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Analysis of Financial Status on Selected Commercial Banks in Ethiopia: An Examination of Capital Growth

By

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Statement of Declaration

I, hereby declare that this thesis is entirely my own work and that all references to other works and sources have been properly cited. No university or college has recognized the thesis for a degree, diploma, or other academic honor.

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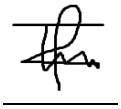
Signature 

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List of Acronyms

CAMEL - Capital adequacy, Asset quality, Management, Earnings, and Liquidity

ROA – return on asset

ROE – return on equity

EA - Earning ability

MQ- Management Quality

AQ - Asset quality

CAR – Capital adequacy ratio

CBE – Commercial bank of Ethiopia

AIB – Awash International Bank

DB – Dashen Bank

BB – Berhan Bank

ZB – Zemen Bank

HB – Hibret Bank

ADIB – Addis International Bank

NIB – Nib international Bank

NBE – National bank of Ethiopia

NPLs - non-performing loans

NPAs - non-performing assets

ESG- Environmental, Social, and Governance

CBB- Construction and Business Bank

Abstract

This study investigates the financial performance of eight commercial banks in Ethiopia over the period from 2013 to 2022 using the CAMEL method. The primary aim is to examine the capital growth trend through CAMEL variables on return on assets (ROA) and ranking the banks based on their individual financial performances. The study adopts a positivist research methodology due to its adaptability in studying pattern for quantitative techniques to achieve a comprehensive understanding of the subject. In this research, the CAMEL framework serves as the foundation, with the performance measure of ROA and CAMEL. The study emphasizes the importance of banks focusing on increasing total assets by mobilizing deposits and efficiently converting them into loans. Notably, the research suggests that total asset size is a determinant factor in enhancing return on assets. This thesis contributes to the existing body of knowledge by shedding light on the specific CAMEL variables that significantly affect financial performance in the Ethiopian banking sector. The findings provide actionable insights for banks to optimize their operations, enhance asset quality, and ultimately improve profitability.

Keywords: CAMEL, Financial performance, Return on Asset, Commercial banks, Ethiopia.

CHAPTER ONE

1. Introduction

1.1 Background of the study

Effective utilization of resources leading to capital growth is a fundamental indicator of a nation's prosperity. Within this framework, the financial sector, especially banking, assumes a pivotal role in regulating the circulation of money, managing supply and demand dynamics, and facilitating economic expansion. Banks serve as intermediaries, receiving deposits from surplus financial entities and extending credit to businesses and industries. This function is indispensable for fostering growth within the financial realm and propelling overall economic development. Moreover, the finance industry acts as a conduit that interconnects various sectors such as construction, agriculture, manufacturing, and technology. By providing crucial financial services, banks contribute significantly to the economic landscape, enabling businesses to thrive and driving progress across diverse sectors. Consequently, evaluating and monitoring the performance of the banking sector becomes imperative, given its foundational importance to any economy. (Boardman and Vining, 2005) Financial performance analysis serves as a robust framework for assessing the strengths and weaknesses of banking institutions. This process involves comprehensively examining the relationships between balance sheets, profit and loss accounts, and employing diverse financial methodologies. Such analysis aids in both short-term and long-term forecasting, enabling stakeholders to pinpoint growth opportunities and chart strategic trajectories. Crucially, tracking bank performance is essential as it directly impacts the efficient functioning of the broader economy. Key metrics such as profitability, efficiency, solvency, and liquidity provide insights into how effectively a bank generates income and allocates its resources. Financial statement analysis serves as a valuable tool in this regard, furnishing pertinent information to lenders, investors, managers, and other stakeholders. (Alhadab, 2017)

In addition to promoting economic development, high-performing banks play a pivotal role in simplifying and enhancing the saving-investment process. By streamlining financial transactions and making them more accessible, these institutions foster capital growth and stimulate investment activities, further fuelling economic progress. (Alhadab, 2017) Moreover, implementing robust performance measurement systems becomes indispensable for banks to

gauge their progress in achieving organizational objectives, devise development strategies, and make informed investment decisions. These systems serve as compasses guiding banks towards sustainable growth and ensuring alignment with overarching economic goals. In essence, the convergence of capital growth and financial performance underscores the intricate interplay between banking dynamics and economic prosperity. By fostering efficient resource utilization, facilitating capital growth, and promoting sound financial performance, banks emerge as linchpins driving sustainable development and prosperity on a national scale. (Anderson, 1994)

1.2 Over view of Ethiopian banking industry

Ethiopia's banking system has evolved over the years, with the Abyssinian Bank marking the beginning of modern banking in the country in 1905. It became the first national bank in Africa when it changed its name to the Bank of Ethiopia in 1931. (Tesfaye, 2018) The Ethiopian State Bank was established in 1943, contributing to the opposition against foreign financial dominance. In 1963, the State Bank was divided into the National Bank of Ethiopia (NBE) and the Commercial Bank of Ethiopia (CBE), the latter being the largest commercial bank in the country.

The 1960s saw the formation of numerous other private financial organisations. Consequently, until Emperor Haile Silassie was overthrown in 1974, Ethiopia's financial structure was formed similarly to that of other African nations. Every privately held financial organisations, including thirteen insurance companies, two non-bank financial intermediaries, and three commercial banks, was nationalized on January 1, 1975, according to (Geda, 2006). One national bank, one commercial bank (CBE), one agricultural and industrial bank renamed Development Bank of Ethiopia, one housing and savings bank renamed Construction and Business Bank (CBB), currently merged with CBE, and one insurance company (Ethiopian Insurance Company) were recognized by national banks. Ethiopia reopened its doors to private investors in 1991, restricting their participation to Ethiopian natives in the financial industry, following a transition of government. Since 1992, Ethiopia, like many other least developed countries (LDCs), has been reorganizing and rebuilding its different institutions. As a result, there are currently 27 commercial banks, two government-owned banks, and the national bank (NBE) that govern Ethiopia's banking industry.

1.3. Statement of the Problem

The study addresses the pressing need to comprehensively evaluate the financial performance of selected commercial banks operating in Ethiopia. Given the absence of a stock market and the paramount importance of economic growth and stability, conducting a rigorous analysis of these banks' financial health, risk management practices, and stability is imperative. This assessment becomes even more crucial amidst the evolving financial landscape, marked by economic fluctuations and the pervasive influence of digital transformation. The research seeks to elucidate how these multifaceted factors impact the performance of commercial banks in Ethiopia, thereby providing invaluable insights for stakeholders, regulatory bodies, and the banking industry as a whole. Particularly, as Ethiopia endeavour's to develop its capital markets, understanding the financial performance of commercial banks within this emerging framework assumes heightened significance. The study aims to explore the intricate interplay between the banking sector and the evolving capital market environment, with a keen focus on financial performance metrics, risk dynamics, and adaptability strategies. By delving into the financial health and operational resilience of commercial banks, the research endeavours to offer actionable insights for decision-makers, policymakers, and industry players, thereby facilitating informed decision-making, policy formulation, and sustainable growth within the nascent capital market ecosystem. The assessment of the banking industry's economic performance holds pivotal importance for various stakeholders. Financial institutions rely on such evaluations to ensure sustained profitability, while governments, regulators, and investors seek clarity on how banks mobilize deposits and navigate the complexities of a globalized industry. Moreover, analysing financial performance metrics aids in identifying strengths and weaknesses within banks, thereby directly influencing the overall profitability, liquidity, and efficiency of the sector.

Furthermore, this study is crucial in enabling management, shareholders, and the general public to discern areas of improvement and capitalize on strengths using financial performance indicators. Despite challenges such as foreign exchange constraints and political instability, the banking sector in Ethiopia has demonstrated substantial growth. As the industry intensifies its efforts to attract international investors and diversify banking services, the evaluation of bank performance emerges as a linchpin for ensuring the continued smooth functioning of the economy. Therefore, this research endeavours to undertake a comprehensive trend analysis of the financial statements of eight prominent commercial banks operating in Ethiopia namely, Commercial Bank of Ethiopia, Awash International Bank, Dashen Bank, Berhan Bank, Zemen

Bank, Hibret Bank, Addis International Bank, and Nib International Bank spanning the period from 2013 to 2022. Through this meticulous examination, the study aims to provide actionable insights that can inform strategic decision-making and contribute to the sustained growth and stability of the banking sector in Ethiopia.

1.4 Research question

1. How has the capital adequacy of the selected Ethiopian banks evolved over the past decade, and what patterns or shifts in risk-absorption capacity have been observed, reflecting their sustained financial stability?

2. What are the distinct indicators of asset quality, loan portfolio performance, and risk management strategies within the selected Ethiopian banks?

3. In what ways do the governance structures, risk management frameworks, and strategic decision-making processes within the selected Ethiopian banks influence their management quality and leadership resilience?

4. How do the earnings sustainability, key profitability metrics, and operational efficiencies of the selected Ethiopian banks contribute to understanding their capacity to sustain profits, manage risk exposure, and navigate market challenges effectively over the 10-year period?

1.5. Objective of the study

1.5.1. General Objective of the study

The main objective of this research was to evaluation of the financial performance of the selected Ethiopian banks within the CAMEL framework over the past decade.

1.5.2. Specific objectives of the study

1. To assess the trends and performance of selected Ethiopian banks in terms of capital adequacy, examining their capacity to absorb risk and maintain financial stability over a 10-year period.

2. To evaluate the asset quality, loan portfolio performance, and risk management strategies of these banks, offering insights into their credit risk resilience and portfolio management practices.

3. To assess the earnings sustainability, profitability metrics, and operational efficiencies of the banks, detailing their capacity to generate sustained profits while managing risk exposure and market challenges.

4. To examine the liquidity positions, funding strategies, and short-term solvency measures of the banks, offering insights into their ability to meet immediate financial obligations and manage liquidity risk.

1.6. Significance of the Study

The following benefits are anticipated to result from the study:

The study will offer a comprehensive understanding of the long-term financial performance and resilience of Ethiopian banks within a rapidly evolving financial landscape. By examining trends and dynamics over an extended period, it aims to uncover insights into the adaptability and strategic positioning of these banks. The research outcomes hold substantial potential to inform regulatory bodies, policymakers, and industry stakeholders about the stability, effectiveness of risk management strategies, and opportunities for expansion and innovation within the Ethiopian banking sector. Furthermore, the study's insights into the relative strength and long-term viability of Ethiopian banks, particularly within the context of developing capital markets and evolving regulatory frameworks, are poised to be highly significant for investors, depositors, and other stakeholders within the financial sector. By providing nuanced assessments of banks' performance and resilience, the research findings will empower stakeholders to make informed decisions regarding investment, risk management, and strategic partnerships, thereby fostering confidence and stability within the Ethiopian financial ecosystem. Ultimately, the study's implications extend beyond academic discourse, offering practical insights that can drive positive changes in banking practices, regulatory frameworks, and investor sentiments. Through its contribution to understanding the intricacies of the Ethiopian banking landscape, the research stands to play a pivotal role in shaping the future trajectory of the financial sector, fostering growth, innovation, and resilience in the face of dynamic market forces and regulatory shifts.

1.7. Scope and Limitation of the Study

The scope of this study encompasses an in-depth investigation into the financial status of selected commercial banks operating within Ethiopia. The research focuses on a 10-year period, spanning from 2013 to 2022, during which annual reports and financial statements of these banks will be meticulously analysed. The study specifically centres on capital growth

within the CAMEL framework, a widely recognized method for assessing bank performance based on Capital adequacy, Asset quality, Management quality, Earnings, and Liquidity.

Geographically, the study is confined to the Ethiopian banking sector, with a particular emphasis on selected commercial banks. Conceptually, the research delves into the nuances of capital growth trends observed within this sector over the specified timeframe. By examining annual reports and financial statements, the study aims to provide a comprehensive analysis of how capital accumulation has evolved over the years and its implications for the financial health and regulatory compliance of the selected banks.

1.8. Limitation of the Study

This research did have some limitations, though, such as the absence of non-monetary measures and limitations on time, money, and logistical resources. The study was also limited by the confidentiality of bank data, and the analysis and conclusions were based on secondary data sources, primarily published annual reports.

1.9. The organization of the study

This research consisted of five chapters that covered various aspects of the study. The first chapter provided an introduction that included background information, the problem statement, objectives, research questions, significance, scope, and limitations. In the second chapter, a review of related literature was conducted, focusing on different documents written about the subject, including the definition of investigative work, theoretical frameworks, and key concepts. The third chapter discussed the chosen research methods, content analysis, and qualitative analysis, and provided justification for their selection. The fourth chapter presented, analysed, and discussed the data collected. Lastly, the fifth chapter summarized the main findings of the study and offered recommendations and suggestions for further research.

