Impact of Non-Interest Income Diversification on Financial Performance of Ethiopian Private Commercial Banks

A Research Project Submitted in Partial Fulfillment of the Requirements of the MSc in Corporate Finance with specialty in Investment Management Program

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June 2025
Addis Ababa

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DECLARATION

I, Nebyou Tekola, hereby attest that the research project I submitted for the Master of Science in Corporate Finance with specialty in Investment Management at Addis Ababa University School of Commerce, titled " Impact of Non-Interest Income Diversification on Financial Performance of Ethiopian Private Commercial Banks " is an original work and hasn't been submitted for consideration for any other degree, diploma, fellowship, or other titles of a similar titles of any other university or institution.

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ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE
DEPARTMENT OF ACCOUNTING AND FINANCE
MSC IN CORPORATE FINANCE WITH SPECIALTY IN INVESTMENT MANAGEMENT PROGRAM

Title

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ACRONYMS

CIR – Cost-to-Income Ratio

FE – Fixed Effects

FX – Foreign Exchange

HHI – Herfindahl-Hirschman Index

MFIs – Microfinance Institutions

NIIR – Non-Interest Income Ratio

NIM – Net Interest Margin

NBE – National Bank of Ethiopia

OLS – Ordinary Least Squares

RE – Random Effects

ROA – Return on Assets

ROE – Return on Equity

VIF – Variance Inflation Factor

ACKNOWLEDGEMENTS

All praise and thanks to God for the wisdom and perseverance He has bestowed upon me throughout this research project.

I would like to express my deepest gratitude to my wife, **Meron**, and my children, **Annabel**, **Abel**, and **Amen**, for their unwavering love, encouragement, and understanding. Their support has been a pillar of strength during this journey.

A heartfelt appreciation goes to my advisor, **Dr. Berhanu Beza**, for his invaluable guidance, patience, and deep insight. His expertise and mentorship have played a crucial role in shaping this research and enabling its successful completion.

Furthermore, this project would not have been possible without the direct and indirect contributions of many individuals. To all those who have offered their time, knowledge, and encouragement, I extend my sincere appreciation and gratitude.

ABSTRACT

This study explored how non-interest income shapes the financial performance of Ethiopian private commercial banks. It sought to determine whether revenue diversification plays a meaningful role in their profitability, considering operational efficiency and market dynamics. Using panel data from 2014/15 to 2023/24, a Fixed Effects (FE) regression model examined the connection between Non-Interest Income Ratio (NIIR), Net Interest Margin (NIM), Cost-to-Income Ratio (CIR), and Herfindahl-Hirschman Index (HHI) with Return on Assets (ROA) as the profitability indicator. The findings revealed that, non-interest income ($\beta = 0.0034$, $p > 0.05$) had no significant impact on profitability, indicating strong reliance on the traditional revenue from lending. Net Interest Margin ($\beta = 0.159$, $p < 0.01$) is a key driver of profitability, emphasizing banks' dependence on interest-based earnings. However, high operational costs (CIR, $\beta = -0.054$, $p < 0.01$) negatively affect financial performance, underscoring the need for cost efficiency improvements. Moreover, market concentration (HHI, $\beta = -0.18$, $p < 0.01$) reduces competition, limiting financial innovation and profitability growth. The study offers insights for bank executives, policymakers, and financial analysts, highlighting the need for strategic cost management, competitive market policies, and regulatory adaptation. Future research should explore the long-term effects of capital market expansion and investment banking growth, and cost optimization strategies on Ethiopian banking profitability, financial stability, and market competitiveness.

Key Words: Cost Efficiency, Non-Interest Income, Profitability

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

Commercial banks play a crucial role in economic development (Kagan, 2024). Beyond providing essential services to individuals and businesses, they serve as key drivers of liquidity and capital formation within the economy. By offering loans and credit facilities, commercial banks expand credit availability, thereby stimulating consumer spending, employment and overall economic output (Kagan, 2024).

As part of their financial intermediation function, commercial banks operate under strict regulatory oversight from central banks, ensuring monetary stability and deposit protection. For instance, reserve requirements imposed by central banks mandate commercial banks to hold a portion of their deposits at the central bank, protecting them against unexpected withdrawal surges. Despite these regulations, banks maintain operational flexibility by diversifying their revenue streams, generating income from interest-based lending, capital markets activities, and fee-based services. While commercial banks primarily earn revenue from interest income, many institutions seek to diversify their financial activities to enhance profitability and reduce reliance on lending margins. This diversification is increasingly important in modern banking markets, where interest margins are narrowing, prompting banks to explore alternative revenue sources such as investment banking, asset management, and securities trading. The rapid expansion of off-balance sheet activities has positioned non-interest income as a critical source of banking revenue (Heffernan, 2005). Globally, banks are shifting toward fee-based income, particularly as traditional lending operations face increasing competition and regulatory constraints. However, this transition also introduces strategic risks, requiring banks to adapt robust operational frameworks to manage revenue volatility (Heffernan, 2005).

Ethiopia’s banking industry remains the dominant player in the country's financial system, with total banking assets accounting for 96.3% of the financial sector’s assets as of June 2023 (NBE, 2024). This reflects the central role of commercial banks in Ethiopia’s economic stability, as their financial health directly influences capital flow, investment activity, and macroeconomic conditions. By June 2023, Ethiopian banks reported total deposits of Birr 2.2 trillion (24.8% of GDP) and outstanding loans/bonds

valued at 1.9 trillion Birr (21.7% of Ethiopia's GDP) (NBE, 2024). Additionally, banks have emerged as major employers, collectively supporting over 187,450 jobs by mid-2023 (NBE, 2024). Beyond traditional credit services, Ethiopian banks contribute to foreign exchange earnings by facilitating export financing, remittances, foreign direct investment (FDI), and FX transactions. Unlike banking systems in developed economies, Ethiopian commercial banks have historically depended primarily on interest-based income, with net interest income accounting for 66.6% of total revenue compared to non-interest income at 33.4% for private commercial banks as of June 2022 (Cepheus Capital, 2023). Non-interest income mainly derives from import Letter of Credit (LC) services, FX trading, guarantee fees, and electronic payment service charges (Cepheus Capital, 2023).

A major transformation underway in Ethiopia's financial landscape with the introduction of capital market and the recent issuance of investment banking licenses. Economic theory suggests that banks and capital markets can either compete or complement each other as financial intermediaries (Ngo & Le, 2019). While banks traditionally serve as primary funding sources, capital markets provide alternative financing avenues, allowing corporations to raise funds through securities trading and bond issuance. This shift introduces both opportunities and challenges for Ethiopian banks including a potential decline in loan and interest income as firms access cheaper funding in capital markets instead of borrowing from banks. And opportunities to diversify revenue streams by participating actively in securities trading, underwriting, and corporate advisory services. The other is adaptation to financial co-evolution, where banks integrate with capital markets through securitization and structured investment products (Fenghua & Thakor, 2010).

Capital market introduction and introduction of investment banking represent a pivotal shift in revenue generation strategies for commercial banks. The capital market establishment enables banks to engage in securities trading, corporate advisory, and structured financing, providing new non-interest income opportunities beyond conventional deposit-lending models. This reform aligns with global trends where banks diversify into investment banking operations to enhance profitability and risk management (Heffernan, 2005). With investment banking licenses now granted, Ethiopian banks may explore market-making, underwriting, and securities issuance

services, further expanding their fee-based revenue streams. This evolution will be instrumental in reducing dependence on traditional interest income, allowing banks to balance credit-based earnings with diversified financial products. These strategic adjustments will define the future of Ethiopia's banking industry, ensuring long-term financial sustainability while fostering competitive market expansion. Depending on their readiness, Ethiopian commercial banks could leverage the upcoming capital market to expand investment banking operations or risk reduced loan demand as corporate clients shift toward market-based funding.

The other important change is the anticipated entry of foreign banks and investors into the banking industry. This decision is an important step in the direction of economic liberalization in the nation. Foreign direct investment (FDI), which is vital for every nation's economic development, is anticipated to increase as a result of this action. Foreign direct investment (FDI) has the potential to boost capital formation, improve the nation's balance of payments, and generate new employment. On the other hand, there's the possibility that foreign banks, with their enormous resources, may control the market and make it impossible for local banks to compete. Therefore, local financial institutions should pick themselves up, improve their capacity, and offer better goods and services to their customers to maintain their profitability.

1.2. Statement of the Problem

Ethiopian banking industry is facing structural as well as regulatory changes that will significantly impact its profitability, revenue diversification, and competitive positioning. These changes include the introduction of a capital market and investment banking operations and the introduction of forging banks in the coming months.

External pressures such as declining export sector performance and FX surrender requirements during the period under study have disrupted key non-interest income sources for banks. While recent policy changes allowing currency market floatation aim to stabilize the FX market, trade finance services and FX-related banking operations remain vulnerable to market volatility. The uncertainty surrounding foreign exchange inflows and international trade dynamics makes it imperative for banks to reassess their revenue models, including expanding non-interest income sources beyond traditional FX transactions.

Additionally, in response to persistently high inflation, the National Bank of Ethiopia (NBE) introduced a new policy in the month of August 2023 to limit commercial bank credit expansion to 14% for the fiscal year ending June 30, 2024 and recently raised to 18% (NBE, 2024). Since Ethiopian commercial banks have historically depended heavily on interest income from loans and advances, this policy will directly affect their revenue streams, forcing banks to explore alternative financial strategies to sustain profitability.

Beyond macroeconomic influences, shifting consumer banking behaviors are reshaping how commercial banks operate. Modern customers prefer digital and personalized banking experiences, interacting with financial institutions through alternative banking channels rather than traditional branch visits. The rise of fintech-driven services, mobile banking, and digital transactions has created new revenue opportunities for banks in the form of transaction fees, service charges, and online financial products. However, to fully benefit from this emerging revenue stream, banks must invest heavily in technology, security infrastructure, and customer-centric innovations to meet evolving consumer expectations.

