
UNIVERSITY OF LUSAKA

## SCHOOL OF POSTGRADUATE STUDIES

# THE IMPACT OF THE COVID-19 PANDEMIC ON THE LENDING ACTIVITIES OF BANKS IN ZAMBIA

**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, UNIVERSITY OF LUSAKA IN PARTIAL FULFILLMENT OF THE AWARD OF THE MASTER OF BUSINESS ADMINISTRATION IN FINANCE**

**BY**

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**DECLARATION**

I Chipo Holly Chikwama, student number MBAGEN212484002, declare that this dissertation represents my own work and has not been previously submitted by anyone else for a postgraduate degree at this University or any other institution. I further declare that all the secondary data in this dissertation has been acknowledged by way of referencing.

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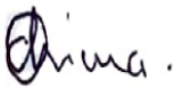
SIGNATURE:  SIGNATURE: 

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| | |
|---|---|
| **BOZ:** | Bank of Zambia |
| **COVID-19:** | Coronavirus Disease of 2019 |
| **IMF:** | International Monetary Fund |
| **NPL:** | Non-Performing Loans |
| **PwC:** | PricewaterhouseCoopers Zambia |
| **TMTRF:** | Targeted Medium-Term Refinancing Facility |
| **VECM:** | Vector Error Correction Method |
| **WHO:** | World Health Organization |
| **ZNPHI:** | Zambia National Public Health Institute |
| **ZANACO:** | Zambia National Commercial Bank |

## ABSTRACT

The COVID-19 pandemic brought disruptions to the global economy, including Zambia is banking sector, significantly affecting lending activities. This study investigates the impact of the pandemic on lending practices in Zambian banks. Specifically, the study aims to assess changes in lending activities, evaluate the effects of key factors such as lending rates, liquidity ratios, and non-performing loans (NPLs), and examine the effectiveness of regulatory measures implemented during the crisis.

This study adopts a quantitative research approach, utilizing a correlational research design to analyse the relationships between the pandemic and lending practices. It is based on secondary data obtained from 2016 to 2023 from institutions such as the Bank of Zambia, the World Bank, and the Zambia National Public Health Institute. The econometric model incorporates various variables, including lending rates, liquidity ratios, loan applications, non-performing loans (NPLs), and COVID-19 infection rates. Data analysis was performed using descriptive and inferential statistics, employing tools such as vector error correction models and the Johansen test to evaluate the long-term relationships between the variables.

Findings reveal a slight reduction in lending rates from 26.046% to 25.99% due to accommodative monetary policies, a surge in loan demand during the pandemic, increased liquidity ratios from 117.2% to 141.98%, and a marginal rise in NPLs from 8.4% to 8.6%. The Bank of Zambia's initiatives, including the Targeted Medium-Term Refinancing Facility, effectively stabilized the banking sector.

The study concludes that while the pandemic posed significant challenges, strong regulatory responses and institutional resilience mitigated its impact. Key recommendations include strengthening liquidity management frameworks, promoting digital financial solutions, and diversifying loan portfolios. Additionally, enhancing financial literacy and fostering public-private partnerships can improve stability and inclusivity in the sector. This research underscores the importance of robust policy interventions and adaptive banking practices in navigating future economic crises.

# CHAPTER ONE

## 1 INTRODUCTION

The COVID-19 pandemic caused a global economic crisis, disrupting industries and economies across the world. One of the sectors which is crucial for economic stability that faced significant challenges is the financial industry. The pandemic, which emerged in late 2019 and swiftly developed into a global health emergency, created unprecedented difficulties for economies and financial systems (Wullweber et al., 2020). While the immediate focus was on managing public health, the ripple effects on various economic sectors, including the banking industry, were profound (Nicola et al., 2020).

In Zambia, as in many other developing countries, the pandemic led to a decline in economic growth, increased unemployment, and heightened levels of poverty. The banking sector, a key driver of economic growth, financial stability, and the facilitation of capital flows (Neanidis, 2019), plays a vital role in economic recovery. Analysing how the pandemic affected lending practices in Zambian banks is essential to understanding the sector's resilience, the challenges it faces, and how policies can be shaped to ensure financial stability and inclusive growth.

Understanding the impact of the COVID-19 pandemic on bank lending in Zambia is crucial for the country's economic recovery and resilience. Governments and central banks around the world took actions to reduce the financial effects of the pandemic, as mentioned by Padhan and Prabheesh (2021), by using a variety of financial and economic measures. These measures included lowering interest rates, offering loan forbearance, and providing stimulus packages to support businesses and safeguard jobs. The lending activities of banks have been greatly impacted by the economic fallout from COVID-19, but the severity of this impact varies depending on the country.

The upcoming chapters explore this topic in detail. Chapter Two presents the literature review which highlights an overview of existing literature on the impact of COVID-19 pandemic on bank lending worldwide. It is divided into two sections; the theoretical framework which lays out key theories and concepts guiding the study and the conceptual framework, which illustrates the relationships between the variables.

Chapter Three outlines the research methodology, the approach, design, target population, sample size, sampling technique, data sources, model specification, data analysis, and considerations for reliability, validity, and ethics. Chapter Four shows the study's findings, correlating them with the research questions and hypotheses. Chapter Five discusses the findings of the study, while Chapter Six provides a summary of the study along with recommendations for future action.

### 1.1 Background of Study

Over the past twenty years, Zambia's banking system has remained largely stable, with steady growth in assets and profitability. This stability, highlighted by the sector's increased lending to the private sector and improved competitiveness, is viewed as a positive indicator for investment in both the banking industry and the broader economy (PwC Zambia, 2022). In 2000, Zambia had a total of 13 banks, including 6 that were Zambian owned. Among these, six were owned by foreign entities, and one, Indo Zambia Bank, was a joint venture between the Zambian government and the Indian government. Between 2000 and 2010, several new banks commenced operations, increasing the total number of banks to 18. This number remained unchanged in 2021 after a local bank was acquired by another institution (Simpasa & Nandelenga, 2022). As of 2021, out of the 18 banks, only 5 were locally owned, while 13 were predominantly owned by foreign entities. The banking sector was characterized by a mix of large and small banks, with 4 classifieds as major banks based on their asset size, and the remaining 14 categorized as smaller banks. In 2000, the four largest banks in Zambia controlled 75.6% of the industry's total assets, highlighting their significant market dominance, as illustrated in Table 1.1 (Simpasa & Nandelenga, 2022). By 2010, the concentration ratio had decreased to 63.1% due to the entry of new banks, which captured a portion of the market share. This trend continued over the next decade, with the concentration ratio further declining to 53.5% by 2019. The reduction in the asset share held by the top four banks indicates increased competition within the banking sector. According to Simpasa (2022), this period also saw a rise in the number of foreign banks entering the market, contributing to the diversification and competitive dynamics of the industry.

**Table 1.1: Banking sector indicators, end-period** (Simpasa & Nandelenga, 2022)

| | | 2000 | 2005 | 2010 | 2015 | 2019[a] |
|---|---|---|---|---|---|---|
| (i) | Share of assets of four largest banks (percent of total assets) | 75.6 | 70.2 | 63.1 | 57.1 | 53.5 |
| (ii) | Investments (percent of total assets) | | | | | |
| | Loans | 40.8 | 31.4 | 54.8 | 40.2 | 38.0 |
| | Government securities | 12.1 | 24.5 | 27.8 | 12.8 | 21.9 |
| (ii) | Source of interest income (percent share)[a] | | | | | |
| | Loans | 72.7 | 60.8 | 70.9 | 75.3 | 54.2 |
| | Government securities | 27.3 | 39.2 | 29.1 | 24.7 | 45.8 |
| (iii) | Lending by borrower (percent share) | | | | | |
| | Private sector | 80.0 | 73.7 | 58.0 | 64.1 | 55.3 |
| | Individuals and households | 12.3 | 19.6 | 32.2 | 30.1 | 29.2 |
| | Central government | 0.4 | 0.1 | 3.2 | 1.8 | 0.3 |
| | Others | 7.3 | 6.6 | 6.6 | 3.9 | 15.2 |

Source: Computed using data from Bank of Zambia
Notes:\[a] Data for December of each year.

In 2008, the government sold most of its shares in Zanaco, which is one of the big banks. This made competition in the Zambian banking industry stronger. Importantly, Barclays Bank Zambia (now Absa Bank Zambia) was ranked fourth in 2000 and became the largest bank pushing Standard Chartered Bank Zambia which was ranked first down to third place. Table 1.1 shows that traditional lending activities make up about 40 percent of all the assets in the banking industry, but this has gone down from a high of 55 percent in 2010. Most interest income comes from loans, making up over 70 percent, except in 2019 when loans only accounted for 54 percent of it. The decrease was mainly due to the noticeable drop in credit which was seen by the decrease in the percentage of loans compared to total assets during that period. Lending to private businesses constituted the largest segment of banks' lending portfolios. However, with the onset of the COVID-19 pandemic in 2020, there was a significant reduction in lending activity as economic uncertainty led to tighter credit conditions and lower demand for business loans. By 2020, household borrowing showed some resilience, as emergency relief measures spurred lending to individuals, while overall business lending declined.

A mere 0.3% of loans were made directly to the central government; however, this percentage does not include investments in government securities, which are handled differently for regulatory and balance sheet purposes. About 22% of all bank assets in 2019 were made up of government securities, up from 12.1% in 2000 and 13% in 2015 following a rise in 2010. The move in investment from loans to government securities was

a result of banks retreating to safety as the macroeconomic environment deteriorated starting in 2016, making loans to the private sector less appealing and riskier. Even after accounting for the effects of the global financial crisis, the average ratio of non-performing loans to gross loans between 2016 and 2019 was 11.5%, down from the 7.3% recorded between 2008 and 2015 (BOZ, 2020b).

Zambia's economic fluctuations have had direct negative effects on the banking sector, influencing how banks conduct their operations. Periods of economic growth have been brief and frequently interrupted by extended downturns, which have adversely affected banks' profitability and asset quality. The COVID-19 pandemic exacerbated an already fragile economic situation, characterized by poor fiscal management and increasing debt burdens. While the crisis did not significantly impact the volume of bank lending, it led to a deterioration in asset quality. In 2020, the ratio of non-performing loans (NPLs) to total loans rose to 11.6%, compared to 9.8% the previous year, exceeding the regulatory threshold of 10% (Simpers & Nandelenga, 2022). However, the negative impact of declining asset quality on profitability was mitigated by higher interest income on Government bonds saw their interest rates rise close to levels from before the Heavily Indebted Poor Countries (HIPC) initiative due to the worsening COVID-19 crisis. This increase helped maintain a positive return on assets at 2.1 percent, although this was lower than the average of 3.1 percent in the two years preceding the pandemic. However, when accounting for high inflation, the actual returns were negative. This research seeks to shed light on the complex aftereffects of the COVID-19 pandemic on the lending activities of banks in Zambia. By examining the changes, in the lending patterns, credit risk management practices and the impact on borrowers, the aim is to contribute valuable insights to the existing body of literature in the field of banking and finance.

This study contributes to the global discourse on strengthening financial systems to withstand future shocks and support sustainable economic recovery. Examining the effects of the COVID-19 pandemic on the lending activities of banks in Zambia is critical to understanding how financial institutions navigated challenges that posed existential threats to the economic stability of businesses and households. This study aims to discover the specific disruptions to lending patterns that hindered private enterprises and

vulnerable segments of society access to capital, assess the effectiveness of policy responses, and discover the broader implications for financial stability.

### 1.2 Statement of the Problem

The COVID-19 pandemic has had profound implications for the banking sector globally, including in Zambia, posing significant threats to its ability to support the economy. Specifically, Zambian banks have faced increased loan defaults, liquidity shortages, and challenges adapting their lending strategies to the pandemic's economic impact. These challenges have strained the financial stability of banks and jeopardized the livelihoods of businesses and individuals who rely on credit to sustain operations and meet financial obligations. Barua (2020) highlighted how increased credit defaults during the pandemic forced many businesses worldwide to shut down, causing widespread economic distress. Similarly, Munsaka (2022) found that the heightened expectations for countercyclical lending placed Zambian banks under significant strain, threatening their capacity to mitigate the economic fallout. Without effective interventions, the stability of Zambia's banking sector remains at risk, with potential long-term consequences for economic resilience and recovery.

Existing studies provide insights into the challenges that the banking sector faced during the pandemic. Barua (2020) observed that increased loan defaults and financial distress led to business closures globally, emphasizing the pandemic's disruptive impact. Munsaka (2022) focused on Zambia, identifying similar challenges, and highlighting the pressure on banks to maintain lending activities despite heightened financial risks. Sakyi et al. (2022) explored the adjustments made to credit management strategies, while Skvortsova et al. (2020) examined the difficulties being faced by borrowers in accessing credit and meeting repayment obligations. These studies however, lacked a detailed focus on how the pandemic-induced disruptions specifically impacted Zambian banks' lending practices and financial stability.

While previous research has examined credit defaults, borrower challenges, and credit risk management during the pandemic, the specific implications for Zambian banks' lending strategies and financial stability remain underexplored. There is limited understanding of how increased loan defaults, and the economic downturn have

reshaped lending behaviours in Zambia and the extent to which these changes have affected the banking sector's ability to support economic recovery. This study addresses this gap by investigating how Zambian banks adapted their lending practices to mitigate the economic impact of the pandemic and the resulting implications for financial stability. By doing so, the study aims to provide insights that can guide policymakers and stakeholders in strengthening the resilience of Zambia's banking sector.

### 1.3 Research Objectives

The main objective is to access the impact of covid-19 pandemic on the lending activities of banks in Zambia

**Specific Objectives**

1. Analyze the changes in the lending activities adopted by banks in response to COVID-19 pandemic.
2. Investigate the effects of Lending rates, liquidity ratio and non-performing loans on bank lending activities during COVID-19 pandemic.
3. Evaluate the effectiveness of policy and regulatory responses implemented during the pandemic and their implications for future regulatory frameworks.

**Research Hypothesis**

$\mathbf{H_0}$**:** The COVID-19 pandemic has no influence on the changes in lending activities of banks in Zambia.

$\mathbf{H_1}$**:** The COVID-19 pandemic has an influence on the changes in lending activities of banks in Zambia.

$\mathbf{H_0}$: There is no significant effect between lending rates, liquidity ratio, and non-performing loans and COVID-19.

$\mathbf{H_1}$: There is significant effect lending rates, liquidity ratio and non-performing loans and COVID-19

$\mathbf{H_0}$: Policy and regulatory response have not supported the banking sector during and after the pandemic.

$\mathbf{H_1}$**:** Policy and regulatory response have supported the banking sector during and after the pandemic.

