

A Review of the Performance of the Zambian Banking Sector between 2010 and 2020

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Abstract

This article provides a comprehensive analysis of the performance of the Zambian banking sector over the past decade, focusing on key financial indicators such as total assets, deposits, profitability, gross loans and advances, and shareholders' equity. Utilizing data spanning from January 2010 to December 2020, the study employed longitudinal analysis techniques to examine trends and patterns in the financial performance of Zambian banks. The research methodology involved collecting financial data from prudential reports. Key financial metrics such as total assets, deposits, profitability measures, loan portfolios, and shareholders' equity were analyzed and compared over the study period. Trend analysis techniques were applied to identify significant changes and patterns in the performance indicators, providing insights into the sector's evolution over time. The findings of the study reveal a story of steady growth and resilience within the Zambian banking sector. Total assets, deposits, profitability metrics, gross loans and advances, and shareholders' equity all exhibited positive trends, highlighting the sector's ability to navigate challenges and capitalize on opportunities amidst changing economic conditions and regulatory environments.

Keywords

Zambian Banking Sector, Financial Performance, Longitudinal Analysis, Total Assets, Deposits, Profitability, Gross Loans and Advances, Shareholders' Equity, Economic Development, Resilience

1. Introduction

The banking industry, in Zambia has seen changes over the ten years, reflecting the country's economic growth and regulatory adjustments. From the period after independence to the day the sector has adapted to changes in market condi-

tions, regulations and technology. This study offers an examination of how the sector has performed during this time, focusing on trends, obstacles and opportunities that have influenced its progress.

The performance of Zambia's banking sector in the decade has been marked by a mix of achievements and difficulties. Despite challenges, profitability, a key indicator of financial well-being, has remained strong. Banks have generally maintained returns on equity and assets even though issues like operating costs and slow economic growth have presented challenges.

One ongoing concern within the industry has been asset quality regarding performing loans (NPLs). Efforts to enhance risk management practices have resulted in improved asset quality over the years. Nonetheless, effectively managing credit risk continues to be a challenge, underscoring the importance of monitoring and proactive measures to reduce risks.

Regulatory changes have played a role in ensuring that banks have capital to support their activities and meet regulatory standards. However, it is important to prioritize strengthening capital reserves and risk management frameworks to boost the sectors ability to withstand pressures.

The regulatory landscape in the banking industry has undergone changes over the last twenty years. While reforms have aimed at improving oversight and fostering banking practices, challenges related to regulatory supervision persist. It is vital to reinforce structures and compliance mechanisms to protect stability and uphold investor trust.

Promoting inclusion has become a focus for the sector with initiatives concentrated on broadening financial access and fostering inclusive economic growth. Efforts within banking reforms target dismantling obstacles to inclusion. Ensuring that banking services are available to all societal segments. Despite progress, disparities in access remain, underscoring the need for enhancing education and expanding services to underserved populations.

The Zambian banking industry has demonstrated resilience and adaptability over the decade, navigating through challenges while seizing emerging opportunities. While profitability asset quality and capital sufficiency are areas of concern, regulatory adjustments alongside endeavours towards promoting inclusion are vital for upholding the sectors development and stability.

The remaining study is structured as follows:

A background of the Zambian banking sector is provided, detailing its history and evolution, with a particular focus on the turbulence experienced in the late 1990s and early 2000s, which led to several bank failures. Following this, a literature review is presented, summarizing various studies on the performance of the Zambian banking sector, as well as similar research conducted within the region and beyond, and their key findings. The study then outlines the methodology used, noting that monthly balance sheets and income statements were collected for all banks operating in Zambia during the review period. This data was used to calculate key financial ratios, which were subsequently analyzed. The

results of the data analysis are then presented, beginning with the overall market performance, followed by an examination of how key ratios behaved for the market as a whole over the review period, and concluding with the individual performance of the banks. The study is then summarized in the conclusion

2. Background

The Zambian banking sector has undergone significant changes since the country's independence in 1964. In the early years following independence, the sector was dominated by foreign banks, which provided most of the financial services in the country. [Brownbridge \(1998\)](#) observed that the financial system (in Zambia) in the mid 1960s was dominated by foreign commercial banks mainly serving the credit needs of foreign and expatriate businesses. Specifically, as noted by [Beyani and Kasonde \(2009\)](#), the financial system in Zambia comprised foreign commercial banks established in the colonial era, namely, Standard Chartered Bank (1906), Barclays Bank (1918) and Grindlays Bank (1956, now Stanbic Bank since 1992).

In the years following independence, the government pursued a policy of nationalization and established a number of state-owned banks to increase access to financial services for the local population. [Brownbridge](#) further observed that the Zambian private sector first entered the banking industry in 1984 when Meridien Bank, was founded. By mid 1995, there were around 13 banks owned by local private sector investors (henceforth local banks) in operation in Zambia. Most of these banks began operating during the first half of the 1990s when the government liberalized the banking sector and allowed the entry of private banks. This led to increased competition and the expansion of financial services in the country.

[Simwanza and Awolusi \(2020\)](#) observed that a considerable number of developments have been recorded in the Zambia economy and for the financial sector especially, following the liberalization of the economy in the early 1990's, these developments include amongst others the proliferation of banks and non-bank financial institutions.

The banking sector has experienced strong growth over the years, starting in the 2000s as observed by [Haabazoka \(2012\)](#), who noted that Zambia's banking sector has been growing steadily from 2005. Total assets to GDP has been growing from 24.3% in 2005 to 31.3% which is the highest for the analysed period until it reduced to 28.7% in 2009 due to the financial global crisis. This has continued with total assets increasing by over 50% between 2015 and 2020. As of 2020, there were a total of 19 commercial banks operating in Zambia, including both domestic and foreign-owned institutions.

Despite the strong growth, the performance of the sector has been mixed in recent years. While some banks have demonstrated improved performance, the sector has also faced challenges such as high levels of non-performing loans, declining profitability, and liquidity issues. These challenges have been attributed

to a number of factors, including a challenging macroeconomic environment and increased competition.

Most bank failures in Zambia were observed in the 1990s. Maimbo (2001) observed that in the third quarter of 1993, and throughout 1994, adverse developments began to occur. In the quest to attract and retain customers, banks disregarded prudent loan application procedures and collateral arrangements, and reckless lending left banks with unrecoverable loans. Further, a rise in the cost of funds, shortages in liquidity, the erosion of earnings from treasury bills and foreign exchange operations, and shortages of capital, accelerated the financial deterioration of banks (Muke, 1996). These developments culminated in the closure of three banks in 1995. Meridien BIAO Bank, then the fourth largest bank in Zambia collapsed on 19 May 1995, African Commercial Bank on 17 November 1995, and Commerce Bank on 29 November 1995. He further noted that despite the efforts of the BoZ to redress the situation, the last quarter of 1997 saw yet another crisis emerge. Prudence Bank collapsed on 17 October 1997, followed by Credit Africa Bank on 2 December 1997, Manifold Investment Bank on 5 December 1997 and Firstly Merchant Bank on 2 February 1998. Between 1995 and 1998 therefore, a total number of nine commercial banks failed.

In the early 2000s, a number of banks were forced to close due to their exposure to the government's debt, which had been restructured following a financial crisis. In talking about these failures, Hinfelaar (2020) observed that the events that would ultimately culminate in the closure of Meridien placed considerable strain on Zambia's financial system and significantly eroded confidence in Bank of Zambia's capacity to effectively supervise the commercial banks (McPherson, 2004; Mwape, 2014). He further noted that according to McPherson (2004: 205): "The subsequent failure of these [five local] smaller banks can be attributed (in part) to the knock-on effects of the MB [Meriden Bank] difficulties." In more recent years, a number of banks have faced challenges due to the economic downturn.

3. Literature Review

The banking industry, in Zambia has seen changes in the ten years with reforms, technological advancements and shifts in market dynamics playing a key role. These transformations have impacted the sectors assets, profitability and the number of players involved. This review summarizes insights from studies to present a look at these developments and their consequences.

Moyo and Phiri (2023) delve into an in depth examination of the structural modifications affecting Zambias banking industry, emphasizing how regulatory reforms have influenced bank performance positively. They highlight improvements in asset quality and profitability underscoring the role that regulatory changes played in stabilizing the sector and fostering growth.

Expanding on this research Banda and Simuchimba (2022) study the repercussions of mergers and acquisitions, demonstrating that consolidation has sig-

nificantly reshaped the industry landscape. Their analysis reveals that while mergers led to a reduction in the number of banks it also resulted in enhanced asset base and profitability for the remaining banks. This consolidation has contributed to bolstering stability and operational efficiency across the sector.

In an investigation, [Chileshe and Mwamba \(2022\)](#) concentrate on profit dynamics by providing evidence on how alterations, in asset management strategies and market competition have impacted bank profits. They argue that heightened competition has pushed banks to adopt asset management approaches ultimately boosting profitability.

The study also points out that allowing competition, through market liberalization has been key in attracting players and promoting competitive behavior.

In a vein, [Mwenda and Kalaba \(2021\)](#) delve into how reforms in the banking sector have impacted stability. They discover that efforts to enhance oversight and capital adequacy have significantly boosted the stability and resilience of banks. The authors contend that these changes were vital in managing risks and ensuring the sectors long term viability.

[Nyirenda and Zulu \(2020\)](#) explore the effects of banking on profitability. Their research reveals that embracing banking technologies has led to cost savings and increased profits for banks. They emphasize that digital transformation has played a role in enhancing efficiency and customer satisfaction, contributing to performance enhancements in the sector.

Additionally, [Phiri and Mbewe \(2019\)](#) examine shifts in competition within the banking industry. They note that the entry of players foreign banks has intensified competition, resulting in improved services and products, for customers. This heightened competition has also pushed existing banks to enhance their efficiency and asset management approaches.

The study by [Mutale and Kalima \(2018\)](#) delves into the performance of banks, pointing out the unique challenges they face compared to larger counterparts. It is revealed that while smaller banks grapple with costs they have displayed resilience and adaptability in managing their assets to stay profitable.