CHAPTER TWO

2. Literature review

2.1. Introductions

The financial system is made up of a number of different organizations, including stock and bond markets, mutual funds, insurance companies, and banks. Efficiency and competition in the banking system are closely linked, as banks need to operate efficiently to retain their customers and remain in business Survival in a competitive environment depends on performance and growth (M, 2010). The banking sector, insurance companies, microfinance organizations, credit and savings cooperatives, and the unorganized financial sector make up Ethiopia's financial sector. The sector is dominated by the banking industry, which is underdeveloped and comparatively closed off when compared to its regional counterparts. The government owns a large portion of the industry, which limits competition, prevents financial intermediation, and impedes economic growth. The Ethiopian banking industry is still very profitable, well-capitalized, and stable in spite of these drawbacks. But financial intermediation is poor, lagging behind other nations in sub-Saharan Africa (D. Teshome (2017). Ethiopia's banking system has a long history; contemporary banking was first offered in the country in 1905. Up until the 1970s, when the private banking sector was legalized and the industry underwent significant reforms, the industry was controlled by a single government-owned bank. At the moment, either the entire government or the entire private sector owns the industry. For a long time, Ethiopia's banking industry was heavily regulated and closed to outside competition. However, as of right now, the government of Ethiopia is offering foreign banks the chance to enter the Ethiopian market, but no banks have taken advantage of this opportunity, so there is very little commotion. Insufficient competition results in stringent lending regulations and a dearth of substitute funding sources.

2.2. Determinants of Efficiency and Performance in the Banking Sector

The expansion of a nation's economy depends heavily on competition, especially in the financial industry. Increased competition boosts the sector's level of innovation, quality of financial products, and efficiency in the financial services industry. The degree of competition has an impact on households' and businesses' access to financial services. Governments can boost competition in the banking industry to attain targeted rates of economic growth. The two primary methods for assessing bank competition are non-structural and structural. (Addis

Alemayehu, 2019). By evaluating market performance in light of market structure, the structural approach establishes a connection between concentration and competition. Two models that are part of the structural approach are the efficiency hypothesis and the structure-conduct-performance paradigm. While the latter looks into whether greater market concentration encourages collusive behaviour among larger banks and improves performance, the former looks at how fundamental supply and demand factors and market structure affect banks' performance. (Sahoo Biresh, 2007)

The "Competition-stability" view argues that increased market power in the loan market can lead to higher bank risk due to the default of loan customers and increased moral hazard incentives. According to recent research, there is a positive correlation between a higher risk of bank failure and more concentrated banking markets. Numerous studies have looked at the competitive environment in the banking sector; some have concentrated on the connection between profitability and market concentration, while others have investigated how regulations and other factors affect the performance of banks. Tighter entry restrictions have been found to have a negative correlation with bank efficiency (Boardman and Vining, 2005). This correlation can lead to higher interest margins, higher overhead costs, and increased bank fragility. To reduce negative shocks and improve the stability of the financial system, an effective banking sector is essential. Numerous scholars have deliberated over the most effective approaches to gauge bank efficiency, encompassing both parametric and non-parametric techniques. Bank accounts are a common internal determinant used to measure bank efficiency, along with other internal and external determinants. The banking systems of emerging nations are notoriously inefficient, which can impede the growth and stability of the global financial system. (Barth, 1999) Managers and regulators can attain an efficient banking system with the aid of research conducted in various regions with differing environmental and economic factors. A prohibition needs to be profitable.

2.3. Non-financial factors in the banking industry

Non-financial factors, including customer satisfaction, innovation, and corporate governance, are increasingly gaining prominence in the performance evaluation of banks and financial institutions. The integration of these factors reflects the evolving nature of banking, with a broadened focus on sustainable relationships, adaptability, and ethical leadership. Here's a detailed examination, validated with references, highlighting the growing significance of these non-financial factors:

Customer satisfaction has increasingly become a pivotal metric in evaluating bank performance, reflecting a shift towards customer-centric business models. The link between customer satisfaction, loyalty, and financial performance has been established, emphasizing the importance of positive customer experiences in driving long-term business success. (Anderson, 1994). The second factor which is innovation, particularly in the context of technological adaptability, is gaining recognition as a critical factor in bank performance evaluation. The ability of a bank to innovate and embrace digital transformation directly impacts its competitiveness, operational efficiency, and the delivery of customer-centric services. (Serrano, 2017). When it comes to Corporate Governance and Ethical Leadership, corporate governance practices are increasingly influencing performance assessment, emphasizing the role of boards and senior management in steering ethical conduct and transparent decision-making. Sound corporate governance directly contributes to a bank's stability, risk management, and long-term value creation. (Brown, 2006). Non-financial factors such as talent management and employee engagement are gaining attention in performance evaluation. Employee satisfaction and effective talent retention are linked to improved customer service, operational efficiency, and overall organizational resilience. (Harter, 2002). Banks are increasingly being evaluated based on their social responsibility and community engagement. The impact of their activities on broader societal welfare, environmentally sustainable operations, and community development is being scrutinized as part of a bank's overall performance assessment. (Brammer, 2008).

The evaluation of non-financial factors reflects a broader focus on long-term value creation and strategy alignment. Banks are being assessed based on their ability to sustainably create value, aligning their operations with social, environmental, and governance imperatives. (Eccles R. G., 2013). The growing prominence of non-financial factors in performance evaluation marks a shift towards a more balanced and comprehensive assessment of a bank's overall health and sustainability. Reference to these factors reflects the complex and evolving nature of banking operations, emphasizing the integral role of customer satisfaction, innovation, corporate governance, and ethical leadership in driving long-term success. The integration of these non-financial metrics in performance assessment is expected to continue shaping the future of banking, prompting an increased emphasis on sustainable relationships, societal well-being, and organizational resilience.

2.4.What is CAMEL?

In 1979, the Federal Financial Institution Examination Council adopted the CAMEL rating system, which stands for Capital Adequacy, Asset Quality, Management Quality, Earning Ability, and Liquidity Management. Since then, the National Credit Union Administration has also used this rating system. By highlighting the ones that need extra care or attention, this internal rating system assesses the soundness of financial institutions. The CAMELs approach was added in 1996 as an extra component to emphasize risk. The CAMEL rating is private and is only disclosed to senior management and the relevant supervisory personnel. To make sure a bank is in good health, it assesses a number of factors, including its cash flow, funding sources, financial statements, and macroeconomic information. (Mulualem, 2015)

2.4.1. Capital Adequacy

The banking sector is significantly impacted by the cost and availability of capital. Capital is essential for assessing a bank's stability and safety. It serves as a financial safety net against a variety of risks the institution faces, preserving depositor confidence (Solomon, 2018). A bank's ability to lend money is also influenced by its capital. The ability of management to meet capital requirements and the overall financial health of a bank are both significantly impacted by capital adequacy. Three essential elements of capital adequacy are its permanence, its non-imposition of fixed charges on earnings, and its ability to yield to depositor and creditor rights. Supervisors use the capital risk asset ratio, which takes into account the ratio of capital to risk-weighted assets, to evaluate the adequacy of capital. The Bank for International Settlements has set a minimum capital requirement of 8%, though this may differ depending on the nation. The goal for banks could be a higher capital ratio. Tier 1 (core capital) and Tier 2 (supplementary capital) are the two categories of capital. Weights are assigned according to the risk attached to each asset class in order to calculate risk-weighted assets. (Solomon, 2018)

In the CAMEL model, each component, including capital adequacy, is rated on a scale of 1 to 5. A rating of 1 indicates a strong capital level, while a rating of 5 signifies a critical deficiency that requires immediate action from shareholders or external resources. (Koch, 1995)

2.4.2. Asset Quality

One particular factor that has a significant bearing on a bank's profitability is asset quality. The cash, deposits, loans, and investments that a bank has on hand, as well as their quality, all have a significant impact on how much money the bank makes. In actuality, a bank's loan portfolio

is frequently its largest asset class and directly affects its profitability. One of the main reasons banks fail is a portfolio of low-quality loans. (Baral, 2005) Determining the subjective quality of assets necessitates managing credit risk and evaluating them using trend analysis and peer comparison. Determining the amount of non-performing assets (NPAs) as a percentage of total assets requires measuring the asset quality. Ratios like Net NPAs to Net Advances and Non-Performing Loans to Gross Loans are frequently used to evaluate the quality of an asset. (Liu, 2010)

2.4.3. Management efficiency

The ability of the board of directors and management to recognize, assess, and mitigate the risks associated with an institution's operations in order to maintain safe, sound, and efficient operations that comply with relevant laws and regulations is referred to as management efficiency. According to Tesfaye (2014), management efficiency is the capacity for leadership and administration, conformity to established standards, and flexibility in planning and responding to changing conditions. In his research, he makes the case that assessing management effectiveness necessitates looking at personnel quality, organizational discipline, control systems, and management systems. The ratio of non-interest expense to gross expense, as well as other ratios like total advances to total deposits, interest income over total assets, profit per employee, business per employee, and return on equity, is some of the quantitative measures of management efficiency that are proposed (Misrak, 2013). The assessment of management is deemed difficult and uncertain; in prior research, the ratios of operating costs to net operating income and operating expenses to assets were utilized as measures of management effectiveness. These ratios show how well the bank is able to control costs in relation to revenue and expenses in relation to size.

2.4.4. Earning quality

A measure of earning quality takes into account the quantity and trend of earnings as well as potential long-term sustainability factors. Inadequate management can raise market risks and result in loan losses. Earnings performance in the future holds equal or greater significance than its historical and current performance. Grier (2007) asserts that sustaining a balanced financial structure, supplying shareholder rewards, absorbing loan losses, and fostering public confidence all depend on steady profits. The percentage of annuity-based earnings, the consistency of growth in comparison to industry norms, and the existence of multiple sources of income are just a few examples of the profitability ratios that can be used to assess earning

potential. Specific ratios that can be considered include operating profit divided by average working funds, operating profit divided by total assets, net profit divided by total assets or average assets, interest income divided by total income, non-interest income divided by total income, and spread or net interest margin divided by total assets. (Alhadab, 2017)

2.4.5. Liquidity

The ability of a bank to fulfil its on-going responsibilities, such as paying depositors, is evaluated using the liquidity ratio. A bank runs the risk of running out of liquidity if it is unable to meet these demands (Yeager, 1989). Thus, a bank needs to have efficient fund management procedures in place to guarantee that it can keep up enough liquidity to fulfil its financial commitments on time and that it can swiftly turn assets into cash with little loss. Liquidity is measured by different scholars using different financial ratios, such as total loans to customer deposits and customer deposit to total assets. The liquid asset to deposit ratio, as defined by the guidelines of the National Bank of Ethiopia, is a definite indicator of liquidity in the Ethiopian context. These guidelines establish the minimal amounts of liquid assets and primary reserve assets that banks are required to maintain. (Ermias, 216)

2.5. Evolving CAMEL framework

The evolving landscape of banking and financial services, characterized by a growing emphasis on non-financial metrics, customer-centricity, and sustainability considerations, necessitates a nuanced understanding of the enduring relevance of frameworks such as CAMEL (Capital adequacy, Asset quality, Management, Earnings, and Liquidity). A comprehensive evaluation of a bank's performance is made possible by the systematic assessment provided by CAMEL, which is essential as the industry navigates a dynamic environment. In light of current demands, this literature review seeks to highlight the enduring value of CAMEL and pave the way for a more thorough investigation of the dynamic interactions among non-financial factors, traditional financial metrics, and the changing banking

Amidst the evolving focus on non-financial factors, it is essential to underscore the enduring relevance of CAMEL in evaluating a bank's stability and soundness. The framework's emphasis on capital adequacy, asset quality, and liquidity provides a fundamental assessment of a bank's risk resilience and overall financial robustness. Since these conventional pillars continue to serve as the cornerstone of long-term stability, it is imperative to discuss CAMEL in the context of the contemporary banking environment. (Berger A. N., 1997). Since CAMEL frameworks are in line with changing industry standards and regulatory requirements, their use is still

relevant. Because CAMEL is structured, banks can use it as an essential tool for regulatory assessments, proactive risk management, and compliance with the constantly changing standards set by regulators and supervisors. (Scholtens B. &., 2013). A balanced assessment that takes into accounts both financial and extra-financial aspects is made possible by using CAMEL, especially in light of the growing emphasis on non-financial metrics. A comprehensive understanding of a bank's operations is fostered by the framework's structured assessment, which offers a platform for incorporating non-financial considerations into a thorough performance evaluation. (Eccles R. &., 2013). The ability of CAMEL to steer banks through challenging circumstances makes it relevant in the face of dynamic market fluctuations. Banks can effectively navigate shifting market dynamics thanks to the framework's multidimensional evaluation, which gives them a thorough understanding of risk exposure, operational resilience, and strategic adaptability.. (Berger A. N., 1997)

The continued applicability of models such as CAMEL in light of current industry dynamics creates the conditions for a thorough analysis that takes into account both contemporary non-financial factors and conventional financial measures. This review aims to shed light on the crucial role that CAMEL plays in forming a comprehensive understanding of a bank's performance in the constantly changing financial landscape, as the literature currently shifts towards a deeper investigation of the dynamic interplay between financial and non-financial factors within the banking sector.

