Post-coronavirus disease resilience of cooperative financial institutions in Kenya

By

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DECLARATION

I, Benard William Chitunga, declare that:

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DEDICATION

I dedicate this work to my paternal grandfather, who I am named after, Chitunga Musa, who, at the age of 96, was laid to rest on 29th May 2024. His life profoundly shaped who I am today. I carry his name with pride.

ABBREVIATIONS AND ACRONYMS

ACCOSSCA	Africa Confederation of Cooperative Society Savings and Credit Association
AfDB	The African Development Bank
Ag. CEO	Acting CEO
AGM	Annual general meeting
AI	Artificial Intelligence
ATMs	Automated Teller Machines
AVMA	America veterinary medical association
AWS	Amazon Web Services
BCP	Business Continuity Plan
BCU	Business Continuity Units
BIA	Business Impact Analysis
CBA	Commercial Bank of Africa
CBK	Central Bank of Kenya
CCRC	Cooperative Coronavirus Response Committee
CDP	Cooperatives Development Program
CECA	Confederation Espanola de Cajas de Ahoros
CEO	Chief Executive Officer
CFF	Central Finance Facility
CFIs	Cooperative Financial Institutions
CGAP	Advisory Group for the Support of the Poor's
CIC	Chartered Insurance Institute
CICOPA	Comité International des Coopératives de Production et de Services
COVID-19	Coronavirus Disease 19
CRB	Credit Reference Bureau
CSR	Cooperate social responsibility
CUSO	Credit Union Service Organizations
EABL	East Africa Breweries Limited
EACB	European Association of Cooperative Banks
ERAA	Economic Regime-based Asset Allocation

ETFS	Exchange-Traded Funds
EU	European Union
FNB	First National Bank
FONDERSURCO	Fondo de Desarrollo Rural Sustentable Conservación de la Naturaleza
GDP	Gross Domestic Product
GHG	Green House Gas
GPS	Global Positioning System
HSBC	Hongkong and Shanghai Banking Corporation
ILCU	Ireland Credit Unions
ILO	International Labour Organization
IMF	International Monetary Fund
IoT	Internet of Things
IPA	Interpretative Phenomenological Analysis
IT	Information Technology
IWOSS	Industries Without Smoke
KII	Key Informant Interviews
KNBS	Kenya National Bureau of Statistics
KUSCCO	Kenya Union of Savings and Credit Co-operatives
LMICs	Low- and Middle-Income Countries
LDCs	Least Developed Countries
MFI	Micro Finance Institution
MFIB	Model Financial Institution Building
MFIs	Micro Financial Institutions
MFPs	Micro Finance Providers
MT4	Meta Trader 4
MT5	Meta Trader 5
MVP	Most Viable Product
NAFCU	National Association of Federals Insured Credit Unions
NCUA	National Credit Unions Administration
NPA	Non-Performing Assets

NPL	Non-Performing Loans
NSE	Nairobi Stoke Exchange
OECD	Organization for Economic Co-operation and Development
PDA	Personal Data Assistants
PI	Principal Investigator
PoS	Proof of Stake
REIT	Real Estate Investment Trust
RPA	Robotic Process Automation
RPO	Recovery Point Objectives
RTO	Recovery Time Objectives
SaaS	Software-as-a-Service
SACCO/s	Saving and Credit Cooperative Organizations
SASRA	SACCO Societies Regulatory Authority
SDCs	State Department of Cooperatives
SDGs	Sustainable Development Goals
SMBs	Small and Medium Businesses
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences (SPSS) version 23
SRS	Simple Random Sampling
SSNA	Social Systems Network Analysis
TCR	Transparency Clearness & Responsibility
UCBs	Urban Cooperative Banks
UK	United Kingdom
UKZN	University of Kwazulu-Natal
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VCS	Version Control System
WHO	World Health Organization
WOCCU	World Council of Credit Unions

OPERATIONAL DEFINITION OF TERMS

Business Operations Model: This is how an Organization carries out its activities to deliver value to its customers (Hedman & Kalling, 2003).

Cooperative Financial Institutions: This is a member-owned, nonprofit financial institution formed to serve a population's financial needs. It is also referred to as savings and credit cooperative Organizations (SACCOs) (SASRA, 2022).

Resilience: This is the aptitude to successfully foresee, counter, adapt to, and pull through disruptions, challenges, and abrupt changes while maintaining the principal functions, status, and value proposition. It embodies an Organization's ability to circumnavigate diverse blows, strains, and uncertainties without compromising its long-term viability and sustainability (Aldianto et al., 2021).

ABSTRACT

Globally, Cooperative Financial Institutions (CFIs) suffered enormously from the unprecedented havoc and disruptions of the coronavirus disease 2019, which resulted in insurmountable and unimaginable public health, social and economic impacts and has continued three years post-pandemic. The CFIs are grappling with rebuilding and bouncing back from the negative impact of the pandemic that resulted in unpredictable cash flows, reduced fixed deposits through continued withdrawals, dormant membership, massive layoffs, and a decline in profits and savings. This study aimed to investigate the resilience of CFIs post the pandemic in Kenya to formulate an improved resilient business model for systemic economic shocks and crises. The study was conducted in Nairobi Metropolis and Nairobi City County. An exploratory, descriptive cross-sectional study design was applied with a mixed methods approach—the study population comprised operations, finance, marketing, and chief executive officers. Probability and non-probability approaches were employed. Multi-stage sampling was used to select the study population and study area. Data collection tools included a semi-structured questionnaire distributed among 35 respondents and a Key Informant Interview schedule among 11 executives. Secondary data was generated from the existing documents in the respective institutions. Pearson's Chi-square test and logistic regression showed the associations between the dependent and independent variables using Statistical Package for Social Sciences version 23 for quantitative data and content analysis using themes in NVivo version 12 for qualitative data. The study recommends an all-inclusive model to inform better planning and implementation by stakeholders in the cooperative movement in the face of the next pandemic. This model for the future should anchor risk-based leadership and organizational culture with sustainability at the core of people, profit formula, key processes, and resources within CFIs. Cooperative financial institutions must adopt a broad-based liquidity avenue, including exploring alternatives for equity. This should include private sector capital mobilization in addition to informing global, regional and national in synergy while preparing for the next pandemic. Finally, the government, executive and legislature are challenged to rethink the policies and laws governing CFIs to enable them to become future-fit institutions.

Keywords: Resilience, financial institutions, COVID-19, Kenya, cooperatives, SMEs

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CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 Introduction

The global Coronavirus Disease 2019 (COVID-19) outbreak caused unprecedented disruptions across various economic sectors. Cooperative financial institutions (CFIs), which play a vital role in mobilising savings and providing credit to their members, were no exception. In Kenya, CFIs have been instrumental in supporting small and medium enterprises (SMEs), individual households, and the broader financial inclusion agenda. However, the pandemic exposed CFIs to new financial and operational challenges, threatening their sustainability and resilience. Despite these challenges, some CFIs demonstrated resilience, enabling them to continue providing essential financial services during and post-COVID-19.

Developing countries whose economies are supported mainly through small and medium enterprises (SMEs) need resilient and sustainable financial ecosystems, including CFIs that will resist systemic shocks and disruptions from pandemics such as COVID-19 and its unprecedented implications to interconnected systems that yield business transactions and value. Institutionalising resilient CFIs post-COVID-19 is an antidote for accelerating preparedness and response to economic crises, financial instability, human capital losses and distortion of business balance sheets. There is a need for innovative approaches to enhance entrepreneurship continuity, including business financial liquidity and sustainable business operations. In the aftermath of COVID-19, CFIs' business models needed interrogation and possible improvement to guarantee resilience during future systemic shocks that precede pandemics. COVID-19's effects were enormous on global value chains, business operations, governance structures and leadership architecture, supply chain processes, value proposition, theory of change, and the community where CFIs operate. This study explores the factors contributing to the resilience of CFIs in Kenya following the pandemic.

This chapter comprehensively describes the background, rationale, research objectives, research questions, hypothesis, significance, scope of study, limitations and delimitations, the structure of the thesis, and summary of the chapter. The chapter lays the foundation for the research by presenting the background and context of the study. It introduces the key themes surrounding the resilience of cooperative financial institutions post-COVID-19, emphasising the sector's importance in the Kenyan economy. Secondly, it highlights the study's rationale, explaining the need to understand the factors that influenced the recovery of CFIs and their ability to navigate economic disruptions caused

by the pandemic. Thirdly, the chapter outlines the study's objectives, focusing on identifying the resilience strategies employed by CFIs, evaluating the impact of the pandemic on their financial stability, and exploring the role of external support in their recovery.

The chapter further establishes the research questions derived from these objectives, guiding the investigation into the specific elements that contributed to CFIs' resilience, presents the hypotheses with the assumption that CFIs with more robust financial management, diversified portfolios, and digital innovation were more resilient during the post-COVID-19 recovery phase. Lastly, the chapter explains the significance of the study, emphasising its contribution to the understanding of CFI resilience, providing insights for policymakers, regulators, and financial institutions on enhancing their stability in future crises while at the same time establishing the scope of the study, limiting its focus to Kenyan CFIs pre, during and post-pandemic. The limitations and delimitations address the potential challenges in data collection and generalisation. The chapter concludes with a brief overview of the thesis structure and a summary of the key points discussed in this introductory chapter.

1.2 Background of the Study

Cooperative financial institutions (CFIs) contribute immensely to Kenya's economy. SASRA (2022) reported that CFIs contributed over 30% of Kenya's Gross Domestic Product (GDP). In communities, they are platforms where farm inputs are purchased by members at concessional rates, aggregation of produce after harvest is realised, marketing of products happens, and financing services are accessed (Matabi et al., 2022).

Pinzaru et al, (2020) highlighted the disruptions brought about by the unprecedented COVID-19 pandemic, which resulted in massive layoffs, increased membership dormancy in financial institutions, and loss of income in various global economic sectors. These layoffs and loss of income negatively impacted members of the financial cooperatives' institutions. The African Development Bank's (2023) (AfDB) report on the economic outlook for the continent of Africa argues that stakeholders have yet to assess the full extent of the pandemic impact. The AfDB continues to argue that two years post-COVID-19 pandemic is when Africa and her entities will realize how unprecedented the pandemic was.

The OECD (2022) reports that membership of CFIs reduced, and there was an increased dormancy during the pandemic period. Most members who were beneficiaries of the various debt facilities could not service them. The OECD (2022) findings also indicate that most members struggled to make

regular contributions to their deposits and sought to withdraw their savings. Moreover, when restricted movements occurred, these members applied for short-term loan facilities to meet their daily subsistence and support their livelihoods. This arguably affected the respective financial cooperative institutions' liquidity, membership, governance and member services.

Research shows that the CFIs' business model has shown relative resilience to shocks. Birchall (2013a) compares their resilience and resilient nature with investor-owned financial institutions during Germany's 1923 hyperinflationary crisis, the stock market crash of 1929 and the consequent recession, two world wars, the Scandinavian banking crisis of the 1990s, and the global financial crisis of 2007-2008. This resilience stems from several advantages of the cooperative business model, including ownership, control, and member interests. Furthermore, innovation, collective skills and the role of government are additional advantages that contribute to the resilience of cooperatives (Borda-Rodriguez & Vicari, 2012). However, Allen and Maghimbi (2009) warn that while financial cooperatives tend to hold some advantage in times of crisis, evidence from the 2007-2008 financial crisis shows financial cooperatives in Africa are not strong enough to protect themselves against systemic shocks, especially those that result in loss of income for their members. The World Bank (2023) agrees with Allen & Maghimbi (2009) that crises such as the post-COVID-19 socio-economic environment present a fragile picture of elements that concern an enabling environment for enterprise development. The World Bank's outlook further argues that the pandemic caused a global recession. Governments and actors in the private sector worldwide are striving to put in place institutional policies and strategies that support enterprises to recover, develop and thrive post-pandemic.

Over the past decades, cooperatives have played an important role in responding to various crises. These include reintroducing equitable distribution systems through consumer co-operatives, building supply chains through agricultural co-operatives, credit and marketing, job creation through workers and land co-operatives, and resettlement of veterans. Crises have been around the world since time immemorial. This crisis response function of cooperatives is a characteristic of the resilience of the cooperative economic model (Dave, 2021). In times of sudden economic upheaval, such as during the COVID-19 pandemic, it is vital to consider cooperatives' business model before, during, and after the systemic shock. There is massive data on the cooperative movement during the COVID-19 pandemic and how they weathered the pandemic. Having demonstrated substantial contribution to the development of capacities, the promotion of local ownership, and the maintenance of sustainability, all of which are essential components of long-term solutions for impacted people, there

are grounds to assume that cooperatives may aid in improving the resilience of both their members and the organization during economic shocks via various variables or qualities (Billiet et al., 2021).

Herbes et al. (2021) reflect on the tenacity, flexibility, transformation capability, innovation, and learning of the cooperative business model. Billiet et al. (2021) state that the durability of the cooperative financial institutions during the COVID-19 crisis may be attributed to the unique governance qualities of cooperatives, which guarantee that members remain vital to the organization. Researchers, in more recent years, have paid great attention to the resilience of cooperatives during the financial crisis that occurred in 2008 and 2009. There is now substantial data on cooperatives during the COVID-19 pandemic period from 2020 to 2022. However, most of the studies have focused on cooperatives in general rather than financial cooperative institutions; thus, this research provides an opportunity to expand the body of knowledge on post-pandemic activities, initiatives, the behavior of the business model and stakeholders in the cooperative movement.

1.3 Statement of the Problem

The World Health Organization (WHO) (2020) declaration of COVID-19 as a pandemic forced the world to lock down to reduce its spread and effects across the globe. The first lockdowns led to the disruption of livelihoods, business ecosystems, and the world. The pandemic presented unprecedented challenges, and enormous shocks across the socio-economic sectors brought havoc that directly and indirectly influenced Cooperative Financial Institutions (CFLs) (Kumar et al., 2021; World Bank, 2020). Consequently, the WHO directed countries to adopt strict measures to prevent the spread of COVID-19 (Ataguba, 2020).

The pandemic's universal dormancy, coupled with predictors that caused both global economic, health and human crises, which are interdependent, have stretched into the post-COVID-19 period (Hevia, & Neumeyer, 2020). This suggests a lack of resilience and coping strategies with limited business orientation (Francesconi et al., 2021a). Despite WHO's declaration of end of emergency globally in May 2023, COVID-19's effects have continued to dominate in all spaces of human operations. Across Countries, (2020) findings at the peak of the pandemic reflected on the impact COVID-19 had on the economies around the world, from the institutions of learning, value and supply chains, trade, business and work, travel restrictions within countries, regions and around the world. These long-term effects continue to cause major financial and business challenges and disruptions for the upper-stream and low-stream supply chain, services, and financing industry (Across Countries, 2020).

Even with the return of normalcy, globally, the impact of COVID-19 remains the most cross-cutting financial catastrophe of all industries (Giese & Haldane, 2020). The universal aftermath effects exacerbate the implications in business operations, the service industry, and the economy as a whole, which is the greatest shock with the greatest bottle-necks in accelerating the attainment of Sustainable Development Goals (SDGs) (Giese & Haldane, 2020). Moreover, the resilience and sustainability of CFIs have suffered the test of time in terms of business continuity, financial risks, the decline in profits, assurance of business partners and customer retention. COVID-19's impact is enormous on the global economy and calls for a development emergency (Aikman, 2020; Dave, 2021; Hevia, & Neumeyer, 2020).

Shereen et al. (2020) enumerate the impact of the pandemic on various imperatives that define a country's economy. These include the fundamentals of treasury, such as gross domestic product and central bank measures. Their research findings affirmed the severe social and economic consequences of the pandemic. The critical sector of Small and Medium Businesses (SMBs) and how they were affected by the pandemic is recorded by the research of Bartik et al. (2020). These businesses experienced mass sackings, closures, cash flow disruptions, significant financial instabilities in all business operations, and liquidity in addition to household operations.

Advisory Group for the Support of the Poor's (CGAP) Global Pulse survey of microfinance institutions during the Covid-19 pandemic reported shrinking lending portfolio, microfinance institution (MFI) liquidity, branch closures, employee layoffs, and MFI digital's expansion; it describes the building of channels and even expansion of existing digital channels (Tortia, & Troisi, 2021).

COVID-19 has affected many sectors of the economy (Zaazou & Abdou, 2020). Janssen et al. (2021) echo World Bank projections during the pandemic, predicting that the COVID-19 crisis could push 40 to 60 million people into poverty, including members of cooperative financial institutions. This is in addition to the findings of Ren et al. (2021), showing reduced efficiency in microfinance institutions. Their study explains the catastrophe caused by COVID-19 and how it threatens the business world, including cooperative financial institutions and small businesses on every continent. The favourable environment for the operation and growth of CFIs and SMEs is crumbling, hence the urgent need for interventions that will stand the storms of a pandemic.

Against the backdrop of the pandemic, it is of great interest in recovery and preparedness for future pandemics to contribute to the body of knowledge by assessing the state of cooperative financial institutions' business model post-COVID-19. Moreover, the argument by Habiyaremye, (2021). has

been validated by the World Bank (2023) and AfDB (2023) that the extent to which the pandemic disrupted economies and businesses is yet to be fully established. Therefore, this study investigated the resilience of cooperative financial institutions during the COVID-19 pandemic in Kenya to formulate and propose an improved resilient business model for CFIs during systemic economic shocks and crises.

1.4 Rationale of the Study

The unanticipated 21st-century global pandemic, COVID-19, not only caused large numbers of mortalities and morbidities but also disrupted and crumbled the global economy, the supply chains, and the inter-connected sectors and systems that support human life (Zeren & Zeren, 2020). COVID-19 caused widespread global illness, deaths, and substantial disruptions in education systems, healthcare systems, workplaces, travel, business, social interactions, and the world economy (Naseer et al., 2023).

At the onset of COVID-19, all interventions were diverted to health, reducing mortalities and the spread of the infection; meanwhile, other interconnected and interrelated sectors were ignored. Despite the uncertainties, COVID-19 remained and continues to remain a universal crisis that caused and exposed deficiencies in enterprises, hence a duo global burden and crisis on financing and service delivery that called for urgent interventions (Ratten, 2020). Dave (2021) affirms that complete shutdowns exposed the inability of many CFIs to continue business operations, with unimaginable social and economic impacts. Such impacts included but not limited to liquidity pressures, deterioration of loan portfolios, rapid shifts of business models (digitization), increased cost of operation, minimal in-person engagement, minimal digital literacy, increased employee welfare concerns, delicacy of balancing member welfare and financial sustainability and mistrust among some members (Across Countries, 2020). Albeit asymmetrical dependence in and among sectors, the indiscriminate virus disrupted and disconnected the system, exacerbating the existing inequalities including sectoral exposure, asset size disparities, liquidity buffer disparities, membership composition, gender composition, regulatory tiering, digital readiness gaps, member retention, recovery trajectory differences and capital adequacy landscape among others (Bacq & Lumpkin, 2021; Ratten, 2020).

Health and the intersection of a healthy population traverse all sectors in achieving development, yet this was curtailed by COVID-19 (Hevia, & Neumeyer, 2020). The economic, environmental and health impacts remain severe (World Bank, 2020). Rebuilding and bouncing back to normalcy

requires multi-faceted innovative and beyond state-of-the-art techniques, including integrating technologies and digital solutions, innovation, diversified entrepreneurship business acumen, suitable and strategic multi-stakeholder engagement, contextualisation, leveraging on stakeholder's strengths, are promising mechanisms of resilience (Braimoh, 2020).

In the Kenya's financial ecosystem, the COVID-19 pandemic presented an unparalleled shock, with remarkably intricate implications for CFIs. CFIs serve as crucial financial solution for millions of Kenyans, especially those who have less access to conventional banking systems. Many factors thus make is incumbent for a customized study on the anatomy of their resilience. First, CFIs hold a unique position in Kenya's financial industry, serving approximately 14 million members and managing more KES 800 billion worth of assets (SASRA, 2023). Their resilience directly impacts financial inclusion, economic stability, and social welfare of men and women across both urban and rural populations. Understanding the challenges faced by these institution and how they navigated the disruptions instigated by pandemic provides crucial insights into strengthening Kenya's broader financial safety net (Herbes et al., 2021).

Second, the pandemic birthed a natural experiment for evaluating institutional resilience. CFIs like other institutions faced multifaceted shocks including operational disruptions, liquidity pressures, deteriorating loan portfolios, increased cost of operation, social distancing requirements and the urgent need for digital transformation—all while their members were forced into severe socio-economic hardship (Pinzaru et al, 2020, OECD, 2022). This context offered a singular opportunity to study and identify the institutional characteristics, cultures, practices, strategies, advantages and adaptations which enabled some CFIs to survive the crisis and its impacts more effectively than others. Third, the post-pandemic era has seen permanent modification of the operational environment of many financial institutions (Hevia, & Neumeyer, 2020). Changes in regulatory frameworks, new members' expectations with digital services, and shifts in many socio-economic and financial sectors have created both opportunities and threats for CFIs. Researching into post-pandemic resilience, provides actionable intelligence for policymakers, regulators, and CFI leaders to navigate the new norms (World Bank, 2020).

Fourth, cooperative financial models are theoretically formulated to give precedence to members' welfare over profit optimization. The pandemic however tested these provisions against financial sustainability imperatives. This research intended to elucidate how the cooperative model's either augmented or hampered CFIs' resilience compared to conventional financial institutions which prioritize profit optimization. Lastly, with climate change, gender inequalities, political instability,

and economic unpredictability creating an increasingly unclear future, building resilient and era-strategic CFIs has become more imperative than ever before. Lessons from the COVID-19 experience can inform vigilance for future high magnitude socio-economic disruptions, and thus strengthen not just individual institutions but the entire cooperative financial sector in Kenya as a whole (World Bank, 2020, Kumar et al., 2021).

Bella et al., (2021) adds to the urgent need to strengthen financial systems via diversified enterprises by accelerating economic growth and resilience beyond pandemics. The economy is largely dependent on strengthened financial institutions. The ability of financial institutions to offer services in a continuum will always be a stimulus during a pandemic period and beyond. Thus, it accelerates economic growth and stability, maintains social and economic welfare, ensures an even distribution of income and wealth, and plays a role in poverty alleviation. Adopting, embedding, and integrating catalytic mitigation and preparedness measures before and after the pandemic will produce resilience incrementally and avert economic shocks such as the ones experienced during the world's most devastating pandemic; the COVID-19. The global learning opportunities presented COVID-19 as a bridge for timely response mechanisms and preparation for future pandemics (Tortia & Troisi, 2021).

Dohale et al. (2022) and Ahmed et al. (2023) propose the use of technologies and Artificial Intelligence (AI) to strengthen and propagate resilience. Post-COVID-19 season is a platform for co-creating evidence-based and context-specific solutions. African businesses struggle to be part of the 4^{th} industrial revolution, introducing the workplace for today and tomorrow. Adopting improved models and frameworks for continued business in social and economic enterprises and development to enhance value-chain efficiencies and operations effectively is not just critical but a common good globally for sustainable and resilient livelihoods, including those supported by CFIs in all sectors. Focused, strategic, and deliberate actions, processes, and fit-for-purpose infrastructure will contribute to eliminating systemic gaps in future pandemics and thus enhance resilience for sustainability.

Accommodating, adopting and adapting to mutual, cutting-edge, and applicable strategies to fit the interplay of all sectors will create robust, sustainable and resilient systems to avert other unprecedented havoc of future disastrous occurrences. Furthermore, this is envisaged to be a well-thought antidote for promoting enabling environments, models of digital solutions, diversified financing and investment mechanisms and business development for service delivery that foster mutual and inclusive suitable investments from grassroots to the top (Tortia & Troisi 2021; Barbier-Gauchard et al., 2021).

A compréhensive and enhanced win-win of the Public and Private Partnership model will re-tool the financial cooperatives' architecture in the post-COVID-19 era (Dave, 2021; Mignenan, 2021). This will aid the realisation of transformed, sustainable and resilient financial ecosystems, including cooperatives financial institutions that will promote accelerated and scaled financial stability during the occurrence of other pandemics. Socio-economic performance on profitability, processes, human capital and purpose, more so during socio-economic disruptions, depends on interoperability and seamless operation across sectors (Dave, 2021; Barbier-Gauchard et al., 2021; World Bank, 2020).

Moreover, technologies, innovation, public-private partnerships and other imperatives revolving around COVID-19 are a testament to building and re-imagining resilient business models for institutions like the CFIs. This includes diversified entrepreneurial–oriented income activities and enterprises that will guarantee and promote continued businesses coupled with friendly digitisation systems, data analytics and visualisation for decision-making, and systems for monitoring, evaluation and learning that will resist the enormous and severe impacts of disruptions (Billiet et al., 2021; Quayson et al., 2020). This research therefore addresses a critical knowledge gap with significant implications for resilience of CFIS, financial inclusion, economic development, and institutional design in Kenya and similar emerging economies.

1.5 Research Objectives

This subsection establishes the objectives the study aims to achieve. It, therefore, provides the broad objective and specific objectives that guide the investigation in this study.

1.5.1 Broad Objective

The broad objective of this study was to investigate the post-COVID-19 resilience of cooperative financial institutions in Kenya.

1.5.2 Specific Objectives

The specific objectives were to:

1. Undertake a comparative analysis of cooperative financial institutions pre- and post-COVID-19 pandemic.
2. Analyse the impact of post-COVID-19 on the resilience of cooperative financial institutions in Kenya.
3. Assess critical success factors and survival mechanisms of the cooperative financial institutions post-COVID-19 in Kenya.

4. Formulate an improved resilient business model for cooperative financial institutions in Kenya during economic shocks and crises.

1.5.3 Research Questions

This study investigated the post-COVID-19 resilience of cooperative financial institutions (CFIs) in Kenya and sought to answer the following research questions:

1. What is the comparative analysis of cooperative financial institutions pre- and post-COVID-19 pandemic in Kenya?
2. What is the impact of post-COVID-19 on the resilience of cooperative financial institutions in Kenya?
3. What are the critical success factors and survival mechanisms of cooperative financial institutions post-COVID-19 in Kenya?
4. What resilient business model for cooperative financial institutions in Kenya can be used for recovery during economic shocks and crises post-COVID-19 in Kenya?

Table 1.1 Matrix of How research Questions were answered

	Research Question	Strategy
1	What is the comparative analysis of cooperative financial institutions pre- and post-COVID-19 pandemic in Kenya?	Empirical literature review and quantitative and qualitative data analysis
2	What is the impact of post-COVID-19 on the resilience of cooperative financial institutions in Kenya?	Primary data (Quantitative and qualitative data analysis) and empirical study
3	What are the critical success factors and survival mechanisms for cooperative financial institutions post-COVID-19 in Kenya?	Empirical review and interpretive phenomenal analysis of primary and secondary data
4	What resilient business model for cooperative financial institutions in Kenya can be used for recovery during	Interpretive phenomenal analysis, primary and secondary data

	economic shocks and crises post-COVID-19 in Kenya?	

1.6 Hypothesis of the Study

This subsection presents the assumptions of the study. In other words, it presents the assumptions made before the study was conducted. The assumptions form the basis on which statistical analysis was conducted to establish whether they would stand or not.

1.6.1 Null Hypothesis

The status of cooperative financial institutions, business models, and critical survival mechanisms do not influence the improved cooperative financial institutions' resilience post-COVID-19. The null hypothesis is plausible, given the data.

1.7 Significance of the Study

The cooperative movement worldwide, including Africa and Kenya, is envisaged to be the significant beneficiary of this research study. In Kenya, the study will contribute immensely to the knowledge work of critical institutions in the movement, namely, The State Department of Cooperatives, Cooperatives apex institutions like the Cooperative Alliance of Kenya, Kenya Savings Cooperatives Union, The Cooperative University of Kenya, and Cooperative Insurance Company. In their efforts to strengthen resilience post-COVID-19 and during the recovery period, the cooperative financial institutions will also significantly benefit from the study. The results would inform all the stakeholders in formulating improved policies and models for enhanced performance. Thus, the institutions will benefit from the knowledge and the model proposed in this study, which aims to improve CFIs' resilience and enhance their local and international competitiveness. This would support members' economic growth in terms of saving, shareholding, and credit facility services. The same would strengthen the Cooperative Alliance of Kenya, Kenya Savings Cooperatives Union and Cooperative Insurance Company. The Cooperative University of Kenya would benefit in the sense that they will be able to custom-make some of the training modules they offer to suit the unique needs of CFIs in Kenya.

1.8 Scope of the Study

The outbreak of the COVID-19 pandemic presented a formidable crisis and disruption that brought the world to a standstill in all cross-cutting sectors that are essential for holistic human well-being, especially the global economy. Consequently, such times present an urgent need to conduct an

intersection of evidence-based research for knowledge sharing and to inform modelling, planning and adaptation mechanisms in preparation for future pandemics. This informed the quest to undertake this study in Kenya, specifically in the Nairobi Metropolis and Nairobi City County. Nairobi City County is the single largest regional contributor to the Kenyan economy. It has the largest urban population and is home to Cooperative Financial Institutions, which were fit to provide information on the effect of COVID-19 on resilience and share their lessons and experiences. Such lessons and experiences inform the new paradigm shift in rethinking and remodelling how such institutions will operate in future pandemics. The study focused on the period just before the outbreak of the pandemic in Kenya (2019) through to the post-pandemic times (2022) and primarily focused on the status of CFIs before, during and after the pandemic. The study adopted three strategies: primary quantitative study, primary qualitative status (in-depth interviews) and secondary mixed method, where quantitative and qualitative data were reviewed for triangulation purposes.

1.9 Limitations and Delimitations of the Study

This section outlines limitations, delimitations, and challenges encountered during the study, along with the boundaries set to guide the research. One key limitation is time constraints, as the study had to be completed within a specified timeframe, impacting the data collection and analysis depth. Additionally, using research assistants through a three-tier study strategy posed challenges in maintaining uniform data quality, as assistants were responsible for various stages of data collection, potentially leading to inconsistencies. However, these limitations were managed through careful planning and rigorous training of the assistants. Delimitations, such as the geographic scope and targeted population, helped focus the study to ensure manageability.

1.9.1 Limitations of the Study

The geographical spread limits the study since it was undertaken in Kenya's capital, Nairobi, home to most cooperative financial institutions. This was a major limitation, especially in the context of resilience regarding pandemics, which was informed by widespread reach globally or at least on the continent or whole country. In addition, time was a major constraint given that the principal investigator (PI) lives and works in Abidjan, Côte d'Ivoire. Consequently, the PI worked closely with research assistants based in Kenya. The PI arranged to travel to Kenya once during the data collection period. The PI also secured and adequately utilised the respective networks and gatekeepers who supported the process. Secondly, three strategies were used: quantitative study, primary qualitative study through in-depth interviews and qualitative secondary study through desk reviews.

1.9.2 Delimitations of the Study

In Kenya, cooperative financial institutions are member-owned entities with varying interests, such as savings, credit facilities, marketing and shareholding from the government, populace, investors, entrepreneurs, and people of all classes. They are, therefore, the most accessible and broadly utilised entities for financing livelihoods and business. Thus, they are pivotal in accessing the information regarding their resilience in the aftermath of COVID-19 and the recommendations on lessons learnt. The framework of CFIs' operations in Kenya has a communal and societal approach whose values are espoused on strengthening entrepreneurship businesses, personal development, and the community. The processed model integrates the dynamics presented with the occurrence of pandemics such as COVID-19.

Specifically, Nairobi County, where the study was conducted, comprises approximately 5.3 million inhabitants, who relate to it as the economic and political hub of the country and region. Nairobi County alone contributes to about 50-60% of GDP and is home to almost all CFIs' main branches (Kenya Population and Housing Census, 2019). The city drives the business and economy of the country and, thus, is a promising repository of findings that can contribute to a body of knowledge.

1.10 Assumptions of the Study

In pursuit of this study, the following assumptions were made:

a. All participants would enrol for the study.
b. The participants would be honest in their responses as findings for reporting.
c. The study would propose an enhanced model that would strengthen the resilience of cooperative financial institutions.
d. The data collection phase would be completed within the stipulated time of three weeks.

1.11 Structure of the Thesis

As provided in the UKZN Postgraduate guide, the thesis is organised as indicated and summarised in Figure 1.1.

Chapter One: Introduces the study, presenting the background of the study, statement of the problem, rationale, objectives, research questions, hypothesis, significance and scope of the study, limitation and delimitation, as well as the structure of the thesis and summary of the chapter.

Chapter Two: Critically discusses theoretical, empirical, and methodological literature reviews from diverse sources such as journal articles, book chapters, conference proceedings, newspaper articles,

and more. The chapter uncovers the existing research gaps in the literature in the context of the resilience of cooperative financial institutions, pandemics and approaches and models for response and mitigation.

Chapter Three: Articulates and compares relevant theoretical and conceptual frameworks and research model applicable to cooperative financial institutions' resilience and their adaptions to pandemics and post-pandemic periods for low- and middle-income countries (LMICs).

Chapter Four: Describes the philosophical underpinning of the study, including research paradigm (ontological perspective), research approach (epistemological perspectives), research design, population, sampling, data collection strategies, ethics (axiological perspectives) and data analysis using both descriptive and inferential tools.

Chapter Five: Presents the findings from quantitative and qualitative data from the study with a clear articulation of analysis and presentation using descriptive and inferential data presentation tools.

Chapter Six: This chapter discusses the results of analysed data using extant literature and the theoretical underpinning of the study. The chapter also presents the proposed model for the resilience and sustainability of CFIs.

Chapter Seven: Documents the summary of findings, conclusions and recommendations based on the study objectives and the gaps that will require further studies. It further declares the originality of the study.

1.12 Chapter Summary

This chapter discussed the background of the study, which is relevant to the resilience of cooperative financial institutions in the context of the COVID-19 pandemic. The chapter also documents the statement of the problem, the rationale, objectives, hypothesis, research questions, significance of the study, scope, limitations and delimitations. The chapter concludes with the Organization of the thesis, as depicted in Figure 1.1.

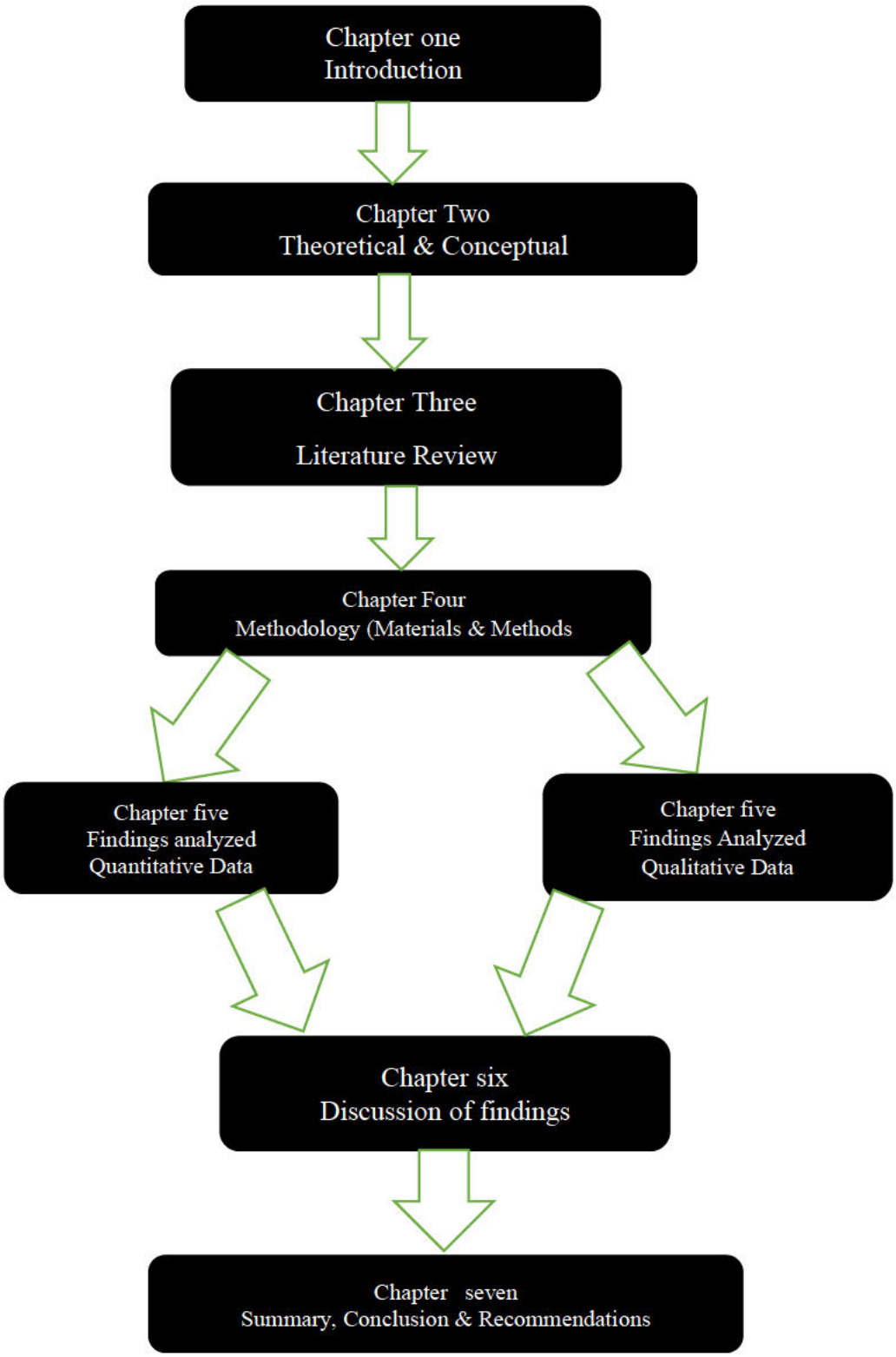


Figure 1.1: Organization of the Thesis

CHAPTER TWO

THEORETICAL AND CONCEPTUAL FRAMEWORKS

2.1 Introduction

This section discusses two main dimensions of the study: the theories on which the study is anchored and the conceptual framework drawn from the literature review conducted in the previous chapter. The section discusses two main theories, namely the institutional and dynamic capabilities theories, focusing on how organizational resilience is achieved amidst crises. Both theories provide valuable insights that help contextualize the study and inform the direction taken within academia.