Additionally, [Kasonde and Nkonde \(2017\)](#) examine how regulatory frameworks influence the banking sector. They argue that robust regulations play a role in upholding market stability and safeguarding consumer interests. Their research underscores how strict regulations ensure banks adhere to practices ultimately boosting sector performance.

In summary the Zambian banking industry has undergone growth and evolution in years. Regulatory changes, technological advancements and increased competition have enhanced asset quality, profitability and operational effectiveness. These developments position the sector for progress and stability, in the future.

While the existing literature provides comprehensive insights into the performance and transformations of the Zambian banking sector between 2010 and 2020, there are notable gaps that this study aims to address. Previous studies,

such as those by Moyo and Phiri (2023) and Banda and Simuchimba (2022), have thoroughly examined the impacts of regulatory reforms and mergers on bank performance and stability. Similarly, Chileshe and Mwamba (2022) and Nyirenda and Zulu (2020) have focused on profit dynamics and the role of technological advancements, respectively. However, these studies often treat these factors in isolation, without a holistic view of how they interconnect to influence the sector's overall performance. Additionally, while competition and market liberalization have been discussed, there is limited exploration of how these factors interact with regulatory changes and technological advancements to shape the industry's trajectory. This study differentiates itself by adopting an integrative approach, examining the interplay between regulatory reforms, technological progress, market dynamics, and competition. By doing so, it not only fills the gap in understanding the comprehensive impact of these factors on the banking sector's performance but also provides a more nuanced perspective on the sector's evolution. This holistic analysis will offer valuable insights for policymakers and stakeholders aiming to foster a more robust and resilient banking industry in Zambia.

4. Methodology

This study employs a longitudinal analysis spanning from 2010 to 2020 to examine the financial performance and stability of Zambian banks. Key financial ratios such as Return on Assets (ROA), Return on Equity (ROE), Loan-to-Deposit Ratio and Liquid Assets to Total Assets Ratio were calculated for each bank over the specified period, and for the sector as a whole. Temporal and financial analysis techniques were then employed to identify patterns and significant changes in financial performance indicators over time.

5. Description of Data Collected

The study sample included all commercial banks in operation in Zambia over the period January 2010 to December 2020. January 2010 was chosen because a number of Banks started their operations in 2009; In 2006 there were 13 commercial banks in Zambia, since 2008, 6 more subsidiaries of foreign banks were registered, bringing the total number to 19 commercial banks for the whole sector at the end of 2012. (Zambia Invest, 2022) Data was collected for twenty banks that have operated in Zambia from April 2004 to December 2020. The banks were labelled bank 1 through to 20. **Table 1** gives an overview of the data collected.

6. Types of Analysis Conducted

Financial Analysis

Financial Analysis was utilized to assess the financial health and performance of banks by analysing key financial ratios and metrics. This analysis involved examining parameters such as equity-to-assets ratio, loans-to-deposits ratio, and

Table 1. Bank data used.

Bank	Data Available from:	Data Available to:	NUMBER OF OBSERVATIONS
1	November 2011	December 2020	110
2	January 2010	December 2020	132
3	January 2010	December 2020	132
4	January 2010	December 2020	132
5	January 2010	December 2020	132
6	No data Available	No data Available	
7	January 2010	December 2020	132
8	January 2010	December 2020	132
9	January 2010	December 2020	132
10	No data Available	No data Available	
11	June 2010	December 2020	127
12	January 2010	December 2020	132
13	No data Available	No data Available	
14	January 2010	December 2020	132
15	January 2010	December 2020	132
16	January 2010	December 2020	132
17	January 2010	December 2020	132
18	January 2010	December 2020	132
19	January 2010	December 2020	132
20	April 2019	December 2020	21

Source: Author.

growth in total income to evaluate the stability, profitability, and risk exposure of banks over time.

Temporal Analysis

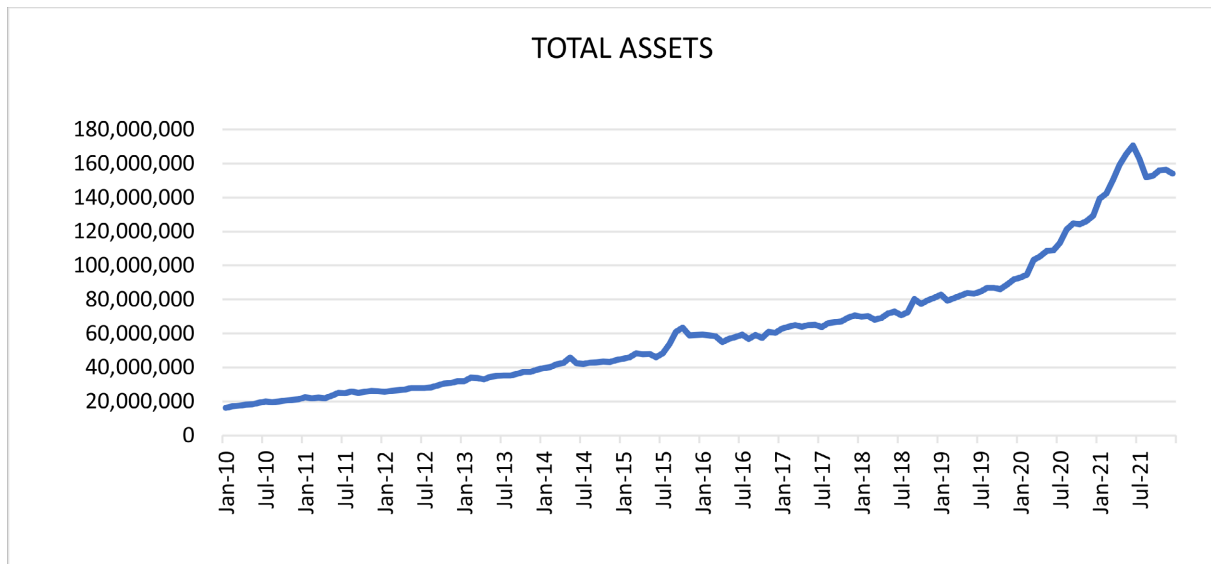
Temporal analysis was conducted by reviewing line graphs and charts to determine trends and patterns in the data. This analysis helped identify long-term movements and directional changes in financial parameters, contributing to a comprehensive assessment of a bank's performance and vulnerability to systemic risks.

7. Results and Discussion of Results

Overall Market Performance

The following insights were derived by looking at the totals across all Banks in the review period. They generally show that the market as a whole has been on

an upward trajectory during the period.



Source: Author Calculations.

Figure 1. Total assets in banking sector over review period.

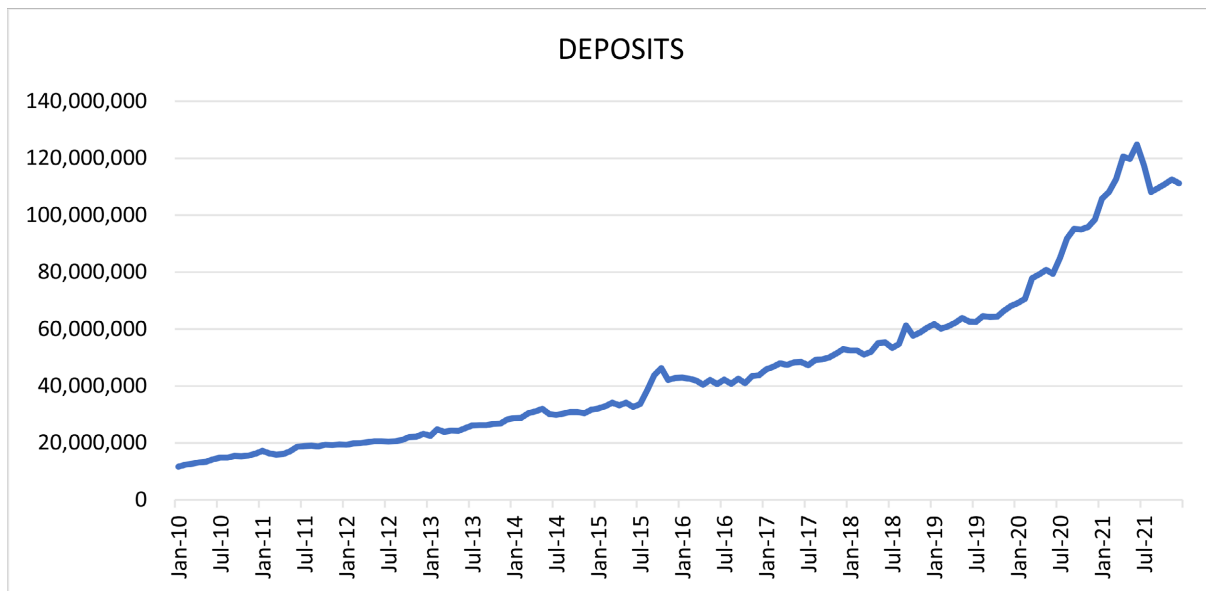
As shown in **Figure 1**, from January 2010 to December 2019, the Total Assets of the Zambian banking sector exhibited a discernible upward trajectory, albeit with fluctuations influenced by economic factors and regulatory interventions. Starting at approximately 16.3 billion Zambian Kwacha (ZMW) in January 2010, Total Assets grew steadily, reaching around 156.3 billion ZMW by December 2019. This substantial growth underscores the sector's expansion and increasing importance within the Zambian economy over the past decade.

The early years of the decade saw moderate growth in Total Assets, reflecting the aftermath of the global financial crisis and domestic economic challenges. However, from around mid-2010, the sector experienced more robust growth, with Total Assets surpassing the 20 billion ZMW mark by September 2010. This growth momentum continued throughout the decade, supported by factors such as improved economic stability, expanding customer base, and technological advancements in banking services.

Despite overall growth, the sector faced several challenges and uncertainties during the decade. Economic slowdowns, fluctuations in global commodity prices, and currency depreciation posed risks to asset quality and profitability. Additionally, regulatory reforms aimed at enhancing financial stability and consumer protection introduced new compliance requirements and operational challenges for banks.