With these market disruptions; credit limitations, shifting customer behaviors, capital market reforms, and foreign competition; Ethiopian banks must rethink their revenue models. The continued reliance on interest income presents vulnerabilities, making diversification into non-interest income increasingly critical for financial sustainability. This study examined how the Ethiopian private commercial banks can strategically adapt their revenue models to ensure long-term financial resilience amid evolving economic conditions, regulatory reforms, and competitive shifts. And also aims to provide actionable insights into how Ethiopian private commercial banks can sustain profitability and enhance competitiveness in a rapidly transforming financial landscape.

1.3. Research Questions

These are the main research questions that this study aims to address:

i. What is the level of income diversification among Ethiopia's private commercial banks?
ii. What is the relationship between non-interest income and the profitability of Ethiopia's private commercial banks?

Since investment banking and capital market operations were not active during the study period, the focus was on existing non-interest income sources such as trade finance, FX transactions, and service fees.

1.4. Research Objectives

1.4.1. General Objective

The primary aim of this study was to evaluate the impact of non-interest income on profitability, while considering control variables such as cost efficiency, market concentration, and interest margins, to determine whether revenue diversification enhances financial performance in Ethiopia's private commercial banks.

1.4.2. Specific Objectives

i. To examine the level of income diversification among Ethiopia's private commercial banks and its interaction with key profitability determinants such as cost-to-income ratio (CIR) and net interest margin (NIM).
ii. To evaluate the role of non-interest income in shaping profitability trends of Ethiopia's private commercial banks, while accounting for the effects of market concentration, cost efficiency, and traditional lending revenue.

1.5. Significance of the Study

Policymakers, financial institutions, and researchers can all benefit from this study since it offers important insights into the revenue structures and diversification trends of the banking industry.

For policymakers and financial regulators, the findings will offer evidence-based recommendations on banking sector resilience and revenue adaptation, particularly as capital market regulations and investment banking frameworks evolve.

For Financial institutions, the study will highlight how banks have historically diversified revenue streams, providing a benchmark for future adjustments in income models.

For academic researchers, this study will serve as a reference for future analyses on Ethiopia's financial sector evolution, helping scholars examine revenue trends before and after financial liberalization efforts.

1.6. Delimitation and Scope of the Study

The study examined revenue diversification and the role of non-interest income on profitability of private commercial banks in Ethiopia over the 2014/15–2023/24 period. Since investment banking and capital market operations were not active during the study timeframe, the focus was on existing non-interest income sources such as: trade finance (import/export Letters of Credit and guarantees), FX-related transactions and service fees from banking operations, including transaction charges.

State-owned banks, the Development Bank of Ethiopia and the Commercial Bank of Ethiopia, were not included in the study. Additionally, it did not include three fully-fledged interest-free banks and five MFIs that had recently transitioned into commercial banks, though limited data availability prevented their inclusion in the analysis. Among Ethiopia's thirty regulated private commercial banks, fourteen were relatively young, having been in existence for only a few years.

Therefore, the study concentrated on the 16 private commercial banks that had been in business for at least ten years, up to Global Bank S.C., which was the last to commence operations before the nearly decade-long gap mentioned earlier. Due to the short operational history of these 14 newer banks, the researcher believed it would be difficult to draw significant conclusions and conduct a fair comparison with the 16 banks that had operated for a longer period. Awash Bank S.C. was the oldest among the 16 selected banks, having been in existence for 30 years, while Global Bank S.C. was the newest, having been operational for 13 years. To ensure a more recent, relevant, and balanced study, the researcher utilized panel data spanning a decade, from 2014/15 through 2023/24.

1.7. Limitations of the study

While this research provided valuable insights, certain limitations existed:

- **Sample size constraints**: The study focused on 16 private banks, limiting broader industry representation.
- **Limited inclusion of non-financial variables**: The research primarily examined financial indicators, excluding organizational strategies, management policies, and regulatory shifts that might have influenced diversification efforts.

- **Short-term scope on recent reforms**: While introduction of investment banking and capital markets were acknowledged, their impact required longer-term research beyond to assess banking adaptation and income restructuring.
- **Study period constraints**: The research covered a ten-year period from 2014/15 to 2023/24, restricting analysis to trends within this timeframe and limiting insights into potential shifts beyond this period.

1.8. Organization of the Study

To accomplish its goals, this study was divided into three main phases. The formulation of the problem and the overall project plan's objectives constituted the first phase. This phase also included a review of literature from various sources regarding revenue diversification, non-interest income, and their effects on the profitability of financial institutions overall and commercial banks specifically. The gathering, analyzing, and interpreting of data took place in the second phase, while the documentation, conclusions, and recommendations from the research formed the main focus of the third and final phase.

Hence, the study was divided into five chapters. The introduction, problem statement, study objectives, study significance, study scope, and limitations were all discussed in the first chapter. The second chapter looked at both theoretical and empirical literature to make a link between the study and pertinent sources. While the study's methodological techniques were described in Chapter 3, Chapter 4 concentrated on the analysis of empirical data. Chapter 5 concluded with a summary of the study's main findings and recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

The importance of non-interest income as a strategic element of financial diversification has been underlined increasingly with the change of bank revenue patterns. Even though traditional banking models highly rely on interest-based revenues, empirical research shows that those banks that engage in various income sources, such as fee-based services, trading activities, and advisory function, often experienced better profitability and improved risk management. Previous researches in this area produced conflicting results suggesting that the advantages of non-interest income can differ according on the respective regulatory frameworks, bank-specific characteristics, and financial market structures. Particularly in Ethiopia, where interest-based revenue is a dominant source of income and where banks are subject to strict regulations, there is limited information about how non-interest income influences the profitability commercial banks. This chapter examines the influence of revenue diversification on the performance these banks by critically analyzing theoretical viewpoints and actual data available. Furthermore, the study introduces a conceptual framework outlining the relationship between non-interest income and profitability, supported by key financial indicators as control variables such as Net Interest Margin (NIM), Cost-to-Income Ratio (CIR), and market concentration metrics. By assessing these factors, this chapter establishes a foundation for understanding how Ethiopian private commercial banks can strategically optimize their revenue models in response to evolving financial sector dynamics.

2.2. Theoretical review

2.2.1. Financial system

Economic resources are finite in any healthy economy, whereas people's demands and needs are limitless (Elisha, 2021). One of the key forces behind an economy is this issue, which is also known as scarcity. To decide when, where, and to whom to allocate its resources can be difficult for an economy. It led to a financial system structure that was able to allocate resources to the economy effectively in order to promote growth. Johnson (2020) defined a financial system as an economic arrangement wherein financial institutions facilitate the transfer of funds and assets between borrowers,

lenders, and investors. Its objective is to allocate financial resources effectively in order to promote economic growth and provide market players with a return on their investment (ROI). All countries have financial systems that facilitate payments and the flow of money from savers (lenders) to borrowers (investors or spenders) as part of a credit system (Barth & Brumbaugh, 1997). The authors also added that unlike tangible assets that facilitate economic growth, a financial system is largely an intangible asset that promotes growth by facilitating the transfer of funds from savers to borrowers and by facilitating payments. Households, firms, and the government can at any point in time be a saver or lender, a borrower, investor, or spender, or way engage in all these roles.

Compared to other economic sectors, the financial system plays a different role. Rarely do individual business owners possess sufficient funds to make investments on their own. Without combining their funds, individual savers would be unable to benefit from the possible increasing returns to scale of their investments and would be exposed to a high level of risk with limited liquidity. The financial system, which includes banks and other financial intermediaries, equity markets, and debt markets, overcomes these issues by pooling money from several smaller savers, allocating it to the most crucial uses, and overseeing its effective use. The financial system also communicates information, moves funds, pools resources to decrease risk, and increases liquidity. Schmidt & Tyrell (2003) use both a more specific and more general definition of a financial system. The financial sector is the restricted notion. According to the authors' definition, the financial sector is the area of an economy that provides financial services to other economic sectors. The entities that comprise it include the central bank, various banks, non-bank financial institutions, structured financial markets, and pertinent regulatory and supervisory bodies. And according to the authors the idea of the financial system is more general. In general, it may be described as the result of the interplay between the demand and supply for capital and other services associated to finance.

According to Johoson (2020), people have limitless wants and desires, but economic resources are finite. One of the key factors influencing an economy is this issue, which is known as scarcity and is one of the significant drivers of an economy. However, it challenges an economy in determining when, where, to whom to distribute its resources. Consequently, it resulted in a financial system structure capable of efficiently allocating

economic resources to stimulate growth. Johoson (2020) highlighted that a financial system provides several benefits to its participants including

- Facilitation of transactions through banks, ensuring an efficient payment system;
- Offering investment opportunities, allowing individuals to earn interest over time,
- Protecting against financial risks by insurance institutions,
- Gathering and distribution of essential financial data for informed decision-making by credit agencies;
- Regulating financial stability and maintaining economic balance Central banks and governments; and
- Ensuring liquidity by converting investments into cash when needed by banks and other financial institutions.

2.2.2. Role of banks in the financial system

The allocation of economic resources is made easier by the financial system; hence banks are essential to maintaining financial stability and making credit available. Understanding the role of banks within this system is key to evaluating their revenue sources and overall contribution to the economy. Despite their many activities, banks' primary goal is to take deposits from people with money, combine those funds, and then lend them to people in need. Banks serve as intermediaries between borrowers—to whom the bank extends credit—and depositors, who supply the bank with capital. Banks are often described as intermediaries between capital users and savers. Banks are special intermediaries because of their unique capacity to fund production by lending their own debt to people willing to take it and use it as money (Drigă & Dura, 2014).

In addition to serving as lending and borrowing organizations, banks also offer payroll services, financial advice, investments, bill financing, safe-deposit boxes, payments, settlements, and money transfers, as well as foreign exchange and savings and investment services. Commercial banks conduct the following tasks within the national economy in order to offer these financial services: the role of accepting deposits, which draws in momentarily accessible funds from corporate and individual clients; the loan-granting function of investments; and the commercial function, which permits fund transfers between account holders based on various activities. Altogether, banks

channel savings into productive capital, facilitate productive use of surpluses to generate employment and promote economic welfare and provide risk free income to depositors (Drigă & Dura, 2014).