### 1.4 Significance of the Study

The significance of this study extends across several dimensions, with important implications for Zambia's banking sector and the broader economic landscape. The study aims to bring out a number of benefits. Firstly, study seeks to help provide an understanding of how Zambian banks have adapted their lending practices in response to the COVID-19 pandemic. This in turn helps financial institutions in refining their strategies to have the ability to fight future pandemics effectively and thereby enhance stability and resilience. Secondly, conducting this study increases the academic knowledge on the impact of the COVID-19 pandemic on the banking sector particularly on the lending activities. Thirdly, this study seeks to assist policy makers and regulatory bodies with designing effective policies to protect the financial sector and promote economic stability in the face of future pandemics.

Lastly, this study seeks to provide an opportunity to contribute a Zambian case study to the global discourse on the economic impacts of COVID-19. By sharing lessons and best practices specific to the Zambian context, this research will offer valuable insights to other regions facing similar challenges. The absence of such contributions would mean missing out on the chance to enhance the global understanding of how health crises interact with the banking sector and to influence positive changes in banking and regulatory practices worldwide.

### 1.5 Scope of the Study

This study seeks to comprehensively examine the impact of the COVID-19 pandemic on the lending activities of commercial banks in Zambia. The research focuses on all commercial banks in Zambia as their diverse loan portfolios provide a broader perspective on banking lending practices. The study utilizes aggregate data published by the BOZ, Ministry of Finance, and World Bank dataset. The study aims to show the changes made in response to the pandemic regarding loan volumes (Total Loans), credit risk as measured by non-performing loans ratio, liquidity risk and interest risk. The period under study will be from 2016 to 2023. This period has been chosen to show a detailed analysis

of how the pandemic influenced banking operations and regulatory responses within the banking sector.

### 1.6 Definition of Key Terms

**COVID-19:** Refers to the global outbreak of the novel coronavirus disease (COVID-19) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that began in late 2019 and had widespread social, economic, and health consequences (Ciotti et al., 2020; World Health Organization, 2024).

**Pandemic:** Refers to the extensive spread of an infectious disease across an entire country or globally within a specific period (Grennan, 2019; Morens et al., 2009).

**Lending Activities:** Refers to the range of actions and processes undertaken by banks to provide loans and credit to individuals, businesses, and other entities (Thompson, 1998). This includes loan origination, underwriting, disbursement, and monitoring to ensure compliance with the loan terms (Ferrary, 2003).

**Lending Patterns:** The distinctive trends and shifts observed in how banks allocate loans, including changes in loan volume, loan types, and target industries or sectors (Asea & Blomberg, 1998; Wondimu, 2020).

**Credit Risk:** The potential loss arising from a bank borrower or counterparty failing to meet its obligations in accordance with the agreed terms (Brown & Moles, 2014; Witzany, 2017).

**Credit Risk Management:** The set of strategies and practices employed by financial institutions to assess, mitigate, and manage the risks associated with lending money, encompassing credit scoring, risk assessment, and loan loss provisioning (Brown & Moles, 2014; SAS Institute, 2024).

**Borrowers:** Individuals, businesses, or entities that receive loans or credit from banks and other financial institutions and may include various demographic and financial profiles (Rhyne, 2009; Ssekiziyivu et al., 2018).

**Loan Delinquency:** The condition where a borrower fails to make loan payments within the agreed-upon terms, potentially leading to default (Chong & Rafiq, 2021; Federal Student Aid, 2024).

**Non-Performing Loans (NPLs):** Loans that are in default or significantly overdue, typically defined as loans with payments overdue by a specified number of days (European Central Bank, 2021; Parven, 2011).

**Policy and Regulatory Responses:** Refers to the measures and actions taken by government authorities and regulatory bodies to address economic challenges arising from the COVID-19 pandemic, including fiscal stimulus, changes in interest rates, and regulatory adjustments (Narula, 2020; Sharma et al., 2020).

**Economic Resilience:** The ability of an economy to withstand, adapt to, and recover from economic shocks and challenges while maintaining stability and growth (Sabatino, 2016; Sutton et al., 2023).

**Economic Recovery:** The process of returning to, and potentially exceeding, pre-pandemic economic activity levels after a period of decline, often involving the re-establishment of businesses and job growth (Chang & Rose, 2012; De Santis & Stoevsky, 2023).

**Banking Sector:** The collective group of financial institutions, including banks and credit unions, that provide a wide range of financial services such as accepting deposits, providing loans, and facilitating payments (Boot & Marinč, 2008; Jokipii & Monnin, 2013).

**Financial Inclusion:** The accessibility of financial services, including banking, credit, and insurance, to individuals and businesses, especially those who are traditionally underserved or excluded from the formal financial system (CGAP, 2024; World Bank, 2024).

**Loan Forbearance:** An arrangement where a lender temporarily allows a borrower to postpone or reduce loan payments, typically in response to financial hardship (Berlinger et al., 2022; Mcmanus & Yannopoulos, 2021).

**Interest Rate Risk:** The danger that a bank may incur loss or lose money in granting loans, taking, and placing funds, or trading in financial instruments as a result of changes in the market interest rates or some unexpected adverse conditions (Kumar, 2014; Onyiriuba, 2016).

**Liquidity Risk:** The risk of being unable to satisfy claims without impairment to its financial or reputational capital (Greenbaum et al., 2019; Maddaloni, 2015).

# CHAPTER TWO

## 2 LITERATURE REVIEW

The COVID-19 pandemic has not only materialised as a significant global health crisis but has also triggered profound economic disruptions, affecting various sectors, particularly the financial industry. The banking sector as a cornerstone of economic stability, plays a pivotal role in facilitating capital flows and sustaining economic activities. The purpose of this literature review is to explore the complex implications of the pandemic on bank lending activities, specifically focusing on Zambia. It first presents an empirical overview of relevant studies that address the pandemic's impact on banking, followed by a discussion of theoretical frameworks that inform this research. Lastly, a conceptual framework is outlined to illustrate the relationships between the key variables identified in the study.

### 2.1 Empirical Review

#### *2.1.1 Global Perspective on Banking during COVID-19*

Several studies have been carried out in the wake of this global pandemic in order to understand the effect of COVID-19 in different sectors of the economy including the banking industry. For instance, Gautam et al. (2022) carried out an analysis on the health, economic and environmental impacts of COVID-19 on Bangladesh. He used data from various sources and discovered that the impact of the COVID-19 pandemic had led to approximately 20 million job losses out of 60 million workers both in the formal and informal sector in Bangladesh. The Agriculture and Garments sectors where mostly affected due to a decline in market demand and price cuts. Sakyi et al. (2022) found that the COVID-19 pandemic had a strong impact on credit facilities in Zambian banks thus leading to swift adaption of change. Damak et al. (2020) in their study stated that it is important to understand the effects of COVID-19 on banks in emerging economies. This information is vital in dealing with the implications of the COVID-19 in developing countries as it possesses a strong threat towards the performance, survival, and growth of these banks especially in developing countries where the bank play a pivotal role in the economy.

Existing literature on banks has specifically been focused on credit risk management, performance and stability, equity and performance, and non-performing loans such as studies conducted by Sinkala et al. (2022), Nicola et al. (2020) and Lukášková (2021). Sinkala et al. (2022) and Lukášková (2021) studied the effects and impact of the COVID-19 pandemic on Credit Risk Management in banks while Nicola et al. (2020) focused on the socioeconomic implications of the COVID-19 pandemic.

Çolak and Öztekin (2021) studied how the pandemic affected how banks lend money worldwide. They looked at how different banks and countries reacted to the spread of the disease. They found that as a result of the pandemic, bank lending had decreased. The decrease was dependent on how bad the pandemic was in a particular country Padhan & Prabheesh (2021) emphasized the diverse fiscal and monetary responses employed by governments to mitigate economic fallout, including measures like lowering interest rates and providing loan forbearance. Research by Nicola et al. (2020) showed that these interventions were crucial in sustaining liquidity and stopping systemic failures in banking systems. However, the effectiveness of such measures varied significantly across different regions and economies, influencing lending activities and credit availability (Çolak & Öztekin, 2021a). The fiscal and monetary reactions to the pandemic were not the same across the world. In developed economies, central banks swiftly implemented large-scale asset purchase programs and reduced interest rates to near-zero levels (Otekenari & Tamunowariye, 2021). These actions were targeted at stabilizing financial markets and ensuring the flow of credit to households and businesses (Padhan & Prabheesh, 2021). In contrast, Nicola et al. (2020) argued that developing markets and economies encountered greater constraints due to limited fiscal space and higher borrowing costs. As a result, their responses were more varied and often less aggressive.

Banks in the U.S. and Europe indicated a sharp increase in NPL ratios as businesses and individuals struggled to meet their financial debts (Birindelli & Schenk-Hoppé, 2021). The surge in non-performing loans (NPLs) was a significant challenge for banks during the pandemic. The economic uncertainty and widespread lockdowns led to a sharp increase in borrower defaults. In the U.S., the NPL ratio for commercial banks rose significantly, reflecting the financial strain on businesses and households (Eyraud et al., 2021).

Similarly, European banks stated higher NPL ratios, particularly in countries with severe COVID-19 outbreaks and strict lockdown measures (Padhan & Prabheesh, 2021). The rise in NPLs highlighted the importance of effective credit risk management and the need for banks to strengthen their capital buffers to absorb potential losses (Nicola et al., 2020).

The COVID-19 pandemic highlighted the serious role of government interventions in stabilizing the banking sector during times of crisis. Moving forward, policymakers need to focus on enhancing the resilience of financial systems to withstand future shocks. This includes implementing strong regulatory frameworks, promoting financial inclusion, and encouraging the adoption of digital banking solutions (Padhan & Prabheesh, 2021). Additionally, banks must continue to refine their risk management practices and build stronger capital positions to navigate the uncertainties of the post-pandemic world (Nicola et al., 2020).

Duan et al. (2021) examined the effects of COVID-19 on systemic risk across 64 countries during the COVID-19 pandemic. They found that COVID-19 increased systemic fragility through government policies and bank default risk channels. However, the adverse impact varied based on the bank's and country's heterogeneity. Equally, Elnahass et al. (2021) studied how COVID-19 affects banking stability. They found that when COVID-19 is spread, it affects the bank's financial performance and stability.

### *2.1.2 African and Regional Perspective on Banking during COVID-19*

According to Shipalana and O'riordan (2020), the COVID-19 pandemic profoundly impacted Africa's banking sector by exposing structural vulnerabilities while also driving innovation and policy reforms. Kimani (2023) highlighted that the Kenyan banking sector faced significant disruptions, with the suspension of loan defaulters' listings at credit reference bureaus temporarily concealing credit risks. This led to tighter lending standards and a contraction in credit to critical sectors such as trade and manufacturing (Kimani, 2023). Similarly, Zambia experienced an increase in non-performing loans (NPLs) to 11.6% in 2020, surpassing the regulatory threshold of 10%. This rise was attributed to economic disruptions and heightened unemployment levels, which reduced borrowers' repayment capacity (Simpasa & Nandelenga, 2022).

Banks in both nations responded cautiously, reducing loan issuance, and increasing selectivity in credit extension. This approach often disadvantaged small and medium enterprises (SMEs), which are vital to economic recovery but were perceived as high-risk borrowers during the pandemic (Kimani, 2023). In Zimbabwe, the banking sector encountered similar trends, where businesses, especially in agriculture and mining, struggled to secure adequate financing due to heightened credit risks (Chirisa et al., 2021).

Policy reactions across Africa varied, reflecting differences in fiscal capacities and economic structures. Olawoye (2023) stated that Central banks implemented measures such as liquidity injections, interest rate cuts and loan forbearance programs to stabilize the banking sector. For instance, the Central Bank of Kenya (CBK) initiated the emergency liquidity facility and reduced the cash reserve ratio to boost banks' capacity to lend (Wakiini, 2024). Despite these efforts, credit allocation remained uneven, with sectors like consumer durables and private households experiencing reduced credit flows due to declining disposable incomes and increased economic uncertainty (Wakiini, 2024).

In contrast, South Africa's banking sector demonstrated resilience supported by strong pre-pandemic capital buffers and liquidity. Government programs like the COVID-19 Loan Guarantee Scheme facilitated the extension of credit to businesses, particularly SMEs (Akınbowale et al., 2023). However, banks in South Africa equally encountered challenges such as increased NPLs and reduced profitability (Magwedere & Marozva, 2022).

The pandemic accelerated digital banking adoption across Africa. Kenyan banks expanded their digital platforms to meet the rising demand for contactless transactions and digital financial services amidst mobility restrictions (Kimani, 2023). Mobile money platforms, already widely used in East Africa, played a pivotal role in maintaining financial flows and supporting livelihoods. For example, M-Pesa in Kenya and Tanzania witnessed a surge in transactions as customers sought alternatives to cash handling (Njoroge, 2021). Similarly, in Nigeria, fintech platforms like Flutterwave and Paystack reported significant growth during the pandemic, reflecting increased reliance on digital payment solutions (Damilola, 2020).

Beyond digital transactions, banks also began investing in advanced risk management and credit assessment tools. Leveraging artificial intelligence and machine learning, financial institutions sought to enhance their capacity to evaluate creditworthiness in a rapidly changing economic environment. For instance, some Nigerian banks introduced credit-scoring systems based on transaction data, enabling faster and more inclusive lending decisions (Damilola, 2020). The pandemic also reshaped the regional integration agenda in Africa. The African Continental Free Trade Area (AfCFTA), which came into effect in 2021, presented opportunities for cross-border banking and financial services (Ajambo & Emebinah, 2021). Despite initial disruptions, the agreement is expected to foster greater financial integration, enabling banks to diversify risks and tap into new markets (Ajambo & Emebinah, 2021).

Moreover, COVID-19 highlighted the importance of financial inclusion. Women-led businesses, which form a significant portion of Africa's informal sector, were disproportionately affected by the economic downturn. Recognizing this, several financial institutions launched targeted programs to support female entrepreneurs. In Rwanda, for example, the government partnered with banks to provide low-interest loans to women in agriculture and trade, sectors hit hardest by the pandemic (Muteteri, 2021).

Policy adjustments in response to the pandemic have revealed both successes and shortcomings. While liquidity support and regulatory flexibility prevented a more severe banking crisis, long-term resilience requires structural reforms. These include strengthening banking regulations, promoting economic diversification, and enhancing financial literacy. The European Investment Bank's "Finance in Africa 2022" report emphasizes that Africa's banking sector needs to prioritize sustainability and digital transformation to remain competitive in the post-pandemic world (EIB, 2022).