2.6. Significant of CAMEL in the banking sector

Frameworks like CAMEL are often endorsed and utilized by regulatory authorities and supervisory bodies. For instance, in the United States, the Federal Reserve and other regulatory bodies utilize the CAMEL rating system as a benchmark for supervising and assessing the condition of banks and other financial institutions. The CAMEL framework enables a comprehensive assessment of a bank's performance across multiple critical dimensions. It goes beyond simple profitability metrics to include measures of capital adequacy, asset quality, and risk management, thus offering a more holistic view of a bank's overall health. (Berger A. N., 1997). By focusing on liquidity, asset quality, and capital adequacy, frameworks like CAMEL assist in evaluating a bank's risk management practices and its overall financial stability. This is particularly vital for ensuring sustainable operations and protecting against potential financial instability. CAMEL also provides a standardized framework for comparison across banks and over time. This standardization facilitates clearer comparisons of performance and

risk profiles, aiding stakeholders in making informed decisions about the financial soundness of banks.

The structured assessment provided by the CAMEL framework helps regulatory authorities in identifying banks that may require intervention or corrective action. It facilitates targeted supervisory measures and regulatory interventions, ultimately contributing to the stability and resilience of the banking sector. (Gilbert, 1999) In conclusion, the CAMEL framework and similar assessment tools play a pivotal role in ensuring the prudential regulation and supervision of banks. By providing a structured and multi-faceted assessment of a bank's performance and risk profile, these frameworks contribute to the maintenance of a stable and sound banking system, which is vital for the broader financial stability and economic well-being of a country.

2.7.The CAMEL rating system

The CAMEL rating system, also known as the Uniform Financial Institution Rating system (UFIRS), was adopted by the Federal Financial Institution Examination Council in 1979. It is employed to determine which institutions need extra care and to assess the stability of financial institutions. A sixth component, "S," which gauges sensitivity to market risk, was added to the system in 1996. The CAMEL approach evaluates a bank's financial soundness using six main criteria: earning capacity, capital adequacy, asset quality, management quality, liquidity management, and sensitivity to market risk (Gulgzoztorul, 2011). The capital adequacy component is especially crucial since it shows how well a bank is doing financially overall and how well it can handle capital requirements. The availability and cost of capital, the capacity to absorb losses, and the ability to lend are some of the variables that determine capital adequacy. The adequacy of capital is evaluated using the capital adequacy ratio, which compares the bank's capital to its risk-weighted assets (Podviezko, 2010). A rating of 1 denotes a high level of capital, whereas a rating of 5 denotes a serious shortfall that has to be fixed right away. Comparing the performance of various banks and identifying issues early on are two more benefits of a CAMEL rating. Furthermore, the viability of banking institutions depends on their profitability. ratios of profitability, like operating profit to total.

2.8. Empirical Review

Numerous researchers in various countries have conducted studies on the performance of commercial banks. These studies aim to evaluate the financial performance of private banks and understand the effectiveness of the banking system. In order to conduct a comprehensive

analysis, researchers have looked at articles on bank performance in Ethiopia and other countries.

One important study by **Azizi and Sarkani DYA (2014)** assessed the performance of Mellat Bank using the CAMEL model. The study found a significant and positive association between indicators of liquidity, management efficiency, earning quality, and financial execution. The research suggests that the CAMEL model should be carefully considered by supervisors to improve the competitiveness of banks. Another study by Persona examined the performance of 65 Indian banks using the CAMEL model and found that innovative products, better service quality, and better bargaining were beneficial in the face of tough competition.

Mishra (2013) evaluated the performance of different Indian public and private banks from 2000-2011 using the CAMEL approach and found that private sector banks performed the best in terms of soundness.

Dash and Das (2009) compared the performance of public sector banks with private or foreign banks using the CAMEL framework and found that private foreign banks performed better, particularly in management soundness and earning profitability.

Mohamed and Hashim (2014) investigated the performance of domestic and foreign banks in Malaysia using the CAMEL framework and found that asset quality and liquidity had a significant effect on the performance of Malaysian banks.

Abdulazeez (2014) examined the financial performances of Saudi commercial banks from 2000-2013 and found that factors such as capital adequacy, asset quality, operational efficiency, bank size, and liquid assets had a significant relationship with financial parameters like Return on Equity (ROE), Return on Asset (ROA), and Net Interest Margin (NIM).

Antenehet et al. (2013) assessed the health of commercial banks in Ethiopia and found that private banks performed better in terms of asset quality, management quality, and earning ability, while public banks were better in capital adequacy.

Mulualem (2015) examined the financial performance of Ethiopian commercial banks from 2010-2014 using the CAMEL approach and found that capital adequacy, asset quality, and management efficiency had a negative relationship with profitability measures, while earning and liquidity had a positive relationship.

Dakito (2015) studied the performance of commercial banks from 2000-2013 and found a positive relationship between capital adequacy and bank performance.

Anteneh (2018) investigated the financial performance of commercial banks in Ethiopia from 2011-2016 using the CAMEL approach and found that asset quality, management efficiency, liquidity, size of the bank, and net interest margin were significant variables in explaining return on assets (ROA) and return on equity (ROE).

Previous research has examined various factors that influence bank profitability, such as capital adequacy, asset quality, managerial efficiency, and liquidity management. Studies have found both positive and negative relationships between these factors and bank profitability. For example, in Kenya, capital adequacy, asset quality, managerial efficiency, and liquidity management were found to influence the financial performance of saving and Credit Cooperative Societies (SACCOs) in Kisumu County. In Ethiopia, capital adequacy, asset quality, and management efficiency were found to have a negative relationship with profitability measures, while earnings and liquidity had a positive relationship. Bank deposits have also been found to have a direct positive association with bank profitability. Smaller businesses have been shown to develop more quickly and have a more secure cash situation, leading to increased profitability in the short term. Factors such as bank size, asset management, and operational efficiency have also been found to impact bank profitability. The relationship between these factors and profitability indicators may vary depending on the specific indicator used, such as Return on Assets (RoA) or Return on Equity (RoE). Overall, factors such as asset management, operational efficiency, and bank size have been found to significantly impact bank financial success.

Financial Performance of Commercial Banks in Ethiopia: A Comparative Analysis"- carried out: A. Tesfaye, B. Assefa, C. Lemma Publication: Ethiopian Journal of Economics, 2018.This study delves into the financial performance metrics of commercial banks within Ethiopia, emphasizing aspects such as capital adequacy, asset quality, management efficiency, earnings, and liquidity. The authors conduct a comparative analysis of selected banks, offering insights into their financial stability and operational dynamics within the Ethiopian banking landscape.

"Regulatory Reforms and Financial Performance: A Case Study of Ethiopian Commercial Banks" conducted by D. Teshome, E. Mulatu Publication: Journal of African Business, 2017. Investigating the impact of regulatory reforms on the financial performance of commercial banks in Ethiopia, this study delves into the responses of banks to evolving regulatory

frameworks. The authors illustrate the nexus between regulatory changes and the financial metrics of Ethiopian banks, offering implications for regulatory and supervisory bodies. "Global Trends in Financial Performance Assessment of Commercial Banks" conducted by: X. Zhang, Y. Chen, Z. Wang Publication: Journal of Banking Research, 2020. This comprehensive review of financial performance assessment practices across various global banking systems provides a broad perspective on the key metrics, methodologies, and challenges encountered in evaluating the financial health of commercial banks worldwide. The study highlights notable trends in assessing risk, profitability, and capital adequacy, offering a comparative lens for understanding similar facets in the Ethiopian context." Technological Innovations and Financial Performance in Global Banking: A Review "Authors: S. Kumar, M. Li, J. Smith Publication: International Journal of Finance, 2019, Focusing on the impact of technological advancements on financial performance in global banking, this review encompasses the adoption of digital innovations, fintech integration, and the resultant shifts in operational efficiency and customer-centric strategies. The authors' insights provide a valuable framework for contemplating the technological influence on financial performance metrics within Ethiopian commercial banks.

2.9. Research Gap

The banking sector is responsible for allocating a country's financial assets, making it vital to regularly evaluate its performance. The CAMEL model is an effective tool for evaluating and assessing the stability of banks. Previous empirical evidence suggests that the CAMEL variables have a positive impact on the dependent variables of ROA and ROE and also study also found that bank size and net interest margin are influential factors in bank performance. In order to explore the effects of these variables, this research gather data from a selected set of commercial banks, preferably including both large and small banks, to ensure a representative sample. Obtain historical financial data from 2013 to 2022 for these banks, including information on the CAMEL variables (Capital Adequacy, Asset Quality, Management Efficiency, Earnings, and Liquidity) conduct a detailed trend analysis of the CAMEL variables and bank performance indicators (ROA) over the selected time period. Examine the patterns, fluctuations, and changes in these variables over time. Identify any long-term trends, cycles, or seasonal patterns that may exist.

2.10. Conceptual Framework

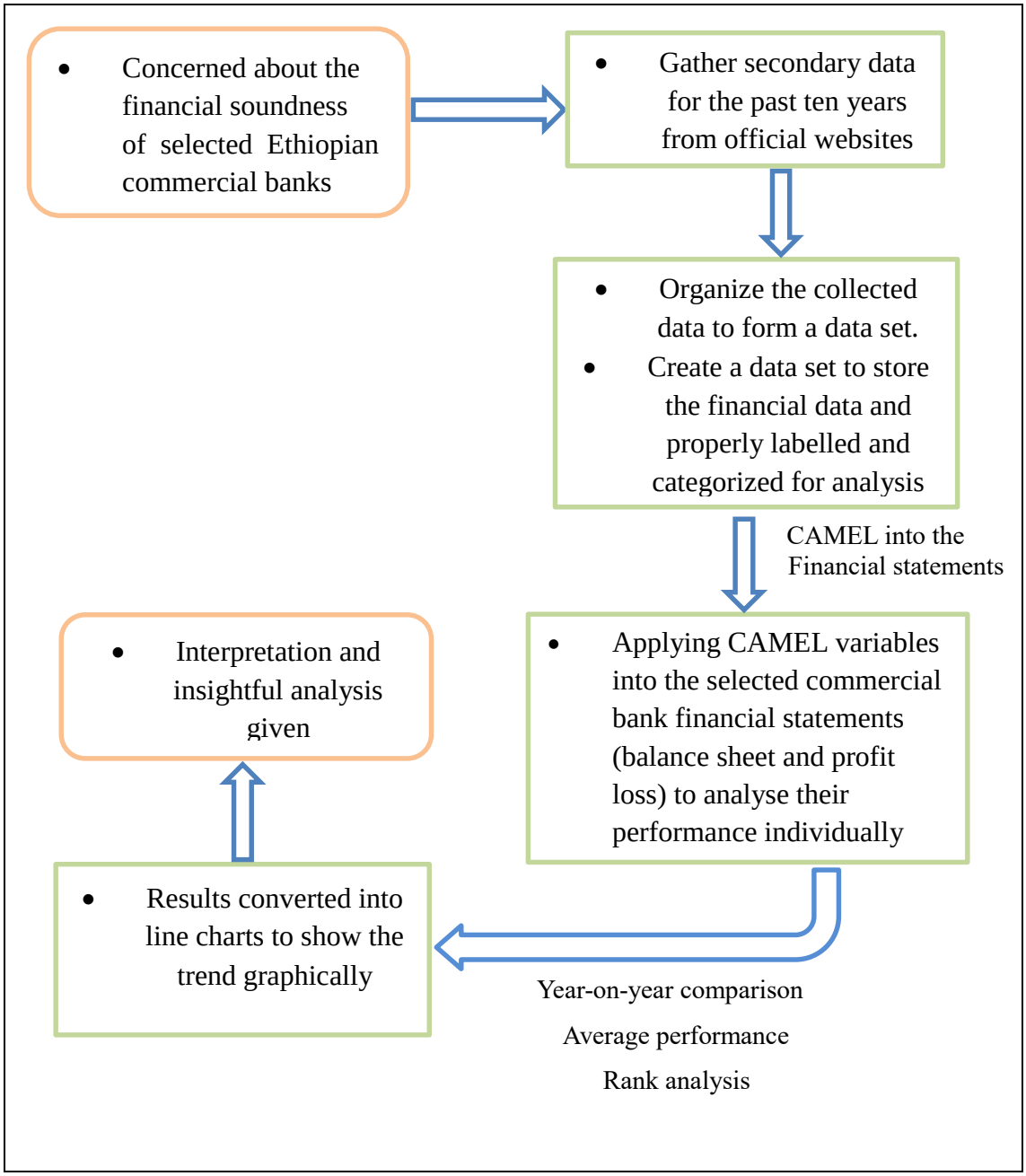

Figure 2.12. Conceptual Framework

Source: Gathered by the researcher, 2023

This conceptual framework diagram illustrates the assessment of financial soundness of selected commercial banks by gathering secondary data from their official website and organize and categorize those data into a data set to apply CAMEL variables to get the statistic result. After the result fetched in converted into line chart to show the trends. Finally interpretations and insightful analysis is given.

