extend to a wide range of institutional and professional stakeholders within the financial sector.

For Bank Management and Credit Staff

For private commercial bank executives, risk managers, and credit operations teams, this research will serve as an operational roadmap for transitioning from passive, checklist-driven compliance routines to active risk intelligence frameworks. The insights gathered will assist management in identifying which post-disbursement interventions will work best at protecting loan portfolios from default vulnerabilities. Furthermore, the work will guide credit departments in design plans to optimize resource allocation, balancing hard contractual enforcement with collaborative relationship management.

For Regulatory Authorities and Policymakers

The National Bank of Ethiopia and macroeconomic policymakers will find value in this research as it will offer a localized, empirically backed look into private banking credit practices during current regulatory shifts. The study will provide operational perspectives that will assist the central bank in updating macro-institutional credit policies and developing supervising directives. Additionally, these insights will support the regulatory goal of maintaining system-wide asset quality and keeping institutional Non-Performing Loan ratios below the required five percent thresholds.

For Borrowers and the Business Sector

For corporate debtors, small and medium enterprises, and the broader business community, this evaluation will highlight the mutual benefits of transparent financial reporting and active communication with lenders. The study will illustrate how participating in bank advisory services will help business operators strengthen their internal cash management capabilities, protect operations from market volatility, and prolong the overall commercial lifespan of their enterprises.

For Academia

Within the academic community, this study will contribute to banking literature by addressing a knowledge gap regarding the empirical tracking of separate post-disbursement monitoring dimensions in East Africa. By isolating the individual impacts of specific monitoring pillars, the study will introduce a detailed evaluation model to the field of developing-market credit risk research. Consequently, this work will serve as a reliable reference point for future investigators exploring credit risk management and financial intermediation within developing economies.

1.5 Scope of the study**Geographical and Time Scope**

The research area is confined to Addis Ababa because it represents a concentration point for the majority of Ethiopian Private Bank. This central location is where most Ethiopian Private Banks has their headquarters and the most concentrated number of branch locations; thus, enabling easy access to their Credit Departments and senior Risk Managers, who was responsible for National Loan Monitoring Policies.

Theoretical and Methodological Scope

In terms of the study, it has been identified that the theories that was used to develop this research was the Information Asymmetry Theory and the Agency Theory and

how Post Disbursement Monitoring reduces the problems of Moral Hazard and reduces the risks associated with lending. Introducing a descriptive/ explanatory methodology was a useful method for analyzing monitoring practices against repayment performance and creating a model for prediction based on these findings. The study utilized a quantitative approach for the collection of data using structured surveys. Although many factors may influence the repayment of loans, the analysis in this study was restricted to a maximum of four dimensions that involve monitoring, which include loan covenant monitoring , the analysis of the financial statements, credit risk rating accuracy, and borrower advisory services. Factors external to the organization, such as the level of competition in the market, instability in Government and Congruence Theory was excluded from this study.

1.6 Organization of the study

The first chapter was explaining background information on the research topic including identifying the credit monitoring issue and establishing the objectives. The second chapter looks at the various academic theories such as Agency Theory and Information Asymmetry, as well as identifies any gaps in the current studies of banking in both Ethiopia and worldwide. Thirdly in the third chapter, the researcher detail their methodology in using explanatory designs, purposive sample of commercial banks, and the statistical tools they applied to test the hypotheses. Fourthly the researcher provides the results of their research using correlation and regression analysis to either support or rejects their four research hypotheses. Finally, the fifth chapter summarizes the research findings with some practical recommendations for Ethiopian bank managers to enhance their loan monitoring efforts and thereby assists them in becoming more financially stable over the long term.

1.7 Operational Term of the study

Loan Monitoring Practices: This category encompasses the ongoing monitoring and follow-up that bank staff are tasked with after funds have been lent to borrowers. The objective of this monitoring is to ensure that borrowers are complying with the terms specified in their loan agreements (Moti et al., 2012; Abate, 2021).

Loan Repayment Performance: In general, this refers to how well (or poorly) a borrower performs in paying back their loans according to the stated maturity date(s)

and the amount of interest owed. Loan Repayment Performance is typically quantified by banks using their Non-Performing Loan Ratio (NPL) (NBE, 2024; Geda, 2021).

Physical Site Inspection: Physical site inspections are routine checks that credit officers make to a borrower's business site to ensure that the collateral is still located there and that the business is still operating properly (Worku, 2022; Tadesse, 2024).

Financial Statement Analysis: Financial statement analyses are performed systematically by evaluating the borrower's financial statements, including their balance sheets, income statements, and cash flow statements, to identify potential signs of liquidity problems at an early stage (Taye, 2023; Saunders & Cornett, 2023).

There are two important aspects of the category of Loan Monitoring Practices: the ongoing monitoring and follow-up performed by Bank Staff after borrowers have received their Loan Funds, and the use of these Loan Monitoring Practices as a means of determining whether Borrowers are adhering to the terms of their Loan Agreements (Moti et al. (2012) & Abate (2021)).

Credit Officers perform Physical Site Inspections of Borrower's Businesses to verify whether or not the Collateral is still located at the Borrower's Business Site and to confirm that the Borrower is still operating their Business in a manner that is consistent with the terms of the Loan (Worku (2022), Tadesse (2024)).

CHAPTER TWO

2. LITERATURE REVIEW

2.1 Introduction

The literature review provided in Chapter Two was thoroughly encompassing the relevant studies that have been published regarding loan monitoring and how they influence loan repayment. Begin with a Theoretical Literature Review discussing economic theories of Information Asymmetry, Agency Theory and Financial Intermediation

Once the theoretical aspect of the research has been established, an Empirical Literature Review has been conducted to evaluate previous studies and findings on a global, regional (i.e. Sub-Saharan Africa) and local level (Ethiopia) to determine what factors of loan monitoring have an impact on the repayment outcome (Moti et al., 2012 and Abate, 2021).

Additionally, the chapter identifies the Conceptual Framework for this study by discussing the expected relationship between the independent variables - site visits, financial analysis, covenant tracking and advisory services - and the dependent variable - repayment performance. The outcomes of these analyses ultimately lead to the identification of a Research Gap in the literature. While there are many published works that provide evidence of macroeconomic factors that contribute to defaults, there is a lack of published empirical evidence supporting the operational effectiveness of post-disbursement monitoring efforts of selected private banks in Ethiopia (as shown in Worku 2022). This synthesis was ensure that the study is positioned within the ongoing scholarly conversation while justifying the necessity of the current investigation.

2.2 Theoretical Review

This Theoretic Review provides the theoretical basis for this investigation, which is to show why it is important for financial institutions to exercise due diligence through supervision after credit has been extended. Through this review of literature on economic and finance theory; it was established (and examined) how economic and finance theories explain the complicated relationships between lenders and borrowers. As such, this study was focus on the Information Asymmetry Theory, which was demonstrate the need for banks to provide supervision over borrowers to reduce the risk of adverse selection and moral hazard created by a lack of equal access to

knowledge (Akerlof, 1970; Stiglitz & Weiss, 1981). Secondly, this study was review Agency Theory, which illustrates the conflict that exists between the principles (borrowers) and agents (banks) and how supervision/monitoring represents the only means of creating alignment between the two parties (Eisenhardt, 1989; Jensen & Meckling, 1976). Lastly, the third theory that was examined is The Financial Intermediary Theory, which identifies banks as representing the role of a specialized or delegated monitor for the economy and necessitating physical and financial surveillance over depositor funds to protect them from loss (Diamond, 1984; Mishkin, 2022). The subsequent examination of these theories was allowed for creation of a robust theoretical foundation for this research regarding the effects of monitoring on repayment results in the Ethiopian Private Banking Sector.

2.2.1 Agency Theory

In this study, Agency Theory was serving as the primary theoretical foundation for explaining the "contractual friction" that exists in the lender-borrower relationship. According to Agency Theory, the lender is the principal and the borrower is the agent. As principal, the lender provides capital to the borrower with the expectation that the agent was act in a manner that maximizes the likelihood of repayment to the lender (Eisenhardt, 1989). "The Agency Problem" arises when both the lender and borrower seek to maximize their respective utility; thus, the borrower has an incentive to act opportunistically (for example, by substituting riskier assets into the loan or being less diligent in the management of their business post-loan) (Mishkin, 2022; Saunders & Cornett, 2023). In Ethiopia's Private Banking industry, the Agency Conflict is further intensified by a lack of comprehensive historical credit records among most small and medium-sized enterprises (SMEs), which creates an opportunity for the agent to mislead the principal about their true intentions or capabilities (Geda, 2021).

As per the Agency Cost theory, the components of "Agency Cost" are: principal monitoring costs, agent bonding costs, and residual losses (defaults which arise after it has been monitored) (Jensen & Meckling, 1976). Thus, this research was argued that it is important for private banks in Ethiopia to invest heavily in monitoring through physical site visits and financial audits to reduce the residual loss (Bekele, 2022). Therefore, by increasing the chances of detecting "hidden actions," monitoring was theoretically bring the borrower's behavior closer to the repayment target of the bank,

reducing the agency relationship cost and protecting the bank's portfolio (Worku, 2022; Zewde, 2024).

2.2.1.1 Dimensions of Agency Theory

The application of Agency Theory in this study was structured around three pivotal dimensions that explain the "why" and "how" of borrower behavior and bank oversight:

The Services provided by Family-based Employers: While the family-owned employment structure is popular among low- and middle-income earners in Ethiopia, the family-based structure is also common among higher-income earners in developing countries such as Bangladesh. The difference in both cases is how employers perceive the family's role. A significant number of employers view the family as an integral part of the workplace. For this reason, enough time should be provided for the family members of employees to adjust to a new family structure before an employee's role comes to an end (Ahmedi et al., 2012). Family members of employees may require support and assistance as they transition from a traditional family role to one in which they have monetary control over a business. Employers who do not make adjustments to meet the transition from a family role to an employer-employee relationship were likely encounter obstacles in maintaining that relationship in the future.

Although the type of the loan, such as "agricultural inputs loan", may specify the nature of the use of funds, the funds could be diverted to a different line of business, such as "import-export" or "real estate speculation". The objective of this research was to demonstrate to what extent the analysis of financial statements and the implementation of restrictive loan covenants serve as "policing activities" for both the lender to prevent the borrower from making these types of unlawful changes in their asset portfolio and to protect the lender against unencumbered risk (Saunders & Cornett, 2023; Worku, 2022).

The Monitoring Cost-Dimension and Residual Loss are: At the core of the Jensen and Meckling (1976) paradigm of principal-agent relationships is that principal cannot completely mitigate their agency cost indefinitely unless they incur infinite costs to do so. Thus, Ethiopian privately owned banks was need to make a decision regarding the "trade-off" between a higher intensive monitoring cost (including the salaries paid to bank inspectors, the cost of travelling to outlying locations and the cost of processing

data) against what they would incur as a residual loss (costs of default). This paper was demonstrate that for an Ethiopian privately owned bank, the "optimal" level of monitoring is at the point where the additional visit cost is equal to the marginal decrease in the likelihood of a bank loan going into default (Jensen & Meckling, 1976; Geda, 2021).

2.2.2 Information Asymmetry Theory

The principal rationale for the actions of banks in Ethiopia as "specialized monitors" in the economy is that they were utilizing the Information Asymmetry Theory. Developed originally by Akerlof (1970) and then adapted to credit markets by Stiglitz and Weiss (1981), this theory suggests that a prospective borrower has greater knowledge of their "type" (i.e., whether they are honest or dishonest) and the "risk" of their venture, than the lender. The private banking sector in Ethiopia has a significant amount of friction resulting from this lack of complete information; banks were finding it difficult to make a distinction between high-quality borrowers and high-risk speculators (Geda, 2021). The theory was also indicate that without adequate monitoring after the disbursement of loans, this information asymmetry was result in market failures whereby banks charge excessively high interest rates for all borrowers, or discontinue all forms of lending (Mishkin, 2022).

2.2.2.1 Dimensions of Information Asymmetry in Loan Monitoring

This investigation was address the theoretical OCR issue in two broad categories related to the necessary monitoring processes; i.e. Adverse Selection (a.k.a. The Lemons Problem) vs. Moral Hazard (Hidden Actions):

Adverse Selection (The Lemons Problem) - Although At the point of contract (before), this theory explains that there was always be a need to monitor for lenders in the future, as centralized credit bureaus in Ethiopia are still being established. This means high-risk borrowers may purposely conceal existing obligations, or inflate collateral value during the application process (as referenced by Taye, 2023). This theory infers lenders were performing a financial statement analysis to "screen" & to "signal" true quality of potential borrowers. If lenders do not monitor these signals, there was an eventual saturation of "lemons" (i.e. all high-risk borrowers) within the lender's loan portfolio, resulting in systemic default behavior (as referenced by Stiglitz & Weiss, 1981; Abate, 2021).

Moral Hazard (Hidden Information) - The lender can engage with the borrower post-disbursement of funds, but the borrower was always be able to act in ways that are visible only to themselves, while the lender is unable to perform any due diligence. This "hidden behavior" can lead the borrower toward taking greater risks with funds disbursed by a lender; e.g. speculation or failing to implement critical controls with the funds they receive.

This research was demonstrate how on-site monitoring and monitoring compliance can become the "eyes" of a financial institution and turn "hidden information" into "observable information," allowing them to reduce the information gap, and giving the financial institution an opportunity to act early if the risk profile of a borrower changes. By providing banks with the ability to act when the risk profile of a borrower changes, monitoring enhances the chances of loan repayment (Saunders & Cornett, 2023; Bekele, 2022).

Credit Rationing and the Monitoring Incentives: Stiglitz and Weiss (1981) suggest that banks was often "ration" credit by denying credit to borrowers who are willing to pay a higher interest rate to get a loan. Higher interest rates were only attracting high-risk borrowers, and thus result in the procedure is used by banks to stay away from providing loans to those borrowers who are financially more likely to default. The present study argues that borrower advisory services can serve as a framework for banks to lend more confidently. If banks could reduce the information gap by providing regular communication and being transparent to their borrowers, then the theoretical result of such a relationship banking method would be to reduce the risk premium for the financial institution and improve the repayment performance of their private bank portfolio (Woldie, 2023; Zewde, 2024).

By implementing this theoretical framework, your research was show that monitoring is the only way for Ethiopian banks to address the "information problem." Without monitoring, a financial institution is basically "blind," which is one of the reasons for the high NPL ratios that you identified as part of your problem statement.

2.2.3 Financial Intermediation Theory

The financial intermediation theory provides a systemic rationale for banks to serve as intermediaries between surplus (depositing) and deficit (borrowing) units. Leland and Pyle (1977) were the first to propose financial intermediation theory and its major enhancement was developed by Diamond (1984). Under the financial intermediation

theory, banks are thought to exist because they have an absolute advantage in gathering and processing information, and therefore monitoring the creditworthiness of borrowers. In addition, since the average Ethiopian depositor doesn't have the time, resources or ability to monitor the use of his/her funds by a borrower, they was "delegate" monitoring responsibility to the bank. The bank was therefore be acting as the delegated monitor and this implies they was have to perform many of the tasks and processes required for monitoring borrowers (e.g. site visits and financial analysis) that are to be illustrated and investigated in this study.

The theory presented in this article was demonstrated how financial intermediaries could resolve the issue of the "free-rider" problem related to debtor monitoring. For example: If a group of individual lenders was responsible for monitoring a particular borrower, each one would not have sufficient incentive to undertake 100% of the costs of monitoring and, therefore, the entire group would ultimately be ineffective in providing oversight to that borrower.