The latter half of the decade witnessed accelerated growth in Total Assets, reflecting increased confidence in the banking sector and ongoing efforts to promote financial inclusion and innovation. By December 2019, Total Assets had more than quadrupled since the beginning of the decade, reaching a record high

of approximately 156.3 billion ZMW. This remarkable growth underscores the sector's resilience and adaptability in navigating through various economic and regulatory challenges.



Source: Author Calculations.

Figure 2. Total deposits in banking sector over review period.

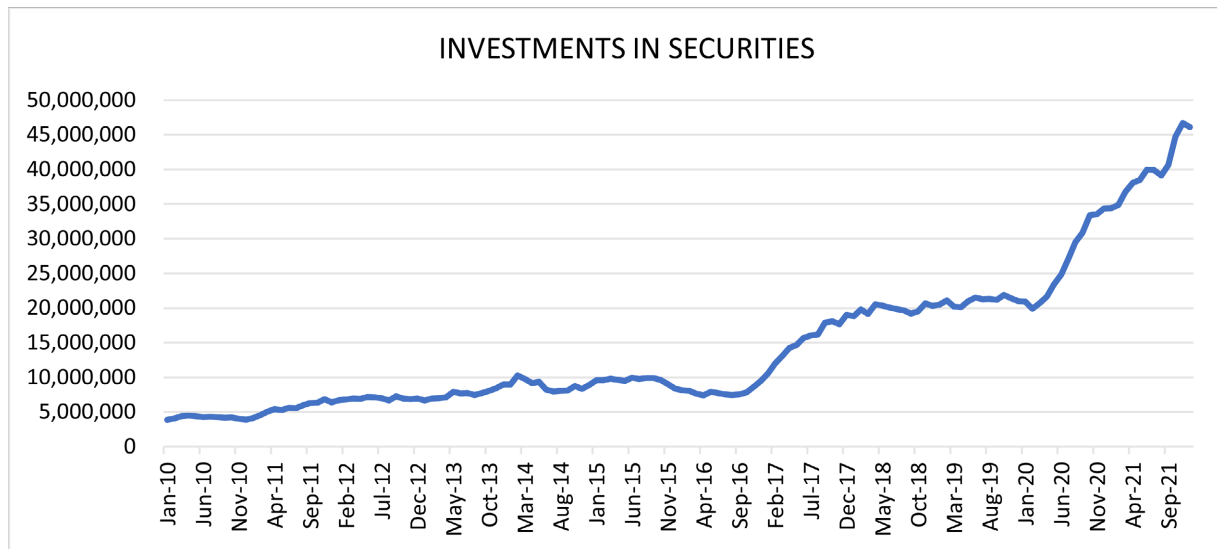
As can be seen in **Figure 2**, from January 2010 to December 2021, Deposits within the Zambian banking sector exhibited steady growth, albeit with fluctuations influenced by various economic factors and regulatory interventions. Starting at approximately 11.6 billion Zambian Kwacha (ZMW) in January 2010, Deposits increased steadily, reaching approximately 111.2 billion ZMW by December 2021. This significant growth underscores the sector's expanding role in intermediating funds within the economy and mobilizing savings from individuals, businesses, and other institutions.

The early years of the decade saw moderate growth in Deposits, reflecting efforts to stabilize the economy following the global financial crisis. From around mid-2010, the sector experienced more robust growth, with Deposits surpassing the 15 billion ZMW mark by September 2010. This growth momentum continued throughout the decade, supported by factors such as improving economic conditions, rising incomes, and increasing financial literacy.

Despite overall growth, the sector faced several challenges and uncertainties during the decade. Economic volatility, currency fluctuations, and changes in regulatory requirements influenced depositor behaviour and banking practices. Additionally, the emergence of digital banking and fintech innovations reshaped the landscape, driving changes in customer preferences and service delivery models.

The latter half of the decade witnessed accelerated growth in Deposits, re-

flecting increased confidence in the banking sector and ongoing efforts to promote financial inclusion and stability. By December 2021, Deposits had more than quintupled since the beginning of the decade, reaching a record high of approximately 111.2 billion ZMW. This remarkable growth underscores the sector's resilience and adaptability in navigating through various economic and regulatory challenges.



Source: Author Calculations.

Figure 3. Total investments in securities in banking sector over review period.

Figure 3 shows that beginning from January 2010 to December 2021, investments in securities witnessed a generally increasing trend, reflecting banks' strategic allocation of funds to various financial instruments such as government bonds, corporate bonds, equities, and other marketable securities. The decade commenced with investments totalling approximately 3.9 billion Zambian Kwacha (ZMW), steadily rising to around 46.1 billion ZMW by the end of December 2021.

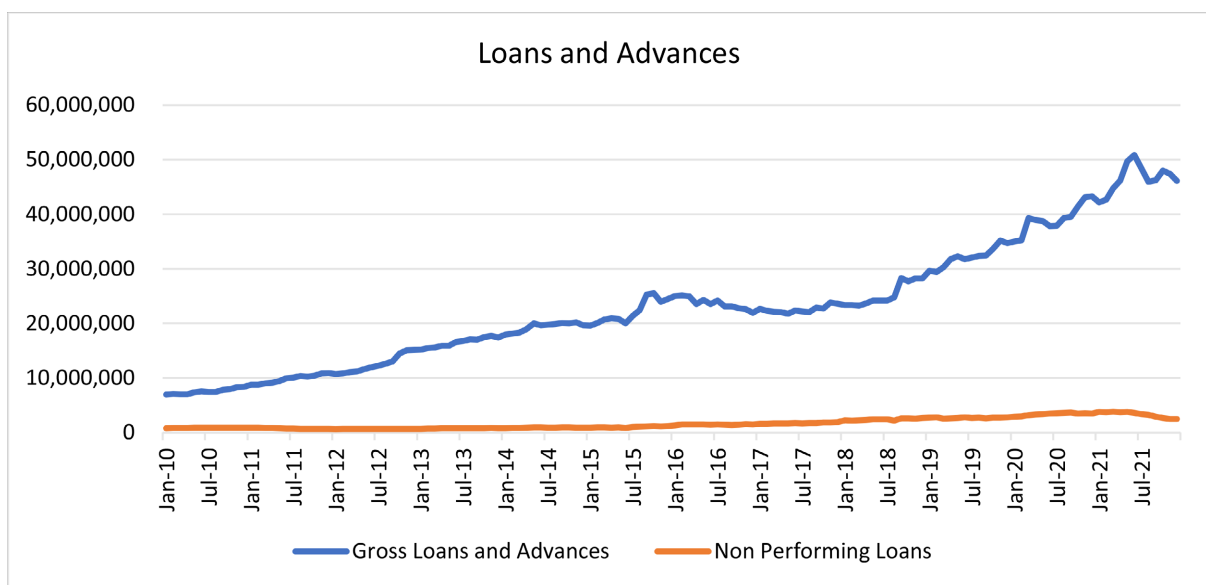
The early years of the decade saw relatively conservative investment strategies by banks, with cautious approaches following the global financial crisis of 2008. However, as economic conditions stabilized and investor confidence improved, banks gradually expanded their investment portfolios, seeking higher yields and diversification opportunities. Investments in securities grew steadily throughout the years, underpinned by factors such as favourable interest rate environments, increased liquidity in financial markets, and growing demand for fixed-income securities.

The mid-decade period witnessed a significant uptick in investments, reflecting banks' efforts to capitalize on emerging opportunities in domestic and international financial markets. Strong economic growth, coupled with supportive monetary policies, spurred demand for credit and investment products, prompting banks to bolster their securities holdings. Moreover, regulatory reforms

aimed at strengthening risk management and capital adequacy requirements incentivized banks to invest in high-quality, liquid assets to enhance their overall financial resilience.

In the latter half of the decade, investments in securities continued to expand, albeit at a more moderate pace. Banks remained focused on optimizing their investment portfolios, balancing risk and return considerations in an evolving economic and regulatory landscape. Heightened market volatility, changing interest rate dynamics, and global uncertainties influenced banks' investment decisions, leading to adjustments in asset allocations and portfolio rebalancing strategies.

Total loans and advances have generally been on the increase across the Banking sector, rising from K10 billion in 2010 to almost K45 billion in 2022. There was a period of slight decline between 2016 and 2018, driven mostly by a shift in preference for government securities across the sector.



Source: Author Calculations.

Figure 4. Loans and advances in banking sector over review period.

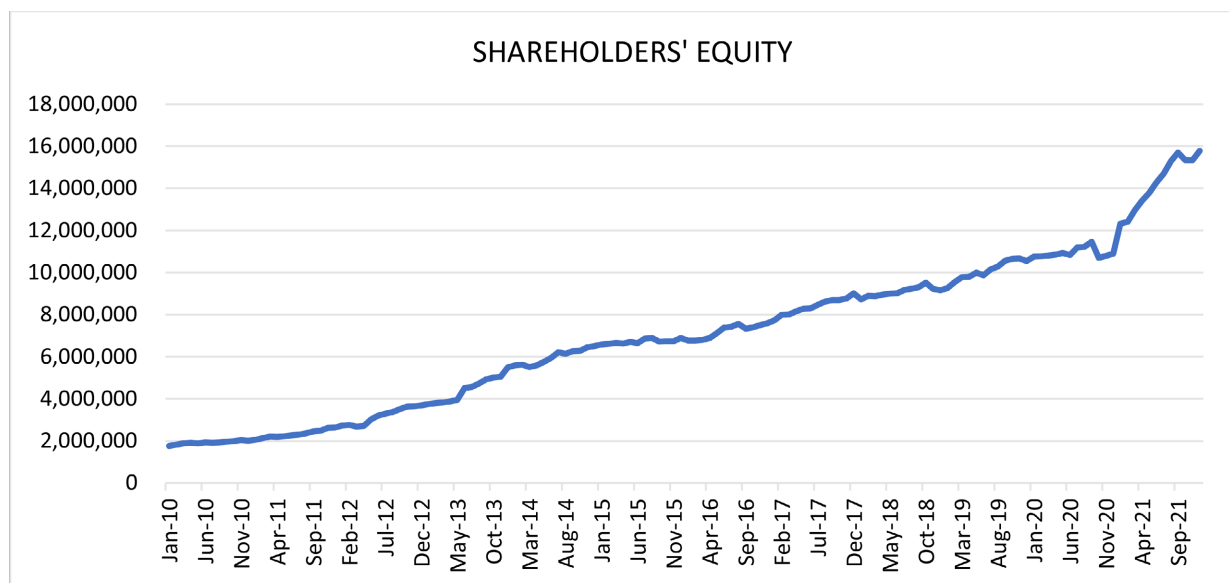
As can be seen in **Figure 4**, from January 2010 to December 2021, the data depicts a consistent upward trajectory in gross loans and advances issued by banks operating in Zambia. Commencing at approximately 6.97 billion ZMW in January 2010, gross loans steadily increased over the decade, reaching around 46.14 billion ZMW by December 2021. This sustained growth reflects the banking sector's endeavours to meet escalating credit demands from businesses, households, and other economic entities, thereby fostering investment, consumption, and economic expansion within the country.