2.2 Theoretical Framework

The emergence of the COVID-19 pandemic has underscored the crucial significance of organizational resilience within financial institutions, aiding in furnishing a robust comprehension of the elements that shape the resilience of financial entities amid a pandemic, with a particular emphasis on the unique scenario of COVID-19. By drawing insights from diverse theoretical viewpoints and empirical observations, the framework discerns pivotal facets that contribute to the resilience of financial organizations. The theoretical frameworks examine how these dimensions interact and investigate their implications on the outcomes experienced by these Organizations (Duchek et al., 2020). According to Chen et al. (2021), Organizational resilience is defined by the following parameters: adaptive capacity, risk management, redundancy and backup systems, diversity and collaboration, technology and innovation, and supply chain resilience.

Adaptive capacity is a philosophy that focuses on the ability to swiftly adapt to changing circumstances, for example, working remotely, accepting unpaid leaves, working half days or even forced layoffs. It holds significant importance within the domain of Organizational resilience, especially when confronting disruptions, uncertainties, and intricate obstacles such as the COVID-19 pandemic. It denotes an Organization’s aptitude to rapidly and proficiently react to shifting conditions, revise approaches, and introduce innovation to uphold its activities, cater to stakeholders, and preserve its enduring sustainability. This comprehensive discourse deeply explores the intricacies of adaptive capacity, encompassing its elements, importance, and contribution to nurturing resilience in Organizational contexts (Chen et al., 2021). Adaptive capability is characterised by flexibility and agility, learning and knowledge sharing, innovation and creativity, and effective communication. Tengblad (2018) notes that adaptive capability is essential for survival and sustainability, mitigating risks, and enhancing innovation.

Risk Management is a central factor in strengthening the resilience of Organizations, enabling them to adeptly navigate disturbances, uncertainties, and difficulties while upholding fundamental operations and adjusting to shifts. It encompasses recognising, evaluating, alleviating, and overseeing risks that might affect an Organization's activities, standing, and enduring viability. This discourse explores the importance of risk management as a pivotal element in elevating Organizational resilience to achieve success (Tengblad, 2018). Effective risk management is characterised by anticipating and preparedness, which involves proactivity in the identification of potential risks and vulnerabilities; minimization of adverse impacts to lessen the severity of disruption and maintain core business; adaptability and flexibility so that the Organization can adjust to impactful changes in their environment swiftly; vigilant allocation of resources to prioritize investing in the areas that are most vulnerable to disruption (McCarthy et al., 2017).

Redundancy and backup mechanisms are vital in a resilient system, whether applied to technology, infrastructure, or Organizational processes. Resilience pertains to a system's capacity to endure, rebound from, and adapt to disturbances, breakdowns, or unforeseen circumstances. These redundancy and backup systems substantially contribute to bolstering this capability by furnishing substitute routes and resources in instances of malfunction. In the arguments of Tengblad (2018), redundancy and backup systems form a safety net, which helps Organizations absorb shock. Duchek et al. (2020) further note three types of redundancy: component redundancy, path redundancy, functional redundancy, and geographic redundancy. Backup systems such as data backup, system image, and version control become essential for information and communication Organizations whose business security depends on data safety and security. Notably, CFIs face data security threats such as cyber-attacks, so they need an adequately reliable backup system. Generally, redundancy contributes to resilience through fault tolerance, rapid recovery, risk mitigation, continuity, disaster recovery and adaptability (Chen et al., 2021).

Component Redundancy

Component redundancy refers to complementing a system; thus, it is a practice that incorporates additional or complementary elements (components) into a system to enhance its reliability, performance, or tolerance to a fault. It ensures that, in the event of a failure of one component, other redundant components can take over the task, minimising the impact of the failure or disruption and maintaining the system's functionality. Component redundancy is crucial in systems where downtime, failures, or errors could have severe consequences, such as in finance, healthcare, telecommunications, aerospace, and transportation industries. There are different forms of

redundancy, including hardware, software, and data redundancy. Hardware Redundancy refers to duplicating physical components such as servers, hard drives, or power supplies to ensure system reliability (Nowell et al., 2017). For example, data is stored across multiple hard drives in a RAID (Redundant Array of Independent Disks) system. If one drive fails, others can continue providing data access, preventing data loss. Software redundancy involves duplicating software systems or creating backup algorithms to address software failures.

A good example is cloud-based applications, which often have redundant servers in multiple geographic regions. If one server fails or becomes unreachable, the software switches to another backup server to continue offering services. Finally, data redundancy involves storing copies in different locations to ensure a backup copy exists if data in one location is corrupted, lost, or compromised (Kamalahmadi et al., 2022). For instance, most banks use data redundancy in their core systems, ensuring customer transaction data is stored across multiple data centres. If one centre fails, data can still be accessed from another, ensuring business continuity. Telecom networks also use redundant links and pathways to ensure that communication can be rerouted in case of a failure. For instance, if a fibre optic cable is cut, the network automatically switches to a redundant route, minimising user downtime. In the aerospace industry, aircraft are designed with multiple redundant systems, such as several independent control systems for the same function. For instance, modern aircraft have multiple redundant autopilot systems; if one system fails, others take over to maintain control and safety.

Path redundancy

Path redundancy refers to having multiple routes or paths between two points in a system to ensure continuous connectivity, even if one or more paths fail. It is a critical aspect of network design, engineering, and architecture, especially in systems where reliability and fault tolerance are essential. Path redundancy ensures that data, power, or any other essential service can continue to flow if one pathway is disrupted. Path redundancy enhances system reliability by allowing systems to maintain operations even when part of the network or pathway is compromised. Additionally, with multiple paths available, systems can tolerate failures and continue functioning without significant interruption. Redundancy can also balance loads across multiple paths, improving overall performance and reducing congestion on any single route (Hauser & Zimmermann, 2017; Srinivasan, 2015).

Functional redundancy

Functional redundancy refers to including extra components, systems, or functionalities within a system that perform the same task or function. This concept ensures that if one component or function fails, another can take over its duties, thus improving the system's reliability, fault tolerance, and resilience. Functional redundancy is common in engineering, computing, biology, and other fields where system failure is not an option or should be minimised. It enhances a system's ability to continue functioning despite the failure of one or more of its parts. This is particularly important in critical systems such as aerospace, medical devices, and computing infrastructure. By having redundant components, a system can distribute workloads more efficiently, ensuring no single component is overwhelmed and increasing performance and durability. The more critical a system is (e.g., in aviation, nuclear power plants, or banking), the higher the need for functional redundancy. Redundancy ensures continuous availability of services, even under failure conditions (Hauser & Zimmermann, 2017).

Geographic Redundancy

Geographic redundancy refers to distributing critical systems, data, or infrastructure across multiple physical locations, often in different geographic regions, to enhance resilience and reliability. The primary goal of geographic redundancy is to ensure continuous service and minimising downtime in the event of localised disasters, such as natural disasters, power outages, or cyber-attacks, by having backup systems in other areas that can take over operations.

Geographic redundancy relies on having multiple, physically separated sites. These sites can serve as backup locations or operate concurrently, ensuring that if one site fails, another can seamlessly take over without interrupting service (Hauser & Zimmermann, 2017). A major benefit of geographic redundancy is disaster recovery. In the case of natural disasters like hurricanes, earthquakes, or floods, a geographically redundant system can continue operating from unaffected locations, which is crucial for industries that require high availability. Geographic redundancy often involves load balancing, where traffic or operations are distributed across multiple sites. If one site becomes overloaded or goes offline, the system can fall over to another location without affecting performance or causing downtime. In systems with geographic redundancy, data is often replicated in real-time or near-real-time between sites (Srinivasan, 2015). It ensures that the latest data is available at all locations, critical for industries such as banking, healthcare, and cloud computing, where real-time data access is crucial.

Geographic redundancy is essential for maintaining business continuity during both planned maintenance and unplanned disasters. By distributing systems across multiple locations, Organizations can ensure that operations continue smoothly, minimising downtime and potential financial losses. In industries that rely on 24/7 operations, even a few minutes of downtime can be costly. Geographic redundancy ensures systems can recover quickly from disruptions, significantly reducing downtime and allowing businesses to continue serving customers. Additionally, Geographic redundancy helps protect critical data from being lost during a disaster. By replicating data across different regions, Organizations can ensure their information is secure and recoverable, even if a primary location is compromised (Srinivasan, 2015).

Data backup, system image, off-site backups and version control

Data Backup

Data backup means creating copies of data to protect against loss, corruption, or accidental deletion. These copies are stored separately from the original data and can be used to restore information during hardware failure, cyber-attacks, or natural disasters. Data backup is critical to any disaster recovery plan and ensures that valuable information remains accessible even after an unforeseen event. Data can be backed up as a full backup, which is a complete copy of all data and provides the most comprehensive protection but requires significant storage space and time to complete; incremental backup, which only backs up data that has changed since the last backup, it is faster and uses less storage than a full backup but can be more complex to restore, or differential backup which backs up all data changed since the last full backup. It balances full and incremental backups in terms of storage and recovery time (Menard et al., 2014).

The backup can be implemented as an on-site backup, which means data is stored in physical devices like external hard drives or local servers on the same premises as the primary data. While easily accessible, on-site backups are vulnerable to localised disasters like fire or theft. Alternatively, the backup can be done off-site, meaning data is stored at a separate physical location or via cloud services. Off-site backup protects against local disasters but may take longer to retrieve, depending on the distance. A third option, cloud backup, involves off-site backup where data is stored in a remote cloud server. Cloud providers, like Google Cloud, Amazon Web Services (AWS), and Microsoft Azure, offer scalable storage solutions that are easily accessible over the Internet (Ramesh et al., 2022).

One of the primary reasons for data backup is to protect against data loss caused by accidental deletion, hardware failures, malware, or natural disasters. Without a reliable backup, businesses risk

losing critical information, leading to costly downtime and operational disruptions. Additionally, backups are essential for disaster recovery. When a system crashes, a security breach, or a natural event (like a flood or fire) occurs, businesses can use backup data to restore operations with minimal downtime. It is vital for industries that rely on constant access to data, such as healthcare or financial services. Also notable is that data backups are integral to maintaining business continuity. By ensuring that data can be restored quickly, businesses can continue serving customers, processing transactions, and functioning even during crises (Menard et al., 2014).

System image

A system image is an exact copy of the entire hard drive or a specific partition that includes the operating system, applications, system settings, and all associated files. It allows a user to restore their computer to its exact state when the image was created, providing a complete snapshot of the system. System images are beneficial for backup and recovery, allowing users to quickly restore a system in case of a failure, corruption, or significant hardware changes. A system image includes all the files and configurations necessary to run an operating system, which makes it different from regular file backups that save selected files and folders. With a system image, the entire system — including applications, settings, and the operating system — is backed up in one go. When a system image is restored, it can completely replace the contents of the existing system, making the restored system bootable and fully functional. This makes it a valuable tool for disaster recovery, allowing a user to revert to a fully working state after severe issues like system crashes or virus infections. System images require ample storage space because they contain everything on the system's hard drive. As a result, they are often saved to external hard drives, network storage, or cloud storage systems (Buyya et al., 2001).

System images are a crucial part of disaster recovery strategies. In the event of system corruption, hardware failure, or malware attacks, users can restore their systems to a previous state without manually reinstalling the operating system or individual applications. When a ransomware attack hits a business, all its computers are compromised; therefore, using system images stored on external drives, the IT team can restore each computer to its pre-attack state, mitigating data loss and downtime. Organizations, therefore, often use system images to streamline the deployment of operating systems and software configurations on multiple devices. Instead of setting up each system individually, a system image can be deployed to multiple computers with the necessary software and settings pre-installed. System images are useful when replacing hardware like hard drives or

upgrading new computers. Instead of manually configuring everything on the new hardware (Ma et al., 2000).

Version Control

Version control is a system that records file changes, allowing multiple people to collaborate on projects and track the development history of code, documents, or other digital assets. It enables users to manage and maintain multiple file versions over time, making it easier to track changes, revert to previous states, and identify who made specific modifications (Zolkifli et al., 2018). It further enhances collaboration between multiple developers who can work on different aspects of the project without overriding each other's code. Branching and merging allow for parallel development, making handling large, complex projects more manageable. Secondly, a version control system (VCS) maintains a detailed history of every change made to the project, including who made it, why it was made (if accompanied by commit messages), and how the project evolved over time (Zolkifli et al., 2018). This is valuable for auditing, tracking issues, and maintaining accountability. Thirdly, if something goes wrong, version control systems allow reverting to previous files or project versions, protecting against data loss or introducing errors in the project.

Moreover, when multiple developers are working on the same part of the project, the VCS flags any conflicting changes and provides tools to resolve them, minimising the risk of overwriting each other's work. Lastly, version control mitigates the risk of losing work due to unforeseen events (e.g., system crashes), as everything is safely stored and versioned in the system (Pilato et al., 2008).

CFIs, on their own, might not be able to implement the redundancy and backup system they might desire. It is, therefore, crucial for them to embrace diversity and collaboration. Diversity and collaboration with other strategic partners are critical foundations that greatly bolster an Organization's resilience. They introduce distinctive viewpoints, talents, and methods for addressing challenges, cultivating flexibility, creativity, and adeptness in effectively managing unexpected events. Diversity and collaboration are defined in the scope of cognitive flexibility, which implies taking advantage of diverse viewpoints from the workforce. Diversity entails cognitive flexibility, cultural sensitivity, and adaptive learning, enabling an Organization to leverage diversity. On the other hand, collaboration involves sharing knowledge, rapid response, collective decision-making, and innovation. When diversity and collaboration exist, an Organization enhances problem-solving, flexibility and adaptation, expanding the resource pool and inspiring the employees (Duchek et al., 2020).

Innovation and Technology are yet another significant critical success in Organizational resilience. Innovation and technology provide businesses with the means, tactics, and competencies to manage disruptions adeptly, flexibly respond to alterations, and successfully rebound from challenges. Innovation, for example, enables an Organization to approach disruption proactively, implement product differentiation, identify and assess potential risks, and cultivate a culture of innovation that encourages employees to think creatively and embrace change. On the other hand, technology enables an Organization's employees to work remotely through advanced communication technology to collect, process and analyse large volumes of data to enhance decision-making and operation efficiency. Some technologies, such as cloud computing and automation, enable Organizations to recover data swiftly, remote access and redundancy, and contribute to disaster recovery (McCarthy et al., 2017.

The study's theoretical framework is based on two main theories, the institutional theory and dynamic capabilities theory, as discussed in the subsequent section. Institutional Theory explicitly addresses organizations ability and approach to respond to external forces and dynamics. It thus provides a ground for understanding how CFIs navigated the tension between maintaining legitimacy and regulatory expectations while also developing unique adaptive responses. Secondly, the theory's focus on isomorphic pressures (coercive, mimetic, and normative) is particularly relevant to CFIs in Kenya, which operate within a highly institutionalized environment with regulatory oversight from SASRA, normative expectations from the cooperative movement, and mimetic tendencies during crisis. This helps explain why certain restructuring approaches (digital, staff, loan) became widespread across different institutions. This theoretical lens effectively bridges your mixed methods approach by connecting macro-level institutional pressures (quantifiable through regulatory compliance metrics) with micro-level leadership decisions (captured through the qualitative design)

While Institutional theory explains the environmental constraints and pressures CFIs faced, Dynamic Capabilities Theory specifically addresses how institutions reconfigure and align their resources and competencies to respond to a rapidly changing environment. This is particularly relevant for examining how CFIs actively adapted during the COVID-19. Secondly, the theory's emphasis on sensing, seizing, and reconfiguring capabilities directly aligns with the research's focus on restructuring activities (digital, staff, loan, and job restructuring). Additionally, the theory acknowledges path dependencies and organizational histories, helping explain why CFIs with different pre-pandemic capabilities demonstrated varying levels of resilience. Lastly, the theory's focus on organizational learning and knowledge integration complements the qualitative interviews

with leadership by providing a framework for understanding how CFIs translated crisis experiences into enhanced capabilities for future resilience.

2.2.1 Institutional Theory

The research is anchored on institutional theory (IT), a fundamentally prominent view in contemporary research that discusses the imperatives of resilience in social structure. The institutional theory focuses on cultural understandings and shared expectations while considering the processes, resources, and formula by which Organizations, through rules, norms, and routines, become statutory frameworks for social behaviour (Scott, 2004). DiMaggio and Powell (1983), renowned early bankers and contributors to the institutional theory, identified ways institutions face derivative and strong arms and regulating pressure forces (DiMaggio & Powell, 1991).

Measures put in place by the cooperative financial institutions in moments of uncertainty to ensure continued service delivery to the membership and society are imperative for business continuity. In this response strategy, the stakeholders or actors usually do not have clarity on the outcomes. The COVID-19 pandemic was such a moment. According to Peters (2000), the state of an institution can be assessed based on four dimensions: autonomy, adaptability, complexity, and coherence, through which one can judge the level of institutionalisation of any structure. It is within this understanding that any structure put in place must be able to be institutionalised in a short period so that it survives, thus impacting the members and the whole society/community or the environment. This research draws from four dimensions as follows: i) adaptability- the extent to which the members and stakeholders of the cooperative financial institutions adapt to environmental changes of their enterprises, livelihoods, etc., and how they work to reengineer the same environment to fit their aspirations and envisaged outcomes. The purpose, profit formula, key resources and processes as critical components of the cooperative business model are adapted to ensure the institution continues to function in moments of distress; ii) Complexity: The business model of the cooperative institutions is defined by values and principles that have defied time. The accompanying structures demonstrate the nature of these institutions to meet their purpose and to perform when ordinary enterprises are all collapsing. Adaptability and complexity, as derived from institutional theory proponents, explain why and how cooperative institutions withered during the COVID-19 pandemic- this also demonstrates what needs to be done post-COVID-19 pandemic to further strengthen the institutions and their business model.

The practical emphasis derived from institutional theory is wide-ranging. Therefore, assumptions and preoccupations will continue to exist, as reflected in the arguments throughout the research. The

traditions and norms of the financial cooperative institutions in Kenya, their ability or inability to change, and the regulatory policies around their establishment and operation are important. This argument can be likened to the Weberian approach (1978) workaround social phenomena, thus differentiating it from an economic base approach that adheres to market demands on goods and services as the major influence. Various studies have investigated Organizational performance and resilience through an institutional theory lens, noting that the internal factors must at least balance the external factors for an Organization to thrive. In the studies, Organizational competitive advantage is an inherent feature, behaviour, skill, expertise, culture, belief and practices which are adopted within the Organization to face different circumstances surrounding the operation of the institution (Ferguson et al., 2013; Nilsson, 2015; Chandler & Hwang, 2015). Figure 2.1 summarises the theory and its provisions.

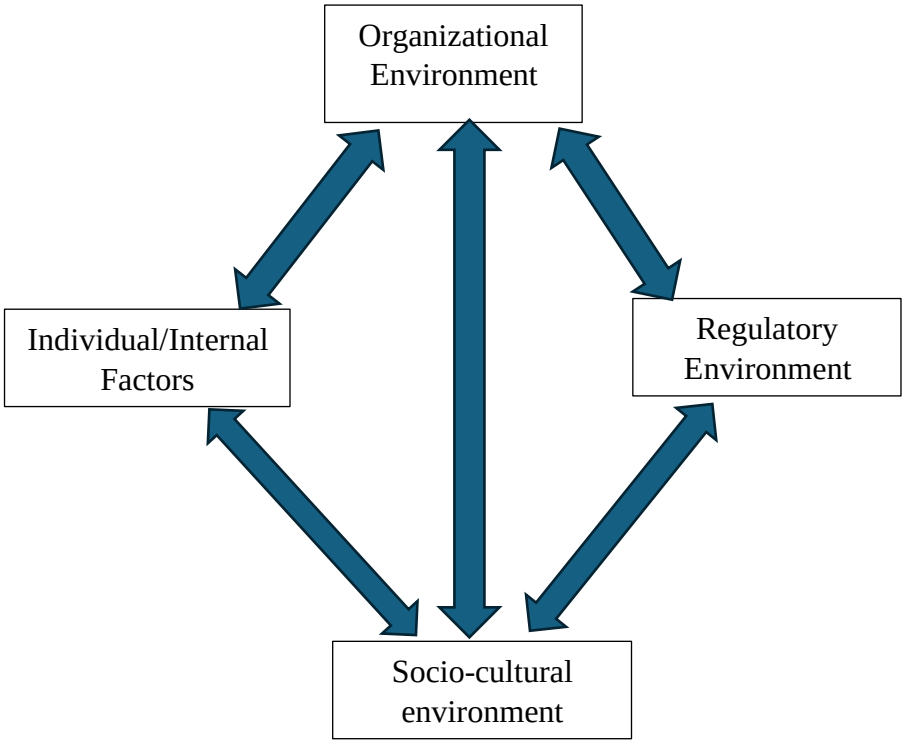


Figure 2.1: Institutional Theory

Adopted from Scott (2004), Ferguson et al. (2013), Nilsson (2015), Chandler and Hwang (2015)

2.2.2 Dynamic Capabilities Theory

The dynamic capabilities theory was proposed by Teece and Pisano in 1994 to explain the need to develop and redevelop resources and capabilities that could address emergent but threatening conditions in the Organization's environment. The theory is a derivative of the resource-based theory. In the scope of the theory, dynamic capabilities are advantages that enable an Organization to integrate, marshal, and reconfigure its resources and capacities to adapt to a drastically changing Organizational environment (Teece & Pisano, 1994). Such resources and capacities would enable the Organization to achieve sustainable competitive advantage and performance amidst threatening situations (Denrell & Powell, 2015).

According to Denrell and Powell (2015), dynamic capabilities theory presents a path-dependent process through which an Organization can adapt to a rapidly changing and threatening environment. The process would enable the Organization to build, integrate and reconfigure its resources and capabilities portfolio. The theory builds its argument on three main dimensions: sensing, seizing and transforming. Sensing is about identifying and assessing opportunities in emerging issues; seizing is about mobilising resources to exploit an opportunity and capture value. Transforming is continuously

renewing or reconfiguring an Organization's tangible and intangible assets to focus on the emerging issue that requires attention.

Scholars have increasingly developed interest in the application of dynamic capabilities in the past literature. The foundation of international ambidexterity literature has arguably elicited the interest of scholars. Consequently, ambidexterity is described as the ability of a firm to respond to a drastic change in the environmental complexity and international experience (Hsu et al., 2013). Empirical studies have established that the relationship between dynamic capabilities and Organizational performance in crisis is positive. In other words, there is a close linkage between Organizational performance and dynamic capabilities (Hung et al., 2010). Additionally, Zollo and Winter (2002) emphasised that when an Organization has no dynamic capability in the changing environment, the coping of the Organization or the firm would be marred with threats in the changing environment and therefore, the firm may not sustain its performance in crisis such as witnessed during the COVID-19 pandemic. In support, Teece (2007) emphasised that leveraging dynamic capabilities would help an Organization identify its competitive advantage at the enterprise level, which would translate to its resilience during a crisis.

This theory, therefore, forms a foundation for studying the resilience of the cooperative and the success factors (dynamic capabilities) which enable them to stay relatively vibrant amidst the cruel impacts on their counterparts in the banking sector. Within the scope of the study, the dynamic capabilities would correspond to the key elements or attributes of the CFIs that enable them to cope with the pandemic's impacts on them, their members, and their employees. In understanding Organizational adaptation and sustainability, Chowdhury and Quaddus (2017) and Jurksiene and Pundziene (2016) observed that Organizations' ability to integrate, build, and reconfigure internal and external resources to respond to rapidly changing environments is crucial to resilience. They noted that in volatile markets, Organizations that go beyond static resources but employ their dynamic capabilities in innovation can adapt and remain competitive. The theory highlights flexibility and continuous learning as critical factors for sustaining competitive advantage in dynamic markets. Figure 2.2 summarises the theory and its provisions.

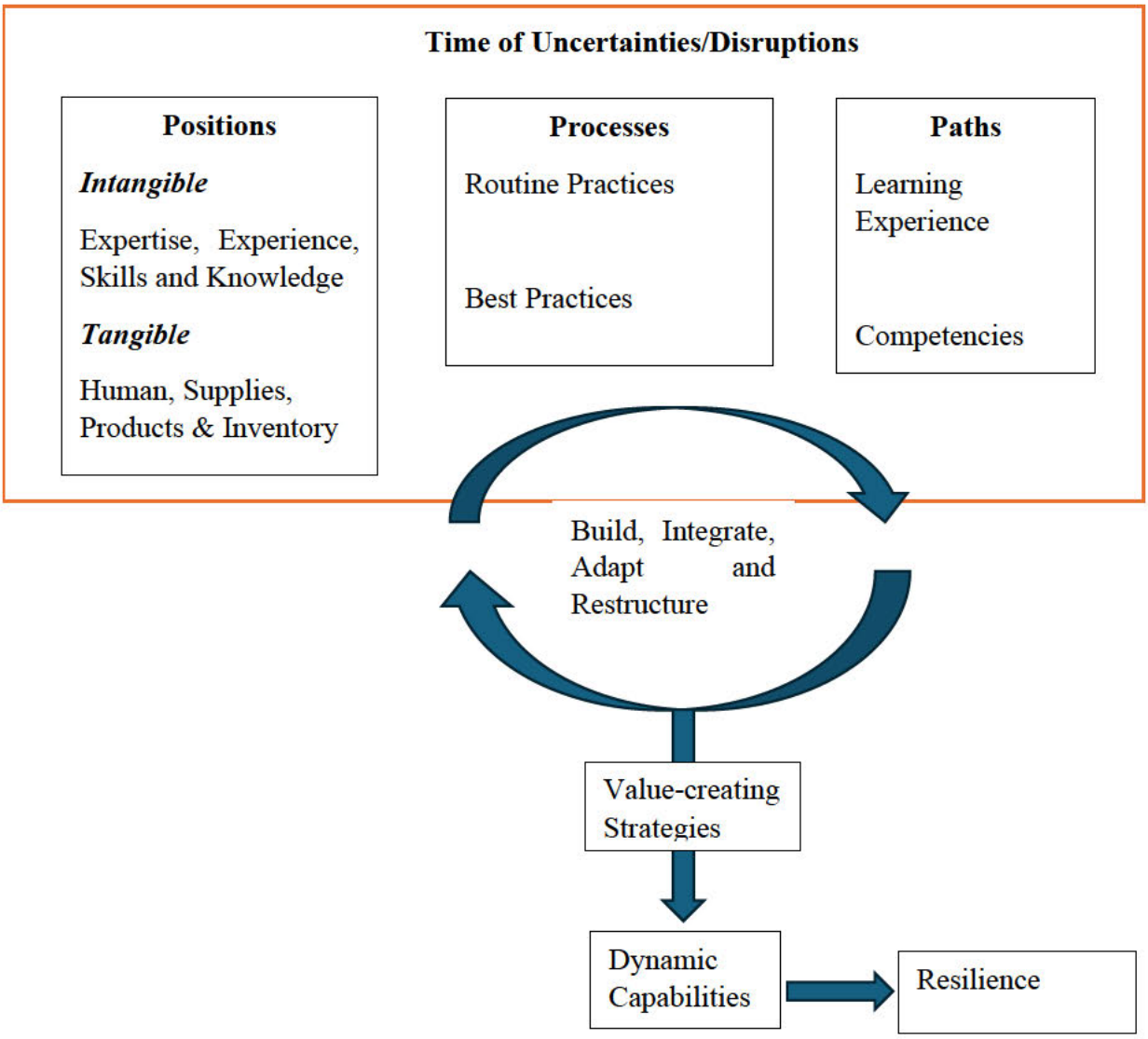


Figure 2.2: Dynamic Capabilities Theory

Adopted from Denrell and Powell (2015) and Jurksiene and Pundziene (2016).

2.3 Conceptual Framework

Resilience has gained significant recognition as a pivotal determinant for the enduring viability and accomplishments of financial establishments, particularly when confronted with unforeseeable occurrences like pandemics. COVID-19 is unprecedented in this generation. Cooperative financial institutions, renowned for emphasising member-centric methodologies and community-oriented principles, exhibit particular relevance. Therefore, the conceptual framework endeavours to scrutinise the associations among the autonomous variables: capitalisation model, Organizational restructuring, people-centeredness, and their influences on the resilience of cooperative financial institutions, where the intermediary factor represents the influence of pandemic shocks.

2.3.1 Independent Variables

Capitalization model: The concept of a capitalization model pertains to the fiscal configuration and techniques implemented by cooperative financial institutions to reinforce their fiscal soundness. This aspect covers the allocation of retained earnings, equity infusion, and external funding resources. Cooperative financial institutions that adopt a resilient capitalization model are better positioned to absorb disruptions and uphold their activities during moments of crisis.

Organizational restructuring pertains to the adaptability and agility of cooperative financial institutions in restructuring their internal operations and structures. Institutions that can swiftly and effectively reorganize in response to evolving circumstances are more likely to showcase elevated levels of resilience, encompassing the capacity to reallocate resources, redefine roles, and adjust administrative mechanisms.

People-centeredness encapsulates the degree to which CFIs prioritise their members, staff, and communities. Institutions that sustain robust associations with their members, cultivate trust and accentuate community involvement are more prone to amass backing and allegiance. This positioning empowers them to navigate adversities with a sturdier outlook.

Pandemic shocks encompass unanticipated and tumultuous incidents, such as global health crises, with the potential to deeply affect cooperative financial institutions' functional, financial, and communal facets. Such shocks can result in heightened pressure on the institution's resources, disrupt member engagement, and challenge established business models. The role of pandemic shocks as a mediating factor is to scrutinise how the associations between the autonomous variables and resilience are altered when confronted with such external shocks.

Capitalisation model and resilience: Cooperative financial institutions that adopt a well-structured capitalisation model are anticipated to possess augmented fiscal cushions and liquidity, enabling them to endure adverse scenarios. This financial robustness can contribute to overall resilience, as they can continue rendering services and supporting members even amid periods of economic duress.

Organizational restructuring and resilience: Organizational restructuring facilitates the adaptability of institutions to fluctuating circumstances. Institutions that can efficiently reassign resources, streamline operations, and respond to disruptions are inclined to exhibit greater resilience. Through restructuring, institutions can uphold vital functions and adjust to fresh challenges, heightening their comprehensive resilience (Chowdhury & Quaddus, 2017; Jurksiene & Pundziene, 2016). These are summarised as the second independent variable in the conceptual framework.

People-centeredness and resilience: A strong focus on people-centeredness reinforces the connection between cooperative financial institutions and their members and staff. This robust association can elevate member trust and loyalty, extending the institution's support network during trying periods. The engagement with the community additionally contributes to the institution's ability to endure shocks.

Pandemic shocks can mediate the connections between autonomous variables and resilience. The response of a cooperative financial institution to a pandemic shock might necessitate modifications in its capitalisation model, Organizational restructuring, and people-centred strategies. Institutions that promptly adjust these dimensions to the novel pandemic context are more likely to uphold or even boost their resilience in the face of adversity.

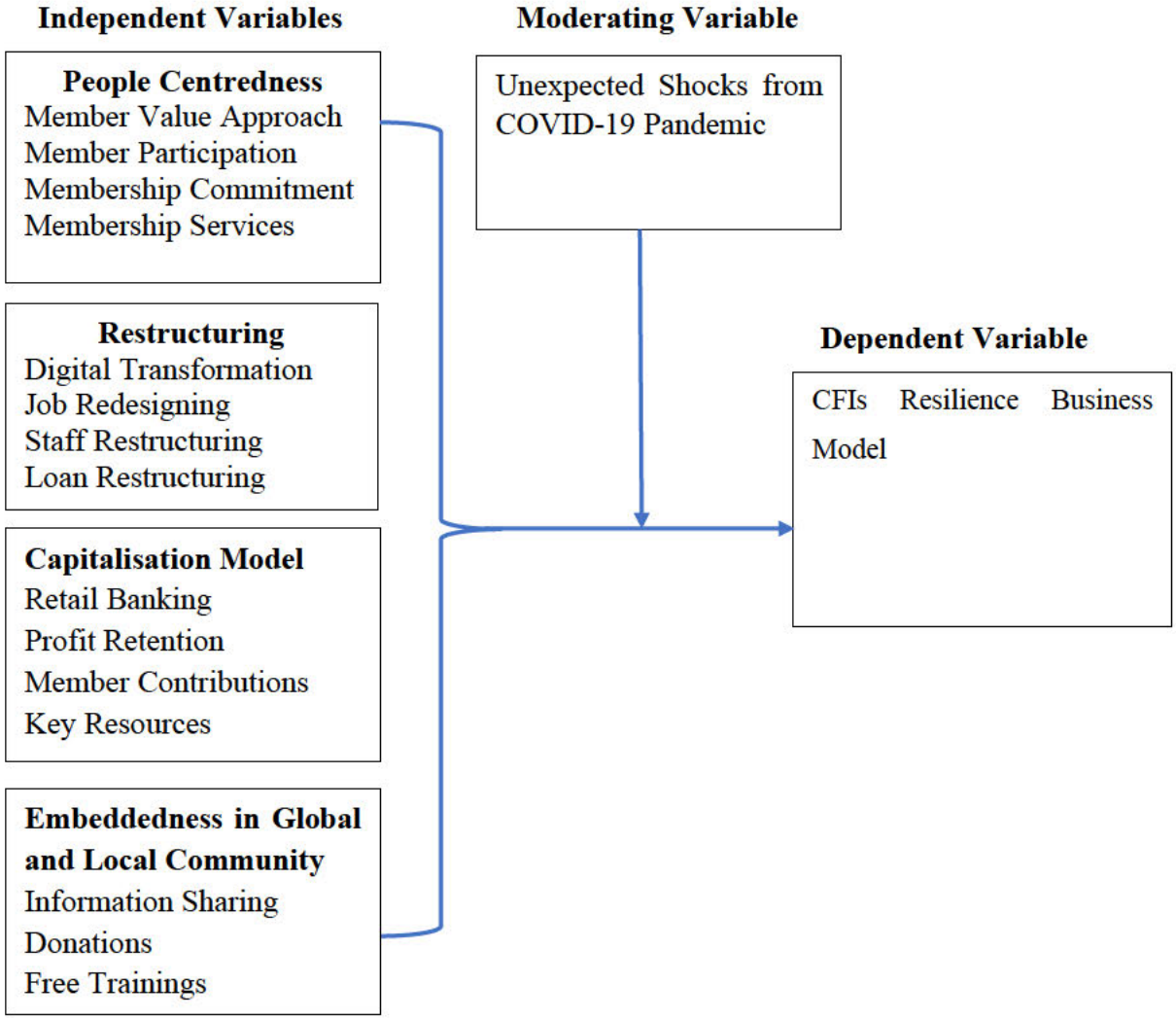


Figure 2.3 Conceptual Framework

Adopted from Chowdhury and Quaddus (2017) and Jurksiene and Pundziene (2016).

The conceptual framework establishes a comprehensive interplay between the capitalisation model, Organizational restructuring, people-centeredness, and resilience in cooperative financial institutions, with the mediating influence of pandemic shocks. Through exploring these connections, this framework delivers valuable insights to CFIs striving to enhance their capacity to navigate unforeseen challenges and continue effectively serving their members and communities. The study relied on the conceptual framework in Figure 2.3 to guide the study in terms of the structure, design and Organization. Therefore, The conceptual framework presents the study variables and how they are projected to relate to the study objective.