Individuals and households, financial and nonfinancial institutions, and local and national governments can all be depositors and borrowers. Deposits may be made on demand (a checking account, for instance) or subject to certain limitations (savings and time deposits, for example). While some depositors may require their money at any given time, the majority do not. This makes it possible for banks to offer longer-term loans using shorter-term deposits. Short-term liabilities (deposits) are transformed into long-term assets (loans) through a process known as maturity transformation. In most nations, the majority of banks' revenue comes from the difference between what they pay depositors and what they collect from borrowers (Heffernan, 2005).

Banks are also essential to both the local and international payment systems, even if their main duty may be to facilitate the interaction between creditors and borrowers. People, businesses, and even governments need a mechanism to move money in addition to a place to deposit and borrow it. They carry out payments, ranging from the tiniest personal checks to large automated payments between (Gobat, 2021).

Additionally, banks are essential to the government's ability to implement monetary policy, which is one of its most crucial instruments for attaining economic expansion devoid of inflation (Gobat, 2021). Banks enable the movement of money in the marketplaces in which they operate, whereas the central bank regulates the money supply nationally. Central banks can alter the money supply at the national level by changing the reserve requirements for banks and by purchasing and disposing of assets on the open market, with banks acting as important counterparties. By storing more deposits as reserves with the central bank or by retaining more liquid assets—those that can be quickly turned into cash with little change in value—banks can reduce the amount of money in circulation.

2.2.3. Income diversification

While banks traditionally generate revenue through interest-based lending, evolving market conditions and regulatory changes have pushed financial institutions to seek alternative income streams. One such strategy is income diversification, which enables

banks to reduce risk and enhance profitability. Many businesses employ income diversification as a tactic to preserve their financial stability. A business may open up new revenue streams by introducing new products or services, improving the current ones, reaching a broader market, or forming collaborations. Many theories have been proposed to explain diversification decisions and predict both positive and negative consequences of diversification (Mulwa, et al., 2015). Particularly for businesses with free cash flows, the agency theory relates diversification to value destruction brought on by managerial self-efficacy, empire building, and entrenchment. On the other hand, the market power theory and the resource-based view theory forecast improved company performance due to cost effectiveness, resource sharing, economies of scale, or creating a lasting competitive edge (Mulwa, et al., 2015).

Compared to other businesses, banks have far more flexibility in attaining focus or diversification through the investment or disinvestment of financial claims, or loans, in certain markets and sectors (Acharya, et al., 2006). A typical business, on the other hand, may find it difficult to grow its product line and that changing its portfolio of real-sector operations would come with significant transaction costs. The most significant and often applied diversification strategies in the banking sector include regional, international, credit, asset, income, and credit diversification. According to Abraham and Hasan (2008), income diversification is the development of new revenue-generating financial services outside of traditional intermediation activities.

As per Goetz, et al (2013), asset diversification pertains to the allocation of a bank's earnings among lending and non-lending assets. Diversifying their loan lines is another way that banks might strive for diversity. This entails spreading out a loan portfolio throughout several business sectors, regional areas, or industry verticals (Acharya, et al., 2006). Additionally, commercial banks might employ geographic diversity as a means of pursuing diversification initiatives. This entails the spread of branches and service locations over a wide area, sometimes a whole nation. Additionally, banks may imply international diversification, which would include extending bank operations beyond borders via subsidiaries or branches (Berger, et al., 2010).

2.2.4. Non-interest income

A major component of income diversification is non-interest income, which encompasses earnings from service fees, asset sales, and financial advisory services. Understanding the significance of non-interest income helps assess whether revenue diversification contributes to banking profitability. For most commercial banks, interest revenue is their main source of income. The main source of revenue is hence net interest margin. The difference between the interest a bank receives from loans and the interest it pays on deposits after deducting its expenses is known as net interest margin, or NIM. It is a commonly held belief that the net interest margins of banks are heavily influenced by fluctuations in interest rates and economic cycles, with non-interest revenue serving to diversify and stabilize bank profitability. Some sources of non-interest income have been available to banks for many years. Extensive deregulation accompanied by technological development has changed the environment in which financial intermediaries, and in particular banks, are operating. Technological development has facilitated the rapid development of new financial products. Innovations in financial products have facilitated a reshaping of the balance sheets and income structures of banks considerably.

The landscape in which financial intermediaries, and banks in particular, operate has evolved as a result of widespread deregulation and technological advancement (Davis & Tuori, 2000). Rapid innovation in financial goods has been made possible by technological advancement. The revenue structures and balance sheets of banks have undergone significant changes thanks to innovations in financial products. According to Davis & Tuori (2000), some of the main driving forces behind the shift have been the rise in securitization, which has expanded the potential for non-interest earnings, the increased competition between banks and the securities markets, which has put pressure on interest margins, and capital adequacy requirements, which promote capital efficiency through a variety of off-balance sheet activities.

With the rapid rise of new types of off-balance-sheet activity, many banks are diversifying, and non-interest income is becoming an increasingly important source of revenue (Heffernan, 2005). According to Heffernan (2005) non-interest income can be categorized into several key areas. Traditional fee income includes charges for intermediary services such as deposits, checking accounts, loan arrangements, credit

card fees, electronic funds transfers, trust and fund management, and global custody services. More recent sources of fee income come from securities brokerage, municipal securities, underwriting, real estate services, and insurance activities. Banks also generate income from off-balance sheet activities, including loan commitments, note issuance facilities, letters of credit, and derivatives. Additionally, management consulting, data processing, back-office operations, securitization, and proprietary trading contribute to non-interest revenue streams.

According to Brunnermeier, et al., (2020) profits from trading and securitization, brokerage commissions, venture capital, investment banking and consulting fees, fiduciary services, and gains on non-hedging derivatives are examples of noninterest income. The authors also stated that these are not the same as the typical banking functions of accepting deposits and making loans. Banks compete with other capital market intermediaries like hedge funds, mutual funds, investment banks, insurance firms, and private equity funds in noninterest earning operations.

Providing "conventional" banking services like trust and cash management, as well as checking, has allowed banks to generate non-interest income for a considerable amount of time, but more recently, these services have become a larger part of the banks' overall financial management strategies (Smith, et al., 2003). These consist of fees for credit cards, deposit services, and electronic financial transfers.

2.3. Empirical review

Theoretical perspectives suggest that revenue diversification through non-interest income can stabilize profits and reduce dependence on interest margins. However, empirical studies provide mixed findings on its effectiveness across different banking markets.

Both interest-based and non-interest income often make up a bank's revenue sources. Though banks are primarily thought of as lenders, diversified banks generate revenue in a number of other ways. According to DeYoung & Rice (2003), in the United States, deregulation generated competition between banks, nonbanks, and financial markets that did not previously exist. In response to these competitive threats and opportunities, several banks adopted new technology that revolutionized their production and distribution tactics, resulting in significant gains in noninterest income. In contrast,

many other banks have continued to employ traditional banking techniques, with noninterest revenue playing a minor role.

Furthermore, in their study (DeYoung & Rice, 2003) found that well-managed banks grow more slowly into noninterest businesses, and that marginal gains in noninterest revenue are linked with weaker risk-return tradeoffs on average. And the authors findings suggest that noninterest revenue coexists alongside, rather than replaces, interest income from intermediation operations, which the authors stated will continue to be the basic financial services function of banks.

Although the transition to noninterest income has helped banks generate more revenue recently, there is also a perception that it can lessen risk and the volatility of bank revenue and profit. According to Stiroh (2004)increased reliance on noninterest income may lessen the cyclical volatility in bank earnings and revenue since it may be less reliant on general business circumstances than conventional interest income. However, Stiroh (2004) found out that among the components of non-interest income trading income, in particular, shows higher volatility. On the other hand, increasing noninterest income may present potential for cross-selling and new product lines, which could provide a bank's revenue portfolio with the conventional diversification advantages.

According to other studies, product diversification does not always offer an opportunity to increase banks' profitability. Hidayat, et al. (2012), who conducted research on the relationship between product diversification and bank risk in the Indonesian banking sector between 2002 and 2008, observed that the impact of product diversification on bank risk is significantly influenced by the asset size of the bank. In particular, product diversity lowers bank risk for small banks while increasing bank risk for larger banks.

According to Ammar & Boughrara (2019), while non-traditional businesses boost bank profitability, they also make the bank more unstable. They dissect non-interest income into its component parts to enable deeper insights and discover that trading revenue is the most important factor in improving bank performance, while commissions, fees, and other non-interest income activities exacerbate the benefit-cost trade-off of diversification by increasing the risk of insolvency and volatile investments.

It should be mentioned that not all research indicates that non-interest income boosts commercial banks' profitability. Phan, et al. (2023) concluded that non-interest income

had a negative effect on the performance of commercial banks in the ASEAN region when examining the relationship between the two variables using data from 36 commercial banks between 2008 and 2020. Their analysis indicates that if non-interest income is kept below the threshold of 59.3% of total revenue, it will positively impact the performance of commercial banks in the ASEAN region. Non-interest income has an adverse effect on the performance of commercial banks if this level is exceeded.

As per the finding of Berger, et al. (2010) another key profitability indicator is Net Interest Margin (NIM) which reflects the spread between the interest earned on loans and the interest paid on deposit. DeYoung & Rice, (2003) also stated that bbanks with a higher NIM tend to rely more on traditional lending revenue, while those with a lower NIM are often incentivized to explore alternative income sources like fee-based services and advisory functions. Banks must balance their interest-based income with non-interest revenue to stabilize earnings which in turn affect their profitability. As. Ahamed, (2017) emphasizes that in markets with high lending rates and limited financial innovation, banks may maintain strong NIM but face challenges diversifying income sources. Conversely, institutions operating in competitive financial environments must optimize their revenue streams by expanding non-interest income services to remain profitable.

Although NIM measures how effectively banks make money from lending, operational cost control has an impact on profitability as well. A key parameter to evaluate operational efficiency and profitability is the Cost-to-Income Ratio (CIR) serves. Cost-to-Income Ratio (CIR) assesses banking efficiency, comparing operational costs to revenue generation (Ammar & Boughrara, 2019). According to Alhassan, (2015) a higher CIR indicates that a larger portion of bank's earnings are consumed by their operating expenses, potentially reducing its profitability. In contrast, banks with lower CIR values demonstrate efficient cost management, which will give them more funds to reinvest in technology, new banking services, and market expansion (Berger, et al., 2010). In Ethiopia, where financial sector reforms are gradually reshaping banking structures, CIR plays an important role in determining how well banks adapt to competitive pressures and revenue diversification. Studies have shown that banks with controlled operational costs are better positioned to increase non-interest income, while

inefficient institutions struggle to remain profitable despite revenue diversification efforts (Ahamed, 2017).