The data also reveals the evolution of non-performing loans (NPLs) within the Zambian banking sector throughout the same period. NPLs signify loans that have defaulted or are at risk of default, serving as a gauge for potential credit risk

exposure for banks. Over the decade, NPLs experienced fluctuations but generally exhibited an upward trend. Starting at approximately 809.45 million ZMW in January 2010, NPLs increased to around 3.73 billion ZMW by December 2021. This trend underscores the challenges encountered by banks in managing credit risk amidst economic uncertainties, evolving market dynamics, and borrower-specific circumstances.

Calculating the non-performing loans ratio provides further insights into the quality of banks' loan portfolios and their ability to mitigate credit risk effectively. The NPL ratio is derived by dividing non-performing loans by gross loans and expressing the result as a percentage. Throughout the decade, the NPL ratio demonstrated fluctuations but generally trended upwards, indicating a deterioration in asset quality relative to the total loan portfolio.

For instance, in January 2010, the NPL ratio stood at approximately 11.61%, reflecting a substantial credit risk within the banking sector. However, by December 2021, the NPL ratio had decreased to around 7.65%, indicating a relatively lower proportion of non-performing loans relative to gross loans. This suggests a potential improvement in asset quality and a reduction in credit risk over the period, although challenges remain in managing and mitigating credit-related risks effectively.



Source: Author Calculations.

Figure 5. Shareholder equity in banking sector over review period.

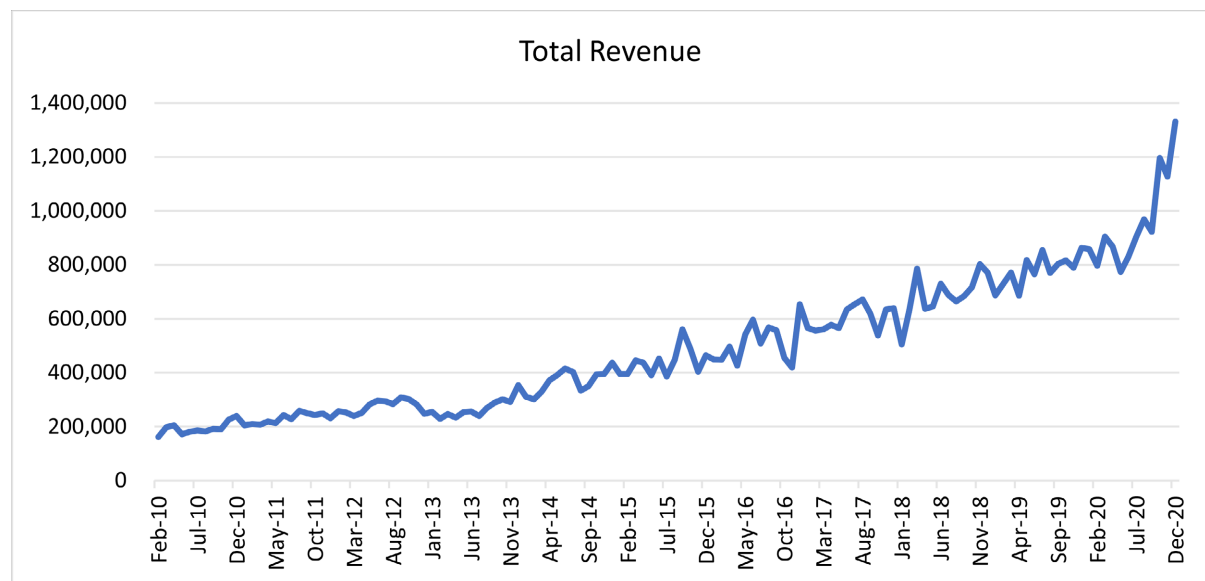
Looking at **Figure 5**, it is clear that over the past decade, the Zambian banking sector witnessed a notable expansion in shareholders' equity, indicating sustained growth, profitability, and investor confidence. The total value of shareholders' equity surged from approximately 1.76 billion Zambian Kwacha (ZMW) in January 2010 to around 15.78 billion ZMW by December 2021. This significant increase underscores the sector's resilience and ability to generate re-

tained earnings, despite facing various economic and financial challenges.

The upward trajectory in shareholders' equity reflects several factors contributing to the sector's robust performance. These include prudent financial management practices, effective risk mitigation strategies, and regulatory oversight. Banks have demonstrated a commitment to maintaining adequate capital buffers to support their operations, absorb potential losses, and comply with regulatory requirements, thereby enhancing financial stability and resilience.

Furthermore, the expansion of shareholders' equity signifies banks' ability to attract capital from investors, both domestic and international, indicating confidence in the sector's prospects and growth opportunities. Strong capital positions enable banks to expand their lending activities, invest in technology and innovation, and explore new business lines, fostering sustainable growth and competitiveness in the market.

However, it is essential to recognize the challenges and risks associated with the sector's performance despite the overall positive trend in shareholders' equity. Factors such as economic volatility, regulatory changes, and market uncertainties can impact banks' profitability, asset quality, and capital adequacy. Therefore, continuous monitoring of key financial indicators, prudent risk management, and proactive measures to address emerging challenges are imperative for ensuring the sector's long-term viability and stability.



Source: Author Calculations

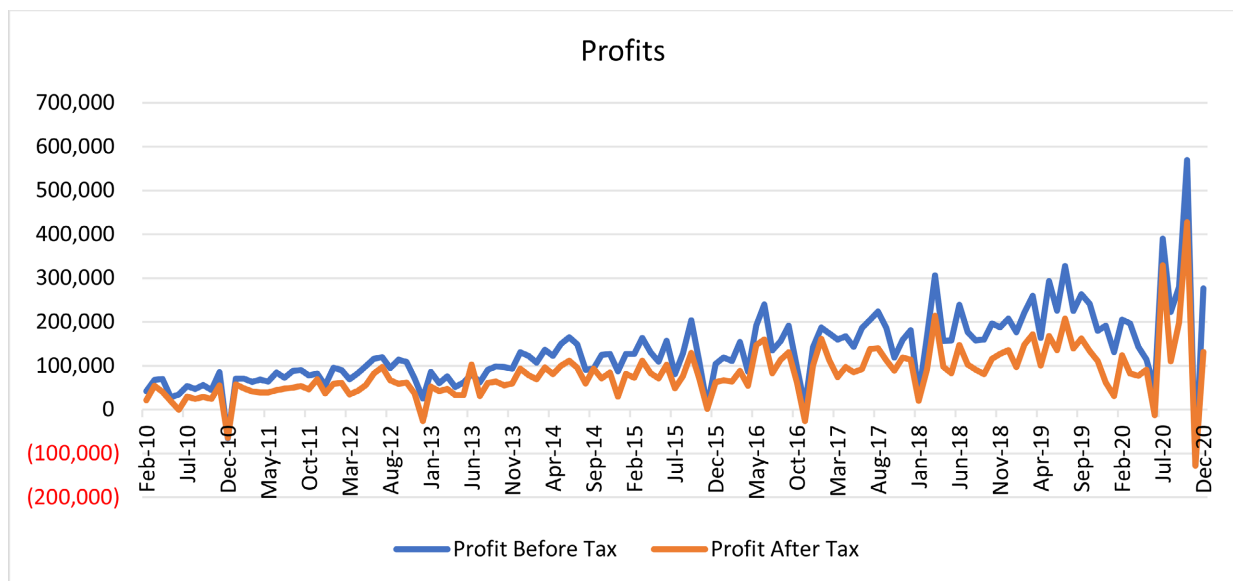
Figure 6. Total revenue in banking sector over review period.

As can be seen in **Figure 6**, the data reveals fluctuating trends in total revenue over the decade, reflecting various economic conditions, regulatory changes, and competitive dynamics. Beginning at 186.77 million Zambian Kwacha (ZMW) in January 2010, total revenue experienced periods of growth, contraction, and stabilization, reaching a peak of 1.33 billion ZMW by December 2020. These fluc-

tuations underscore the sector's resilience in adapting to external pressures and internal restructuring initiatives aimed at enhancing operational efficiency and revenue generation capacity.

Several factors have influenced the Zambian banking sector's revenue performance during the past decade. Economic growth, interest rate dynamics, inflationary pressures, and regulatory reforms have shaped banks' ability to attract deposits, extend credit, and generate fee-based income. Additionally, advancements in technology, changing consumer preferences, and evolving market dynamics have necessitated strategic investments in digital banking solutions, product innovation, and customer-centric service delivery to remain competitive and sustain revenue growth amidst industry disruption and heightened competition.

While the sector has demonstrated resilience and adaptability, it has also faced significant challenges that have impacted revenue generation. Economic volatility, currency fluctuations, asset quality concerns, and liquidity constraints have posed challenges to banks' profitability and sustainability. Moreover, the emergence of fintech disruptors, cybersecurity threats, and regulatory compliance burdens have further heightened operational risks and cost pressures, requiring banks to recalibrate business models, fortify risk management frameworks, and foster greater collaboration with regulators, industry stakeholders, and technology partners to navigate through uncertainty and capitalize on emerging opportunities.



Source: Author Calculations.

Figure 7. Profits in banking sector over review period.