CHAPTER THREE

3. Research Design and Methodology

This chapter discusses the research methodology employed to carry out this study. It starts by discussing the research design and proceeds with a discussion about the nature and instruments of data collection and sampling design.

3.1 Research Design

The main purpose of the study is to evaluation of the financial performance of the selected Ethiopian banks within the CAMEL framework over the past decade on its financial performance. As stated by (Croswell, 2009 p.3) research designs are plans and procedures for research that span the decisions from broad assumption to detailed method of data collection and analysis. The design of this study was to construct a quantitative approach to assess the financial performance of selected commercial banks in Ethiopia using the CAMEL framework. This approach involves the systematic analysis of numerical data obtained from secondary sources with the aim of objectively evaluating key economic indicators. Emphasis is on using statistical methods to obtain meaningful information about banks activity within the CAMEL framework, ensuring targeted and evidence-based research.

3.2 Research approach

In order to thoroughly assess the financial performance of particular Ethiopian commercial banks using CAMEL, this study offers a positivist research methodology. It was decided to use positivist because of its adaptability in combining quantitative techniques to produce a thorough comprehension of the topic. This strategy focused on using the methods that were most appropriate for achieving the research objectives while also taking into account the practical implications of the study question (Kothari, 2004). Using quantitative analysis of financial statements and numerical indicators, the positivist approach allowed for a detailed examination of the objective components of financial performance. In line with the goal of the study, which was to assess quantitative measures of financial health using the CAMEL framework, this research methodology was appropriate. Because of the positivist approach, the research process was dynamic and flexible, and the methodology chosen was able to effectively address the intricacies involved in evaluating the financial performance of the chosen commercial banks.

3.3 Target Population

A target population is the group of individuals that the intervention intends to conduct research in and draw conclusions from (Khizer, 2011). The target population for this study is total commercial banks registered by the National Bank of Ethiopia (NBE) and currently operating in the country. There are a total of 27 private commercial banks and one government owned commercial bank in Ethiopia. Selection criteria include the size of banks, market share, operation year and geographic location. Focusing on this specific subgroup of banks, it aims to provide a detailed and contextual analysis of the selected commercial banking sector in Ethiopia within the CAMEL framework.

3.4 Sampling method

The sampling strategy employed in this study is a purposive sampling method, chosen deliberately to ensure alignment with the research objectives and criteria essential for comprehensive analysis within the CAMEL framework. By selecting commercial banks based on specific criteria such as size, market share, and data availability, the study aims to focus on institutions that are most pertinent to its objectives. This approach allows for the inclusion of banks that are representative of the Ethiopian banking sector, capturing a diverse range of perspectives and experiences. Additionally, the selection of banks with readily available financial statements and reports ensures access to sufficient data for analysis. The purposive sampling method was chosen because it enables researchers to select banks deliberately based on their compatibility with the research objectives, ensuring a focused and relevant analysis within the framework of financial performance assessment.

3.5 Sample size

Sample design deals with sample frame, sample size and sampling technique. Sampling is a technique of selecting a suitable sample for the purpose of determining parameters of the whole population. (Hafiz, et al.2007). The sample size and sampling method for this study involved conducting research in eight private commercial banks in order to ensure the results are representative of the industry. Data was collected from the official websites of the banks from the period of 2013-2022. The time period selected for this study considering the availability of data, research time and cost. This study employs annual data. The study didn't include all commercial banks due to unavailability of audited financial statement on their respective website. As a result, the study used 8 commercial banks namely CBE, AIB, DB, BB, ZB, HB, ADIB, and NIB.

3.6 Source of Data

This research is based solely on secondary data from various sources including financial statements, annual reports and other publicly available documents. The use of historical records of commercial banks provides a comprehensive dataset for quantitative analysis within CAMEL. The exclusive reliance on secondary data allows research to effectively use existing data without bank in an activity that provides a solid basis for an objective assessment of their financial situation.

3.7. Data Analysis and Presentation

According to (Kothari, 2004), data analysis must be done with the research's objectives in mind. As a result, the CAMEL model was used in this study's quantitative analysis to assess the financial performance of a chosen commercial bank in Ethiopia from 2013 to 2022 based on Panel data. The reason of selected this method because panel data allows for a comprehensive analysis, pooling together cross-sectional and time series dimensions. It's particularly effective for detecting variances and similarities in the financial metrics of multiple banks, offering a broader understanding of how different institutions fare across the CAMEL assessment criteria. Secondary data that was gathered from the banks' official websites was examined to evaluate its appropriateness, dependability, sufficiency, and accuracy. To prepare the data for analysis, the gathered information was coded, verified, and input into a basic Excel application.

3.8. Variable Description

This includes variables that have been taken from various literature sources in order to determine how the CAMEL framework affects Ethiopian banks' performance. According to Mahdian and Asadi Afshordi (2014), the Basel Committee on Banking Supervision has declared since 1988 that the CAMEL model must be applied in order to evaluate financial institutions. The capital adequacy, asset quality, management quality, earning capacity, and liquidity position are the five components of the CAMEL framework. Return on Asset (RoA) is the sole dependent variable in this study. The other five independent variables are capital adequacy, asset quality, earning quality, management efficiency, and liquidity.

ROA and ROE are the two main alternative measures of profitability that are found in the literature. The return on assets (ROA) measures the ability of bank management to make money from the bank's assets, but it may be skewed because of off-balance-sheet activities. The return on equity to shareholders is displayed by ROE. The study's profitability metrics include return on asset (ROA). The ROA is a measure of a bank's management team's capacity to turn a profit

on the institution's assets. It displays the earnings per billions of assets and provides insight into how well the bank manages its assets to produce income. The study employed average assets to account for any variations in assets over the course of the fiscal year. To calculate ROA, use:

Return on Assets = Net income after tax /Total Assets

Adequate capital is essential for a bank to keep investors' trust and keep it out of bankruptcy. It displays the banks' overall financial situation. In times of crisis, this ratio can be used as a mirror to assess whether banks have sufficient capital to cover customer withdrawal requests. The ability of the bank to absorb losses emerging from risk assets is measured by the capital adequacy ratio (CAR), which is one of the four ratios included in this category.

Capital Adequacy (CA) = Total Capital/Total

Asset Capital comprises paid up capital, retained earnings, and other bank reserves. This formula is used to compute the capital adequacy ratio. Asset quality: The quality of a bank's assets is a key indicator of its strength. Determining the non-performing asset (NPA) factor as a percentage of the bank's total assets is the motivation behind computing asset quality (Nandi, 2012). Loan default to total advance ratio is a widely used metric to assess asset quality. The formula for calculating the asset quality ratio is as follows:

Asset quality (AQ) = non-performing loans / total asset management efficiency.

It is evident that one of the key elements underlying the bank's performance metrics is effective management. The effectiveness of the bank's management ensures its continued existence and expansion. The expenditure to income ratios—discussed in the review by Karri HK (2015)—should provide the most insight into the CAMEL parameter out of the four ratios.

Management Quality (MQ= Non-interest expenses/Operating income Earning quality) is used to calculate it.

Earning quality: It is largely responsible for the profitability and productivity of the bank, as well as the growth and sustainability of its future earning capacity. The ratio of net interest income to total loans was used in the study.

Earning ability (EA) = Net interest income / Total loans is the formula used to calculate it. Liquidity, in general, is the capacity of a bank to convert non-cash assets into cash when

necessary. Consequently, the liquid asset to total deposit ratio—which examines the entire deposit rather than a portion of it—was selected as the thesis's preferred ratio among the four because it provides the most insight into the bank's capacity to meet its deposit obligations with readily available liquid funds. It's computed using the formula

Liquidity = Liquid Asset/Total Asset.

3.9 Ethical Considerations

In order for a research study to be considered thorough and credible, it is crucial for it to adhere to the ethical guidelines set for scientific research. The following issues were carefully considered in order to maintain ethical standards throughout the study.

Chapter Four

4 Result and discussion

The objective of the study is to examine the financial performance of selected commercial banks on measures of profitability, specifically Return on Asset using their individual past trend through CAMEL framework. The study also aims to rank commercial banks based on these factors. This chapter presents, analyses, and discusses the results obtained from the data analysis.

4.1. Description of Statistical Data

This section uses an accompanying graph to provide a detailed review of the various CAMEL ratios, such as capital adequacy, asset quality, earning quality, management efficacy, and liquidity.

4.1.1. Capital Adequacy

Maintaining an adequate level of capital is essential to a financial institution's stability. A bank's capital adequacy ratio indicates if it has sufficient capital to withstand future unanticipated losses. This ratio illustrates the bank's internal resilience, which enables it to weather difficult times. It stands for the amount of capital needed to control a bank's exposure to various risks, including credit, market, and operational risk, as well as to absorb losses while shielding debt holders. Additionally, it's just as crucial to adhere to the minimal legal requirements. The four main metrics used to assess a bank's capital adequacy are the government securities to total investment ratio, advance to asset ratio, and debt to equity ratio.

4.1.1.1. Loan and Advance to Asset Ratio

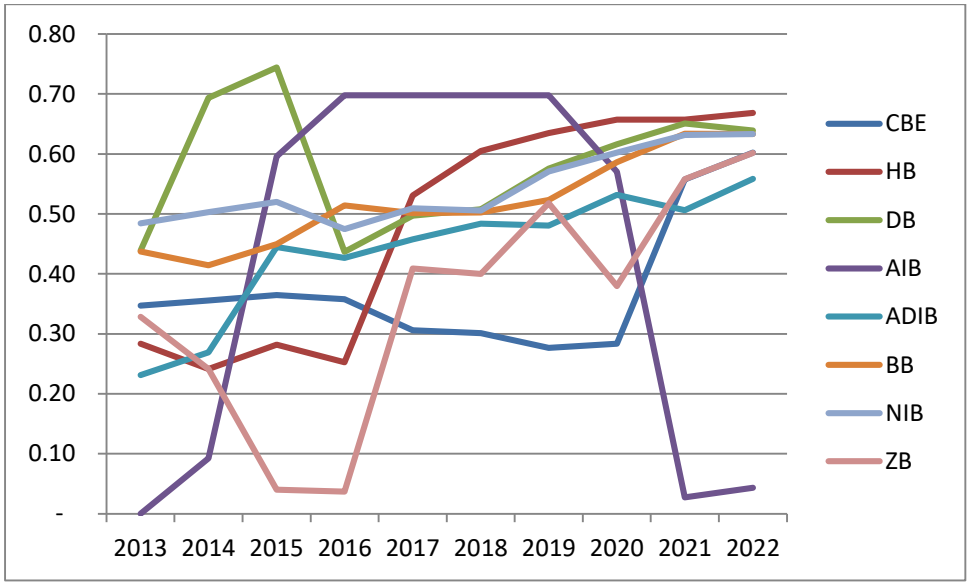

Figure 4.1.1.1. Loan and Advance to Asset Ratio

In interpreting the findings on the Loan and Advance to Asset Ratio in the Ethiopian banking industry, it's crucial to compare them with international benchmarks to gain a comprehensive understanding. While the average ratios observed in Dashen, Nib, and Berhan Bank were notably lower, ranging from 52% to 58%, compared to the global banking standard of 60% to 80%, they still reflect a conservative approach to lending. Conversely, CBE Bank's average ratio of 38% indicates a more cautious lending strategy, which may limit its profitability potential compared to its peers. However, when benchmarked against emerging market norms of 40% to 60%, the Ethiopian banking sector's ratios appear more aligned, suggesting a balanced approach to risk-taking and asset allocation. Overall, the Ethiopian banking industry could benefit from optimizing its lending practices to achieve a better balance between risk and profitability, drawing insights from both global standards and the unique dynamics of emerging markets.