Ahamed (2017, p. 1), noted in his work "Asset quality, non-interest income, and bank profitability: Evidence from Indian banks" that since the early 1990s, when Indian banks were liberalized, they have been moving away from traditional lending activities and toward non-traditional sources of income like fees, commissions, and trading securities for higher profits. Because of the intense competition among these banks, income diversification has become a crucial component of their business models. But the author also stated that banks must have a sophisticated technical scale, expertise, resources, and capacity as they transition from interest-based lending activities to non-interest revenue streams.

Using a large global sample of commercial banks from 126 countries, (Saklain & Williams, 2024) studied how financial structure affects banks' revenue decisions, profitability, and risk. They found that banks in nations with more market-based financial structures engage in a higher percentage of non-interest income-based activities, and that non-interest income boosts bank profits and risk-adjusted profits in nations with less restrictive regulatory environments.

Lee, et al. (2014) investigated whether the impact of non-interest income varied depending on a country's income level and bank specialization in Asian banks. They discovered that non-interest activities are more closely associated with risk mitigation than with profitability enhancement. For banks with different specializations and for banks in different income-level countries, the impact of non-interest income does vary.

The profitability and stability of commercial banks in South Asia are positively impacted by overall revenue diversification into non-interest income (Nisar, et al., 2018). The study examined a panel dataset comprising 200 commercial banks from all of the region's nations. The authors also noted that the performance and stability of banks are impacted differently by various non-interest income-generating activities. Their results demonstrate that other non-interest income has a favorable influence on the stability and profitability of South Asian commercial banks, but fees and commission income have a negative effect. Furthermore, the findings suggest that banks can gain from revenue diversification if they expand into particular categories of

non-interest income-generating ventures. According to Mulwa, et al (2015), banks often pursue diversification through the following typical approaches: revenue diversification, assets diversification, credit diversification, geographical diversification, and international diversification.

While investigating pair-wise profit complementarity and (dis)economies of joint production between lending and non-interest activities (Abedifar, et al., 2018) find evidence which support that large size banks benefit from synergies in joint production of non-interest income and lending, whereas other banks, in particular smaller banks suffer from diseconomies of joint production. And larger banks exhibit cross-subsidization between several non-interest activities and lending business. In addition to size, experience also matters for banks to generate more non-interest income and diversify their income source from the traditional interest income. Luu et al. (2019) discovered that banks with greater business experience stand to gain more from revenue diversification during their investigation on the relationship between the financial performance of Vietnamese commercial banks and income diversification. Furthermore, their analysis's conclusion shows that older institutions with greater market experience benefit more from revenue diversification.

The Ethiopian banking industry is highly regulated and the economy is not a market-based economy. In its recent publication of “Financial Stability Report” the National Bank of Ethiopia categorized commercial banks in the country based on asset size at the end of June 2023 as large, medium and small banks (NBE, 2024). As per this categorization the only large bank in the country is the state-owned Commercial Bank of Ethiopia constituting 49.5% of the asset of the whole banking sector. The remaining are 5 medium sized banks and 24 small banks constituting 28% and 22.5% of the asset of the whole banking sector respectively (NBE, 2024).

To the best of the researcher's knowledge, not many studies have been done on the impact of revenue diversification in general and non-interest income in particular on the profitability of commercial banks in Ethiopia. The majority of these earlier studies concentrate on the elements that influence commercial banks' profitability and the variables that determine their non-interest income. Furthermore, these scant research on non-interest revenue was conducted over a shorter time span and with data from fewer institutions.

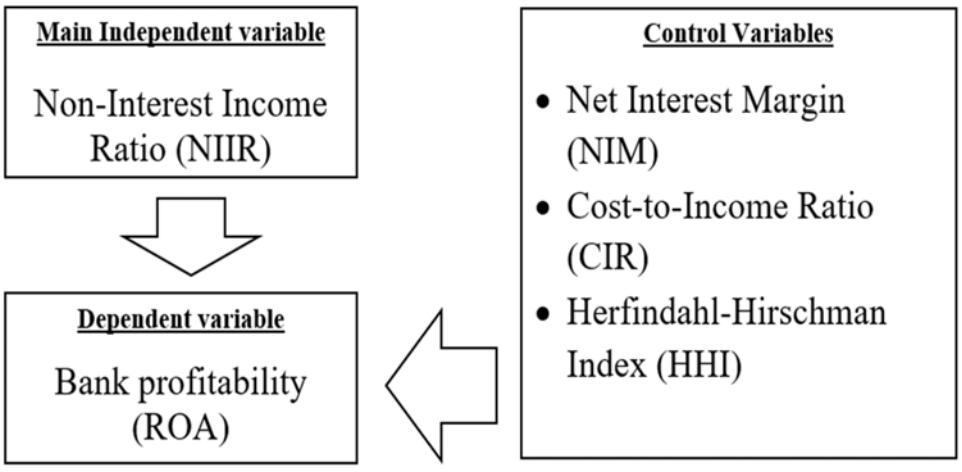
From this review, it is evident that income diversification and non-interest income play complex roles in bank profitability. While some studies highlight their benefits, others caution against revenue volatility. Given Ethiopia's unique banking environment, these global insights provide a critical foundation for evaluating whether non-interest income supports financial performance in Ethiopian commercial banks

Therefore, by analyzing the role of non-interest income on the profitability and degree of income diversification of private commercial banks in Ethiopia, this study adds to the body of literature already in existence. The results of this study will supplement previous research on non-interest income and income diversification by offering empirical evidence based on more current and extensive historical data from the nation's private banking industry.

2.4. Conceptual framework

The link between bank profitability (ROA), the dependent variable and the main independent variable, non-interest income ratio (NIIR) and the control variables, Net Interest Margin (NIM), Cost-to-Income Ratio (CIR) and Herfindahl-Hirschman Index (HHI) are explained by this conceptual framework. The connection is depicted as follows in the diagram below;

Figure 2.1: Conceptual framework diagram



The framework is adopted from existing literature, including research on non-interest income (Ahamed, 2017; Phan et al., 2023) and market concentration (Berger, et al., 2010).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter provides a detailed overview of the research methodology employed in assessing the impact of non-interest income on the profitability of private commercial banks in Ethiopia. The chapter presents the research design, method of data collection, sampling techniques, methods of analysis and all the variables incorporated in the study. A descriptive research design was employed to analyze the relationship between non-interest income and profitability with a quantitative research approach. The study used a sample of 16 private commercial banks by ensuring consistency in data availability for robust evaluation. A secondary financial data for a 10-year period was collected from the annual reports of the selected private commercial banks. The methodology applied was a panel data methodology, comprising both time-series and cross-sectional observations. Multiple regression was utilized to assess the role of non-interest income on profitability and also controlling for variables of net interest margin, cost-to-income ratio, and revenue diversification. And key assumptions of a panel data model were also considered to ensure the validity of the estimation.

3.2. Research design

According to Creswell (2009), a research design is a strategy and the procedures for conducting research that included choices ranging from general hypotheses to specific techniques for gathering and analyzing data. Additionally, the author stated that a research design was a rational series of steps that researchers took to gather, examine, and present the data they found.

In addition, Punch (1998) stated that a research design had four primary concepts and served as the foundational framework for a research endeavor. The plan came first, the conceptual framework came second, the third concerned what or who was the subject of the study, and the fourth related to the tools and procedures that were utilized to gather and examine empirical data. Certain kinds of social research problems require particular methods, according to Creswell (2009). Therefore, the nature of the study problem, the researcher's own experience, and the intended audience had to be considered when choosing a strategy.

Considering the research problem and objective, a descriptive research design was employed to explain the significance of non-interest income on the profitability of private commercial banks in Ethiopia. Using a descriptive study design, the study characterized the relationship between the selected commercial banks' non-interest income and their financial performance. A quantitative research approach was employed to gather, examine, and present numerical data in order to address the research question and evaluate theories on certain variables.

3.3. Source of data and method of data collection

This study relied on secondary data sources to achieve its research objectives. The financial data came from the official annual reports of the selected private commercial banks in Ethiopia. These reports were obtained from each bank's website or, when digital versions were unavailable, in hardcopy format. Additionally, relevant reports and directives from the National Bank of Ethiopia (NBE) were examined to ensure that the regulatory and policy context was appropriately considered. To provide a thorough analysis over time, financial reports covering the 10-year period from 2015 to 2024 were utilized, allowing for a well-rounded assessment of trends and developments.

3.4. Sample and sampling technique

The population of the study consisted of all private commercial banks operating in Ethiopia. For the purpose of the study, a sample of all 16 private commercial banks that had been operating throughout the study period (2014/15 to 2023/24) was selected from the 30 banks in operation. The main criteria for the sample selection were being in operation for the whole period under study and availability of data. At the commencement of the study in April 2024, there were 30 private commercial banks licensed by the National Bank of Ethiopia.

As shown in the table below, 13 of the 14 remaining private commercial banks were relatively new, having been in business for less than three years. Data from the National Bank of Ethiopia indicated that there was an eight-year lapse between the launch of Global Bank S.C.—the 16th private commercial bank to enter the market—in April 2012, and the entry of Zam Zam Bank S.C., an interest-free bank, in September 2020. After that, 13 more private commercial banks began operations up to July 2023, marking the most recent wave of new commercial banks' entry into the market, which

started in June 2021. Given the relatively short operating history of the 14 newly established banks, the researcher determined that their inclusion would make it challenging to draw meaningful conclusions and conduct a fair comparison with the 16 more established banks. Consequently, this study analyzed financial data from the selected 16 private commercial banks over the period 2013/14 to 2023/24, comprising a total of 160 observations. These 16 private commercial banks accounted for 90.49% of total deposits and 90.15% of loans and advances of private commercial banks as of June 30, 2023 (National Bank of Ethiopia, 2023). In terms of paid-up capital and number of branches as of June 30, 2023, the 16 private commercial banks represented 77.91% and 83.78% of the total figures for private commercial banks, respectively.