Finally, collaboration between public and private sectors will be critical. Governments must create an enabling environment for banks to thrive, while banks must adopt innovative strategies to support recovery. For instance, public-private partnerships can mobilize resources for infrastructure development, which could, in turn, stimulate credit demand and economic activity. The COVID-19 pandemic revealed both challenges and opportunities within Africa's banking sector. While it reviewed structural weaknesses, it

also spurred policy and technological advancements that could strengthen the sector's resilience against future crises. Policymakers and financial institutions must continue to build on these lessons to support sustainable economic recovery and growth.

### *2.1.3 The Zambian Banking Sector during COVID-19*

In Zambia, the pandemic worsened existing vulnerabilities in the banking sector, which had displayed signs of instability even before the crisis. According to Sinkala et al. (2022), when studying the effect of COVID-19 on credit risk management, they found that COVID-19 had a negative impact on credit risk. They discovered that the economic crisis caused by the pandemic led to a rise in unemployment levels and a disruption in economic activity which caused a lot of pressure on the creditworthiness of customers and companies therefore causing a high default rate and credit risk on commercial banks.

According to Simpasa and Nandelenga (2022), the ratio of non-performing loans (NPLs) to total loans rose to 11.6% in 2020, surpassing the regulatory threshold of 10%. This increase highlighted the pandemic's impact on borrowers' ability to repay loans, necessitating a re-evaluation of banks' lending practices. The PwC Zambia report (2022) noted that banks tightened their lending criteria, leading to a marked decline in new loans issued during the pandemic. The decline was a result of reduced demand from businesses facing uncertainty and banks' heightened risk aversion. Consequently, the banking sector's role in economic recovery became even more critical, as it needed to balance risk management with the imperative to support economic activity.

The rise in non-performing loans raised significant alarms within the Zambian banking industry. The economic disruptions arising from the pandemic resulted in an increase in defaults among borrowers, as both businesses and individuals faced difficulties in fulfilling their financial responsibilities (ZamBanker, 2022). This situation was worsened by prior economic issues, including high inflation and a decline in currency value, which hindered the ability of borrowers to repay loans (Simpasa & Nandelenga, 2022).

In response to the intensified risk environment, banks in Zambia adopted more stringent lending criteria. This comprised higher collateral requirements and more rigorous credit assessments. PwC Zambia (2022) report indicated that the decline in new loan issuances was not only due to reduced demand but also banks' increased restraint in extending

credit. This cautious method was needed to mitigate the risk of further loan defaults but also had the unintended consequence of limiting access to credit for many businesses, particularly small and medium-sized enterprises (SMEs).

The banking sector's role in Zambia's economic recovery became even more critical during the pandemic. Banks needed to strike a delicate balance between managing credit risk and supporting economic activity. Finn et al. (2021) emphasized the importance of maintaining credit flow to viable businesses to sustain economic recovery. However, the increased risk aversion among banks posed a challenge to this objective.

To address these challenges, several policy recommendations were proposed. Strengthening the regulatory framework to enhance credit risk management practices was crucial. Additionally, supporting financial inclusion and digital banking initiatives can help improve access to financial services for underserved populations. Finn et al. (2021) also suggested that targeted government interventions, such as credit guarantees and interest rate subsidies, could help mitigate the impact of the pandemic on the banking sector and support economic recovery.

### *1.1.1 Changes in Lending Practices during COVID-19*

The COVID-19 pandemic prompted significant shifts in lending practices among Zambian banks. According to Daumiller et al. (2021), banks increasingly focused on assessing borrowers' risk profiles, leading to stricter lending conditions. This shift was accompanied by the adoption of innovative solutions, such as digital lending platforms, which emerged as vital tools for increasing accessibility while managing risk. These platforms allowed banks to streamline the loan application process, reduce paperwork, and provide quicker loan approvals, thereby improving customer satisfaction and operational efficiency (Hill, 2021).

Sakyi et al. (2022) further noted that banks adapted their credit risk management strategies to include enhanced data analytics and borrower profiling, enabling them to make more informed lending decisions. By leveraging big data and advanced analytics, banks could better predict borrower behaviour and creditworthiness, thus minimizing the risk of defaults. This approach also facilitated the development of personalized loan products tailored to the specific needs and risk profiles of different customer segments.

These changes reflected a broader trend toward increased digitization and automation in the banking sector, which is crucial for maintaining operational efficiency and resilience in the face of ongoing challenges (Hill, 2021). The integration of digital technologies not only helped in managing risks more effectively but also supported the scalability of banking operations, allowing institutions to serve a larger customer base with greater precision and lower costs.

While prior research has explored credit defaults, borrower challenges, and credit risk management during the COVID-19 pandemic, the specific implications for Zambian banks' lending strategies and financial stability remain insufficiently addressed. Notably, there is limited understanding of how increased loan defaults, and the broader economic downturn influenced the lending behaviours of Zambian banks and the extent to which these changes impacted their capacity to support economic recovery. This study seeks to fill this gap by examining how Zambian banks adapted their lending strategies in response to the pandemic, as well as the resulting implications for financial stability. By addressing these critical issues, the study aims to provide actionable insights for policymakers and stakeholders to enhance the resilience and adaptability of Zambia's banking sector in the face of future economic challenges.

### 1.2 Theoretical Framework

This research is grounded in Credit Risk Theory and Risk Management Theory, which offer critical perspectives on banks' lending practices during the COVID-19 pandemic. Credit Risk Theory addresses the potential financial losses lenders face when borrowers default, a risk heightened by the pandemic's economic disruptions. It provides insights into how Zambian banks managed increased borrower risk. Risk Management Theory provides a broader framework for identifying and mitigating risks, including credit, liquidity, and operational risks. Its proactive approach highlights how banks adapted their strategies during periods of heightened uncertainty. These theories collectively offer a comprehensive foundation for analysing how Zambian banks responded to the pandemic's challenges by adjusting their lending practices to manage financial risks and maintain stability.

### 1.2.1 Credit Risk Theory

Salas and Saurina (2002) defined credit risk as the probability or likelihood that a borrower will fail to meet their financial obligations, particularly in repaying debt and interest as agreed. This type of risk primarily falls on the lender, who faces potential financial losses arising from the borrower's inability to meet their obligations. These losses may include both the principal amount loaned out and any anticipated interest earnings. Credit risk is a central concern in financial transactions because it poses a threat to the stability and profitability of financial institutions, businesses, and economies at large (Bessis, 2015).

Losses resulting from credit risk can vary in magnitude and circumstances. In some cases, they may result in the complete loss of the principal and interest, referred to as a total disruption loss (Salas & Saurina, 2002). In other situations, the losses may be partial, where the lender recovers some of the outstanding debt or interest but not the full amount. Such disruptions can occur in a wide range of scenarios, including the failure of financial institutions like banks that become insolvent and are therefore unable to repay funds deposited by clients. Similarly, credit risk is heightened during periods of unforeseen global crises, such as the COVID-19 pandemic. The pandemic significantly disrupted global economic activities, forcing countries to close borders and implement strict containment measures to control the spread of the virus (Wullweber et al., 2020). These disruptions adversely affected businesses and individuals' ability to meet their financial obligations, further emphasizing the relevance of understanding and managing credit risk (Nehrebecka, 2023).

To mitigate or minimize credit risk, lenders often employ various strategies to assess and manage the risk associated with lending. For instance, lenders may perform comprehensive credit checks on potential borrowers to evaluate their financial stability, credit history, and ability to repay. These credit checks provide valuable information that helps lenders make informed decisions about extending credit (Koulouridi et al., 2020). Additionally, lenders may require borrowers to obtain adequate insurance, such as mortgage insurance, to provide a safety net in case of default. In certain cases, lenders may also seek security or collateral from borrowers, which can be liquidated to recover losses if the borrower defaults. Another common practice is requiring third-party

assurances or guarantees from co-signers who agree to assume the financial obligation if the primary borrower fails to repay (Bessis, 2015).

This theory is particularly relevant to this study because it provides a theoretical framework for understanding the dynamics and implications of credit risk. Specifically, it underscores the potential effects of the COVID-19 pandemic on the variables under investigation. By analysing how the pandemic has altered borrowers' ability to meet financial obligations and the associated risks for lenders, this theory aids in explaining the broader economic impact and contextualizing the findings within the scope of financial risk management during unprecedented global events.

### *1.2.2 Risk Management Theory*

Pyle (1999) defined risk management as the systematic process of identifying, assessing, and controlling risks that a bank or financial institution may encounter during its day-to-day operations. This definition underscores the proactive nature of risk management, where institutions seek to minimize adverse outcomes by thoroughly understanding and mitigating potential threats. Risk Management Theory provides a robust and comprehensive lens through which the financial sector, particularly banks, can navigate periods of economic uncertainty and market volatility. By employing this theoretical approach, financial institutions can effectively address challenges posed by unpredictable economic events, such as those encountered during the COVID-19 pandemic.

The COVID-19 pandemic brought about unparalleled global disruptions, with significant implications for the financial industry. As economic activities slowed down, financial risks heightened, and borrower behaviours shifted. This context makes Risk Management Theory particularly relevant in examining how Zambian banks adapted their lending practices during this period. The theory serves as a guiding framework to understand the critical processes involved in risk identification, assessment, and mitigation, which are essential for banks aiming to achieve their financial and operational objectives in the face of uncertainty.

Risk Management Theory highlights a structured approach to managing various types of risks that banks encounter, such as credit risk, market risk, operational risk, liquidity risk, and interest rate risk. This approach is essential for maintaining stability and profitability

in the banking sector. By effectively identifying and addressing risks, banks can prevent disruptions in their operations and maintain the confidence of investors and customers. The importance of this theory is especially evident in times of economic uncertainty, such as during the COVID-19 pandemic, which intensified pre-existing risks while introducing new challenges (Jorion, 2006).

Credit risk refers to the potential for financial losses when borrowers fail to meet their repayment obligations. It is a major concern for banks as it directly impacts their profitability and capital reserves. Economic downturns, like the one caused by the pandemic, can significantly strain borrowers' ability to pay, leading to a rise in non-performing loans (NPLs) (Brown & Moles, 2014). In response, banks may increase their provisions for bad loans, which can limit resources available for other purposes. Effective credit risk management involves evaluating borrower reliability, diversifying loan portfolios, and tightening lending criteria to reduce exposure (Bessis, 2015).

Market risk involves the possibility of losses due to changes in market variables such as stock prices, currency values, and commodity prices. These shifts can be triggered by a variety of factors, including economic conditions, political instability, and regulatory changes, creating significant challenges for banks that deal with large-scale market exposure (Dowd, 2007). For example, a sudden change in exchange rates can lead to substantial losses, while fluctuations in commodity prices can disrupt financing for businesses. Banks typically use strategies such as hedging and derivatives to manage this risk and closely monitor market conditions to minimize their exposure (Bessis, 2015).

Operational risk stems from internal failures, such as errors in processes, systems, or human operations, which can lead to financial and reputational damage. This includes fraud, technological failures, or lapses in compliance (Moosa, 2007). As banks increasingly rely on digital technologies, the risk of cyberattacks and data breaches has become more pronounced. A single cybersecurity breach can not only result in financial losses but can also erode trust and invite regulatory scrutiny. To manage operational risk, banks strengthen internal controls, upgrade technological infrastructure, and train employees to handle and prevent potential vulnerabilities (Bessis, 2015).

Liquidity risk is the risk that a bank will not be able to meet its short-term financial obligations due to insufficient cash flow. This risk becomes particularly acute during crises, where banks may experience a sudden drop in deposits or difficulty accessing credit markets (Moosa, 2007). A liquidity shortfall can trigger a panic among customers and investors, destabilizing the bank. Banks manage liquidity risk by holding adequate cash reserves, preparing contingency funding strategies, and regularly forecasting cash flow to ensure they can meet obligations in times of stress. Regulatory standards like the Liquidity Coverage Ratio (LCR) help ensure that banks maintain sufficient liquid assets to withstand financial shocks (Bessis, 2015).

Interest rate risk arises from changes in interest rates that can affect a bank's earnings and asset values. Fluctuations in rates can impact loans, securities, and other financial instruments, as well as the cost of liabilities. For instance, rising interest rates can reduce the value of long-term bonds held by banks, while falling rates may squeeze their profit margins (Delis & Kouretas, 2011). This risk is particularly important during times when central banks adjust interest rates to manage inflation or economic growth. To mitigate interest rate risk, banks engage in asset-liability management, use interest rate swaps, and conduct regular stress tests to assess potential vulnerabilities (Jorion, 2006).

Effective risk management, as noted by Jorion (2006), involves deliberate actions aimed at identifying, assessing, and mitigating these risks. Banks implement advanced models to assess potential risks, maintain diversified investment portfolios, and put in place strong internal controls to protect against financial losses. Stress testing is another important tool, allowing banks to simulate various adverse scenarios and gauge their ability to withstand potential shocks. By applying these practices, banks can not only safeguard their financial stability but also position themselves to navigate future uncertainties. This proactive approach helps ensure long-term resilience, enabling banks to adapt and continue supporting economic activity, even amid unprecedented challenges.

During the COVID-19 pandemic, these risks were exacerbated, presenting new challenges and uncertainties for banks. The crisis forced financial institutions to revisit and adapt their existing risk management frameworks to address rapidly changing

economic conditions. For example, the economic slowdown resulted in widespread financial instability, affecting borrowers' repayment capabilities and increasing credit default rates. Consequently, banks had to re-evaluate their credit risk assessment processes and adopt measures such as restructuring loan terms, extending repayment periods, or providing temporary relief to borrowers. According to Bessis (2015), risk management in the banking sector is not merely a defensive mechanism but also a proactive strategy. By adopting this approach, banks can enhance their resilience and maintain financial stability during economic shocks, such as those caused by the pandemic.

This theoretical framework is particularly applicable to understanding how Zambian banks revised their bank lending strategies in response to the economic impact of the COVID-19 pandemic. Through this lens, it becomes possible to analyse the specific steps taken by these institutions to address heightened credit risks and other financial challenges during the crisis. The proactive adjustments in risk management strategies highlight the importance of flexibility and adaptability in safeguarding the financial sector against future disruptions.

### *1.2.3 Application to the Study of Zambian Commercial Banks*

The COVID-19 pandemic brought about significant disruptions in global and local economies, affecting businesses, individuals, and financial markets. In Zambia, these disruptions manifested through reduced economic activity, business closures, job losses, and financial instability, which collectively increased the risk of loan defaults. The 2020 PWC Annual Report stated that the Zambian economy was reported to have contracted by 3% in 2020 compared to the 1.4% it had achieved in 2019 (PwC Zambia, 2022). The Zambia statistics agency also reported that between 2019 to 2021, unemployment rate had risen 12.50% to 12.60% (Zambia Statistics Agency, 2021). This resulted in the Çolak and Öztekin (2021b) on the impact of COVID-19 reported that around 5% of businesses reported to have permanently closed while 21% were reported to have temporarily closed. Finn et al. (2021) addresses Zambia's financial challenges by highlighting the country's debt burden coupled with rising inflation and the impact on public finance Zambian banks, like many around the world, were forced to reassess their risk exposure, particularly in

their lending practices, to mitigate potential financial losses (PwC Zambia, 2022). The Bank of Zambia reports indicate that commercial banks tightened their credit conditions by increasing loan tenures o personal loans in order to cushion borrowers on from adverse effects of the COVID-19 pandemic and weak economic activity.