4.1.1.2. Debt to Equity Ratio

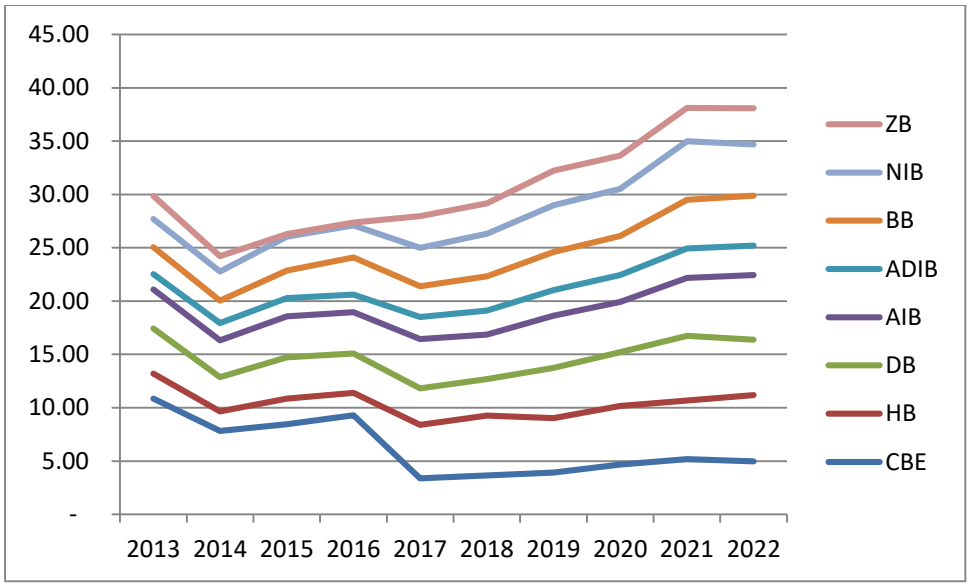

Figure 4.1...2. Debt to Equity Ratio

In comparing the debt equity ratios of various banks in the Ethiopian context, it's evident that there is considerable variation in their leverage levels. Addis International Bank stands out with the lowest average leverage ratio of 21.19%, suggesting a more conservative financial approach with less reliance on debt financing. Conversely, Commercial Bank of Ethiopia (CBE) exhibits the highest leverage ratio at 62.18%, indicating a higher level of debt relative to equity. This contrast underscores differing risk profiles among banks, with those like Addis International Bank potentially enjoying lower financial risk compared to CBE. However, it's essential to note that each bank's leverage strategy is influenced by its unique business model, market conditions, and risk appetite. Therefore, while a lower debt equity ratio is generally considered favourable for stability, it's not necessarily indicative of superior performance without considering other contextual factors.

Composite capital adequacy

Addis, Nib, Berhan and Dashen Bank consistent first- fourth place ranking indicates a robust capital adequacy position, reflecting its capacity to absorb risk and maintain financial stability over the 10-year period. This sustained performance highlights resilience and strength in effectively managing its capital resources, potentially indicating prudent risk management practices and strategic capital allocation strategies. Hibret and Zemen Bank are consistent fifth-six rank performances highlight a steady capital foundation and resilience within the context of the CAMEL framework analysis over the 10-year period but need some attention. Awash

and CBE bank consistent seventh-eighth-place ranking showcases its capital resilience and capacity to absorb risks within the context of the CAMEL framework assessment. In summary, the rankings within the CAMEL framework over the 10-year period provide substantive insights into the long-term capital strength and resilience of each bank. Each bank's positioning within the framework reflects its ability to absorb risks, maintain financial stability, and strategically manage its capital resources, offering a comprehensive understanding of their relative standings in terms of capital adequacy. These insights further lay the foundation for understanding the banks' strategic positioning and adaptability.

4.1.2. Asset quality

Financial institutions must consider asset quality because it impacts their capacity to absorb possible losses. Examining the ratio of non-performing loans (NPLs) to total loans and the provision for loan loss reserves are two methods to gauge the quality of an asset. Banks must maintain reserves for bad loans as required by law. The health of the loan portfolio is evaluated using the ratio of provision for loan losses to total loans. By dividing the loan loss provision by the total loan, one can calculate the asset quality; a lower ratio indicates higher asset quality relative to competitors. A financial institution's capacity to turn a profit is directly impacted by the quality of its assets, and deteriorating asset quality is frequently the root cause of banking issues. Therefore, it is important to analyse asset quality in the banking industry using various tools, such as non-performing loan data.

4.1.2.1. Non-performing loan to Total Loan and Advance

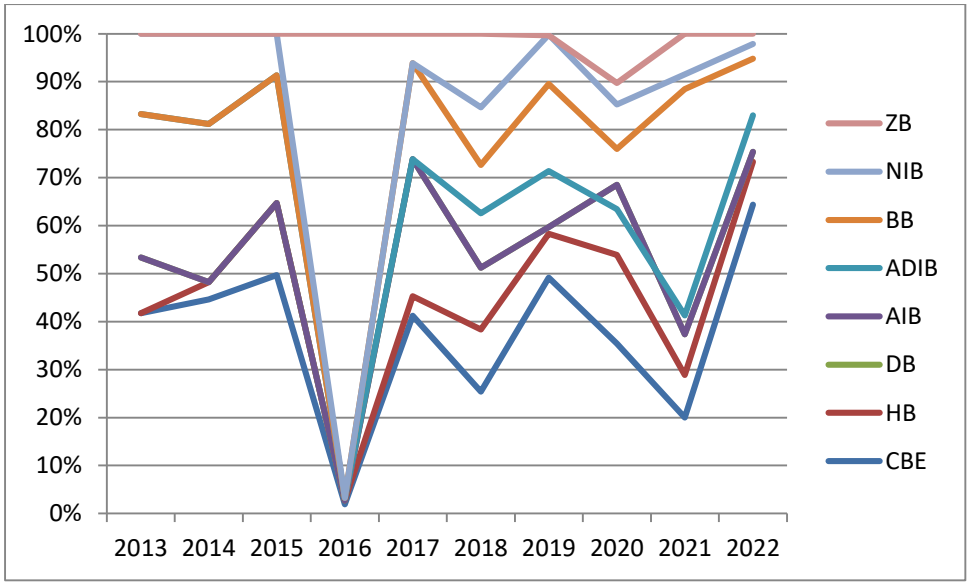

Figure 4.1.2.1. Non-performing loan to Total Loan and Advance

The assessment of asset quality in Ethiopian banks reveals notable variations across institutions, highlighting differing levels of risk within their loan portfolios. Based on the benchmarks provided, the findings reveal notable variations in asset quality among the banks analysed. Awash Bank stands out with the best asset quality, as indicated by its low non-performing loan to total loan ratio of 0.02%, well below the benchmark of 5%, suggesting a strong loan portfolio with minimal non-performing loans. Conversely, Commercial Bank of Ethiopia (CBE) exhibits the poorest asset quality, with a non-performing loan to total loan ratio of 1.71%, significantly exceeding the benchmark threshold. This indicates a higher proportion of non-performing loans relative to its total loan portfolio, potentially signalling challenges in loan management and credit risk assessment. Similarly, when considering the non-performing loan to total asset ratio, Awash Bank maintains superior asset quality with a low ratio, while CBE again demonstrates weaker performance, surpassing the benchmark threshold of 2%. These findings underscore the importance of effective loan management practices and risk assessment frameworks in maintaining favourable asset quality levels, with deviations from benchmark thresholds warranting further attention and corrective measures to mitigate credit risk and safeguard financial stability.

4.1.2.2. Non-performing loan to Equity

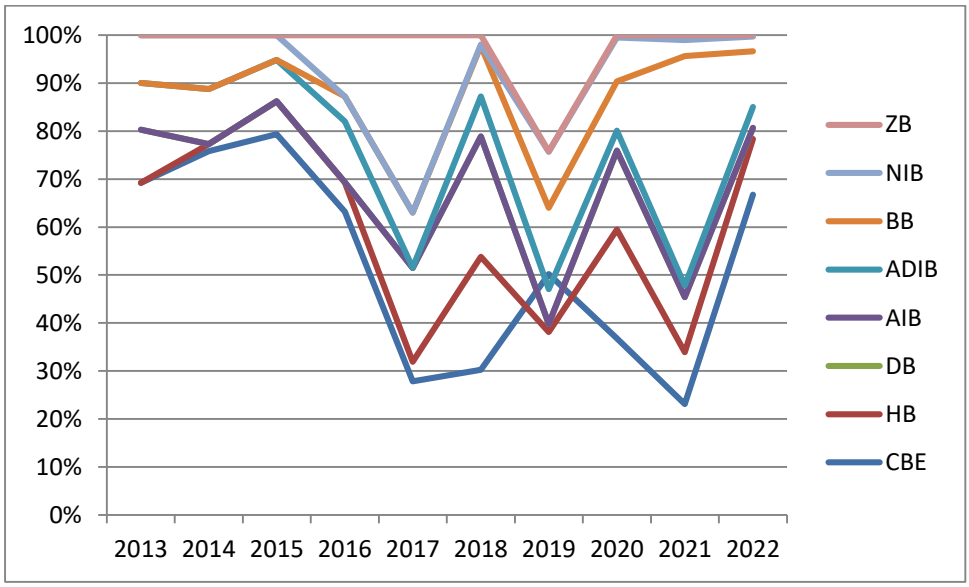

Figure 4.1.2.2. Non-performing loan to Equity

Based on the benchmark data, a non-performing loan to equity ratio below 5% is generally considered favourable, indicating stronger asset quality and lower financial risk. In this context, Awash Bank's ratio of 0.02 falls well below the benchmark, reflecting robust asset quality and

prudent risk management practices. On the other hand, CBE's ratio of 9.41% significantly exceeds the benchmark, signalling potential weaknesses in its loan portfolio and elevated financial risk. Zemen and NIB's ratios of 0.28% and 0.68% respectively also fall within acceptable ranges compared to the benchmark. This comparison highlights the varying degrees of asset quality and risk exposure among the banks, with Awash Bank performing notably better than CBE in terms of non-performing loans relative to equity. Such analysis underscores the importance of effective risk management and asset quality monitoring in maintaining financial stability and resilience within the banking sector.

Composite asset quality

Awash, Dashen, Nib, and Hibret Bank's consistent first- fourth place ranking in asset quality signifies a robust management of its assets, indicating a strong and stable portfolio quality over the 10-year period. The sustained performance implies notable asset soundness and effective risk management practices, reflecting a capacity to maintain high-quality assets and mitigate potential credit risks. Addis and Berhan Bank's fifth- six place ranking underscores its performance in managing its asset quality within the CAMEL framework, indicating a stable position in maintaining a sound credit portfolio. The bank's sustained performance reflects its effective risk management and a steady credit portfolio, pointing towards its ability to maintain asset soundness and mitigate credit risks over the 10-year period but need some attention to long run complication. Commercial Bank of Ethiopia's consistent eighth-place ranking underscores its management of asset quality within the CAMEL framework, reflecting its position in maintaining an unstable and rigid credit portfolio. The sustained rank indicates its inability to address credit risks and maintain the soundness of its asset portfolio, reflecting ineffective risk management practices over the 10-year period

4.1.3. Management efficiency

For a bank to run well, management efficiency is essential. Understanding their performance requires evaluating control mechanisms, organizational culture, and management systems. Ratios are also useful for evaluating managerial skills. Effective risk identification, measurement, and control combined with safe, sound, and efficient operations constitute the hallmark of quality management. Evaluating systems, culture, and controls subjectively can help determine management capability; alternatively, certain ratios can be employed. These ratios include the capacity to cut costs, optimize revenue, and make efficient use of facilities. An approach to gauge management effectiveness is to look at the ratio of expenses to income.