As can be seen in **Figure 7**, the data exhibits a diverse spectrum of pre-tax profit fluctuations throughout the decade. Commencing at 70.58 million Zambian Kwacha (ZMW) in January 2010, pre-tax profits oscillated, reaching both

highs and lows, and closing at 276.12 million ZMW by December 2020. This trajectory reflects the sector's ability to navigate through economic headwinds, regulatory reforms, and industry-specific challenges while striving to maintain profitability amidst evolving market conditions.

Similarly, post-tax profits experienced a tumultuous journey over the period under review. Despite beginning at 37.47 million ZMW in January 2010, post-tax profits encountered periods of volatility, marked by significant gains and occasional setbacks. The decade concluded with post-tax profits standing at 131.55 million ZMW in December 2020. This trajectory underscores banks' efforts to optimize operational efficiency, manage tax liabilities, and enhance shareholder value amidst a dynamic operating environment characterized by regulatory changes, technological advancements, and market uncertainties.

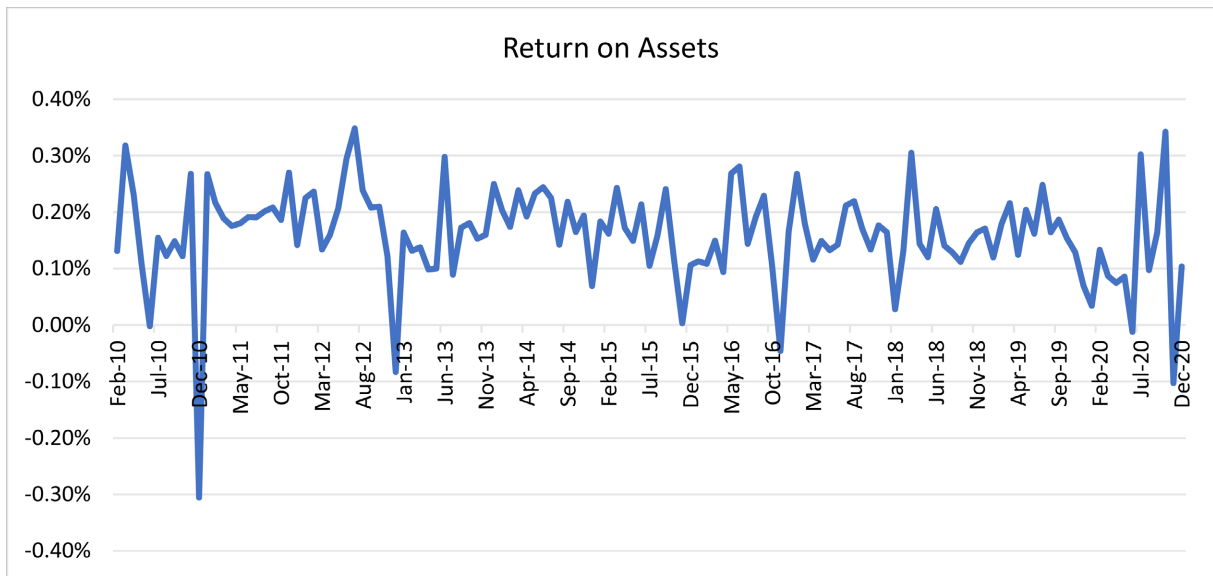
Several factors have influenced the Zambian banking sector's profitability dynamics over the past decade. Economic growth rates, interest rate fluctuations, inflationary pressures, and exchange rate volatilities have exerted varying degrees of impact on banks' revenue streams, cost structures, and bottom-line performance. Furthermore, regulatory reforms, compliance requirements, and capital adequacy standards have shaped banks' risk management practices, lending activities, and investment strategies, influencing their overall profitability and sustainability.

While the sector has demonstrated resilience and adaptability, it has also grappled with numerous challenges that have tested its profitability and resilience. Asset quality concerns, liquidity constraints, market competition, and cybersecurity threats have posed significant challenges to banks' profitability, necessitating robust risk management frameworks, operational resilience measures, and strategic investments in digital transformation to mitigate risks and capitalize on emerging opportunities in the digital economy.

8. Key Ratios Analysis

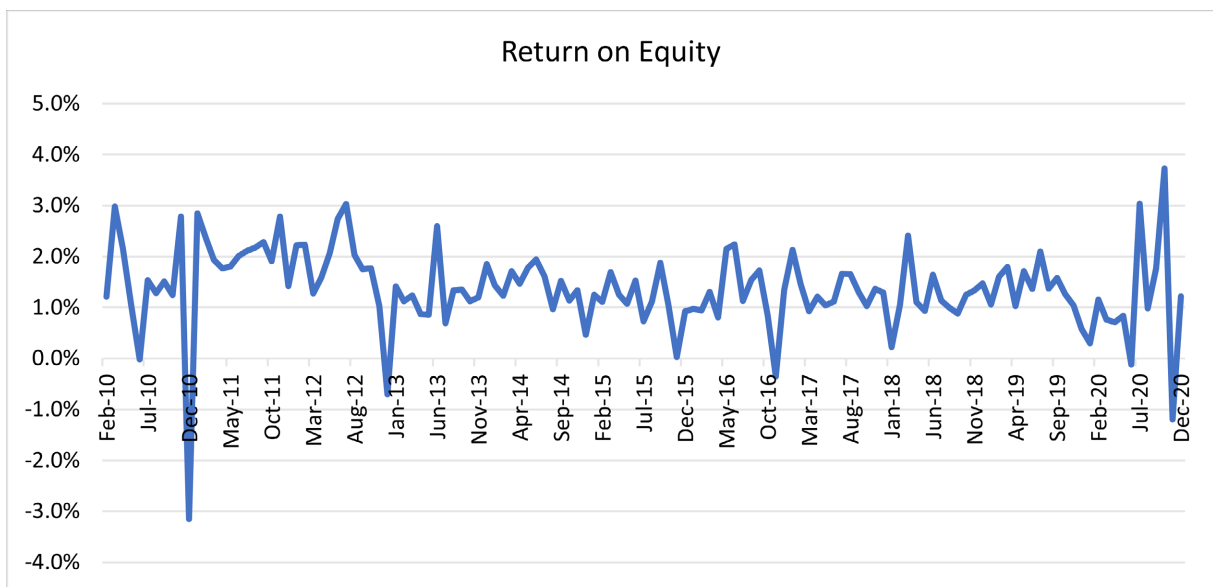
The data reveals a fluctuating trend in return on assets over the period under review. Commencing at 0.13% in February 2010, the ROA experienced varying trajectories, reflecting both positive and negative performance indicators. Notably, there were instances of robust ROA, reaching peaks of 0.35% in August 2010 and June 2019. However, the sector also encountered challenges, evident in negative ROA figures, such as -0.31% in December 2010 and -0.10% in April 2018. Overall, the sector's ROA trajectory underscores its adaptability to changing market dynamics, regulatory reforms, and economic fluctuations, as can be seen in **Figure 8**.

The data reveals a varied trend in return on equity throughout the period under review, as can be seen in **Figure 9**. Starting at 1.2% in February 2010, the ROE experienced fluctuations, reflecting both positive and negative performance indicators. Notably, there were instances of robust ROE, reaching peaks of 3.0% in March 2010 and February 2019. However, the sector also encountered



Source: Author Calculations.

Figure 8. Return on assets in banking sector over review period.

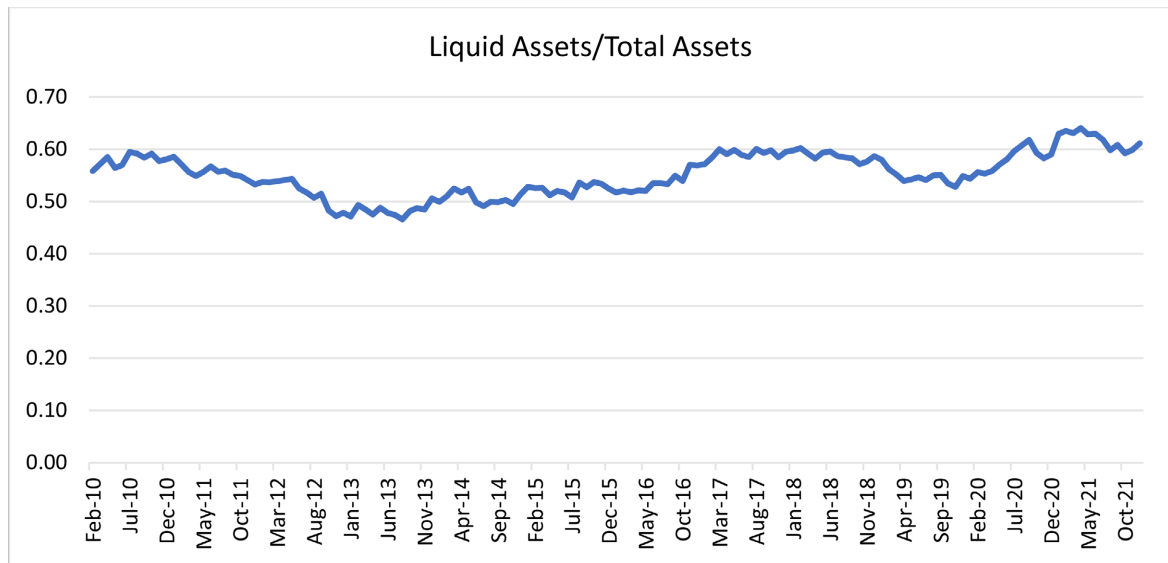


Source: Author Calculations.

Figure 9. Return on equity in banking sector over review period.

challenges, as evidenced by negative ROE figures, such as -3.2% in December 2010 and -1.2% in January 2018. Overall, the sector's ROE trajectory underscores its adaptability to changing market dynamics and regulatory environments.

From February 2010 to December 2021, the liquid assets to total assets ratio exhibited fluctuations, reflecting dynamic changes in the sector's liquidity position in response to various economic and financial factors. The ratio ranged from a low of 0.47 to a high of 0.64 during this period, indicating variations in the proportion of liquid assets held relative to total assets, as shown in **Figure 10**.