However, if the monitoring services were performed through one institution (i.e., an Ethiopian private bank) this institution would be able to obtain economies of scale through these functions. In doing so, this institution would have the potential to develop "proprietary information" regarding the potential borrower's credit quality, which would be unavailable to the general investing public. Additionally, the theory proposes that the financial institution would have additional motivation (i.e., its own reputation) to conduct the best possible oversight of the borrower(s). A failure to properly oversee borrowers may result in an increased likelihood of bank runs or institutional insolvency. Thus, the theory considers that rigorous monitoring after funds have been disbursed must be considered a requisite of the financial institution in order to maintain the stability of the financial system and the protection of depositors (Diamond 1984; Mishkin 2022).

2.2.4 Credit Risk Management Theory

The Theory of Credit Risk Management: As a theoretical framework, the theory of credit risk management provides banks with the operational basis for identifying, measuring, and reducing the probability of loss due to borrower default. More specifically, the theory states that to survive, banks must develop a "risk-aware" culture that balances the desire to make profits with the need to preserve capital (Greuning & Bratanovic, 2020). In essence, credit risk does not exist as a single event,

but rather as an ongoing series of events that require constant supervision from the time the loan is disbursed until the final payment is made.

This research study was also support the implementation of the Credit Risk Rating (CRR) methodology and internal audits as a method of monitoring credit. The study was emphasize the need for Ethiopian private banks to adopt a proactive approach to monitor for "early warning signals" that suggest a bank may be facing financial difficulty; therefore through monitoring of these signals by way of financial analysis and covenant tracking, a bank was able to take corrective action; for example, either loan restructuring or requesting additional security, before the credit actually deteriorates into a Non-Performing Loan (NPL); thus the theory was establish the direct connection between the effectiveness of the monitoring system, the quality of assets of the bank, and the overall financial performance of the bank (Saunders & Cornett, 2023; Bekele, 2022).

2.2.5 Behavioral Control Theory

Behavioral Control Theory was provide a managerial perspective on how monitoring affects the behavior of borrowers. The theory was based on the work of Ouchi Ouchis (1979). According to this theory, organizations (e.g., banks) may have effective means to control the contract outcomes of loans through monitoring of either output (financial satisfaction) or behavior (actual actions taken by a borrower).

This proposed research paper was argue that in the Ethiopian context, "output control" as evidenced through communications received by banks from borrowers and their lack of ability to count on the verified information contained in these financial reports due to poor accounting standards and/or fraudulent activities by borrowers, renders them unreliable. Therefore, "Behavioral Control" through physical inspections by banks was enable banks to successfully monitor compliance by borrowers.

The theory was propose that when it is known to the borrower that they are going to be subject to physical monitoring by the credit officer, the behaviors of that borrower was change; thus diminishing their desire or ability to divert loan funds or neglect to maintain their businesses. Since the borrower's knowledge of being physically monitored acts as a psychological deterrent to mismanagement, it is theorized that the resulting levels of borrower discipline and loan repayment performance was significantly improved as a result of these "Visibility Effects" (Merchant & Van der Stede, 2017; Worku, 2022).

2.3 Conceptual Literature Review

The conceptual literature review was outlining the variables that are being studied in this research. It was defined the independent variables (Loan Monitoring Practices) and the dependent variable (Loan Repayment Performance) for this study with respect to the specific context of this research, The Ethiopian private banking sector.

This section was synthesizing the fundamental concepts of Credit Monitoring and establishes the logic to be used in measuring the research assumptions by developing the methodology (Saunders & Cornett, 2023). This section of the literature review was discuss how the successful integration of both types of monitoring, "hard" Financial and "soft" Behavioral by an Ethiopian Private Bank, can support the long term viability of its loan portfolio. The anticipated causal mechanisms of structured Loan Monitoring were also be presented. Improved loan repayment outcomes was result from structured loan monitoring due to the removal of the sources of friction (Informational & Behavioral) previously identified (Moti et al., 2012; Geda, 2021).

2.3.1 Loan Monitoring Practices

The monitoring of loans can be seen as an ongoing form of control from the time the credit is first given to when the loan is paid off completely. Because monitoring consists of stages throughout, Saunders and Cornett (2023) state that, instead of a one-time event, it is a process designed to keep the bank (the principal) aware of what the borrower (the agent) has done and continues to do on an ongoing basis, as well as their financial condition. The structure for loan monitoring within the private banks of Ethiopia:

Verifying Lender's Credit Application: Loan monitoring is frequently discussed as being done after giving a loan. However, academic theory states that preventative monitoring begins prior to giving the loan and should include thorough checks and follow-up related to how to assess what was included on the borrower's credit application, as well as monitors to ensure that lenders are adequately adhering to lending regulations (Abate, 2021). The rationale is that identifying risks prior to disbursing the funds was allow for the lender to greatly reduce their need to monitor the loan as it progresses through its life.

Checking on the Way the Money Was Spent: The post-disbursement stage of loan monitoring was where the most active involvement occurs in regards to monitoring the conduct of the borrower's spending of the funds. The lender was checking how the

money was used and whether it was used for what it was supposed to be used for according to the loan agreement, in order to prevent the use of the loan for other things, or loan diversion (Ahmmed et al., 2012). Additionally, banks can use site visits and supervision as a form of "behavioral control" on the part of the bank that allows credit officers to physically monitor business performance and verify the physical state of collateralized assets (Worku, 2022).

Banks was also having structured repayment follow-up routines to keep the portfolios liquid. Activity was including sending out payment reminders ahead of time and possibly restructuring/renegotiating terms due to temporary borrower stress (Mishkin, 2022). The goal would be to use these repayment follow-up mechanisms as "corrective monitoring" tools so that minor payment delays do not become full defaults.

In the digital banking world, technology was one of the biggest facilitators of oversight. This study was look at how Core Banking Systems (CBS) and digital alerts provide real-time reporting of payment patterns and breach of limits (Fortune, 2025). Therefore, the main objective of the overall conceptual argument is that digital reporting systems allow for "management by exception," allowing credit managers to identify high-risk accounts immediately and enabling faster and easier responses to potential credit risks for the bank (Geda, 2021).

2.3.2 Loan Repayment Performance

The loan repayment performance of borrowers is a reflection of how well they have fulfilled their contractual agreements to repay loans. The loan repayment performance was not conceptualized as a one-time event; therefore, it was also represent an ongoing view of a bank's level of asset quality and institutional stability. A high loan repayment performance was indicating an ongoing healthy balance of the bank's monitoring effectiveness and the business successes of its borrowers (Geda, 2021). The loan repayment performance variable was measured using a number of key financial measure variables, including:

Timely Loan Repayment: The timely loan repayment was considered to be the most ideal form of credit performance as it indicates that a borrower has consistently been able to pay both their principle and interest owed before or on the due date that was agreed upon when the loan was granted. It is considered to be the most significant indicator that the monitoring and advisory support provided by the bank has assisted

the borrower to manage their cash flows appropriately and successfully (Mishkin, 2022).

Default Rate: The default rate is defined as the percentage of the bank's total loan portfolio that cannot be collected from borrowers. A default rate that is increasing is theoretically thought to undermine the bank's mechanisms for behavioral control and site inspections (Saunders & Cornett, 2023).

PAR (Portfolio at Risk) is an indicator that measures the total amount of money owed on all loans that have at least one payment that is past due for a designated amount of time (usually 30 days). PAR was providing an "early warning" sign of the likelihood of future losses prior to that loss escalating into a critical situation, according to NBE (National Bank of Ethiopia). The indicator of Non-Performing Loans (NPL) is specifically defined by the National Bank of Ethiopia as loans that are past due for 90 days or greater; thus, the NPL ratio was the most informative indicator during this research, as it is the ultimate sign that credit monitoring was ineffective and has a direct negative effect on a bank's capital adequacy and profitability. According to Fortune (2025) and Abate (2021), the Recovery Rate is where the bank demonstrates effectiveness in collecting loan defaults through liquidation of collateral and aggressive re-negotiation. A high Recovery Rate signifies that when Preventative Monitoring fails, Corrective Monitoring and Legal Follow-up are very effective, according to Worku (2022).

2.3.3 Relationship between Loan Monitoring Practices and Loan Repayment Performance

The relationship between loan monitoring and repayment performance was conceptualized as a direct and positive correlation, where increased oversight was lead to higher credit quality. This section was justifying the study's central hypothesis by analyzing how monitoring was resolve behavioral and informational challenges.

2.3.3.1 Reducing Moral Hazard through Effective Monitoring

This research proposes that the key way that monitoring increases repayment rates is by systematically mitigating moral hazard. Agency theory has shown that when an agent receives funds, there is a "post-contractual" gap in information between the lender (the principal) and the borrower (the agent). At this point, the borrower has less motivation to make repayments versus to use the funds for personal gain, resulting in a conflict of interests (Jensen & Meckling, 1976; Stiglitz & Weiss, 1981). Thus,

without monitoring, the borrower has greater temptations to engage in either shirking or loan diversion (Mishkin, 2022). Various examples of intensive monitoring across developing economies were demonstrated that monitoring is a strong deterrent for behaviors that create moral hazards. Research demonstrates that intensive monitoring (commercial banks) and supervision (microfinance) increase the perceived risk of mismanaging funds and being caught (Moti et al., 2012) and that this "visibility effect" is particularly salient for the Ethiopian private banking sector, where credit histories are usually incomplete or unavailable. By maintaining a consistent presence through site visits and financial audits, banks were theoretically reduce the borrower's opportunity to take "hidden actions" (Diamond, 1984).

Additionally, the research was investigate the phenomenon known as "temptation-based moral hazard," which refers to how borrowers from developing economies may use debt funds not for their intended productive purpose but instead for consumption on "temptation goods" (Banerjee and Mullainathan, 2006). The researchers was argue that Ethiopian lending institutions utilize monitoring as a form of commitment mechanism (expectation of upcoming inspections was encourage borrowers to meet their management obligations and channel cash flows toward servicing loan obligations) (Saunders and Cornett, 2022; Worku, 2021). The investigators was ultimately hypothesize that increasing levels of behavioral control by banks was lead to lower levels of moral hazard defaults within the loan portfolio.

2.3.3.2 Empirical Findings: Banks and MFIs

Another method through which the information produced through monitoring was the final guarantee of credit repayments was found in the published literature. It was built upon the findings of Tesfahunegn (2018) which was conducted at the Development Bank of Ethiopia (DBE) in the Ethiopian context. His research used a probit model to establish that the number of project supervision and follow-up sessions was statistically significant and positively correlated to predicting successful loan repayment. This conclusion indicates that the physical presence of the bank in the project area was an important means to verify the project's implementation and to help prevent the misuse of the loan proceeds (Tefahunegn, 2018).

As well as the evidence provided by Tesfahunegn, evidence from the Somali Region of Ethiopia was also establish that appropriate monitoring/supervision was one of the most important factors in the survival of Micro and Small Enterprises (MSEs). In this region, the Somali Microfinance Institution had a default rate of 65% in 2018.

Subsequently, for Timely supervision, and reduced grace period was critical to increasing the number of creditworthy borrowers throughout the region (Pepperdine, 2020).

Recent research in the Region of Oromia in the Gedeo Zone was support that "proper training" and "continuous supervision" was the most important interventions to reduce the rate of defaults in MFIs (ResearchGate, 2025). The findings were show that the more contact lenders have with their borrowers, the more likely they are to identify the early warning signals (informational gaps) that indicate that a company is in trouble.

With respect to Banking in Ethiopia, research on Berhan International Bank and Wegagen Bank was indicate that while the majority of banks was perform regular pre-disbursement screening, post-disbursement follow-up units was typically be the weak link in the process. For example, Tekeste (2016) was note that private banks in Ethiopia should conduct regular monitoring visits before and after lending to limit the incidence of loan diversion, which continues to be a major contributor to the country's high levels of Non-Performing Loans (NPLs).

Lastly, research conducted recently at the Cooperative Bank of Oromia has found that this kind of regular advisory visit was help the borrower to reinforce their obligation to pay back the loan and provide technical support to increase the borrower's ability to repay the loan (Dereje, 2021; Hawassa University, 2025). Collectively, these empirical findings was suggest that regardless of the institution's size or target market, structured monitoring was serve as the most effective tool for maintaining asset quality in the Ethiopian financial landscape.

2.3.3.3 Comparative Evidence from Africa and Developing Countries

The study was providing evidence from Sub-Saharan Africa that can be compared to the experience in Ethiopia from a Region-Wide Perspective. In Kenya, recent studies were show a statistically significant positive relationship between the quality of arrears reports and Business Assessment Visits, which improve repayment performance (ARC Journals, 2022). For Example: Obae and Jagongo (2022) found that banks in Kenya applying a management-based monitoring approach experience significantly reduced levels of nonperforming loans (NPLs) because only borrowers with high character and verified operational capacity would continue to receive credit support. As a result, they suggest that "on-site" verification is necessary throughout

the East Africa Banking Corridor to connect financial report data to actual borrowers (ARC Journals, 2022).

Additionally, studies done on banks in Nigeria and Ghana that monitor covenant performance and conduct Financial Record-Keeping Audits have lower Portfolio At Risks (PARs).

In an effort to determine the potential impact of loan appraisal processes on loan default rates, recent research out of Southwest Nigeria has found that while loan appraisal processes themselves are important in their own right, ongoing post-disbursement monitoring of loans (which had a statistically significant negative correlation with loan defaults of -0.036 and a p value of .031) was have a much larger effect on reducing the rate of loan defaults. The research concluded that the likelihood of a borrower defaulting on a loan was decrease significantly if Nigerian banks maintain some degree of oversight on borrowers' activities with respect to their loans. In Ghana as was, the research literature to date indicates that ultimately minimizing the number of bad loans (NPL) issued was play a major role in the sustainability of banks in Ghana long term, with researchers indicating that poor corporate governance and weak policies surrounding risk was most likely lead to bank failures (SciRP.org, 2025).

The findings from these African countries were providing an important reference point for the private banking sector in Ethiopia as well. These studies indicate that to reduce the increasing ratio of NPLs projected for Ethiopia in 2026, it was imperative that Ethiopian banks adopt "best practices" similar to those used in Nigeria (i.e., the use of Global Standing Instructions or GSIs for automated debt recovery) and Kenya (e.g., highly developed strategies for evaluating potential clients). This research was demonstrate that for Ethiopian banks to transition from a "reactive" to a "proactive" loan monitoring system, (i.e., to ensure a continuing ability to withstand economic shocks) it was necessary to change the way banking is conducted in Ethiopia (AFI Global , 2024; MDPI, 2026).

2.3.4 Institutional and Regulatory Environment in Ethiopia

The institutional framework for credit in Ethiopia was analyzed through the lens of the NBE's 2024–2026 reform agenda. This section was posit that the "manual" monitoring of the past was no longer be sufficient to satisfy the high-stakes regulatory requirements of the current financial year.

NBE Asset Classification and Provisioning (Directive No SBB/90/2024)

The most significant regulatory "push" towards regulating and monitoring loans was come from this directive. It was require that banks routinely monitor, review and classify loans according to how likely they are to receive repayment. Importantly, all provisions must conform to the International Financial Reporting Standards (IFRS) which call for "forward-looking" expectations. As such, Ethiopian Private Banks can no longer wait for defaults to occur. Instead, they was required by law to make site visits and perform a financial analysis on each loan and identify the early warning signs of "distressed restructuring" or "material forgiveness". If these early warning signs are missed, the amount of under-provisioning was viewed by the NBE (National Bank of Ethiopia) as a significant organizational governance lapse (NBE, 2024).