Table 2.1 Relationship of research questions, conceptual framework and theoretical framework

Research question	**Conceptual framework variable addressed**	**Theoretical framework variable addressed**
What was the status of the cooperative financial institutions before COVID-19, during COVID-19, and post-COVID-19?	People-Centeredness Restructuring Capitalisation Model Embeddedness in Global and Local Community	Restructuring of Organizational Environment Individual/Internal Factors
How has the business model of the cooperative financial institution been impacted post-COVID-19?	Capitalisation Model People-Centeredness	Complexity
What are the critical success factors and survival mechanisms for the cooperative financial institutions post-COVID-19 in Kenya?	Restructuring	Adaptability Sensing, Seizing and Transforming

2.4 Chapter Summary

This chapter discussed the theoretical, empirical, and methodological literature reviews from diverse sources such as journal articles, book chapters, conference proceedings, newspaper articles, and more. The chapter uncovered the existing research gaps in the literature in the context of the resilience of cooperative financial institutions, pandemics and approaches and models for response and mitigation.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

This chapter examines the existing literature surrounding CFIs, focusing on the cooperative business model before, during and after the COVID-19 pandemic. The chapter evaluates how the pandemic reshaped the business and financial landscape, highlighting the resilience and adaptability of CFIs in response to the unprecedented challenges instigated by the pandemic. Through empirical and theoretical perspectives, this review aims to provide a comprehensive understanding of the impact that the COVID-19 era had on these institutions and how they managed to navigate the crisis. The chapter also draws on global and regional examples to contextualise the Kenyan experience. By examining both theoretical frameworks and empirical studies, the chapter explored the multifaceted nature of the cooperative business model in Kenya, its structural vulnerabilities, and how CFIs responded to external shocks like the pandemic. This understanding is critical to assessing their resilience, sustainability, and overall impact on Kenya's financial ecosystem.

Structurally, this section explores the origins and historical development of the cooperative model globally and, more specifically, in Kenya. It traces the ideological and structural foundations that set CFIs apart from other financial institutions. Secondly, the section delves into the subject of principles and governance, discussing the core principles, governance structures, and operational frameworks that define cooperatives, with a particular focus on how they promote member welfare, equity, and collective decision-making. Thirdly, the section analyses how cooperative financial institutions operate in providing savings, credit, and investment services, emphasising their unique business model. Additionally, the chapter discusses the CFIs' business model pre-, during and post-COVID-19 pandemic. Furthermore, the chapter reviews the pre-pandemic performance of CFIs, focusing on growth trends, financial stability, and the sector's contribution to Kenya's economy, while at the same time discussing the impact of the COVID-19 pandemic on CFIs, highlighting liquidity crises, membership changes, service disruptions, and other immediate effects. Lastly, this section examines the strategies implemented post-pandemic to ensure sustainability. It discusses the evolution of business practices, digital transformations, and structural changes that occurred as part of post-COVID-19 recovery and as part of the evolution necessitated by the changing demands and priorities of members of CFIs, business operation landscapes, policies and digital transformation, which has drastically infiltrated all business landscapes globally.

3.2 Empirical Review

The empirical review provides an in-depth examination of existing studies and real-world data regarding cooperative financial institutions (CFIs), particularly their resilience before, during, and after the COVID-19 pandemic. This section, therefore, focuses on analysing empirical evidence from various regions, with a particular emphasis on Kenya, to understand how CFIs have adapted to challenges, including liquidity issues, membership fluctuations, and operational disruptions. By reviewing case studies, statistical reports, and previous research findings, this section aims to assess the effectiveness of the cooperative business model in fostering financial stability and its role in supporting economic recovery post-pandemic. The empirical evidence highlights patterns, trends, and gaps, laying the foundation for understanding the overall resilience of CFIs.

3.2.1 Cooperative Business Model

The cooperative business model is a hybrid kind of social entrepreneurship that combines social and commercial aims based on the requirements specified within the cooperative's most viable product (MVP). A community-based company, such as a cooperative, is founded on the abilities already present within its membership (Billiet et al., 2021). Cooperative success depends on its members' and stakeholders' engagement to accomplish various objectives, which may be of an economic or social character, nature and result. The economic model of the cooperative is very adaptable, allowing it to meet and react to changing conditions in the marketplace (Felipe & Benavides, 2021).

The communal approach that centres on the promotion of members is one of the defining characteristics of the cooperative business model. Members of a cooperative see this as a source of wealth for themselves (Miribung, 2020). According to Yu and Jerker (2019), one of the characteristics that encourage the resilience of cooperative financial institutions in their marketplaces is the presence of social capital in the cooperatives themselves. Roman and Ihor (2018) also suggest that the horizontal and vertical integration encouraged through cooperatives enables members to overcome the constraints of limited resources, thereby strengthening the resilience of cooperative members and Organizations.

Today, the "cooperative" business model may exist in various industries, both for those focused on production and those more service-oriented. The popularity of the cooperative business model may be attributed to its adaptability in the face of new obstacles. As a result, it has gained recognition as a distinct Organizational structure and an alternative economic model. In contrast to companies whose primary focus is on the market, the cooperative model emphasizes the importance of community involvement and the advancement of its members (Wanyama, 2009).

Considering the drastically changing business environment with characteristic competition in the CFIs' sector, prioritization of the cooperatives business model is not sufficient for sustainable and resilient operation even in the absence of far reaching disruptions. The their arguments, Birchall, and Ketilson, (2009) observed that the evolutions which have evidently emerged over time in the business environment of CFIs calls for them to equally focus on strategic competition and profit optimization. The sector in Kenya for examples currently faces competition from within the sector itself with over 350 SACCOs emerging and from mainstream financial institutions such as banks (SASRA, 2023). Among the issues of concerns to members include stability, interest rates on shares and deposits and responsiveness to members' demands in a timely manner. With the increasingly changing members' interests and the competitions in the sector, CFIs must look beyond the famous cooperatives model and strategize on resilience amidst unpredictable futures and sustainable competition in a market that has registered tremendous growth (Schaltegger et al., 2016). It is however not a clearly cut out phenomenon that in times of normal business operation or in times of crisis, the CFIS, have a formula. The formulation of resilience strategies thus form the primary burden of this study.

3.2.1.1 Origin and Diffusion of Cooperative Financial Institutions

The earliest history of cooperatives can be traced back to the early 19th century in Germany. The first recognized cooperatives were formed in Germany by Herman Shulze-Delitzsch in 1850 (urban credit cooperative) and Friedrich Wilhelm Raiffeisen in 1864 (rural credit cooperative) (McKillop et al., 2020). The main motivating factors were the need for economic self-sufficiency and religious beliefs, respectively. However, Isbister (1994) notes that the principal purpose of the early credit cooperatives was to source funds externally for communities which needed credit facilities (McKillop et al., 2020). Many people appreciated the model, and it quickly spread in Europe, with Switzerland, Italy, Netherlands, Belgium and Austria being the first neighboring countries to embrace the idea and try it out (Colvin & McLaughlin, 2014).

In the early 20th century, the idea of financial cooperatives spread to North America, where Alphonse Desjardins established the first CFI in Quebec (Canada) in 1900 (Mook et al., 2015). Desjardin's entrepreneurship spread drastically, and he was the first person to establish CFIs in Manchester and New Hampshire (US) in 1908, having dominated Canada (Walter, 2006). Credit cooperatives gained popularity in the US, and soon afterwards, the Massachusetts Credit Union Enabling Act in 1909 was enacted. The Credit Union National Extension Bureau was established to lobby for credit union legislation at the State and Federal levels. In 1934, the Federal Credit Union Act was passed to streamline the structure and operation of credit cooperatives (Kaushik & Lopez, 1994).

The idea of cooperatives penetrated to Africa in the 1950s. The initial SACCO society was introduced by Father John McNulty in Ghana in 1959. According to Mushonga et al. (2019), Father McNulty intended to help villagers enhance their economic circumstances and livelihoods. Notably, the British colonies were the pioneers in embracing the concept of CFIs in Africa. Ghana, Nigeria, Tanzania, Uganda, and Kenya were among the earliest countries to adopt SACCOs. Mushonga and colleagues (Mushonga et al., 2011) notes that most non-English-speaking African countries appreciated the idea of credit cooperatives in the 1960s, and soon, the majority of them rapidly embraced and adopted the cooperative socio-economic model, sparking a significant surge of adoption in the 1970s. The expansion of the CFIs across Africa was remarkable and revolutionary, leading to the creation of a continental association of SACCOs known as the Africa Confederation of Cooperative Society Savings and Credit Association (ACCOSSCA) in 1965. ACCOSSCA was established to promote SACCO principles, provide SACCO insurance, and educate members about SACCO-related matters. Currently, Africa has a combined total SACCO membership of above 40 million and assets worth about US$ 16 billion (The Cooperator, 2022).

In Kenya, the emergence of CFIs can be traced back to the colonial era, during which they were popularly recognized as cooperative movements. The evolution of the cooperative movements into CFIs went through several phases. The first phase is tightly associated with the colonial era and early development dating to the early 1900s through the 1960s. The pre-independence era in Kenya gave birth to several cooperative societies, which focused on addressing the economic challenges faced by smallholder farmers and marginalized populations. The formation of societies was necessitated by the need to pool resources and provide a medium through which the farmers could collectively bargain for fair prices for their produce, for example, the Elburgon Farmers' Cooperative Society formed in 1908. Additionally, the societies shared information amongst themselves to help address their challenges (Bwana, 2013).

The independence and post-colonial era of the 1960s and 1970s saw the increasing importance of cooperative societies in fostering economic growth and development among smallholder farmers and marginalized groups. Consequently, the post-independent government of Kenya initiated the enactment of the Cooperative Societies Act of 1966 to provide a legal framework for forming and regularizing cooperative societies (Co-operative Societies Act, 1997). Additional cooperatives were formed, some of which introduced housing and savings and credit cooperative societies (Wanyama, 2009). The transition from the 1970s to the 1990s saw further diversification and growth of cooperatives, which saw the emergence and strengthening of savings and credit societies, thus giving

rise to savings and credit cooperatives (SACCOs) (Bwana, 2013). SACCOs increasingly became imperative in financial services, particularly in rural areas where banking services were inaccessible. Kenya's financial sector liberalization in the early 2000s paved the way for the continued rise and expansion of SACCOs in the provision of financial services. This included the introduction of the digital platform through the telecommunication companies in the country. The government continuously recognized cooperative financial institutions as an avenue of financial inclusion and economic growth and development. The accelerated expansion and growth of the CFIs can significantly be attributed to the emergence and adoption of digital technologies such as mobile money, which enhanced accessibility and provision of financial services by the CFIs because they became more affordable and accessible to more customers (International Cooperative Alliance Africa, 2021). The rural members of these entities, where brick-and-mortar bank halls were nonexistent, could now receive their money on mobile phones that were fast being adopted.

With the increasing significance of CFIs, the government of Kenya initiated an improved regulatory framework and supervision through the establishment of the SACCO Societies Regulatory Authority (SASRA) in 2008. SASRA was commissioned to oversee and regulate SACCOs to ensure that they sustainably remained stable and sound, complied with the prudential standards and fiduciary imperatives, and promoted transparency in their governance, operations and businesses (International Cooperative Alliance Africa, 2021). CFIs remain a paramount and integral player in Kenya's financial industry, providing diverse and friendly financial services to their members and customers, who would otherwise not have secured the same services from conventional financial institutions such as commercial banks. Besides financial services, CFIs offer a diverse scope of other products, such as investment opportunities, insurance and financial inclusion for economic growth and development.

3.2.1.2 Cooperative Financial Institutions Diffusion in Kenya

The spread and integration of the CFIs into the mainstream financial ecosystem in Kenya have been particularly catalyzed by their increased relevance and significance in the Kenyan economy, their history, the favorable regulatory landscape, socioeconomic conditions, increasing innovation and technology, and the supportive participation of the key stakeholders. The diffusion is, therefore, characterized by the historical context of the adoption of CFIs, the regulatory landscape, financial inclusion, technological advancement, collaboration of stakeholders, trust and cumulative ownership, service diversity and future prospects.

3.2.1.3 Historical Context of Early Adoption

The establishment of CFIs is fundamentally rooted in the colonial and independent socio-economic atmospheres which prevailed in Kenya. These conditions instigated the emergence of CFIs in the form of cooperative societies, which were believed to address the socio-economic challenges faced by smallholder farmers and other disadvantaged groups. Therefore, the history of the adoption revolved around Kenya's colonial economy, which was predominantly agriculture (Bwana, 2013). Kenya's economy was mainly defined by cash crops such as tea and coffee grown by the white settlers. However, the natives were marginalized into subsistence farming and restricted to small pieces of land. In addition, the creation of an economic hierarchy by the colonialists segregated many Kenyans so much that they had limited access to educational information on farming, markets and economic opportunities. The emergence of cooperative societies was catalyzed by the social injustice and economic inequality which dominated. The marginalized farmers formed small groups through which they could advocate and bargain for inclusion and fairness. For example, the Elburgon Farmers' Cooperative Society focused on inclusivity in agricultural production and marketing. The cooperative society helped its members combine resources to access a better market and bargain for fair prices for their produce (Nair & Kloeppinger-Todd, 2007).

When the immediate independent government of Kenya recognized the potential of cooperatives to address economic marginalization and advocate for socio-development among smallholder farmers and small traders, it encouraged the formation of more cooperative societies to accelerate the realization of economic independence and fight poverty (Zeleza, 1990). Therefore, the government created a favorable atmosphere and an environment with a full-fledged state department that would propel more cooperative societies to thrive, enable members to achieve economic self-sufficiency, and reduce poverty. Subsequently, grassroots movements were formed to help the members advocate for economic justice, land reforms and better living conditions for marginalized populations (Wanyama, 2009).

With the increasing momentum of the cooperatives and the SACCOs, the government and some of their development agencies began integrating CFIs into their development plans and programs from the 1980s onwards: the integration particularly prioritized food security, income and improvement of living standards among rural populations. Historically, the Kenyan government has been working towards addressing the three challenges identified at independence: poverty, illiteracy, and disease. The government and development agencies' appreciation of CFIs stimulated the evolution of the CFIs beyond agriculture. They launched other service domains, such as savings and credit facilities and

could thus address the members' increasing and evolving financial needs. As a result, financial inclusivity deepened among the rural and urban populations (Bwana, 2013).

3.2.1.4 Regulatory Landscape

Government regulations of cooperative societies played a critical role in the evolution of cooperatives into modern-day CFIs in Kenya. For instance, The Cooperative Societies Act of 1996 provided a legal landscape for cooperatives' formation, governance and operations in Kenya. The legal and regulatory landscape provided a firm foundation for forming, growing and expanding cooperative societies beyond traditional agriculture-based cooperatives to other services, including investments and financial services (Kimani, 2021; Nair & Kloeppinger-Todd, 2007). The enactment of the Cooperative Societies Act (1966) was a signal of recognition and support of the cooperative societies by the state and government of the day. Stakeholders gained trust because they felt safe due to the formalization of the cooperatives. The act provided well-spelt legal guidelines on establishing and managing cooperatives and the operation of cooperative societies. The legal frameworks supported the expansion and diversification of the cooperatives into other sectors' lines of services, thus attracting more membership (Buluma et al., 2017). SACCOs, for example, are the first outcomes of the legalization and legislation of cooperative societies. With the emergence of CFIs' aggressive expansion of products and services, the government further introduced prudential standards and regulatory oversights through the establishment of the SACCO Societies Regulatory Authority (SASRA) in 2008. SASRA was mandated to supervise and regulate CFIs to ensure they comply with regulatory and fiduciary provisions. Such regulatory provisions particularly emphasized good governance practices by including provisions for creating a board of directors, management committees and internal control infrastructure. The CFIs' management, operations and services were professionalized and accounted for better (Mushila, 2012).

Additionally, the regulatory framework introduced legislative capitalization prerequisites aimed at enhancing the stability and strength of the financial profile of the CFIs. Kimani (2021) noted that such a requirement encouraged the CFIs to maintain sound capital reserves to enable them to absorb shock in bad times and maintain a healthy financial status. Wanyama (2009) adds further that sustainable capital status is critical for the sustainability of the financial institution. Buluma et al. (2017) also note that the regulatory frameworks compelled CFIs to inculcate a transparent and accurate financial reporting culture. The CFIs were obligated to submit their books of account to SASRA regularly. The practice enhanced the quality and accessibility of financial information to members, regulators, and other stakeholders. Moreover, the regulatory framework under the eyes of SASRA had specific provisions which protected the interests of the members and those who made

deposits. More specifically, the legislation defined the establishment of reserves, how members' funds can be used, and how risk would be managed within the CFIs. Lastly, with SASRA, the CFIs have been encouraged and allowed to adopt emerging technologies and financial products, which would allow them to deliver services and reach out to populations in remote and marginalized places.

3.2.1.5 Financial Inclusion

The enactments of the Cooperative Societies Act (1996) and the establishment of SASRA were particularly done because Cooperative Financial Institutions had proved critical in reinforcing the proximity and accessibility of financial services. As noted by Nair and Kloeppinger-Todd (2007), the proximity of the CFIs to the people and, thus, their accessibility choreographed them as a distinct Organization which could meet the financial needs and expectations of their members. According to Maleto (2016), the geographical presence of CFIs (cooperative societies) in urban and rural areas popularised them as the best financial service providers because they got closer to the people. People appreciated the convenience of financial products, which would otherwise be costly to access when no conventional banking services were available. Besides geographical presence, CFIs interacted with people and leveraged their proximity to them, thus sensitizing membership to saving. They helped many of their members to embrace a saving culture. Low-income earners appreciated the ease and flexibility of saving with CFIs. Initially, the CFIs provided credit facilities for agriculture and other income-generating activities. Still, with time and increasing demands for financial services, they allowed members to take credit for healthcare, investment, education and emergencies. Additionally, some CFIs introduced other services like insurance. The diversification into these other domains created a more comprehensive suite of services with which most of the members of the CFIs identified and needed (Maleto, 2016).

Advancements in technology are considered to fuel CFIs' evolution further. Wanyama (2009) noted that the emergence and adoption of digital banking services, such as mobile money and online banking by CFIs, further made them relevant and competitive. The Safaricom PLC, Kenyan Corporate Mobile money (M-Pesa) and online banking, for example, allowed members to remotely access and manage their accounts with CFIs, make transactions and apply and access credit facilities through their cell phones. Maleto (2016) emphasised that digital technology enhanced and extended the convenience of CFIs' financial inclusion strategy among rural and hard-to-reach populations. According to Nyoro (2019), the penetration of the CFIs into rural and hard-to-reach places has lifted many rural economies because individual members are encouraged to invest in agribusiness and other income-generating activities, thus significantly contributing to grassroots economic growth and

development. The impact of the CFIs among low-income earners has worn down the governments' goodwill and continuous support by creating a more favorable environment for the CFIs.

3.2.1.6 Socio-Economic Impact

The socio-economic impact of the CFIs has significantly contributed to their diffusion in Kenya. In the arguments of Wanyama (2009), CFIs have played a critical role in driving socio-economic growth and development in many parts of the country and consolidating social cohesion amongst these communities and institutions. Subsequently, they have had a monumental influence on the economy of many urban and rural populations. For example, Ismaila and Gamede (2021) note that through CFIs' economic empowerment products, such as financial investments, education and training and affordable credit and savings, many low-income earners and marginalized communities have recorded a tremendous reduction in poverty. The extension of affordable financial services to hard-to-reach populations or populations not qualifying for financial services from mainstream financial institutions such as commercial banks made the CFIs more popular among low-income populations than commercial banks. This last-mile financing has been consequential for rural populations.

Ismaila and Gamede (2021) note that the CFIs have mainly earned their popularity among women and the youth because they make accessibility of financial services (credit and saving) more convenient and efficient. Therefore, the CFIs have contributed to bridging the gap between gender disparities and youth unemployment in Kenya and encouraging more women and youths to participate in income-generating activities such as Small and Medium Enterprises (SMEs). Additionally, the financial services of CFIs have saved many low-income earners from Shylocks, who exploit borrowers by charging extremely high interest rates with a couple of exploitative conditions in cases where borrowers default to repay as agreed. Through affordable credit facilities, members and borrowers find reprieve and a safety net, which, as reported, saved many from a cycle of debts. By stimulating investment in SMEs by youths and women, the CFIs have continued to diffuse further at the grassroots level. Ismaila and Gamede (2021) further argue that CFIs have stimulated localised development among local communities by fostering a sense of ownership and responsibility among their members. CFIs achieve this by encouraging the formation of small groups through which financial resources are mobilized and channeled into a common pool to finance local development projects such as education initiatives, healthcare facilities, infrastructure improvement and community-based programmes.

The agricultural sector, which is dominant in rural areas, has particularly reaped multiple benefits from CFIs. Smallholder farmers in cooperative societies receive financial support and other support,

including a platform for input access, product aggregation, extension service education and training from CFIs. The education and training services go a long way in building farmers' capacity for the production of the related value chain, financial management, savings, and effective resource management (Nzengya, 2013). Additionally, the CFIs play a pivotal role in providing credit services, which the farmers use to purchase farm inputs and modernize their agricultural practices, which translates to improved productivity and profitability. In some cases, cooperatives have been helping farmers create more robust social networks and cooperation among members, thus helping them market their produce (Waiganjo et al., 2016).

3.2.1.7 Trust and Local Ownership

The popularity and widespread acceptance of CFIs have been mainly accelerated by the local membership and the trust members have historically had in the CFIs. Under the formation of local members, in addition to democratic member control, members' economic participation, autonomy and independence, and cooperation among members, CFIs have won the members' trust. Buluma et al. (2017) assert that trust is a fundamental success factor. However, the CFIs earn the members' trust through transparency, consistent delivery of services and accountability. Additionally, being a reliable source of financial services, members have become more loyal to CFIs than other financial institutions. Nair and Kloeppinger-Todd (2007) add that clear communication of the terms and conditions of services, protection of the interests and rights of the members, and fair treatment have additionally inculcated trust among members of some CFIs. The democratic and equal rights of every member allow them to participate in decision-making and thus contribute to the CFIs' management, growth, performance and success (Wanyama, 2009).

In the argument of Tshishonga and Okem (2016), local membership of the CFIs fosters a community-based method of operations; therefore, community members are actively engaged in the activities of the cooperatives. Direct interaction between the management and staff of the cooperatives and the members reinforces a sense of belonging and, thus, mutual respect, cultivating support. Consequently, cooperatives are viewed as locally relevant because they can customize their services and interventions per the local interests, challenges, and gaps. When CFIs customize their product services to fit the local context, they advance resonance between the members' expectations and interventions. Local membership and the corresponding privileges convince the members that the cooperatives care for their interests, aspirations and needs. By demonstrating interest and concern about community development programmes, the cooperatives anchor their commitment to the overall socio-economic well-being of their members. In other words, the members of the cooperatives become the center of interest and business of the cooperatives. Member-centeredness subsequently

imparts trust in the members, which explains the popularity and consistent growth and expansion of the many cooperatives in Kenya. Ismaila and Gamede (2022) also note that local membership and trust strengthen social networks at the community level and create an avenue of solidarity and platforms of shared goals and the diffusion of the CFIs. With the embeddedness of the CFIs in the local communities, they accept and embrace the local cultural values, traditions and norms and, therefore, harmonize with the communities' saving and credit habits. In the long run, the cooperatives achieve maximum penetration among the off-grid communities.

In summary, the diffusion of the CFIs into the financial ecosystem has taken a long process of evolution from the cooperative societies, which were limited to pooling resources and providing a medium through which farmers could collectively bargain for fair prices for their produce and share information amongst themselves, to savings and credit cooperative societies (SACCOs) which expanded services to include savings, and credit facilities (personal loans, business loans, home improvement loans, education loans, emergency loans), dividends, and financial literacy education to individual members and SMEs, and finally to CFIs whose services include services of SACCOs in addition to microfinance services, banking services (cooperative banks), insurance, real estate and housing and wealth management. It is, therefore, observed that CFIs introduced new lines of business in addition to the domains dominated by SACCOs, widening their scope in the Kenyan finance ecosystem.

3.2.1.8 Network Arrangements around CFIs

Cooperatives generally develop cardinal institutions and networks of associations. The associations centralise common services such as basic support, group representation and strategic advice. In some instances, the associations integrate executive functions, such as risk management, supervision of local financial institutions, mutual support management, and liquidity and risk management (Ayadi et al., 2010; Karafolas, 2016). France, the Netherlands and Finland exhibit prominently consolidated and centralized systems within their cooperative banking networks. Austrian and German cooperative banks, on the other hand, opted for a more limited allocation of functions to central entities, while their Italian and Spanish counterparts predominantly operate in a decentralized manner (Bülbül et al., 2013; Hackethal, 2004).

Cross-country evidence presented by Desrochers and Fischer (2005) implies that cooperative banking systems characterized by high integration reduce both performance volatility and the inclination towards expense preference behavior within financial cooperatives. The authors deduce that such integrated systems are characterized by heightened efficiency and the optimization of bounded

rationality. According to Ayadi (2010), most credit unions adopt an atomized business model. This model is defined by the loose integration of member credit unions characterized by limited representation, public relations and lobbying. In some regions, for example, the United States of America (USA), credit unions form Credit Union Service Organizations (CUSOs) (limited liability companies) to expedite shared services. The CUSOs differ in terms of the number of credit unions involved in the cooperation. Wilcox (2005) notes that credit unions prefer to be members of CUSOs because they enjoy economies of scale and can, therefore, engage in very costly and riskier activities if they were to handle such as individual cooperatives.

CFIs in Kenya are managed and governed through collaborative structures and partnerships with major stakeholders sharing resources to augment their efficiency and effectiveness and expand the scope of their products and services (Gunga, 2013). Collaboration and partnership have become crucial success factors, enabling the CFIs to reinforce capacity building, collaboration, market information knowledge sharing, and cooperation among the CFIs. The major stakeholders and partners with which CFIs network include the Kenya Union of Savings and Credit Co-operatives (KUSCCO), SACCO Societies Regulatory Authority (SASRA), Regional and County-level Associations, inter-SACCO networking, Credit Reference Bureaus, and international affiliates.

3.2.1.9 Partnership and Collaboration between the KUSCCO and CFIs

The formation of the Kenya Union of Savings and Credit Co-operatives (KUSCCO) in 1973 was necessitated by the need to promote the growth and development of savings and credit co-operatives in Kenya. To achieve this, the primary focus of KUSCCO then was providing services such as cooperative education, accounting, stationery supply and risk management. To date, KUSCCO has been pivotal in supporting sustainable growth and collective advancement of the cooperatives in the financial sector. The main roles of KUSCCO in the support of CFIs (cooperatives) include advocacy, knowledge sharing, capacity building, and fostering collaboration amongst cooperatives.

KUSCCO represents cooperatives at various levels of regulatory agencies, government, and other stakeholders. It voices the unified opinions of the SACCOs and influences policies affecting SACCOs, regulatory legislations and decisions which affect their growth and development. International Cooperative Alliance -Africa (2022) adds that the role of KUSCCO in influencing policy involves lobbying through policy dialogues aimed at creating a favorable environment, favoring cooperatives' progress. Consequently, KUSCCO collaborates with lawmakers, policymakers and government agencies to ensure cooperative-friendly policies and encourage their growth. Additionally, KUSCCO supports and guides cooperatives in complying with legislative

regulations and policy requirements in the formations, governance, management, and operations set by SASRA. With the intervention of KUSCCO, cooperatives can easily navigate complex regulatory measures and adhere to the cooperative principles that underpin their fundamentals. KUSCCO particularly encourage SACCOs to uphold cooperative values such as voluntary and open membership, members-centeredness, democratic member control, members' rights of participation, equity, and concern for the community (corporate social responsibility).

Besides the advocacy, representation, and guidance, KUSCCO plays a vital role in capacity building and training to equip the leaders, managers and staff of SACCOs with relevant and quality knowledge, skills and best practices for achieving efficiency and effectiveness in the management and operations of cooperatives. Kimani (2021) notes that through research, KUSCCO collects relevant market intelligence information and data from all over the world and shares it with SACOOs. Such data and information create insights useful in understanding global trends, from which the SACCOs can make better decisions and adapt to current market dynamics. Such information, data, and insights are essential during crises such as the global COVID-19 pandemic. The critical imperative by KUSCCO is the co-creation of innovation with the cooperative movement actors. Where the need arises, KUSCCO networks and collaborates with other financial institutions or development partners and investors to help SACCOs in need access credit facilities, funding and other resources they may need to improve their services.

3.2.2 SACCO Societies Regulatory Authority (SASRA)

The establishment and operations of CFIs, particularly SACCOs, are regulated by SASRA. This section discusses the responsibilities of SASRA in establishing regulations under SACCOs, which should operate soundly and securely, safeguard member deposits, and foster confidence in the cooperative financial system. The regulatory body also works to enhance governance and risk management practices, ensuring SACCOs contribute effectively to the country's financial inclusion and economic growth. This empirical review examined the specific roles and impact of SASRA on SACCO performance, sustainability, and resilience in Kenya's evolving financial landscape.

3.2.2.1 Regional and County-Level Associations

Regional and county-level associations are formed to enhance collaboration and information sharing and improve advocacy for the interest of CFIs and their members at the local levels. The associations have proven significant in advocating for better policies and regulations supporting the sustainable growth of CFIs at the regional or county level (International Cooperative Alliance -Africa, 2021).

Additionally, the associations strengthen the operations of cooperatives within specific geographical locations or counties. The associations address some of the common challenges they face; they share best practices and thus corporately contribute to the growth of the CFI sector in those regions. Through networking and knowledge sharing, the regional CFIs can network and exchange ideas, experiences, lessons and success insights from which they learn how to improve their practices and services. To facilitate networking and information sharing, the associations organize training workshops, conferences, and seminars to bring the leaders, managers, staff and members of CFIs together to learn and share knowledge. Conferences, workshops or seminars create interactive and practical platforms for information dissemination. Some of the information disseminated, such as market intelligence, trends in the industry, and regulatory updates, are essential in helping CFIs adapt and adjust accordingly to fit into the most current financial topography. In Kenya, for example, every county has a cooperative union, which serves as a hub for all other cooperatives in the counties. Some counties sometimes unite to establish federations to create more robust and broader collaboration and resource-sharing avenues.

3.2.2.2 Credit Reference Bureaus (CRB)

Credit Reference Bureaus (CRBs) collaborate with CFIs by credit information sharing to promote safe and responsible lending practices. Credit information of potential borrowers, individuals or SMEs is essential in lending and credit risk management decision-making. CRBs are legally mandated to collect and store credit information of individuals, businesses, companies and Organizations and share the information with lenders as may be necessitated within the provisions of the law of privacy and data protection. The information is meant to evaluate the credit history and behavior of potential borrowers so that the lenders take necessary precautions as a measure of risk mitigation to minimize the chances of getting trapped into non-performing loans. Additionally, the same information helps CFIs to help potential borrowers avoid over-indebting.

Grace et al. (2018) also note that collaboration with CRBs helps CFIs with the information needed for loan pricing and, therefore, sets the most appropriate interest rates and the terms and conditions for each customer depending on their credit portfolio with CRB. Kimani (2021) adds that CRBs are the avenues that help CFIs maintain trust and transparency as they interact with their members and customers. However, Ndemo and Mkalama (2023) point out that there are issues surrounding data privacy and security. There are significant gaps in data protection, which CFIs and CRBs must address if they have to adhere to the new legislation of the Data Protection Act of 2019. CFIs and CRBs are therefore challenged and face challenges of sharing personal information/data without "breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorized

disclosure of, or access to, personal data transmitted, stored or otherwise processed" (Data Protection Act, 2019, p.8).

Additionally, CRBs do not have the credit information of new borrowers; as such, CFIs are compelled to explore alternative ways of establishing the credit behavior of such borrowers. In some cases, problems with inaccurate data have been reported either due to the intentional concealment of borrowers' information or errors in the processes of capturing, storing, and sharing the information. CFIs, therefore, have to formulate ways of verifying the authenticity of information about borrowers' credit characteristics.

3.2.2.3 Partnership with International Affiliate Organizations

Additional network arrangements have been evident between CFIs and international strategic Organizations regarding funding, technical assistance, expertise sharing, and capacity building of resources. Such collaborative partnership has thus enhanced the ability of many CFIs to serve their customers and members more effectively. Collaboration with international affiliates such as development banks, donor agencies, and charity foundations has helped some CFIs to secure funding meant to finance initiatives tailored to support poverty reduction. Some CFIs have used such opportunities to expand their service portfolio, adopt technology, diversify products and support community development projects.

Alushula (2023) notes that the Co-operative Bank of Kenya (Co-op Bank), for example, partnered with the DEG (Germany-headquartered) Consortium to support micro, small and medium-sized enterprises (MSMEs) in Kenya. The consortium is a federation of micro, small, and medium enterprises bonds and European development finance institutions, namely Finnfund, Norfund, Africa Agriculture and Trade Investment Fund, and European financing partners. The partnership saw Co-op Bank receive a US$100 million long-term loan. While acting as the leader strategist, DEG provided the loan with the primary aim of furthering the development of Kenya's wider economy, specifically the financial sector, through creating affordable local income and jobs at the grassroots level. The Co-op Bank had previously secured support from other partners, US$121.2 million from the International Finance Corporation and US$54 million from the European Investment Bank East Africa (Alushula, 2023).

At the helm of international partnership is the World Council of Credit Unions (WOCCU) Inc., which has been working closely with Kenyan SACCOs in agricultural development, financial inclusion and technology solutions. WOCCU, for example, created the then IRnet Coop Kenya to help Kenya

savings and credit cooperatives develop and adopt new products and services and modern technologies to reach the hard-to-reach populations. WOCCU has emphasized investment in women and youths by customizing training and some products and services. For example, the e-SACCO (e-Kenya) was introduced by WOCCU to meet the demand of senior youths for financial services. With this technology, the Youth Agricultural Project agenda was launched to inspire and train youths on the economic opportunities in agriculture. WOCCU introduced other programmes in Kenya, such as the Cooperatives Development Program (CDP), in collaboration with USAID in 2010. The project was meant to run until 2017 and was expected to create agricultural finance tools to help credit unions extend services to rural populations (Muriuki & Country, 2019).

The progressive growth and expansion of Kenya credit unions and financial institutions are partly attributed to the WOCCU's Model Financial Institution Building (MFIB) product and PEARLS monitoring system. MFIB introduced a model that would amalgamate credit with savings mobilization and customization of service to meet the customers' and members' expectations. PEARLS (Protection; Effective financial structure; Asset quality; Rates of return and costs; Liquidity and Signs of growth) is a financial performance monitoring system designed to help analyses the financial health of financial institutions such as CFIs. Lastly, WOCCU collaborates with the USAID Cooperative Development Program (CDP) to improve small rural producers' income through integrated access to financial services and agricultural markets (2010- 2017). WOCCUs is reportedly working with seven SACOOS and about 180 small producer groups and other Organizations to facilitate partnership between Kenyan-based KUSCCO and Guatemala's FENACOAC where experiences and lessons on agricultural financing and rural outreach are shared (Muriuki & Country, 2019).

3.2.2.4 The Regulatory Framework around CFIs- SASRA

CFIs are governed and regulated by a gamut of laws and legislative provisions meant to standardize the practices in the financial sector by promoting soundness, transparency, and responsible operations in the financial sector. The goal of the regulatory framework is to protect the customers' interests, promote and maintain systematic financial stability, and promote and protect the CFIs' safety and financial soundness, thus guaranteeing and promoting the growth of the cooperative sector. Additionally, Kimani (2021) notes that the regulations aim to enhance and maintain healthy competition among players. Consequently, there are different types of regulations, which can broadly be categorized into prudential regulations (focus on solvency, soundness and safety of CFIs) and conduct of business regulations (focus on how CFIs ought to conduct their business). In other words, prudential regulations focus on the economic and social welfare of CFIs, while the conduct of

business regulation focuses on the welfare of the consumers of the products of the CFIs (International Cooperative Alliance -Africa, 2021).

Presently, the cooperative movement in Kenya is overseen by the Cooperative Societies Act, Chapter 490, and the SACCO Societies Act of 2008. The Cooperative Societies Act addresses matters concerning the formation, registration, and oversight of cooperative societies, along with matters indirectly associated with these. On the other hand, the SACCO Societies Act constitutes legislation enacted by the Parliament and outlines arrangements for licensing, regulation, supervision, and advancement of SACCO societies. This act also establishes the SACCO Societies Regulatory Authority (SASRA) to serve related objectives (SACCOs Societies Act, 2008).

3.2.2.5 Cooperative Societies Act, Chapter 490 in Kenya

The longest cooperative society legislation is the Cooperative Societies Act (Chapter 490), enacted in 1966. Since then, various amendments have been made to the act, for example, the Co-operatives Societies Act No. 12, enacted in 1997 to limit government involvement in the affairs of cooperatives. However, further amendments were made to the act. For example, in 2004, government involvement was reintroduced through the Commission for Co-operatives Development and The Cooperatives Societies Rules (Amendment) Act No.2, which re-ignited the function of the Co-operative Tribunal to resolve disputes.

In 2004, the act was further amended and enforced as of November of the same year following a legal notice L N/123/2004. The revision introduced supplementary regulations. Notably, the promulgation of the Constitution of Kenya 2010 restructured the regulatory framework governing cooperatives, such that certain administrative tasks were decentralized to counties. Nevertheless, the Act was not abolished. The county governments were designated with responsibilities concerning trade development and the oversight of cooperatives (International Cooperative Alliance -Africa, 2021).