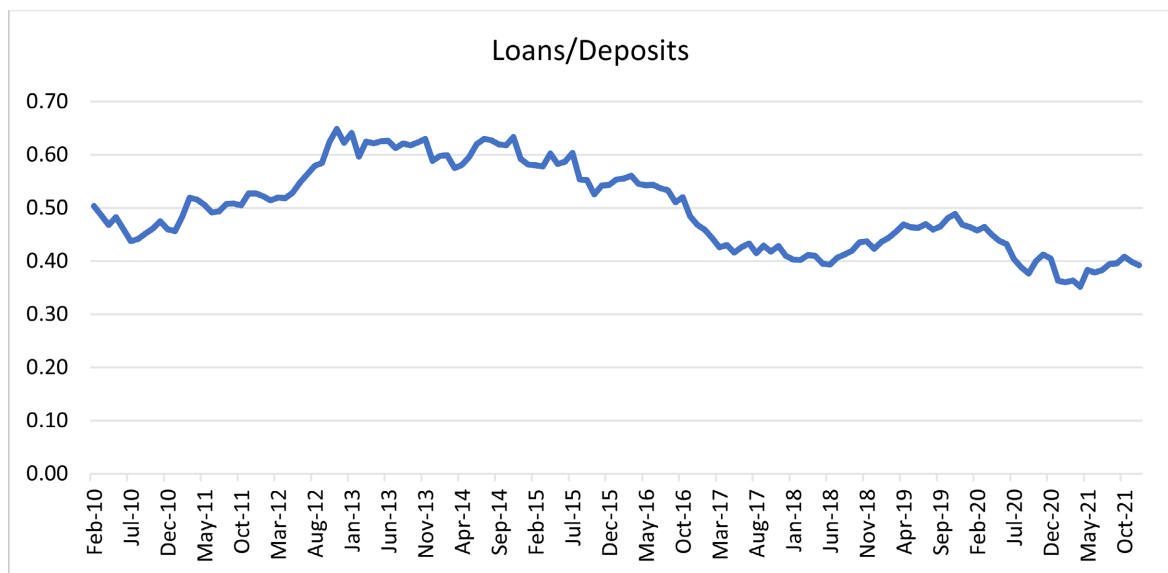


Source: Author Calculations.

Figure 10. Liquid assets to total assets ratio for banking sector.

As can be seen in **Figure 11**, The observed fluctuations in the liquid assets to total assets ratio can be attributed to several factors. Economic conditions, monetary policies, and market dynamics influence banks' liquidity positions, affecting their asset allocation and liquidity management strategies. Additionally, changes in customer deposit behavior, loan demand, and regulatory requirements also impact banks' liquidity profiles, leading to fluctuations in the ratio.

Higher liquid assets to total assets ratios typically indicate a more liquid balance sheet, providing banks with greater flexibility to meet unexpected funding needs and mitigate liquidity risks. Conversely, a lower ratio may signal potential



Source: Author Calculations.

Figure 11. Loans to deposits ratio for all banks.

liquidity constraints and the need for banks to adjust their asset composition or funding sources to enhance liquidity resilience.

From February 2010 to December 2021, the loans to deposits ratio exhibited fluctuations, reflecting changes in banks' lending practices and deposit mobilization efforts. The ratio ranged from a low of 0.36 to a high of 0.65 during this period, indicating variations in the proportion of loans extended relative to deposits collected by banks.

The observed fluctuations in the loans to deposits ratio can be attributed to several factors. Economic conditions, monetary policies, and market dynamics influence banks' lending appetite and deposit mobilization strategies, impacting the ratio. Additionally, changes in credit demand, risk appetite, and regulatory requirements also influence banks' lending decisions and their ability to maintain a balanced loan-to-deposit ratio.

A higher loans to deposits ratio suggests that banks are extending more loans relative to their deposit base, potentially indicating increased lending activity and credit expansion in the economy. However, a very high ratio may also raise concerns about the quality of lending and banks' exposure to credit risk, especially if deposits fail to keep pace with loan growth.

Conversely, a lower loans to deposits ratio may signal conservative lending practices and a focus on maintaining liquidity buffers. While a lower ratio may enhance banks' liquidity positions and reduce credit risk, it may also limit their ability to support economic growth through lending activities.

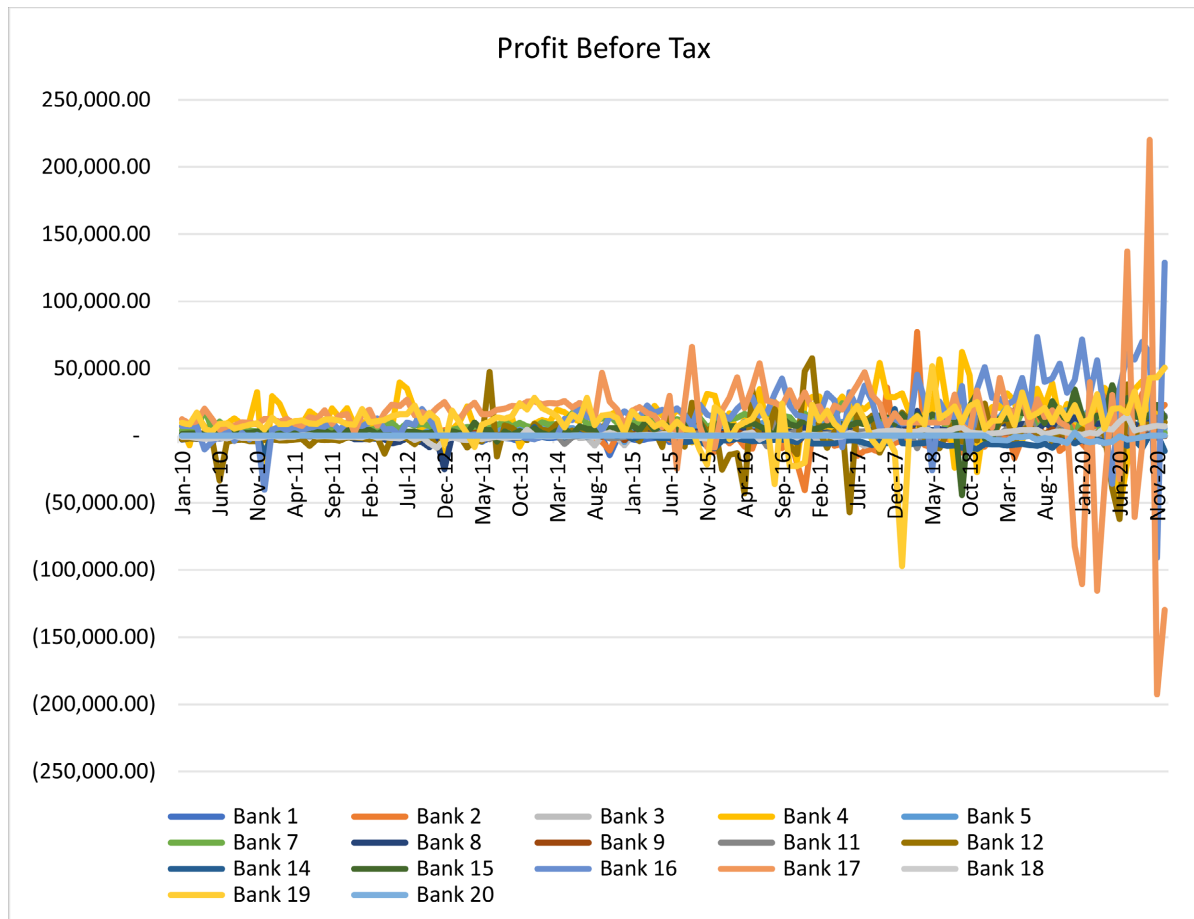
9. Individual Banks Performances

Number of Profitable Banks: Over the decade, the number of profitable banks varied from year to year. For instance, in 2010, out of the 18 banks operating in Zambia, 13 banks reported profits. Similarly, in 2015, 16 out of 19 banks were profitable. However, in certain years, such as 2018, only 8 out of 19 banks were profitable, indicating a significant drop in profitability across the sector.

Losses were indeed present within the sector, affecting multiple banks at various points in time. For example, in 2016, around 4 banks reported losses, including some of the larger institutions in the sector. Similarly, in 2019, losses were reported by 9 out of 19 banks. These losses were not concentrated in one particular period but occurred intermittently throughout the decade.

As can be seen in **Figure 12**, Profit growth varied among banks during the period. While some banks experienced consistent and substantial profit growth, others faced challenges in maintaining profitability. For instance, between 2010 and 2020, the cumulative net profit of the banking sector grew from ZMW 507 million to ZMW 2.8 billion, indicating overall sector-wide profit growth. However, individual banks' profit trajectories differed, with some banks achieving remarkable growth while others struggled to maintain profitability.

The changes in bank profitability were not uniform across all banks. Some banks consistently maintained profitability throughout the period, demonstrating



Source: Author Calculations.