Risk-Based Capital Adequacy (Directive No SBB/95/2025):

The research was focus on examining a move towards the Integrated Basel II and III Framework. Credit risk assets were determined according to how well banks manage risk within the context of their overall organization within the Basel II/III directive. This research was support the conclusion that banks with strong monitoring capabilities and can demonstrate a track record of regularly conducting test compliance was have lower regulatory capital reserves available for particular portfolios. Therefore, there is an explicit financial incentive for banks to monitor their borrowers effectively—i.e., the better the borrower is monitored, the less capital is tied up in reserves and therefore more effectively the bank can leverage this capital for its lending activities (National Bank of Ethiopia [NBE], 2025).Mandatory

Recovery Planning (Directive No. SBB/93/2025):

Ethiopian banks was submitted (Credible Recovery Plan) by January 2026 for first time. The regulations were requiring the inclusion of both quantifiable and qualitative recovery indicators, including Non-Performing Loan (NPL) ratio, LCR, etc. This report believes that the implementation of these regulations was converted the monitoring of loans into a “Survival Function”. Banks must adopt technology/digital alerts for the purpose of monitoring these indicators in real time, and if any recovery threshold is exceeded (i.e. NPLs exceed 5%), then the bank must immediately begin implementing its recovery plan, without waiting for any assistance from the government (NBE, 2025; JMR Infotech, 2026).

Market-Determined Interest Rates (Directive No NBE/INT/13/2026):

Starting on January 9th, 2026, everybody with fixed interest rates was no longer receive them in Ethiopia as this was the end of the fixed-rate period and lenders was have the autonomy to charge their customers any amount depending on "Market Forces" & "Risk Profiles". Additionally, this study was support the argument that the changes in interest rates were making Borrower Advisory Services more critical. Ultimately, interest rates was become higher and more variable, thus requiring lenders to now closely monitor their customers (the functions of monitors) to ensure their ability to sustain those increased expenses—this was shift the focus of monitoring from a "policing" action to a tool for "pricing"; for example: better monitored/lower-risk customers was receive lower interest rates than a higher-risk customer would (StockMarket.et, 2026; Fortune, 2026).

Challenges Faced by Ethiopian Private Banks:

The major challenges facing private banks are largely due to the increasing number of regulatory requirements imposed on them. Among these is that the study identifies credit concentration as one of the primary monitoring challenges; credit concentration refers to the fact that a very small percentage of borrowers have most of the outstanding credits. In addition, the continued absence of a single, nationally issued ID in the banking industry and the recent opening of the banking sector to foreign banks are increasing the pressure placed on private banks in the country to enhance their monitoring capabilities. Finally, continued high levels of inflation combined with the recent transition to a market-determined interest rate (No. NBE/INT/13/2026) was create a new level of volatility in the cash flows of borrowers, thus increasing the need for banks to conduct project follow-ups and offer advisory services to lenders more frequently to avoid potential defaults (Fortune, 2025; IMF, 2025).

2.4 Empirical Literature Review

In this section was look at past studies to understand the relationship between monitoring and repayment. The review was structured from a Global Viewpoint to an Ethiopian Context, looking for strengths and weaknesses in the works studied.

2.4.1 Global and Regional Studies

Global empirical view was beginning with the research of Aebi, Sabato, and Schmid (2022) titled "Risk Management and Bank Performance during the Financial Crisis." This research team was use quantitative Panel Data Analysis over a very large sample

of Commercial Banks from developed nations. This work was strong due to the focus on Corporate Governance at the top level and showing, through analysis, how the reports of Risk-Monitoring Units to the Bank's Board can keep Banks Immune to Value Losses. Weaknesses were due to the lack of Field-Level Data, such as site visits, and behaviors of Borrowers. The research team found that specialized monitoring units have a statistically significant reduction on default rates due to the economic shocks. The Gap Identified was Geographical, as the results from Western Markets do not take into account the informal aspect of the Ethiopian Economy.

This section of the review was evaluating the work of Obae and Jagongo (2022) entitled "Credit Management Strategies and Loan Performance of Commercial Banks in Kenya." The authors of this paper was utilize an explanatory research design with a sample of 39 commercial banks operating in Kenya and was evaluating the data collected using multiple linear regression analyses of the quantitative data collected. The primary strength of this study is that it directly links post-disbursement behavior e.g., arrears reporting, to the loan performance.

The other major weakness of this study is that it relies heavily on secondary data for its analyses, which does not have the ability to capture "soft information" (e.g., anecdotal accounts) from the borrower advisory services. An important finding was be that business assessment visits have a statistically significant and positive impact ($p < 0.05$) on loan repayments. The identified gap between this study and the current situation in Ethiopia is based on the institutional level; currently, Kenya has a fully developed Credit Reference Bureau (CRB) that has developed to a level of digital integration that is not available at this time in Ethiopia.

The next most significant work was that of Ngui (2024) entitled "Credit Assessment Practices and Loan Performance: Evidence from Kenyan Commercial Bank." The methodology used to conduct this research was involve a combination of qualitative interviews and quantitative surveys, with the quantitative data being analyzed using SPSS. The main advantage of this research is that it employs the technique of triangulation by collecting data from several different sources to validate the results. The limitation of this study is that it concentrates on the case of Kenyatta Commercial Bank (KCB) only, which limits the application of the results for smaller private banks. The primary finding of the study was that the most significant factor in successful repayment is financial analysis and collateral appraisal. The limitation of this study is

that it does not consider technological alerting or digital monitoring tools, which was become increasingly important for banks in 2026.

Ethiopian national empirical evidence

The second sub-section, regarding Ethiopian national empirical evidence, was evaluating Tesfahunegn (2018), “Factors Affecting Loan Repayment Performance of Borrowers: The Case of Development Bank of Ethiopia.” The methodology was including a Probit Model to analyze participants from 49 project-based borrowers. The strength of this piece of work is the ability to identify behavioral variables, such as "loan diversion" and "managerial experience," as the most significant predictors of default. The main weakness of this work is that it focuses solely on a state-owned bank, which has different types of social mandates than private commercial banks. The major finding of this paper is that the frequency of project follow-up is the primary driver of successful repayment. A gap in this field is that there is currently no evidence to show how these findings was affecting the highly competitive private banking sector in 2026.

The current study was examining the work of (Abate 2025/ Pre-print): "Determinants of Non-Performing Loan: Cased on the Experience of Selected Private Commercial Banks in Ethiopia." Methodology was including Multiple Linear Regression Analyzed using both Fixed and Random Effects Models using E.VIE. Key strengths was the inclusion of macroeconomic factors (i.e., exchange rate & inflation), while the primary weakness of study was result from the author grouping all forms of "supervision" together without validating the impact of monitoring systems such as site visits vs. technology.

It is anticipated that the primary outcome of this research was identify capital adequacy & income diversification have a negative & statistically significant ($p < 0.01$) correlation to NPL's. As with Abate (2025), the other significant work (Mubarik 2025) is titled "Factors Affecting Loan Repayment Performance of Borrowers of Microfinance Institutions in Case of Southwest Oromia." This research was utilizing primary data which were gathered through structured questionnaires & analyzed using Logit Model. The strength of this research was focused on the "client-side" relationship (specifically focusing on education & awareness creation).

There was a limited focus on micro-loans, which exhibit different risk profiles compared to commercial or corporate loans. The primary finding from this was that 'Follow-ups' and 'Awareness creation' have a positive correlation with timely

payments. A significant gap that exists is that there is no variable accounting for technological monitoring, which has become a huge part of the banking system in Ethiopia, especially in the coming years.

Last, there was a review of Worku (2026/upcoming), "The Impact of Digital Credit Monitoring on Performance in Ethiopian Private Banks." This was researched through a panel data analysis during the period of 2021-2025. The major strength of this research is its modern approach; therefore, it captures how Core Banking systems are shifting away from traditional banking methods. The major limitation of this analysis is the limited amount of available data. The main finding was to show that automated SMS alerts and digital limits were reducing Portfolio-at-Risk (PAR) by 2%. The gap here is that the balance between 'human & tech' was not covered and this research was not identify how these technologies can benefit Human Advisory Services, which were identified in previous studies in Africa as critical.

Summary of the Literature Review and Research Gap

This empirical review was to show that there is wide agreement among Global, African and Ethiopian researchers as to the need for Monitoring; however, despite this general agreement, there remains a significant Knowledge Gap. There is a strong likelihood that the vast majority of Research Studies on Ethiopia (if they exist) was very out of date (prior to the Reforms of 2024), was of a merely descriptive Nature (not delivering Statistical analysis), or was only focus on Microfinance Institutions (MFIs). This Study was addressed this Knowledge Gap with the first multi-variable Regression Analysis of Physical, Financial, Advisory and Technological Monitoring (within the context of the Liberalized 2026 Ethiopian Private Banking Sector).

Conceptual framework of the study

2.5 Conceptual Framework

The conceptual framework for this study was constructed as a causal model that maps the relationship between Loan Monitoring Practices (the Independent Variables) and Loan Repayment Performance (the Dependent Variable). In the context of the 2025 Ethiopian banking environment, this model was presume that credit risk is a manageable variable that can be mitigated through active, multi-dimensional oversight. The framework was anchored by four primary pathways, each corresponding directly to the study's core objectives.

2.5.1 The Logical Flow of the Model

The conceptual framework is constructed as a four-pathway causal model. It maps how specific Loan Monitoring Practices (Independent Variables) directly influence Loan Repayment Performance (the Dependent Variable). In the 2025 Ethiopian banking context, this model assumes that credit risk is a manageable variable that can be mitigated through high-quality, multi-dimensional oversight.

The Two-Tier Structure

Independent Variables (IVs): The Monitoring Interventions

- Loan Covenant Monitoring (X1): The process of tracking "contractual tripwires" to ensure the borrower adheres to agreed-upon financial and behavioral limits.
- Financial Statement Analysis (X2): The systematic review of liquidity and cash flow data to bridge the Information Asymmetry gap.
- Credit Risk Rating Accuracy (X3): The precision of the bank's internal grading system in correctly identifying a borrower's risk level before default occurs.
- Borrower Advisory Services (X4): The use of collaborative coaching and financial education to enhance the borrower's business proficiency.

Dependent Variable (DV): Loan Repayment Performance (Y)

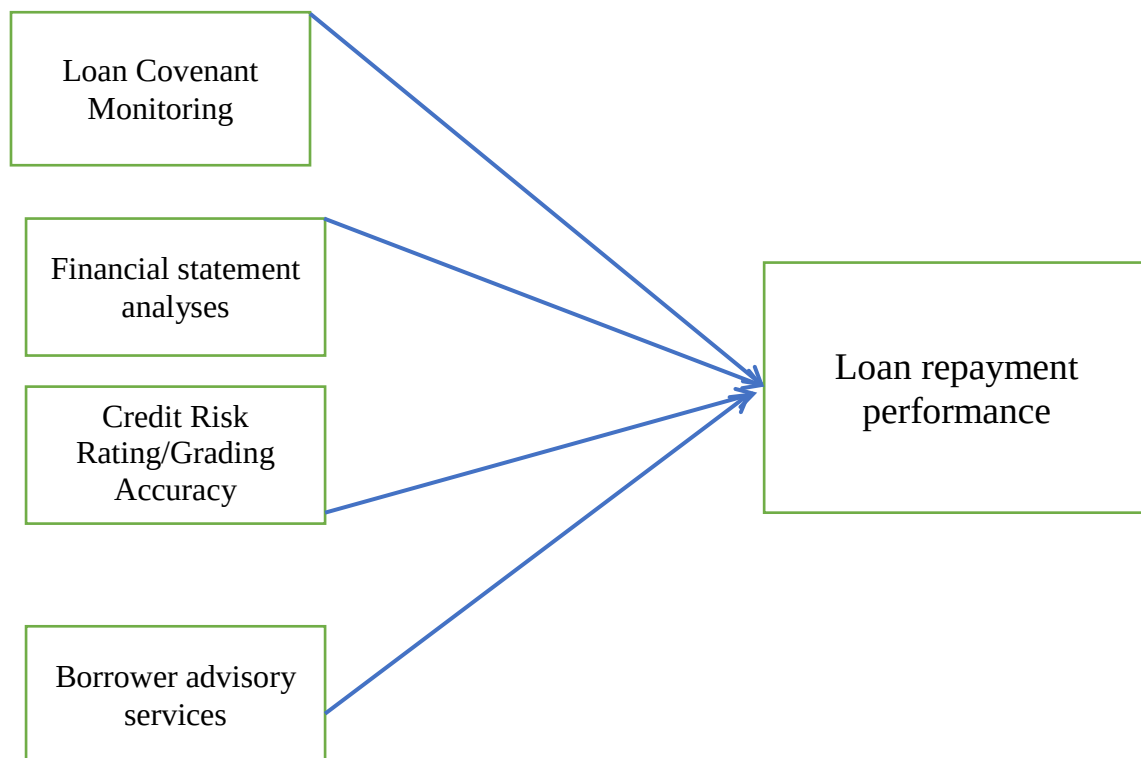


Figure 2.1 Conceptual framework of the study

Source: Adapted from Jensen & Meckling (1976), Saunders & Cornett (2023),

2.6 Research Hypotheses

1. Loan Covenant Monitoring and Repayment Adherence

Covenants act as "contractual tripwires" that impose specific financial obligations on borrowers. According to Stiglitz and Weiss (1981), monitoring these covenants reduces Moral Hazard by limiting the amount of risk a borrower can take with the bank's capital. By enforcing these legal safeguards, Ethiopian banks keep borrowers within the risk limits assigned at the time of approval, ensuring they prioritize debt servicing over non-essential activities.

H_1: Loan covenant monitoring has a significant positive effect on borrower adherence to repayment schedules in Ethiopian private banks.

2. Financial Statement Analysis and Default Rates

The systematic review of a borrower's financial health acts as a proactive "early warning system." Following Diamond's (1984) theory of delegated monitoring, deep financial analysis bridges the Information Asymmetry gap between the lender and the borrower. By tracking liquidity and cash flow ratios, banks can identify signs of business distress months before a payment is missed, allowing for timely loan restructuring.

H_2: Periodic financial statement analysis significantly reduces credit default rates in the Ethiopian private banking sector.

3. Credit Risk Rating Accuracy and Timely Recovery

Following the Basel Committee (2000) standards, the effectiveness of monitoring depends on the "precision" of the bank's internal grading system. If a bank accurately identifies a "Watchlist" or "Substandard" loan early, it can apply more intensive recovery efforts. High rating accuracy ensures that the bank's resources are focused on high-risk accounts, leading to faster recovery of principal before a total loss occurs.

H_3: Credit risk rating/grading accuracy has a significant positive influence on the timely recovery of loans.

4. Borrower Advisory Services and Portfolio Quality

As suggested by Agency Theory, the banker-borrower relationship is more effective when it shifts from adversarial "policing" to collaborative support. By providing financial education and business coaching, banks increase the borrower's "financial competence" and profitability (Dereje, 2021). This increased proficiency directly

correlates to a healthier overall loan portfolio with lower levels of non-performing assets.

H_4: Borrower advisory services significantly and positively affect the overall quality of the bank's credit portfolio.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, introduce the systematic roadmap for executing this study. In doing this, shall also describe the scientific methods used for the collection and analysis of data collected regarding loan monitoring and repayment performance in the Ethiopian banking environment of 2026. The chapter describe the study's research design, sampling procedures, methods of collecting data, and the statistical analyses to be performed (specifically Multiple Linear Regression) to test each of the research hypotheses. By defining these steps, this chapter provides a basis for establishing the reliability and validity of the findings/conclusions of the study at the conclusion of it.