Using both the Credit Risk Theory and Risk Management Theory, this study aims to investigate how Zambian banks adjusted their credit risk management strategies during the pandemic. Credit risk is a primary concern for banks, as it directly relates to the likelihood of borrowers defaulting on their loan obligations. To manage this risk, banks typically employ a range of tools and strategies, such as tightening lending criteria, increasing loan loss provisions, and enhancing due diligence processes (Bessis, 2015). The COVID-19 pandemic likely accelerated the adoption of more conservative lending practices as banks sought to protect their balance sheets from the potential surge in non-performing loans (NPLs).

These theories are relevant to this study because it outlines the risks that Zambian banks were faced with during the pandemic. It will also help explore how Zambian banks responded to the increased risks posed by the COVID-19 pandemic in their lending activities.

The insights gained from this theoretical framework will provide a deeper understanding of how Zambian banks navigated the challenges of the COVID-19 pandemic and will offer valuable lessons for future risk management practices in the banking sector.

### 1.3 Conceptual Framework

The conceptual framework integrates the theoretical foundations of the Credit Risk Theorem and Risk Management Theory to examine how the COVID-19 pandemic impacted banks' lending activities in Zambia. The framework provides a structured approach to analysing the relationships between the pandemic, the economic environment, and critical variables influencing bank lending decisions. The framework directly addresses the research objectives as follows:

Changes in Lending Activities: The COVID-19 pandemic, as an independent variable, necessitated adjustments in lending strategies. This aligns with the first specific objective, which seeks to analyse the changes in lending activities adopted by banks during the pandemic.

Effects of Key Financial Indicators: The independent variables of credit risk (non-performing loans), liquidity risk (liquidity ratio), and lending rates (interest rate risk) directly correspond to the second specific objective, which investigates how these financial indicators influenced lending activities during the pandemic.

Effectiveness of Policy and Regulatory Responses: The framework incorporates the implications of policy and regulatory interventions, acknowledging their moderating role in mitigating economic impacts. This aligns with the third specific objective, which evaluates the effectiveness of these measures and their implications for future regulatory frameworks.

The framework includes the following elements:

**Dependent Variable**: Bank lending activities, measured through metrics such as the volume of loans disbursed, average loan size, or loan-to-deposit ratio.

Independent Variables:

- COVID-19 Pandemic
- Economic Slowdown
    - High Unemployment Rates
    - Financial Market Instability
    - Inflation
- Credit Risk (NPLs).
- Liquidity Risk (liquidity ratio).
- Lending Rates (Interest rate risk)

**Moderating Variable:** Government Policy and regulatory responses during the pandemic, shaped the environment within which banks operated.

This conceptual framework directly links the research objectives to the key variables, providing a clear roadmap for analyzing how the COVID-19 pandemic influenced lending activities in Zambia.

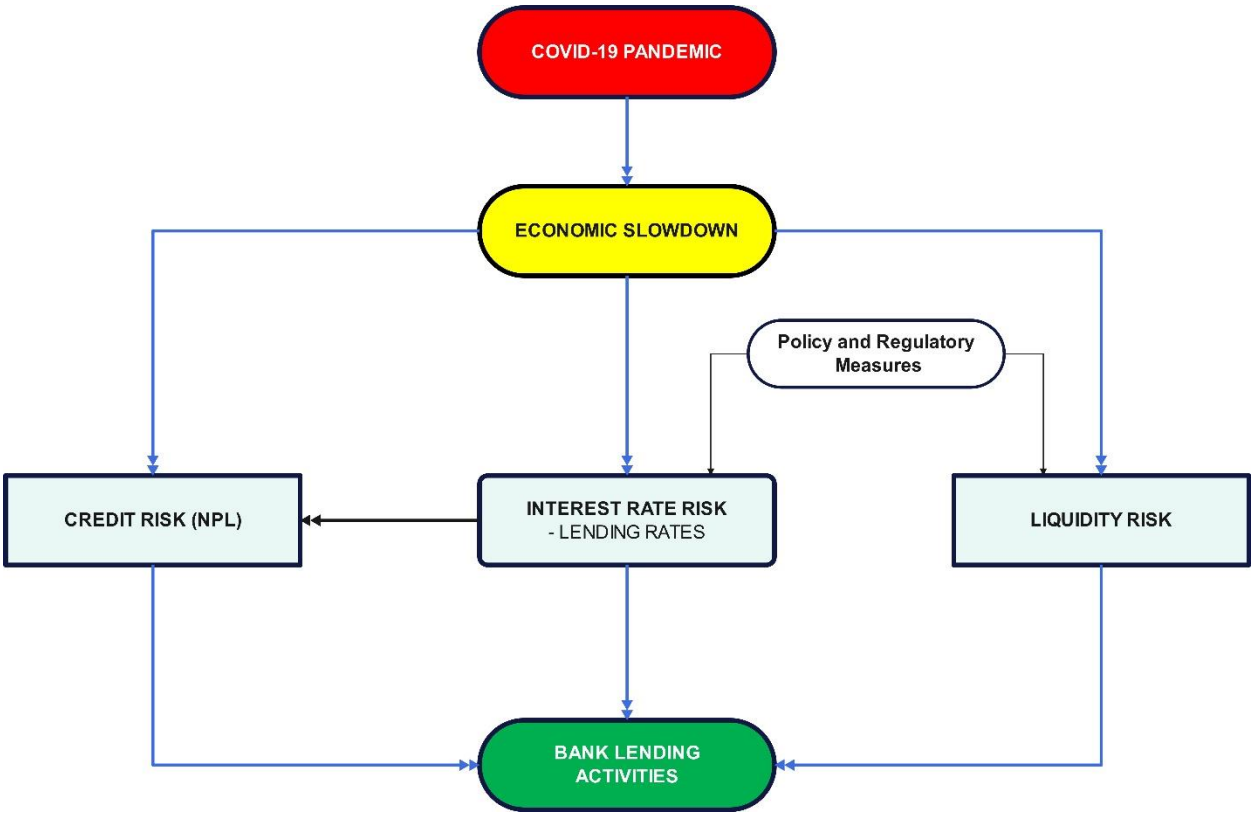



**Figure 2.1: Conceptual Framework**

# CHAPTER THREE

## 3 METHODOLOGY

### 3.1 Methodology

The methodology encompasses the research approach, design, target population, sample size, sampling technique, source of data, model specification, data analysis, and considerations for reliability, validity, and ethics. This chapter highlights the research approach that has been adopted to conduct this research. It explains in detail how the research will be conducted.

### 3.2 Research Approach

The research methodology for this study employs a quantitative method approach. This approach, as described by Bhandari (2020), involves collecting data that is quantifiable and measurable and can be analysed using statistical tools. This is done in order to identify trends and patterns as well as establish relationships that exist between the variables under observation. This comprehensive strategy is tailored to provide a holistic and in-depth comprehension of the research topic. The study seeks to encompass a wider spectrum of insights and perspectives concerning the impact of the COVID-19 pandemic on the lending activities of banks in Zambia.

### 3.3 Research Design

This study is based mainly on desk research by examining existing literature and publications in order to achieve research objectives. A Correlational Research Design was chosen for this study due to its suitability in examining the relationships between variables. In the context of this research, this design is used to assess whether and to what extent the COVID-19 pandemic correlates with changes in lending activities within the Zambian banking sector. This design is particularly well-suited for exploring the cause-and-effect relationships and identifying potential trends and patterns between the pandemic and the banking industry's lending activities.

### 3.4 Study Population

According to Saunders et al. (2019) a study population refers to the entire group or set of cases relevant to the research being conducted. For this study, the population includes

all commercial banks operating within Zambia's banking sector. These banks represent the key institutions responsible for lending activities, making them central to understanding the impact of the COVID-19 pandemic on the country's financial services.

### 3.5 Sample Size

Schindler (2019) defined a sample as a subset of the population that is selected for observation and analysis. The main purpose of sampling is to draw inferences about the characteristics, behaviour, or opinions of the entire population from this representative subset (Schindler, 2019). In research, it is important to ensure that the sample size is adequately determined to develop reliable and statistically significant results. A sample that is too small may not capture the variability or characteristics of the population accurately, leading to misleading conclusions, while a sample too large could waste resources without adding value to the analysis.

For this study, secondary data was mostly used, relying solely on quarterly lending activity data obtained from financial institutions in Zambia. The aim was to understand patterns and trends in lending activities over time. The sample size was carefully determined to be 32 data points, collected from the 1st quarter of 2016 to the 4th quarter of 2023. This timeframe ensures a comprehensive view of lending behaviours over several years, capturing fluctuations, economic shifts, and policy changes that influenced banking practices.

### 3.6 Sampling Techniques

No sampling technique was employed in this research as the study used secondary data obtained from the Bank of Zambia. This approach ensured that the data was comprehensive and representative of the entire banking sector in Zambia. By relying on secondary data, the research findings are based on actual banking industry data, enhancing the validity and reliability of the conclusions drawn. This process decreases bias and provides a clear reflection of the behaviours and practices within the broader banking industry in Zambia.

### 3.7 Data Collection

This research was mainly guided by empirical literature acquired through desk research, drawing on existing studies and reports from reputable sources. The study depended

heavily on secondary data, which was obtained from aggregate publications issued by key institutions, including the Bank of Zambia (BOZ), the World Bank, the Ministry of Finance, and the Zambia National Public Health Institute (ZNPHI). These sources provided essential data related to lending activities, economic indicators, and financial trends pertinent to the Zambian banking sector.

The variables used in this study includes both quarterly and annual data. Quarterly data was obtained from the BOZ's regular reports, offering insights into short-term lending patterns, while annual data was drawn from the BOZ's comprehensive annual reports while the COVID-19 statistics were obtained from ZNPHI and World Bank data. By combining data from these sources, the study aimed to capture a more comprehensive and reliable picture of lending activities within Zambia's banking sector over an extended period.

### 3.8 Econometric model

In the model below the following variables were used for estimation; Bank Lending (BL), COVID-19 Pandemic (COVID-19), Average Lending Rates (intra), Liquidity Ratio (LR), Number of Loan applications (LA) and Non-Performing Loans as a Percentage (NPL). The model that will be used in this study is:

$$lBL_t = \alpha + \text{Covid 19}_t + LR + \text{INTRA} + LA + \text{NPL} + \varepsilon_i$$

Where,

| | | |
|---|---|---|
| $\alpha$ | = | is the intercept |
| $lBL$ | = | Bank loans denoting Bank Lending |
| **COVID-19** | = | Total number of infections |
| **LR** | = | Liquidity Ratio |
| **INTRA** | = | Average Lending Rates |
| **LA** | = | Number of Loan Applications |
| **NPL** | = | Non-Performing Loans as a percentage of total loans |
| $\varepsilon_i$ | = | error term or disturbance term |

### 3.9 Data Analysis

Descriptive statistics will be employed to summarize and present data. Inferential statistics will help identify trends, changes, and correlations between variables. Inferential statistical analysis will be crucial for quantifying the extent of change in lending activities and their relationship with the pandemic. The data is analysed empirically/statistically

using vector error correction methods (VEC). The study begins by testing for the presence of unit roots in the model in order to ensure that parameters are being estimated using stationary time series data and ensure that all series are integrated processes of order 1 denoted as I(1) .This is done using the augmented Dickey-Fuller test to ascertain if the model's variables consist of unit roots or not, in simple terms this method is used to test the stationarity of the model. The next step will be to test the model for co-integration among the variables using the Johansen test, where the presence of co-integration indicates causality but does not specify in which direction it occurs. This test also helps to identify the number of co-integrating relationships exist among the variables in the model i.e. long run relationships that exist between the independent variables and the dependant variable.

Engle and Granger (1987) showed that in the presence of co-integration, there will always exist a corresponding error correction representation. The use of statistical software, such as Stata and Microsoft Excel, will facilitate comprehensive analysis of the quantitative data collected.

### 3.10 Ethical Considerations

Ethical considerations are foundational to this research, ensuring the ethical treatment of all participants and the responsible handling of data. Thus, all participants, whether in surveys or interviews, will be fully informed about the research's objectives and the nature of their participation. Their consent will be entirely voluntary, emphasizing the importance of their contribution to the study.

To protect the privacy and proprietary information of individuals and institutions, all data collected will be treated confidentially by anonymizing personal and proprietary data to safeguard identities and business-sensitive information. Robust data security measures, including encryption for digital data and secure storage for hard copies, will be implemented to ensure the safe storage and handling of both digital and physical records. All the data collected will be consolidated into a master spread sheet that will be password protected. The data will only be used for the purpose of this research. For physical documents that are no longer needed, the information will be shredded and disposed of to prevent data breaches.

This research was conducted under clearance by the institutions Ethics Committee and will therefore adhere to the ethical guidelines and standards. This ensures that the research is conducted ethically and aligns with legal and institutional standards. By meticulously addressing these ethical considerations, the research will maintain the highest standards of integrity, respect for privacy, and data security throughout its execution. This ethical foundation is essential to conducting rigorous, responsible, and credible research.

### 3.11 Limitations of Study

During this research, data collection presented several challenges. Follow-ups with respondents to retrieve completed questionnaires were difficult, with many not responding or becoming unavailable. This limited access to primary data affected the comprehensiveness of responses. Additionally, strict policies at banks hindered access to financial data beyond public information, with privacy concerns cited. Consequently, the study relied on secondary data and existing reports from sources like the Bank of Zambia, the World Bank, the Ministry of Finance, and the Zambia National Public Health Institute, focusing on a thorough literature review.

# CHAPTER FOUR

## 4 PRESENTATION AND ANALYSIS OF DATA

In this chapter a presentation of the data collected during this research is done in numerous forms to represent different aspects of all the data being analysed in this study. The chapter goes further to analyse the data that is presented and also give a description of what the presented data means in relation to answering the key questions that the study intends to address.

### 4.1 Descriptive Statistics

The following shows a descriptive statistic of the variables that were used in the study. The study used quarterly data from 2016 to the fourth quarter of 2023 resulting into 32 (obs) observations. The second table show the averages during the COVID-19 period.