Table 3.1: List of all licensed private commercial banks as of April 2024.

S.No.	Bank Name	Date established	Age in years
1	**Awash Bank S.C.**	**November 1, 1994**	**29.4**
2	**Dashen Bank S.C**	**September 1, 1995**	**28.6**
3	**Bank of Abyssinia S.C.**	**February 1, 1996**	**28.2**
4	**Wegagen Bank S.C**	**June 2, 1997**	**26.8**
5	**Hibret Bank S.C**	**January 1, 1998**	**26.3**
6	**NIB Int. Bank S.C.**	**May 3, 1999**	**24.9**
7	**Corporative Bank of Oromia**	**October 1, 2004**	**19.5**
8	**Lion Int. Bank S.C.**	**October 2, 2006**	**17.5**
9	**Oromia Bank S.C.**	**September 1, 2008**	**15.6**
10	**Zemen Bank S.C.**	**October 1, 2008**	**15.5**
11	**Bunna Bank S.C.**	**June 1, 2009**	**14.8**
12	**Berhan Bank S.C.**	**June 2, 2009**	**14.8**
13	**Abay Bank S.C.**	**July 1, 2010**	**13.8**
14	**Addis Int. Bank S.C.**	**May 2, 2011**	**12.9**
15	**Enat Bank S.C.**	**July 1, 2011**	**12.8**
16	**Global Bank S.C.**	**April 2, 2012**	**12.0**
17	ZamZam Bank S.C.	September 1, 2020	3.6
18	Shabelle Bank S.C.	June 1, 2021	2.8
19	Goh Betoch Bank S.C.	July 1, 2021	2.8
20	Hijra Bank S.C.	September 1, 2021	2.6
21	Ahadu Bank S.C.	October 1, 2021	2.5
22	Siinqee Bank S.C.	October 4, 2021	2.5
23	Tsedey Bank S.C.	January 3, 2022	2.2
24	Tsehay Bank S.C	February 1, 2022	2.2
25	Amhara Bank S.C.	February 2, 2022	2.2
26	Gadda Bank S.C.	April 1, 2022	2.0
27	Omo Bank S.C.	July 1, 2022	1.8
28	Sidama Bank S.C.	July 7, 2022	1.7
29	Rammis Bank S.C.	October 3, 2022	1.5
30	Siket Bank S.C.	July 12, 2023	0.7

Source: National Bank of Ethiopia, 2024

3.5. Method of data analysis

This study employed a panel data analysis approach, incorporating both time series and cross-sectional data from 16 private commercial banks over a 10-year period (2014/15–2023/24). The collected data was analyzed using statistical tools, with the assistance of Stata, a widely recognized econometric software, ensuring a systematic evaluation of banking profitability and revenue diversification. To interpret the data, descriptive statistical methods such as mean, standard deviation, minimum, and maximum values were used to summarize key variables (Brooks, 2014). Additionally, multiple regression analysis was conducted to examine the relationship between non-interest income and profitability, controlling for other banking performance indicators (O'Connell, 2023).

3.6. Description of variables

3.6.1. Dependent variable

Profitability: One of the measures of a nation's overall economic health and the success of the banking industry is its profitability. These are some important indicators of bank profitability that are often used, along with an explanation of how they are determined (Rana-Al-Mosharrafa & Islam, 2021).

- **Return on Assets (ROA)**: This measure illustrates how profitably a bank uses its assets to produce income. The formula for calculating it is Net Income / Total Assets, which is the bank's net income divided by all of its assets.
- **Return on Equity (ROE)**: ROE quantifies a bank's profitability by indicating the amount of profit the bank makes on the capital that shareholders have contributed. Net Income / Shareholder Equity is how it's computed.
- **Net Interest Margin (NIM)**: This is a measurement of the difference between the amount of interest banks receive on their interest-earning assets and the interest they pay to their lenders (like deposits, for example). It is computed as follows: (Interest Income - Interest Expense)/ Average Earning Assets.

Although off-balance-sheet activities may distort ROA, it represents a bank's management's ability to profit from its assets. ROE represents the return to shareholders on their equity (Athanasoglou, et al., 2008). ROE is a widely used performance metric

but it is not sensitive to risk and does not account for the risk profile of the bank, including the percentage of risky assets, liquidity, and solvency (Rana-Al-Mosharrafa & Islam, 2021). While ROE and NIM provide valuable insights into bank performance, ROA is widely regarded as the best measure of profitability in emerging markets due to lower equity levels and reliance on asset-based efficiency (Mehzabin, et al., 2023). Thus, this study selected ROA to assess bank profitability."

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}}$$

3.6.2. Main Independent variable

Non-Interest Income Ratio (NIIR)

Non-interest income (NII) refers to the revenue banks generate from sources other than interest earned on loans, including service and penalty charges, asset sales, and real estate leasing (Shah, et al., 2018). Unlike interest income, non-interest revenue is often unregulated by law and is less sensitive to financial and economic market fluctuations. It represents any income a bank earns from activities beyond its core function of financial intermediation, such as lending and deposit-taking.

Traditionally, banks were primarily viewed as institutions that accepted deposits and issued loans. However, in recent decades, non-interest income has become an essential component of banking operations, significantly influencing profitability and risk exposure (Abedifar, et al., 2018). The shift toward revenue diversification has been driven by financial deregulation, heightened competition, and advancements in financial technologies (Ammar & Boughrara, 2019). Banks strategically expand their service offerings—including advisory services, payment processing, foreign exchange transactions, and wealth management—to strengthen revenue diversification and enhance financial stability (Acharya, et al., 2006).

Revenue diversification can improve bank efficiency and profitability, as highlighted by studies on emerging markets (Alhassan, 2015). By incorporating fee-based services, banks reduce dependency on traditional lending and mitigate risks related to interest rate fluctuations (Ahamed, 2017). However, excessive reliance on non-interest income can also introduce volatility, particularly in institutions engaged in speculative trading

and investment operations (Brunnermeier, et al., 2020). Therefore, achieving an optimal balance between interest-based and non-interest revenue is essential for long-term sustainability (Berger, Hasan & Zhou, 2010).

The primary independent variable in the regression analysis was non-interest income. The study focused on examining its impact on banking profitability, recognizing that higher non-interest income could influence earnings stability and affect risk-taking behavior (Athanasoglou, et al., 2008). Following (Stiroh, 2004, DeYoung & Rice, 2003 and Lee, et al., 2014), the non-interest income ratio is defined as:

$$\text{Non-Interest Income ratio} = \frac{\text{Non-Interest Income}}{\text{Net Interest Income} + \text{Non-Interest Income}}$$

This variable will help assess whether revenue diversification enhances banking profitability, particularly as Ethiopian banks navigate financial sector transitions.

3.6.3. Control Variables

Net Interest Margin (NIM)

Net Interest Margin (NIM) evaluates a bank's lending profitability by measuring the spread between interest earned on assets and interest paid on liabilities (Berger et al., 2010; DeYoung & Rice, 2003). Banks with higher NIM tend to rely heavily on traditional lending models, whereas those with lower NIM may focus more on non-interest income sources for profitability (Phan, et al., 2023).Mathematically, NIM is expressed as:

$$\text{NIM} = \frac{\text{Net Interest Income (NII)}}{\text{Average Earning Assets}} \times 100$$

Ethiopian banks have historically depended on interest-based income, making NIM an essential control variable to account for profitability trends (Cepheus Capital, 2023). However, with financial sector reforms and increased adoption of digital financial services and introduction of capital market and investment banking, reliance on traditional lending margins may gradually decline. Understanding NIM's role in

profitability will help determine how Ethiopian banks adjust their revenue models in response to market shifts.

Cost-to-Income Ratio (CIR)

Cost-to-Income Ratio (CIR) measures operational efficiency by indicating how well a bank manages expenses relative to its revenue (Ammar & Boughrara, 2019). A higher CIR suggests higher operational costs relative to earnings, potentially reducing profitability (Alhassan, 2015). Given Ethiopian banks' increasing investment in digital banking infrastructure and regulatory compliance, understanding CIR dynamics is crucial. Mathematically, CIR is computed as:

$$CIR = \frac{Operating\ Expenses}{Total\ Income}$$

This metric helps assess whether cost management strategies impact income diversification efforts. Efficient banks with lower CIR values could allocate resources toward expanding fee-based services, improving revenue stability, and enhancing their competitiveness in Ethiopia’s evolving financial landscape.

Herfindahl-Hirschman Index (HHI)

Revenue diversification is quantified using the Herfindahl-Hirschman Index (HHI), which is widely employed in banking research to assess income concentration versus diversification (Alhassan, 2015, Ammar & Boughrara, 2019, Ahamed, 2017 and Githaiga, 2020). Traditional HHI models often evaluate market concentration in terms of asset distribution and competition among financial institutions. However, this study used the modified standard HHI formula to measure income concentration within Ethiopian private banks. This modified version of the HHI accounts for the concentration of income sources, allowing for a structured assessment of revenue diversification within banks. The approach aligns with studies analyzing income concentration effects on banking stability and profitability, including (Abedifar, et al., 2018, Ahamed, 2017 and Ammar & Boughrara, 2019).

Therefore, the Herfindahl-Hirschman Index for revenue diversification ($HHI_{(REV)}$) is calculated as follows:

$$HHI_{(REV)} = \left(\frac{NON}{NETOP}\right)^2 + \left(\frac{NET}{NETOP}\right)^2$$
Where: $NETOP = NON + NET$

Where:

- NON = non-interest income (revenue generated from fees, commissions, and advisory services).
- NET = Net interest income (interest earned from loans and advances minus interest expenses).
- NETOP = Net operating income (NON + NET).

Higher values of $HHI_{(REV)}$ indicate greater reliance on either non-interest or interest-based income, reflecting lower diversification. Lower values of HHI(REV) suggest revenue diversification, indicating that both interest and non-interest income contribute more evenly to total operating income. Thus, Ethiopian private banks with lower $HHI_{(REV)}$ scores are considered more diversified, potentially benefiting from revenue stability in times of financial sector transitions.