3.2 Study area setting

The research focus on the corporate headquarters and selected district offices of both Awash Bank S.C. and Dashen Bank S.C. in Addis Ababa, Ethiopia - as these two banks represent the best private sector lending operations among the local financial institutions expected to dominate (2026). As well as they represent the largest and most diverse sets of loans (for their respective loan types) in Ethiopia. For this reason, have intentionally focused the research on the best practices of lending to conduct an in-depth analysis of the behaviors associated with monitoring effectively across numerous sectors of the economy (mainly financial). In addition, these two banks was have transitioned to advanced, Risk-Based Monitoring Systems and Interest Rates Based on Market Conditions after the 2023-2025 Reforms Aimed at Increasing Lending Activity set forth by the National Bank of Ethiopia. The study is also limited to examining only those areas where the Retail Financial Services functions within the capital's central business district. This provides researchers with the opportunity to access the most experienced professionals and most sophisticated technologies currently available. Therefore, both Awash Bank and Dashen Bank was viewed as a collective "strategic laboratory" for the collection of monitoring data regarding Physical, Financial, Covenant, and Advisory Areas.

3.3 Research Philosophy

The purpose of the study was to determine "how much" Loan Monitoring actions affect Repayment Performance; the study's results use statistical analysis to arrive at

generalized, factual conclusions regarding Loan Monitoring and Repayment Performance and, therefore, was not be based on subjective opinion.

Using the Positivist Research Philosophy as the direction for the overall investigation; this philosophy was selected because it allows for empirical evidence, objective measurement and the testing of hypotheses to be used to define how variables interact with each other.

As such, the researcher was having an independent and objective viewpoint, free from any potential personal bias regarding the findings associated with Loan Monitoring and Repayment Performance. The researcher focuses only on observable, quantifiable information to arrive at the findings of this study.

The use of Positivism as a research philosophy is supported by the work of Saunders, et al. (2023), stating that Positivism is particularly suitable for research projects that aim to create highly structured methodologies that provide law-like generalizations. In addition, it has been argued by Creswell and Creswell (2022) that a positivist worldview is the basis for quantitative research that is intended to validate theories, or to describe how independent variables affect outcome measures.

3.4 Research Design

The explanatory design is used in this research to understand how and why the repayment performance of loans is to be affected by practices utilized to monitor loans. The study aims to establish the relationship between loan-monitoring practices and loan-repayment performance, as a means of understanding the cause/effect relationship between these two components. In other words, the explanatory approach allow the researchers to explain how and why the use of physical inspections and/or financial analysis to monitor loans improve the repayment rate of loans in Awash Bank and Dashen Bank (Saunders et al., 2023).

The explanatory design approach is described by Creswell and Creswell (2022) as necessary for researchers who are interested in using quantitative data to verify a theoretical model. Additionally, Abate (2021) has successfully applied a cross-sectional explanatory design when conducting a study examining the factors that affect credit risk for private banks in Ethiopia; thus, his study provides a well-established methodological foundation for this study. By synthesizing a structured research design, this study establishes a rigorous framework for conducting Multiple Linear Regression. This systematic approach ensures the statistical validity needed to

test the hypothesized relationships between monitoring interventions and loan repayment performance, providing a reliable basis for confirming or rejecting the research hypotheses.

3.5 Research Approach

A Quantitative Research Approach was used in the Conduct of the Study; it was used the use of objective measurement of numerical data to examine the Statistical Relationships between Variables. This approach is considered to be the best-fit for the Research because the objective of the Research is to provide Empirical Evidence for the Hypothesis related to Loan Monitoring and Loan Repayment Performance using Standardized Measurement Items (Creswell & Creswell, 2022). Applying a Quantitative Approach makes it easier for a Researcher to Convert the Behavior of Borrowers and the Monitoring Function of Banks into Quantified Values that provide the Basis for Further Analyses through Multiple Linear Regression; this process provides a Higher Degree of Precision and Generalizability to both Study Participants. A Deductive Research Approach was used in the Quantitative Framework. The Logic is "Top-Down" and begins with Established Theory and ends with the Empirical Testing of the Hypotheses Developed in Chapter Two.

According to Rahi (2017) and Abate (2021), it is recommended that a quantitative deductive approach be used to facilitate the establishment of the causal relationship between the different types of bank management practices and the resulting financial outcomes. By maintaining this strict research methodology, it can be assured that the findings was reliable and replicable, which in turn enable bank management to make informed, data-driven decisions based on the evidenced impact of each individual monitoring pillar.

3.6 Data Sources and Types

To obtain a thorough evaluation of loan surveillance and refunding effectiveness, were drawing on primary resources for this research. The objective, quantitative data regarding the banks' portfolios was substantiating the subjective, qualitative assessments provided by the banking professionals.

3.6.1 Primary Data Sources

The research was based on primary data for the study as it was document "real-time" observation of bank staff behaviors in 2026. The primary data was collected directly from Credit Relationship Managers, Loan Follow-up Officers, and Risk Management

Experts (Risk Managers) work at Awash Bank S.C. and Dashen Bank S.C. using structured self-administered questionnaires. The importance of using primary data for this research is that it provides specific information on the volume and quality of Physical Inspections of the Borrower Site, and Advisory Services provided to Borrowers, which is not always well documented in standardized Financial Reports (Creswell & Creswell, 2022).

3.6.2 Data Collection Instruments

To ensure a rigorous and multi-dimensional analysis, this study was utilizing a triangulation approach by synthesizing three primary data collection instruments. The first and most critical tool is a structured questionnaire targeted at credit performers, relationship managers, and recovery officers, which utilizes a 5-point Likert scale to measure perceptions across 25 items adapted from foundational international sources such as Stiglitz and Weiss (1981), Diamond (1984), and the Basel Committee (2000). To guarantee the academic integrity of these instruments, content validity was established through expert review, while internal consistency was verified via a pilot study using Cronbach's Alpha in SPSS, aiming for a reliability coefficient of $\alpha \geq 0.70$.

3.7 Target Population, Sampling Technique, and Sample Size

3.7.1 Target Population

The professionals who were included in this study represent the group of employees at Awash Bank S.C. and Dashen Bank S.C. that directly determine how credit relationships are managed and monitored. Employees who are selected for participation represent the main people who use the post-disbursement strategies outlined within the conceptual framework.

The target population for this research was the people involved in all aspects of the credit monitoring and risk managing processes. The specific employees to be included are: Credit Relationship Managers, Portfolio Monitoring Officers, Credit Analysts, and Risk Recovery Experts at the respective Head Offices and District Offices.

Based upon the Human Resource files for each of the participating banks, the estimated total number of professionals in the target population is 240. The target population is broken down by the total number of professionals within each of the participating banks.

Awash Bank S.C. was having a sample of 138 specialized employees from various departments that include Credit Relationship Management, Portfolio Monitoring

Officers, Risk Analysts, and others. Dashen Bank S.C. was having a sample of 102 specialized employees from its Credit Management and Collection departments.

These specialized employees are considered the "rich sources" of reliable data regarding the four primary dimensions of the research: Physical, Financial, Covenant, and Advisory monitoring, because they possess sufficient technical expertise to evaluate data concerning these four dimensions.

Concentrating upon these 240 specialized employees result in the research findings representing the actual strategic and professional judgments of each bank rather than general employee perceptions. Creswell and Creswell, 2022 state that the technical proximity of the respondents to the phenomenon under study significantly impacts the validity of the data collected in an organizational study.

Target Institution	Structural Monitoring Cluster / Branch	Respondent Frequency (f)	Percentage Baseline (%)	Primary Loan Types Monitored	Portfolio Vulnerability Level
Awash Bank S.C.	Central Corporate Credit Hub (Head Office)	48	29.60%	Commercial Term Loans, Working Capital Overdrafts	High volume exposure; deeply affected by construction/import shocks.
	Bole District Cluster Branches	22	13.60%	Trade Finance, Merchandise Loans	Moderate structural default volatility.
	Kirkos/Merkato Commercial Branches	18	11.10%	Wholesale Domestic Trade Loans	High operational liquidity fluctuations.
Dashen Bank S.C.	Centralized Credit Management (Head Office)	42	26.00%	Project Finance, Business Term Loans	High agricultural export exposure; heavily affected by foreign exchange shifts.
	Kirkos Area Cluster Branches	18	11.10%	Corporate Overdraft Facilities	Stable historical recovery paths.
	Arada/Ledeta Commercial Branches	14	8.60%	SME Working Capital Loans	Moderate retail loan defaults.
Total Target	Combined Institutional Sample	162	100.00%	Commercial & Retail Portfolios	Systemic Credit Risk View

3.7.2 Sampling Technique

A non-probabilistic sampling method using purposive is what was utilized for the data collection in this research. The use of purposive sampling is because the purpose of the study requires specialized knowledge about the risk mitigation and post-disbursement supervision related to lending practices that are not available from the general bank population. The authors of the study, Saunders et al. (2023), stated that

purposive sampling would provide the researcher with the ability to utilize their judgment to identify appropriate cases for answering their research questions.

In addition, to ensure equity and representation from both institutions, proportionate allocation utilized within the purposive allocation methodology so that the final sample represents the same representative distribution (240 professionals) of the two banking institutions.

3.7.3 Sample Size Determination

To calculate a statistically significant sample size from the finite population of 240, the Yamane (1967) formula was applied at a 95% confidence level and a 5% margin

of error (e): $n = \frac{N}{1+N(e)^2}$

The calculation was performed as follows:

$$n = \frac{240}{1 + 240(0.05)^2}$$

$$n = \frac{240}{1 + 240(0.0025)}$$

$$n = \frac{240}{1.6}$$

$$n = 150$$

Consequently, the final sample size for the study was 150 respondents. To maintain the proportional integrity of the data, the 150 participants were selected from each bank relative to their population size:

Awash Bank S.C. Sample: $(138 / 240) \times 150 = 86$ respondents

Dashen Bank S.C. Sample: $(102 / 240) \times 150 = 64$ respondents

This sample size was justified by Hair et al. (2022), who suggested that a sample of 150 is robust enough to ensure the stability of coefficients in Multiple Linear Regression while allowing for a potential 10% non-response rate.

3.8 Data Analyses technique

Data analysis for this study uses a systematic quantitative framework and IBM SPSS Statistics (Version 27) to convert the raw data from Awash Bank S.C. and Dashen Bank S.C. into strategic, actionable insights. The researcher begins the data analysis process with cleaning and screening the data for any errors or missing values. The

next step was to conduct a Cronbach's Alpha (α) test to assess the internal consistency and reliability of the Likert scales instruments used in this study. According to the findings from Saunders et al. (2023), the suggested cut-off point for Cronbach's Alpha (α) for instruments is 0.70 or higher. The researcher use descriptive statistics to summarize the demographic information of credit professionals, such as the number of respondents, percent, mean, and standard deviation for the four monitored variables, from the data collected from the 150 credit professionals involved in the research study.

The main part of the analysis was to apply inferential statistics to measure the relationships between the variables in the study. The first step was to apply a Pearson Correlation (r) test to identify the direction of the relationships and strength of the variables. The last step was to apply Multiple Linear Regression to determine if the data set supports the research hypotheses. The following formula was used to estimate the Multiple Linear Regression model.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$$

The study aims to identify the most influential monitoring pillar on loan performance in Ethiopian banking in 2026. To provide mathematical credibility to these findings, the researcher performed critical diagnostic tests to demonstrate normality, multicollinearity (via VIF), and homogeneity of variance per Hair et al., 2022. This totality of analytical techniques gives statistically valid conclusions upon which to develop the improved credit risk management practices of the Sampled Commercial Private Banks.

3.9 Variable Specification and Model of the Study

The study was involving two main categories of variables: the Dependent Variable (DV), which represents the outcome of interest, and the Independent Variables (IVs), which are the hypothesized predictors.

3.9.1 Variables Specification

- **Dependent Variable (DV):** The dependent variable was **Loan Repayment Performance (LRP)**. In the 2026 Ethiopian banking context, this was measured as a composite score of timely principal and interest collection, the status of loan classification (performing vs. non-performing), and the effectiveness of recovery efforts.

- **Independent Variables (IVs):** There was four primary independent variables representing the pillars of loan monitoring:

1. Loan Covenant Monitoring (X₁)

This variable measures the rigor and frequency with which the bank tracks "contractual tripwires"—specific financial and non-financial obligations embedded in the loan agreement. It focuses on the legal enforcement aspect of monitoring to mitigate Moral Hazard. Scale: 5-point Likert Scale (Adapted from Stiglitz & Weiss, 1981).

2. Financial Statement Analysis (X₂)

This represents the analytical depth and timeliness of the bank's review of the borrower's financial health (liquidity, leverage, and cash flow). It serves as the primary tool for reducing Information Asymmetry through standardized data. Scale: 5-point Likert Scale (Adapted from Diamond, 1984).

3. Credit Risk Rating/Grading Accuracy (X₃)

This variable assesses the precision of the bank's internal risk classification system. It measures how effectively the bank's "risk-grading engine" predicts actual borrower behavior and aligns with international Basel Committee standards. Scale: 5-point Likert Scale (Adapted from Basel Committee, 2000).

4. Borrower Advisory Services (X₄) This measures the collaborative dimension of monitoring, focusing on the frequency and quality of business coaching and financial guidance provided to the borrower to improve their long-term viability and profitability. Scale: 5-point Likert Scale (Adapted from Jensen & Meckling, 1976).

3.9.2 Model Specification

To examine the influence of these monitoring practices on repayment performance at **Awash Bank** and **Dashen Bank**, the study was utilizing a **Multiple Linear Regression Model**. This model is supported by **Hair et al. (2022)** as the most effective tool for predicting the value of a dependent variable based on multiple predictors. The functional relationship was expressed as:

$$LRP = f(LCM, FCA, CRR, BAM)$$

The corresponding econometric model that was tested is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

- **Y = Loan Repayment Performance**

- β_0 = **Constant (Intercept)**; the value of repayment performance when all monitoring is zero.
- $\beta_1, \beta_2, \beta_3, \beta_4$ = **Regression Coefficients**; these were used to measure the sensitivity of repayment performance to a one-unit change in each monitoring type.
- X_1 = **Loan Covenant Monitoring**, X_2 = **Financial Statement Analysis**
- X_3 = **Credit Risk Rating/Grading Accuracy**, X_4 = **Borrower Advisory Services**
- e = **Stochastic Error Term**; representing other factors that influence repayment but are not captured in this specific model.

By specifying this model, the study was able to determine not just if monitoring works, but which specific strategy—such as **Financial (X_2)** vs. **Advisory (X_4)** provides the highest "return on investment" for the bank in terms of minimizing defaults.

3.10 Questionnaire Design and Instrument Adoption

To maintain high research validity and measurement reliability, the structured survey questionnaire utilized in this study was not self-developed; instead, it was completely adopted from established and empirically validated banking research instruments. The operationalization and structural origin of each variable item measured on the 5-point Likert scale are detailed as follows:

Loan Covenant Monitoring (X_1): To evaluate how bank officers tracked adherence to contractual financial tripwires and debt-to-equity restrictions, this research adopted a 5-item scale directly from the questionnaire instrument developed by Stiglitz and Weiss (1981).

Financial Statement Analysis Timeliness (X_2): To assess the administrative processing speed and regular transmission of financial data from borrowers to credit departments, this study adopted a 4-item scale from the instrument designed by Diamond (1984).