That notwithstanding, under the national government, the regulation of cooperatives falls within the domain of the Ministry of Agriculture, Livestock, Fisheries, and Co-operatives, but the oversight role is domiciled at the State Department for Co-operatives (SDC). The Cooperative Societies Act, Chapter 490 of 2005, has therefore remained active and partly applicable in the legalization of operations of CFIs. Along with the cooperative societies' rules, the Act dictates distinct functions pertaining to cooperatives. These encompass the privileges and obligations of registered societies, the rights and responsibilities of members, functions of co-operative societies, provisions for amalgamation, the rights and obligations of cooperative societies, the management of funds and assets, processes for investigation and examination, procedures for dissolution, levies, and

mechanisms for resolving disputes. In addition, the Companies Act, Chapter 486, is applicable per the provided schedule.

3.2.2.6 SACCO Societies Act 2008

The roles and mandate of SASRA are provided in the Kenya SACCO Societies Act 2008, under which it was established and operationalized. The act provides information on how cooperatives should be licensed, regulated, supervised, and supported. The Act, therefore, develops the framework guiding the registration and governance of the cooperatives. In Part III, the Act defines the licensing requirements, the process involved, the issuance of the license, and additional requirements that must be met before an Organization is incorporated as a CFI. At the same time, Part IV established the CFIs' governance model, their minimum capital reserve requirement, liquid assets requirements and the legal business activities that CFIs can operate. Part V of the Act confers the authority to license, regulate, inspect and direct the business of deposit-taking financial institutions (SACCO societies) to SASRA.

Furthermore, this gives powers to SASRA to prohibit or impose restrictions on some activities and to intervene in the management of the affairs of SACCO societies. Part VI of the Act directs CFIs to establish a deposit guarantee fund meant to be invested by the board of trustees in deposits with commercial banks and government securities. The fund is meant to protect the savings of the members who deposit up to US$943.4 (International Cooperative Alliance -Africa, 2021).

Kenya's prudential CFI regulations are based on the Basel Accords, which set standards for the capital adequacy of Banks and CFIs. The regulations define the minimum capital and liquidity prudential prerequisites. Prudential regulations encompass stipulations such as essential capital thresholds, standards for maintaining liquidity or diversifying loan portfolios, restrictions on a bank's investment activities or business operations, and other measures aimed at constraining the variety of risks that a banking institution can engage in (Muriuki & Country, 2019). Notably, the prudential regulations are customized more to regulate the banking sector than other financial institutions. The government, therefore, established the SACCO Societies Regulatory Authority (SASRA) to specifically regulate the CFIs (cooperative banks, credit unions and other financial cooperatives). SASRA was established under the Sacco Societies Act of 2008 to oversee CFIs and ensure they are soundly and prudently managed, to promote transparency and protect the interest of the members and the customers. The authority was, therefore, mandated to license and supervise CFIs, set standards of prudential practices, and enforce compliance with all applicable laws and regulations (Muriuki & Country, 2019).

3.2.2.7 The SACCO Societies Regulatory Authority (SASRA)

One of the critical mandates of SASRA is to ensure that all cooperative societies and financial institutions are duly licensed to operate in the Kenyan financial sector. The licensing process ensures that the potential CFIs meet certain requirements, such as governance structure, capital solvency, risk management frameworks and routine operation standards. It is, therefore, SASRA that maintains the register of all CFIs operating in Kenya. SASRA develops prudential standards on capital adequacy, governance, asset quality, liquidity management, risk management and financial reporting to enhance its supervisory role. All CFIs must maintain a certain level of capital reserves and liquidity to ensure that they remain stable and able to meet routine financial obligations. Furthermore, SASRA stipulates that CFIs must establish a vigorous risk management system to identify, characterize, evaluate and manage credit, operations, and liquidity risk effectively and efficiently (International Cooperative Alliance -Africa, 2021). According to the arguments of (Muriuki & Country, 2019), an adequate risk management framework is a critical sustainability success factor in the financial sector embedded in global economics.

SASRA also oversees legislation and ensures that CFIs are appropriately managed to protect and address the members' best interests. Consequently, the CFIs are expected to have a competent, extensively skilled, and experienced board of directors on management, finance, and accounting matters. Moreover, CFIs are expected to make their decision transparently, involving the members' participation. The same transparency is expected in preparing and submitting financial statements in line with International Financial Reporting Standards (IFRS). In some cases, SASRA requires that CFIs publish some of their financial information for public consumption. In compliance with these regulations, CFIs win the trust of their members and customers (Waiganjo et al., 2016).

In the SASRA regulations, there are laws meant to protect the rights and interests of members of CFIs as well as their customers. Such regulations include fair lending practices, accurate and clear disclosure of terms and conditions of their financial products and services and transparent costing of the credit facilities. To ensure that CFIs are run and managed in accordance with the laws and regulations, they carry regular supervision to inspect and further enforce the regulations. Therefore, they audit CFIs and take appropriate corrective measures in case of non-compliance or partial compliance with the regulations. Such measures may include but are not limited to penalties, suspension or revocation of license (Mushila, 2012).

3.2.2.8 Structural Characteristics of CFIs in Kenya

Cooperatives are legally recognized entities registered by the cooperatives commissioner, established under the Cooperative Societies Act, chapter 490 and SACCO Societies Act of 2008, at the apex of the establishment of all cooperatives in SASRA mandated to oversee the establishment, registration, governance, and operations of the CFIs. Although most CFIs (cooperatives) are owned and controlled by the members, they are commercial trading entities with limited liability. In other words, the cooperatives, as opposed to their members, are liable for any debts. All members of CFIs are shareholders with equal rights (one vote) of participation in decision-making (International Cooperative Alliance -Africa, 2021).

The membership of any cooperative is defined by by-laws submitted to SASRA during registration. Most commonly, members of cooperatives are either employees working in a given sector or traders in a common business. However, there are cooperatives in which anybody can qualify whether they are neither employees in a sector nor trading in common business. The members must have at least one share and fulfil the eligibility defined in the cooperative's by-laws. Upon acquiring membership rights, they get the mandate to elect the management team, including the board of directors and the absolute authority in decision-making. Among the most critical functions of the members is the election of the committee's board of directors (Ngaira, 2011).

The management committee in many cooperatives serves for a two-year term before another election is conducted. However, whether a member of the board or management team has served a two-year term, they still qualify to vie for re-election either in the same post or a different post. The primary function of the board of directors/management team is the overall management of the cooperative, strategic planning, governance, and investment decisions. Muriuki & Country (2019) also note that other common roles of the board of directors/committee include entering into contracts, instituting and defending suits and or legal court cases against the cooperative, hiring and firing employees, accounting for the cooperative's finances, convening general meetings and managing all the routine operations of the cooperatives. Notably, the committee/board of directors can be removed by the members in a general meeting upon a resolution of the majority of members present by voting before their term limit (Ngaira, 2011).

Ngaira further points out that the manager can be recruited by the committee from among the board of directors or sourced externally, depending on the level of professionalism required. The manager's role is to oversee the routine operation of the cooperative and is responsible for the financial accounting and all the other work carried out by the employees. They also serve as the mandatory

signatory of the cooperative's accounts, manage and supervise all the activities of cooperatives and present the financial reports. They report to the management committee. The employees, on the other hand, are employed by the managers, who can determine if the employees are employed among the cooperative members or sourced externally. According to Mushila (2012), most cooperatives employ staff for roles such as accounting, front office operations, marketing, transport and savings and credit.

The management structure of cooperatives is not standard because they vary based on size. Most cooperatives are managed by a board of directors, which members elect. The board, however, has to consult members on critical decisions. The tiered regulatory framework provides sounder surveillance for larger, DT-SACCOs, and can protect them during crises. Additionally, Schaltegger et al. (2016) observed that common bond requirements create member loyalty and shared identity, which can reduce panic withdrawals during turbulent periods. Schaltegger and colleagues add that the democratic leadership structure model allows for member-responsive policies during hardship.

However, many CFIs, especially smaller non-DT SACCOs, are limited and lack adequate capital buffers to absorb significant loan defaults which are commonly necessitated by economic hardship. With Limited access to external liquidity support (compared to commercial banks), crises create vulnerability during system-wide shocks (Birchall, and Ketilson, 2009). In instances where members of CFIs share the same economic sector or employers, the common bond often creates a higher concentration risk. Moreover, the three-tier governance slows decision-making and as such crisis response may not be as quick as it ought to be (Rena, 2017). With primary member contributions being the capital source, the capital resilience suffers when members themselves face financial distress simultaneously characterized with more withdrawal than deposit and savings. This explains why many CFIs caught unprepared for operational disruptions (Kumar et al., 2021). Limited diversification in revenue streams and investment portfolios reduced the ability to withstand sector-specific shocks (Francesconi et al., 2021a).

A more advanced structure and regulatory approach could help build resilience across all CFI types while remaining proportionate to institutional size. However, developing such advanced structure and regulatory approach requires extensive research and benchmarking from across the globe. Targeted structural and regulatory adjustments to bolster greater capital adequacy while sustaining the cooperative model would strengthen crisis absorption capacity, resilience and competitiveness.

3.2.2.9 Behavioural Characteristics of CFIs

Behavioral characteristics are those characteristic behaviors that are common among most cooperatives. These behaviors, therefore, vary from cooperative to cooperative. For example, in

situations involving contracts for marketing produce or hiring service providers, the management committee has the authority to enter into agreements on behalf of the cooperative with these non-members. When the cooperative intends to secure a credit facility from a financial institution, the general assembly is responsible for determining the maximum amount to be borrowed. Approval from the commissioner is necessary for establishing the maximum borrowing authority. The extent to which the cooperative can assume financial obligations is determined by the strength of its asset base, and this should not surpass eighty percent (80%) of the total assets (International Cooperative Alliance -Africa, 2021).

Cooperatives are granted the right to pursue additional objectives and expand their activities if they bring economic and social advantages to the cooperative members. Such activities should serve the members' interests and contribute positively to the community. Nevertheless, any such initiative requires authorization from the general assembly or the annual general meeting (Waiganjo et al., 2016). Moreover, a cooperative society has the prerogative to explore alternate goals and diversify its undertakings, given that these activities offer economic and social value to its members. These economic activities, if desired by the members, must align with legal standards, provided that the same services are not already offered by the government (International Cooperative Alliance -Africa, 2021).

Members of CFIs invest in the cooperatives by purchasing shares, but each cooperative decides how much to invest and the interest to be paid. The net profits the cooperatives earn are distributed according to established standing orders. Notwithstanding, most cooperatives retain between 25% and 35%, which is paid into the reserve fund. The remainder is distributed as dividends to the members based on the amount of trade each member has transacted with the cooperative in that particular year. Besides, each cooperative may also invest in corporate social responsibility depending on its policy (Mushila, 2012). For example, some cooperatives responded during the pandemic by offering support to vulnerable members of healthcare facilities to help them cope with the pandemic. The State Department of Cooperatives (SDC) established the Kenya Cooperative Coronavirus Response Committee (CCRC) to assist. This committee comprised ten primary stakeholder Organizations, including national associations representing cooperative groups. One of the noteworthy endeavors undertaken by the CCRC involved the distribution of "Co-op Kits," which included essential items like cooking oil, rice, food supplies, and personal protective equipment (PPE) to approximately 3,500 households through cooperative societies. These cooperative Organizations disseminated the kits to their members and non-members within their respective communities. Notably, the kits were assembled at various county stores, thereby promoting local businesses.

On the other hand, non-deposit-taking CFIs do not allow their members to withdraw deposits except when withdrawing membership. The situation is necessitated by the fact that in non-deposit-taking CFIs, members do not hold accounts where they can deposit or withdraw their savings. The CFIs are further categorized into financial or non-financial entities. Financial CFIs offer active financial services (investment and housing), while non-financial market members produce related products (SASRA, 2022; Pulubuhu et al., 2020). Kenyan CFIs are founded on principles of self-help, equity, self-responsibility, and democracy. Broadly, the CFIs are government-based, farmers-based, teachers-based, community-based, or private-sector-based (Rawal, 2021).

Kenya's CFI sector has reportedly been identified as one of the most versatile in Africa. According to the International Co-operatives Alliance -Africa (2020), the Kenyan CFI sector is the best example of CFI success in Africa. Hoang and Hindery, (2020) notes that the World Council of Credit Unions' (WOCCU) 2018 data showed that Kenya's CFI sector is the best in Africa, registering about 8 million members with a penetration rate of 28.4%. The rating was attributed to the country's well-developed CFI sector, which had more than US$ 2.133 billion worth of assets and US$ 1.76 billion in savings collection in 2018. According to Gogo and Oluoch (2017), this has propelled the CFIs sector to a market share of about 20% of the country's national savings.

As Mathuva (2016) pointed out, the success factors of the Kenya CFIs include favourable legislation, particularly the regulatory reforms introduced between 2018 and 2010. The reforms allowed SACCOs in Kenya, as members of CFIs, to scale up their operations and target people who were not necessarily from the sector membership decreed by the common bond. This regulation saw membership of SACCOs and, thus, CFIs grow drastically. Subsequently, the monthly subscription grew and increased the CFIs' capital reserves (Ismaila & Gamede, 2021). With the growth in monthly subscriptions, the CFIs are better positioned to deliver sustainable quality and timely services.

Generally, Kenya's CFIs have been characterised by specific characteristics that have helped them navigate their path to successfully managing their stakeholders' interests. Different scholars arguably label these characteristics as strategies. Among them include Kinyua et al. (2015), who note that some CFIs are keen on defensive and holding strategies, which they use to counter competitors' business models and maintain their marketplace and share. Kinyua et al. (2015) add that some CFIs leveraged swig strategies, which rely on highly cooperative stakeholders and unique human resource abilities. With such abilities, CFIs drastically collaborate with them to optimise the benefits they draw from the positive influencing abilities while countering threatening attributes. Kinyua et al. (2015) further assert that a significant and positive correlation exists between offensive strategies and financial

performance and success among Kenyan CFIs. Karakaya and Yannopoulus (2011) noted that some CFIs have explored offensive marketing strategies to gain competitive advantage. Such strategies include shifting into new market niches to avoid competition or direct and indirect ethical attacks on the competitor. WOCCU (2015) adds that technology and partnership strategies have equally and significantly contributed to the stable and sustainable growth and performance of CFIs in Kenya.

CFIs adopt a business model in which the responsibility of governing CFIs is given to board members elected by members through a delegate system. CFIs are owned by members who voluntarily join the CFIs based on shared common bonds, such as the characteristics of employees of an Organization or sector or residents of a given community. The members participate in decision-making and have the right and mandate to select the management board because their stakeholder rights are protected in principle (Waiganjo et al., 2016). The selected board members oversee the CFIs' operations and strategic directions. Notably, most CFI boards are voluntary, with the exception of some CFIs giving stipends for the board members based on their participation in board meetings. According to Ismaila and Gamede (2021), this kind of management model of CFIs is weakened by a lack of clear regulations on term limits of board members, inadequate technical abilities in governance, inadequate management systems, and political conflicts of board members, male gender dominance and inadequate capacity of board members on governance. The inadequate professional training of board members on Organizational governance and management causes inefficiencies, which may derail the service delivery of many CFIs and compromise their business performance. Some CFIs are, therefore, forced to employ external consultants to help them with strategic planning and accounting. Unfortunately, not all CFIs are able to employ professional staff in management, accounting, and ICT. Consequently, the CFI members are left with the burden of due diligence, which exposes them to exploitation. On the other hand, Inadequate clear regulatory policies hamper the functioning of the management as many board members become adamant about delegating authority to their managers (Nair & Kloeppinger-Todd, 2007).

These behavioral characteristics highlighted above including, member-centric decision-making, risk-averse lending practices, reciprocity expectations, social pressure enforcement mechanism, relationship-based service model, savings-first orientations, transparency and information sharing and governance by non-professionals are fair and accommodative in times of normal operations but the same can be the weak points (Karakas, 2019). The standard CFIs' operational behaviors can often be the vulnerabilities in times of crises if the institutions cannot adapt their behavior patterns to the demands of crisis (Paudel, 2021). However the mechanisms of adaptation has not been extensively

researched in the Kenyan context and as such repeat of global disruption event might expose the CFIs to the same dilemma as did COVID-19.

3.2.3 Cooperative Bank and Cooperative Colleges

Cooperative banks, notably the Cooperative Bank of Kenya, offer financial literacy programs to CFIs, particularly SACCO members. These programs focus on essential financial management skills, such as budgeting, savings, credit management, and investment. The goal is to empower members with the knowledge to make informed financial decisions. Secondly, cooperative banks often organize workshops and seminars for SACCO leadership and members to improve governance, financial reporting, risk management, and operational efficiency. These initiatives enhance SACCOs' leadership and management skills, contributing to their sustainability.

Further, cooperative banks help SACCOs develop and diversify their financial products to meet the evolving needs of their members. This includes introducing savings products, loan products, and insurance services tailored to different sectors, such as agriculture, small businesses, and education. Lastly, cooperative banks provide credit facilities and advisory services to help SACCOs access funding and navigate the complexities of financial markets. This helps SACCOs improve their liquidity, diversify their income streams, and provide better financial services to their members (Mumanyi, 2014). For example, the Cooperative College of Kenya, the Cooperative University of Kenya (formerly Cooperative College), offers diploma, undergraduate, and postgraduate courses in cooperative development, finance, and management. These programs are designed to provide SACCO members and leaders with formal education on cooperative principles, financial management, and governance. Secondly, the cooperative college also provides short-term training programs and workshops tailored to the specific needs of members of SACCOs. These include courses on cooperative governance, accounting, auditing, and marketing. These programs are crucial for improving SACCOs' managerial capacity and financial accountability.

Moreover, the cooperative college engages in research to address the challenges faced by CFIs. Through evidence-based research, the institution helps identify best practices and innovative approaches to improve the resilience and sustainability of CFIs in a dynamic financial environment. Lastly, the cooperative college provides consultancy services to SACCOs on strategic planning, policy formulation, and governance. These services are crucial in ensuring that SACCOs have the capacity to grow and adapt to changing market and regulatory conditions (Bwana, 2013).

The Cooperative Bank and Cooperative College sometimes collaborate with government agencies, international Organizations, and donors to offer specialised training and capacity-building programs. These initiatives focus on improving financial inclusion, governance, and service delivery within SACCOs and CFIs. CFIs can implement capacity, auditing, lending technology and risk management, and MIS and accounting systems through these collaborations. Capacity building is implemented through various training programs, which are costed differently. The training is facilitated locally and internationally with the help of KUSCCO, the Cooperative Bank and Cooperative College. The training targets upskilling the board members, the staff, and other members. The board members and staff are trained in managing CFIs, while members are trained in savings, production, and marketing (Nair & Kloeppinger-Todd, 2007).

CFIs provide a wide range of products and services, including business accounts, school fee accounts, banker checks, money transfer services, sale of school fee checks, access to ATMs, digital banking services and pay points meant for members to receive their payments, pensions and salaries. Some CFIs provide custody of vital documents such as title deeds. CFIs also offer savings products, including savings accounts, medical accounts, time and fixed deposit accounts, children's accounts and Christmas accounts. Competitive interests are offered on savings and loans but with considerate terms for members. In addition to savings products, CFIs extend credit facilities to members. Such credit facilities include salary advances, school fees loans, loans and advances to farmers, revolving credit to business clients, loans to members on salary, microfinance loans, development credit for investments and market day loans. Other CFIs offer insurance services to their members through the Co-operative Insurance Company of Kenya or private insurers. Some other CFIs remit National Health Insurance Funds (NHIFs) on behalf of their members. Meanwhile, others contribute to support government programs such as the Poverty Eradication Commission (Nair & Kloeppinger-Todd, 2007).

Kenyan CFIs play a crucial role in fueling economic growth at the national level, community level and individual members' level. Reportedly, CFIs contributed approximately 5.55% to Kenya's GDP in 2018. The Kenya Financial Stability Report (2020) noted that CFI societies proved resilient to the impacts of the COVID-19 pandemic, registering a growth of 13.5% in total assets in 2020. Over the same period, gross loans grew by 12.9%, of which 13.1% was funded from increased member deposits. The report further notes that the CFI sector had capital reserves over and above what is stipulated by statutory requirements. The mean liquidity ratio was 70.8%, attributed to increased members' savings. Notably, the CFIs borrowed less externally, as signified by the decline in the external borrowing to total assets ratio from 3.9% in 2019 to 3.7% in 2020. Although these pieces of

data point to the significant resilience of the CFIS amidst the pandemic, CFIS in the Agriculture sector registered a 16.6% rise in the Non-Performing Loans (NPLs) ratio, indicating a negative impact of COVID-19 on the livelihood of members of the CFIS (Financial Sector Regulators, 2021).

Although some CFIs have been characterised by challenges such as non-remittance of dues by employers, loan repayment defaults, and mismanagement, they have generally exhibited resilience in times of crisis. According to Mullings and Otuomagie (2023), unlike conventional financial institutions, Kenya's CFIs have mostly sailed through the turbulence of socioeconomic crises. KUSCCO notes that CFIs offer credit facilities to their members and SMEs and technological support in the loan appraisal process, particularly during the pandemic (KUSCCO LTD, 2023). According to the State Cooperatives Department's report, CFIs cumulatively contributed 30% of the GDP in the same year. Arguably, 63% of Kenyans derive their livelihood directly or indirectly from CFIs as members or beneficiaries. According to the International Co-operatives Alliance -Africa (2020), Banking leads the CFIs landscape at 57.8%, followed by the Agriculture and Food industry at 24.5%, Real estate activities at 8.5%, and other sectors at 4.8%.

Among the arguments for the drastic growth of the CFIs is their contribution to agricultural and non-agricultural productivity, housing, modern financial solutions and economic development in the long run. In agricultural and non-agricultural productivity, for example, CFIs help their members to procure, produce, trade and distribute a wide scope of farm inputs, therefore enabling them to realise industrial development in the long run (International Labour Organization, 2013). The CFISs have also significantly contributed to the development of housing Units in Kenya, with the World Bank reporting that 90% of Housing Units in Kenya were constructed with the help of CFIs. This could explain why the Co-operatives Alliance of Kenya Ltd 2019 reported that the Kenyan Government envisaged (Vision 2030) that CFIs would offer 25% of the housing stock in the urban settlements in the country (Otieno, 2019).

With the growth and evolution of CFIs worldwide, the Kenyan MFI sectors have equally registered significant development and thus have diversified their scopes, targeting the agricultural sectors and other sectors such as finance. The CFIs give more flexible, more affordable and friendly credit facilities to their members who would be locked out by the terms and conditions of commercial banks' credit facilities. Subsequently, the CFIs have led to sustainable economic growth and inclusivity among low- and middle-income earners, including SMEs who would otherwise not meet the requirements of commercial banks (Rawal, 2021). According to Otieno (2019), CFIs form one of the best models for enhancing agricultural and nonagricultural productivity, resulting in large-scale trade,

value addition, and distribution of farm inputs. Otieno further adds that the additional economic contributions of CFIs are due to the employment opportunities they create through the value addition, marketing and distribution of their merchandise.

3.3 Business Model

The cooperative business model is a unique Organizational structure where members collectively own, control, and benefit from the Organization. Unlike traditional businesses driven by profit maximization for shareholders, cooperatives prioritize their members' welfare and economic interests, who are also customers, employees, or suppliers. The guiding principles of cooperatives, including democratic governance, member participation, and profit-sharing, are designed to create equitable and sustainable business practices. In the financial sector, CFIs like SACCOs embody this model, pooling resources to provide affordable financial services to members. Cooperatives play a critical role in promoting financial inclusion by fostering collective ownership and decision-making, especially in underserved communities. This section explores the structure, operations, and impact of the cooperative business model, particularly in the context of financial institutions.

3.3.1 Cooperative Financial Institutions Business Model Pre-and Post-Covid-19 Pandemic

The landscape of cooperative financial institutions (CFIs) operations, people resources, technology and profitability changed significantly due to the pandemic. CFIs, including credit unions, cooperative banks, and other community-based financial Organizations, enhance financial inclusion and thus promote local economic growth and development at the local level. In Europe, for example, CFIs had a strong presence with about 2,816 independent cooperative banks with a customer base of about 210 million, 40% of whom were members (European Association of Cooperative Banks, 2019). The cooperatives in Europe represented a wide range of people, including individual members of CFIs, SMEs, social enterprises, and local communities.

The CFIs served as financial intermediaries for rural and urban populations, regardless of their economic background. Aghabarari et al. (2021) emphasise that the people, SMEs, local communities, and social enterprises which could not secure credit services from mainstream financial Organizations found a safety net in the CFIs. The people additionally benefited from the CFIs through financial training, advisory, and capacity building, which enlightened them about financial literacy and helped them make informed decisions (Migliorelli, 2018). The members of the CFIs develop a solid and deep relationship with their CFIs because of the personalized financial services they receive, hence strengthening their sense of community ownership. The members of the CFIs had the right to be heard

in the decision-making process as well as the opportunity to participate in the management of the CFIs indirectly. The relationship was almost the same for the SMEs which traded with the CFIs. The SMEs received customized credit facilities and services such as working capital and business loans, which helped them thrive and thus contributed to job creation in the communities in which they existed and, thus, economic growth (Lee & Carlisle, 2020).

The emergence of the COVID-19 pandemic created and multiplied the complexity of the challenges which disrupted CFIs. Members of CFIs were therefore, affected both directly and indirectly. Members of the CFIs in low-income categories and informal sectors were disproportionately affected by the economic downturns. Consequently, their demand for financial and social interventions increased drastically. The increased demands notwithstanding, most CFIs in Kenya could not meet all the demands of the members and maintain all their routine operation at optimum. The pandemic uncovered the gaps which need to be bridged lest the CFIs suffer the same fate in the unfortunate event that similar or worse event emerges in the future. There have never been comprehensive and situational-based study targeting enhancements of resilience which integrates improvement of the cooperatives business model and profit maximization.

3.3.1.1 Resources

Resource-wise, CFIs had well-established resource profiles, which included human resources, financial and social resources, physical resources, technological resources and physical infrastructure, which enabled them to implement their mandate, including promoting financial inclusivity. Human resources of the CFIs, including skilled staff, local knowledge from among the community members and members' engagement, have helped them with the daily management and operations. Skilled staff included professionals who handled specialties such as finance, accounting, banking and customer service (Dopico & Wilcox, 2018). Locally hired staff from the community helped the CFIs to deliver tailor-made training for the members. Furthermore, the CFIs relied on the engagement of members in decision-making. In addition to human resources, CFIs have access to financial resources mainly from capital reserves, which, in the interim, supported their routine operations, service offerings and growth. Such resources, therefore, included members' deposits, which created a stable source of funding through which they met their credit services and operational costs; equity capital accumulated through members' contributions and retained earnings; loans and credit facilities from other financial institutions; investments, which generated additional returns and external funding from international affiliated philanthropic Organizations, or governments. Together, these financial resources enhanced the CFIs' soundness so that they could meet their obligations sustainably (McKillop et al., 2020).

The CFIs also relied on technological resources to heighten member engagement, improve the efficiency of their operations, and improve service delivery. CFIs utilized technology such as digital infrastructure to adopt digital banking, thus enabling members and customers to access and manage their accounts, apply for credit facilities, and execute online transactions without going to the banking hall or the front office. Within the adoption of digital technology were the mobile banking applications through which members of CFIs would engage with it, albeit remotely. These two were enabled through robust information technology systems based on data management, risk evaluation and regulation compliance (Dopico & Wilcox, 2018).

CFIs also capitalized on their social resources, including members' relationships, social capital, and cooperative networks. With strong member relationships fostered by trust, a sense of community ownership and shared values, CFIs developed social capital from the local communities. Additionally, CFIs have extensive associations and networks from which they can collaborate, share information on best practices, and advocate for improved policies (Lee & Carlisle, 2020). Lastly, CFIs leveraged their physical infrastructure to deliver services and maintain presence and accessibility within local communities. Such infrastructure includes branch networks or service points to maintain and enhance physical accessibility, ATMs, and self-service outlets, allowing members to access cash and other basic transactions.

Analysis of the CFIs' resources during and after the pandemic reveals that most CFIs faced some restructuring, particularly regarding people, human resources, technological resources, networks, and physical infrastructure. For example, McKillop et al. (2020) note that most CFIs in Europe have expanded their technology resources to enhance the delivery of services remotely. This was particularly necessitated by maintaining continuity of service delivery and maximizing social distancing to minimize the risk of spreading the virus. However, the acceleration in digital transformation was a challenge to members or staff with limited digital literacy. In some instances, resources such as physical branches were temporarily closed while ATMs and Self-service outlets expanded during the pandemic (Aghabarari et al., 2021). On the other hand, human resources faced restructuring, which saw some staff laid off, some given unpaid leaves, while others were forced to work from home or half days or with PPEs. Human resources who lost their jobs faced financial constraints and thus could not sustain their remittance to CFIs' savings.

The landscape of the financial resources of CFIs faced some shifts due to reduced deposits, equity capital and thus loans and credit facilities amidst increasing demand for credit services. Following the financial constraints induced by the pandemic, most members significantly cut down their

deposits and subscriptions. This affected the accumulated equity capital, which forced the CFIs to implement stricter lending terms and conditions. Additionally, the CFIs invested less because the focus shifted to cushioning communities and members with the help of funding from the government, as well as philanthropic Organizations or international associates. The CFIs, nevertheless, were forced to expand some of their physical resources, such as networks, ATM coverage and self-service outlets. The pandemic reportedly did not significantly impact social resources (membership relationship and social capital), including governance and management (McKillop et al., 2020).

Although the literature gives a snippet overview of the resource base that reinforced the resilience and sustainability of CFIs, it lacks a critical assessment of the long-term implications of the pandemic-induced shifts. While it effectively highlights the adaptability of CFIs—such as digital transformation, expanded self-service infrastructure, and reliance on social capital—it underestimates the potential risks associated with these changes. The digital shift, for instance, is framed as a positive adaptation, yet it does not adequately address the digital divide that may have excluded older members or digitally illiterate customers. Similarly, the restructuring of human resources, including layoffs and unpaid leave, is acknowledged, but the long-term impact on institutional knowledge, employee morale, and service quality is not explored. Moreover, while the financial constraints that led to stricter lending terms are discussed, the literature do not adequately examine whether these measures might have scoured trust or access to credit for members who were already in financial distress. Additional studies is thus necessary to examine how the resource adjustments affected the long term sustainability, resilience and competitiveness of CFIs, particularly in balancing digital transformation, cyber security among older and digitally illiterate and financial inclusivity.

3.3.1.2 Profitability

CFIs recorded inconsistencies in their business growth as characterized by membership, loan book qualities and loan repayments, and costs-to-income ratios. McKillop et al. (2020) note that membership growth has considerably been attributed to consolidations through mergers. Although the period between 2013 and 2020 saw a 21.1% decline in the number of credit unions in the UK, for example, at the same time, membership grew by 12.4% over the same period (Bank of England, 2020). The loan book quality deterioration was evidenced by the growth of loan arrears from £95.612 million in the first quarter to £115.25 million in the second quarter of 2020. The trend was feared to result in capitalization challenges if continued (McKillop et al., 2020). Contrastingly, COVID-19 did not adversely affect the savings of the CFIs. In fact, the savings (total member shares) of the same CFIs in consideration grew £3.029 billion in the first quarter to £3.188 billion in the second quarter over the same period. During the same period, the UK's CFIs registered a decline in

loans extended to members from £1.697 billion in the first quarter to £1.597 billion in the second quarter. According to McKillop and colleagues, CFIs have additionally been characterized by high cost-to-income ratios and low return on assets. Interestingly, during COVID-19, the average returns on assets ratio improved from 0.25% in the first quarter to 0.36% in the second quarter of 2020 (McKillop et al., 2020).

Desjardins Group (Canada) showed a robust and consistent track profitability performance record before the pandemic. The performance was notably driven by interest from loans, commissions, fees and diversified business operations such as retail banking, investment products, insurance services and other financial offerings. The pandemic, however, attracted business contractions, disruptions of economic activities, and increased volatility in the financial markets. Consequently, Desjardins Group's profitability declined significantly. Desjardin's surplus earnings before dividends dropped to US$285 by the end of the first quarter of 2020, from the last quarter of 2019, which registered surplus earnings of US$401 before dividends.

Additionally, the cooperative registered a 62.5% decline in the surplus earnings before member dividends in their personal and business services domain (Surplus earnings before member dividends were US$341 million and US$213 million in the first quarters of 2019 and 2020, respectively). These trends were primarily attributed to the pandemic's negative impacts on the general economy (Desjardins, 2020). The reports concur with the reports of the International Monetary Fund (IMF), which indicate that the global economy contracted by 3.2% in 2020 compared to the 2.8% positive growth registered in 2019, just before the outbreak of the pandemic.

The direct effects included being forced to take unpaid leaves, working half days, or working from home. While some employees were forced to work remotely by regulatory measures, some went into isolation due to fear of infection or because they contracted the virus and thus had to isolate to lower the risk of spreading it. Those who had to work physically were compelled to use personal protective equipment (PPEs) such as face masks and gloves. In severe cases, some CFIs laid off some of their workers. Nevertheless, CFI employees who served as tellers or customer representatives worked amidst uncertainties. Forced unpaid leaves or being laid off heaped financial constraints on the employees because the majority of the affected workers lost their livelihoods, thus causing them many uncertainties. The uncertainties and fears induced by the pandemic, therefore, affected the emotional and mental well-being of the employees and members of the CFIs, who ended up defaulting due to economic constraints (Ndirangu, 2021). Notably, most CFIs cushioned their members against the

sting of the pandemic by giving them relief, emergency grants and loans, essential services and other interventions to help them cope with the crisis.

The transition to digital services forced some CFI employees to adapt to new technologies and digital systems. The strategy enhanced efficiency in service delivery and optimised human resource use. The adoption of ICT saw the CFIs shift from the pre-COVID-19 traditional practices in which members flocked to the halls to access credit facility services. In some cases, the employees were forced to retrain to upskill themselves in the technologies and digital systems adopted. The retraining posed financial challenges, particularly when they had to pay for the training (Ndirangu, 2021).

The lockdowns, curfews, restrictions on social gatherings and business closures came with an economic downturn, which adversely affected the CFIs' businesses and operations, thus inducing financial strain, which forced them to implement operations cost-cutting measures. With the outbreak, service delivery by the CFIs was reduced by about 65.5%, while direct engagement with members was nosedived by 61.7%. Additionally, measures such as loan restructuring and moratoriums or suspension of loan principal payments reduced the ability of members to access CFI services by 26.8% and introduced 13.3% difficulties in accessing services through information communication technology (Nyamai, 2021). Consequently, the CFIs recorded a growing liquidity drain, particularly in Kenya, as reported in Albania, Indonesia, Tanzania and Rwanda, among other countries (Naseer et al., 2023). In Indonesia, for example, Ridwansah (2020) reported that due to the pandemic and the resulting responses to manage it, members of cooperative societies could not pay instalments, and many of them withdrew their savings from the CFIs, thus having a spiral effect on the liquidity of the cooperatives.

The literature demonstrates that the global crisis, which directly affects economic activities, disrupts the financial systems of all Organizations but, most adversely, investment-oriented and for-profit enterprises. The financial environment of worker-owned CFIs thus faces difficulties negotiating loans with conventional banks. Worker-owned cooperatives whose resilience depends on the performance of manufacturing, construction, and business services suffer the most during times of global crisis, which forces economic shutdown. Worker-owned CFIs, which relied more on industrial sectors in Eastern and Central Europe, lost as much as 20-30 percent of co-operatives and workers during a crisis. CICOPA (2010), however, notes that CFIs coped better in such difficulties than conventional enterprises because they mostly rely on their resources, including capital reserves maintained from members' subscriptions. Birchall (2013a) note that although economic crises force worker-owned CFIs to lay off some workers, they lay off fewer workers than shareholder-oriented enterprises. In

Spain, for example, Mondragon Cooperatives saw less than a 5% layoff compared to the 25% unemployment recorded among conventional enterprises during the 2008/2009 global financial crisis (Migliorelli, 2018). The findings are similar to those of Davis (2021), who noted that worker-owned cooperatives retain approximately 45% more employees than normal Organizations during global economic crises. In some countries, CFIs access mutualized support from institutions, including non-banking financial cooperative instruments (CICOPA, 2010) and investments oriented to economics.

The challenges notwithstanding, the CFIs in Kenya notably demonstrated impressive progress in deposits, loan advancement and assets. For example, gross loans advanced by the CFIs grew by 13.2% from US$4.11 billion in 2019 to US$4.48 billion in 2020. Additionally, deposits held by the deposit-taking CFIs grew by 13.4%, from US$3.1 million recorded in 2019 to US$3.4 million, while assets grew by 12.7% to US$4.9 million by the close of 2020. The core capital of the CFIs also grew by 23.4%, from US$619 million to US$772 million in 2020. In contrast, the non-performing loans portfolio increased by 8.4% to US$282.1 million in the same financial year (2020). The trends further provoke the question of the resilience of CFIs (Ndirangu, 2021).