When compared to other banks, a lower ratio denotes superior management in terms of cost control per unit of revenue.

4.1.3.1. None Interest Expense to Operating Income

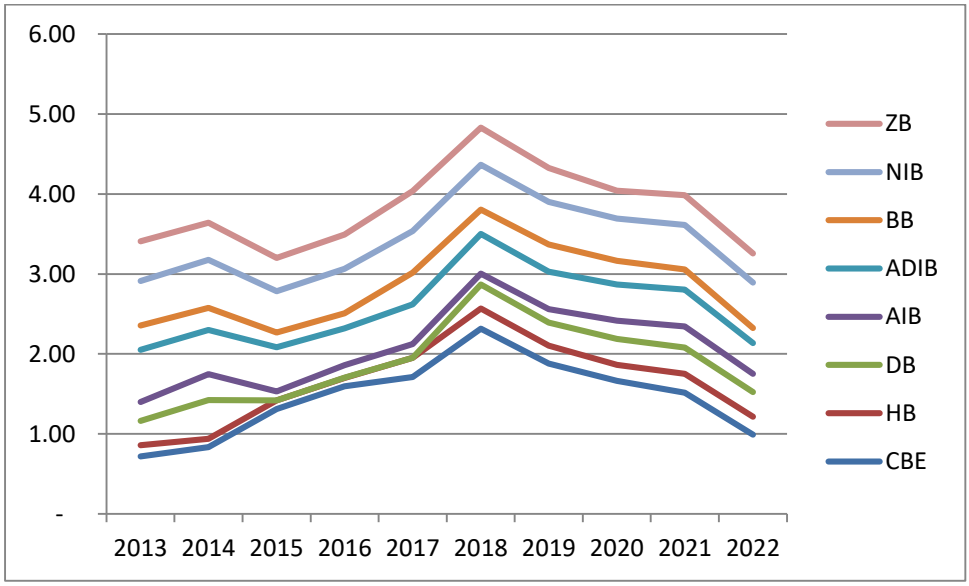

Figure 4.1.3.1. None Interest Expense to Operating Income

The lower this ratio is, the better the management is at controlling or minimizing the cost per unit of revenue generated compared to other banks. This can be seen in the table, where Hibret, AIB, and Dashen banks spend 18, 20, and 23 cents respectively to generate 1 birr of operating income. CBE, on the other hand, is the most expensive bank, spending 1.45 cents to generate 1 birr of operating income. The average cost for all banks to generate 1 birr of operating income during the given period was 48 cents. Comparing these figures to industry benchmarks, Hibret, AIB, and Dashen banks perform exceptionally well, with their ratios falling significantly below the average benchmark of 48 cents. In contrast, CBE's ratio is substantially higher than the benchmark, indicating potential inefficiencies in cost management. This comparison highlights the varying levels of efficiency among banks in controlling non-interest expenses relative to operating income, with some exhibiting superior performance compared to industry standards, while others may need to address areas for improvement. As a common benchmark is to aim for a non-interest expense to operating income ratio of around 60% or lower, Hibret, AIB, and Dashen banks appear to be operating efficiently, while CBE may need to re-evaluate its cost management strategies to align with industry standards.

4.1.3.2.Loan and Advance to Asset

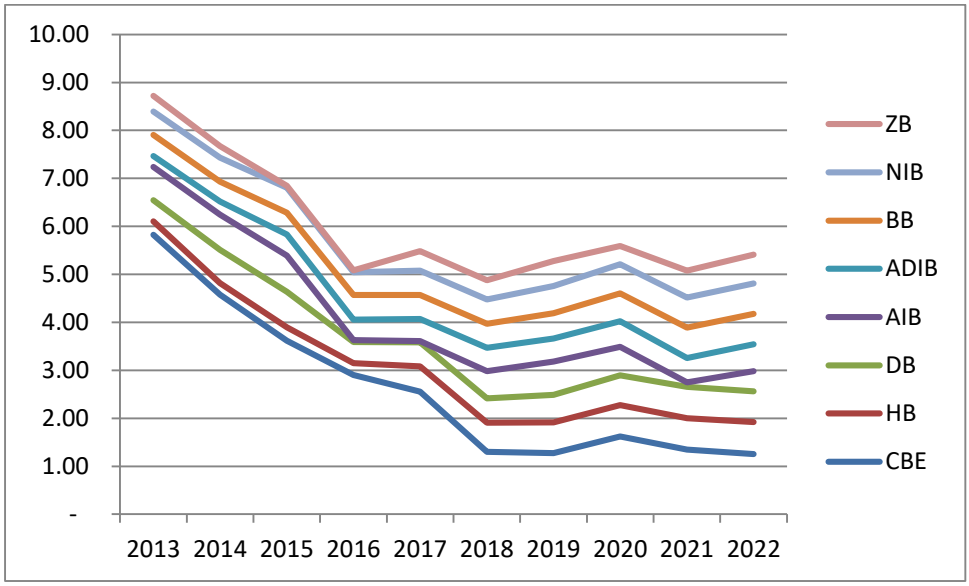

Figure 4.1.3.2. Loan and Advance to Asset

Based on the benchmark data provided, a common benchmark for the Loan and Advance to Asset ratio is between 40% to 60%. In comparison, the findings reveal that Berhan, Nib, and ADIB banks have conversion rates exceeding this benchmark, indicating a more aggressive lending approach and potentially higher risk. Conversely, AIB's lower conversion rate suggests a more conservative lending strategy, falling below the benchmark range. The industry average of 49.75% falls within the benchmark range, indicating a balanced approach across the banking sector. These findings highlight variations in lending strategies among banks and their alignment with industry benchmarks for asset utilization.

4.1.3.3.Net profit to total asset ratio

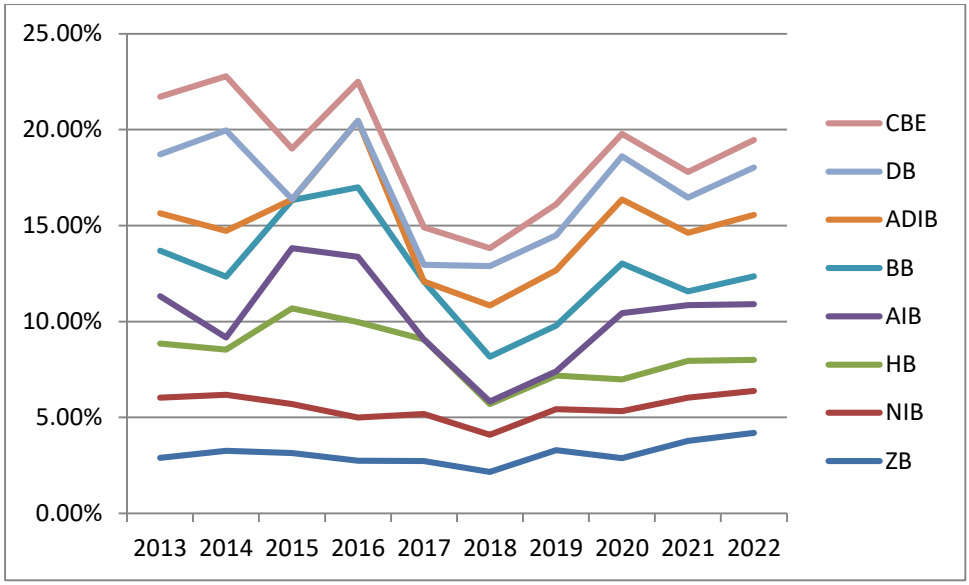

Figure 4.1.3.3. Net profit to total asset ratio

The Return on Assets (ROA) ratio measures how efficiently a bank utilizes its assets to generate profits. In this context, benchmark data suggests that a healthy ROA typically falls within the range of 1% to 2%, indicating effective asset utilization and profitability. Comparing the findings to this benchmark, Zemen, Hibret, and Nib banks demonstrate strong performance, exceeding the benchmark with ROA ratios of 3.1%, 2.8%, and 2.4% respectively. Conversely, Awash Bank and CBE fall below the benchmark with ROA ratios of 0.19%, indicating lower levels of profitability and asset utilization. Overall, the average ROA of 2.3% across all banks in the study aligns well with the benchmark, indicating satisfactory asset utilization and profitability levels within the Ethiopian banking industry.

Composite Management efficiency

Hibret, Zemen, Dashen and Berhan Bank are consistent first- fourth place ranking in management efficiency signifies a strong and effective operational and strategic leadership within the CAMEL framework assessment over the 10-year period. The sustained performance indicates the bank's adeptness in managing its operations and leadership effectiveness, potentially reflecting robust governance and strategic decision-making capabilities. Nib, Addis, and Awash Bank's consistent fifth- seventh place ranking reflects its operational efficiency and strategic leadership within the CAMEL framework assessment. The moderate performance suggests less stable governance and adept strategic decision-making, highlighting the bank's operational effectiveness and leadership resilience over the specified timeframe. Commercial Bank of Ethiopia's consistent eighth-place ranking signifies its operational efficiency and

strategic leadership within the CAMEL framework assessment over the 10-year period. The sustained rank suggests a capacity for effective governance and strategic decision-making, reflecting the bank's management of operations and leadership rigid. In summary, the rankings within the CAMEL framework for management efficiency provide valuable insights into the operational effectiveness and strategic leadership of each bank. Each bank's positioning reflects its ability to manage its operations and demonstrate effective leadership, offering a nuanced understanding of their relative standings in management efficiency within the CAMEL assessment. This analysis contributes to comprehending the banks' strategic positioning and operational adaptability within the evolving financial landscape in Ethiopia.

4.1.4. Earning quality

The overall performance of a bank is reflected in its earning ability. When a bank performs well, it increases the profitability of the banking industry. The earning ability of the banking sector is determined by looking at how effectively assets generate net interest income. The quality of earnings is important as it indicates a bank's ability to make a profit, as well as its long-term viability and potential for growth.

4.1.4.1. Interest Income to Total Income

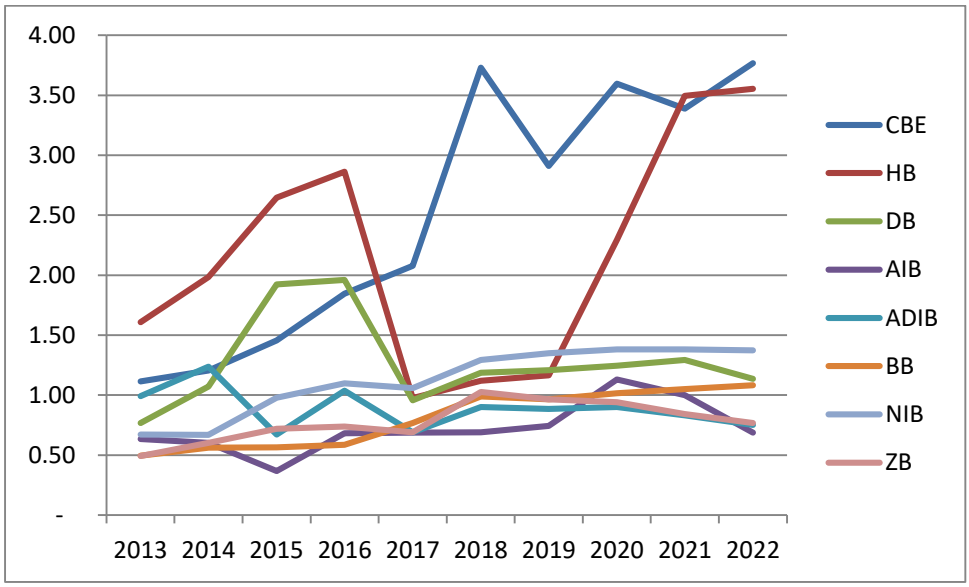

Figure 4.1.4.1. Interest Income to Total Income

Based on the provided data, CBE, Hibret, and Dashen banks exhibit higher proportions of income generated from lending activities and interest earned on deposits, with average ratios of 251.1%, 217%, and 127% respectively. This indicates that a significant portion of their total

income is derived from interest-related sources. In contrast, Awash Bank has a lower proportion at 71%, suggesting a relatively smaller reliance on interest income. Comparing these findings to the benchmark range of 70% to 80% for Interest Income to Total Income ratios in the banking industry, it is evident that CBE, Hibret, and Dashen banks exceed this benchmark, indicating a stronger emphasis on traditional lending activities. Conversely, Awash Bank falls below the benchmark range, indicating a more diversified revenue stream with a lower dependency on interest-related sources.