**Table 4.1: Descriptive Statistics for the Study Period**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| AvgLendingRate | 32 | 26.042 | 1.553 | 23.38 | 29.17 |
| LiquidityRatio | 32 | 117.253 | 29.557 | 60.26 | 177.07 |
| BankLoans | 32 | K112.4 m | K37.4 m | K68.4 m | K204.7 m |
| LoanApplications | 32 | 4040921.4 | 2129536.1 | 69274 | 6487982 |
| NPLsinPecentage | 32 | 8.438 | 1.727 | 4.81 | 11.03 |
| ofCovidCases | 32 | 10722.969 | 21735.285 | 0 | 67693 |

**Table 4.2: Descriptive Statistics during COVID-19 period (2020 to 2023 Q1)**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| AvgLending | 13 | 25.992 | 1.14 | 24.93 | 28.44 |
| LiquidityRatio | 13 | 141.983 | 18.396 | 110.39 | 177.07 |
| BankLoans | 13 | K134.8 m | K14.4 m | K111.2 m | K165.4 m |
| LoanApplications | 13 | 5177882.6 | 870278.79 | 3054864 | 6317510 |
| NPLsinPecentage | 13 | 8.618 | 1.603 | 6.2 | 11.03 |
| No.ofCovidCases | 13 | 26395 | 27790.103 | 35 | 67693 |

Source: Author's Illustrations (2024)

. Data revealed that the lending rate had a mean of 26.046. This entails that on average the rate at which the banks were loaning out money was 26.05% percent. There was a slight reduction in lending during COVID-19 to 25.992%. Liquidity ratio, which measure the Banks's ability to cover short term obligations showed a much stronger position during the COVID-19 period 141.98 compared 117.2. This could have been due to precautionary measures banks were taking to ensure financial stability during the pandemic.

Both bank loans and applications increased significantly during the pandemic from K112.4 million with the mean loan applications of over 4 million to the mean of K134.8 million with the mean loan application of over 5 million respectively. This increase suggests heightened demand for financial support during the pandemic. Non-performing loans (NPLs) increased during COVID-19 indicating some strain on borrowers' ability to repay loans, likely due to economic disruptions.

### 4.2 Bank Loans vs COVID-19 Cases

The graph below suggests a lagged relationship between COVID-19 cases and the amount banks loaned out.

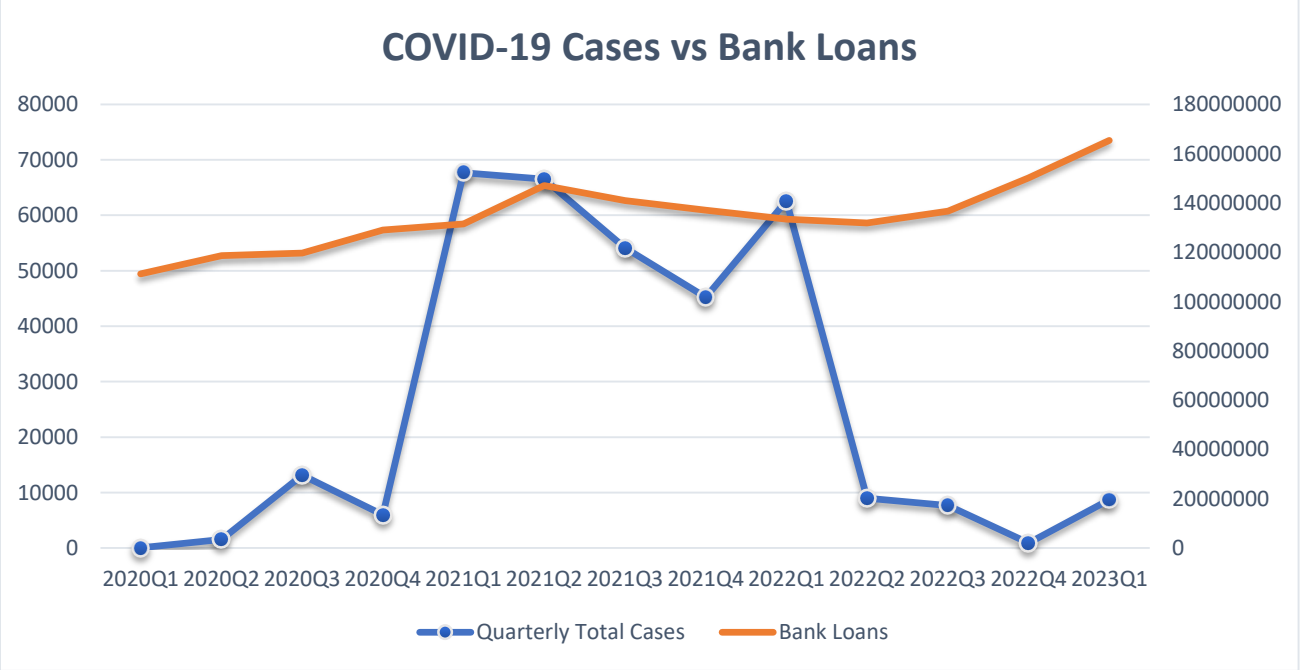



Figure 4.1

Source: Author's Illustrations

### 4.3 Unit Root test

The following table shows the results from a unit root test. The study used the augmented dickey fuller test to determine the level of integration of different variables. The results showed that no variables were stationary at level. However, all the variables were stationary at 1st difference. The table below indicates the all the variables used in this study were integrated of order one.

**Table 4.3: Unit Root test**

| Variables | ADF at level | Stat | ADF at !st Diff | p-value |
|---|---|---|---|---|
| AvgLending~R | -1.828 | 0.36667 | -4.279 | 0.0005*** |
| LiquidityR~o | -2.3108 | 0.1685 | -9.2697 | 0.0000*** |
| BankLoans | 2.46424 | 0.99904 | -3.52 | 0.0075*** |
| LoanApplic~s | -1.945 | 0.3112 | -6.2882 | 0.0000*** |
| NPLsinPece~e | -0.6199 | 0.86643 | -5.9258 | 0.0000*** |
| #ofCovidCases | -2.0872 | 0.24968 | -6.5374 | 0.0000*** |

Source: Author's Computation (2024)

Following the unit root test, the best model to fit the data depends on whether the variables are cointegrated or not. To determine cointegration, the study used Johnsen cointegration test. The resulted are summarised in the table below.

### 4.4 Johansen Tests for Cointegration

Trend: constant — Number of obs = 30
Sample: 3 - 32 — Lags = 2

| maximum rank | parms | LL | eigenvalue | trace statistic | 5% critical value |
|---|---|---|---|---|---|
| 0 | 42 | -1461.006 | . | 143.4228 | 94.15 |
| 1 | 53 | -1436.4156 | 0.80590 | 94.2420 | 68.52 |
| 2 | 62 | -1417.3051 | 0.72030 | 56.0211 | 47.21 |
| 3 | 69 | -1404.1333 | 0.58444 | 29.6775* | 29.68 |
| 4 | 74 | -1396.1156 | 0.41405 | 13.6421 | 15.41 |
| 5 | 77 | -1389.2997 | 0.36517 | 0.0103 | 3.76 |
| 6 | 78 | -1389.2946 | 0.00034 | | |

Source: Author's Computation (2024)

The Johansen test results assess cointegration among variables with a constant trend and 2 lags, using 30 observations. The trace statistic indicates the presence of up to three cointegrating relationships at the 5% significance level, as the rank increases to 3 before the trace statistic (29.6775) falls below the critical value (29.68). This suggests that the variables in the system have three cointegrating equations, indicating a stable long-term relationship.

### 4.5 Lag selection criteria

**Table 4.4: Lag Selection Criteria**

| Selection-order criteria | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample: | 5-32 | | | | | Number of obs: | | 28 |
| lag | LL | LR | df | p | FPE | AIC | HQIC | SBIC |
| 0 | -1483.73 | | | | 6.60E+38 | 106.41 | 106.497 | 106.695 |
| 1 | -1353.94 | 259.59 | 36 | 0 | 8.60E+35 | 99.71 | 100.321 | 101.708 |
| 2 | -1305.31 | 97.265 | 36 | 0 | 5.20E+35 | 98.8077 | 99.9423 | 102.519 |
| 3 | -1227.15 | 156.32* | 36 | 0 | 9.50E+34 | 95.7962* | 97.4543* | 101.22* |
| 4 | . | . | 36 | . | -7.8e-12* | . | . | . |

Source: Author's computation (2024)

The table above summarises lag selection criteria used to identify the optimal lag length for testing. Among the tested lags (0 to 4), lag 3 emerges as the best choice, with minimum values for Final Prediction Error (FPE), Akaike Information Criterion (AIC), Hannan-Quinn Criterion (HQIC), and Schwarz-Bayesian Information Criterion (SBIC), all marked with an asterisk (*). Additionally, the likelihood ratio (LR) test for lag 3 shows a significant improvement (p = 0) compared to previous lags. These findings suggest that a model with 3 lags provides the best fit and predictive accuracy for the dataset.

### 4.6 Matrix of Correlations

The matrix of correlations below shows relationships between six variables, highlighting their degree of association.

**Table 4.5: Matrix of correlations**

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| (1) AvgLendingRate~R | 1.000 | | | | | |
| (2) LiquidityRatio | -0.235 | 1.000 | | | | |
| (3) BankLoans | -0.151 | 0.777 | 1.000 | | | |
| (4) LoanApplications | -0.395 | 0.634 | 0.628 | 1.000 | | |
| (5) NPLsinPecentage | -0.199 | -0.208 | -0.503 | 0.173 | 1.000 | |
| (6) ofCovidCases | -0.010 | 0.509 | 0.343 | 0.174 | 0.007 | 1.000 |

Source: Author's computation (2024)

Key observations include a strong positive correlation between the Liquidity Ratio and Bank Loans (0.777) and between the Liquidity Ratio and Loan Applications (0.634), suggesting these variables move closely together. Conversely, the Average Lending Rate is weakly or negatively correlated with all other variables, with the strongest negative correlation observed with Loan Applications (-0.395). Non-Performing Loans (NPLs) in Percentage are negatively correlated with Bank Loans (-0.503) but show negligible correlation with the number of COVID-19 cases (0.007). These correlations suggest that a VECM model could be a suitable model to fit that data and model long–run relationships, particularly between variables like the Liquidity Ratio, Bank Loans, and Loan Applications which shows a much stronger correlation.

## 4.7 Vector Error Correction Model

The results from the equations suggest varying levels of model fit and significance. For the LD_BankLoans equation, the model has a high R-squared value (0.9504) and a significant chi-squared test ($p < 0.0001$)

**Table 4.6: VECM Equations**

| Equation | Parms | RMSE | R-sq | chi2 | P>chi2 |
|---|---|---|---|---|---|
| LD_BankLoans | 16 | 2.60E+06 | 0.9504 | 210.6457 | 0.0000 |
| LD_AvgLendingR~R | 16 | 0.919412 | 0.6145 | 17.53794 | 0.3516 |
| LD_LiquidityRa~o | 16 | 6.46584 | 0.9204 | 127.2226 | 0.0000 |
| LD_NPLsinPecen~e | 16 | 0.753462 | 0.6685 | 22.17848 | 0.1375 |
| LD_ofCovidCases | 16 | 15179.8 | 0.6356 | 19.18957 | 0.259 |
| LD_LoanApplica~s | 16 | 860255 | 0.6413 | 19.66887 | 0.2355 |

Source: Author's computation (2024)

The table shows that the bank loans equation, and the liquidity ratio questions were significant at 1% level of significant since their corresponding p-values were less than 0.01.

### *4.7.1 VECM Short – Run Dynamics*

**Table 4.7: VECM Short Run Dynamics**

| **BankLoans** | Coef. | Std. Err. | z | P>z | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| BankLoans | | | | | | |
| L2D. | -1.010799 | 0.2259438 | -4.47 | 0.000 | -1.453641 | -0.5679577 |
| L3D. | 0.0132916 | 0.1875188 | 0.07 | 0.943 | -0.3542386 | 0.3808217 |
| AvgLending | | | | | | |
| L2D. | -430907.6 | 902054.4 | -0.48 | 0.633 | -2198902 | 1337087 |
| L3D. | 583454.3 | 780019.9 | 0.75 | 0.454 | -945356.6 | 2112265 |
| LiquidityRatio | | | | | | |
| L2D. | -373630.8 | 87929.02 | -4.25 | 0.000 | -545968.6 | -201293.1 |
| L3D. | -202253.2 | 61768.85 | -3.27 | 0.001 | -323317.9 | -81188.49 |
| NPLsinPercentage | | | | | | |
| L2D. | -3170275 | 978491.8 | -3.24 | 0.001 | -5088084 | -1252467 |
| L3D. | -1425077 | 1104633 | -1.29 | 0.197 | -3590118 | 739964.6 |
| ofCovidCases | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| L2D. | 503.5232 | 72.81462 | 6.92 | 0.000 | 360.8092 | 646.2372 |
| L3D. | 280.2357 | 69.89331 | 4.01 | 0.000 | 143.2473 | 417.2241 |
| LoanApplications | | | | | | |
| L2D. | 2.917527 | 1.008059 | 2.89 | 0.004 | 0.941768 | 4.893286 |
| L3D. | 2.673504 | 1.263851 | 2.12 | 0.034 | 0.1964014 | 5.150608 |
| _cons | -9.10E-06 | 893519.6 | 0 | 1.000 | -1751266 | 1751266 |

Source: Author's computation (2024)

The analysis reveals that several factors significantly influence bank loans in the short run. The second lag of BankLoans (L2D) has a significant negative effect on current BankLoans (coefficient = -1.010799, p = 0.000), indicating that past BankLoans inversely affect current lending in the short term, while the third lag (L3D) is not significant. Liquidity Ratio's lags also show significant negative effects in the short run, with both the second (L2D) and third lags (L3D) suggesting that higher liquidity ratios are associated with reduced bank lending. Non-performing loans (NPLsinPercentage) have a significant negative effect for the second lag (L2D) but not the third lag (L3D), emphasizing that the effect of NPLs is more pronounced in the short term. CovidCases lags show significant positive effects, with both the second and third lags indicating that higher COVID-19 case numbers in previous periods are linked to increased current lending in the short run. LoanApplications also have significant positive effects for both the second and third lags, suggesting that an increase in loan applications positively impacts BankLoans in the short term. The constant term is not significant (p = 1.000), highlighting that other factors, rather than a baseline level, primarily drive changes in bank loans in the short run. Overall, BankLoans (L2D), LiquidityRatio, NPLsinPercentage (L2D), CovidCases, and LoanApplications play important roles in explaining short-term changes in bank loans.