The literature reviewed above presents a detailed analysis of the profitability and financial resilience of the CFIs during the COVID-19 era. However, it lacks a deeper interrogation of the sustainability, and long term competitiveness which goes beyond financial metrics. While the literature demonstrates growth in deposits, loan advancements and assets, it does not adequately compare with institutional and industry expectations and neither does it evaluate the vulnerabilities which might have arisen die to non-performance of loan, liquidity challenges faced during the pandemic. A more critical study was necessary so that an additional consideration on whether the CFIs dependence on internal capital repository and mutualized support would be adequate to safeguard their resilience, competitiveness and sustainability in and increasingly digital landscape threatened with cyber security among other risks.

3.3.2 Impact of Post-COVID-19 on the Resilience of Cooperative Financial Institutions

The outbreak of the COVID1-19 disease in December 2019 in the Wuhan City of Hubei Province in China and its viral spread across the globe sent the world economy into disruption, whose effects are still felt today. The virus is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; medically identified as 2019-nCoV). Later, the WHO declared it a global health emergency on January 30, 2020, and on March 11, the same year, it was declared a global pandemic. The pandemic caused widespread illness, death, and substantial disruptions to education systems, healthcare systems, workplaces, travel, business, social interactions and the world economy (Naseer et al.,

2023). According to the World Health Organization, there have been 767,972,961 confirmed COVID-19 infection cases, of which 6,950,655 (about 1% of the infection) confirmed deaths across the globe (WHO, 2020).

The emergence, spread and prevalence of the COVID-19 pandemic across the globe had various but profound and impactful implications on all sectors of the economy, including CFIs, insurance mutuals and financial cooperatives. Generally, with China contributing an estimated 39% to the global economy, the outbreak and the corresponding regulatory measures had grave consequences, including a decline in China's contribution to the global economy from 39% to about 16.3% (58.2%) during the pandemic. In the first quarter of 2020, Bloomberg Market Diagnosis predicted China's GDP growth would fall by 4.5% while the global GDP would decline by about 0.42% over the same period due to the outbreak (Naseer, 2023).

The pandemic and the measures crafted to manage it led to a significant contraction of the global economy (Naseer et al., 2023). According to Panchal and his colleagues, the world's leading economy, the United States, registered almost 26 million job losses in the previous five weeks of the first quarter of 2020. By March of the same year, unemployment topped at 4.4%, reaching the highest level since August 2017 (Panchal et al., 2020). In the same year, the International Monetary Fund (IMF) predicted that there would be a contraction of 4.4% in the global economy, which would be the worst contraction ever since the Great Depression. Notably, only China registered a growth rate of 2.3% among the top world economies. According to the IMF, global growth was expected to rise to 5.2% in 2021, while China and India, during the same period, were expected to register economic growth at 8.2% and 8.8%, respectively. However, the recovery was expected to be slow in the UK and slower in Africa (Francesconi et al., 2021a).

The impacts of the pandemic across the globe could have been direct and indirect on cooperative financial institutions and CFIs. The direct impacts include the direct effect of the pandemic on the CFIs, while the indirect impacts include the effects the pandemic had on the members of the CFIs, as individuals or as SMEs (Dave, 2021). These impacts were particularly pronounced among CFIs, whose membership mostly comprised low-income earners. For instance, most populations in the LMICs became more vulnerable because they generally had fewer resources, which could cushion them from the impacts of the pandemic. Consequently, they saved hardly anything as their attention shifted to domestic survival needs such as food, housing, and healthcare (Andago, 2020). The impacts were even worse in Asia and Africa's low- and middle-income countries (Buchenau & Cuevas, 2020).

These impacts were accelerated by the shutdown of business and disruption of the supply chain caused by implementing mitigation measures.

The lockdowns forced many businesses to close or be taken over by other entities. The effects were, therefore, enormous across the globe due to the loss of trade, tourism, sports, and education, which resulted in industry recession, increased unemployment caused by layoffs, temporary closedown, or reduced operation hours. Some CFIs faced limited access to intermediary materials and goods needed to sustain their production. Additionally, reducing commodity demand exposed manufacturers to more market challenges (Naseer et al., 2023). Other studies noted that the service industry recession, the disruption of the education sector, the sporting sector, and the disruption of activities in the agricultural sector, which trickled down to the food industry, all led to a decline in sustainability and quality of life (Naseer et al., 2023).

For example, the cost of agricultural goods fell by 20% due to a worldwide slump in demand from hotels and restaurants (Aday & Aday, 2020). Moreover, measures such as the self-isolation of employees (inspectors and workers) who contracted the virus affected the delivery of the factories and the agricultural industry (Aday & Aday, 2020). The situation instigated losses from perishable products, such as foods high in fat, carbohydrates and protein, such as meat and vegetables. In some instances, some markets took matters into their own hands and restricted floor trading, which hurt the exchange of commodities. One example from more recent times is the Chicago Mercantile Exchange, in which closures were opted to minimize large gatherings that would catalyse the spread of the virus (Sridhar et al., 2023). In some cases, people over-purchased and stocked products, which they felt would run out of supply due to disrupted production (Panic purchasing), thus complicating shortages (Billiet et al., 2021). Concerns, for instance, were raised by the American Veterinary Medical Association (AVMA) over the inadequate supply of animal drugs, including those that well-established suppliers supplied.

Among the main impacts included was the reduced ability of the CFIs to adequately provide credit facilities to their members. According to the World Bank through Kenya's CFI Societies Regulatory Authority (SASRA), the CFIs experienced some of the worst business slowdowns, as indicated by insignificant asset growth in 2020, relative to the previous two years. The mean gross loan growth was negative during the same period, sharply contrasting with the previous two years, during which the CFIs registered a growth rate (Zetterli, 2020). Bartik et al. (2020) note that the trends were partially occasioned by job losses, pay cuts and corresponding defaults and moratoriums by members to repay loans by members of the CFIs.

Moreover, the pandemic led to an increased MFI portfolio at risk. In other words, the level of risk associated with MFIs' loan portfolios rose. In basic terms, more loans were in danger of default or becoming delinquent. With the MFIs' portfolio at risk increase, a higher percentage of borrowers faced financial difficulties or could not make timely loan repayments. This was instigated by various factors, such as economic downturns triggered by the lockdowns and regulatory restrictions. An increased portfolio at risk can be a cause for concern for lenders as it may lead to higher financial losses and challenges in maintaining the stability of the MFIs. MFI lenders are compelled to closely monitor this metric to assess the health of their loan portfolio and take appropriate measures to mitigate risks (Cooperatives Europe, 2021).

In the same report, the pandemic accelerated the deterioration of capital adequacy, which caused some CFIs to be non-compliant in Kenya. In Mexico, CFIs faced the risk of medium-term solvency problems (Billiet et al., 2021). In other words, some CFIs faced the risk of being incapacitated to meet their medium-term financial obligations, even if the same meant disposal of their assets. The liquidity was accelerated by members' poor repayment and withdrawal from regular savings, delays or non-request of new wholesale financing lines. Consequently, the liquidity situation of MFIs became unstable, with providers facing difficulties meeting the cash demands for client withdrawals, leading to a rush of members trying to withdraw their deposits. Suspension of loan collection during a voluntary or mandated freeze caused new lending activities to slow down, subsequently putting further strain on the income of MFIs. Consequently, they struggled to retain their staff, service their debt, and meet the demand for the withdrawal of savings (Hoang & Hindery, 2020). Commercial banks also faced similar pressures during this crisis and reduced credit lines extended to MFIs.

The crisis further jeopardized the issuance of new loans to either new clients or existing clients who had successfully paid off their previous loans, which are usually incentivized to qualify for subsequent loans. In summary, the combination of these factors created significant challenges for MFIs and commercial banks alike, affecting their liquidity and ability to sustain normal operations during the crisis (Hoang & Hindery, 2020). Ren et al. (2021), also noted that the pandemic forced many microfinance institutions (MFIs) like CFIs into financial inefficiencies. As a result, the pandemic became a global and national threat to the continuity of the SMEs, which mainly relied on the MFIs for services they could not easily access from their governments. The threat was mainly attributed to the pandemic, which created an unfavorable environment and complicated routine operations. Consequently, economic crises, partly catalyzed by some government policies across the globe, accelerated the pandemic's impacts. The spiral effect was a shrink in consumption, which also trickled down and negatively affected production (Gustavsson, & Larsson, 2020).

In other studies, Rustam (2020) found that the strategies executed to curb the spread of COVID-19 deconstructed the systems of financial institutions, including MFIs. Many financial institutions reportedly closed most of their Automated Teller Machines (ATMs). Some closed some of their operational units, while some cut down their operation hours. Meanwhile, others restructured employee work schedules, including institutionalisation of operations shifts so that some employees could work from home, work shorter hours, or take compulsory unpaid leaves to enhance the CFIs' operational measures to curb the spread of the virus and lower operational costs.

Additionally, the regulatory measures disrupted the sports and entertainment sectors in significant magnitude; the outbreak of the pandemic forced the cancellation and postponement of most local and international sporting events to lower the risk of spreading the virus and thus protect the health of the athletes, the spectators and the staff. The cancellations and postponements led to significant financial losses because the revenue streams from selling entry tickets, concessions, merchandise and broadcasting rights could not be realised. The sporting clubs, teams and Organizations suffered economic shock, forcing them into financial constraints. Many small sporting clubs struggled to remain afloat and, therefore, laid off some of their staff and implemented pay cuts for remaining staff and athletes. Sports broadcasters equally suffered because their advertising revenues nosedived, and broadcasting contracts with sports Organizations and leagues only worsened the situation. The effects trickled down to companies which sponsored clubs and athletes because they could no longer leverage their investments. The conditions saw endorsement deals and sponsorships renegotiated or suspended. Even as the pandemic eased, strict safety protocols such as testing, limited stadia capacities, bubbles, and bio-secure environments forced the sporting industry into slow motion (Weston, 2020; Drewes et al., 2021).

In Kenya, the pandemic forced the government to enforce emergency containment strategies, which included a nationwide, selective or general lockdown, dusk to dawn curfew; closure of schools and colleges, businesses, entertainment joints, and restaurants; restrictions on all forms of gatherings (including in places of worship); social distancing in public and transport vessels; compulsory wearing of face masks, hand washing and sanitisation in public places (Nyamai, 2021). Consequently, all sectors of the economy experienced severe impacts, particularly the informal sector, which happens to be the biggest employer in Kenya. To cushion the most vulnerable populations, the government unveiled economic assistance to help them during the financial hardships directly or indirectly caused by the COVID-19 crisis. Prior to the outbreak of the pandemic, Kenyan economic growth was healthy and on an upward trajectory, expanding by 6.3% in 2018 and 5.4% in 2019, with a projection of 6.2% in 2020/2021. However, with the confirmation of the first case of the COVID-

19 pandemic in March 2020, the Kenyan economy was affected drastically, with IMF estimating that the growth would fall to -0.1% in 2020 ().

Oseno and Margaret (2022) studied the impact of the coronavirus pandemic shock on the liquidity of CFI firms in Kenya and the mitigation measures for the COVID-19 pandemic shock, as well as identifying strategic response interventions for CFI companies to stay afloat. A qualitative study design involving guided interviews was used. The response strategies established by CFI companies were reported to be loan restructuring, loan allocation, development of new CFI packages, refinancing production, and limiting external borrowing. The study only included warehouse CFIs, but since CFIs include depot and non-CFIs, studies are needed to delve deeper into both post-pandemic.

Suspension of interest rates aimed at cushioning members of the societies against the economic shock caused by the pandemic was instituted. The economic shocks were worsened by unpaid or half-paid compulsory leaves, necessitated by the closure of business and reduced hours of operation. Restaurants and entertainment joints, for instance, were forced to close due to the dawn-to-dusk curfews. Reportedly, members of CFIs in aviation, horticulture and hospitality withdrew their savings to focus on meeting their basic domestic needs. Members of such CFIs suffered some of the worst impacts of the pandemic due to the suspension of international airlines (KUSCCO LTD, 2023). Consequently, the CFIs' daily operations, performance and growth were significantly affected.

The service sector reportedly experienced the worst shock. However, within IWOSS, besides tourism and trade and repairs, all the other IWOSS sectors' share of employment expanded during the COVID period. The ICT sector remained resilient and demonstrated to be an important enabler for firm operations across sectors – through promoting business continuity amid the pandemic. In Kenya, Information Communication and Technology (ICT) experienced a once-off shock in the March/April 2020 period and recovered strongly thereafter. Horticulture and agriculture have remained relatively resilient even with COVID-19, enabling the Country to remain competitive in the global market (Kemboi, 2020).

The reviews above provide a wide scope account of the experienced impacts of the pandemic of CFIs, including global economic, sectoral disruptions, and regulatory responses which sustained the CFIs. While the review articulately highlight on the external shocks and the diverse but immediate responses by institutions, states, and business enterprises including CFIs, The literature reviewed do not delved extensively on analysis of the structural adaptations that is indispensable for long terms resilience and sustainability. The available literature so far fundamentally focuses on discussions around short-term mitigations measures taken by CFIs including loan re-structuring, suspension of

interest rates, remote service delivery, liquidations and some government interventions. However the literature do not examine whether the strategies adopted could adapt the CFIs for future crises on were merely reactional in nature. Furthermore, the review also generalizes CFIs experiences without considering the disparities across different economies; developing and developed, without sufficiently distinguishing the divergent levels of resilience between CFIs in developed and developing countries and between CFIs with stronger capital reserves and those which significantly rely on external funding. A more critical approach, integrating evaluation of CFIs' adaptability beyond survival, and extending to their ability to innovate, diversify revenue stream and build stronger foundation for sustainable resilience is paramount.

3.4 Cooperative Financial Institutions Response to COVID-19 Pandemic

Various adaptive strategies were formulated and implemented in different places and levels depending on the pandemic's prevalence, severity, and impact to cope with its adverse effects. The strategies included a change of management structure, process and procedures, a change of management focus, the introduction of precautionary measures, the introduction of home delivery support to members of the community, new business models, partnership to strengthen the community, international collaboration, and local collaboration (World Cooperative Monitor, 2021). Notably, these responses would not have been possible without cooperatives' resilience factors. Broadly, these factors can be categorized into three categories: people-centeredness, joint ownership and control, and inherence to the cooperatives model at the micro level. This section examines the strategies and adaptive measures employed by CFIs to navigate the unprecedented economic crisis brought by the pandemic, focusing on how they sustained operations while supporting members through financial hardships.

3.4.1 Restructuring

Restructuring and reorganization of cooperatives' business model, management, processes and procedures have been determined as a critical resilience factor amidst crises. Restructuring involves a change of frameworks of the credit facilities, including qualification and interest rates, the operations of the CFIs, reorganizing employees' working schedules, digital transformation, and risk management, diversification of investments (McKillop et al., 2020).

3.4.1.1 Digital Transformation

Many cooperatives had to invest in digital transformation, limiting physical contact and ensuring continuity. Organizations developed innovative solutions to commercialize rural smallholders by

providing advisory services and market intelligence by phone or aggregation. Many CFIs, for example, invested in online banking and mobile banking through mobile Apps and other digital media, which enabled their members to operate their accounts and apply for loans and savings withdrawals without having to walk to the offices or banks (Ridwansah, 2020). Consequently, adopting digital and mobile banking technologies ensures continuity of services and improved efficiency. Cooperatives Europe (2021) notes that the cooperatives supported each other during the pandemic to create more social value for their members. The cooperatives leveraged technology (websites and social media) to interact with each other and inspire each other across the globe.

For example, the Grupo Cooperative Cajamar of Spain leveraged technology to establish a home banking service targeting older people, who could thus access cash in the comfort of their homes. Additionally, the same cooperative facilitated their employees to contact their elderly customers through mobile phones to support them and keep them adequately informed and reminded of their security and protection of personal data while using the home banking technology. Coopeuch in Chile also readjusted its business model to introduce digital tools for strategic planning (World Cooperative Monitor, 2021). In Bali, 172 cooperatives initiated semi-online, online or digital technology financial services in 2019; in 2020, 133 implemented the same strategy (Rustariyuni et al., 2022). Consequently, the cooperatives experienced efficiencies in transaction processes while minimising the risk of spreading the virus.

This restructuring lowered the risk of transmission. Additionally, digital transformation created a means of working remotely and meeting virtually. CFI staff members whose jobs did not require physical presence worked from home while board or committee meetings were held on virtual meeting platforms (Capodistrias et al., 2022). Many CFIs, therefore, had to train their members on the use of digital communication media to broadcast awareness about COVID-19 and provide themselves with sustainable income as the lockdown took effect (Dave, 2021). The Mid-counties' Cooperative Co-op initiated free virtual consultations in the UK to support parents further (Billiet et al., 2021).

Hoang and Hindery, (2020) notes that digitisation was expanded to enhance resilience and coping with the pandemic in Africa. In his study, Hoang and Hindery, (2020) points out that most microfinance providers adopted or expanded digital services through mobile phones or tablets to continue providing services such as loan application, processing and money transfer, and customer registration. In so doing, they enhanced efficiency, which the pandemic would compromise. The adoption of mobile phone technologies enabled microfinance providers (MFPs) to carry out their

routine operations and deliver new services such as savings collection. Additionally, existing digital services were expanded to cover remote services to ease the accessibility of digital services, such as electronic payments and information systems. Hoang & Hindery, (2020) also notes that the expansion of digitisation enabled the microfinance providers to simplify customers' due diligence for some accounts, raising transaction limits and waiving or reducing credit fees and loan disbursements and repayments. Consequently, the MFPs were able to cope better with the pandemic.

CFIs in Kenya also adopted technology as a measure to enhance their resilience. A study by Omwando, (2021) on the resilience of CFIs in Nairobi established that most CFIs adopted technology on a wide scale. The main technology they focused on included various mobile banking models and technologies to realize virtual banking solutions. The extent of adoption of virtual banking amongst bank clientele was found to favor social distances and, therefore, a way of ensuring continuity while maximizing health safety precautions against COVID-19 infection. The study recommended that CFIs should consider information and technology sharing across various networks to accelerate the adoption of technologies that would enhance their sustainability while advancing improved customer experience.

In a survey to determine how CFIs managed financial risk with SME borrowers during the pandemic, it is reported that KUSCCO intensified weekly virtual training for CFI workers to ensure CFIs put in place appropriate strategies to protect liquidity management such as guarantees, insurance cover to indemnify the customers and special funds. Kanana and Matabi (2022) also noted the same trend where CFIs adopted digital technology to help them cope with the pandemic. For example, ASILI CFI increased the number of its members using the mobile application known as M-ASILI to do various transactions such as withdrawals, fund transfers to other accounts or other members, deposits, and utility payments. The loan application was also digitized with the help of Microsoft Navision as the core banking system. The CFIs ran a member portal on the website, which assisted members in viewing their statements and applying for different loans online. With this digitization in some CFIs, the members were safer from coronavirus infection (Kanana & Matabi, 2022).

The literature review shows a well-documented account of digital initiatives which CFIs took to survive the severity of the pandemic. It highlights the immediate shift to mobile banking, online financial services and virtual meetings. However, the reviews do not dwell on the evaluation of challenges and limitations associated with digital restructuring such as digital illiteracy, inequality in access of technology and cyber security threat all of which as subject of high magnitude. Additionally, the literature did not explore on long terms sustainability of digital infrastructure in developing

economies and whether the adoption were planned for long term use of was provisional for the situation created by the pandemic. Moreover the literature highlighted cooperative collaboration and knowledge sharing in digital adaptation does not the tradeoffs between smaller resource limited CFIs and well established and affluent counterparts. A balance analysis, considering both opportunities and challenges of digital restructuring for future resilience is necessary.

3.4.1.2 Loan Restructuring

Another element of restructuring was evident in the framework of credit facilities offered by many microfinance providers (MFPs). As a risk mitigation strategy, many MFPs avoided issuing sub-prime loans. In cases where borrowers were perceived as sub-prime, some MFPs avoided issuing them loans due to fear of increased risk of defaulting repayments. Instead, CFIs adopted a divergent governance structure which involved scrutiny of the decisions of conventional financial institutions. The scrutiny enabled the CFIs to understand better that the loans they offer are savings for other members (Hoang & Hindery, 2020).

On the other hand, some CFIs became lenient to their clients and members. The leniency involved either issuing moratoria, restructuring loans for members, or writing off some loans in response to the pandemic. The primary rationale behind the initiative was to cushion members and clients from the harmful effects of the pandemic. Additionally, some CFIs restructured their credit facilities by reducing lending. In a survey of global microfinance institutions by CGAP Global Pulse, Zetterli (2020) claims that more than 69% of all microfinance institutions cut down loan disbursement while about 1% stopped lending. Notably, the reduction in lending was partly induced by the decision of the MFIs to lower risks or hoard cash in speculation of uncertainties in the future or due to more strict regulation but was also caused by reduced demand from clients (Zetterli, 2020; Gustavsson & Larsson, 2020).

According to Ahmed et al. (2021), Kenya CFIs have been keen to implement a reduction in lending and flexible staffing arrangements during the crisis, as was witnessed during COVID-19. Reduced lending is a precautionary measure Organizations use to cut down their lending to reduce the risk of repayment defaults. Defaulting refunds of loans from financial institutions is a big risk but an even bigger risk to MFIs. As most of the members of the CFIs are low-income earners and often qualify for loans from the MFIs without collateral or repayment guarantee, their risk of default was worsened by the pandemic, which cut down the incomes of the population. Gustavsson and Larsson, 2020) further notes that the reduced lending was not only a risk management strategy, but it was

further occasioned by lower loan demand from clients, lower risk tolerance by the MFIs, riskiness of clients, tighter regulatory frameworks and general hoarding of cash to meet needs which would emerge with the increasing effects of the pandemic.

While the review highlights on loan restructuring measure taken by CFIs during the peaks of the pandemic, with measures including loan moratoria, cut down of lending, and rigorous credit scrutiny, it lacks the critical review of the broader implication of those measures on both CFIs and their customers/members. There is minimal literature of the possible long terms implication of the reduced lending and stricter scrutiny, such as reduced financial inclusion which is the primary focus of the CFIs, diminished trust among the members and the potential of CFIs losing their relevance for the members. Moreover, the review did not critically evaluate whether alternative risk mitigation measures such as credit insurance and government backed relief programs could have enabled the CFIS to afford loan write-offs and to continue lending without excessive risk aversion. It is therefore important to consider how CFIs balanced financial sustainability while holding onto their core mission. This is only possible through evidence based research.

3.4.1.3 Staff Restructuring

The epidemiology of COVID-19 forced most Organizations to reorganize their places of work to minimize the spread and the impacts of the disease on employees' health. The re-organization partly followed WHO regulations and recommendations, which included social distancing and reduction of mobility to minimize the risk of spread of the virus. The situation forced CFIs, like any other Organization, to restructure the work processes and introduce working remotely without people coming to the offices for jobs which did not require physical presence (Nicola et al., 2020). Staff restructuring could take two forms: soft and hard. Soft restructuring gives priority to the employee and is therefore implemented for the good and well-being of the employee (Bieńkowska et al., 2022). On the other hand, hard restructuring is an HR strategy meant to cushion the Organization from the harsh prevailing economic conditions.

Soft human resource strategies include training employees to acquire new skills necessary to work in new conditions and inspire more resilience (Nijssen & Paauwe, 2012). Additionally, some Organizations focus on appropriate communication processes and the transfer and exchange of information (Wood et al., 2011). They also tried to provide activities such as mentoring and coaching, which positively, even in crises, raise the wellbeing of employees (Ramlall, 2018). In practice, employees' development means developing their skills and the Organization. Although employees' development and promotions are considered one of the most effective ways to support their

performance, they may not be prioritized during crises because the overall goal shifts from performance to adaptation and resilience.

In times of crisis, when the need to survive in the market becomes crucial, Organizations decide to take many radical steps that eliminate the Organization's flexibility (Bieńkowska et al., 2022). The HR department also has a key role in dealing with the consequences of the crisis, which is responsible for reducing stress among the employees in the Organization, still taking care to invest in human capital but keeping in mind the minimization of strategic costs (Vardarlıer, 2016). Among these tools are modern methods of offering alternative jobs, part-time positions, or flexible working hours (Bieńkowska et al., 2022). This provides employees with a certain sense of security, which in times of global crisis will have a more effective impact on employees, their performance, and their intention to stay in the Organization. Thus, issues related to development and promotion opportunities will come into the background so that their reduction during the crisis will not significantly impact employees and their performance (Wynen & Op de Beeck, 2014).

Amidst a global crisis causing economic decline, CFIs implemented stringent human resource strategies in response to their financial status. These strategies encompass measures such as enacting pay reductions through unpaid leaves, downsizing workforces, implementing hiring freezes, curtailing training budgets, and diminishing individual performance targets and associated perks (Clibborn, 2020; Roche & Teague, 2014; Wickramasinghe & Perera, 2012). CFIs frequently opted to curtail numerous supplementary expenses, including outlays for supplementary benefits, promotions, and employee advancement (Vardarlıer, 2016). Consequently, despite heightened employee expectations, the crisis curtailed opportunities related to employees' growth and promotions. Furthermore, as previously noted, Organizations often found themselves constrained to diminish or entirely suspend recruitment efforts, prompting HR departments to devise mechanisms that mitigate such circumstances and retain existing personnel within the Organization, notwithstanding the mounting risk of employee discontent stemming from reduced promotional prospects and employee development initiatives (Vardarlıer, 2016).

Cutting down operation costs initiatives reduce the financial burden of CFIs. The Organization must cut off preventable expenditures to ensure that financial obligations are minimized to the most compulsory. In the case of COVID-19, laying off some workers and enforcing unpaid leaves or half-day or fewer hours work schedules lowered the risk. In the arguments of Hoang and Hindery (2020), the strategic measures used to manage the COVID-19 pandemic reduced the scope of many business operations through the extensive adoption of digital technologies and self-service outlets.

Bieńkowska et al. (2022) highlighted the reduced intensity of administrative and operational activities implied that the CFIs would have less workload. Some CFIs sometimes temporarily reduce wages paid to their workers (Hoang & Hindery, 2020). Although laying off some staff, unpaid leaves and temporary reduction of wages exposed the workers to the economic crisis, the actions cushioned the CFIs against potential adverse repercussions such as the closure of operations or collapse. In implementing these strategies, therefore, CFIs enhanced their resilience to the COVID-19 pandemic.

Literature covers staff restructuring strategies implemented by CFIs during the pandemic and highlighted both soft and hard restructuring coupled with cost cutting measures including unpaid leaves, downsizing, and introduction of flexible work arrangements (remote work) and reduced employee benefits. However, the literature lacks a critical assessment of the long term effects on the human resource of the CFIs, on dimensions such as staff morale, retention and organizational performance. The review does not sufficiently explore the measure might have compromised service delivery and long-term institutional capacities. Although the literature seems to assume that digital adaptation reduced the administrative workloads, the literature does not show how CFIs planned to address potential inefficiencies, employee burnouts, downtimes, and digital divide. Additionally, the literature leaves a gap on approaches such as reskilling employees, or leveraging government subsidies to maintain human resource. Additional research is thus required to evaluate whether CFIs' staff restructuring efforts merely reactional of were strategically thought through for long terms adaptability and resilience in bad and good times.

3.4.1.4 Job Redesign

Job design plays a vital role in HRM processes because it considers all structural and social aspects and the workplace's impact on the employees. Furthermore, once a job design is made, it must be systematically reviewed and redesigned because many factors, such as management style, working conditions, the technology used in the Organization, and environmental dynamics, influence how the job will look (Bieńkowska et al., 2022). The COVID-19 pandemic has caused some changes in job design on Organizations' global level. HRM professionals must ensure that the Organization's operations and employees align with the changes. They also should support employees in adapting to these changes to ensure long-term benefits in improving job redesign (Caponecchia & Mayland, 2020).

Many Organizations during the COVID-19, to avoid business downtime, quickly had to work under changed conditions: using new technologies in entirely new spaces—most often at home or in hybrid

mode, with reduced social and physical interaction, and with far less supervision and support from other colleagues (Caponecchia & Mayland, 2020). Changes in work are not just about adapting to new technologies or automation; they often reflect changes in how tasks are conceptualized and performed, such as treating patients online or providing customer service to restaurants online (Foss, 2021). This explains why job redesigning plays such a vital role in the functioning of an Organization. The current pandemic indicates that the implemented changes will persist for a long time and remain in the Organization even after the pandemic. Therefore, HRM professionals need to proactively review job design, risk analysis, regulations, guidelines, and practices to protect employees' health in the future (Dirani et al., 2020).

The literature presents a comprehensive review on how CFIs restructured their work places during the pandemic. Among the main measures included adapting to new technologies, hybrid work models and evolving work place dynamics. The literature however does not address some critical things for example it does not highlight on the challenges and the unintended consequences that might have come with the restructuring. There might have been transition hiccups characterized with resistance and hesitancy, digital gaps, and psychological toll on remote work arrangement. Additionally the literature does not explore whether CFIs, strategically institutionalized such shifts or if they were short lived responses or if they were merely short-term crisis responses. It is therefore pertinent that additional research be carried out to assess whether strategies such as job-redesign strengthened resilience during the pandemic and post pandemic or if the same might have introduced operational inefficiencies.

3.4.2 Enabling Factors

The resilience of Cooperative Financial Institutions (CFIs) during the COVID-19 pandemic was largely supported by a range of enabling factors that facilitated their ability to restructure operations and meet the evolving needs of their members. These factors included regulatory flexibility, technological advancements, strong governance, and a cooperative ethos that prioritised member welfare. In Kenya, the SACCO Societies Regulatory Authority (SASRA) provided essential regulatory adjustments, while the adoption of digital platforms allowed CFIs to continue offering financial services remotely. This section explores the critical factors that enabled CFIs to pivot and remain operational during the pandemic, ensuring continued access to financial resources for their members.

3.4.2.1 People-Centeredness

CFIs operate within the confines of the principles of open and voluntary membership and democratic management. Consequently, CFIs prioritize the interests, opinions and rights of the members. Unlike conventional corporations, which give decision rights to capital and are motivated by profits, CFIs give decision rights to membership and are motivated by members' welfare. This implies that CFIs prioritize creating value for members by successfully aggregating and translating information about members' needs and expectations into valuable products and services (Reynolds, 2013). By upholding the principles of voluntary membership and democratic management, CFIs appreciate that their members are intrinsically capable of optimizing personal and Organizational interests based on moral principles. This implies that CFIs embrace a balance of objectives and involve the members in the decision-making process. User or member centrality is about collective ownership and democratic governance, which gives the members priority in sharing their views, interests, and concerns so that decisions of the CFIs are made for the ultimate good of the members. To achieve this, CFIs adopt structural paradigms that grant decision rights based on membership but not capital/ownership (International Labour Organization, 2020).

Additionally, cooperatives limit the primacy of shareholder value because patronage refunds are reimbursed to members instead of following the capitalist logic practiced by conventional firms. In so doing, cooperatives promote collective ownership. This dynamic is further reinforced by the non-transferability of ownership in cooperatives (Billiet et al., 2021).

Dave (2021) notes that the democratic management structure of cooperatives and upholding the one-member-one-vote principle implies that the cooperatives are governed collectively. Consequently, the opinions and decisions of members are respected by the manager. The managers were thus constrained to allocate means to create use-value, particularly in times of crisis such as the COVID-19 pandemic. The centrality of the members, through economic participation in the activities of the cooperatives and their corresponding commitment, added to the CFI's coping advantage because it created a mutual relationship reinforced by strategic linkages between the members of the CFI and the CFI itself (Dongre and Paranjothi, 2020).

Due to the centrality of members in the CFIs, many committed to maximizing members-user utility. The commitment forced the cooperatives to change their economic production activities. In some cases, the change was characterized by redirection of the allocation of the financial reserves and investment plans. For example, Lokaliteit Workers, a Cooperative Restaurant in Ghent, Belgium,

diverted into an entrepreneurial switch during spring 2020 to ensure that the workers (members) remained at work. The cooperative, for example, reprocessed perishable products into canned and fermented products such as kimchi or tomato sauce, thus transforming the restaurant into a food shop. The shift enabled the cooperative to continue with business while at the same time providing healthy food to the surrounding community (Billiet et al., 2021). Another cooperative in Belgium, La Cooperative Ardente, delivered biologically, ethically and locally produced food items in collaboration with local short-supply chain farmers due to the drastic and massive rise in the demand for local foods. Since the consumers avoided supermarkets for fear of infection instigated by the crowdedness of the supermarkets, cooperative members volunteered to help with the continuous supply and distribution of food in the early weeks of the lockdown (Cooperatives Europe, 2021).

In their literature review study, Dongre and Paranjothi (2020) documented the experiences of co-operatives in the Asia Pacific in responding to the COVID-19 crisis. The authors found that cooperatives primarily focused on relief measures and provided social and economic protection to their members and workers in the Asia Pacific region. They partnered with the state to an appreciative extent. An overview of the responses undertaken by the cooperatives showed that they focused on addressing the situation immediately. Therefore, the response activities to the COVID-19 crisis mostly ranged from providing a financial contribution to those in distress through designated relief funds.

The centrality of the members explains why many CFIs crafted interventions to cushion their members as the pandemic raised havoc. Reportedly, some insurance and credit CFIs established programs to alleviate the debt of members and affiliates; meanwhile, other CFIs rolled out medium- and long-term plans to help their members recover from the mayhem of the pandemic. For example, the Odua Cooperatives Conglomerate Ltd of Nigeria extended credit facilities at lower interest rates to their members to help them grow amidst the pandemic. Kilimanjaro Cooperative Bank Ltd in Tanzania also extended funds to other cooperatives to help them purchase and store members' farm produce, which could not reach the market due to the lockdowns. In Kenya, the Cooperative Bank of Kenya Ltd restructured loan repayments and short-term financing for their operations and granted their members moratoria on interests and principal repayment (World Cooperative Monitor, 2021).

According to the literature reviewed, people centeredness was a key resilience during the pandemic, emphasizing democratic governance collective ownership and member engagement in decision making. Additionally the literature exposes how CFIs prioritized members' welfare by offering financial reliefs, providing both financial and health education to members to mitigate the pangs of

the pandemic. Nevertheless, the literature barely highlight the challenges and limitation which came along with the emphasis on people centeredness in a highly competitive sector. For instance, issues to do which slow decision making during crisis could mean a lot for a CFIs, The literature assume that all the CFIs had reliable liquid capital reserves which could be redirected to members interests without harming the institutions on considering its sustainability. Additionally, while highlighting CFIs' collaboration with government, the literature does not assess whether regulatory constraints, bureaucratic inefficiencies, or internal conflicts affected these collaborations. This further justified why this study was significant.

3.4.2.2 Method of Capitalisation

Most CFIs do not rely on the capital market for funding because they focus on retail banking. Risk-based- capitalization involves assessing the risk profile of liabilities, assets and off-balance items to determine the amount of capital required every time. Higher risk assets, for example, necessitate higher levels of capital reserves. On the other hand, leverage-based capitalization weighs into capital adequacy without taking care of the specific risk characteristics of the assets. If a CFI, for example, adopts a risk-based capitalization method, it would be forced to focus on retail banking, implying that most cooperatives retain most of their profits and take fewer risks, thus enabling them to retain higher indivisible capital reserves. In France and Italy, accumulating such reserves is mandatory and comes in handy for continuity in large-scale pandemics (Billiet et al., 2021). Billiet et al. further note that the capital reserves act as financial immunity, ensuring that cooperatives continue their production and service delivery to their members. The non-reliance on the capital market for funding implies that CFIs do not have to suffer shock in the capital market as other conventional financial institutions would.

Additionally, the double quality of members of most CFIs minimizes their dependence on external financing. Lescure et al., (2021) note that the additional capitalization advantage of CFIs is drawn from most of them investing in the real economy within the market they operate in. Dongre and Paranjothi, (2020) argued that CFIs are more resilient because they balance profit generation and stakeholders' consideration better. Also, the absence of shareholders, lack of shares in the financial market and the relative information advantage enable CFIs to weather the pandemics better.

The literature review on capitalization methods as resilience factors for CFIs during COVID-19 presents valuable insights but contains several limitations. The review relies heavily on European examples (France and Italy) without sufficiently acknowledging the contextual differences in

regulatory environments, member capacity, and economic conditions that might limit direct applicability to other economies like Kenya. Additionally, the assertion that "non-reliance on the capital market" universally enhanced resilience oversimplifies the complex liquidity challenges faced by many CFIs upon decline of members' deposits and savings. The review also fails to examine how double quality of members created correlated risks when members faced financial distress. Furthermore, while mentioning investment in the "real economy" as an advantage, the review fails to critically assess how such investments performed during pandemic-related economic shutdowns. The literature would benefit from a more nuanced analysis of how different capitalization approaches performed across various CFI sizes, member compositions, and regulatory frameworks.

3.4.2.3 Embeddedness in Global Movement and Local Community

Cooperatives by design are rooted in global cooperative movements due to the shared identity right from the community level. Embeddedness in global movement means that cooperatives, regardless of where they are, share an Organizational identity recognized and promoted worldwide (Becker et al., 2017). The shared identity is a question of common principles to which all cooperatives subscribe. The principles serve as the constitution which guides all the cooperatives' routine operations, making them different from all other conventional financial institutions (Basque & Langley, 2018).