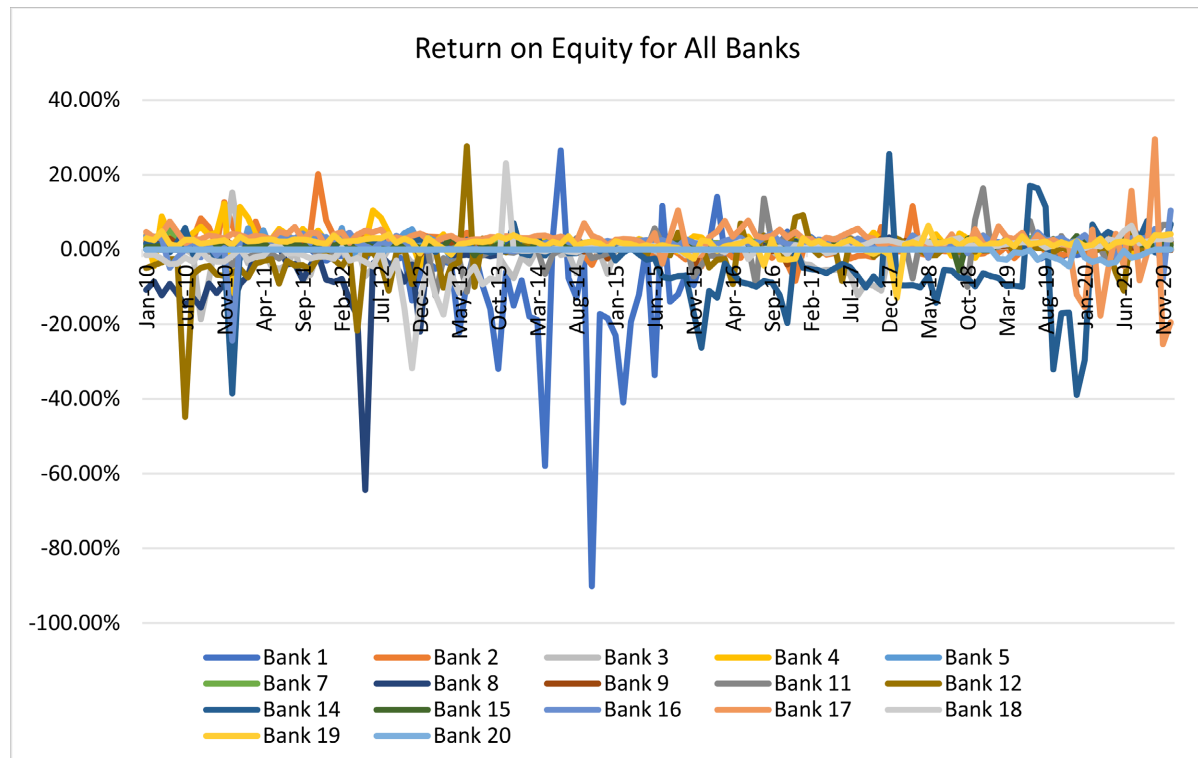
Figure 12. Profit before tax for individual banks.

resilience and effective risk management practices. In contrast, certain banks experienced fluctuations in profitability, with periods of losses offsetting periods of profitability. The differences in profitability changes can be attributed to various factors, including differences in business models, market focus, risk management practices, and operational efficiency among banks.

Analysing the return on assets (ROA) data for the Zambian banking sector over the past decade provides valuable insights into the performance trends of individual banks and the sector as a whole. ROA is a crucial financial metric that indicates the efficiency of banks in generating profits from their assets.

Looking at the data, as shown in **Figure 13**, it can be observed that there are significant variations in ROA among the banks over time. Some banks consistently maintain positive ROA figures, indicating sound asset management and profitability. For instance, Bank 2 exhibits relatively stable and positive ROA throughout the period, suggesting efficient asset utilization and prudent financial management practices.

However, other banks experience fluctuations in ROA, with periods of both positive and negative returns. For example, Bank 1 encounters several periods of



Source: Author Calculations.

Figure 13. Return on equity for individual banks.

negative ROA, indicating challenges in profitability and possibly inefficiencies in asset deployment or higher operational costs. Similarly, Bank 12 demonstrates erratic ROA fluctuations, including a notably large negative ROA in June 2010, suggesting potential financial distress or mismanagement during that period.

Analysing sector-wide performance, it can be observed that despite fluctuations at the individual bank level, the sector appears to have shown resilience and overall stability over the past decade. Most banks manage to maintain positive ROA figures, indicating the sector's ability to generate profits from its assets despite occasional challenges.

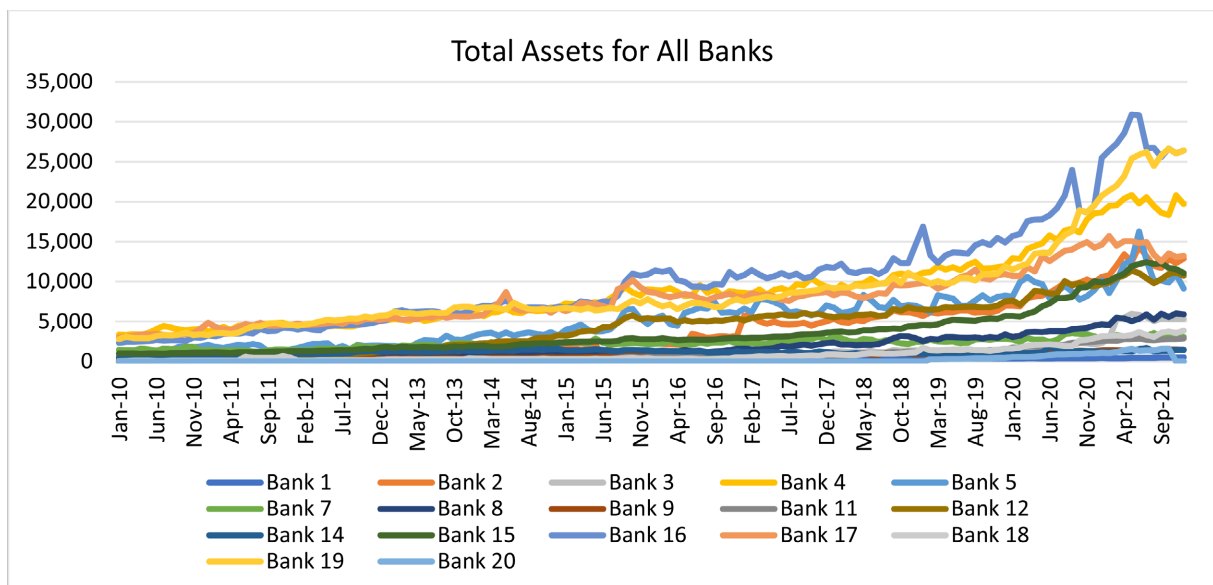
It's important to note that the banking sector operates within a dynamic economic environment influenced by various factors such as regulatory changes, economic cycles, and market competition. Therefore, while analysing historical ROA data provides valuable insights, it's essential to consider contextual factors when assessing the sector's performance and prospects for the future.

With regards to Return on Equity, over the past decade, the Zambian banking sector has navigated through a series of challenges and opportunities, as reflected in the return on equity (ROE) figures of the major banks operating within the country. ROE serves as a crucial metric for evaluating a bank's profitability by measuring how effectively it utilizes its shareholders' equity to generate profits. Analysing the ROE data from January 2010 to December 2020 provides insights into the sector's performance dynamics.

From January 2010 to December 2010, the sector exhibited relative stability, with most banks maintaining ROE figures around or near zero percent. However, some fluctuations were observed, indicating varying degrees of profitability and efficiency among individual banks. Notably, Bank 1 experienced negative ROE figures towards the end of the year, suggesting challenges in profitability and operational efficiency.

The following years witnessed a mix of positive and negative trends across different banks. Bank 2 emerged as one of the top performers, consistently generating positive ROE figures, albeit with occasional fluctuations. In contrast, Bank 3 faced challenges, experiencing negative ROE figures in several periods, signalling issues in profitability and operational management.

In conclusion, the Zambian banking sector has demonstrated a mixed performance over the past decade, with some banks exhibiting stable profitability and others facing challenges. Despite these variations, the sector as a whole has shown resilience, reflecting its ability to adapt to changing market conditions and maintain positive returns on assets.



Source: Author Calculations.

Figure 14. Total assets for individual banks.

Figure 14 shows the movements of the total assets for all Banks in Zambia during the review period. Analysing the data provided on the total assets of banks in Zambia over the past decade reveals several noteworthy trends and patterns. The data spans from January 2010 to December 2021, encompassing a period of significant economic and financial development in Zambia.

Bank 1 shows a notable increase in assets over the years, starting from a minimal level in January 2012 and steadily rising to a peak in December 2021. This trend indicates growth and expansion in the operations of Bank 1 over the past decade.

Bank 2 exhibits a remarkable growth trajectory, with assets consistently increasing over the years. The growth rate appears to accelerate in recent years, indicating successful business strategies and market positioning by Bank 2.

Bank 3's assets show some fluctuations throughout the period, with periods of growth followed by slight declines. However, there is an overall upward trend, suggesting resilience and adaptability in response to changing market conditions.

Bank 4's assets demonstrate steady growth, albeit with some fluctuations, reflecting the bank's ability to navigate challenges and capitalize on opportunities in the banking sector. Bank 5's assets display a pattern of steady growth, with occasional fluctuations. This indicates successful business operations and effective risk management practices by Bank 5.

Bank 7's assets exhibit a consistent upward trend, indicating sustained growth and profitability over the past decade. This suggests effective management and strategic decision-making by the bank's leadership.

Bank 8 shows moderate growth in assets over the years, with some fluctuations. This reflects the bank's ability to maintain stability and capitalize on growth opportunities in the banking sector. Bank 9's assets display a pattern of fluctuation, with periods of growth followed by slight declines. However, there is an overall upward trend, indicating resilience and adaptability in response to changing market dynamics.

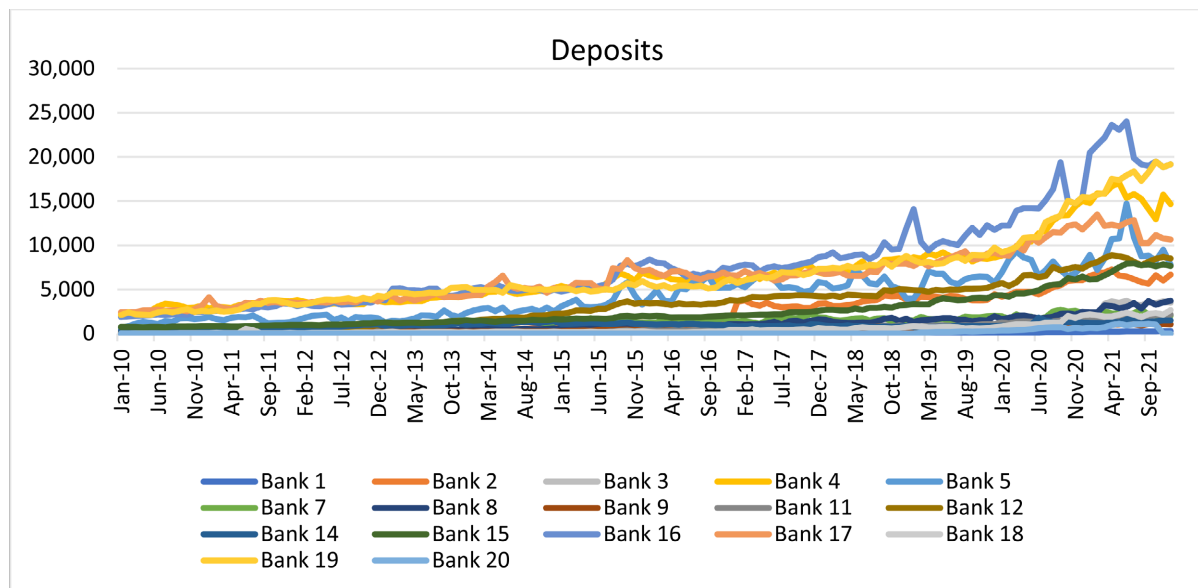
Bank 11's assets show significant growth over the past decade, with the bank expanding its operations and market presence. This suggests effective management and strategic planning by Bank 11. Bank 12 exhibits a steady increase in assets over the years, indicating successful business operations and market positioning. This reflects the bank's ability to capitalize on growth opportunities in the banking sector.