### *4.7.2 VECM Long – Run Relationship*

The table below shows the long run relations between bank loans and the dependent variables

**Table 4.8**

| Cointegrating equations | | | | | | | |
|---|---|---|---|---|---|---|---|
| Equation | Parms | chi2 | P>chi2 | | | | |
| _ce1 | 3 | 19.76205 | 0.0002 | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| _ce2 | 3 | 62.42931 | 0.0000 | | | | |
| _ce3 | 3 | 33.49706 | 0.000 | | | | |
| | | | | | | | |
| Identification: | Beta | Is | exactly | identified | | | |
| Johansen normalization restrictions imposed | | | | | | | |
| Beta | | Coef. | Std. Err. | Z | P>\|z\| | [95% | Conf. Interval] |
| _ce1 | | | | | | | |
| BankLoans | | | | | | | |
| L1. | | 1 | . | . | . | . | . |
| AvgLendingRa | | | | | | | |
| L1. | | 1.86E-09 | . | . | . | . | . |
| LiquidityRatio | | | | | | | |
| L1. | | 0 | (omitted) | | | | |
| LoanApplicatio | | | | | | | |
| L1. | | -4.44718 | 3.374897 | -1.32 | 0.188 | -11.0619 | 2.167502 |
| NPLsinPecenta | | | | | | | |
| L1. | | -5523996 | 4013463 | -1.38 | 0.169 | -1.34E+07 | 2342247 |
| ofCovidCases | | 1306.061 | 301.5587 | 4.33 | 0.000 | 715.0173 | 1897.106 |
| _cons | | -1.28E+08 | . | . | . | . | . |

Source: Author's computation (2024)

The table above is summarised in the equation below.

$$BankLoans_t = 1.86E-09 * AvgLending_t - 4.44718 * LoanApplicatio_t + 1306.061 * \#ofCovidCases + \varepsilon_t$$

In the table above all the variable are not significant except for covid – 19 cases. This suggests that there is a long run relationship between bank loans and covid – 19. This implies that during Covid – 19 periods, a one-unit increase in the number of covid case would increase the amount banks loaned out by K 1306.061.

## 4.8 Diagnostic tests

### *4.8.1 Autocorrelations*

The Lagrange-multiplier (LM) test checks for autocorrelation in the residuals of the model at lags 1 and 2.

| Lag | chi2 | Df | Prob>Chi2 |
|---|---|---|---|
| 1 | 48.549 | 36 | 0.079 |
| 2 | 44.299 | 36 | 0.161 |

H0: no autocorrelation at lag order

For lag 1, the test statistic is 48.549 with 36 degrees of freedom and a p-value of 0.079, which is greater than the 0.05 significance level, so we fail to reject the null hypothesis and conclude that there is no significant autocorrelation at lag 1. Similarly, for lag 2, the test statistic is 44.299 with 36 degrees of freedom and a p-value of 0.161, which is also above the 0.05 threshold, leading us to fail to reject the null hypothesis and conclude that there is no significant autocorrelation at lag 2. Overall, the results suggest that there is no significant autocorrelation in the residuals at lags 1 and 2, indicating that the model is free from autocorrelation issues at these lags.

### *4.8.2 Normality test*

The Jarque-Bera test assesses the normality of the residuals in the model by checking for skewness and kurtosis.

**Table 4.9: Normality test**

| **Jarque-Bera** | | | |
|---|---|---|---|
| Equation | chi2 | df | Prob>chi2 |
| LD_AvgLendingRateAvgLR | 1.167 | 2 | 0.55788 |
| LD_LiquidityRatio | 4.38 | 2 | 0.11193 |
| D_BankLoans | 0.348 | 2 | 0.84011 |
| LD_LoanApplications | 1.283 | 2 | 0.52645 |
| LD_NPLsinPecentage | 0.028 | 2 | 0.98602 |
| D_ofCovidCases | 1.141 | 2 | 0.56534 |
| ALL | 8.347 | 12 | 0.75742 |

Source: Author's computation (2024)

The test results for each equation show the chi-squared statistic, degrees of freedom (df), and the p-value. For the individual equations, the p-values are as follows: LD_AvgLendingRateAvgLR (p = 0.55788), LD_LiquidityRatio (p = 0.11193), D_BankLoans (p = 0.84011), LD_LoanApplications (p = 0.52645), LD_NPLsinPercentage (p = 0.98602), and D_ofCovidCases (p = 0.56534). Since all p-values are greater than the 0.05 significance level, we fail to reject the null hypothesis for each equation, suggesting that the residuals for these equations are normally distributed. The overall test (ALL) gives a chi-squared statistic of 8.347 with 12 degrees of freedom and a p-value of 0.75742, further supporting the conclusion that the residuals across all equations are normally distributed.

### *4.8.3 Stability*

To test the stability in the model, the study employed eigenvalues and the unit cycle analysis. The results of the test are summarised in the table below.

**Table 4.10**

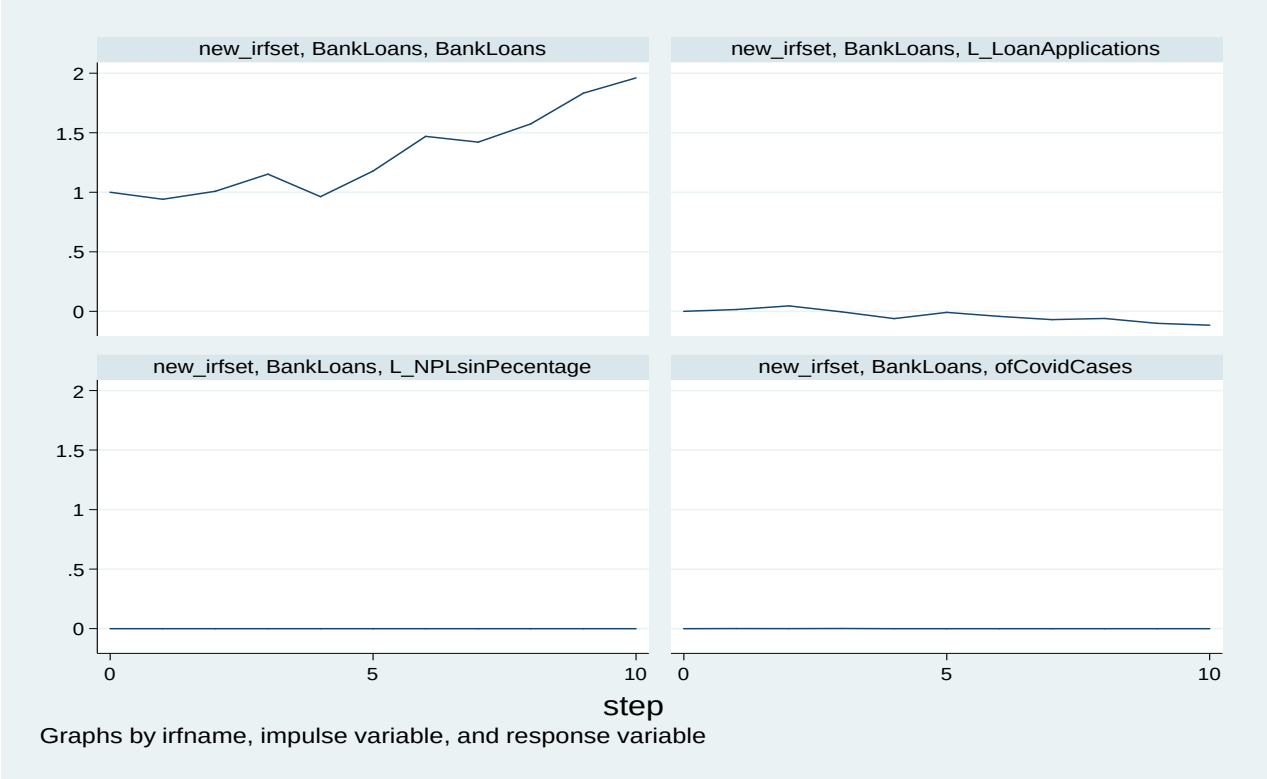
| Eigenvalue | Modulus |
|---|---|
| 1.072895 | 1.0729 |
| -0.56197 + .7864282i | 0.966582 |
| -0.56197 - .7864282i | 0.966582 |
| 0.875051 + .3859659i | 0.956391 |
| 0.875051 - .3859659i | 0.956391 |
| 0.190384 + .7831588i | 0.805968 |
| 0.190384 - .7831588i | 0.805968 |
| -0.76638 | 0.766384 |
| -0.24388 + .6635847i | 0.706983 |
| -0.24388 - .6635847i | 0.706983 |
| -0.06205 + .6636327i | 0.666527 |
| -0.06205 - .6636327i | 0.666527 |
| -0.57831 | 0.578311 |
| 0.248941 + .3849727i | 0.458449 |
| 0.248941 - .3849727i | 0.458449 |

Source: Author's computation (2024)

The given eigenvalues and their corresponding moduli reflect the stability and behaviour of a system, typically used in econometric or statistical models. For the real eigenvalues,

we observe values such as 1.072895, 1, and -0.76638, which have moduli equal to or close to 1. A modulus of 1 indicates that these eigenvalues represent stable or unit roots, suggesting that the system is neither explosive nor decaying. The complex eigenvalues, represented by pairs like -0.56197 ± 0.7864282i and 0.875051 ± 0.3859659i, show the system's oscillatory behaviour. The moduli of these complex eigenvalues are 0.966582, 0.956391, and 0.805968, which are all less than 1, indicating stable oscillations without explosive growth. Additionally, the eigenvalues like -0.24388 ± 0.6635847i and -0.06205 ± 0.6636327i also have moduli less than 1 (0.706983 and 0.666527, respectively), suggesting stable behaviour. Overall, the system appears to have mostly stable dynamics, with no indications of instability or explosive behaviour.

### *4.8.4 Impulse Response Function*




This Impulse Response Function (IRF) graph shows varying responses across banking variables over 10 time steps, where bank loans demonstrate a clear upward trend from 1 to 2 units, loan applications show a slight downward trajectory near 0, while both non-performing loan percentages and COVID cases remain flat at 0, suggesting that a shock

to the banking system primarily influences loan volumes positively while having minimal to no impact on the other variables.

## 4.9 Conclusion

Chapter 4 analyses banking data from 2016-2023 Q4, revealing increased bank loans (K112.4M to K134.8M) and loan applications (4M to 5M) during COVID-19, alongside higher liquidity ratios (117.2 to 142) and slightly lower lending rates (26.05% to 25.99%). Unit root tests confirmed first-difference stationarity, while Johansen tests identified three cointegrating relationships. The VECM analysis showed COVID-19 cases positively influenced bank loans in both short and long-run (coefficient: 1306.061), while liquidity ratio and NPLs had negative short-run effects. Model validity was confirmed through diagnostic tests showing no autocorrelation (LM test p-values > 0.05), normal residual distribution (Jarque-Bera test p-values > 0.05), and stable system dynamics (eigenvalue analysis), with IRF analysis indicating positive influence on loan volumes but minimal impact on other variables.

# CHAPTER 5

## 5 DISCUSSION OF FINDINGS

This chapter presents and discusses the results obtained, along with the various tests conducted, in the research exploring the impact of COVID-19 on lending activities of banks in Zambia. It provides a detailed interpretation of the findings presented in Chapter Four. Additionally, the chapter evaluates how the research objectives have been achieved, offering a clear analysis of the results and their relevance to the study's aims.

### 5.1 Impact of COVID-19 on lending Activities of Banks

The COVID-19 pandemic has led to diverse and significant impacts on the credit services provided by Zambian banks. A key finding from recent research highlights a notable decline in the demand for credit, primarily driven by reduced economic activities and heightened uncertainty among both businesses and consumers (Saidi, 2024) With economic conditions deteriorating due to the pandemic, many businesses faced financial instability, leading to a cautious approach toward borrowing. Consumers, too, became more risk-averse, contributing to a reduction in the overall demand for loans and credit facilities (Saidi, 2024).

Moreover, the economic downturn induced by COVID-19 exacerbated credit risk within the banking sector (Nehrebecka, 2023). As businesses and individuals struggled to maintain cash flows, the likelihood of loan defaults increased. This resulted in a rise in non-performing loans (NPLs), posing a challenge to the stability of financial institutions. Consequently, Zambian banks responded by tightening lending criteria, becoming more selective about the borrowers they deemed creditworthy. These more stringent requirements aimed to mitigate the rising credit risk but ultimately limited access to credit, especially for small and medium enterprises (SMEs) and individuals facing financial hardship (Saidi, 2024).

The impact of these developments on Zambian banks' liquidity and profitability has been profound. The increase in NPLs and reduced credit demand have strained banks' balance sheets, reducing their income from interest and fee-based income. Additionally, the need to provision for higher loan losses has further diminished profitability. To address these

challenges, Zambian banks have had to adopt adaptive strategies, such as diversifying their credit portfolios, enhancing risk management practices, and offering relief measures such as payment holidays or loan restructuring to support borrowers affected by the crisis. These efforts aim to stabilize the financial health of the banks and ensure the continued flow of credit to sectors crucial for economic recovery.

### *5.1.1 Credit Conditions during COVID-19 and post COVID-19*

During the COVID-19 period (2020-2022), it became evident that credit conditions remained highly restrictive. This was primarily due to banks enforcing stringent lending criteria aimed at mitigating default risks, which escalated due to the significant slowdown in business activities and overall economic downturn (BOZ, 2022). The resurgence of the COVID-19 pandemic's second wave exacerbated these conditions, creating further barriers to access credit. In 2022, high interest rates compounded the difficulty for businesses and individuals to secure loans, largely driven by the government's reliance on domestic borrowing, which limited liquidity and constrained credit availability (Saidi, 2024).

However, by 2023, there were indications of a loosening of credit conditions, primarily due to improvements in the banking system's liquidity and cash flow. Commercial banks began relaxing their stringent lending practices, offering credit at more favourable terms, making loans more accessible to borrowers (BOZ, 2023). Zambian banks have undertaken various measures to address the challenges posed by the pandemic on lending services. Research indicates an increasing shift towards online lending platforms, providing more accessible and efficient loan application processes (Saidi, 2024). Banks are intensifying efforts to assess credit risks more thoroughly, monitoring loan repayments closely to ensure the quality of their assets remains intact and to minimize defaults (Saidi, 2024). Additionally, collaboration with government agencies and international financial institutions has fostered initiatives such as loan guarantee programs aimed at supporting businesses adversely affected by the pandemic (Saidi, 2024). These partnerships have played a crucial role in enhancing financial stability and ensuring credit availability amidst ongoing economic uncertainties. Additionally, the study found that in the long run shown in table 4.8 COVID 19 and bank lending had a significant relationship denoted by the P-

value of 0.000 and a positive coefficient of 1306.061. This implies that during Covid – 19 periods, a one-unit increase in the number of covid case would increase the amount banks loaned out by 1306.061.