Composite Earnings Quality

Addis, CBE, Hibret, and Dashen Bank are consistent first- fourth place ranking signifies a robust and sustainable earnings quality within the CAMEL framework assessment over the 10-year period. The sustained performance reflects the bank's ability to generate sustained profits while effectively managing risk exposure and market challenges, signalling strong profitability and operational efficiencies. NIB, Zemen and ADIB bank fifth-seventh place ranking indicates its earnings quality and a sustainable capacity to generate profits within the CAMEL framework assessment over the 10-year period. The sustained rank underscores the bank's ability to maintain moderate profit metrics and operational efficiencies, highlighting its capacity to manage less risk exposure and navigate market challenges effectively. Awash Bank of Ethiopia's consistent eighth-place ranking indicates its earnings quality and the sustainability of its capacity to generate profits within the CAMEL framework assessment. The sustained rank reflects the bank's ability to maintain lowest profit metrics and operational efficiencies, indicating its capacity to manage risk exposure and sustain profits effectively over the 10-year period relatively to asset.

In summary, the rankings within the CAMEL framework for earnings quality provide significant insights into the banks' capacity to generate sustained profits and manage risk exposure effectively. Each bank's position offers a nuanced understanding of their relative standings in terms of earnings quality within the CAMEL assessment, providing insights into their strategic positioning and adaptability within the evolving financial landscape in Ethiopia.

4.1.5. Liquidity

The management of liquidity is a crucial task for a bank. If money is not spent wisely, the organization will experience financial loss. Keeping cash on hand in idle form yields no profit. However, the bank won't be able to pay creditors, satisfy depositor demands, or meet other

financial obligations if it doesn't have enough liquid cash on hand. This may result in excessive trading and make borrowing money more difficult. Banks must always have enough liquidity to meet customer needs and maintain a well-balanced cash position in order to prevent these problems.

4.1.5.1.Liquid Assets to Total Asset

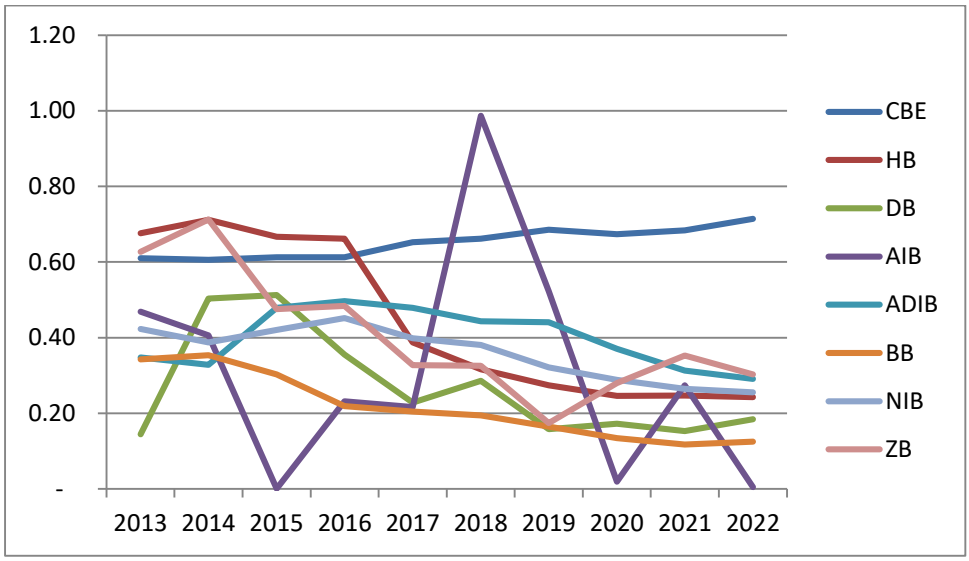

Figure 4.1.5.1. Liquid Assets to Total Asset

Based on the benchmark data indicating a common ratio of 20% to 30% for Liquid Assets to Total Assets, the findings reveal that most banks in the study exceed this benchmark, with CBE leading with a proportion of 66%, followed by Hibret at 44%, Zemen at 41%, and AIB at 31%. This suggests that these banks maintain exceptionally strong liquidity positions, well above industry standards and best practices for managing short-term solvency measures. However, Berhan Bank falls below the benchmark, with a proportion of 22%, indicating a less stable position in liquidity management. Despite this, the average proportion of liquid assets to total assets across all banks in the study is higher than the benchmark, indicating a generally healthy liquidity position within the Ethiopian banking industry.

4.2 Discussion

Based on the research findings from the evaluation of financial performance in selected commercial banks within the CAMEL framework, it is evident that each CAMEL component significantly influences various aspects of the banks' operations. The exploration of capital adequacy dynamics over the past decade highlights the resilience and stability of these banks, which are crucial for their overall performance, return on assets (ROA), and profitability.

Additionally, the in-depth analysis of asset quality indicators reveals patterns that impact the banks' overall health and play a pivotal role in shaping ROA and profitability, as low credit losses are correlated with enhanced financial performance. Moreover, the examination of management quality underscores the critical role of effective leadership in influencing overall bank performance and profitability. It is also clear that the evaluation of liquidity management within the CAMEL framework explores its impact on short-term obligations and how it must be balanced to optimize return on assets and profitability. Collectively, these components provide unique insights into specific dimensions of financial performance, contributing to a comprehensive understanding of the operational landscape of the selected commercial banks over a 10-year period. In summary, the research findings highlight the multifaceted nature of financial performance evaluation within the CAMEL framework, emphasizing the interplay of capital adequacy, asset quality, management quality, earnings sustainability, profitability metrics, and liquidity management. Each component plays a crucial role in shaping the overall health and performance of the selected commercial banks. The resilience and stability of the banks' capital adequacy, the patterns in asset quality indicators, the influence of effective leadership on performance, and the impact of liquidity management on short-term obligations collectively provide a comprehensive understanding of the operational landscape of these banks over the span of a decade. These findings are instrumental in informing strategic decision-making and risk management practices within the banking sector.

In addressing the research questions cantered on the evaluation of financial performance in selected commercial banks within the CAMEL framework, each CAMEL component significantly influences various aspects of the banks' operations.

Firstly, the exploration of capital adequacy dynamics over the past decade illuminates the resilience and stability of these banks, crucial for their overall performance, return on assets (ROA), and profitability. Secondly, the in-depth analysis of asset quality indicators unveils patterns that not only impact the banks' overall health but also play a pivotal role in shaping ROA and profitability, moving on, the examination of management quality highlights the critical role of effective leadership in influencing overall bank performance and profitability. Furthermore, a close scrutiny of the earnings sustainability, key profitability metrics, and operational efficiencies reflects on the capacity of Ethiopian banks to sustain profits, manage risk exposure, and navigate market challenges effectively. Finally, the evaluation of liquidity management within the CAMEL framework explores its impact on short-term obligations and how it must be balanced to optimize return on assets and profitability. In essence, each CAMEL

component provides unique insights into specific dimensions of financial performance, contributing collectively to a comprehensive understanding of the selected commercial banks' operational landscape over the span of 10-year period.

CHAPTER FIVE

5 Summary, Conclusion, and Recommendations

5.1 Summary

This research has analysed the financial performance of eight commercial banks in Ethiopia over a ten-year period (2013-2022) using the CAMEL model. The study aimed to evaluate and analyse the banks' performance based on CAMEL components and rank them accordingly. It also sought to examine comprehensive analysis of capital growth trends and their implications for the financial health of the banks such as return on assets (ROA). Data was collected from the banks' annual reports during the specified period. The research aimed to answer the question of the capital growth trends and their implications for the financial health on the banks' performance.

Based on the ten-year trend analysis within the CAMEL framework, notable patterns and standings have emerged across various banks in terms of capital adequacy, asset quality, management efficiency, earnings quality, and liquidity. Addis International Bank, Nib, and Dashen Bank have consistently demonstrated strengths in capital adequacy. Contrastingly, Awash Bank and Commercial Bank of Ethiopia have shown challenges in this area. Asset quality has exhibited significant disparities with Awash Bank, Dashen Bank, and Hibret Bank emerging as strong performers, while Commercial Bank of Ethiopia lagged behind.

In terms of management efficiency, Hibret, Dashen, and Berhan Bank have showcased robust operational and strategic effectiveness, while Commercial Bank of Ethiopia has continually struggled in this aspect. Addis International Bank, Hibret, and Berhan have excelled in earnings quality, reflecting consistent profitability; meanwhile, Awash Bank has encountered on-going challenges. Lastly, Addis International Bank, Hibret, and Commercial Bank of Ethiopia have excelled in liquidity, whereas Awash Bank has continuously faced concerns.

5.2 Conclusion

In conclusion, the ten-year trend analysis within the CAMEL framework has revealed substantive variations in the performance of Ethiopian banks across essential dimensions such as capital adequacy, asset quality, management efficiency, earnings quality, and liquidity. This nuanced evaluation has elucidated various banks' strategic positioning and adaptive capabilities within the evolving financial landscape.

The findings underscore the significance of targeted improvements in specific areas, stretching from capital strengthening to asset quality management, strategic and operational effectiveness, and liquidity risk mitigation. It is clear that the variations in performance call for a tailored approach to enhancing each bank's resilience and strategic positioning within the framework. Furthermore, the policy recommendations and industry considerations derived from these findings offer a practical pathway for regulatory bodies, the banking industry, and supervisory authorities to promote a stronger, more adaptable banking sector. Policymakers can leverage these results to develop targeted regulatory actions that encourage capital adequacy enhancement, affirming asset quality, and fostering industry-wide governance and operational effectiveness frameworks, further reinforcing liquidity risk resilience across banks.

As trends and regulatory requirements continue to evolve, these findings and recommendations offer a roadmap for future research and industry application. They prompt a deeper exploration of specific policy formulations and industry interventions to fortify the banking sector, ensuring its resilience and adaptive capabilities within Ethiopia's financial landscape. In summary, the thorough analysis within the CAMEL framework not only unveils critical insights into individual banks' performance but also stands as a foundation for broader industry reform, strategic improvement, and a collective drive towards a more resilient and sustainable banking sector within Ethiopia.

5.3 Recommendations:

Based on the comprehensive analysis of each bank's performance metrics, tailored recommendations can be made to enhance their overall financial performance and sustainability. Dashen Bank, leveraging its strong liquidity position and effective short-term solvency measures, should strategically expand its loan portfolio while upholding prudent risk management practices. Similarly, Nib International Bank, with a notable proportion of income generated from lending activities, should prioritize strategic loan portfolio expansion and effective credit risk management to maximize interest income. Berhan Bank, despite its lower proportion of liquid assets, can bolster its performance by reinforcing liquidity risk management frameworks and exploring revenue diversification avenues. While the Commercial Bank of Ethiopia (CBE) exhibits a strong liquidity position, its relatively lower performance in other areas necessitates a focus on optimizing asset quality, reducing operating costs, and enhancing overall financial performance. Awash Bank, with the lowest proportion of income from lending activities, should introduce new loan products, enhance credit risk management practices, and optimize cost control measures to boost profitability. Hibret Bank's

robust liquidity management and profitability indicators position it well for sustained growth, with continued emphasis on effective liquidity risk management and initiatives to enhance asset quality and financial performance. Zemen Bank, having demonstrated stability and resilience in liquidity management and profitability, should explore opportunities to expand its loan portfolio, strengthen credit risk management practices, and implement cost-effective strategies to further improve financial performance. Finally, Addis International Bank (AIB) should focus on enhancing liquidity risk management frameworks, optimizing asset quality, and increasing interest income and profitability to drive future growth and sustainability. These tailored recommendations, aligned with each bank's specific performance strengths and areas for improvement, will enable them to achieve long-term financial success and resilience in the dynamic banking industry landscape.