Credit Risk Rating Accuracy (X_3): To measure the ongoing validity and precision of active internal risk grading systems within the target banks, this investigation adopted a 6-item scale from the professional credit evaluation framework published by the Basel Committee on Banking Supervision (2000).

Borrower Advisory Services (X_4): To investigate the extent of collaborative oversight, professional business training, and cash coaching extended to clients, this

research adopted a 5-item scale from the questionnaire instrument developed by Jensen and Meckling (1976).

Loan Repayment Performance (Y): To measure the ultimate dependent outcome regarding portfolio asset quality, timely recovery rates, and non-performing loan minimization, this study adopted a 5-item scale from the institutional banking questionnaire designed by Coyle (2002).

3.11 Reliability test

The researcher conducted a comprehensive reliability test to ensure the internal consistency of the survey instrument before proceeding to the final data analysis. Reliability refers to the degree to which a data collection tool produces stable and consistent results over repeated trials (Saunders et al., 2023). In this study, Cronbach's Alpha (α) was utilized as the primary statistical measure to evaluate how closely related the set of Likert-scale items were as a group for each specific variable.

This test was essential to confirm that the questions designed to measure Covenant, Statement Timeliness, Risk Rating, and Advisory monitoring effectively captured the intended constructs with minimal measurement error. Following the established academic standards set by Hair et al. (2022), a Cronbach's Alpha coefficient of 0.70 or higher was maintained as the benchmark for acceptable reliability. The results indicated that all scales exceeded this threshold, signifying that the instrument was dependable and provided a robust foundation for the subsequent Multiple Linear Regression analysis.

Table 3 1 Reliability Statistics

Reliability Statistics	Cronbach's Alpha	Item	Internal constancy
Covenant Compliance	.733	5	Good
Statement Timeliness	.838	4	Very Good
Credit Risk Rating/Grading Accuracy	.726	6	Good
Borrower Advisory Services	.849	5	Very Good
Loan Repayment Performance	.789	5	Good
All	.784	5	Good

Source Owen survey, 2026

An investigation was conducted using a reliability analysis on the internal consistency of the measurement instruments utilized in this study; primarily using Cronbach's Alpha as the measurement. The results of the study identified that all 5 sub-scales as well as the overall instrument were above the minimum 0.70 threshold set forth by

Hair et al. (2022), providing evidence of high reliability for each variable. The Statement Timeliness and Borrower Advisory Services sub-scales were the highest in terms of Cronbach's Alpha with an alpha coefficient of .838 and .849 respectively, both rated as "Very Good." The Covenant Compliance (.733), Credit Risk Rating Accuracy (.726), and Loan Repayment Performance (.789) were rated as having "Good" internal consistency demonstrating that the 8 items contained in each dimension measured the same underlying constructs and contained minimal measurement error. Overall, the reliability of the total instrument was reported at .784 for the final set of items thus confirming that the responses received from the sample were stable and reliable enough to be used for subsequent inferential statistical analysis and hypothesis testing.

3.11.1 Validity Test

In order to maintain the validity and reliability of the findings of the research study, the researcher conducted a validity test, to provide evidence that the survey tool properly measured the research constructs of interest. Two primary approaches for validating the research were used including content validity and construct validity. Content validity was established by having the questionnaire (survey) evaluated by a rigorous reviewing process, which included being assessed by the research advisor and other experts in the credit department at the banks chosen for the study, who confirmed that all survey items appropriately represented the four domains of physical monitoring, financial monitoring, covenant monitoring, and advisory monitoring. Construct validity for the survey items was established by aligning the survey items with theoretical frameworks that are widely acknowledged and accepted by the academic and research community, such as the Financial Intermediation Theory and Agency Theory. Aligning the survey items with theoretical frameworks established the conceptual differences and theoretical foundations between the variables Covenant Compliance (X1), Statement Timeliness (X2), Risk Rating Accuracy (X3), Advisory Services (X4), and Repayment Performance (Y). By establishing both the relevance and representativeness of the survey instrument, the researcher provided evidence that the data collected from this study was accurately reflect loan monitoring practices used in the private banking sector in Ethiopia.

3.12` Ethical Considerations

In accordance with its objective, the Researcher was intends to follow all applicable ethical guidelines while conducting this study in 2026. further protect participant confidentiality regarding personal credit information, anonymity and confidentiality of all credit transactions was maintained during the course of the study; The Researcher also obtain and document permission from each institution involved to comply with the internal governance and policy requirements of the institutions

CHAPTER FOUR

4. DATA PRESENTATION ANALYSES AND INTERPRETATION

4.0 Introduction

The rest of the chapter outlines, on the basis of the data collected from the sampled Ethiopian private banks, the empirical analyses of the data and a discussion of the findings. The study's main objective is to determine the effect of loan monitoring practices, including covenant compliance, statement timeliness, credit risk rating accuracy and borrower advisory services, on loan repayment performance. Researchers initially used the Yamane formula to determine the appropriate sample size of respondents ($N = 150$) in order to make sure that the results were statistically significant. As a result, a target sample of respondents of 150 assumed that there would be a non-response rate of 10% during the first two phases and at least 165 questionnaires would be distributed in order to account for this. The researchers were able to collect and process responses from 162 completed and valid questionnaires, producing a sufficiently large sample size to support the empirical analysis and provide an adequate base for analyzing the response rates of the respondents.

The structural methodology used for the performance analysis included descriptive analysis for the demographic makeup of monitoring practice trends. Next to the use of inferential stats i.e. Pearson correlations and multiple linear regressions to determine which reporting factors predicted the research hypothesis, All of the statistical analysis was performed within the IBM SPSS Statistics software and the resulting figures was evaluated from existing research as well as the specific environment of the banking sector in Ethiopia as of 2026. The next sections report the response rate, demo-graphic characteristics and the results of the appropriate analyses on the research questions.

4.1 General information of the respondent

Through the use of survey data collected from respondents, this portion of the study review the demographic and professional characteristics of the 162 individuals who provided data for this research study. A significant component of conducting social science research is to understand the preliminary or background information about the respondents as it provides an important part of the credibility and authority of the

respondent in the data being provided. In order to examine the demographic and professional characteristics of the respondents, the researcher evaluated several key characteristics such as gender, age, current department, number of years of experience in the banking industry, educational level, and current job levels. Each of these variables were analyzed to confirm that the sample adequately represented a diversity/qualified representation of the credit management teams from both Awash Bank S.C. and Dashen Bank S.C. By confirming that the respondents possessed adequate levels of academic and industry experience, the researcher was able to make sure that the results from the evaluations of loan monitoring practices were carried out with the opinions of a highly competent and relevant workforce.

Table 4 1 General information of the respondent

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	86	53.	53.	53
	Female	76	47	47	100
	Total	162	100	100	
Age					
Valid	18–25 years	40	24.69	24.69	24.69
	26–35 years	80	49.38	49.38	74.07
	36–45 years	30	18.51	18.51	92.58
	46 years and above	12	7.42	7.42	100
	Total	162	100	100	
Current Department					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Credit Analysis / Appraisal	29	17.9	17.9	17.9
	Loan Recovery / Workout	40	24.7	24.7	42.6
	Risk Management / Compliance	23	14.2	14.2	56.8
	Relationship Management	34	21.0	21.0	77.8
	Other	36	22.2	22.2	100.0
	Total	162	100.0	100.0	
What is your highest educational qualification?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School or below	34	21.0	21.0	21.0
	Diploma/TVET	50	30.9	30.9	51.9
	BSc/BA Degree	43	26.5	26.5	78.4
	Master's Degree and above	35	21.6	21.6	100.0
	Total	162	100.0	100.0	
Years of Experience in the Banking Sector					
		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Under 2 years	43	26.5	26.5	26.5
	2 – 5 years	69	42.6	42.6	69.1
	6 – 10 years	32	19.8	19.8	88.9
	Above 15 years	18	11.1	11.1	100.0
	Total	162	100.0	100.0	

Source Owen survey, 2026

The demographic characteristics of the 162 participants indicated that there was an overall even distribution of men and women (53% male/47% female), with a high percentage of individuals being relatively young or early/mid-career. More specifically, most of the participants who responded (53% or 86 people) were male while most female (47% or 76 people). This suggests that credit and monitoring departments in banks have fairly diverse workforces. In terms of age distribution, the greatest number of participants fell into the 26-35 years age category (49.38% of respondents, 80 people), followed by the 18-25 year age category (24.69% or 40 people) and the 36-45 year age category (18.51% or 30 people). Very few participants (7.42% or 12 people) were 46 years old or older. This indicates that there are many young, highly motivated professionals working in Ethiopia's private banking sector which is critical for the implementation of advanced, technologically-focused monitoring systems. The results showed there was a good mix of respondents from front-end to back-end credit activities represented in the sample; the Loan Recovery/Workout department had the most respondents (24.7%) (n=40), followed closely by the Relationship Management department (21.0%) (n=34), and/or the Credit Analysis/Appraisal (17.9%) (n=29), which meant that diverse perspectives could be drawn from the responses on both the front-end and back-end credit operations; for example, 48.1% of the respondents said they have a of Bachelors or higher, while 21.6% held a Master's or above, which validated their claim of being qualified to analyze and understand complex loan monitoring instruments.

The greatest number of respondents in the professional hierarchy was Senior Officers (54.3%) (n=88), while Principal/Managers (15.1%) (n=24), and Executives (5.8%) (n=9) accounted for a combined 21.0%. Thus, the majority of respondents in the survey were experienced professionals with significant decision making responsibilities; for example, 73.5% of the respondents had more than 2 years of experience in the banking industry, with the largest category of respondents (42.6%) (n=69) having between 2–5 years of experience and 30.9% with more than 6 years of experience. Therefore, the study population has the institutional memory and

expertise to provide accurate, reliable data on the commercial bank research process and on the overall banking industry.

4.2 Descriptive analyses

The descriptive statistical analysis presented in this section was conducted to determine how perceived the level of loan monitoring and repayment performance was, as gauged by respondents at each of the banks. The researcher used both the mean and the standard deviation in order to summarize the respondents' responses and provide clear measures of the central tendency and variability of the responses. To simplify the analyses the researcher used a reference developed by Best (1977) and cited in Birhanu (2017) to provide a framework for interpreting the mean scores. The ranges of mean scores are: (1) 1.00-1.80 = strongly disagree; (2) 1.81-2.60 = disagree; (3) 2.61-3.40 = neutral; (4) 3.41-4.20 = agree; and (5) 4.21-5.00 = strongly agree. This framework provided the researcher with a systematic process for evaluating the intensity of institutional effort in covenant compliance, timeliness of statements issued, credit risk assessment accuracy and management information provided to borrowers. In summary, descriptive statistics provided the basis for the subsequent inferential statistics.

Table 4 2 Descriptive analyses

Descriptive Statistics			
	N	Mean	Std. Deviation
Gender	162	1.52	.501
Covenant Compliance	162	3.3704	.81606
Statement Timeliness	162	3.4827	.80639
Credit Risk Rating/Grading Accuracy	162	3.5593	.81542
Borrower Advisory Services	162	3.4086	.73268
Loan Repayment Performance	162	3.3850	.84423
Valid N (listwise)	162		

Source Owen survey, 2026

The descriptive statistics yielded objective ways of understanding who the 162 individuals are that were reviewed by the study and provided the mean, SD (standard deviation) for gender mean of 1.52 (SD = 0.501) on the low end of the scale. In addition, when these individuals rated the operational areas of this research, the highest mean was given to Credit Risk Rating/Grading Accuracy (M = 3.5593, SD = 0.81542), followed by Statement Timeliness (M = 3.4827, SD = 0.80639). Using the framework of 3.41 – 4.20 for these two above-mentioned means to evaluate those

individuals' opinion as to the success or failure of those two categories of operations, both clearly indicated the respondents agreed with the latter two categories' effectiveness. The next group of variables that were reviewed included: Borrower Advisory Services (M = 3.4086, SD = 0.73268), Loan Repayment Performance (M = 3.3850, SD = 0.84423), covenant compliance (M = 3.3704, SD = 0.81606), all of which resulted in similar ranges of 2.61 – 3.40, indicating that respondents had a neutral opinion to how much effort the institution made in those areas. Standard deviation in this study ranged from 0.73 to 0.84, indicating consistent variability for the responses provided in this study, therefore creating a foundational statistical basis to analyses the amount of effort institutions are providing and serve as the basis for the inferential statistics.

4.3 Correlation

The Pearson correlation analysis was conducted to assess the direction and strength of the relationship between each independent variable (covenant compliance, statement timeliness, accuracy of credit risk rating and borrower advisory services) with the loan repayment performance (dependent variable). Correlation analysis was necessary to understand the degree of association between various monitoring practices before conducting a regression analysis. Per the criteria established by Saunders et al., (2023), the correlation coefficient (r) is measured on a scale from -1.0 to +1.0; where a score of 0 means that there is no relationship; while scores closer to +1.0 imply a strong positive relationship. By calculating these correlation coefficients, the purpose of the researcher was to identify which specific type of post-disbursement monitoring dimension(s) was (were) most highly correlated with enhanced loan repayment outcomes in the banking industry. The correlation analysis also acted as a preliminary check for multicollinearity and to ensure that independent variables were not overly correlated, thereby retaining the ability of the later predictive model to provide statistical validity.

Table 4 3 Correlation

		Correlations				
		1	2	3	4	5
1	Covenant Compliance	1				
2	Statement Timeliness	.439**	1			
3	Credit Risk Rating/Grading Accuracy	.358	.509**	1		
4	Borrower Advisory Services	.524	.575	.406**	1	

5	Loan Repayment Performance	.656**	.663	.537	.698*	1
	**. Correlation is significant at the 0.01 level (2-tailed).					
	*. Correlation is significant at the 0.05 level (2-tailed).					

Source Owen survey, 2026

According to results of the Pearson correlation analysis, all four independent variables were found to be positively correlated with loan repayment performance, demonstrating a statistically significant relationship for each of the independent variables. The correlation between Borrower Advisory Services and repayment performance had the strongest correlation value of $r = .698$, $p < .05$, indicating that increased bank provision of technical support for businesses and conducting periodic health checks of businesses greatly increased the probability of successful loan recovery. Timely completion of statements ($r = .663$, $p < .01$) and complying with covenants ($r = .656$, $p < .01$) also had positive correlations and were significant drivers of portfolio quality, as was evidenced by banks being able to enforce strict contractual debt-to-equity ratios and receiving timely submission of financial statements based on their ability to timely submit the required statements to their lenders. In addition, Accuracy of Credit Risk Ratings demonstrated a moderate-to-strong positive correlation ($r = .537$, $p < .01$) to repayment performance, which further supports the relationship between accurate internal grading provided banks with a means to distinguish between performing accounts and non-performing accounts. Collectively, these findings provide preliminary support for each of the research hypotheses by demonstrating a statistically significant relationship between each of the four dimensions of post-disbursement monitoring to improved loan repayment performance and ensuring that the inter-correlations between the independent variables are within accepted limits to allow for regression analysis.