Table 3.2: Description and expected sign of variables

Variable Description	Measured By	References	Expected Sign
Dependent Variable			
Return on Asset (ROA)	Net Income/Total Asset	Rana-Al-Mosharrafa & Islam, (2021), Hidayat, et al. (2012) and Mehzabin, et al., (2023)	
Main Independent Variable			
Non-interest income (NII)	Non -Interest Income/ (Net interest income + Non – interest income)	DeYoung & Rice, (2003) Stiroh, (2004), Hidayat, et al. (2012), Abedifar, et al. (2018) and Ahamed (2017)	Positive
Control Variables			
Net Interest Margin (NIM)	Net Interest Income/Average Earning Assets	Mehzabin, et al. (2023), Nisar, et al. (2018), O'Connell (2023) and Hidayat, et al. (2012)	Positive
Cost to Income Ratio (CIR)	Operating Expenses/Operating Income	Alhassan (2015),Ahamed, (2017), Berger, et al. (2010) and Lee, et al. (2014)	Negative
Herfindahl-Hirschman Index (HHI)	$HHI_{(REV)} = \left(\frac{NON}{NETOP}\right)^2 + \left(\frac{NET}{NETOP}\right)^2$ Where: $NETOP = NON + NET$	Lee, et al. (2014), Stiroh (2004), Phan, et al. (2023), Ammar & Boughrara, (2019), Ahamed, (2017), Hidayat, et al. (2012) and Nisar, et al. (2018)	Positive or Negative (depends on diversification benefits)

3.7. Model specification

The study employed a panel data methodology, integrating cross-sectional observations (multiple banks) and time-series observations (2014/15–2023/24). Panel data analysis allowed for a more comprehensive assessment of Ethiopian banks by capturing both bank-specific effects and dynamic financial trends over time (Brooks, 2014).

Compared to simple cross-sectional or time-series studies, panel data models offered multiple advantages. First, they enhanced statistical power, providing more reliable estimations of banking performance (Brooks, 2014). Second, panel models accounted for heterogeneity across banks, ensuring that institution-specific characteristics were considered in profitability assessments (Berger, et al., 2010). Third, this approach mitigated omitted-variable bias, improving the accuracy of financial estimations (Athanasoglou, et al., 2008). Lastly, panel regression reduced multicollinearity among independent variables by incorporating both time-series and cross-sectional variations (DeYoung & Rice, 2003).

Given these advantages, this study applied a multiple linear regression model to estimate the impact of Non-Interest Income (NIIR) on Ethiopian banks' profitability (ROA). The regression equation was specified as follows:

$$ROA_{it} = \alpha + \beta_1 NIIR_{it} + \beta_2 NIM_{it} + \beta_3 CIR_{it} + \beta_4 HHI_{it} + \epsilon_{it}$$

Where:

- ROA_{it}: Represented the profitability (Return on Assets - ROA) of bank i in year t.
- $NIIR_{it}$: was the Non-Interest Income Ratio, the main independent variable representing revenue diversification.
- NIM_{it}, CIR_{it}, and HHI_{it} were the control variables representing lending profitability, cost efficiency, and income concentration, respectively.
- α denoted the intercept, while β_1, β_2, β_3, β_4 represented the coefficients estimating the impact of independent and control variables on bank profitability.
- ϵ_{it} was the error term capturing unobserved factors affecting profitability.

To ensure robust estimation, the study employed panel regression techniques, allowing for both fixed effects (capturing unique characteristics of individual banks) and random effects (modeling variations across time). Model selection tests, including the Hausman test, were conducted to determine the appropriate approach (Brooks, 2014). By applying panel data methods, this study aimed to enhance accuracy and reliability in assessing the role of revenue diversification in Ethiopian banking profitability (Athanasoglou et al., 2008; Berger et al., 2010; Alhassan, 2015).

Panel data models rely on the following key assumptions for valid estimation and ensuring these assumptions enhances the reliability of panel regression analysis;

- **Linearity** – The relationship between independent and dependent variables must be linear (Brooks, 2014).
- **No Perfect Multicollinearity** – Independent variables should not be excessively correlated, ensuring proper estimation (Athanasoglou, et al., 2008).
- **Exogeneity** – Independent variables must not be correlated with the error term to prevent endogeneity bias (Punch, 1998).
- **Homoskedasticity** – Error variance should remain constant, but violations can be corrected using robust standard errors (Ammar & Boughrara, 2019).
- **No Serial Correlation** – Errors should not exhibit autocorrelation across time, ensuring reliable estimates (Acharya, et al., 2006).
- **Normality** – Error terms should follow a normal distribution for valid inference, though violations matter less in large samples (Athanasoglou, et al., 2008).
- **Strict vs. Weak Exogeneity** – Fixed Effects (FE) models allow correlation between regressors and entity-specific effects, while Random Effects (RE) models assume no such correlation (Rana-Al-Mosharrafa & Islam, 2021).

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1. Introduction

The results of the data analysis on the profitability, revenue diversification, and financial performance of Ethiopian private commercial banks are presented in this chapter. First a descriptive statistic will highlight key financial trends followed by analysis to examine relationships between variables affecting profitability. Diagnostic tests are also conducted to validate panel regression assumptions. And through the diagnostic test heteroscedasticity, autocorrelation, multicollinearity and normality are examined to confirm the integrity of the regression model. Hausman test is used to determine whether Fixed Effects or Random Effects models provide the best estimations. Regression analysis outputs are then presented along with interpretation to show the impact of the main independent and control variables on profitability.

4.2. Descriptive Statistics

The panel data for this study was structured to ensure that each bank (entity) was observed consistently over the period 2015–2024. The dataset was verified as strongly balanced, meaning all entities had complete observations for each year, which help enhance the reliability of the regression model. The time variable was recognized as year, with yearly intervals between data points. This structured approach ensures a robust framework for examining financial performance trends over time while accounting for bank-specific characteristics and sector-wide dynamics. Before estimating the regression model, it is essential to examine the distribution of key variables to understand the underlying financial trends of Ethiopian private commercial banks. The descriptive statistics provide insights into the profitability structure, efficiency levels, and competitive landscape of the banking sector.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
roa	160	.0234938	.006868	.003	.042
niir	160	.3934125	.1433873	.012	.749
nim	160	.0745438	.0164113	.031	.114
cir	160	.5689187	.0930378	.343	.832
hhi	160	.6293813	.1822077	.5	1.889

Source: Stata output and author's computations, 2025

As can be shown in the above table the average Return on Assets (ROA) is 2.35%. this indicates Ethiopian private commercial banks have a moderate level of profitability. This also suggests that these banks are generating reasonable returns while facing regulatory constraints and the competition in the industry. According to Athanasoglou et al. (2008), ROA is a key indicator of bank efficiency in utilizing assets to maximize their earnings. On the other hand, ROA with a range of 0.3% to 4.2% shows some of these banks are significantly more profitable than others. This will likely be due to the differences in operational efficiency, their risk management strategies, and their revenue diversification approaches.

The Non-Interest Income Ratio (NIIR) average of 39.34% in the study reflect that banks derive a sizable portion of their revenue from non-lending activities such as trade finance, transaction fees, and foreign exchange operations. However, compared to similar figures of other countries where NIIR often exceeds 50%, these banks rely heavily on traditional interest-based revenue. As stated by Abedifar et al. (2018) banks in emerging economies benefit from diversifying revenue streams to stabilize their earnings and reduce their risk exposure. Given the introduction of capital markets, Ethiopian private commercial banks can further develop their participation the securities trading and investment banking to improve their income diversification.

As shown in the above table Net Interest Margin (NIM) for Ethiopian private commercial banks is 7.45%, confirming these banks maintain a strong lending profitability by benefiting from their favorable interest rate spreads. As stated by Berger et al. (2010) a higher NIM is often linked to banks that focus primarily on their credit-based revenue rather than their fee-based services. The range in NIM from 3.1% to 11.4% suggests that some of these banks have stronger pricing power on loans and deposits, while others may struggle with competitive pressures or funding constraints.

The Cost-to-Income Ratio (CIR) which averages 56.89% shows that Ethiopian private commercial banks are spending more than half of their revenue on operational costs. This fact aligns with the findings of (Alhassan, 2015) on banking efficiency, the high CIR, which is up to 83.2% among some of these banks suggests potential inefficiencies in their cost management and operational structure. Reducing their CIR through digital banking adoption and streamlined processes could improve profitability, as suggested by (Ammar & Boughrara, 2019).

Lastly, the Herfindahl-Hirschman Index (HHI) which averages 0.629 reflects a moderate revenue concentration across these Ethiopian private commercial banks. While some of these banks maintain well-balanced income sources, others are highly dependent on either lending or fee-based revenue, as evidenced by higher HHI values which is up to 1.889. As stated by Fenghua & Thakor (2010) a higher market concentration can reduce competition and discourage innovation.

In summary, the above descriptive statistics reveal the key characteristics of these Ethiopian private commercial banks, including moderate profitability, their reliance on traditional lending, a high operational cost, and market concentration. The findings indicate opportunities for improvement in their revenue diversification, operational efficiency, and market competition as Ethiopia's financial sector transitions toward introduction of capital markets and investment banking.

4.3. Correlation Analysis

Correlation analysis is important to assess the existence of relationships between all the variables the researcher have selected for the study before proceeding to regression modeling. This process helps the researcher to identify whether independent variables are strongly associated which may lead to multicollinearity that can distort regression estimates and reduce the reliability of econometric models (Brooks, 2014). As stated by Athanasoglou et al. (2008) banking profitability can be influenced by both financial structure and market dynamics which makes it very important to conduct the test for the existence of correlation among the variables. Since correlation coefficients range between -1 and 1, where 1 represents a perfect positive relationship and -1 a perfect negative relationship, high absolute values may indicate collinearity and require further diagnostic testing (Brooks, 2014).

Table 4.2: Correlation matrix of variables

	roa	niir	nim	cir	hhi
roa	1.0000				
niir	0.4783	1.0000			
nim	-0.0559	-0.6417	1.0000		
cir	-0.6970	-0.3697	0.3140	1.0000	
hhi	-0.4986	-0.5090	0.2716	0.0747	1.0000

Source: Stata output and author’s computations, 2025

As shown in Table 4.2 above, the result of the correlation analysis tells a moderate positive relationship (0.4783) between the variables of non-interest income ratio (NIIR) and return on assets (ROA) suggesting Ethiopian private commercial banks which have a higher revenue from fees and other non-interest income sources tend to achieve better profitability. And this finding is in conformity with the findings of (DeYoung & Rice, 2003), who argued that revenue diversification enhances financial stability by reducing dependency on traditional lending income. But a (0.4783) correlation is not that overwhelmingly strong as other factors, such as their cost efficiency and market structure, also play significant roles in determining their ROA.