Many other cooperatives leveraged their embeddedness in the global movement to cope with the pandemic's repercussions. According to Lashitew et al. (2020), cooperatives embedded in global movements are better positioned to adapt to crises because they are more exposed to the members' demands and the opportunities created by the prevailing conditions. Most cooperatives operate with default operational designs, which automatically embed them in the global movement, giving them Organizational recognition as promoted by the International Co-operative Alliance at the global level. Being aligned and recognized in global cooperative movements enhances the bounded solidarity of cooperatives across the globe. This happens because the cooperatives develop a shared sense of belonging to the cooperatives' enterprise (Dufays et al., 2020). In a nutshell, global cooperatives' embeddedness gives individual cooperatives a significant level of immunity through which they can preserve their operations, cope with crisis and conjure collective solutions through which they sustainably meet the needs of their members during the pandemic.

In addition to being embedded in the global movement, cooperatives also have firm local community anchorage (Munoz et al., 2020). This deep-rootedness is born from the tight association between the CFIs and their members and users. The cooperative, therefore, enjoys the advantage of social capital

derived from the stakeholders. The members of the cooperatives, on the other hand, can easily access cooperative services and participate in decision-making (Dufays et al., 2020).

On the premise of global and local embeddedness, the Italian retail cooperatives, for instance, donated their surplus revenue to support local community-based cooperatives, which were rendered bankrupt due to the lockdowns. The support went a long way in cushioning the local cooperatives, thus enhancing their coping abilities amidst the pandemic. The same kind of support was also witnessed across international borders. For example, Coop Italy responded quickly to the shortage faced by the Bulgarian retail cooperatives when they faced a nationwide shortage of cleaning detergents and disinfectants during the first wave of the pandemic. In Belgium, Pwiic and Multipharma partnered to set up an online community that brought together supply and demand to help them at the local level (Cooperatives Europe, 2021; Adam & Alarifi, 2021).

Tortia & Troisi, (2021) findings on cooperatives' response to the pandemic reveal strategies for emerging challenges. The study provides good insights into cooperatives' responses at the height of the pandemic but may not provide more information on the latter stages of the pandemic response. Thus, a post-pandemic investigation is necessary to gain insight into the cooperative response. Habiyaremye, (2021) conducted a study across six countries in South America and Africa to assess the response strategies adopted by co-operatives towards the COVID-19 pandemic. The cross-sectional study design conducted through phone surveys in four survey rounds from May 2020 through February 2021 revealed that cooperatives provided pandemic-related information to the members, changing operations to address mobility/social distancing requirements, and developing new operating procedures to ensure the safety of co-operative staff and members. The study was only conducted amongst cooperatives supported by USAID. Hence, the findings may only be limited to these cooperatives, not financial cooperative institutions. In further studies, cooperatives adopted various strategies to neutralize the impacts of COVID-19. Among the strategies included were user/member centrality, structural adjustments, and embedding in a global movement and the community (Tortia & Troisi, 2021).

Elsewhere in India, the Self-Employed Women's Association took up initiatives to promote proper and adequate nutrition for their communities' vulnerable populations by establishing community kitchens. In the UK, the Mid-counties' Cooperative Co-op launched the "Helping Hands" redundancy support programme across England to cope with the lockdowns. They offered free childcare support services, flexible payment and financial reduction to parents of children who were affected by COVID-19 (Billiet et al., 2021).

Zubair et al. (2020) studied the repercussions of the 2007 financial crisis on the Netherlands' MFIs and SME sectors. Zubair and colleagues concluded that MFIs and SMEs considerably scaled down their investment during the crisis. Similar findings were established by Habiyaremye, (2021), which state that adaptability, strategic agility, and resource slack are critical resilience success factors. Within this discourse, va Dijk (2020) examined entrepreneur resilience within the SME sector, focusing on adopting innovation in managing the COVID-19 pandemic in Twente in the Netherlands. Van Dijk found that innovation contributed positively to SMEs' ability to cope with the pandemic. In Malaysia, Omar and his colleagues assessed the impact of the COVID-19 lockdown on SMEs' coping strategies. They established that pre-crisis resilience strategies such as cash flow reconfiguration and capital rationing prepared the SMEs for COVID-19 disruptions (Omar et al., 2020). Resource reconfiguration contributes to the acceleration of the implementation of policy decisions into resilience outcomes.

The research findings underline the importance of resource orchestration in attaining firm-level resilience. Islam et al. (2020) examined entrepreneurial self-efficacy, business resilience, and creative work etiquettes in selected food service industries in Kazakhstan, using structural equations modelling to understand how these factors played out in SMEs' performance during COVID-19. They found that entrepreneurs' psychological capital and innovative work behaviour predicted continued performance and sustainability despite COVID-19 disruptions. Comparable findings to Islam et al. (2020) were proposed by Alves et al. (2021), who explored SMEs' COVID-19 survival strategies in Macau. They interviewed six (6) small firm owners and established that SME resilience to COVID-19 disruptive shocks was due to the existence and deployment of crisis management strategies. Accordingly, they proposed a resilience model focusing on customer experience, dynamic learning, financial orchestration, and product and equipment redeployment.

Many CFIs also restructured their human resources to help them cope with the pandemic. Many of the SACCOs opted for flexible staffing arrangements to reduce the risk of spreading the virus and lower the cost of operations. Flexible staffing arrangement refers to the staffing schedules which give employees a flexible working arrangement comprising of shorter working hours (part-time working), working from home, job shares, unpaid leaves, flextime, compressed or annualized hours, staggered start and finish times or self-rostering (CIPD, 2020; McMahon, 2020). In a study of the COVID-19 response and resilience of microfinance institutions in Kenya, it was established that flexible staffing and reduction in lending have a positive and significant influence on resilience during a pandemic. Additionally, KUSCCO strengthened its Central Finance Facility (CFF) as a common fund from

which CFIs with excess liquidity could deposit their funds, which would then be lent to those faced with liquidity challenges (Nyamai, 2021).

CFIs, like many other institutions, had to strengthen their existing operational frameworks and augment them with additional strategies to remain afloat during the pandemic and also to accelerate recovery from the aftermath. Such existing operational frameworks include member-centeredness, community entrenchment, and entrenchment in international CFI Organizations. Complementary strategies such as Organizational restructuring, job and staff restructuring, loan restructuring, and change of capitalization method equally enhanced CFIs' resilience.

The literature review demonstrate how local CFIs leveraged cooperative networks to cultivate mutual support, financial aids and adaptation to crisis. It provides stout pragmatic examples of CFIs leveraging their global links and local relationship to sustain operations and cushion members. However, the discussions lacks critical assessments of the challenges and limitations of such collaborations. While global cooperative networks provided solidarity and the resource-sharing, the literature barely explores whether bureaucratic challenges, inequalities in resource distribution might have limited effectiveness. Although local embeddedness is unfolded as an advantage, the literature does not consider how economic hardship among members may have escalated to the CFIs. Additionally, the literature are more of case studies in developed economies and does not extensively explore whether CFIs in underdeveloped economies has the same experiences. More research is thus necessary to investigate both the strengths and the constraints that Kenyan CFIs might have experience and still likely to experience in the collaboration with their counterparts from across the globe.

3.5 Literature Review Gaps

The empirical reviews established that most CFIs relied on traditional brick-and-mortar service delivery, face-to-face operations, limited digital services and a strong emphasis on member subscriptions as a primary revenue source. The emergence of COVID-19 forced a shift towards remote service delivery, increased focus on digital platforms for transactions and member engagement, implementation of health and safety measures in physical locations and adjustments to lending practices and loan terms to accommodate members' financial stress. As CFIs navigated the post-pandemic landscape, several trends emerged, including accelerated digitalisation of services, hybrid models combining physical and digital presence, enhanced risk management strategies and diversification of revenue streams beyond member subscriptions.

The key gaps and challenges identified included overreliance on member subscriptions, limited diversification of income sources and vulnerability to economic shocks affecting members. Additionally, many CFIs faced challenges with maintaining adequate cash reserves. This created difficulty in meeting increased withdrawal demands during the crises**.** Slow adoption of digital technologies due to resistance to change among staff and members posed challenges. Other independence concerns, for instance, are that most CFIs operate mostly in isolation, yet they cannot maintain autonomy while seeking growth.

It was evident that limited research has been done on the evolution of the CFI business model, particularly when juxtaposed with the economic disruption of the magnitude of the COVID-19 pandemic. Insufficient analysis of the long-term impacts of pandemic-induced changes implies that CFIs and the key stakeholders may cling to the status quo, exposing them to higher and bigger risks if other economic disruptions hit the global and local economies. The lack of comprehensive studies profiling SACCO business models through pre-COVID, during-COVID, and post-COVID phases in the context of the Kenyan politico-business environment means that such a study is indispensable going into the future. The identified gaps suggested several areas for research, including strategies for diversifying SACCO revenue streams, effective approaches to digital transformation in CFIs, and balancing independence with the cooperative principle amidst growth and modernisation.

3.6 Chapter Summary

The empirical literature reviewed covered the historical and contextual background, including the origin and diffusion of CFIs globally**,** the adoption and growth of CFIs in Kenya, and the historical context of early adoption in Kenya. Secondly, the reviews examined the regulatory framework with an overview of the regulatory landscape for CFIs in Kenya, the key legislations such as the Cooperative Societies Act, the SACCO Societies Act of 2008 and the role of the SACCO Societies Regulatory Authority (SASRA). Thirdly, the reviews delved into the socio-economic impact and financial inclusion, such as CFIs' contribution to financial inclusion in Kenya, the socio-economic impact on members and communities and the importance of trust and local ownership in CFI operations.

The review also focused on network and partnerships, with a focus on network arrangements around CFIs, collaboration between KUSCCO and CFIs, regional and county level associations, partnerships with Credit Reference Bureaus (CRB) and international affiliate Organizations. Additional reviews revolved around structural and behavioural characteristics**,** structural features of CFIs in Kenya,

behavioural aspects of CFI operations, and the role of cooperative banks and cooperative colleges. Moreover, the review analysed the Business Model of the CFIs pre-COVID-19, during COVID-19 and post-COVID-19, as well as the resources and profitability considerations. Finally, the review delved into the impacts of COVID-19 and the response of the CFIs, thus presenting various observations, including the impact of COVID-19 on CFIs' resilience, CFIs' responses to the pandemic challenges and adaptations in operations and services of the CFIs. Such adaptations included financial inclusion strategies, trust-building mechanisms, policy adjustments to enhance compliance and governance, technological adoption and digital transformation, resilience and adaptability in crises.

This empirical review comprehensively examines cooperative financial institutions, particularly in the Kenyan context. It covers their historical development, regulatory environment, socio-economic impact, and operational characteristics. The review also addressed the critical aspect of how CFIs have adapted their business models and operations in response to the COVID-19 pandemic, highlighting their resilience and the challenges they face in a rapidly changing financial landscape.
In conclusion, the COVID-19 pandemic has served as a catalyst for change in SACCO business models, highlighting both vulnerabilities and opportunities for innovation. As SACCOs continue to evolve, addressing the identified gaps will be crucial for ensuring their resilience, relevance, and sustainable growth in the post-pandemic era.

CHAPTER FOUR

MATERIALS AND METHODS

4.1 Introduction

This chapter presents a detailed description of materials and methods applied to undertake the current study in all phases. The components of this chapter comprise research philosophy/paradigm (ontology), research approach (epistemology), research design, study site, study variables, study population, inclusion and exclusion criteria, sampling methods and techniques, sample size determination, data collection methods and tools, pretesting of tools and training of data enumerators/research assistants, data analysis, management and presentation, and the ethical considerations.

This section introduces the research philosophy guiding the study, such as positivism, interpretivism, or pragmatism, to provide a theoretical foundation for the chosen research design. It comprehensively explains the study's mixed-method approach, combining both quantitative and qualitative research, to gather a more complete data set. It justifies why the mixed-method approach was chosen, emphasising how it addresses the research questions more effectively than a purely quantitative or qualitative approach. The section also defines the dependent and independent variables under investigation, explaining how they will be measured and analysed. Additionally, a detailed description of the study location, with a focus on the geographical area and its relevance to the research objectives, specifically Nairobi, is presented, with a focus on the population of Nairobi City County, under which demographic and socioeconomic information about Nairobi's population, essential for understanding the study’s context is provided.

The chapter also identifies the target population relevant to the research, including specific characteristics such as age, profession, or membership in cooperative financial institutions. It discusses the sample drawn from the population, including its size and characteristics, listing the criteria used to include participants in the study, ensuring they align with the research objectives, and the exclusion criteria to clarify which individuals or groups will not participate and why. The chapter further introduces the importance of determining a representative sample, provides an overview of the factors considered in calculating the appropriate sample size, and explains methods and formulas used to determine the sample size, considering factors such as confidence

levels and margins of error. The chapter also provides a breakdown of how the total sample size is distributed across various study areas within Nairobi and the techniques used for sampling, such as random sampling, stratified sampling, or purposive sampling, based on the research design.

Also captured in the chapter are the research and data collection tools, the construction of research tools, and the process involved in designing and creating the tools for data collection, such as surveys, interviews and desk reviews. Moreover, the chapter provides specifics on the structure and development of data collection instruments to ensure accuracy and validity in gathering information; quantitative data collection tools, explaining the specific tools used to gather quantitative data, such as surveys or structured questionnaires; Semi-structured Questionnaire/ Interview, discussing the use of semi-structured questionnaires or interviews as a flexible tool for collecting both qualitative and quantitative data, and desk reviews, describing the process of gathering and analysing existing data from reports, documents, and other secondary sources relevant to the study.

The chapter further discusses the qualitative data collection tools, focusing on the tools for gathering qualitative data, such as interviews and focus group discussions. It also outlines the schedule and structure for interviews with key informants who provide expert insights or unique perspectives, specifying the number of key informants interviewed and their areas of expertise. The pre-testing of study instruments and the pilot testing of data collection tools are discussed to ensure their validity, reliability, and effectiveness in the actual study. It also provides an overview of the measures to ensure the study's instruments and results are valid and reliable. The validity sub-section addresses how well the research instruments measure what they are intended to measure. The reliability sub-section addresses the consistency of the instruments when used under similar conditions.

Finally, the chapter also describes the recruitment and training of research assistants, detailing the process of selecting and training them ensuring their preparedness for data collection and fieldwork. Additionally, the chapter describes data management and analysis, the procedures for managing the data collected, including coding, storage, and analysis methods for both qualitative and quantitative data, the ethical considerations, challenges experienced during the study, and the summary of materials and methods.

4.2 Research Philosophy

Kothari (2003) defines research as a search for knowledge and an inquiry that contributes to a body of knowledge in resolving an existing problem. The applied methodology is, therefore, informed by various existing philosophies depending on the researcher's worldview and personal view. Various studies have used different descriptions, categorizations, and classifications of research paradigms and philosophies in relation to the research methods, with overlapping emphases and meanings, to appreciate the divergence in research methods. There are three main philosophies namely positivism, pragmatism and interpretivism.

4.2.1 Pragmatism

Pragmatism provides that best tools possible should be used to investigate a phenomenon. The argument of pragmatism s that researched should be approached practically where knowledge evolves through questioning and interpretation. The main elements of pragmatism therefore include practical consequences, problem centered orientation (addressing real-world problems and questions), methodological pluralism (embracing both quantitative and qualitative methods), contextual relevance, integration of perspectives, experiential foundation, and value-oriented inquiry (acknowledges that research is inherently value-laden and researchers' values influence what they study and how they interpret findings). Additionally, the philosophy encourages abductive reasoning (inference to the best explanation alongside deductive and inductive approaches, moving between theory and data iteratively) transferability over generalizability, that is aimed at transferring insights that can be used to promote adaptation to new context and thus promote social utility (social improvement and human flourishing). research should ultimately benefit society in some way (Legg, & Hookway, 2008).

For your study on CFI resilience, a pragmatic approach would justify your mixed methods design by focusing on what best answers your research questions rather than philosophical purity. It would allow you to combine institutional and dynamic.

4.2.2 Positivism

Positivism is based on the idea that measurement is obtained by objective criteria rather than subjective and that the observer must be independent of the observation (Mugenda & Mugenda, 2003). It is attributed to lack of bias, validity of results, impartiality, authentic details and

measurement. Positivists make use of existing theories for hypotheses development, which is put to the test and found to be acceptable. Positivism promotes objective reality, holding that there exists observable and measurable objective reality independent of human perception. Additionally the philosophy provides that knowledge claims must be verified through direct observation, measurement, and empirical testing. The philosophy also advocates for a separation between facts and values, arguing that researchers should maintain objectivity and neutrality, eliminating subjective biases from the research process. Other provisions of the philosophy include deductive reasoning, quantification (quantitative method), causality and generalization, reductionism methodological unity, cumulative knowledge development and falsifiability (Crossan, 2003).

4.2.3 Interpretivism

Interpretivism is a research philosophy which emphasizes understanding the subjective meanings that individuals assign to social phenomena. Among the top arguments of interpretivism include the arguments that reality is socially constructed (reality is subjective and shaped by human experiences and interactions), research is qualitative and inductive. Interpretivism therefore lays emphasis on meaning and context in interpretation, subjectivity and researcher involvement (Interpretivist research acknowledges the researcher's influence in shaping findings), multiple realities and perspectives, holistic understanding of human behavior and social behavior though analysis of relationships, historical influences and social structure before interpretation of findings. Rather than reducing phenomena to measurable variables, interpretivists seek a deep, holistic understanding of human behavior and social processes. They analyze relationships, historical influences, and social structures to interpret findings. Lastly the interpretivism holds that
Research is dynamic and evolving and therefore researchers should be able to adjust their approaches based on emerging insights, allowing for a more flexible research process (Trangbæk, & Cecchini, 2023).

Globally, researchers postulate that research is anchored on different philosophical assumptions that will inform the study's outcome (Creswell, 2003). This study was enshrined in the mixed method approach of qualitative and quantitative research models, meant for collecting and

analysing quantitative and qualitative research data in an in-depth single study on post-COVID-19 resilience of cooperative financial institutions in Kenya.

The study aligned with pragmatic inquiry and espoused the principles of actionable knowledge and interconnectedness between experience, knowing, acting and inquiry, which provides a guiding epistemological framework anchored in the inquiry process and research practicality. Pragmatists focus on producing actionable knowledge for desired results, formulating policies, and making evidence-based decisions (Morgan, 2007; Kelly & Cordeiro, 2020).

4.3 Study Design

This study adopted an analytical cross-sectional deductive case study that employed a mixed method of both quantitative and qualitative methods. Deductive research approach was deemed suitable because the study was guided by two main theories namely the institutions theory and the dynamic capabilities theories to examine how CFIs integrated their cultural, resources and capabilities to face the disruption necessitated by COVID-19. In tackling these aspects, this research employed a mix of approaches to generate rich data and develop deep insights into the aspects under study. The study acknowledges that the objectives of the study have valuable secondary data contained in various papers, briefs, and websites developed during the pandemic and in the recent year or two post the pandemic. The research, therefore, augmented the primary research approaches with secondary data from the targeted sources. The case study of the CFIs was primary chosen partly based on personal interest of cooperatives and the basis on the integral part played by CFIs in promoting financial inclusivity, gender inclusivity and socio-economic development and growth.

Kothari (2012) states that such a design analyses and describes a phenomenon in a multi-pronged manner for triangulation purposes to draw tangible evidence-based conclusions, especially in a study whose power of strength is high. This design was chosen in favour of others due to its uniqueness in the reliability of data collected; it maximises the scarce resources in time and funds and is easily manageable. Kombo and Tromp (2006) argue that essentially, the study design is also important in fact-finding, in formulating knowledge, policy and solutions to the problem of post-COVID-19 resilience of cooperative financial institutions in Kenya and the cooperative movement on the continent of Africa and the rest of the world.

4.3.1 Justification for the Mixed Design

The application of the mixed methods design is recommended for studies which seek to collect data on insights that might be biased realized through quantitative design. The study adopted sequential mixed method where quantitative data was collected and analyzed first before qualitative aspect was carried out. First the multidimensional nature of the organizational resilience demands both breadth and depth of investigations. Although, quantitative methods provide measurable indicators of financial performance, membership trends an operational metrics that uncovers the objective impacts of the pandemic across numerous CFIs, qualitative interviews with top leadership would capture the nuanced decision- making processes, adaptive strategies and the contextual challenges that quantitative method alone might not convey (Plano, 2017).

Secondly, the phenomenon of COVID-19 resilience encompasses both observable outcomes and underlying dynamics. The quantitative is limited to identifying patters and relationships between variables that predict resilience, while qualitative insights from CFI leadership explains why and how the relationships exists, illuminating the casual mechanisms and institutional learning process that quantitative data might miss out. Additionally, the unique nature of CFIs, with emphasis son both financial sustainability and prioritization of members welfare necessitates methodological approaches which captures the duality (Green et al., 2015). Quantitative methods can measures financial resilience parameters but it is through qualitative approach that leadership can explain how the cooperatives principles influenced strategic responses to the crisis and how institutions balanced members' demands and institutional survival (Plano, 2017).

Moreover, the unprecedented nature of the pandemic meant that preexisting measurement frame works might have been inadequate. The mixed methods allowed for emerging concepts and anticipated resilience factors to be identified through qualitative data, while at the same time measuring resilience indicators quantitatively. Lastly, interviewing top leadership specifically was important because the leadership's responses carry strategic oversight and institutional responses which then can bridge gaps in quantitative data and also articulates the reasoning behind restructuring decisions Quantitative data can often be limited to outcomes (Green et al., 2015).

4.4 Study Variables

This study was anchored on both independent and dependent variables whose relationships point to the resilience of cooperative financial institutions, which informs the need for context-specific frameworks that inform partnerships and quick decision-making and actions in the occurrence of other pandemics post-COVID-19. The conceptual framework indicates the relationship of variables (see Figure 3.1).

4.5 Study Location

The study was conducted in Kenya, which has been documented as the largest economy in Eastern Africa. Specifically, this study was conducted in Nairobi County, which is the capital city of the Republic of Kenya. As a capital city, most CFIs domiciled there, in head offices, liaison offices, or marketing offices. The CFIs, referred to as SACCOs, were the major study sites from which data was collected. Additionally, Nairobi City County creates a pool of CFIs in different sectors which would then give more and divergent insights into the subject matter of resilience. Additionally, since most of the CFIs and employee based, Nairobi creates a catchment area because is in the biggest employments and business hubs which creates the foundation on which CFIs, particularly SACCOs are formed and established in the country.

According to the Kenya census (2019), Nairobi County is one of the 47 counties in Kenya and is in the southeastern part of the country. It is Kenya's capital and largest city and serves as the country's economic, cultural, and political hub. Nairobi County is subdivided into seventeen (17) administrative sub-counties. A sub-county is a territorial administrative unit used in some countries, particularly in Africa, to divide a county or district into smaller administrative divisions. A sub-county is usually smaller than a county and consists of several wards and villages. Figure 4.1 shows the 17 sub-counties that are composed of Nairobi County.

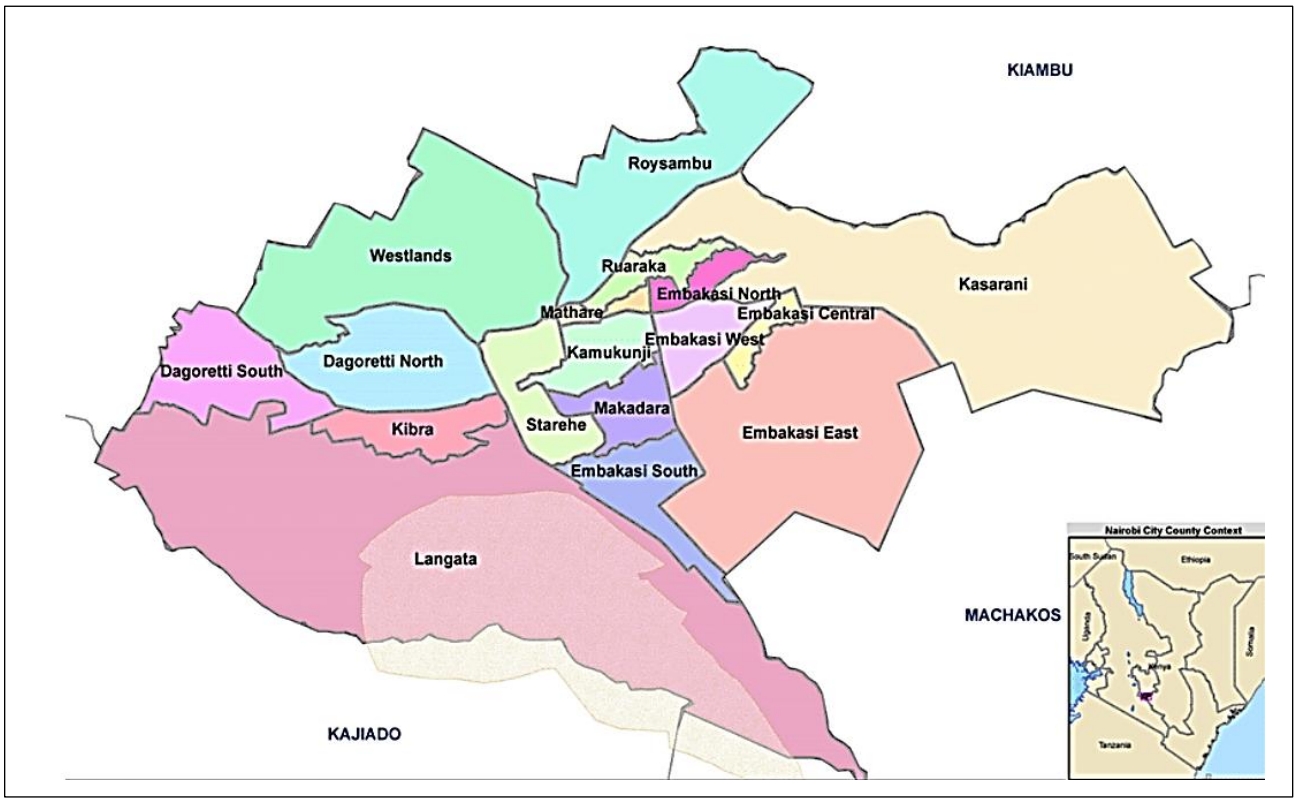
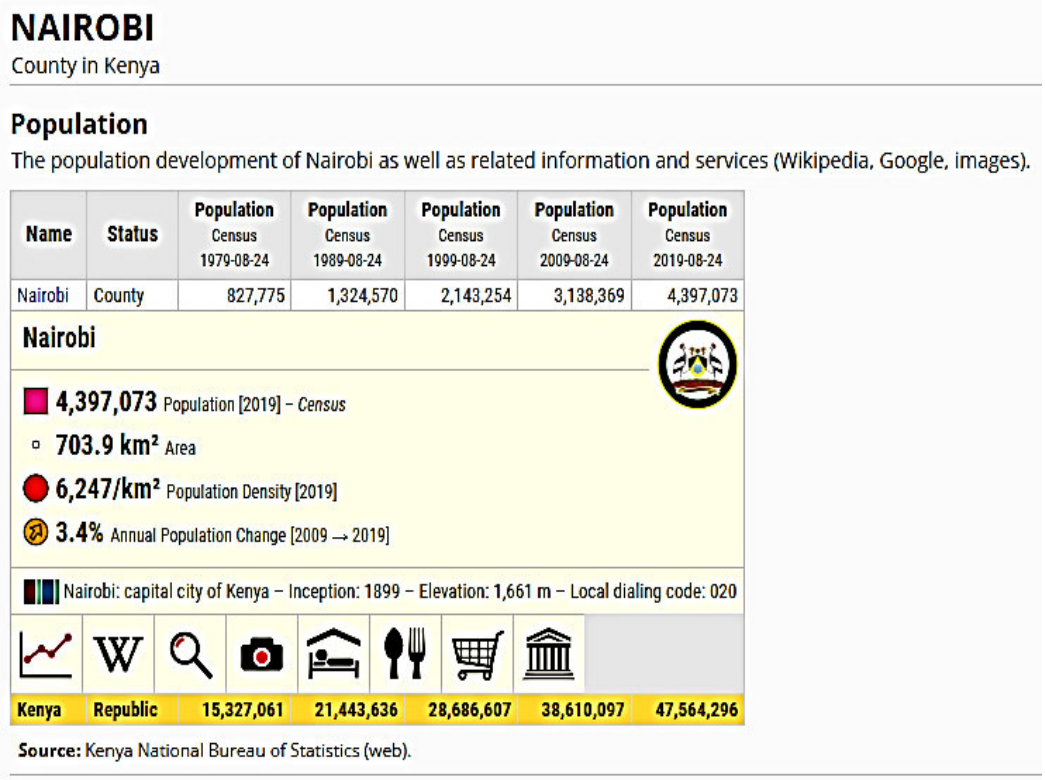


Figure 4.1: Sub-counties, Nairobi County

Nairobi's population continues to grow exponentially, with its current size being 4,397,073 million (Kenya Population and Housing Census, 2019). Kenya Bureau of Statistics provides a numerical description of Nairobi county's population and size, as shown in Figure 4.2.



NAIROBI

County in Kenya

Population

The population development of Nairobi as well as related information and services (Wikipedia, Google, images).

Name	Status	Population Census 1979-08-24	Population Census 1989-08-24	Population Census 1999-08-24	Population Census 2009-08-24	Population Census 2019-08-24
Nairobi	County	827,775	1,324,570	2,143,254	3,138,369	4,397,073
Nairobi						
Kenya	**Republic**	**15,327,061**	**21,443,636**	**28,686,607**	**38,610,097**	**47,564,296**

4,397,073 Population [2019] – *Census*

703.9 km² Area

6,247/km² Population Density [2019]

3.4% Annual Population Change [2009 → 2019]

Nairobi: capital city of Kenya – Inception: 1899 – Elevation: 1,661 m – Local dialing code: 020

Source: Kenya National Bureau of Statistics (web).

Figure 4.2: Population Development in Nairobi County

4.6 Nairobi Population

Nairobi County and City is one of the fastest-growing cities in Africa at a rate of over 4% annually, and it is expected to become the second largest city in the African Great Lakes (Kenya Census, 2019). Nairobi is primarily a cosmopolitan county that hosts large populations of immigrants who come to Nairobi searching for business and employment opportunities. It is estimated that by 2025, the city will have a population of 5 million, and the city will continue its upward trajectory in terms of population. The county is the smallest of the 47 counties in Kenya, yet it has the largest population. It is situated at 1°09′S 36°39′E and 1°27′S 37°06′E and occupies 696 square kilometres (270 sq mi). It has the highest urban population in Kenya. This area hosts a total combination of all residents within its geographic environs, with approximately 4,850 residents per square kilometre and 12,600 people living per square mile (Kenya Census, 2019).

According to the UN World Urbanization Prospects (2023), Nairobi's population is estimated at 5,325,160, and it is expected to shoot up; this presents urbanization effects, business prospects and mobility. Nairobi is the country's major economic zone and principal industrial center, and it is

linked to other countries and counties via air, land, and water. The county hosts major manufacturing industries, economic activities, infrastructure development, and agriculture produce markets, specially produced by the nearby counties. Also, the county is located near Eastern Africa's agricultural heartland, where primary products are routed through Nairobi before being exported via Mombasa and the route of the Eastern Africa Community. It is the headquarters of important regional railways, harbors, and airways corporations.

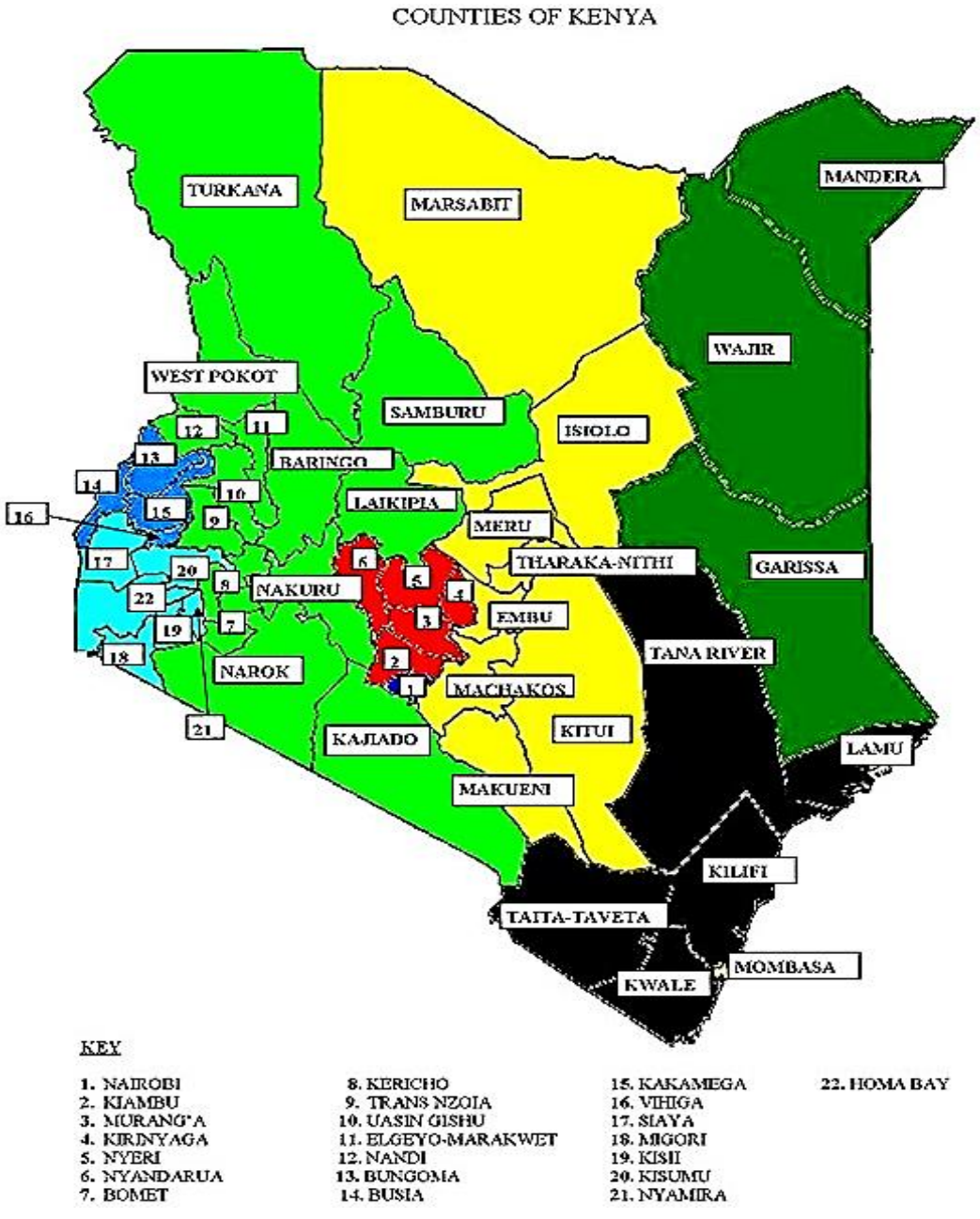


Figure 4.3: Counties in Kenya

4.7 Study Population

The study population included the leadership of the cooperative financial institutions (espoused by the Cooperative Act of Kenya) and in Nairobi County, which harbors the majority of these institutions. The details (contacts information, positions and institutions represented) of all the study was maintained in in a secured system with limited access to the research team only. The choice was premised on their experience at the helm of the cooperative financial institutions in service provision and engagement with clients and various stakeholders before and post-COVID-19. Their insights, dedicated responses, and participation provided an opportunity for learning and successful study completion (SASRA, 2022).

4.7.1 Population Sample

Regarding the study target population, Nairobi is estimated to be the home of 46 licensed deposit-taking cooperative financial institutions, commonly known as SACCOs. This study obtained an updated list of all active CFIs in Kenya, traditionally known as SACCOs. Quantitative data was collected from a sample population of managers, including operations officers, credit officers, finance/accounts officers, and customer relations from the selected CFIs as stratified across the county based on the sectors and sub-counties proportionately. Qualitative data was derived from key personalities, including Chief Executive Officers (CEO) and Ag. CEOs, who provide additional insights into how the cooperatives responded to the impact of COVID-19 and the post-pandemic experiences, as well as their recommendations from the lessons learned and challenges experienced. These, among others, were leveraged to craft a resilient model for CFIs.

4.7.2 Inclusion Criteria

Ethically and according to research principles, a study inclusion criterion should be applied and complied with when conducting research. As such, this included only participants from the study county, Nairobi, working in cooperative financial institutions. The study participants who consented were also included and considered as voluntary participants. Again, only those who agreed to participate in the interviews physically or virtually in private environments were included.

4.7.3 Exclusion Criteria

The study excluded all the individuals who did not qualify to participate due to eligibility as per the inclusion criteria. While at the study sites, those who did not consent to participate were honorably and respectfully excluded with the realization that participation remains voluntary. Participants who had not worked at the institution and at the capacity of the positions they held for three months, at least during the pandemic period, were excluded from participating in the study.