Bank 14's assets demonstrate steady growth, with occasional fluctuations. This indicates successful business operations and effective risk management practices by Bank 14. Bank 15's assets show consistent growth over the years, reflecting the bank's ability to maintain profitability and capitalize on growth opportunities in the banking sector.

Bank 16's assets display a pattern of steady growth, with occasional fluctuations. This indicates successful business operations and effective risk management practices by Bank 16. Bank 17's assets exhibit a consistent upward trend, indicating sustained growth and profitability over the past decade. This suggests effective management and strategic decision-making by the bank's leadership.

Looking at the data, it is evident that most banks experienced positive growth rates over the years, indicating a robust and expanding banking sector in Zambia. However, the growth rates varied among banks, with some institutions exhibiting higher growth rates compared to others. Banks with particularly good growth rates include Bank 5, Bank 12, and Bank 16, among others, which consistently expanded their total assets throughout the period.

Moreover, there were periods when most banks grew faster or slower collectively. For instance, from around mid-2013 to mid-2016, there seems to be a notable acceleration in the growth of several banks, possibly attributed to favourable economic conditions, increased investment, or other factors contributing to the banking sector's expansion. Conversely, there might have been periods of relatively slower growth, which could be attributed to economic downturns, regulatory changes, or other challenges affecting the sector.



Source: Author calculations.

Figure 15. Deposits for individual banks.

Figure 15 shows the movements in the deposits for all the individual banks in Zambia over the review period. Banks 1, 2, and 3 exhibit steady deposit growth throughout the period, with no significant deviations in their growth rates. This consistent performance suggests stability and reliable growth strategies within these institutions.

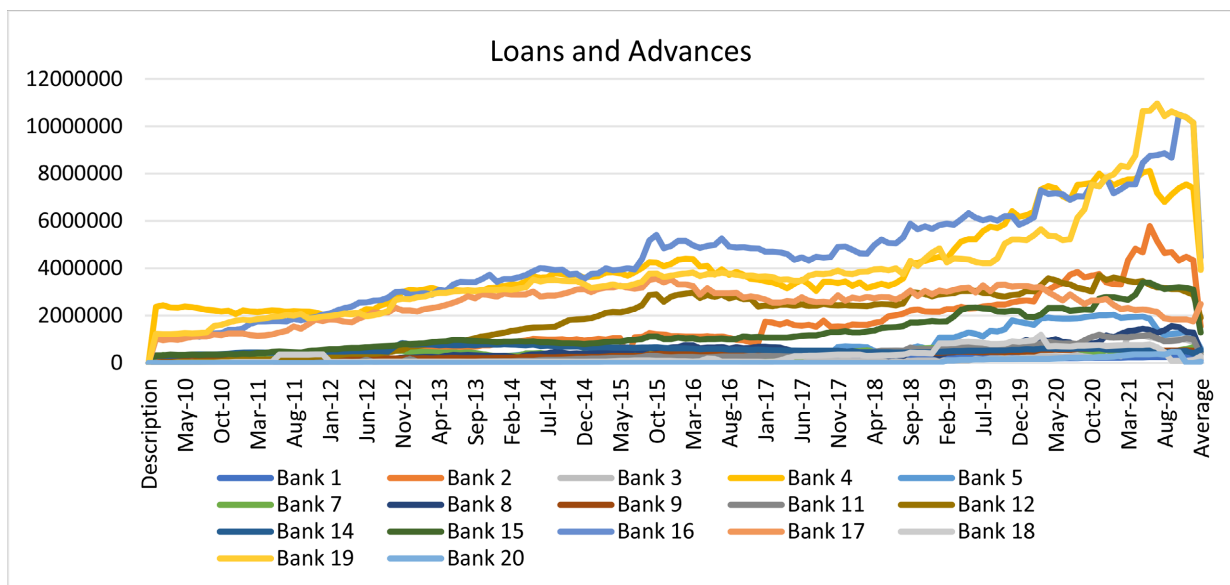
Banks 4, and 5 show a similar pattern of steady deposit growth, with slight fluctuations in their growth rates. However, there's a notable increase in growth rate for Bank 5 starting from mid-2013, indicating a potential shift in strategy or market conditions.

Banks 7, 8, and 9 display relatively stable growth, with minor fluctuations in their growth rates. However, there's a noticeable decrease in growth rate for Bank 8 around 2016. Banks 11, and 12 demonstrate consistent growth over the period, with no significant deviations in their growth rates. This stable performance suggests effective management and growth strategies within these institutions.

Banks 13, 14, and 15 exhibit steady growth with some fluctuations in their growth rates. However, there's a noticeable acceleration in growth for Bank 15 from around mid-2014 onwards, indicating successful strategies or favourable

market conditions. Banks 16, 17, and 18 display relatively steady growth, with some fluctuations throughout the decade. There's no discernible upward or downward trend in their growth rates. Banks 19 and 20 show consistent growth over the period, with a noticeable increase in growth rate for Bank 19 from around mid-2013. Both banks demonstrate stable performance, with no significant fluctuations in their growth rates.

On the whole, several banks, such as Bank 2, Bank 4, Bank 5, and Bank 16, experienced significant growth spurts, possibly due to effective business strategies, market demand, or macroeconomic factors. There were periods, such as from 2012 to 2015, where most banks exhibited accelerated growth, indicating favourable market conditions or regulatory changes promoting banking activities. However, some banks, like Bank 8, showed a slight decline in growth rate during certain periods, possibly due to internal restructuring, economic downturns, or increased competition.



Source: Author Calculations.

Figure 16. Loans and advances for all banks

Figure 16 shows the movements in loans and advances for all the Banks in Zambia over the review period. Over the years, all banks have shown varying degrees of growth in their loans and advances portfolios. Bank 1, for instance, commenced its operations with negligible values and gradually expanded its loan book over time, experiencing exponential growth in recent years, reaching a substantial average by the end of the decade. Conversely, Bank 19 started with a significant loan portfolio and maintained steady growth, albeit at a slower rate compared to Bank 1.

Examining the data, it can be observed that there were certain periods of accelerated growth across multiple banks. For instance, between 2013 and 2015, several banks experienced a surge in their loan portfolios, likely driven by fa-

avourable economic conditions, increased demand for credit, and strategic initiatives by the banks to expand their lending activities. Conversely, there are periods of slower growth, often associated with economic downturns, regulatory constraints, or changes in market dynamics.

Furthermore, it's essential to highlight outliers or banks that consistently outperform or underperform their peers. For example, Bank 16 consistently demonstrates robust growth, indicating effective strategies in capturing market share or catering to specific segments. Conversely, banks with stagnant or declining loan portfolios may need to reassess their business models, risk management practices, or market positioning to remain competitive.

The Zambian Banking Sector has witnessed significant growth over the past decade, with various banks expanding their loan portfolios to meet the evolving needs of the economy. However, challenges such as regulatory changes, economic volatility, and competitive pressures continue to shape the sector's landscape, necessitating agile strategies and prudent risk management practices for sustainable growth and resilience.

10. Conclusion

The Zambian banking sector has shown growth and resilience in the ten years since 2009. The total assets in the sector have steadily increased from ZMW 16.3 billion in January 2010 to ZMW 126.2 billion by December 2020, reflecting a growth rate of around 12%. This growth highlights the sectors expansion and its significant role in driving progress.

Deposits, which indicate trust in the banking system, have also seen growth over this period. Starting at ZMW 11.6 billion in January 2010 deposits reached ZMW 98.5 billion by December 2020 with a growth rate of about 11%. This continuous rise suggests a flow of funds into the banking system.

Profitability, measured by both pre-tax and tax profits has shown fluctuations but overall improvement. Pre-tax profits increased from ZMW 70.6 million in January 2010 to ZMW 569.3 million by December 2020, while post-tax profits followed a trend rising from ZMW 37.5 million to ZMW 427.5 million during the same period, averaging around a yearly increase of about 15%. This growth highlights the sectors ability to generate returns despite changing circumstances.

Banks have seen an increase in their lending activities with the loans and advances portfolios growing from ZMW 6.97 billion in January 2010 to ZMW 103.3 billion by December 2020, showing an average annual growth rate of around 14%. This growth highlights the role banks play in providing credit to businesses and individuals, fostering investment and consumption.

In addition, the shareholders' equity of banks has steadily risen from ZMW 1.76 billion in January 2010 to ZMW 162.4 billion by December 2020, with a growth rate of approximately 20%. This uptrend demonstrates investors trust in the sectors stability and long-term prospects.

The performance of the banking industry over the past decade exhibits resili-

ence, expansion and adaptability. Despite encountering challenges such, as fluctuations and regulatory shifts banks have seized opportunities maintained financial standing and contributed to the nation's economic well-being and progress.

In light of the global financial turbulence caused by the 2008 Global Financial Crisis, the performance of the Zambian banking sector between 2010 and 2020 stands as a significant testament to the progress achieved by the Zambian banking regulator. This period reflects the concerted efforts made to stabilise the sector and foster an environment conducive to growth. The measures implemented by the regulator have not only mitigated the adverse effects of the crisis but also facilitated substantial growth and resilience within the banking industry in Zambia. This progress underscores the effectiveness of the regulatory framework in ensuring the stability and development of the sector amidst global economic challenges.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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