## 5.2 Assessing the changes in lending activities of banks in Zambia in response to the COVID-19 pandemic

The study is guided by the following hypothesis which is carried out in tables 47 and 4.8;

**Null Hypothesis:** The COVID-19 pandemic has no influence on the changes in lending activities of banks in Zambia.

**Alternative Hypothesis:** The COVID-19 pandemic has an influence on the changes in lending activities of banks in Zambia.

From the findings we will discuss each variable accordingly below.

### 5.2.1 Loan Disbursement (Bank Loans) and Loan Volumes

Bank loans refer to the total amount of credit disbursed by commercial banks, while loan volumes represent the number of loan applications submitted by bank customers. The findings from this study reveal that both bank loans and loan applications increased, with loan amounts rising from K112.4 million to K134.8 million, and loan volumes growing from 4,040,921.4 to 5,177,882.6. This increase is attributed to the stimulus packages provided by the Bank of Zambia, which aimed to ensure banks could meet liquidity demands and maintain stability within the financial sector.

Kimani (2023) supports the notion that during the COVID-19 pandemic, amidst soft fiscal policies and reduced household and corporate incomes, banks extended stimulus measures to help meet heightened liquidity demands from both businesses and individuals affected by the pandemic. However, due to constrained income levels, borrowers struggled to access new loans and service existing ones. Commercial banks, facing uncertainties regarding the pandemic and concerns over potential high default rates, were hesitant to extend new credit.

According to the Bank of Zambia “2020 Quarterly Credit Market Monitoring Report” (2020a), loan disbursements declined by 7.9% from 58.3% in 2019 to 50.4% in 2020, largely due to the adverse effects of the COVID-19 pandemic on the economy. By 2021,

however, total credit availability increased by 42.5% to K12.6 billion, as more economic activities resumed following the easing of COVID-19 restrictions. This growth in loan availability led to increased lending across various borrower categories. The 33.4% increase in the number of loans disbursed, reaching K4,404,065, aligns with the study's findings.

The rise in credit availability was supported by the increasing vaccination rates across the country (BOZ, 2021). It was anticipated that by the third quarter of 2022, banks would tighten their lending conditions due to ongoing COVID-19 challenges, high interest rates, and the government's dominant role in domestic borrowing. Through a comprehensive analysis, it was observed that loan disbursements rose from K112.4 million to K134.8 million during the COVID-19 period, indicating a lagged relationship between the pandemic and bank loans. This suggests that the impact of COVID-19 on bank lending did not occur immediately but rather unfolded gradually over time.

### 5.2.2 Lending Rates

The study findings indicate that the average bank lending rate in Zambia is approximately 26.046%. However, during the COVID-19 period, the lending rate slightly decreased to 25.99%. The change in the lending rate was relatively minor. Table 4.1, which presents the correlation matrix, highlights that the average lending rate is negatively correlated with other variables, particularly with bank loans. This suggests that when lending rates increase due to monetary policy rate hikes, credit conditions tend to be perceived as less favourable by borrowers, thereby reducing the demand for bank loans.

In 2020, commercial bank lending rates continued to rise due to increased credit risks. This rise was driven by a slowdown in economic activity, high inflation, and the depreciation of the kwacha, all of which were exacerbated by the impact of COVID-19 on various sectors of the economy (BOZ, 2020b). The reduction in economic activities led to higher levels of uncertainty, which increased the perception of risk among lenders, prompting banks to adjust their lending rates upward to account for potential defaults and uncertain economic conditions.

By 2021, lending rates decreased by 1 basis point to 25.7%, following the relaxation of some COVID-19 restrictions, signalling the beginning of an economic recovery. The easing of restrictions allowed for a gradual resumption of economic activities, which contributed to reduced uncertainty and helped stabilize the financial sector. The decline in lending rates during this period was partly attributed to the efforts of the Bank of Zambia to maintain an accommodative monetary policy stance, aiming to foster credit availability and support economic recovery.

At the end of the fourth quarter of 2020, lending rates fell as banks accessed funding under the Bank of Zambia's Targeted Medium-Term Refinancing Facility, which influenced interest rates. This facility aimed to provide liquidity to banks, reducing the cost of borrowing and encouraging credit flow to the economy. It was expected that lending rates would remain relatively low, as banks anticipated the Bank of Zambia maintaining an accommodative monetary policy stance to support economic activity.

However, in the second quarter of 2023, banks reported increased lending rates due to a rise in the monetary policy rate from 9.25% to 9.50%. This increase was driven by inflationary pressures and ongoing economic uncertainties, prompting the Bank of Zambia to tighten its monetary policy to curb inflation and stabilize the economy (BOZ, 2023). The higher lending rates reflected the adjustment in monetary policy and its impact on borrowing costs, making credit conditions less favourable for borrowers.

### 5.2.3 Liquidity ratio

Commercial banks accessed liquidity support with flexible terms from the Bank of Zambia through open market operations. Following the Bank of Zambia’s decision to implement an accommodative monetary policy, liquidity conditions in the sector began to ease. The primary source of liquidity injection came from the issuance of the COVID-19 bond by the government, aimed at mitigating the negative impact of the pandemic on the economy. According to the Bank of Zambia Annual Report (2023), commercial banks demonstrated sufficient liquidity within the money market, contributing to more favourable credit conditions.

From the analysis conducted in this study, it was revealed that the liquidity ratio exhibited a much stronger position during the COVID-19 period, at 141.98%, compared to 117.2%

as shown in Tables 4.1 and 4.2. This illustrates that despite the significant challenges faced by the banking sector due to the COVID-19 pandemic, the financial sector remained resilient. Commercial banks-maintained liquidity ratios well above the 100% benchmark set by the Bank of Zambia (BOZ). This suggests that the banks possessed sufficient high-quality liquid assets to withstand stressful scenarios, such as the COVID-19 period, for a minimum of 30 days.

### 5.2.4 Non-performing loans

From 2020 to 2022, Zambia's financial sector showed significant improvements in loan quality and asset management. In 2020, gross loans totalled 43.2 billion Kwacha, with 11.6% classified as Non-Performing Loans (NPLs), amounting to 5.0 billion Kwacha. By 2021, gross loans increased slightly to 44.5 billion Kwacha, while the NPL ratio dropped to 5.8%, with NPL reducing to 2.6 billion Kwacha. In 2022, gross loans expanded to 52.5 billion Kwacha, and the NPL ratio further decreased to 5.0%, with stable NPLs at 2.6 billion Kwacha. Both Doubtful and Loss categories of loans also improved.

**Table 5.1: Gross Loans and Non-Performing Loans, 2020-2022**

| | 2020 | 2021 | 2022 |
|---|---|---|---|
| **Gross loans (K' billion)** | 43.2 | 44.5 | 52.5 |
| **NPLs (K 'billion)** | 5.0 | 2.6 | 2.6 |
| **Substandard (K' billion)** | 0.3 | 0.0 | 0.1 |
| **Doubtful (K' billion)** | 0.8 | 0.2 | 0.5 |
| **Loss (K' billion)** | 4.0 | 2.0 | 1.8 |
| **NPL ratio (percent)** | 11.6 | 5.8 | 5.0 |
| **Substandard/Uncollateralized loans** | 0.7 | 0.1 | 0.1 |
| **Doubtful** | 1.8 | 0.4 | 0.9 |
| **Loss** | 9.2 | 4.6 | 3.4 |

Source: Bank of Zambia (BOZ Annual Report,2022)

Based on the findings in this study, we reject the null hypothesis and conclude that COVID-19 did have an influence on changes in lending activities in banks.

## 5.3 Investigate the effects of Lending rates, liquidity ratio and non-performing loans on bank lending activities during COVID-19 pandemic.

The study tests the following hypotheses against the variables lending rates, liquidity ratio and NPLs on bank lending.

**Null Hypothesis:** Lending rates, liquidity ratio and non-performing loans have no significant effect on bank lending activities during COVID-19

**Alternative Hypothesis:** Lending rates, liquidity ratio and non-performing loans have a significant effect on bank lending activities during COVID-19

### *5.3.1 Liquidity Ratio*

The matrix reveals a strong positive relationship between the liquidity ratio and bank lending (0.777). This indicates that higher liquidity levels enable commercial banks to maintain sufficient funds readily available, allowing them to meet sudden cash demands from customers effectively. A strong liquidity position means that banks can approve more loan applications from businesses and individuals who meet their selection criteria without incurring high default risks. In this study, the liquidity ratio increased from 117.2% to 141.98%, signifying a strong liquidity position among commercial banks during the COVID-19 period. This demonstrates that banks were compliant with the Bank of Zambia's 6% benchmark for liquidity, contributing to financial stability in the sector.

For borrowers, a high liquidity ratio enhances access to credit, enabling them to secure the necessary financing to support their business operations or personal needs. Additionally, a moderate positive correlation (0.634) between liquidity and loan applications implies that a unit increase in the liquidity ratio leads to an increase in loan applications. This was evident when the Bank of Zambia initiated the Targeted Medium-Term Refinancing Facility, through which businesses and individuals that met specific conditions applied for these loans. The findings suggest that banks with strong liquidity positions are more likely to approve loan requests due to their ability to lend funds, providing borrowers with confidence that their applications are likely to be approved. During uncertain periods such as the COVID-19 pandemic, banks tend to be cautious about extending credit due to concerns about potential defaults stemming from reduced

business and economic activity. A higher liquidity ratio, therefore, facilitates increased lending activities during such times.

The study also found a weak negative correlation between the liquidity ratio and non-performing loans (NPLs) (-0.208). This suggests that as the liquidity ratio increases, there is a slight decrease in NPLs. A reduction in NPLs is beneficial for banks as it leads to improved loan portfolios and reduced credit risk. The decline in NPLs implies that some of these loans are being repaid, contributing to better overall financial stability. The **p-value** at L.2D and L.3D are 0.000 and 0.001 which are less than 5% show a high significant. This suggests that there exists a relationship between bank lending and liquidity ratio in the short run.  On this equation we reject the null hypothesis since the p values are less than 0.05.

The impact of COVID-19 on liquidity indicates a moderate relationship. The results suggest that as COVID-19 cases increased, banks' liquidity ratios also rose. The Bank of Zambia reported that stimulus packages were provided to banks at the onset of the pandemic due to the uncertainty surrounding the crisis. These measures aimed to support banks' liquidity needs, ensuring they had sufficient funds to meet credit demands and maintain resilience within the financial sector (BOZ, 2021). It was also observed that at the onset of the pandemic, banks were able to meet the surge in liquidity demand through a combination of high pre-crisis capital levels, inflows from depositors, and liquidity injection programs. However, the U.S. Federal Reserve survey highlighted that bank globally tightened lending standards, particularly during periods of economic uncertainty, as they sought to manage risks associated with potential defaults.

### *5.3.2 Avg. Lending Rates*

The study findings indicate that the average bank lending rate in Zambia is approximately 26.046%. However, during the COVID-19 period, the lending rate slightly decreased to 25.99%. The lagged differences of Avg.Lending shown in table 4.7 indicates no significant effect on BankLoans, suggesting that variations in average lending rates do not impact BankLoans in the short term. The Avg. lending rates p-value at L.2D is 0.633 which is greater than 0.05 and at L.3D p-value is 0.464 also higher than 0.05. we can conclude that lending rates are not statistically significant at 5% level and therefore fail to reject the

null hypothesis and state that in the short run, there is no correlation between bank lending and avg. lending rates.

### *5.3.3 Non—performing Loans*

Results produced in tables 4.1 and 4.2 indicate that NPLs increase from 8.4 to 8.6. This shows a relative high percentage in non-performing loans suggests a considerable risk in lending environment leading banks to raise their lending rates in order to try and mitigate this risk. It also suggests some form of strain on the borrowers to commit to their liabilities. When borrowers fail to repay their loans this poses as a credit risk to banks. Furthermore, The second lagged difference of NPLs in table 4.7 shows a p-value of 0.001 which is less than 0.05. this shows a significant value meaning in the short run there exists a negative correlation as shown by the coefficient -3170275. This result suggests that a higher percentage of non-performing loans results in a decline in current BankLoans. Elevated levels of bad loans diminish banks' willingness or capacity to extend credit. Based on this result, for this equation, we reject the null hypothesis and conclude that there exists significant relationship in the short run.

## 5.4 Evaluate the effectiveness of policy and regulatory responses implemented during the pandemic and their implications for future regulatory frameworks.

The Bank of Zambia (BoZ) introduced a K10 billion fund known as the Targeted Medium-Term Refinancing Facility (TMTRF) to mitigate the adverse impacts of the COVID-19 pandemic on the financial sector. The TMTRF was designed to provide liquidity support to eligible financial service providers by offering loans at concessionary interest rates pegged to the Monetary Policy Rate. These financial institutions were then tasked with channelling the funds to critical sectors of the economy to maintain financial stability and support recovery efforts. By reducing the cost of borrowing, the facility aimed to encourage lending and ensure that key economic activities were not stifled during the crisis (BoZ Annual Reports, 2020, 2021, 2022).

As a major source of affordable financing, the TMTRF played a significant role in reducing the average lending rates within the financial sector. By December 31, 2021, the Bank of Zambia had received 59 loan applications under this facility from 33 financial service providers, amounting to a total of K12.05 billion. These applications included 14

commercial banks, with a cumulative request of K8.63 billion, and 19 non-bank financial institutions (NBFIs), whose applications totalled K3.43 billion. After a thorough review process, the BoZ approved 41 applications, while 10 were rejected due to non-compliance with eligibility requirements. Furthermore, two applications were voluntarily withdrawn, five were still under review, and one was placed on hold pending the merger of two banks (BoZ Annual Reports, 2020, 2021, 2022).

Of the funds disbursed through the TMTRF, financial institutions utilized approximately K4.1 billion to issue new loans, while another K2.4 billion was allocated to restructuring existing loans. These measures ensured that borrowers received much-needed relief during the economic slowdown while maintaining credit flows to vital sectors of the economy (BOZ, 2021).

In addition to the TMTRF, the BoZ implemented measures to reduce reliance on cash transactions and promote digital financial solutions, especially mobile money transfers. To encourage the use of digital platforms, transaction limits were increased significantly. For Tier 1 individuals, the limit was raised from K10,000 to K20,000, with a maximum threshold of K100,000. For Tier 2 individuals, the limit increased from K20,000 to K50,000, with a maximum threshold of K500,000. Similarly, for Small-Scale Enterprises (SSEs) and farmers, the transaction limit was raised from K250,000 to K1,000,000, with a maximum threshold of K1,000,000. These adjustments were aimed at reducing physical over-the-counter transactions, thereby minimizing the risk of COVID-19 transmission while also fostering the adoption of digital financial services (BoZ Monetary Policy Report, 2020).