The correlation observed between cost-to-income ratio (CIR) and ROA is a strong negative correlation (-0.6970) which confirms a higher operational expense significantly reduces profitability. In alignment with the finding of Alhassan (2015), who emphasized that cost efficiency is a critical determinant of banking performance in emerging markets, banks with very high costs often find it difficult to maintain competitive returns.

The analysis's other finding is a somewhat negative correlation of (-0.4986) between Herfindahl-Hirschman Index (HHI) and ROA shows those Ethiopian private commercial banks operating in concentrated revenue environments experience lower profitability due to limited competitive pressures. As indicated by Fenghua & Thakor (2010) a high market concentration discourages financial innovation, potentially restricting growth opportunities. As these banks navigate the current financial sector transitions in the country, a more competitive environment may foster revenue diversification and increased profitability.

Those banks with a higher non-interest income rely less on income from lending for profitability as revealed by the strong negative correlation of (-0.6417) between NIIR and net interest margin (NIM). This was also the finding of Berger et al. (2010), who explained that traditional banks tend to optimize either income from lending or from fee-based services but rarely excel in both at the same time. As the country moves toward a capital market development, banks may need to balance both revenue streams to improve their financial resilience (Ngo & Le, 2019).

4.4. Diagnostic Tests for Panel Data Regression Assumptions

4.4.1. Heteroscedasticity Test

Heteroscedasticity testing ensures that error terms in the regression model exhibit constant variance. A fundamental assumption in regression analysis was that the average value of the error terms was zero. This condition was satisfied as the researcher have included a constant term in the regression equation, ensuring unbiased estimates. Since the regression model of this study incorporated a constant term, the expectation was that the error term's mean remained zero. And the other issue was homoscedasticity which assumes the variance of the error terms will remain constant across observations. If the variance fluctuated, the model exhibited heteroscedasticity, which affected standard errors and compromised the reliability of hypothesis testing (Brooks, 2014). To test this assumption, White's test was applied and the result of the test is presented below;

Table 4.3: Result of White's test for Heteroscedasticity

```
White's test for Ho: homoskedasticity
         against Ha: unrestricted heteroskedasticity

         chi2(14)     =     74.88
         Prob > chi2  =    0.0000

Cameron & Trivedi's decomposition of IM-test
```

Source	chi2	df	p
Heteroskedasticity	74.88	14	0.0000
Skewness	7.32	4	0.1197
Kurtosis	5.28	1	0.0216
Total	87.48	19	0.0000

Source: Stata output and author's computations, 2025

As shown in the Stata output table, since p-value < 0.05, the null hypothesis of homoscedasticity is rejected, confirming the presence of heteroscedasticity in the regression model. And the heteroscedasticity component (p = 0.0000) indicates significant non-constant variance among residuals. Regarding skewness (p = 0.1197), the result suggests no major skewness concerns. However, kurtosis (p = 0.0216)

indicates some deviation from normal distribution, suggesting the presence of some outlier effects. To correct for heteroscedasticity, robust standard errors were applied to ensure reliable coefficient estimates, as recommended in empirical studies (Athanasoglou, et al., 2008).

4.4.2. Autocorrelation test

The autocorrelation assumptions, which suggest that error terms have zero covariance across time, were evaluated by the researcher. According to Brooks (2014) autocorrelation in panel data models can lead to inefficient estimates and biased standard errors, affecting the reliability of financial performance analysis. As one of the methods used to test autocorrelation, the researcher used Arellano-Bond test, which examines first-order and higher-order autocorrelation in panel datasets and the below is the summary of the test result;

Table 4.4: Result of Arellano-Bond test for autocorrelation

Test Type	Lag Order	Coeff.	Std. Err.	Z-Value	p-Value
Arellano-Bond (AR1)	1st Lag (L1.ROA)	0.0192	0.3692	0.05	0.959
Arellano-Bond (AR2)	2nd Lag (L2.ROA)	0.0333	0.2148	0.16	0.877

Source: Stata output and author's computations, 2025

The result of the test presented above for autocorrelation of the data revealed that neither first-order nor second-order autocorrelation was significant, indicating that residuals do not systematically influence future observations. Specifically, the first-order lag showed a p-value of 0.959, while the second-order lag showed a p-value of 0.877, both above the conventional threshold of 0.05 for statistical significance.

4.4.3. Test for Multicollinearity

Test for multicollinearity is done to ensure independent variables are not excessively correlated, which can distort regression estimates. According to Brooks (2014) multicollinearity is said to occur if two or more predictors have a strong linear relationship, leading to unstable coefficients and unreliable significance levels. The researcher conducted the widely used Variance Inflation Factor (VIF) test to measure how much the variance of a variable is inflated due to correlation with other predictors. A value of 10 or above VIF indicates the existence of severe multicollinearity, requiring

other measures, while a lower VIF values require no or minimal concern. The result is presented below. (Brooks, 2014).

Table 4.5: Result of Variance Inflation Factor (VIF) test

Variable	VIF	1/VIF
niir	2.30	0.434375
nim	1.73	0.578600
hhi	1.38	0.722478
cir	1.19	0.837938
Mean VIF	1.65	

Source: Stata output and author's computations, 2025

The Variance Inflation Factor (VIF) test results presented in the table above shows that multicollinearity is not a concern. as all values are very small. With a Mean VIF of 1.65, indicating independent variables do not show excessive correlation, ensuring that coefficient estimates remain stable and reliable.

4.4.4. Test for Normal Distribution

The researcher hypnotized that the data collected follows a normal distribution and reject the hypothesis if the result shows to the contrary. To assess normality the researcher conducted the Skewness/Kurtosis Test to measure symmetry (skewness) and peak sharpness (kurtosis) to detect distribution abnormalities and the following are the results of the test;

Table 4.6: Result of Skewness/kurtosis test for normality

Skewness/Kurtosis tests for Normality

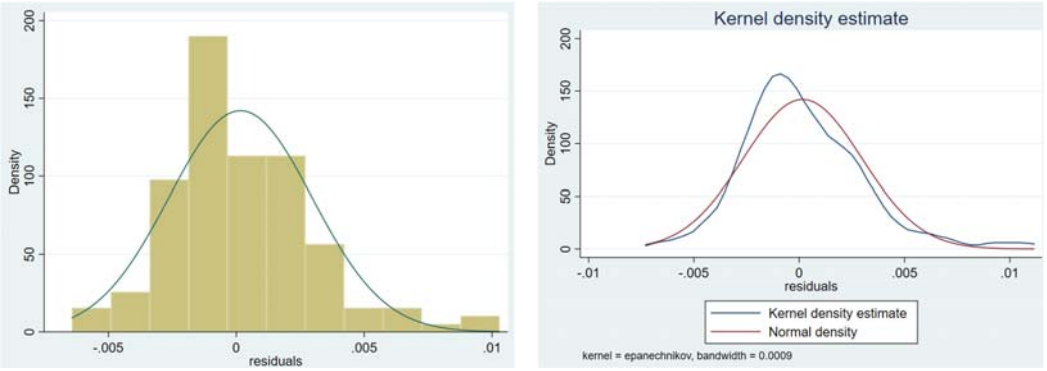
				joint	
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
residuals	128	0.0001	0.0038	18.42	0.0001

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
residuals	128	0.95132	4.947	3.594	0.00016

Source: Stata output and author's computations, 2025

Graph 4.1: Result of Skewness/kurtosis test for normality



As shown in the output table presented above Skewness-Kurtosis Test revealed (Joint chi2 = 18.42, p = 0.0001) and Shapiro-Wilk Test revealed (p = 0.00016). Since both tests yield p-values < 0.05, we reject the null hypothesis of normality, confirming residuals do not follow a normal distribution. This is also depicted the above histogram and kernel density estimate graphs.

Even though the residuals do not follow normal distribution, established empirical studies confirm that panel regression models do not require normally distributed residuals for valid inference, if the researcher applied robust standard errors. Various studies shows that robust standard errors effectively correct for non-normal residuals in panel regressions. Athanasoglou, et al. (2008) and Brooks (2014) emphasize that fixed-effects estimators remain unbiased despite deviations from normality. Nisar et al. (2018) also emphasize that large sample sizes allow estimates to stabilize, supporting the decision to proceed without transformations and making other adjustments.

4.5. Model selection

To determine which model is appropriate, Fixed Effects (FE) and random Effects (RE), to analyze panel data with both cross-sectional and time-series variations the researcher considered the following factors; firstly, according to Athanasoglou (2008) banking profitability is influenced by both bank-specific and macroeconomic factors, making model selection crucial in financial analysis. The FE model is preferred when individual effects are correlated with independent variables, allowing researchers to control for time-invariant characteristics. In contrast, the RE model assumes individual effects are random and uncorrelated with explanatory variables, offering efficient estimates when the assumption holds (Berger, et al., 2010). Considering the Ethiopian banking sector

which is highly influenced by regulatory interventions and market concentration, the FE model was thought to be a suitable choice for controlling entity-specific influences.

4.5.1. The Hausman test for model selection

To justify the selection the Hausman test was conducted to determine whether the Fixed Effects (FE) or Random Effects (RE) model is more appropriate. And with the test the FE model will be selected if individual effects (differences between banks) are correlated with explanatory variables and if these effects are uncorrelated, the RE model will be selected. The below table presents the result of the Hausman test and the p-value is 0.0033 which is below 0.05 leading to acceptance of the FE as an appropriate model.

Table 4.7: Result of Hausman test

	Coefficients			
	(b) fe_model	(B) re_model	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
niir	.0033889	.0119129	-.0085241	.002414
nim	.1587106	.1874104	-.0286998	.0085826
cir	-.0538565	-.0517545	-.002102	.001721
hhi	-.0175014	-.016176	-.0013253	.0004751

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 15.83
Prob>chi2 = 0.0033

Source: Stata output and author's computations, 2025

4.5.2. ANOVA test for poolability

To further validate the appropriateness of the selection of the Fixed Effects model over pooled regression, a poolability test was conducted using the ANOVA method. In this test the intention is to examine whether individual bank specific effects are statistically significant and through that to determine whether pooling data across banks without accounting for entity-specific differences is justified.