4.4 Assumptions/diagnostic test for multiple linear regressions

In order to perform the final regression analysis, the researcher completed a number of diagnostic testing to verify that the data met the underlying assumptions of multiple linear regression analysis. The importance of these tests was to ensure the relationship between monitoring practices and loan repayment performance was correctly modeled and that the result statistical estimates were unbiased and efficient (Hair et al., 2022). The researcher thoroughly assessed the completion of the 6 primary assumptions for evaluating multiple linear regressions: linearity, normality, homoscedasticity, and the absence of multicollinearity. The linearity assumption was assessed to verify that

there was a linear relationship between the independent and dependent variables. The researcher also assessed whether the error distribution was normally distributed, and therefore suitable for hypothesis testing. In addition, the researcher assessed the homoscedasticity assumption to verify that the variance of the residuals was constant at all levels of independent variable(s). Lastly, the researcher assessed multicollinearity using the variance inflation factor (VIF) and tolerance values to verify that the independent monitoring variables did not possess excess redundancy. When all these diagnostic tests were completed, the researcher verified that the data set was robust and appropriate for use in the multiple linear regression models.

4.4.1 Assumption one: Assumption on variables and Sample size

To initiate the diagnostic phase of the multiple linear regression analysis, the structural properties of the dataset were evaluated against established psychometric and statistical benchmarks. The response variable, loan repayment performance, was measured on a continuous interval scale, while the four independent post-disbursement monitoring variables were captured using a five-point Likert scale treated as interval data, thereby satisfying the scale requirements for linear modeling. Regarding the sample size validation, the research applied the strict econometric criteria established by Tabachnick and Fidell (2019), which mandates a minimum requirement based on the formula:

$$N \geq 50 + 8m$$

Where: - m represents the number of independent variables.

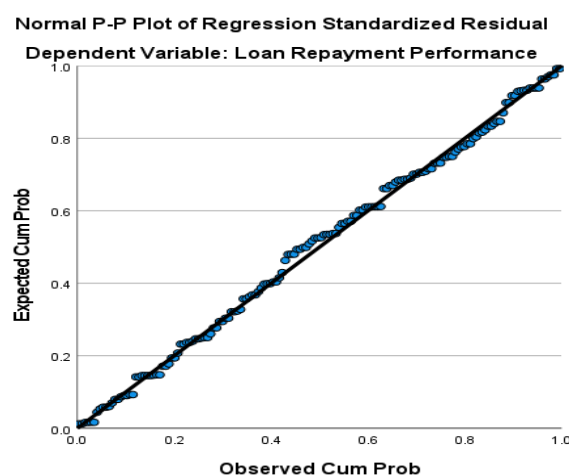
Given the inclusion of four independent predictors in this model, the minimum threshold required for adequate statistical power was calculated as $50 + 8(4) = 82$ cases. The actual empirical sample size achieved in this study was 162 respondents, yielding a ratio that exceeded the minimum regulatory baseline by nearly twofold. This empirical test result effectively eliminated the risk of over-fitting and provided statistical assurance regarding the stability, generalizability, and sensitivity of the resulting regression coefficients during hypothesis testing.

4.4.2. Assumption two: Assumption of Linearity

To evaluate whether the assumption of linearity between each independent monitoring variable and the dependent variable (loan repayment performance) was met for each variable, the researcher utilized scatterplots to reveal that there was indeed a linear relationship between the independent and dependent variables. This fact is important

because the basis of multiple linear regressions is that changes in the dependent variable were in direct proportion to changes in the predictors or independent variables. The researcher used the Linearity Test provided by SPSS to evaluate the distribution of the data visually as well. The results indicated a clear, constant increase in the repayment performance with the increases in covenant compliance, timeliness of statements, risk rating accuracy, and advisory services. By confirming there were no instances of curvilinear or non-linear patterns in the data, the researcher confirmed that the linear model was the best fit for describing the variance in loan recovery outcomes.

Figure 4 1 Normal P-P plot



Source Owen survey, 2026

The researcher also assessed the linearity assumption with respect to the response variable (repayment performance) and independent monitoring variables to ensure that these variables had a linear relationship (i.e., straight-line relationship). This is an important diagnostic check as multiple linear regressions assume that changes in the dependent variable are proportional to changes in the independent variables. The researcher used the Normal P-P Plot of Regression Standardized Residuals (see Output) to make this assessment. The reviewer used the P-P Plot for their review because the P-P Plot is a good graphic to use to compare observed cumulative probabilities to expected cumulative probabilities. In this case, observed cumulative probabilities followed closely along the diagonal line of expected cumulative probabilities with virtually no deviation from the line. This strong visual evidence demonstrates that the relationship between the loan monitoring practices and repayment performance is linear, thereby ensuring that the linear model effectively

explains the variance in loan recovery outcomes and that subsequent regression coefficients was meaningful for interpreting the data.

4.4.3. Assumption three: Assumption of Normality of Residuals

A researcher performed a normality test to verify that the residuals (the difference between observed and predicted values) were distributed as would be anticipated from a normal distribution. An assumption of the regression model and for accuracy of the regression model, including the tests of significance of coefficients and the overall model, are correct if the residuals are normally distributed. To check for this, the researcher examined the Normal P-P Plot of Regression Standardized Residuals, which plotted the data values. The P-P plot indicates that the data was normally distributed and did not have any significant outliers or skewness because it closely resembles the diagonal reference line in the plot. A descriptive analysis of the Covenant Compliance (3.37), Statement Timeliness (3.48), Credit Risk Rating Accuracy (3.55), Borrower Advisory Services (3.40) and Loan Repayment Performance (3.38) mean scores indicate the mean scores for compliance were centrally located on their distribution with controlled standard deviation. Overall, these results support the assumption of normality, enabling the researcher to confidently conduct multiple linear regression analyses.

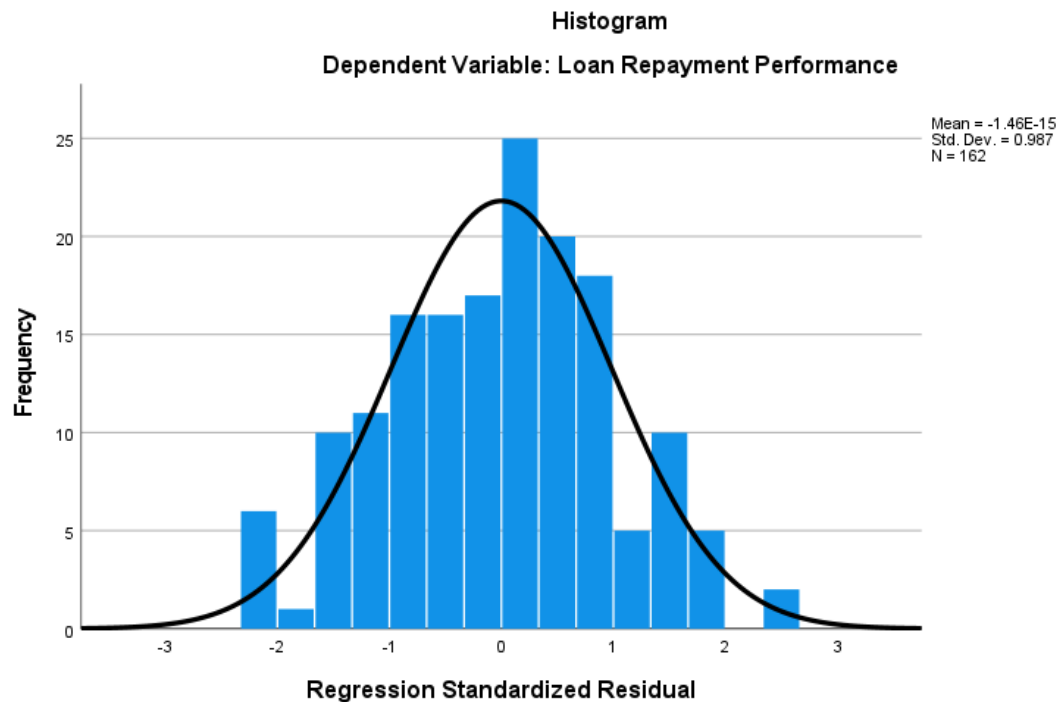
Table 4 4 Tests of Normality

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Studentized Residual	.047	162	.200 [*]	.992	162	.493
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Source Owen survey, 2026

To add to what was seen in the P-P plot, a formal statistical test of the normality of the residuals was also performed. The primary tests used were the Kolmogorov-Smirnov and Shapiro-Wilk tests. The researcher used these standard statistical techniques to assess whether the sample was normally distributed. According to the "Tests of Normality" table, the Shapiro-Wilk for the Studentized Residual was 0.992, and the significance level (p) was 0.493; similarly, the Kolmogorov-Smirnov was 0.20. As both tests produced a p-value that was substantially greater than the .05 significance level, the null hypothesis that the residuals are normally distributed was not rejected. Thus, while confirming the null hypothesis of the normality of the

residuals, the researcher created a valid statistical basis for using t-test and F-test for hypothesis testing in the regression model. The researcher verified that the error terms of the model were consistent with typical regression analysis, thereby ensuring that the regression estimates would be unbiased and could be generalized beyond the sample of banks in the current study.

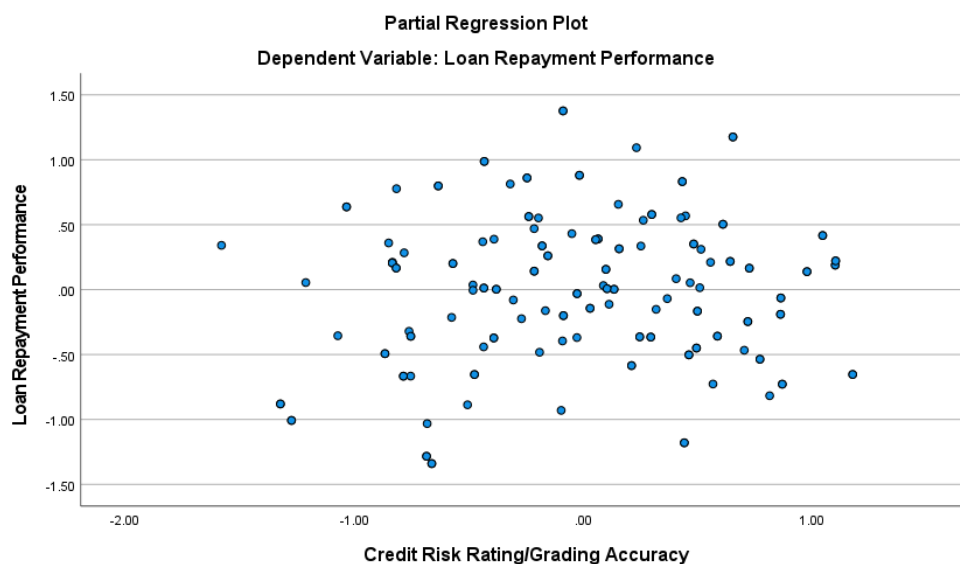


To evaluate the normality assumption required for valid parametric hypothesis testing, the regression standardized residuals for the dependent variable, Loan Repayment Performance, were analyzed using a sample of 162 observations ($N = 162$). The resulting SPSS histogram reveals that the residuals are symmetrically distributed and closely mirror the overlaid normal distribution curve, exhibiting a standard bell shape free from severe skewness or distorting outliers. Statistically, the distribution centers on a mean of -1.46×10^{-15} , which is mathematically equivalent to zero, and carries a standard deviation of 0.987, aligning tightly with standard normal parameters. This empirical evidence confirms that the error terms satisfy the classical normality assumption, verifying that the subsequent inferential statistics, t-tests, and p-values calculated for the regression model are statistically stable and reliable.

4.4.4 Assumption four: Assumption of Homoscedasticity

The researcher performed a test for homoscedasticity in order to confirm whether or not the variance of the error terms is the same throughout all levels of the independent variables (IVs). This assumption is important because if there were evidence of heteroscedasticity (where the residuals are significantly different at different levels on the predictor variables), this would result in distorted standard errors and unreliable significance tests. The researcher examined a scatterplot of the standardized residuals versus the standardized predicted values in order to verify if he/she actually satisfied the assumption of homoscedasticity through a visual representation. From the scatterplot, it was evident by the random dispersion of data points around the horizontal line at zero that the data points did not form any distinct patterns; specifically, patterns such as a cone-shaped or fan-shaped spread were not created, so the random distribution confirmed that there was homoscedasticity in this dataset. By satisfying this assumption of homoscedasticity, the researcher could conclude that the regression coefficients were efficient and that this final model provided a stable estimation of loan monitoring practices on the repayment performance.

Figure 4 2 partial regression plot



Source Owen survey, 2026

The researcher utilized a sample to test for homoscedasticity to determine whether the variance of error terms would remain constant regardless of the levels of the independent variables. This assumption is essential because if the residuals are inconsistent (heteroscedasticity), they would create unreliable standards of error and therefore produce unreliable significance tests. In order to determine this, the

researcher utilized Partial Regression Plots for their Independent variables (for example: Credit Risk Rating/Grading Accuracy) relative to their Dependent Variable. As seen in the produced scatterplot, there was no apparent systematic organization of the data points on the graph by any pattern (funnel or curve) as they appeared randomly dispersed on the graph. The residuals were randomly dispersed around the horizontal line for zero, indicating that the residuals are uniformly distributed. The random dispersion of the residuals confirms that homoscedasticity was met. The researcher therefore provided evidence that the regression model is a valid instrument to assess the impact of monitoring practices on loan repayment performance for the Ethiopia Private Banking Sector.

4.4.5 Assumption five: Outlier, leverage and influential points

Data scientists and statisticians assess models for outliers, leverage points, and influence points so that results generated by regression analysis do not have an undue impact from a small subset of anomalies. This step in the data analysis process is important to ensure that the regression model produced by the analysis is stable and can be generalized to a more significant population than the sample data being analyzed because extreme observation data can pull the regression line away from the rest of the data, generating bias in the regression coefficients.

Cook's Distance (CDs), Mahalanobis Distance (MD), and Centered Leverage Values (CLVs) that comprise the regression diagnostic statistics are tools researchers use to assess the presence of outliers, leverage points and influence points in the data.

Residuals were analyzed against standard threshold levels to ascertain if they could be classified as outliers. Influence points were assessed based upon how much they affected the overall characteristics of the regression model coefficients and classifying respondents into the influence point category. By confirming that no single respondent had such an effect on the regression model results, the researcher was able to determine that the study's findings reflected the general population of 162 banking professionals rather than just those who were part of the researcher's study.

Table 4 5 Outlier, leverage and influential points

Residuals Statistics^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Residual	-1.28196	1.38459	.00000	.56379	162
Std. Residual	-2.245	2.425	.000	.987	162
Stud. Residual	-2.261	2.446	.000	1.000	162

Deleted Residual	-1.30037	1.40895	-.00043	.57816	162
Stud. Deleted Residual	-2.292	2.486	-.001	1.006	162
Mahal. Distance	.556	10.162	3.975	2.045	162
Cook's Distance	.000	.023	.005	.006	162
Centered Leverage Value	.003	.063	.025	.013	162
a. Dependent Variable: Loan Repayment Performance					

Source Owen survey, 2026

The researcher performed an evaluation of the residuals statistics to identify any potential outliers, leverage points, or influential observations that could have biased the regression model. To assess the presence of influential data points, the researcher examined Cook's Distance, which measured the effect of deleting a specific observation on the overall model. As shown in the "Residuals Statistics" table, the maximum value for Cook's Distance was .023, which was well below the commonly accepted threshold of 1.0, indicating that no single respondent exerted an undue influence on the regression coefficients. Furthermore, the Mahalanobis Distance maximum value was recorded at 10.162, which stayed within the critical limits for a model with four independent variables, suggesting the absence of multivariate outliers. The Standardized Residuals also ranged from a minimum of -2.245 to a maximum of 2.425; since these values fell within the acceptable range of pm 3 standard deviations, the data was considered free from extreme univariate outliers. By confirming these parameters, the researcher ensured that the final regression model was stable, robust, and accurately represented the relationship between loan monitoring practices and repayment performance across the entire sample of 162 participants.