The Bank of Zambia also expanded its Open Market Operations (OMO) to provide commercial banks with greater access to short-term liquidity. This intervention featured more flexible terms than those available before the pandemic, ensuring that banks had sufficient funds to meet the credit demands of businesses and individuals during a time of heightened economic uncertainty. The enhanced liquidity support was essential for maintaining confidence in the financial system and ensuring that credit supply chains remained intact (BOZ, 2020b).

Furthermore, the Monetary Policy Committee (MPC) took decisive action to support the economy by lowering the Policy Rate by 225 basis points, bringing it down to 9.25%. This reduction was introduced despite inflationary pressures exceeding the medium-term target range of 6-8%. The decision to lower the Policy Rate reflected the BoZ's prioritization of economic recovery, as the reduction in borrowing costs was expected to stimulate investment and consumption while providing relief to businesses and households affected by the pandemic (BOZ, 2020b).

# CHAPTER 6

## 6 CONCLUSION AND RECOMMENDATIONS

This chapter presents the conclusions, implications, and recommendations drawn from the objectives and findings of the study on the impact of the COVID-19 pandemic on lending activities of banks in Zambia. The findings of this research provide critical insights into how the pandemic shaped the operations of financial institutions, particularly in the area of lending, and offer a basis for future improvements in banking practices and policy frameworks.

### 6.1 CONCLUSION

The study aimed to investigate the extent to which the COVID-19 pandemic affected lending activities in Zambian banks. The detailed analysis of data collected through various methodologies revealed that the pandemic significantly disrupted banking operations, particularly in lending practices. These findings mirror global trends observed in other economies, such as those highlighted by Fischer (2021), which documented widespread disruptions in financial systems due to the pandemic's economic impacts.

One of the key findings was the slight reduction in average lending rates during the pandemic, which dropped from 26.046% to 25.99%. This marginal decrease was largely influenced by the accommodative monetary policies implemented by the Bank of Zambia to foster economic recovery and ensure liquidity within the financial system. Despite the reduced rates, the demand for loans surged during the pandemic, driven by heightened financial needs among businesses and individuals grappling with the economic fallout of the crisis. Both loan volumes and values experienced significant increases, indicating a robust demand for financial support during the challenging period.

The study also highlighted the resilience of banks' liquidity positions, as evidenced by an increase in liquidity ratios from 117.2% to 141.98%. This strong liquidity position enabled banks to continue meeting their obligations and supporting credit demands even amid economic uncertainties. However, the pandemic also brought challenges, particularly an increase in non-performing loans (NPLs), which rose from 8.4% to 8.6%. This increment

reflected the difficulties borrowers faced in fulfilling their repayment obligations due to widespread economic disruptions.

The effectiveness of policy measures, such as the Targeted Medium-Term Refinancing Facility (TMTRF) and Open Market Operations introduced by the Bank of Zambia, was another significant observation. These initiatives played a pivotal role in stabilizing the financial sector by providing liquidity support to banks and ensuring the continuity of lending activities. In conclusion, while the COVID-19 pandemic posed significant challenges to the Zambian banking sector, it also underscored the importance of robust policy responses and institutional resilience in navigating economic crises.

## 6.2 RECOMMENDATIONS

### *6.2.1 Policy and Regulatory Recommendations*

To build on the insights gained from this study, several recommendations are proposed. Firstly, the Bank of Zambia should strengthen liquidity management frameworks to ensure sustained resilience in the face of future economic shocks. Enhancing the scope and accessibility of facilities like the TMTRF can provide critical support during periods of financial stress. Additionally, the promotion of digital financial solutions should remain a priority. The increased reliance on mobile money and digital lending platforms during the pandemic demonstrated their potential to enhance accessibility and efficiency in financial services.

Regulatory authorities must also reinforce monitoring mechanisms to detect systemic risks early. The rise in NPLs during the pandemic highlights the need for proactive measures to identify and address vulnerabilities in the financial system. Establishing robust monitoring frameworks can enable timely interventions, thereby safeguarding financial stability.

### *6.2.2 Banking Sector Recommendations*

For the banking sector, diversifying loan portfolios is crucial. By extending credit to a broader range of sectors and client segments, banks can mitigate the concentration of risks associated with specific industries or demographics. Strengthening credit risk assessment processes is equally important. Enhanced appraisal systems will enable

banks to evaluate borrowers' financial health more effectively, reducing the likelihood of defaults and ensuring sustainable lending practices.

Given the critical role of small and medium enterprises (SMEs) in economic recovery, banks should prioritize this segment by offering tailored financial products and services. SMEs are often disproportionately affected during economic crises, and targeted support can facilitate their resilience and contribution to economic growth.

### *6.2.3 Research and Development Recommendations*

Continuous research is essential to understand the evolving dynamics of the financial sector. Future studies should examine the long-term effects of the COVID-19 pandemic on banking operations, focusing on the sustainability of the measures implemented during the crisis. Comparative research across different regions can also provide valuable insights into best practices for managing similar challenges.

Collaboration between banks, regulatory authorities, and academic institutions can further enhance the understanding of financial systems and foster innovation. By leveraging data-driven insights, stakeholders can develop strategies to address emerging challenges and improve the overall efficiency of the banking sector.

### *6.2.4 General Recommendations*

Education and awareness among borrowers are equally important. Banks and policymakers should collaborate to promote financial literacy, enabling borrowers to manage loans effectively and withstand economic shocks. Enhanced financial literacy can reduce default rates and contribute to a more stable banking environment.

Public-private partnerships should also be strengthened to support initiatives such as loan guarantee schemes. These partnerships can mitigate risks for both lenders and borrowers, ensuring the continuity of credit flow during economic crises. Such collaborative efforts are critical in fostering resilience and inclusivity in the financial sector.

## 6.3 Implications for Future Research and Practice

The findings of this study have several implications for the future of the Zambian financial sector. They highlight the importance of adaptive strategies and proactive policy measures in mitigating the impact of economic shocks on banking activities. Policymakers

and practitioners should leverage these insights to enhance the resilience of the financial sector and ensure its ability to support economic recovery and growth.

Future research should delve deeper into the role of technology in transforming banking operations post-COVID-19. The pandemic accelerated the adoption of digital financial services, and understanding their long-term implications can guide the development of more efficient and inclusive financial systems. Comparative studies on the impact of pandemics on lending activities in different regions can also provide valuable benchmarks for best practices.

Moreover, evaluating the effectiveness of various financial relief programs implemented during the pandemic can offer insights into their scalability and adaptability for future crises. By addressing these areas, the financial sector can better prepare for unforeseen challenges while fostering sustainable growth and stability.

In conclusion, this study underscores the critical role of resilience, adaptability, and innovation in navigating economic crises. By building on the lessons learned from the COVID-19 pandemic, the Zambian banking sector can enhance its capacity to support economic development and withstand future challenges.

## 7 References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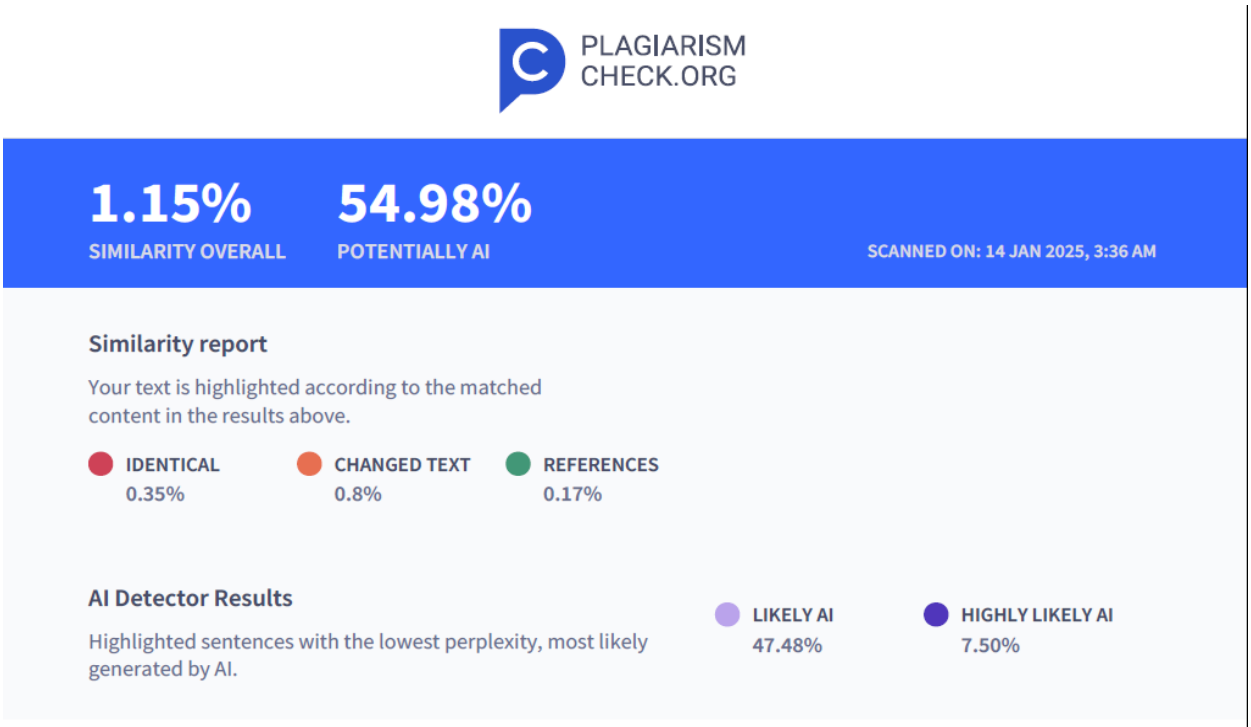
# APPENDIX

Research Data

| Quarter | Bank Loans | Liquidity Ratio | Avg. Lending Rate (Avg.LR) | Loan Applications | NPLs in Pecentage |
|---|---|---|---|---|---|
| 2016Q1 | 79781177 | 60.26 | 26.11 | 69,274 | 7.13 |
| 2016Q2 | 76127899 | 84.73 | 28.04 | 179,960 | 7.44 |
| 2016Q3 | 75312046 | 71.96 | 28.86 | 357,931 | 6.63 |
| 2016Q4 | 72037199 | 92.13 | 29.17 | 619,522 | 7.4 |
| 2017Q1 | 69170763 | 89.55 | 28.98 | 851,030 | 8.32 |
| 2017Q2 | 68394326 | 72.57 | 27.49 | 1,439,391 | 8.68 |
| 2017Q3 | 69555883 | 90.17 | 26.09 | 1,697,151 | 8.49 |
| 2017Q4 | 72696457 | 100.01 | 25.16 | 2,158,772 | 8.78 |
| 2018Q1 | 72379509 | 91.23 | 24.3 | 2,686,927 | 10.35 |
| 2018Q2 | 74415876 | 99.62 | 23.71 | 1,867,033 | 10.34 |
| 2018Q3 | 79668715 | 96.86 | 23.38 | 4,132,135 | 9.88 |
| 2018Q4 | 86787363 | 99.92 | 23.97 | 5,037,749 | 10.3 |
| 2019Q1 | 91926934 | 106.09 | 24.41 | 5,498,675 | 8.03 |
| 2019Q2 | 98478819 | 110.16 | 24.95 | 6,194,471 | 10.11 |
| 2019Q3 | 99434074 | 120.35 | 25.76 | 6,357,183 | 10.43 |
| 2019Q4 | 106251462.1 | 106.75 | 27.38 | 6,487,982 | 10.01 |
| 2020Q1 | 111239918 | 110.39 | 28.44 | 6,317,510 | 9.83 |
| 2020Q2 | 118579741 | 127.56 | 27.52 | 5,605,800 | 10.95 |
| 2020Q3 | 119610416.9 | 125.65 | 25.93 | 5,150,454 | 11.03 |
| 2020Q4 | 128986229.6 | 134.07 | 25.09 | 5,233,861 | 10.34 |
| 2021Q1 | 131448483 | 132.44 | 25.59 | 5,671,999 | 9.97 |
| 2021Q2 | 147086955 | 153.49 | 25.76 | 4,935,566 | 8.48 |
| 2021Q3 | 140937634.2 | 127.47 | 25.49 | 4,815,690 | 8 |
| 2021Q4 | 137039999.7 | 158.72 | 25.86 | 5,099,068 | 7.68 |
| 2022Q1 | 133382966.4 | 165.69 | 27.7 | 3,054,864 | 7.59 |
| 2022Q2 | 131890268.2 | 177.07 | 25.16 | 4,371,218 | 7.43 |
| 2022Q3 | 136653758.2 | 144.78 | 25.11 | 6,137,211 | 7.46 |
| 2022Q4 | 150223774.5 | 144.52 | 24.93 | 6,139,923 | 7.08 |
| 2023Q1 | 165411287.2 | 143.93 | 25.32 | 4,779,310 | 6.2 |
| 2023Q2 | 162376795.8 | 132.99 | 25.62 | 6,306,626 | 5.84 |
| 2023Q3 | 184100896.7 | 162.4 | 25.77 | 5,051,080 | 5 |
| 2023Q4 | 204697382.7 | 118.58 | 26.29 | 5,004,118 | 4.81 |

| COVID 19 CASES | |
|---|---|
| **Quarter** | **Quarterly Total Cases** |
| 2020Q1 | 35 |
| 2020Q2 | 1559 |
| 2020Q3 | 13165 |
| 2020Q4 | 5966 |
| 2021Q1 | 67693 |
| 2021Q2 | 66530 |
| 2021Q3 | 54098 |
| 2021Q4 | 45228 |
| 2022Q1 | 62576 |
| 2022Q2 | 9007 |
| 2022Q3 | 7674 |
| 2022Q4 | 894 |
| 2023Q1 | 8710 |




## Report #24421461

CHAPTER ONE INTRODUCTION The COVID-19 pandemic triggered a global economic crisis, disrupting industries and economies across the world. Among the sectors impacted, the financial industry, which is crucial for economic stability, also faced significant challenges. The pandemic, which emerged in late 2019 and swiftly developed into a global health eme rgency, created unprecedented difficulties for economies and financial systems . W hile the immediate focus was on managin g public health, the ripple effects on various economic sectors, including the banking industry, were profound . In Zambia, as in many other developing countries, the pandemic led to a decline in economic growth, increased unemployment, and heightened levels of poverty. The banking sector, a key driver of economic growth, financial stability, and the facilitation of capital flows , plays a vita l role in economic recovery.

Analysing how the pandemic affected lending practices in Zambian banks is essential to understanding the sector's resilience, the challenges it faces, and how policies can be shaped to ensure financial stability and inclusive growth. It is important to study how the pandemic impacted the way banks in Zambia give out loans so that we can know how well they handled the situation, what problems the y faced, and how we can make policies to keep the financia