The results of the test as shown in the 4.8 below revealed a highly significant effect of the entity variable (Prob > F = 0.0009), confirming that individual bank characteristics influence ROA. The F-test for Fixed Effects (Prob > F = 0.0009) reinforced this

conclusion, indicating that pooling data in a simple OLS model would ignore important bank-specific variations reinforcing the appropriateness of the Fixed Effects model over pooled regression.

Table 4.8: Result of ANOVA test for poolability

Number of obs = 160 R-squared = 0.8607
Root MSE = .002732 Adj R-squared = 0.8418

Source	Partial SS	df	MS	F	Prob>F
Model	.00645509	19	.00033974	45.52	0.0000
entity	.00031134	15	.00002076	2.78	0.0009
niir	6.195e-06	1	6.195e-06	0.83	0.3638
nim	.00041682	1	.00041682	55.85	0.0000
cir	.00185201	1	.00185201	248.14	0.0000
hhi	.00089656	1	.00089656	120.12	0.0000
Residual	.00104491	140	7.464e-06		
Total	.00749999	159	.00004717		

Source: Stata output and author's computations, 2025

4.6. Regression Results and Interpretation

To investigate the impact of non-interest income on Ethiopian private commercial banks' profitability, the researcher estimated a Fixed Effects (FE) regression model using robust standard errors. As stated in the previous sections robust standard errors are used to address the issues of heteroskedasticity and non-normality identified during the validity tests. The results are presented in the table below:

As can be observed from table 4.9 the overall R^2 value is 0.7922 showing that the model used explains 79.22% of the total variation in the dependent variable (ROA). Since Stata did not provide the adjusted R^2 value, a manual calculation provided an adjusted R^2 value of 0.7866, meaning 78.66% of the variation in ROA is explained.

When we come to the individual variables, with $\beta = 0.0034$ and $p = 0.541$ Non-Interest Income Ratio (NIIR) appears statistically insignificant. This indicates that non-interest income does not significantly influence the profitability of Ethiopian private commercial banks. This result also aligns with (Stiroh, 2004 and Phan, et al., 2023),

who argued that non-interest income supports revenue stability but does not necessarily enhance profitability.

Table 4.9: Result of Fixed Effects (FE) regression

```
Fixed-effects (within) regression               Number of obs      =       160
Group variable: entity                          Number of groups   =        16

R-sq:                                           Obs per group:
     within  = 0.7824                                         min =        10
     between = 0.8225                                         avg =      10.0
     overall = 0.7922                                         max =        10

                                                F(4,15)            =     40.95
corr(u_i, Xb)  = 0.1674                         Prob > F           =    0.0000

                                    (Std. Err. adjusted for 16 clusters in entity)
------------------------------------------------------------------------------
             |               Robust
         roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        niir |   .0033889   .0054219     0.63   0.541    -.0081676    .0149454
         nim |   .1587106   .0329743     4.81   0.000     .0884276    .2289935
         cir |  -.0538565   .0044236   -12.17   0.000    -.0632852   -.0444278
         hhi |  -.0175014   .0037302    -4.69   0.000    -.0254521   -.0095507
       _cons |   .0519847   .0056987     9.12   0.000     .0398381    .0641312
-------------+----------------------------------------------------------------
     sigma_u |  .00187671
     sigma_e |  .00273196
         rho |  .32060253   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Source: Stata output and author's computations, 2025

A strong positive effect on ROA ($\beta = 0.1587$, $p < 0.001$) for Net Interest Margin (NIM) confirms that Ethiopian banks remain highly dependent on interest-based income. In their study DeYoung & Rice (2003) and Berger et al. (2010) highlighted that traditional interest-based income sources remain the dominant profitability driver for commercial banks, particularly in regulated banking environments, which is consistent with the result.

Cost-to-Income Ratio (CIR) showed a highly significant negative impact on ROA ($\beta = -0.0539$, $p < 0.001$) which suggests that higher operational costs severely reduce these bank's profitability. This view was also supported by prior studies by (Ammar & Boughrara, 2019 and Alhassan, 2015) who emphasizes that inefficient cost structures act as barriers to profitability, particularly in developing economies where administrative expenses tend to be disproportionately high.

The last variable is the Herfindahl-Hirschman Index (HHI) which also exhibited a negative relationship with ROA ($\beta = -0.0175$, $p < 0.001$). This result suggests that there is a higher market concentration that affects bank profitability negatively. This is in line with the argument of Berger et al. (2010) who stated that excessive market concentration limits competition and discourages financial innovation, thereby constraining overall bank performance.

4.7. Summary of key findings

The empirical results offer significant insights into Ethiopian banks' profitability drivers and revenue strategies.

The first is the limited role of non-interest income in profitability of Ethiopian private commercial banks. The insignificance of NIIR indicate that income diversification strategies of these banks involving fee based and other non-interest income sources may not be a diver of profitability. This finding aligns with Acharya et al. (2006), who argue that in emerging markets, banks rely on lending revenue due to underdeveloped financial innovation and alternative income sources.

Secondly, the strong dependence of Ethiopian private commercial banks on loan-based revenue was highlighted by strong effect of NIM. This supports traditional banking theory, which suggests banks primarily generate income from interest-based activities (Berger, et al., 2010). However, this reliance raises concerns regarding profitability sustainability, particularly during periods of low interest rates.

Thirdly, the significant negative impact of CIR emphasizes that higher operational costs substantially reduce the profitability of Ethiopian private commercial banks. This underlines the fact that reducing operational cost is essential for enhancing their profitability. This finding supports cost efficiency theory, which suggests that operational efficiency leads to stronger financial performance through reduced costs (Athanasoglou, et al., 2008)

Lastly, the result shows that market concentration reduces competition and profitability. The negative effect of HHI confirms that the country’s’ highly concentrated banking sector may limit competition and financial innovation. The findings on market concentration align with market structure theory, which posits that excessive

concentration restricts competition, limiting financial innovation and profitability (Lee, et al., 2014).

In summary the results of the analysis highlighted the factors that influence profitability in Ethiopian private commercial banks, revealing the limited role of non-interest income, the strong dependence on interest margins, the critical impact of cost efficiency, and the negative influence of market concentration. Additionally, Ethiopia's recent introduction of a capital market and issuance of the first investment banking licenses introduces new opportunities for financial diversification, which may impact profitability in the long term.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This last chapter presents the main conclusions drawn from the study and offers recommendations to enhance the financial performance of Ethiopian private commercial banks and for future studies. The findings underscore the reliance of Ethiopian private commercial banks on interest-based revenue, the very limited role of non-interest income, the negative impact of cost efficiency and the effects of market concentration on profitability. While the financial sector undergoes reforms banks must adapt to emerging opportunities and challenges. The recommendations intend to support sustainable growth, encourage diversification, and improve operational efficiency in the evolving banking landscape.

5.2. Conclusions

The analysis leads to several key conclusions regarding Ethiopian private commercial banks' financial performance.

Though fee-based services contribute to their revenue stability, the analysis revealed that Ethiopian banks have not yet developed a strong and consistent non-interest income structure to support their profitability. As expected, Ethiopian private commercial banks are still heavily dependent on interest-based income, but diversification opportunities are emerging in the country's financial sector. Revenue from Loan-driven revenue streams continue to dominate profitability with a high net interest margins sustaining their financial success. The recent introduction of capital markets may allow banks to engage in securities trading and investment services which is expected to provide these banks an alternative revenue stream in addition to lending.

A high Cost-to-Income Ratios negatively affect the profitability of Ethiopian private commercial banks. Accordingly, reducing administrative overhead costs, streamlining operations to make it more efficient and investing in digital solutions should be key priorities for improving financial performance. As these banks go through financial sector reforms and prepare for new financial operations (investment banking, capital market participation), operational efficiency remains crucial for profitability.

The result of the analysis indicate that market concentration weakens profitability, but the introduction of capital market and the ongoing related reforms could encourage competition. The dominance of state-owned institutions may also play a part in restricting private commercial banks' ability to expand to more innovative financial services. The introduction of capital markets may enhance competition, allowing private banks greater access to corporate clients and diversified revenue streams. It is understood that financial sector reforms bring new opportunities, but their success depends on each banks' ability to adapt to fully leverage these opportunities.

5.3. Recommendations

Based on the findings the researcher concluded that interest-based revenue dominates Ethiopian private commercia banking profitability and cost efficiency and market concentration significantly shape financial outcomes. The newly introduced capital market reforms present an opportunity for income diversification, but their long-term profitability impact remains uncertain. Accordingly, the following recommendations have been drawn;

i. Ethiopian private commercial banks should work to strengthen their non-interest income channels. Especially considering the current reforms in the financial sector, banks should immediately undertake initiatives to capitalize on these reforms. These initiatives could be creating securities trading units to generate income through market participation, to engage in investment banking and corporate advisory services and introducing structured financial products depending on regulatory requirements.
ii. Ethiopian private commercial banks need to work to enhance their operational efficiency. While diversifying revenue streams, they need to ensure cost efficiency by optimizing resource allocation. This can be through automation, investing in digital banking, reducing administrative overhead, rationalizing branch networks, and integrating AI-driven financial tools. As these banks go into capital markets and investment banking, cost optimization should be a core focus.
iii. Policymakers and regulators should align the financial sector reforms with long-term financial sustainability objectives by enabling smooth transition to capital market operations, promoting best practice oversight of investment banking and

corporate finance. Institutional participation should also be encouraged to strengthen market liquidity.

iv. While this study provides valuable insights into the role of non-interest income on financial performance of Ethiopian private commercial banks, several areas warrant further investigation.

   a. Since the country is making a significant shift in financial sector dynamics with the recent introduction of capital market and issuance of the first investment banking licenses, future studies should assess the impact of capital market reforms on bank profitability.
   b. And given the strong negative impact of cost-to-income ratio (CIR) on profitability, future researches could explore cost optimization strategies and their influence on financial performance.

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