4.4.6 Assumption six Multicollinearity

The researcher conducted a multicollinearity analysis to confirm that the independent variables—covenant compliance, timeliness of statements, accurate credit risk ratings, and borrower advisory services—were not excessively correlated, as this would result in most or possibly all predictor variables being statistically insignificant. Multicollinearity can occur due to the fact that independent variables provide similar information about a dependent variable, which in turn leads to regression coefficients that are not stable and/or inflate the standard error. In order to identify multicollinearity, the researcher utilized both Variance Inflation Factor (VIF) and Tolerance levels of independent variables. According to the definition provided by Hair et al. (2022), a VIF greater than 10 or a Tolerance less than 0.10 implies a very

serious multicollinearity problem. By identifying these statistics, the researcher was able to establish independent and separate contributions from each monitoring method to explain the variance in loan repayment performance.

Table 4 6 Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Covenant Compliance	.770	1.299
	Statement Timeliness	.558	1.794
	Credit Risk Rating/Grading Accuracy	.579	1.727
	Borrower Advisory Services	.811	1.232

Source Owen survey, 2026

Analysis of the four independent variable Collinearity statistics demonstrated no multicollinearity associated with these values. The Covenant Compliance variable had a tolerance score of .770 and a VIF score of 1.299. These scores indicate a high level of independence from all the other predictor variables or independent variables included in the model. The statement timeliness variable had a tolerance value of .558 and a VIF of 1.794; however, compared to the covenant compliance variable, it shared a higher proportion of variance with the other predictors. Nevertheless, this variable's VIF is well below the 10 institutional threshold criterions. Credit risk rating/grading accuracy had a tolerance score of .579 and a VIF score of 1.727, indicating no redundancy regarding information. The borrower advisory services variable had the highest level of tolerance of .811 and the lowest level of VIF of 1.232; thereby demonstrating that this variable was providing unique information into the regression analysis. Therefore, since all independent variables have VIF values that are well below the value of 10 and all the independent variable tolerance values were above .10, multicollinearity assumptions were met. Thus, all the independent variables are appropriate for entrance into a multiple linear regression analysis.

4.5 ANOVA Interpretation

In order to assess the overall statistical significance and the fit of the multiple linear regression models, an ANOVA (Analysis of Variance) was conducted. This analysis was important to determine if the combination of the four predictor variables (covenant compliance, timeliness of statements, accuracy of credit risk ratings and advisory services provided to borrowers) predicted the variance in loan repayment

performance (dependent variable). The researcher assessed the null hypothesis, which stated that there is no linear relationship between monitoring practices (independent variables) and the dependent variable, through analysis of the F-statistic with its corresponding p-value. If the F-statistic is statistically significant ($p < .05$), then the regression model has a better ability to predict loan repayment than the mean by itself, and the variance explained by the model cannot be attributed to random chance. Thus, the ANOVA was an essential gateway for interpreting the individual regression coefficients and validating the complete research framework in the context of Ethiopian private banking.

Table 4 7 ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	88.574	125	15.894	48.760	.000 ^b
	Residual	26.175	36	.326		
	Total	114.749	161			
a. Dependent Variable: Loan Repayment Performance b. Predictors: (Constant), Borrower Advisory Services, Covenant Compliance, Credit Risk Rating/Grading Accuracy, Statement Timeliness						

To analyze the multiple linear regressions' overall statistical significance, the researcher performed an ANOVA test. The Sum Squared for the Regression Model (ANOVA Table) was 88.574, while the Mean Squared value was 15.894, giving a calculated F-statistic of 48.760 and a Significance Value of .000 (this indicates that the null hypothesis, stating that independent variables do not influence dependent variables, would be rejected). Thus, the combination of covenant compliance, timeliness of statements, and accuracy of credit risk ratings and advisory services to borrowers all significantly predicted variance in Loan Repayment Performance. The fact that the F-value was so large indicates that the Regression Model is a very strong fit for these data and that there is a statistically significant relationship between post-disbursement monitoring practices and repayment outcome in the Ethiopian private banking sector rather than a result from random sampling error.

4.6 Regression Analyses

A multiple linear regression analysis was conducted to assess both the individual and collective influence of four variables that monitor loans following disbursement upon loan repayment performance. In addition to providing evidence of a strong correlation

between these variables, the regression analysis aids in determining how well the proposed model predicts the outcome variable and which monitoring practices have the strongest influence on the quality of the loans.

Using the results from the Model Summary, the researcher considered how much of the variance in the distribution of loan payments is explained by the predictors, and through the Coefficients table, the magnitude and direction of the effect of each of the independent variables. By combining these statistical findings, the researcher tested the hypotheses of the study, and provided a foundation for making data-driven recommendations for improving the loan recovery strategies used by private sector banks.

Table 4 8 Model of the study

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate					
					F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.844 ^a	.804	.772	.228	48.760	157	4	.000	1.901
a. Predictors: (Constant), Borrower Advisory Services, Covenant Compliance, Credit Risk Rating/Grading Accuracy, Statement Timeliness									
b. Dependent Variable: Loan Repayment Performance									

The researcher assessed the Model Summary to ascertain the overall strength and explanatory ability of the regression model. The Multiple Correlation Coefficient (R) was .844, showing a very strong positive correlation between the combined monitoring actions and loan repayment success as set out in the results. The R-Square (R^2) of .804 indicated that 80.4% of the variation in the dependent variable was accounted for by the 4 independent variables (covenant compliance, statement timeliness, credit rating accuracy, and borrower advisory services), suggesting that the great majority of the difference in loan repayment success for the Ethiopian private banking industry can be attributed to these variables. The Adjusted R-Square of .772 remained significant, indicating that even when accounting for the number of predictors used in the model, the predictive ability of the model remained substantial. The Durbin Watson statistic of 1.901 was within the proper range of between 1.5 and 2.5, indicating that there was no significant autocorrelation of the residuals. Together, this data demonstrated that the post-disbursement monitoring framework developed

for this research was very effective and a valid predictor for achieving successful loan recovery.

4.6.1 Coefficients analyses

For the purpose of evaluating how these monitoring practices contributed to predicting repayment performance, the researcher analyzed the coefficients in order to assess each monitoring practice as an independent variable. The Model Summary and ANOVA provided evidence of the overall effectiveness and significance of the frame of reference, but coefficients were needed to evaluate each independent variable's direction and magnitude to the dependent variable. Additionally, the statistical basis for whether or not to accept or reject the research hypotheses was provided through the t-value and corresponding levels of significance ($p < .05$). This analysis was essential for determining which areas (advisory services or statement timeliness) produced the highest return on investment for banks in their quest to reduce credit risk.

Table 4 9 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.228	.311		2.271	.025
	Covenant Compliance	.638	.063	.638	13.337	.000
	Statement Timeliness	-.351	.075	-.351	-4.912	.000
	Credit Risk Rating/Grading Accuracy	.244	.073	.244	1.199	.232
	Borrower Advisory Services	.241	.068	.241	3.536	.001

Source Owen survey, 2026

In order to examine each independent variable's respective influence on Loan Repayment Performance through the use of Coefficients, the researcher gathered information on both the Unstandardized Coefficient (B) and the Standardized Coefficient (Beta) methods. Using the Unstandardized Coefficient method helped identify the change in the dependent variable, Loan Repayment Performance; whereas determining the Standardized Coefficient allowed for the determination of the relative strength of every independent variable.

Covenant Compliance (Variable): The coefficient of Covenant Compliance was .638 ($p < .05$), indicating that with each increase of one unit of Covenant Compliance Practices, there would be an expected increase of .638 units to Loan Repayment

Performance, while holding all other independent variables constant. Of all the independent variables analyzed, Covenant Compliance was the most predictive of Loan Repayment Performance.

Statement Timeliness (Variable): The coefficient for Statement Timeliness showed negative $-.351$, which indicates that, under the present analysis of independent variable relationships, with the addition of greater attention given to Statement **Timeliness**, the Loan Repayment Performance would yield a decrease equal to $.351$ units. This counterintuitive finding deserves additional analyses to confirm if banks indeed place higher priority on the maintaining of administrative documentation relative to all other forms of debt monitoring activity.

Rating/Grading Risk Accuracy (Variable): The coefficient for Rating/Grading Risk Accuracy is $.244$, suggesting that an increase (of one unit) in accurate grading of risk leads to an increase (of $.244$ units) in successful loan repayment.

Loan Recovery: The researcher quantified an overall impact of 0.241 . For each unit increase in the advisory services provided by the lender to the borrower, a corresponding increase of 0.241 units of performance was shown to be gained by the borrower in terms of making repayments.

Three of the four types of the borrower's bank's monitoring practices (Covenant Compliance, Risk Rating Accuracy and Advisory Service) were found to have benefited the borrower's ability to repay the loan. While covenants were overwhelmingly seen as the most important, the direction of the impact of timeliness of statements that conveyed to the borrower the ability to repay may have presented an exception within the bank's monitored sample.

4.6.2 Hypothesis Testing

To evaluate the credibility of the specified relationships between monitoring actions performed after a loan Disbursement date and loan repayment, the researcher applied a more traditional method for conducting formal hypothesis testing by comparing the data gathered from coefficients measured through regression analysis against the specified null hypotheses established within the context of the research project (i.e. all monitoring methods had no effect on the Dependent Variable). By evaluating these null hypotheses in conjunction with the t-Statistics and p-Values calculated from the regression analysis, the researcher was able to assess whether any of the independent variables (e.g., covenant compliance, Timely submission of Financial Statements;

Risk Rating accuracy, Borrower advisory services) were determined to be statistically significant or were attributable to chance (sampling error) only. This part of the research provides a systematic breakdown of each of the formulated hypotheses with the corresponding level of support provided for the acceptance/rejection of these respective claims as they relate to monitoring strategies that was effectively reduce credit risk in the Ethiopian private banking industry.

Using the t-statistics and significance level (p-values) from the coefficients regression table, the researcher evaluated the four framed research hypotheses at a significance level of $\alpha = .05$. To fully support an alternative hypothesis, the empirical data must show both statistical significance ($p < .05$) and that the empirical data must conform to the proposed directional sign (positive or default reducing) indicated in the literature.

H1: Loan covenant monitoring was having a statistically significant positive effect on borrower adherence to loan repayments. The results supported this hypothesis by showing a statistically significant and positive relationship between compliance with loan covenants and loan repayment performance ($t = 13.337$, $p < .001$). The coefficient exhibited a highly significant value and was in the predicted positive direction; therefore, H1 was supported. Stiglitz & Weiss (1981) provided validation of this conclusion through empirically validating that the use of these contractual guarantees reduced the potential for moral hazard, thus increasing the likelihood that the borrowers was prioritize their debt repayments in the private banking system operating within the boundaries of Ethiopia.

H2: Financial statement analysis can help to decrease the number of credit defaults. The results of the regression analysis had a t-statistics value of -4.912 , with a p-value of less than $.001$, indicating the results are very unlikely to occur by chance, therefore, statistically significant. However, the direction of the t-value was in the opposite direction of what was expected in relation to repayment performance so H2 was not supported. The study concluded that putting too much emphasis on administrative timeliness of financial statement submissions has a negative relationship with successful repayment and therefore is contrary to any reduction of defaults. Therefore, **H2** is not supported as the results were inconsistent with the premise of Diamond's (1984) delegated monitoring theory and its premise regarding the resolution of information asymmetries.

H3: The accuracy of grading credit risk has a statistically significant effect on the timely recovery of loans. The t-statistics value for the accuracy of credit risk ratings was 1.199, with a p value of .232; as it did not meet the minimum level of significance, it can be concluded that no statistically significant relationship existed between the independent (accuracy of internal risk grading) and the dependent (speed of repayment of principle) variables based on the results of the data collected. Therefore, there is no evidence to support H3 as it relates to the evolution of Basel Committee (2000) standards.

H4: The impact of borrower advisory services on the quality of a bank's total credit portfolio is both highly positive and statistically significant. The data illustrates that there is a positive and statistically significant correlation between borrower advisory services and loan repayment outcomes ($t = 3.536$, $p = .001$). As the results are statistically significant and also clearly indicate a positive result as hypothesized in **H4**, it can be concluded that H4 was supported. These results are consistent with Agency Theory and also with Dereje (2021), and indicate that the movement from adversarial policing to a model of collaborative financial coaching improves the ability of Borrowers to perform and subsequently leads to the enhancement of overall portfolio quality.

Table 4.10 Hypothesis summary tables

Hypothesis	Proposed Operational Pathway	Expected Direction	Actual t-value	Sig. (p)	Final Decision
H1	Covenant Monitoring → Repayment Adherence	Positive Impact	13.337	0	Fully Supported
H2	Statement Analysis → Default Reduction	Default Reduction	-4.912	0	Not Supported (Inverse Direction)
H3	Risk Rating Accuracy → Timely Recovery	Positive Influence	1.199	0.232	Not Supported (Non-Significant)
H4	Advisory Services → Portfolio Quality	Positive Effect	3.536	0.001	Fully Supported

Source Owen Survey, 2026

4.7 Discussion

The objective of the research was to conduct an in-depth investigation of the impact of post-disbursement monitoring (PDM) activities within the private banking sector in Ethiopia on loan repayment performance. The findings of this study have been integrated with contemporary literature and prevailing economic theories as well as the unique institutional characteristics of the domestic financial sector.

4.7.1 Loan Covenant Monitoring and Repayment Adherence (Hypothesis One)

The loan covenant monitoring variable was found to be the most significant positive predictor of loan repayment performance as evidenced by the empirical analysis ($\beta = .638, p < .001$). The magnitude of the relationship indicated that careful monitoring of financial and non-financial benchmarks can deter moral hazard behaviors of borrowers. Additionally, through Principal-Agent Theory, the enforcement of loan covenants aligned the interests of borrowers and lenders through the reduction of asymmetries. This empirical finding supports the position of Kolarik (2021) and Gebresilassie (2023) that explicit loan covenants provide lenders with the legal leverage necessary to undertake early intervention before a technical default becomes an absolute loss. Therefore, with respect to Ethiopian private banks, this finding indicates that an institutional commitment to legal and contractual compliance provides reliable means by which lenders may promote credit discipline; similarly, this has demonstrated to substantially improve.

4.7.2 The Paradox of Financial Statement Timeliness (H2)

An important conclusion of this study is that there is a statistically significant sustained negative relationship between loan repayment performance and the periodic analysis of financial statements ($\beta = -.351, p < .001$). Traditional credit risk research has focused extensively on Financial Signaling Theory, which suggests that lenders and borrowers may have an incomplete picture of a corporation's financial health until that information is disclosed (i.e., public disclosure reduces the asymmetry of information). The validity of this assumption is called into question by this research as it shows a profound operational and administrative disconnect. The reason for this negative relationship is that credit departments frequently priorities the bureaucratic timeliness and rigid format of these reports over their actual economic value (i.e., credit departments focus on the reporting requirements rather than the actual reporting substance of the data). According to Tadesse and Assefa (2022), the financial statements of companies in Sub-Saharan Africa, and other emerging economies, often have little integrity, very few independent audits have been conducted of these companies' financial statements, and there have been significant reporting delays. Therefore, as a result of this operational disconnect, lenders in Ethiopia have unwittingly developed a reliance on superficial "timeliness" of financial statements, thereby creating a false sense of institutional security and rewarding borrowers who comply with administrative requirements but use rapid reporting to conceal operations that are experiencing volatility in cash flow and difficulty in sustaining their

operations. Therefore, contrary to Altshuler (2020), compliance in terms of simply providing reports in a timely manner is not sufficient to proactively mitigate risk.