4.8 Sampling and Sample Size Determination

Sampling is a critical process in research where a subset of individuals, objects, or data points is selected from a larger population to represent the whole. The primary goal of sampling is to make inferences about the entire population without examining every single unit, which can often be unrealistic or impossible. Proper sampling ensures that the sample accurately reflects the population, leading to valid and generalizable results. On the other hand, sample size determination involves calculating the appropriate number of observations or participants needed to ensure that the study results are statistically significant. A well-determined sample size balances the need for accuracy with the constraints of time, cost, and resources; it is influenced by factors such as the population size, confidence level, margin of error, and the expected effect size. The succeeding section highlights how the sample size was determined and the sampling technique applied in the study.

4.8.1 Sample Size Determination

The main aim of sample size determination was to reduce biases at all costs by producing a representative sample that is generalizable. This study adopted formulae described by Cochran as follows:

Formulae for Derivation of Sample Size

As shown, the researcher developed the sample size based on a Cochran (1977) computation.

SS = (Z-score) 2*p*(1-p) / (margin of error)2
SS = (1.96)2*0.5*(1-0.5) / (0.05)2
SS = 3.8416*0.25 / 0.0025
SS = 384.16
(Z-score is 1.96 for a 95% confidence level)

SS Adjusted = (SS) / 1 + [(SS -1) / population

SS Adjusted = (384.16) / 1 + [(384.16 – 1) / 230]

SS Adjusted = 384.16 / 1 + [383.16 / 230]

SS Adjusted = 384.16 / 2.665913

SS Adjusted = 144.1007, adjusted by 10% to be 159.0

Where SS = Sample Size

FP = Proportion where the population is not known (Common to use 0.5)

SS Adjusted = Sample Size Adjusted

This is calculated at the desired confidence level of a 5% margin of error with 95% confidence.

Based on the above calculation, in this study, the sample size of 159, with an estimated population of 230 (ZIMSTATS, 2014) determined through calculation, was used.

4.8.2 Sample Size from Each Study Area

Nairobi County is quite vast and composed of 17 sub-counties administrative units. The study calculated a sample of respondents proportionately from the selected institutions from the sub-counties in Nairobi County (Ngechu, 2004). The allocation of samples proportionately complies with the rule of thumb in representation, generalization and reduction of biases. This helped cover all sub-counties whose economic activities are diverse, providing an opportunity for learning and drawing lessons from them. Moreover, the samples represented and reflected rural SACCOs and urban architecture, adding more value to the pre- and post-pandemic lessons.

4.8.3 Sampling Techniques

The study employed both probability and non-probability approaches and techniques. Kenya was purposively sampled to understand the resilience of cooperative financial institutions during and post-COVID-19. Kenya is also documented as the leader of the cooperative movement in Africa; it is a major economy in Eastern Africa and harbors a myriad of economic activities in the service and agriculture value chains, which are anchor sectors for most CFIs.

Stratified random sampling from the list of active CFIs in the records at the State Department of Cooperatives (SDC) corroborated with information from Kenya Union of Savings and Credit Cooperative (KUSCCO) Ltd and Sacco Societies Regulatory Authority (SASRA) were used. Purposive sampling considered sampling four strata, including the Agriculture sector, community-

based service sector, and government units allied with CFIs. These strata were chosen because they form the main categories of most SACCOs in Kenya and Nairobi City County in particular. They are the categories perceived to have been most affected by the pandemic.

Proportionate representative samples of CFIs and participants were calculated and allocated across the study institutions for representation and generalizability. Simple Random Sampling (SRS) was also applied. In phase 1, a random number table was used to select participating sub-counties that formed strata. In phase 2, purposive and convenient sampling methods allowed all willing CFIs to participate in the study in a census to achieve an acceptable sample. In all the CFIs that participated, heads of departments were purposively selected to participate.

Key Informant Interviewees within the sampled institutions, CEOs and acting CEOs were purposively selected and conveniently participated. This was paramount because of their positions in their institutions, so they were best fit to provide in-depth information on their institutions before, during and currently during the recovery period from the pandemic. Moreover, their experiences would provide recommendations that can be applied in contracting a more responsive model in preparation for other pandemics in the future. Hence, leveraging on their experience and operational lessons learnt while managing the institutions is an added advantage to the study and is an opportunity to inform other relevant sectors on the most sustainable and resilient models and strategies to be applied in the context of pandemics and other natural occurrences that have impacts on the economy and businesses. Further, the information provided was triangulated with quantitative data, hence the possibility of calibrating the evidence generated to draw and document tangible lessons for adoption. Qualitative information also provides essential information that builds on the quantitative data collected (Mugenda & Mugenda, 2003; Kothari, 2012).

4.9 Research and Data Collection Tools

This section covers details of the tools that were used to collect primary data from the study population. Additionally, it describes how secondary data was collected. It, therefore, briefly discusses how the research tools were constructed and how data collection instruments were developed for both qualitative and quantitative data.

4.9.1 Construction of Research Tools

The research tools were constructed based on the study objectives and the kind of data that was collected. This study adopted and constructed two (2) tools for data collection, i.e., a semi-structured questionnaire (Appendix I) and a key informant interview guide (Appendix II). Similar content from previous relevant studies was also adopted. The choice of these tools was informed by their advantages and the complementary element in collecting robust and in-depth information for analysis, which will eventually be utilized as credible information for decision-making.

4.9.2 Construction of Data Collection Instruments

Quantitative data was collected using interviewer-administered semi-structured questionnaires among the managers, operations, and finance officers from the CFIs that participated in the study because they had busy schedules and could not fill in a questionnaire. Hence, it was interviewer-administered. The questionnaire was most preferred and selected due to its advantageous elements and qualities of collecting specific information coherently, time for both the researcher and the interviewee, and its simple explicit nature in specificity and leeway to provide the most relevant and complete response. Additionally, the questionnaire allows the interviewer and interviewee to directly engage for the common purpose of the study in question.

4.9.3 Quantitative Data Collection Tools

Quantitative data were obtained by administering questionnaires using personal data assistants (PDAs). The questions focused on the cooperative financial institutions pre-, during and post-COVID-19 pandemic. The pandemic's impact on elements of the CFI model included purpose, profit formula, resources, processes, and experiences. Data collection commenced in December 2023 and was completed in March 2024. Due to unprecedented challenges, the data collection period was prolonged.

4.9.3.1 Semi-structured Questionnaire/ Interview

This study adopted a semi-structured interview (Appendix I) to seek information for each objective about the impact of COVID-19 on cooperative financial institutions in Nairobi County, Kenya, among the service delivery officers. The drafted questions were entered in Google Forms/ ODK in tandem with the current advancement of technologies, thereby adopting paperless documents, which provided timely information at the source point of collection. As opposed to questionnaires,

which are sent out for respondents to fill in, the interview schedules played a catalytic role in the timeliness of responses and data collection. Interviews also allowed the data enumerators to ask questions and collect relevant data at the source while filling in the correct responses, with the leeway of asking for clarification. It was significant in collecting quality data, reducing to zero non-response, and contributing to the data's completeness extensively and intentionally (Kothari, 2012; Oso & Onen, 2005).

4.9.3.2 Desk Review

The study adopted a desktop review, which included data from beyond the boundaries of the study location to complement the primary data collected through questionnaires and interview guides. This strategy allowed for insight and triangulation of data and reduced instances of low response rates from the primary data collection. Desk reviews were conducted mainly from websites of local and international CFIs, focusing on their annual financial reports, particularly from the 2019 to 2022 trading period. This trading period was preferred because it presented the pre-, during and post-pandemic era. This strategy was useful for understanding the disruption, its impacts and the responses of local and international CFIs.

4.9.4 Qualitative Data Collection Tools

This subsection discusses the qualitative data collection tools, why they were necessary, and how they were formulated to ensure the collection of relevant data. The study adopted the key informant strategy for primary qualitative data and desk reviews for secondary data.

4.9.4.1 Key Informant Interview Schedule

Qualitative data was elicited through Key Informant Interviews (KII) among the senior business and operations leaders in the cooperative financial institutions in Nairobi County, Kenya. Qualitative data was collected via the Google Meet online platform due to the convenience of the key informants' availability. The KII schedule (Appendix II) was used to collect data from the chairperson of executive committees, the chairperson of supervisory committees, and county directors of cooperatives.

The key informant schedule was preferred due to its competitive advantage of collecting specific information from more knowledgeable persons due to their position, leadership roles, and key mandate because they are the face of the Organization internally and externally. This tool provided

an opportunity for delving more into the sub-strands of the themes more exploratory, thereby gathering more information that was otherwise not collected from quantitative data (Mugenda & Mugenda, 2003; Kothari, 2012). The research team purposed to collect in-depth information based on emerging themes from the study objectives and that such information would build on the quantitative data collected for purposes of triangulation and drawing substantive lessons that informed comprehensive reporting for decision-making. The data collection commenced in April 2024 was concluded in May 2024. Due to unforeseen challenges, the data collection period was prolonged until saturation was reached.

Coverage of Key Informant Interviews

While the study targeted all SACCOS within Nairobi City County, it was important that the main primary sectors were sampled. Therefore, Table 4.1 highlights how the key informants were sampled across the various categories of SACCOs in the county in sectors such as agribusiness, tourism and hospitality, health, energy, finance and revenue, and construction.

Table 4.1: Coverage of Key Informant Interviews

CFI	Category of CFI	Number of Participants
Acumen SACCO	Tourism and Hospitality	1
Afya SACCO	Health	1
Asili SACCO	Banking and Finance	1
Barabara SACCO	Road Construction	1
BAT SACCO	Agribusiness	1
Cereal Growers Association SACCO	Agriculture	1
Harambe SACCO	Multisectoral	1
Java WDV SACCO	Hospitality	1
Stima SACCO	Energy	1
Ushuru SACCO	Revenue	1
Utabibu SACCO	Health	1
Total		**11**

4.9.4.2 Desk Review

A robust desk review was conducted to collect relevant secondary data from published and unpublished documents at the institutions and the county office in charge of cooperative institutions, including recent reports, internal policies, manuscripts, and financial reports. A thorough scrutiny and suitable and adequate process were adopted to verify the existing

documents, and they confirmed the theme under study. This helped track and observe each institution's scenario and learn from similarities and contrasts in the guiding documents. It also provided an opportunity to document the current practice and how it informed future decision-making and strategies for co-creating solutions for resilience in future pandemics.

Also, at the points of entry to the CFIs, CEOs and other technical officers who participated provided additional documents and factsheets for perusal and familiarization with their operations and services and some with statistics on the performance and specific data that facilitated the identification of other targets. The secondary data from each CFI was collected simultaneously and seamlessly provided additional data compared to the primary data. This data augmented and complemented each other for comprehensive conclusions and recommendations in proposing an improved operations business model for CFIs, data options to feed in policy making, policy decisions, and future research.

4.9.5 Pre-testing of Study Instruments

Pre-testing is the process of conducting an initial survey to test the validity and reliability of a survey. Tools were pre-tested in cooperative financial institutions to enhance the quality of data collection. Specifically, tools were pre-tested at Kiambu County, adjacent to Nairobi County, with a population of 15(10%) of the sample size, acceptable as substantive and sufficient for generalizability. The acceptable research procedures were complied with during the pre-testing phase, especially on ethics. Further, it was clearly explained to the participants that the data collected from the pre-testing exercise was only meant to check the reliability and validity of the study. In addition, to ensure the correct design of instruments, the flow of questions, ease of understanding and asking questions, ascertaining the estimated time for the interview as well as correcting any unclear, complex and distorted meaning, the process allowed for perfecting the tools before commencing data collection (Mugenda & Mugenda, 2003).

4.10 Validity and Reliability

A scientifically conducted study should ensure the reliability and validity of the data collection tools and process (Kothari, 2012). This study ensured the authentication of the tools and the training of research/data enumerators before initiating them into the data collection process.

4.10.1 Validity

Validity is defined as the degree to which data collection tools measure what they are intended to measure, and the degree of results obtained from an analysis is deemed as a representation of the phenomena under study (Kothari, 2012; Mugenda & Mugenda, 2003). For this study to comply with the state of validity, data collection tools were adopted from similar studies (Ouma, 2022; Nair & Kloeppinger-Todd, 2007; Mushonga et al., 2019) on financial institutions through pre-testing of the instruments. Content Validity was used to ensure that the research tool (interview guide), fully captured all relevant aspects of the under study. Since qualitative research focuses on depth and richness of data, ensuring that questions or prompts comprehensively cover the topic was essential. Experts or peer reviewers typically assessed whether the tool aligned with the research objectives. The tools were improved in quality and structure and customized to fit within the confines of this study.

4.10.2 Reliability

This study complied with the reliability conditions for tools before the study's commencement. Reliability is the degree to which assessment tools produce stable and consistent results (Kothari, 2012; Oso & Onen, 2005). The questionnaire and KII were pre-tested among a relevant population in a cooperate CFO that did not participate in the study. For the quantitative data tool, Cronbach's alpha was utilised to measure internal consistency to ascertain the reliability rate, especially if the items in each question were within the scale of measure and of the same contrast. An alpha value of 0.6 is the threshold, hence sufficient for a benchmark. In this study, alpha was established for all the objectives separately, and after calculation, the reliability value exceeded the acceptable threshold, scoring 0.735. For qualitative data, refutational analysis was used with comprehensive, constant and comparison analysis with tables to ascertain credibility, dependability, confirmability and transferability of the reliability achieved. Refutational analysis involved identifying and addressing contradictions within data. Three key steps were involved namely Comprehensive Analysis which examined all available data sources in detail to guarantee uniformity and completeness. This helped to identify contradictions or inconsistencies across different perspectives. Secondly, constant analysis was done by continuous comparison of data through the research to enable re-evaluation in light of new data to maintain coherence and refine interpretations and lastly Comparative Analysis which involved contrasting different data points,

participant responses, and case studies to assess whether the findings held water across different contexts.

Table 4.2: Reliability Test Statistics

Objective	**Cronbach's Alpha**
General demographics	0.751
Comparative analysis of cooperative financial institutions pre-and post-COVID-19 pandemic	0.715
Impact of post-COVID-19 on the resilience of cooperative financial institutions in Kenya	0.811
Critical success factors and survival mechanisms for the cooperative financial institutions post-COVID-19 in Kenya	0.870
Need for improved resilient business model for cooperative financial institutions in Kenya during times of economic shocks and crises	0.761
Overall	**0.735**

4.11 Recruitment and Training of Research Assistants

Six (6) data enumerators with a diploma and above in a business-related course were recruited and enrolled for training to maintain the quality of the data collected; a two-day training was organized. The selected enumerators were trained on essential aspects of conducting research, specifically the data collection phase. Among the key content they were trained on included an explanation of the study, its aim and objectives, the process of data collection and entry to the study area, communication skills and research ethics principles. Since the methodology is of utmost importance at this phase, it was explained, and the data collection tools were critically reviewed for understanding and clarity. The content on interviewing techniques and skills was covered on the second day. For purposes of ascertaining that the effect had been made, role-plays were conducted among the research assistants, and this provided an opportunity for correction and affirming the correct way of conducting the study while collecting data.

4.12 Data Management and Analysis

Data management entailed establishing a single information and documentation system to manage research outputs. Collected data was edited daily to ensure data completeness. Data was also appropriately indexed and stored electronically using code names for anonymity purposes, and the names of informants were changed to protect their privacy. Responses to quantitative survey questions were recorded on individual questionnaires, coded, and stored. After data collection, quantitative data was effectively cleaned, coded and analyzed using Statistical Package for Social Sciences (SPSS) version 23.

Quantitative data analysis was analyzed via parametric and non-parametric statistical inferential methods. Three methods of presenting these were adopted, including exploratory analysis via descriptive analysis of central tendency (i.e. mean, mode and median) graphically; distribution (frequencies and dispersion) standard deviation and inferential statistics to test the hypothesis of the study in addition to making tangible conclusions in a more quantifiable way. Pearson's Chi-square test and logistic regression showed the associations between the dependent and independent variables. A p-value of < 0.05 was considered statistically significant. Both tables, graphs, and charts were used to present categorical data statistically and with precise quantification and substantiation quantitatively. This is essential in presenting quantitative statistical data for informed and evidence-based decision-making.

Collecting, processing, and analyzing quantitative data entailed using GPS-enabled data collection devices installed with Survey123 for ArcGIS with ready data transformations for deeper descriptive and inferential statistical analysis for different sub-themes using SPSS Version22.
Collected qualitative voice-recorded data was transcribed, coded and reviewed to identify emerging themes. The audio recordings of interviews as downloaded were archived only for this study and are not to be released for any purpose other than this study as declared in the ethical guidelines. The thematic data was analyzed using NVivo version 12. The analysis consisted of an exploration of each thematic area correctly displayed with relevant categories of information. This data was analyzed using content analysis by categorizing, summarizing and comparing the emerging responses. These findings were triangulated with quantitative data as per the themes, samples of verbatim recordings were directly documented as narrated by the participants

anonymously, and structured substantive conclusions and recommendations were drawn from the study.

4.13 Ethical Considerations

Ethical approval and clearance to undertake this study were sought from the University of Kwazulu-Natal, and after obtaining all ethical clearance, the study commenced (Appendixes III-V). First, authority and administrative clearance from the participating cooperative financial institutions was sought and granted during the entry process, which was preceded by courtesy calls and visitations as well as official letters sent to the institutions explaining the aim of the study.

High standards of ethical practice were maintained in all research activities and phases according to UKZN protocols. Necessary measures were adopted to ensure the study would not present any risks to the study participants. This included avoiding intrusive procedures, seeking informed consent from all study participants, and informing participants of their right to withdraw should they desire to do so. Also, the study's objectives were explained to participants in a language they correctly understood before requesting them to grant consent to be interviewed. All participants' consent was sought verbally and face-to-face before any interview began. They were assured of high levels of privacy, confidentiality and anonymity throughout the study. They were assured of guarding them against discrimination of whatever form, observing rights such as those of genders and people with disabilities and other variables. While undertaking the study, high levels of respect were exhibited for each participant. Further assurance was given that feedback from the study was meant for learning purposes only.

4.14 Challenges Experienced during the Study

The challenges experienced were surmountable, and they remain opportunities for learning to conduct future mega research and program activities. Earlier on, during the phase of setting field activities, it is worth noting that the sensitization and familiarization workshops with CEOs should have been considered; this would have contributed to high numbers in participation, availability and acceptability.

First, the schedule from December 2023 to March 2024 is not the best due to the yearly general meetings, declaration of dividends, and CFOs' internal management meetings held outside their

Nairobi offices. This resulted in collecting data in a fragmented or disjointed manner and at a languid pace based on the availability of officers. To ensure data was collected, the researcher and data enumerators remained flexible and available to fit the schedule approved by different Organizations.

Second, the full-time availability on the part of the Principal Investigator, who was based in Abidjan Cote D'Ivoire, relocated to Beijing, China, during the last month of data collection. Thus, the fully conventional face-to-face with participants was not attained. As such, some KIIs were conducted mainly online. Data enumerators were comprehensively trained to aid in data collection to circumvent the travelling challenges and work-related eventualities, especially when the researcher would not make it to the field, with an additional field manager to supervise the process daily. In addition, other alternatives, such as telephonic, web/mobile conferencing, etc., were utilized. Web-based workspaces were set up to ensure seamless engagements during the data collection session.

Third, there were observations of an assumption on the possibility of suspicion and withholding of critical information by respondents, particularly leaders in the cooperative sector whose fear attributed to divulging the organization's information, particularly on financial matters. This was mitigated through the research permit and ethical clearance from UKZN to allay any fears participants might have had regarding the study and primarily augmented with dialogue and risk communication measures to strengthen the level of trust and honesty.

4.15 Chapter Summary

This research addressed the following study objectives: 1. Undertake a comparative analysis of cooperative financial institutions pre- and post-COVID-19 pandemics; 2. Analyze the impact of post-COVID-19 on the resilience of cooperative financial institutions in Kenya, 3. Assess the critical success factors and survival mechanisms for the cooperative financial institutions post-COVID-19 in Kenya, and 4. Formulate a resilience business model for cooperative financial institutions in Kenya during economic shocks and crises. In tackling these aspects, this research employed a mix of approaches and methods to generate rich data and develop deep insights into the aspects under study. The research used a mixed methods cross-sectional survey, utilizing both

quantitative and qualitative approaches. The primary quantitative data study population included department heads in credit, financing, operations, and marketing.

The key informants were CEOs, and they participated in the qualitative data. Other secondary and desk review data were considered for triangulation purposes and for developing rich data for substantive conclusions and recommendations for adaptation and adoption for informed planning, preparedness, and response in future anticipated or unanticipated pandemics like COVID-19. The data collection tools' content was keenly drafted based on the study objectives, and they were tested for validity and reliability. In addition, the study acknowledges that the objectives of the study have valuable secondary data contained in various papers, briefs, and websites developed during the pandemic and in recent years post the pandemic. The research, therefore, augmented the primary research approaches with secondary data from the targeted sources. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) version 23, and a *p*-value of < 0.05 was considered statistically significant. Qualitative data that were voice recorded was transcribed, coded and reviewed to identify emerging themes, and the thematic data was analyzed using NVivo version 12.

CHAPTER FIVE

RESULTS OF THE STUDY

5.1 Introduction

This section presents the study's main results regarding the data collected. The data was collected on the participants' general demographics, the Cooperative Financial Institutions' business demographics, business operations, CFIs challenges, operational challenges, resilience strategy, human capital, balance sheet, and lessons learnt. This section presents two main analyses: descriptive statistics geared towards describing the individual participants' demographics and the business demographics of the CFIs sampled, as well as inferential statistics to understand the association between the main variables of the study. The section compares the CFIs' status before, during and after the COVID-19 pandemic.

The chapter provides an overview of the demographic characteristics of participants in the study, including age, gender, education, and size, relevant to understanding their influence on cooperative financial activities. The demographic characteristics focus on the characteristics of the CFIs under study, including their size, membership base, geographic location, and the sectors they serve. Secondly, the chapter discusses products and services, analyzing the range of products and services offered by the CFIs, such as savings accounts, loans, insurance, and investment services, and how these services cater to their members' needs as well as the source of operational funds, examining the main sources of funds that CFIs rely on for their operations, such as member contributions, external loans, grants, and investment income, highlighting their financial sustainability. Thirdly, the chapter discusses shifts or changes in the sources of operational funds due to the COVID-19 pandemic, including government support or increased reliance on internal member funds. Additionally, the chapter provides a comparative analysis of CFIs pre-, during and post-COVID-19 pandemic in terms of financial performance and operational resilience of CFIs before and after the onset of COVID-19, highlighting changes in membership, financial health, and business models.

Moreover, the chapter highlights the notable changes during COVID-19, identifying fundamental changes that CFIs experienced during the pandemic, such as digital transformation, changes in member behavior, liquidity issues, and adjustments in operational processes and compares the

average amount of credit extended to members by CFIs before, during, and after the pandemic, showing how the economic environment impacted their lending practices. The chapter also analyses the trends in member savings, borrowing levels, loan repayments, and default rates across the three periods—before, during, and after the pandemic—to assess the financial impact on CFIs and their members.

The chapter finally discusses the overall resilience of CFIs in the face of COVID-19, examining factors such as adaptability, risk management, and member support that contributed to their survival and stability during the crisis, the critical success factors and resilience mechanisms highlighting the key success factors and strategies that enabled CFIs to navigate the challenges brought about by the pandemic. It also covers innovation, collaboration, and government support.

This framework provides a detailed structure for analyzing the state of cooperative financial institutions during the COVID-19 pandemic, offering insights into their adaptability, challenges, and strategies for resilience.

5.2 Response Rate

This study sought to collect data from a sample of 159 respondents, as shown in the calculated sample size. The response rate was 22%. The study was conducted in the Nairobi City County Metropolitan for quantitative and qualitative data. However, due to unprecedented challenges, including time and study period, which took place in December 2023 and March 2024, the busiest months of CFIs. During these months, the CFIs were engaged in annual general meetings (AGMs), dividend declarations, and other managerial meetings. In addition, it was observed that there was an assumption that the study was focusing on financial processes, which is very sensitive. This is because many CFIs selected for the study turned down the request; hence, the data was collected conveniently based on the availability and acceptability to participate. This resulted in some CFIs participating in the study on either quantitative, qualitative, or both, as shown in Tables 5.1 and 5.2, respectively.

Table 5.1: CFIs which Participated in the Qualitative Study

CFI	Category of CFI	Number of Participants
Acumen SACCO	Tourism and Hospitality	1
Afya SACCO	Health	1
Asili SACCO	Banking and Finance	1
Barabara SACCO	Road Construction	1
BAT SACCO	Agribusiness	1
Cereal Growers Association SACCO	Agriculture	1
Harambe SACCO	Multisectoral	1
Java WDV SACCO	Hospitality	1
Stima SACCO	Energy	1
Ushuru SACCO	Revenue	1
Utabibu SACCO	Health	1
Total		**11**

5.2.1 CFIs by Category Which Participated in the Quantitative Study

Table 5.1 and Table 5.2, respectively, indicate that Nairobi Metropolitan City has only forty-six (46) licensed deposits taking CFIs in Nairobi CFIs. A total of thirty-five (35), which is 22% of the respondents, participated in quantitative data from eleven (11) CFIs that participated, as well as eleven (11) CEOs. From the study area, this is sufficient for representation and generalisability. Moreover, according to Mugenda and Mugenda (2003), a response rate of 10% is adequate for quantitative data analysis and representation across all the institutions.

Table 5.2: CFIs which Participated in the Quantitative Study

CFI	Category	Departments	n
Acumen SACCO	Tourism and Hospitality	Head of Credit, Finance and Accounts	2
Afya SACCO	Health	Head of Marketing, other technical officer	2
Asili SACCO	Banking and Finance	Head of finance and accounts	1
Barabara SACCO	Road Construction	Other Technical Officer	1
BAT SACCO	Agribusiness	Head of finance and accounts	1
Cereal Growers Association SACCO	Agriculture	Other Technical Officer	1
Harambe SACCO	Multisectoral	Head of operations and head of marketing	2
Java WDV SACCO	Hospitality	Head of Operations	1
Stima SACCO	Energy	Head of Marketing and Head of Credit	2
Ushuru SACCO	Revenue	Head of Credit, finance and other technical officer.	2
Utabibu SACCO	Health	Head of Operations, Credit and other Technical Officer	3
Police SACCO	Security, Law and Order	Head of Credit and Finance and Accounts	2
Magereza SACCO	Correction	Head of Operations and Head of Marketing	2
Ardhi SACCO	Land	Head of Operations and other Technical Officer	3
Postbank SACCO	Tele-Communication	Head of operations, head of Credit and head of accounts and finance	3
Kenyatta University SACCO	Education	Head of customer care, another technical officer	2
Makataba SACCO	Finance	Head of operations and head of marketing	1
Kenyatta Matibabu SACCO	Health	Head of credit, finance and accounts and other technical officer	3
Total			**35**

5.3 Demographic Characteristics of the Study Participants

The study sought to find out the demographics of participants in this study. The majority, 19 (54.29%) of the participants, had a Master's degree, and in almost the same proportion, 15 (42.85%), had Bachelor's degree education qualifications. Their duration of service at their stations was fairly long, with the majority, 16 (45.71%), indicating that they had served in their current station for between 5 and 10 years and 12 (34.29%) more than 10 years. This pointed to a fairly high probability of getting reliable and quality information from them, given the realities of their experience and institutional memory and their observations before, during and after the COVID-19 pandemic. The participants were distributed into various positions, with the majority, 11(31.43%), being technical officers, followed by heads of credit and heads of accounting and

finance, 7(20%) in each category, heads of operations, 5(14.26%), heads of marketing, 4 (11.43%) and head of customer care 1(2.86%) as shown in Table 5.3.

Table 5.3: Demographic Characteristics of Respondents

	Category	Frequency	%
Highest Level Education	Masters	19	54.29
	Bachelors' degree	15	42.85
	Diploma/Certificate	1	2.86
Total		**35**	**100**
Duration of service at the CFI	Between 3-5 Years	7	20.0
	Between 5-10 Years	16	45.71
	Above 10 Years	12	34.29
Total		**35**	**100.00**
Position	Head of Marketing	4	11.43
	Head of Finance & Accounting	7	20.0
	Other Technical Staff	11	31.43
	Head of Operations	5	14.26
	Head of Credit	7	20.0
	Head of Customer Care	1	2.86
Total		**35**	**100.0**

5.4 Demographic Characteristics of CFIs

Notably, all the CFIs represented in the study were regulated by SASRA. From the data collected, it was evident that all the CFIs represented by the participants were under the regulation of SASRA, which is a body that regulates financial institutions, conducts quality checks and controls the day-to-day operations as per the stipulated rules and regulations. Additionally, almost all 34 (97.14%) of the CFIs had a membership of more than 500, except one (1) had a membership of between 200 and 500 members. On gender composition of the membership, most CFIs, 27 (77.14%), had women comprising 25% to 50% of their membership; this shows the women represented in CFIs as members. This implies that the CFIs are fairly gender friendly and inclusive and thus play an important role in promoting gender equality and inclusivity. The participants were further asked how long the CFIs had been in operation. Most CFIs, 33 (94.29%), had been in operation for more than 20 years, while the remaining two had been in operation for between 6 and 10 years, 1(2.86%), or between 16-20 years, 1(2.86%) as shown in Table 5.4.

Table 5.4: Demographic Characteristics of the CFIs

Characteristic	**Category**	**Frequency (n)**	**Percentage (%)**
SASRA Regulation	Yes	35	100.0
	No	0	0.0
Total		**35**	**100**
Membership	<200	0	0.0
	200-500	1	2.86
	>500	34	97.14
Total		35	100
Age of CFI	6-10 Years	1	2.86
	16-20 Years	1	2.86
	More than 20 Years	33	94.29
	Total	**35**	**100**
% Women Composition of Membership	0-24	2	5.71
	25-50	27	77.14
	51-75	5	14.29
	76-100	1	2.86
	Total	**35**	**100**

5.5 Products and Services

The study examined the products and services they offered their customers (members) and the average amount of credit they extended to members before, during and after the COVID-19 pandemic. Top in the list of products predominantly offered to members was loans as a standalone product, 13 (37.14%), in combination with other products and services such as savings, 10 (28.57%). Notably, the other products included different types of loans such as development loans, emergency loans, health and education/school fees loans, investments loans, property loans, mobile products and short-time loans, as shown in Table 5.5.

Table 5.5: Products and Services offered by the CFIs

Characteristic	Category of Variable	Frequency	%
Products and service	Loans and Savings	10	28.57
	Loans	13	37.14
	Development loans	2	5.71
	Development loans, Financing, School fees and Mobile products	1	2.86
	Development loans, School fees loans, Financing and emergency	1	2.86
	Emergency Loans	2	5.71
	Loans and services such as clearance, advance and salary processing	1	2.86
	Investment loans, Property loans, Health Emergency loans, Education loans	1	2.86
	Loans, Investments and Bank Accounts	1	2.86
	Loans, Savings and Investments	2	5.71
	Short-term loans due to uncertainty	1	2.86

5.6 Source of Operational Funds

On the main sources of finances for operations, the participants noted diverse sources of revenue, including interest charged on loans, members' contributions (savings and deposits), profit from investments in agriculture and businesses, insurance premiums, borrowing from banks, and transactional charges, among others. Evidently, most of the CFIs relied on members' contributions and loan interests, 8(22.86%), members' contributions, 6 (17.14%), members' contributions, loan interests and investments, 3 (8.57%), or and interest earned from loans, 3 (8.57%). A few other CFIs additionally borrowed from banks or generated funds from commissions, transaction changers and insurance premiums, among others, as indicated in Table 5.6. Almost all the CFIs relied on members' contributions, 24 (68.57%), interest earned from loans, 26 (74.29%), and revenue from investments, 37.14 (37.14%). Additionally, a few other CFIs additionally borrowed from banks, 6 (17.14%), or counted on insurance premiums (limited to CFIs which offer insurance services), 3(8.57%), or commissions and transaction charges, 2(5.71%), as summarised in Table 5.6.

Table 5.6: Sources of Operation Funds

Characteristic	Main Categories	Frequency	%
Source of Funds for Operations	Members' Contributions and Loan Interests	8	22.86
	Members' Contributions	6	17.14
	Members' Contributions, Loan Interests and Investments	3	8.57
	Loan Interests	3	8.57
	Loan Interests and Investments	2	5.71
	Loan Interests, Investments and Insurance Premiums	2	5.71
	Members' Contributions and Bank Borrowings	2	5.71
	Members' Contributions, Loan Interests, Investments and Bank Borrowings	1	2.86
	Members' Contributions, Loan Interests and Transactional Charges	1	2.86
	Loan Interests and Investments and Bank Borrowings	1	2.86
	Insurance Premiums, Investments, Holding Shortfall Deposits With Banks	1	2.86
	Investments, Loan Interests and Bank Borrowing	1	2.86
	Loan Interests and Commissions from Transactions	1	2.86
	Members' Contributions, Loan Interests, Investments and Bank Borrowing	1	2.86
	Members' Contributions, Investments and Loan Interests	2	5.71

5.6.1 Investments

CFIs explore a broad range of investments to expand their income base. Cooperative Financial Institutions (CFIs), such as credit unions, SACCOs, and cooperative banks, practice investment to expand their revenue base and better serve their members' needs. Their investment strategies are generally conservative, prioritising safety, liquidity, and member value over high-risk, high-return opportunities. The main areas where CFIs invest include securities such as government bonds, municipal, and agency bonds.

5.6.1.1 Government Bond Investment

Investments in Government bonds are preferable for CFIs because of low risk and stable returns. Investment in government bonds in Kenya, for example, involves purchasing debt securities issued by the Kenyan government to finance its expenditures and manage public debt. These bonds are considered low-risk investments because they are backed by the government, making them attractive to institutional and individual investors. Debt securities are financial instruments representing a loan made by an investor to a borrower that could be a corporation or government. These instruments are a way for the entities to raise capital by borrowing money from investors and agreeing to pay back the principal along with interest over a specified period.

In Kenya, the government offers different cadres of bonds with variant features. Treasury bonds, for example, are long-term debt instruments that mature between 2 and 30 years. These bonds offer fixed interest payments, usually bi-annually. On the other hand, infrastructure bonds are treasury bonds specifically issued to fund infrastructure development projects. Since they come with additional benefits, such as tax incentives, they are more attractive to investors.

The investment process in government bonds in Kenya involves issuing the bonds through a competitive auction process managed by the Central Bank of Kenya (CBK). Investors can purchase government bonds through two main platforms: CBK, where individual investors open a Central Depository System (CDS) account with the CBK to participate directly in auctions, and Commercial Banks and Brokers**.** In the latter, investors can buy bonds through commercial banks and licensed brokers, which may offer additional services and advice. The process begins with an announcement where the CBK announces upcoming bond issues, with details of the terms, maturity, and auction dates. After the announcements, potential investors can submit their bids, indicating the amount they want to invest and the expected yield. Bids can be competitive (specifying the returns on the investment) or non-competitive (accepting the average returns as determined by the auction). The CBK then conducts the auction, and bids are accepted, starting from the lowest returns and going upwards until the entire issue amount is allocated. Successful bidders are allocated bonds at the yields they bid, and payments are made to the CBK.

After issuance, the investors in government bonds can trade them in the secondary market, primarily through the Nairobi Securities Exchange (NSE) as a secondary market. The secondary

market provides liquidity, allowing investors to buy and sell bonds at a profit before maturity. The prices of the bonds, however, fluctuate based on interest rates, economic conditions, and investor demand. Investors in government bonds earn revenue by receiving regular interest payments, otherwise known as coupons, typically every six months. Upon maturity, the principal amount is repaid to the investor. The main advantages of Government bonds in Kenya include several safety benefits because the bonds are considered low-risk and stable returns since the interest payments are regular and predictable. Also, investors benefit from liquidity from secondary market trading, allowing for easy buying and selling. Moreover, the tax incentives from infrastructure, like infrastructure bonds, offer tax benefits. Coupon payments, such as fixed and those paid semi-annually, provide a predictable income stream. Lastly, at the end of the bond's term, the investor receives the face value of the bond based on the financial status.