- Enhance Liquidity Risk Management: Develop and implement robust asset liability management frameworks to effectively manage liquidity risk. Regularly analyse future cash flows and outflows to anticipate liquidity needs and strengthen contingency plans to address potential liquidity challenges.
- Improve Asset Quality: Strengthen credit risk management practices to enhance asset quality. This includes refining risk assessment processes, monitoring non-performing assets closely, and implementing measures to mitigate credit risk.
- Optimize Financial Performance Indicators: Focus on improving earning quality, liquidity management, and bank size to enhance profitability. Establish an optimal level of liquidity to support lending activities while maximizing interest income. Introduce new loan products to diversify revenue streams and maximize interest margins.
- Implement Cost Control Measures: Implement cost-effective strategies such as technology-based banking services and controlled branch expansions to reduce operating costs without sacrificing future growth opportunities. Strengthen operational and strategic effectiveness through refined decision-making processes.
- Increase Total Assets: Mobilize deposits and allocate funds to profitable assets to increase the total asset base. Focus on expanding loan portfolios while effectively managing risks to boost return on assets. Maintain adequate cash reserves for operational needs while investing remaining funds in short-term commercial loans to optimize returns.

- These recommendations aim to address specific areas identified in the research findings and support Ethiopian commercial banks in improving their overall financial performance and sustainability.

Direction for future Research

The results of this study suggest that research projects in the future should go beyond focusing only on financial performance measurements like Return on Assets (ROA). Although ROA provides insightful information, it is advisable for researchers to include other financial performance metrics to provide a more thorough picture of the entire financial health of a banking institutions. Through the examination of a wider range of financial measures, such as the Efficiency Ratio, Net Interest Margin (NIM), and Return on Equity (ROE), researchers may offer a more comprehensive evaluation of a bank's profitability and financial health. Furthermore, although the focus of this study was on comparing the individual performance of banks, future researchers might choose to use an industry benchmarking approach to their comparison analysis. Through comparing a bank's performance to industry norms or averages, researchers can provide important context and insights about the bank's relative status in the industry. Overall, integrating diverse financial performance indicators and industry benchmarks can enhance the depth and breadth of future research endeavours in the banking sector.

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Annex 1

				Debt Equity Ratio									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		SUM	AVER	Rank
CBE	10.85	7.83	8.45	9.28	3.37	3.66	3.93	4.67	5.18	4.96	CBE	62.18	6.22	8
HB	2.36	1.82	2.40	2.10	5.03	5.60	5.10	5.48	5.48	6.22	HB	41.60	4.16	6
DB	4.23	3.23	3.88	3.72	3.42	3.42	4.73	5.06	6.09	5.21	DB	42.97	4.30	7
AIB	3.65	3.45	3.85	3.87	0.00	4.17	4.89	4.70	5.43	6.06	AIB	40.07	4.01	5
ADIB	1.44	1.60	1.71	1.65	2.06	2.26	2.38	2.54	2.77	2.77	ADIB	21.20	2.12	1
BB	2.52	2.10	2.58	3.49	2.88	3.21	3.59	3.65	4.55	4.69	BB	33.27	3.33	3
NIB	2.66	2.75	3.17	2.98	3.63	3.99	4.36	4.42	5.48	4.80	NIB	38.25	3.82	4
ZB	2.16	1.44	0.25	3.25	2.94	2.89	3.26	3.12	3.13	3.38	ZB	25.83	2.58	2

Table 1 Debt to Equity ratio

			Loan and Advance to Asset Ratio											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		SUM	AVER	Rank
CBE	0.26	0.26	0.27	0.26	0.23	0.23	0.22	0.22	0.43	0.48	CBE	2.87	0.29	1
HB	0.28	0.24	0.28	0.25	0.53	0.60	0.63	0.66	0.66	0.67	HB	4.81	0.48	5
DB	0.44	0.69	0.74	0.44	0.50	0.51	0.58	0.62	0.65	0.64	DB	5.80	0.58	8
AIB	0.42	0.09	0.60	0.70	0.70	0.70	0.70	0.00	0.03	0.04	AIB	3.97	0.40	2
ADIB	0.23	0.27	0.44	0.43	0.46	0.48	0.48	0.53	0.51	0.56	ADIB	4.39	0.44	3
BB	0.44	0.41	0.45	0.51	0.50	0.50	0.52	0.59	0.63	0.63	BB	5.20	0.52	6
NIB	0.48	0.50	0.52	0.47	0.51	0.51	0.57	0.60	0.63	0.63	NIB	5.44	0.54	7
ZB	0.33	0.24	0.04	0.44	0.41	0.41	0.52	1.00	0.56	0.60	ZB	4.54	0.45	4

Table 2 Loan and Advance to Asset Ratio

					None performing loan to Total Loan and Advance										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			SUM	AVER	Rank
CBE	0.007	0.006	0.009	0.015	0.008	0.009	0.017	0.004	0.010	0.088	1	CBE	0.172	0.017	8
HB	-	0.001	0.003	0.006	0.001	0.005	0.003	0.002	0.004	0.012	2	HB	0.036	0.004	4
DB	0.002	-	0.000	0.000	0.006	0.005	0.000	0.002	0.004	0.003	3	DB	0.021	0.002	2
AIB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4	AIB	0.000	0.000	1
ADIB	0.005	0.005	0.005	0.004	0.000	0.004	0.004	0.001	0.002	0.010	5	ADIB	0.039	0.004	5
BB	-	-	-	-	0.004	0.004	0.006	0.001	0.022	0.016	6	BB	0.054	0.005	6
NIB	0.003	0.003	0.002	-	-	0.004	0.003	0.001	0.001	0.004	7	NIB	0.022	0.002	3
ZB	0.092	0.059	-	0.008	0.010	0.000	0.0000	0.000	0.000	0.000	8	ZB	0.169	0.017	7

Table 3 non-performing loan to total loan and advance

	None performing loan to Equity													
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		SUM	AVER	Rank
CBE	0.05441031	0.05	0.07	0.14	0.03	0.03	0.07	0.02	0.05	0.44	1	0.940905	9.409%	8
HB	0	0.00	0.01	0.01	0.00	0.03	- 0.02	0.01	0.02	0.08	2	0.144357	1.444%	6
DB	0.00868547	-	0.00	0.00	0.02	0.03	0.00	0.01	0.02	0.01	3	0.105196	1.052%	5
AIB	2.7063E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4	0.000201	0.002%	1
ADIB	0.007622	0.01	0.01	0.03	0.00	0.01	0.01	0.00	0.01	0.03	5	0.104448	1.044%	4
BB	-	-	-	0.01	0.01	0.01	0.02	0.01	0.10	0.08	6	0.238568	2.386%	7
NIB	0.00786408	0.01	0.00	-	-	0.00	0.02	0.00	0.01	0.02	7	0.067322	0.673%	3
ZB	0	-	-	0.03	- 0.00	0.00	0.00	0.00	0.00	0.00	8	0.028756	0.288%	2

Table 4 non-performing loan to equity

		None Interest Expense to Operating Income												
		2013	2014	2015	2016	2017		2019	2020	2021	2022	SUM	AVE	Rank
1	CBE	0.72	0.83	1.31	1.60	1.71	2.32	1.88	1.66	1.51	0.99	14.54	1.45	1
2	HB	0.14	0.11	0.11	0.10	0.24	0.25	0.22	0.20	0.24	0.23	1.84	0.18	8
3	DB	0.30	0.48	0.00	0.00	0.00	0.30	0.29	0.32	0.33	0.31	2.34	0.23	6
4	AIB	0.23	0.32	0.11	0.16	0.17	0.14	0.17	0.23	0.26	0.23	2.02	0.20	7
5	ADIB	0.65	0.55	0.55	0.46	0.50	0.50	0.47	0.45	0.46	0.38	4.98	0.50	3
6	BB	0.31	0.28	0.19	0.19	0.40	0.31	0.34	0.30	0.26	0.19	2.74	0.27	5
7	NIB	0.56	0.60	0.51	0.56	0.52	0.56	0.53	0.53	0.56	0.57	5.49	0.55	2
8	ZB	0.50	0.47	0.42	0.43	0.50	0.46	0.42	0.35	0.37	0.37	4.27	0.43	4

Table 5 non-interest expense to operating income

			Loan and Advance to Total Deposit											
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	SUM	AVE	Rank
1	CBE	0.44	0.45	0.46	0.48	0.41	0.38	0.37	0.39	0.38	0.33	4.10	0.41	8
2	HB	0.37	0.32	0.36	0.33	0.75	0.86	0.89	0.89	0.90	0.94	6.62	0.66	6
3	DB	0.55	0.48	6.47	0.64	1.72	0.72	0.72	0.79	0.83	0.82	13.74	1.37	1
4	AIB	0.60	0.60	0.66	0.67	0.73	0.71	0.79	0.80	**0.67**	0.86	7.08	0.71	2
5	ADIB	0.58	0.64	0.49	0.67	0.69	0.69	0.67	0.74	0.72	0.78	6.66	0.67	5
6	BB	0.60	0.58	0.61	0.70	0.69	0.65	0.67	0.75	0.78	0.79	6.83	0.68	4
7	NIB	0.67	0.68	0.71	0.60	0.65	0.62	0.70	0.76	0.79	0.78	6.96	0.70	3
8	ZB	0.43	0.31	0.05	0.59	0.50	0.49	0.65	0.68	0.74	0.79	5.23	0.52	7

Table 6 loan and advance to total deposit

				Operating profit to total asset ratio										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	SU M	AVE	
1	CBE	0.03	0.03	0.03	0.02	0.02	0.01	0.02	0.01	0.02	0.02	0.20	0.02	7
2	HB	0.03	0.02	0.02	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.25	0.03	6
3	DB	0.07	0.08	0.05	0.03	0.07	0.06	0.06	0.07	0.07	0.07	0.62	0.06	4
4	AIB	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.09	0.08	0.00	0.18	0.02	8
5	ADIB	0.02	0.03	0.08	0.06	0.00	0.08	0.08	0.09	0.09	0.10	0.63	0.06	3
6	BB	0.08	0.11	0.09	0.11	0.09	0.08	0.08	0.10	0.09	0.09	0.91	0.09	1
7	NIB	0.09	0.10	0.09	0.09	0.10	0.06	0.06	0.07	0.07	0.07	0.80	0.08	2
8	ZB	0.09	0.09	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.39	0.04	5

Table 7 operating profit to total asset ratio

				Interest Income to Total Income										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	SUM	AVE	
1	CBE	1.11	1.21	1.46	1.85	2.08	3.73	2.91	3.60	3.39	3.77	25.09	2.51	1
2	HB	1.61	1.98	2.65	2.86	0.98	1.12	1.16	2.29	3.50	3.55	21.70	2.17	2
3	DB	0.77	1.07	1.92	1.96	0.96	1.19	1.21	1.25	1.29	1.14	12.75	1.27	3
4	AIB	0.63	0.60	0.37	0.68	0.69	0.69	0.74	1.13	1.00	0.69	7.22	0.72	8
5	ADIB	0.99	1.24	0.67	1.04	0.69	0.90	0.88	0.90	0.83	0.75	8.90	0.89	5
6	BB	0.50	0.56	0.56	0.59	0.77	0.99	0.96	1.02	1.05	1.08	8.08	0.81	6
7	NIB	0.67	0.67	0.98	1.10	1.06	1.29	1.35	1.38	1.38	1.37	11.25	1.12	4
8	ZB	0.49	0.60	0.72	0.74	0.69	1.03	0.97	0.94	0.84	0.77	7.79	0.78	7

Table 8 interest income to total loan

			Liquid Assets to Total Asset											
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	SUM	AVE	rank
1	CBE	0.45	0.45	0.45	0.45	0.50	0.51	0.54	0.52	0.53	0.57	4.97	0.50	1
2	HB	0.68	0.71	0.67	0.66	0.39	0.32	0.27	0.25	0.25	0.24	4.43	0.44	2
3	DB	0.14	0.50	0.51	0.36	0.23	0.29	0.16	0.17	0.15	0.18	2.70	0.27	6
4	AIB	0.47	0.41	0.00	0.23	0.22	0.99	0.52	0.02	0.27	0.00	3.13	0.31	5
5	ADIB	0.35	0.33	0.48	0.50	0.48	0.44	0.44	0.37	0.31	0.29	3.99	0.40	3
6	BB	0.34	0.35	0.30	0.22	0.20	0.19	0.16	0.13	0.12	0.13	2.16	0.22	8
7	NIB	0.42	0.39	0.42	0.45	0.40	0.38	0.32	0.29	0.26	0.26	3.59	0.36	4
8	ZB	0.63	0.71	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	2.30	0.23	7

Table 9 liquid asset to total asset