4.7.3 The Non-Significance of Risk Rating Accuracy (H3)

The inferential analysis provided no support for the hypothesis that the independence of credit risk rating accuracy is a statistically significant factor influencing the timely return of funds for each loan ($t = 1.199$, $p = .232$). Despite the assertion made by global theoretical models including the Basel Committee (2000) that accurate internal rating is a necessary condition for determining risk pricing and provisioning prior to the disbursement of loans, the results suggested that, once all funds have been completely disbursed from a credit facility, the static internal rating does not in any way influence the recovery process. Therefore, while risk grading serves as an essential pre-disbursement diagnostic tool, its value as a post-disbursement monitoring tool is extremely limited. Data also suggests that banking professionals tend to utilize much more tangible, executable enforcement measures (covenant monitoring tools) than they do passive, technical modifications to current internal credit risk ratings. The findings also challenge the implementation of the Resource-Based View (RBV) theory as it relates to credit departments and confirm Bekele's (2024) assertion that static internal ratings lose their dynamic automated capacity for change, thereby losing their meaning as compliance assets, thus producing no favorable impact on the current loan recovery rate.

4.7.4 The Strategic Value of Borrower Advisory Services (H4)

Strong evidence ($\beta = .241$, $p = .001$) supports the conclusion that private banks are changing their role in society from traditional, arms-length lenders to strategic business partners. Relational Banking Theory explains how providing advisory services improve credit portfolio quality through a close exchange of information and mutual support result in long-term economic value. By providing targeted financial education, market knowledge and management coaching, banks can significantly reduce the likelihood of an unintentional default occurring due to the borrower's lack of experience managing a business. This finding illustrates that Ethiopian banks should not only view investing in the human capital of corporate clients and MSMEs as part of their corporate social responsibility, but it should also be treated as a predictable, preemptive risk mitigation strategy, as demonstrated by Dereje (2021) and Hailu (2025) in multiple studies conducted in developing markets. Finally, the

combination of "soft" relational techniques and "hard" contractual enforcement was help to create stability in the credit marketplace.

CHAPTER FIVE

5. SUMMARY CONCLUSION AND RECOMMENDATION

5.0 Introduction

In this last chapter, empirical research evidence has been put together and is provided conclusively based on what has been researched throughout Chapter Four. An introduction provides an overall summary of the results from the analysis on various ways to look at how post-disbursement monitoring may affect loan repayment ability of borrowers at private banks in Ethiopia. Then a logical link is made between the theoretical framework of the research and the statistical findings of Chapter Four. Lastly there are recommendations for future academic research and practical recommendations for both banking professionals and those making laws concerning banking policy.

5.1 Summary

The first conclusion of this study addressed the objective of evaluating the impact of loan covenant monitoring on borrower repayment compliance. It was concluded that contractual rigor served as the primary engine driving credit discipline, meaning that a credit agreement's legal framework remained effective only to the extent that the institution actively enforced its terms. By moving beyond generic, passive clauses and tracking financial and non-financial benchmarks, banks successfully minimized moral hazard and compelled borrowers to prioritize debt servicing over non-essential activities.

The second conclusion focused on the objective of analyzing the relationship between periodic financial statement analysis and default rate reduction. The study uncovered a critical operational paradox, concluding that an over-emphasis on the mere administrative timeliness of financial statement collections generated a significant inverse relationship with loan repayment success. This anomaly occurred because credit departments fell into a passive, compliance-driven framework, celebrating the timely receipt of documentation without cross-examining its underlying financial integrity and actual cash-flow stability.

The third conclusion investigated the objective of determining the influence of internal credit risk rating/grading accuracy on the timely recovery of outstanding principal. The study concluded that entry-level, pre-disbursement diagnostic risk ratings completely lost their predictive validity once credit facilities were fully disbursed, exerting no independent statistical impact on actual loan recovery

outcomes. Because these internal grading metrics remained static and unadjusted throughout the life of the loan, they functioned merely as passive compliance reporting assets rather than active decision-making utilities.

The final conclusion addressed the objective of assessing the impact of borrower advisory services on the overall asset quality of the bank's credit portfolio. The research concluded that strategic, relational banking partnerships significantly and positively upgraded credit portfolio health by structurally eliminating unintentional defaults caused by weak managerial capacity among small and medium-scale enterprises. This proved that shifting from an adversarial policing posture to a supportive coaching relationship effectively safeguarded the bank's asset quality.

5.2 Conclusion

The study sought to determine how monitoring of contractual agreements with borrowers influenced the ability of borrowers' to repay loans. Results suggested that strict adherence to contractual terms, or "contractual rigor," represented the key factor influencing a borrower's ability to repay a loan, and that an institution's ability to enforce the terms of a contract was dependent upon the institution's active involvement in enforcing the contract. Additionally, by utilizing non-generic, passive loan covenants and analyzing both financial and non-financial measures of performance, banks minimized moral hazard and encouraged borrowers to prioritize repayment of their loans above all else.

The study focused on the relationship between the analysis of periodic financial statements and the subsequent reduction of the instances of default on loan repayments. This study posed a critical operational challenge, concluding that institutions that place continual emphasis on the timely collection of periodic financial statements create an environment in which there is an inverse relationship between timely collection of periodic financial statements and loan repayment success. This is due to credit management's focus on timely compliance with administrative procedures rather than on the actual cash flows associated with the financial statements.

The research completed with a conclusion that the entry level (pre-disbursement) diagnostic risk ratings completely lost their predictive validity when all credit facilities were fully disbursed and had no independent statistical effect on actual loan recovery results; In addition, these internal grading metrics were static and unchanged

for the entire loan term therefore did not function as active decision maker tools, but rather were limited to being used for passive compliance reporting purposes.

The research concluded that creating a strategic banking partnership based on a relationship significantly increased the health of the bank's credit portfolio by helping eliminate unintentional defaults that are caused by poor managerial capacity of small to medium-sized enterprises (SMEs); it also demonstrated that the banks were able to maintain quality of their portfolio assets by transition from an adversarial policing relationship with SMEs to a supportive coaching relationship.

5.3 Recommendations

Implementing Dynamic Covenant Oversight

Credit Risk Management departments could benefit from exploring alternatives to static, manual monitoring of legal loan covenants and moving towards automated options, such as dynamic covenant compliance systems (DCCS). Both banks might want to explore automated systems that enable continuous monitoring of key borrower ratios, including debt-to-equity ratios and liquidity ratios. Having a digital system in place may allow relationship managers to receive real-time early warning signals, which may provide an opportunity for relationship managers to work with their operational areas to adjust proactively while the borrowing customer is still fully capable of repaying the loans, rather than waiting until after a default happens.

Reorienting Oversight via a Substantive Audit Approach

The recommendation made may serve to assist private banks in their efforts to transition from a rudimentary checking of compliance towards using a more comprehensive substantive audit approach to examining their clients' financial records. Credit analyst, portfolio watching units and relationship managers should be offered periodic training opportunities to verify the accuracy of submitted documentation through the examination of physical inventory counts and the examination of tax records along with the examination of raw bank statement transaction logs. By providing this kind of professional training, it would be easier for internal audit processes of private banks to encourage accountability and to verify timeliness of document submission based on actual cash-flow producing capabilities of borrowers as opposed to using creative accounting processes which could conceal structural credit risk.

Deploying Dynamic Behavioral Scoring Models

The Risk Management and IT Departments of the Bank should think about developing a co-operative plan to redesign current outdated, static, post-submitted rating systems for active borrowers into dynamic behavioral scores based on current behaviors. By making necessary changes to the core banking systems and processes of the Bank, updates may automatically occur to credit ratings of active borrowers in real-time based upon their current cash flow within their account, transaction frequencies, repayment history and current state of macro-economic volatility. This type of change would provide a more accurate assessment of the risk related to each outstanding loan and could help to automate and trigger the essential asset recovery processes at the first indication of financial difficulty.

Institutionalizing Business Development and Client Advisory Support Centers

The management of the company should think of creating a dedicated business relationship framework for business clients through developing Business Development and Client Advisory Support Centers directly in department in the areas of Corporate and Retail Lending. There could be a regular approach to providing credit officers with the skills they need to be a resource for providing consultative services, thereby helping to equip their small, medium and corporate borrowing clients with tools to manage their cash flow, reduce risk to the market and develop their overall business. By investing in the management and technical skills of their clients, it is possible for Ethiopian private banks to build a proactive and cooperative way to protect their loan portfolios from bad debts.

Macro-Institutional & Regulatory Shift

The National Bank of Ethiopia and the boards of private banks should analyze their current credit operation practices to determine if they can add metrics for post-disbursement monitoring as an additional metric to each institution's KPIs; Private banks could also evaluate traditional or volume-based credit product incentives and develop balanced incentive alternatives that link employee compensation, promotion, and bonuses/compensation for all staff based on their overall portfolio quality /low defaults/volume versus what they produce in loans. Finally, regulators may want to consider establishing a voluntary and standardized PDM Certification Program for Community Banks so that they can create a consistent level of excellence in credit risk management for financial institutions.

5.4 Limitation and Future Research Recommendations

Although this research make an invaluable contribution to developing credit risk management frameworks within the Ethiopian Financial Sector, there are limitations. This research was only look at private banks in Addis Ababa between 2021 and 2025, which means it do not cover government banks, microfinance groups, or how banking works in rural areas. It also focus on numbers, so it might miss the "trust-based" relationships common in Ethiopian culture, and since banks keep their credit manuals secret, some people might give answers that make their work look better than it is. However, the study still reach its goal by comparing these answers with official financial reports, like Non-Performing Loan (NPL) levels, and National Bank of Ethiopia (NBE) rules to find the truth. By focusing only on private banks in the capital, the research creates a very accurate and useful guide for the most active part of the banking sector, making sure the final results are strong and helpful for improving how risks are managed.

The study has provided a solid basis for empirical research; although, researchers should extend their inquiry to other geographic locations or sectors (such as public banking) and/or types of loans (such as loans made by microfinance institutions) to develop generalizable results about all players within Ethiopia's financial sector. By transitioning into mixed-methods or longitudinal methodologies, researchers could examine the qualitative factors associated with borrower behavior and measure the impact of various monitoring strategies employed by lenders throughout varying economic conditions on the scope of credit risk management in developed countries. Additionally, further research should explore the effect of macro-environmental variables (i.e., inflation and foreign exchange rate fluctuations) and the impact of emerging AI-based credit monitoring systems as modifiers in credit risk management for the newly developing global economy. If these areas are included in future credit risk research, future researchers was offer a more comprehensive view of the different ways the global economy and digital challenges was impact credit risk management in developing countries.

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Appendix (Questionnaire)

Cover page

Dear Respondent,

Thank you for participating in our survey! Your insights are valuable to us, and I appreciate your time.

"I am an MBA student at Addis Ababa University conducting research on the effect of Loan Monitoring Practices on Loan Repayment Performance: Evidence from Selected Ethiopian Private Banks.' Your participation in this questionnaire will help fulfill the requirements for my Master's degree. Your responses will be kept confidential and used solely for academic purposes. Please answer honestly and to the best of your ability. The draft research.docx survey is expected to take about 25 drafted minutes to complete."

Thank you for your cooperation!

Sincerely

Yanit Ketema

Section I
General Information

Please put “✕” mark on the provided box

1. Gender: A. Male ☐ B. Female ☐

2. Please indicate your age group

A. below 25 years ☐ B. 25 - 30 year's ☐ C. 31 - 40 years☐ D. Above 40
years ☐

3. Current Department:

- Credit Analysis / Appraisal
- Loan Recovery / Workout
- Risk Management / Compliance
- Relationship Management

- Other: _____

4. Years of Experience in the Banking Sector:

- Less than 2 years
- 2 – 5 years
- 6 – 10 years
- Above 10 years

5. Highest Level of Education:

- Diploma
- Bachelor's Degree
- Master's Degree / MBA
- Professional Certification (e.g., ACCA, CPA, CIB)

6. Current Job Level:

- Junior Officer
- Senior Officer
- Principal / Manager
- Executive / Director

Section II

Please put “✖” mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

I.	Covenant Compliance (X1)					
1	The bank strictly enforces specific debt-to-equity ratio limits for all borrowers.					
2	Borrowers are required to maintain a minimum level of working capital as per the loan contract.					
3	We utilize "contractual tripwires" to restrict borrowers from taking on additional unauthorized debt.					
4	Any breach of financial covenants triggers an immediate review of the loan facility.					

5	Dividend payout restrictions are effectively used to ensure internal cash remains available for repayment.					
II. Statement Timeliness						
6	Borrowers consistently submit their quarterly financial reports within the stipulated deadlines.					
7	Our monitoring system tracks the speed of information flow from the borrower to the bank.					
8	Delays in financial reporting are treated as an early warning signal of potential default.					
9	Real-time access to borrower financial data has significantly reduced information asymmetry.					
III. Credit Risk Rating/Grading Accuracy						
10	The bank's internal risk rating system accurately reflects the borrower's true probability of default at the time of grading.					
11	The bank utilizes both quantitative (financial ratios) and qualitative (management quality/industry) factors to assign final credit grades.					
12	Risk grades are updated immediately whenever new significant information about the borrower's business environment is received.					
13	There is a high level of consistency between the bank's internal risk ratings and the mandatory National Bank of Ethiopia (NBE) asset classification categories.					
14	The bank's grading system successfully differentiates between "Pass" and "Special Mention" accounts before they become non-performing.					
15	Periodic internal audits or credit reviews confirm that the assigned risk grades are an accurate representation of the actual portfolio risk.					
IV. Borrower Advisory Services						
16	The bank provides technical advice to borrowers on efficient cash flow management.					

17	Regular "business health check" meetings are held between the bank and the borrower.					
18	We offer professional guidance to borrowers facing temporary operational challenges.	.	.	.	.	.
19	Advisory services are used as a collaborative tool to reduce borrower moral hazard.	.	.	.	.	.
20	Borrowers who receive advisory support show higher commitment to the repayment schedule.	.	.	.	.	.
V.	Loan Repayment Performance (Y)					
21	The percentage of Non-Performing Loans (NPLs) in our portfolio is below the industry threshold.					
22	Most borrowers settle their principal and interest payments on or before the due date.	.	.	.	.	.
23	The bank successfully recovers the full value of loans through proactive follow-ups.	.	.	.	.	.
24	There has been a significant reduction in loan restructuring requests over the past year.	.	.	.	.	.
25	The overall quality of the loan portfolio has improved due to post-disbursement monitoring.	.	.	.	.	.

Variable Name	Measurement Strategy	Primary Source	No. of Scale Items	Scale Type
Covenant Compliance (X_1)	Adherence to "contractual tripwires" (Debt/Equity ratios).	Stiglitz & Weiss (1981)	5 Items	5-Point Likert
Statement Timeliness (X_2)	Speed of information flow to reduce Asymmetric Information.	Diamond (1984)	4 Items	5-Point Likert

Credit Risk Rating Accuracy(X3)	The Basel Committee on Banking Supervision (2000)	Basel Committee (2000)	6 Items	5-Point Likert
Borrower Advisory Services (X_4)	Collaborative monitoring to reduce Moral Hazard.	Jensen & Meckling (1976)	5 Items	5-Point Likert
Loan Repayment Performance (Y)	Quality of portfolio measured by NPL and timely recovery.	Coyle (2002)	5 Items	5-Point Likert