Evidence from secondary data collected through desktop revises shows that some CFIs trade and invest in government bonds. The Cooperative Bank, for example, acknowledges investment in Interest-Bearing Assets, which include Call deposits, Fixed deposits, Corporate Bonds, and Kenya Government Bonds. The rationale for such investment is that the investment strategy ensures that the market volatilities do not erode the principal amount invested, the interest earned by the assets, which serve as additional income and that the assets are more liquid as they can easily be traded in the secondary market such as NSE to generate more capital earnings. The Cooperative Trust Investment Services Limited noted:

> "We concentrate on fixed income investment on Interest-Bearing Assets (including Call Deposits, Fixed Deposits, Corporate Bonds and Kenya Government Bonds) which ensure that the principal amount invested is not eroded by the volatility of the market. These assets also earn interest, which serves as additional income to the fund. In addition, these assets are liquid and can be easily traded in the secondary market to make some capital gain." (The Co-operative Trust Investment Services Limited, 2024)

In Stima SACCO's annual report and Financial Statements, released on 31st December 2022 and published early in March 2023, they acknowledged 8% income growth from US$62.39 million in 2021 to KES 7.4 billion (US$67.89 million) in 2022. Notably, the growth was directly linked to investment income and growth in interest income from members' loans:

> "The Society's total income increased by 8%, from KES 6.8 billion in 2021 to KES 7.4 billion in 2022. This growth was driven by investment income and growth in interest income from members' loans." (Stima Sacco, Annual Report and Financial Statements, 2022)

5.6.1.2 Real Estate and Property Investments

CFIs explore other investment alternatives: real estate (residential and commercial housing), property and assets, buying and selling of land to members and non-members, investing in shares and foreign exchange(forex), sale of residential houses, and leasing offices and insurance. Real estate investments, for example, involve purchasing property for rental income or capital gains. This can include residential, commercial, or agricultural properties. In some instances, the CFIs purchase land and develop properties such as residential and commercial buildings, which they later sell off at a profit or rent spaces for official or residential consumption. Some CFIs buy parcels of land in prime locations at lower prices and sell or rent the plots to individual investors. The CFIs acquire land in strategic locations, holding it for future appreciation and development. Land banking is a common investment practice that involves purchasing undeveloped land that has appreciated in value over time due to urban expansion or infrastructure development. CFIs often enter into partnerships with property developers or other investors to undertake large-scale real estate projects. These partnerships can mitigate risks and provide access to larger investment opportunities. Members of the CFIs are privileged as they get such properties at discounted rates. Some CFIs invest in real estate investment trusts (REITs) or real estate funds, which provide exposure to real estate markets without direct ownership. These funds pool resources from multiple investors to invest in diversified real estate portfolios.

CFIs generate revenue from profits from the sale of the parcels of land or the rental income from properties leased. Rental properties provide a regular income stream, which can be used to support the CFIs' operations and member services. Long-term lease agreements with tenants, for instance, ensure consistent rental income. Additionally, over time, real estate properties generally appreciate in value. CFIs can, therefore, realise capital gains by selling properties at a higher price than the purchase cost. Investing in properties in high-growth areas can particularly lead to significant capital appreciation.

Moreover, CFIs that engage in property development can sell completed residential or commercial units at a profit, providing substantial one-time revenue. Selling properties to members at favourable terms can also foster member loyalty and satisfaction. Leasing out excess space in office buildings or branches can generate additional income. Maximising the use of owned properties ensures optimal revenue generation. Investments in REITs and real estate funds yield regular dividends, providing a steady income stream. These investments offer diversification benefits, reducing the overall investment risk.

Stima SACCO, for example, have an investment entity, the Stima Investment Cooperative Society Limited, whose vision is "Innovative in wealth creation", and its mission is "To invest funds in the most viable and secure venture through prudent management of resources to secure maximum, returns, growth and sustainability" (Stima Investment Cooperative Society Limited, 2017). In line with their visions and mission, Stima SACCO invested in real estate and property in various projects, including the Kangundo Road Housing Project (construction of 327 units) at the cost of KES 1.5 billion (US$15.56 million) through a partnership with other financiers and developers. Additionally, the CFIs invested in the Parklands Commercial building, which involved the construction of commercial and residential units at an estimated cost of KES 600 million (US$5.82 million) and Pangani Heights, in partnership with the government of Kenya is famously known as "Affordable Housing". Following the investments, the institution's financial report shows significant gains. For example, The Asset base of SACCO grew from KES 1.3 billion (US$12.62 million) in 2016 to KES 1.6 billion (US$15.53 million) in 2017. The Total assets held for sale over the same period was KES1.5 billion (US$14.56 million) (Stima Investment Cooperative Society Limited, 2017). The national chairperson was on record emphasising the commitment of the SACCO to putting in place strategies to turn around the low fortunes instigated by the volatilities of 2017. More specifically, the chairperson noted that the SACCO is determined to diversify to other income-generating streams was alive and focused on minimising the traditional land sale business. On the same premises, the SACCO set up Stima Investment Insurance Agency Ltd, Stima Investment Projects Development Company Ltd and Stima Investment Real Estate Agency. In his annual speech, while attending the 13th annual delegates' meeting, he noted:

> "Fellow delegates, in spite of the reduced profitability realized by the Society in 2017, the Board of Directors and Management are determined to put in place measures to turn around

> the low fortunes of 2017. Our drive for diversification to other income-generating streams is alive and is intended to reduce over-reliance on our traditional land sale business. In this endeavour, I wish to confirm that the following business streams have been fully set up and are now expected to supplement our incomes for this year: - Stima Investment Insurance Agency Ltd, Stima Investment Projects Development Company Ltd, and Stima Investment Real Estate Agency. The above business streams will cushion members in years of fluctuations on the main income streams from land and houses. Additionally, we shall institute various cost-cutting measures on our operating expenditure." (National Chairperson, Stima Investment Cooperative Society Ltd., 2017)

Other CFIs in Kenya also practised investment, particularly in real estate (residential and commercial housing), property and assets, buying and selling land to both members and non-members, selling residential houses, letting offices, and providing insurance. The police SACCO, through the Kenya Police Investment Co-Operative Society, explores various investment options. Kenya Police Investment Co-Operative Society is a wholly owned subsidiary of the Kenya National Police DT SACCO Society Limited. The core business is undertaking investment activities using member's funds to create wealth for their members and other customers. Some of our business activities include real estate (land and housing), agribusiness and trading in equity and money markets.

Other CFIs, for example, have equally attributed their growth to investments. Ushuru SACCO, in their financial statements for 2022, for example, notes that the society's total interest income rose from KES 543 million (US$4.41 million) to KES 642 million (US$5.22 million). This increase is primarily due to the expansion of the loan book to members compared to the previous year and the investment of excess liquid cash in high-earning ventures such as government securities and fixed-income unit trusts. The surplus before tax grew from KES 107.9 million (US$0.9 million) to KES 143.8 million (US$1.17 million) year-over-year. As of 31 December 2022, the society's net asset position was KES 854.7 million (US$6.95 million), up from KES 710.5 million (US$5.78 million) as of 31 December 2021. The financial reports further evidenced in the financial statements indicated that investment shares amounted to KES 291,174 220 (US$2,367.3) (Ushuru SACCO Society Ltd., 2022).

A report of the board of directors signed by the chair was quoted noting:

> "The total interest income of the society increased from KES 543 million to KES 642 million. The increase is directly attributed to growth in the loan book to members compared to prior year and investment of excess liquid cash in high earning ventures like government securities and fixed income unit trusts. Surplus before tax increased from KES107.9 million to KES 143.8 million compared to prior year. As at 31 December 2022, the net asset position of the society was KES 854.7 million compared to KES 710.5 million as at 31 December 2021." (Ushuru SACCO Society Limited, 2022).

Besides investment in real estate (residential and commercial housing), property and assets, buying and selling of land to members and non-members, sale of residential houses, and letting of offices, CFIs also invest in shares and forex and insurance provision. CFIs, such as Savings and Credit Cooperative Organizations (SACCOs) and cooperative banks, invest in shares to diversify their investment portfolios, generate additional income, and achieve capital growth. Investing in shares involves buying equity in publicly traded companies, which can yield returns through dividends and capital appreciation. Typically, CFIs diversify their investment portfolios to balance risk and return. By including publicly traded company shares, CFIs can take advantage of the growth potential of the stock market while spreading risk across different asset classes. CFIs allocate a portion of their investment funds to equities, depending on their risk appetite, investment goals, and regulatory guidelines. This strategic allocation helps in achieving a balanced portfolio.

CFIs in Kenya actively invest in property and assets as part of their strategy to diversify revenue streams and enhance financial stability. These investments include rental properties, property development projects, land banking, office buildings, joint ventures, and investments in real estate funds. By generating revenue through rental income, capital appreciation, property sales, and dividends, CFIs can support their operations and provide better services to their members.

5.6.1.3 Shares Investment

CFIs also often invest in blue-chip stocks, which are shares of well-established, financially sound, and reputable companies. These companies generally offer stable dividends and have a history of robust financial performance. Blue-chip stocks are chosen based on factors such as market capitalisation, earnings stability, dividend history, and growth prospects. Shares of companies like

Safaricom, East African Breweries Limited (EABL), and Equity Group Holdings are some of the leading blue-chip stocks listed on the Nairobi Securities Exchange (NSE). When CFIs invest in shares, they generate revenue from dividends. Dividends provide a regular income stream for investing in shares. As companies make profits, they pay dividends to their shareholders. Dividends contribute to the CFIs' regular cash flow, which can be used for operational expenses, member services, or reinvestment. Some CFIs may choose to reinvest the dividends received into more shares, leveraging the compounding effect over time.

Apart from the dividends, capital appreciation is another primary goal for CFIs investing in shares. As the value of the shares appreciates over time, the CFIs can realise capital gains by selling the shares at a higher price than their purchase cost. Most CFIs often adopt a long-term shares investment strategy, holding onto shares for several years to benefit from significant price appreciation. As CFIs generally focus on the capital appreciation of their shares in the long term, they may also engage in market timing to capitalise on favourable market conditions, during which they may opt to sell their shares at a profit. The main advantages of investing in chares include revenue generation dividends and capital gains. In other words, CFIs earn an additional revenue stream through dividends and capital gains, enhancing their overall financial performance.

Additionally, business portfolio diversification into shares helps CFIs diversify their assets, spreading risk across different sectors and minimising dependence on a single income source. Equities also offer the potential for significant capital appreciation over the long term, contributing to the financial stability and growth of the CFIs. Shares are also more marketable than most assets and can easily be converted to raise cash as demand dictates.

Evidence from secondary data mined through desktop review shows that various CFIs invest in shares of various companies in Kenya, more specifically in Nairobi County. For example, Stima SACCO, one of Kenya's largest and most well-known SACCOs, has a diversified investment portfolio that includes shares of publicly traded companies. Stima SACCO invests in blue-chip stocks listed on the NSE, benefiting from dividend income and capital appreciation. Additionally, the CFI has invested in shares of Safaricom, Kenya's leading telecommunications company. Safaricom is known for its strong financial performance and regular dividend payouts, making it an attractive investment for the SACCO. Mwalimu National SACCO also invests in shares as part

of its investment strategy. The SACCO aims to enhance its income through strategic investments in the stock market. Notably, the CFIs diversify their business portfolio in equity holdings by investing in shares of various companies across different sectors, including banking, manufacturing, and telecommunications. This diversification helps them manage risk and optimise returns (Mwalimu National SACCO, 2023). Harambee SACCO, which mainly serves government employees and other members, invests in shares to generate additional revenue. The SACCO's investment in equities complements its primary activities of providing savings and credit services to its members. Harambee SACCO holds shares in financial institutions such as KCB Group and Equity Bank, which are among the top-performing banks in Kenya. These investments provide stable dividends and potential for capital growth (The SACCO Societies Regulation Authority (SASRA, 2022).

5.6.1.4 Forex Investment

Investing in forex involves buying and selling currencies to take advantage of fluctuations in exchange rates. It is critical to understand Forex Trading to succeed in forex trade investment. Forex trading involves the exchange of one currency for another in a decentralised global market. CFIs engage in forex trading to hedge against currency risks; this is particularly important for CFIs with exposure to foreign currencies due to international transactions or remittances. By predicting currency movements, CFIs can buy currencies expected to appreciate and sell those expected to depreciate, thus making a profit from these transactions. CFIs utilise forex trading platforms and brokers to conduct their transactions. These platforms offer tools for analysing market trends, executing trades, and managing portfolios. Examples include MetaTrader 4 (MT4), MetaTrader 5 (MT5), and other specialised forex trading software. Various strategies are available for CFIs to adopt in order to optimise their forex trading activities. Such strategies include technical analysis using historical data, charts, and indicators to predict future currency movements; fundamental analysis by assessing economic indicators, geopolitical events, and other factors that influence currency values; and automated trading, which employs algorithms and automated systems to execute trades based on predefined criteria.

It is, however, important to take care of risk. Forex trading is inherently risky due to the volatility of currency markets. CFIs employ risk management practices, including diversification, which involves spreading investments across different currency pairs to mitigate risk, setting

predetermined exit points to limit potential losses, and using cautious leverage to avoid significant losses.

Stima SACCO, one of Kenya's largest and most prominent CFIs, is known for its diversified investment portfolio, which includes forex trading. By leveraging its substantial capital base and employing skilled financial managers, Stima SACCO engages in forex trading to enhance returns. The SACCO uses sophisticated trading platforms and employs technical and fundamental analysis to make informed trading decisions. This has allowed Stima SACCO to generate additional income, which is distributed to its members as dividends. Unaitas SACCO has diversified its investment activities to include forex trading. The SACCO's strategic approach involves careful analysis of currency markets and employing automated trading systems to capitalise on market opportunities. By managing risks effectively and leveraging its financial expertise, Unaitas SACCO aims to achieve stable returns from its forex trading activities. Mwalimu National SACCO, another leading CFI in Kenya, has also explored forex trading as part of its investment strategy. The SACCO employs a team of financial analysts who monitor global currency markets and execute trades based on market trends and economic indicators. Mwalimu National SACCO's involvement in forex trading is part of its broader strategy to diversify its investment portfolio and maximise returns for its members.

5.6.1.5 Insurance Investment

In Kenya, Cooperative Financial Institutions (CFIs) play a significant role in the insurance business by leveraging their vast networks and community-centric approach. CFIs in Kenya often form strategic partnerships with established insurance companies. These collaborations enable CFIs to offer their members a range of insurance products without the need to set up their own insurance firms. For example, the Cooperative Bank of Kenya has partnered with CIC Insurance Group, a leading cooperative insurance provider in the region, to offer various insurance products to its clients. The partnership sees members of the Cooperative Bank SACCO getting products such as life insurance, general insurance, health insurance, and agriculture insurance. Cooperative Bank acts as an agent in the partnership, promoting and selling CIC Insurance products to its members and customers. This partnership leverages the bank's extensive customer base and CIC's expertise in insurance.

Some CFIs establish their own insurance companies to underwrite insurance policies directly. This allows them to design products specifically tailored to the needs of their members, ensuring better coverage and affordability. The CIC Insurance Group, for example, has its own insurance portfolio. CIC Insurance Group was founded by cooperative societies in Kenya. It started as a small cooperative insurance provider and has developed into a major player in the Kenyan insurance market. They offer various insurance products, including life, health, general, and micro insurance. They also provide agriculture insurance, which is crucial for the many cooperative members involved in farming. CFIs cater to a large segment of low-income individuals whom traditional insurance companies often underserve. By offering microinsurance products, CFIs make insurance accessible and affordable to these populations. These products typically have lower premiums and cover common risks low-income households face.

Kenya Union of Savings and Credit Co-operatives (KUSCCO), through KUSCCO Mutual Assurance, offers micro insurance products tailored for members of Savings and Credit Co-operatives (SACCOs). These products include funeral cover, health insurance, and asset insurance. By providing these microinsurance products, KUSCCO helps reduce the financial vulnerability of its members, ensuring they have a safety net in times of crisis. At the same time, they raise revenue, which they can invest in other portfolios.

Other CFIs integrate insurance products with their other financial services, such as loans and savings. This integration often means that members receive bundled products where insurance is a component of the loan or savings account. Stima SACCO, for example, provides loan protection insurance, which ensures that in the event of a borrower's death or permanent disability, the outstanding loan balance is covered by the insurance policy. This integration provides peace of mind to the borrower and the SACCO, reducing the risk of default due to unforeseen circumstances. CFIs also invest in educating their members about the importance of insurance. Through workshops, seminars, and community meetings, they raise awareness about the benefits of insurance and how it can protect against various risks. K-Unity SACCO conducts regular financial literacy programs, including sessions on the importance of insurance. They collaborate with insurance experts to provide detailed information and answer members' queries. CFIs facilitate increased uptake of insurance products among members due to better understanding and trust in insurance solutions.

In conclusion, CFIs in Kenya invest in the insurance business through strategic partnerships, forming their own insurance companies, offering micro insurance, integrating insurance with other financial services, and running education campaigns. These approaches enable CFIs to provide valuable insurance products to their members, promoting financial security and community resilience. Through these efforts, CFIs are crucial in increasing insurance penetration in Kenya, particularly among underserved populations. In all investments, effective risk management practices, including due diligence, diversification, professional management, and regular monitoring, are essential to ensuring the success and sustainability of these investments. Through strategic property and asset investments, CFIs in Kenya can achieve long-term growth and contribute to the economic development of their communities.

Regarding the stakeholders considered in the main decisions made during COVID-19, the participants noted that in most CFIs, 20 (57.14%), the decision centred on the members because they were the worst affected by the pandemic, they were the main stakeholders, the owners of the business, or they are the main source of finances for the CFIs. Other CFIs, n=3 (8.57%), focused on all stakeholders, staff, 2 (5.71%), business clients, 1(2.86%), board of directors, 1(2.86%), Non-salaried members of the CFIs, n=1(2.86%), salaried members, n=1(2.86%), member institutions, n=1(2.86%). Table 5.7 below summarises the results.

Table 5.7: Main Stakeholders Considered in Decision-Making During COVID-19

Characteristic	**Category**	**Frequency**	**%**
Focus of decisions made during the COVID-19 pandemic	Members	20	57.14
	All Stakeholders	3	8.57
	Staff	2	5.71
	Business Clients	1	2.86
	Board of Directors	1	2.86
	Non-Salaried Members	1	2.86
	Salaried Members	1	2.86
	Members Institutions	1	2.86
	Non -Responsive	5	14.29
Total		**35**	**100.0**

In other parts of the world, some CFIs have demonstrated in multiple scopes. Desjardins Group, headquartered in Canada, is a leading cooperative financial group that has effectively diversified

its investments across various sectors, gaining a significant competitive advantage. Desjardins Group is known for its diversification of investments, including financial services, technology and FinTech, Real estate and Infrastructure, and Sustainable and Responsible Investments. In financial services, Desjardins Group's core business in financial services includes banking, insurance, and wealth management. By offering a comprehensive range of financial products and services, Desjardins has been able to cater to diverse customer needs. This diversification within financial services helps mitigate risks associated with reliance on a single product line. In Banking, Desjardins operates a network of caisses (credit unions) across Canada, providing traditional banking services such as savings accounts, loans, and mortgages.

Desjardins Insurance offers a variety of insurance products, including life, health, property, and casualty insurance. This broad product range helps Desjardins appeal to a wide customer base. Additionally, they invest in wealth management through the Group, which offers investment products and advisory services, allowing them to capture a share of the growing investment market. Furthermore, Desjardins has invested heavily in technology and FinTech, recognising the importance of digital transformation in financial services such as digital banking by introducing mobile banking apps and online services that have enhanced customer experience and convenience, attracted tech-savvy consumers and retained existing customers. Additionally, the group has cast its net into FinTech collaborations: Desjardins collaborates with FinTech startups to innovate and stay ahead in financial services. For example, they have invested in the Desjardins Lab, an innovation space that fosters collaboration with startups to develop new financial technologies.

Other noted investments by the group include real estate and infrastructure. Desjardins has also diversified into real estate and infrastructure investments, providing stable returns and long-term growth potential. Through its real estate subsidiaries, Desjardins invests in commercial and residential properties. These investments generate rental income and capital appreciation, contributing to the group's financial stability. The group also funds infrastructure projects such as public transportation systems, energy, and community development. These investments support sustainable growth and provide a steady income stream. The Group strongly focuses on sustainable and responsible investments, aligning with global environmental, social, and governance (ESG) criteria trends. These investments include renewable energy, which the Group invests in renewable

energy projects, including wind, solar, and hydroelectric power. These investments provide financial returns and enhance the group's reputation as a socially responsible entity. Social Impact Investments: The group also engages in social impact investing, funding projects that address social issues such as affordable housing, education, and healthcare.

Investing in a wide scope of sectors and ventures, the group enjoys a competitive advantage, including risk mitigation and stability. By diversifying across various sectors, the Group can mitigate risks associated with market volatility in any single industry. For example, downturns in the banking sector can be offset by gains in the insurance or real estate sectors. This stability is crucial for maintaining investor and customer confidence. Moreover, offering a wide range of products and services allows Desjardins to meet diverse customer needs, fostering loyalty and expanding their market reach. Customers can access comprehensive financial solutions under one roof, increasing convenience and satisfaction. Thirdly, investments in technology and FinTech keep Desjardins at the forefront of innovation in financial services. By continually enhancing their digital offerings, they attract younger, tech-savvy customers and improve operational efficiency. Furthermore, Desjardins' focus on sustainable and responsible investments strengthens their socially and environmentally conscious brand. This attracts ethically minded customers and investors and aligns with regulatory trends and global sustainability goals.

Following these advantages, Desjardins is consistently ranked among the top financial institutions in Canada, partly due to its diversified investment strategy. They are also able to meet the expectations of their customers. High customer satisfaction scores reflect the group's ability to provide comprehensive and reliable services. Additionally, strong financial performance and stability, as evidenced by robust revenue and profit growth, highlight the success of their diversified investment approach. In a nutshell, Desjardins Group's diversified investments across financial services, technology, real estate, infrastructure, and sustainable projects provide them with a competitive advantage by mitigating risks, enhancing customer loyalty, fostering innovation, and aligning with sustainability trends. This diversified approach secures their market position and ensures long-term growth and resilience. In their annual report, they noted:

> "We offer more than 40 responsible investment product options, making us a responsible investment leader in Canada with almost $7.4 billion in assets under management.

SocieTerra funds and portfolios make up $5 billion of these assets, up 45% over 2019. • 29% of Desjardins Funds unitholders now hold SocieTerra funds or portfolios, up from 24% in 2019. In 2020, our members and clients invested more than $1 billion in SocieTerra funds and portfolios. … We joined the Partnership for Carbon Accounting Financials to measure the greenhouse gas (GHG) emissions generated by our financing and investment activities, using a recognized scientific method. We continue to focus our own direct infrastructure investments in renewable energy. In September 2020, we announced a $100 million investment in 4 wind farms and a solar farm in the United States. The farms will ultimately generate enough clean energy to power 140,000 households and displace the equivalent of the GHG emissions produced by 280,000 cars annually. As at September 30, 2020, we'd invested $1.21 billion in the renewable energy infrastructure sector. That's approximately 44% of our infrastructure portfolio". (Desjardins Group, 2020).

5.7 Comparative Analysis of Cooperative Financial Institutions (CFIs) Pre- and Post-COVID-19 Pandemic

The CFIs were compared based on the parameters measured at the pre-COVID-19 and post-COVID-19 seasons. These parameters included the average amount of credit facilities the SACCOs gave in the two seasons, the financial and operational challenges they faced, the savings trends, borrowings, loan repayments, and loans defaulting during the two seasons.

5.7.1 Comparison of Challenges

This subsection presents the findings of the study regarding the challenges that were most faced by the CFIs before, during, and after the pandemic. The challenges are categorised into financial and operational challenges faced by members of the CFIs over the same period.

5.7.1.1 Financial Challenges Pre, During and Post-COVID-19

The participants were interrogated on some of the most notable financial challenges faced by the CFIs prior to COVID-19, during the pandemic and after the declaration to the end of the same as a global public health emergency. The results for the three seasons are captured in the subsequent tables. Before the COVID-19 pandemic, most CFIs faced financial challenges around liquidity, 7 (20.0%), loan defaults, 8 (22.86%), delayed loan repayments, 4 (11.43%), high demands for loans,

3 (8.57%), and low members' savings, 3 (8.57), among others. Notably, most of the CFIs cited multiple challenges.

During the COVID-19 pandemic, the challenges varied slightly but to the negative side, for example increase in loan defaults, 15 (42.86%), a drastic drop in members' savings, 11 (31.43%), liquidity, 9 (25.71%), delayed remittances, 5 (14.29%), low uptake of long terms loans, 5 (14.29%), delayed loan repayments, 4 (11.43%), higher loan demand, 3 (8.57%), and bad debts (8.57%) among other as shown in Table 5.8. In some scope, these challenges intensified, with an alarming increase in loan defaults (42.86%) and a drastic drop in members' savings (31.43%). Other significant challenges included liquidity constraints (25.71%), delayed loan repayments 8(11.43%), and reduced uptake of long-term loans (14.29%). These financial hardships were exacerbated by factors like increased operating costs (5.71%), economic recession (5.71%), and cash flow constraints (2.86%).

After the pandemic, some of the challenges eased while others came in or increased. Most of the CFIs, for instance, struggled with liquidity, 7(20.0%), reduced members' savings, 6(17.14%), loan defaults, 5(14.29%), reduced borrowing, 5 (14.29%), delayed repayments, 4 (11.43%), inflations, 4(11.43%), low loan uptake 3(8.57%), increased cost of living, 3(8.57%) and increased taxation, 2 (5.71%), among others. Some of these challenges were also highlighted by some respondents who participated as Key Informants of various CFIs, as evidenced by their responses. Their responses were similar to the statistics from quantitative data, which documented substantial challenges experienced during the COVID-19 pandemic that ravaged the entire globe across all sectors. The responses :

> "I would say that we scaled down. In other words, we couldn't continue giving the same amount of credit we would give under normal circumstances because it was riskier for the SACCO." (KII III)
>
> "Because of the panic, the business also lost some significant part of expected incomes during that time. Because of the fact that members were not sure of the security of their jobs in the few months to come, so the loan uptake went down." (KII V)

Comparing the seasons, some of the challenges which cut across included liquidity, which rose during the pandemic from 7(20.0%) to 9(25.71%) and has fallen back to 7(20.0%) post-pandemic.

Loan defaults was 8(22.86%) before the pandemic, and escalated to 15(42.86%) during the pandemic, and has drastically reduced to 5(14.29%) post-pandemic. Delays in loan repayments remained the same across the three periods, 4(11.43%). Loan demand remained the same before and during the pandemic, 3(8.57%), but has since risen after the COVID-19 pandemic, 5 (14.29%). There were also significant differences in members' savings across the period, with the period before the pandemic registering the challenges at 8.57%. During the pandemic, the challenge with members' savings worsened to 31.43%. Notably, the same has improved significantly post-pandemic (17.14%).

The findings revealed significant shifts in financial challenges experienced by CFIs, commonly known as Savings and Credit Cooperative Organizations (SACCOs), across different phases: before, during, and after the COVID-19 pandemic. Prior to the pandemic, liquidity emerged as a predominant challenge, cited by 20.0% of SACCOs, alongside issues such as loan defaults (22.86%), delayed repayments (11.43%), and high demand for loans (8.57%). Notably, CFIs often faced multiple challenges concurrently.

Table 5.8: Financial Challenges Before, During and Post-COVID-19 Pandemic

Season	**Category**	**Frequency**	**%**
Before COVID-19 Pandemic	Liquidity	7	20.0
	Loan Defaults	8	22.86
	Delayed Repayments	4	11.43
	High Demand for Loans	3	8.57
	Mismanagement of Funds	1	2.86
	Low Loan Uptake	3	8.57
	Low Members' Savings	3	8.57
	Low Borrowings	1	2.86
	Less Reliable Loan Recovery Model	1	2.86
	Income Inequality Among Members	1	2.86
	Low Membership Growth	1	2.86
	Poor Risk Management	1	2.86
	Smaller Scope of Revenue	2	5.71
	Loss to Investments	1	2.86
	Category	**Frequency**	**%**
During COVID-19 Pandemic	Liquidity	9	25.71
	Increased Loan Defaults	15	42.86
	Delayed Repayments	4	11.43
	High Demand for Loans	3	8.57
	Low Uptake of Long-Term Loans	5	14.29
	Drastic Drop in Members' Savings	11	31.43
	Increased Operation Costs	2	5.71
	Cash Flow Constraints	1	2.86
	Income Inequality Among Members	1	2.86
	Minimal Membership Growth	1	2,86
	Reduced Interest on Loans	1	2.86
	Economic Recession	2	5.71
	Bad Debts	3	8.57
	Very Small Profit Margin	1	2.86
	Delayed Remittances	5	14.29
	Category	**Frequency**	**%**
After COVID-19 Pandemic	Liquidity	7	20.0
	Loan Defaults	5	14.29
	Delayed Repayments	4	11.43
	Increasing Inflation	4	11.43
	Low Loan Uptake	5	14.29
	Reduced Members' Savings	6	17.14
	Higher Interest Rates	1	2.86
	Increased Taxation	2	5.71
	Increased Cost of Living	3	8.57
	High Loan Uptake	1	2.86
	Smaller Scope of Revenue	1	2.86
	Slow Membership Growth	1	2.86
	Market Competition	1	2.86
	Dollar Fluctuation	1	2.86
	Increased Bad Loans	1	2.86

5.7.1.2 Operational Challenges Pre-, During and Post-COVID-19 Pandemic

The study also sought to examine the operational challenges the SACCOs might have faced before, during, and post-pandemic. The responses were analysed by manual coding to standardise the participants' sentiments regarding what they perceived as the main challenges during the three periods. Table 5.9, 5.10 and 5.11 summarise the results. From the tables, the most prevalent challenge before the pandemic was operational inefficiencies, 8(22.86%), competition, 4 (11.43%), and loan defaults, 3 (8.57%), among others.

During the pandemic, the challenges revolved around the mitigation measures, which were announced and enforced immediately without giving the CFIs any time to adjust. Some of these challenges included high cost of operation, 5(14.29%), automation and cyber-attacks, 6(17.14%), MoH regulations and restrictions, 5(14.29%), loan defaults, 4(11.42%), inaccessibility of the office, 4(11.42%), immobility of clients and staffs, 4(11.42%), remote working, 4(11.42%), and membership withdrawal and reduced incomes, 4 (11.42) among others as presented in Table 5.8 summarises the results.

After the pandemic, the challenges remained almost the same, except with a significant reduction in prevalence across the CFIs. Some notable challenges cut across all the periods, for example, loan defaulting, but some changes were notable; before the pandemic, the prevalence of defaults was 3(8.57%). It rose to 4(11.43%) during the pandemic and finally dropped to 2(5.71%) post covid-19 pandemic. Cyber threats were lowest before the pandemic, 2(5.71%), highest during the pandemic, 6(17.14%) but reduced to, 4(11.43%) post pandemic. Employee absenteeism was a fairly significant challenge before (2.86%) and during (5.71%) the pandemic, but none was reported post the pandemic. Although poor communication was not registered as a significant challenge during the pandemic, it was evident before, at 2(5.71%), and reduced after the pandemic at 1(2.86%). The period before the pandemic and after the pandemic both registered competitions (before, 4(11.42%) and after, 3(8.57%). Following the pandemic, while some challenges eased, others persisted or worsened. The institutions continued to grapple with liquidity issues (20.0%), reduced members' savings (17.14%), loan defaults (14.29%), and inflation (11.43%). Additionally, concerns over increased taxation (5.71%), rising living costs (8.57%), and higher interest rates (2.86%) emerged. Table 5.9 summarises the results.

Table 5.9: Operational Challenges During and After COVID-19 Pandemic

	Category	Frequency	%
Operational challenges faced before COVID-19	Poor communication between the board of directors, staff and members	2	5.71
	Operational inefficiencies	8	22.86
	Financial constraints	2	5.71
	Competition	4	11.42
	Loan defaulting	3	8.57
	Cyber security threats	2	5.71
	Congestion in Banking Halls	2	5.71
	Slow growth	1	2.86
	Low liquidity levels	1	2.86
	High employee turnover	1	2.86
	Internal feuds	1	2.86
	Questionable staff qualification	1	2.86
	Unfavorable regulations	2	5.71
	Overconcentration on long-term investment	1	2.86
	Hard economic times	1	2.86
	Personnel absenteeism	1	2.86
	Delayed remittances	1	2.86
	High loan demands	1	2.86
	Category	**Frequency**	**%**
Operational challenges faced during COVID-19 pandemic	High cost of operations	5	14.29
	Loan defaults	4	11.43
	Inaccessibility of the office	4	11.43
	MoH regulations/restrictions	5	14.29
	Immobility of clients and staff	4	11.43
	Remote working	4	11.43
	Automations and Cyber attacks	6	17.14
	Membership withdrawal & Reduced incomes	4	11.43
	Absenteeism	2	5.71
	Transition to Technology	1	2.86
	Staff pay cuts	1	2.86
	Increased financial risks	1	2.86
	Poor decision making	1	2.86
	Minimal members savings	1	2.86

	Category	Frequency	%
Operational challenges post-COVID-19 pandemic	Increase cyber risks	4	11.43
	Slow adoption of technology	4	11.43
	Inflation	4	11.43
	Competition	3	8.57
	Lack of adequate resources	2	5.71
	Unfavorable regulations	3	8.57
	Loan defaults	2	5.71
	Withdrawal of membership	2	5.71
	Poor communication	1	2.86
	Internal feuds	1	2.86
	High employee turnover	1	2.86
	Poor marketing	1	2.86
	Inconvenience of working from home	1	2.86
	Short term loans	1	2.86
	Technology risk	1	2.86

5.7.1.3 Challenges Faced by Membership During the Pandemic

The study further investigated the major challenges that the members of the SACCOs might have faced during the pandemic. The results of the investigation have been summarised in Table 5.10. The main challenges faced by the members during the pandemic included financial constraints, 15(42.86%), which might have been caused by pay cuts, job losses, closure of business, or lockdowns and curfews, minimal accessibility of facilities, 9(25.71%), difficulty of navigating the technology of the automated processes, 7(17.14%), death of members, 4(11.43%), and cyber security, 2(5.71%) among others.

Table 5.10: Challenges Faced by Members of CFIs During the Pandemic

	Category	**Frequency**	**%**
Challenges faced by members of SACCO during the COVID-19 Pandemic	Inaccessibility of Facility	9	25.71
	Difficulty navigating technology of automated process	6	17.14
	Death of members	4	11.43
	Financial Constraints	15	42.86
	Restricted movements	1	2.86
	Fear of infection and sickness	1	2.86
	Communication breakdown	1	2.86
	Inefficient service delivery	1	2.86
	Difficulty getting loan guarantors	1	2.86
	Cyber security	2	5.71
	Losses to business members	1	2.86

5.7.2 Notable Changes During COVID-19

This subsection highlights the main changes that occurred or were necessitated by the pandemic outbreak. It delves into changes in human capital, membership, technology, products and services.

5.7.2.1 Human Capital

The study investigated what might have changed on the staff due to the pandemic. The results of the inquiries are summarised in Table 5.11. Some of the most notable changes on staff included additional staff, 5 (14.29%), having to learn to work from home through technology, 5(14.29%), remote working and social distancing 4(11.43%), increased salaries 4(11.43%), mandatory vaccination (11.43%), voluntary retirement/resignation/increased turnover 3(8.57%), increased sense of ownership 3(8.57%), training/capacity building, 3(8.57%), increased health awareness 3(8.57%), and COVID-19 insurance, 2(5.71%), among others.

Table 5.11: Changes on Human Capital

	Category	Frequency	%
Changes on Staff	Additional Staff	5	14.29
	Voluntary retirement or resignation	3	8.57
	Increased sense of ownership	3	8.57
	Remote working and Social distancing	4	11.43
	Increased salaries	4	11.43
	Having to learn remote working technologies	5	15.29
	Vaccination	4	11.43
	Training/capacity building	3	8.57
	Increased health awareness	3	8.57
	Performance contracting	1	2.86
	Dissatisfaction	1	2.86
	Covid-19 Insurance	2	5.71

5.7.2.2 Membership

A further inquiry into some of the major changes that the pandemic might have necessitated regarding membership and technology has been summarised in Tables 5.12 and 5.13, respectively. Most CFIs notably grew membership, 15(42.0%), while others noted reduced membership, 7(20.0%). A few CFIs noted that their members became more enlightened on matters of consumer FinTech, 3(8.57%), while others cut down their savings with the SACCOs 1(2.75%). In a few instances, some members became more informed about the SACCOs.

Table 5.12: Changes on Membership

	Categories	n	%
Changes on Membership	Growth of membership	15	42.86
	Decline in membership	7	17.14
	Decline in rate of growth	1	2.86
	Dormant accounts increased	1	2.86
	Members adopted technology	3	8.57
	Members promoted to civil service	1	2.86
	Reduced savings	2	5.71
	Members are more informed about the SACCO	1	2.86

5.7.2.3 Technology

The participants noted that the pandemic necessitated advancements in both operation technology and service delivery technology. Some operational technologies included Google Meet, Zoom, or

Teams to facilitate virtual meetings. On the other hand, service delivery technologies included mobile services, online banking, online applications of membership or credit facilities, and mobile Apps, among others. These technologies were part of business continuity strategies. Table 5.13 summarises the changes in technology. About 12 (34.29%) adopted new technologies for service delivery, while another equal proportion adopted both service delivery and operations technologies, while 5(14.29%) of the CFIs adopted technology specifically to enhance their operations.

Table 5.13: Changes on Technology

	Category	**n**	**%**
Changes in Technology	New technology of operations	5	14.29
	New technology of service delivery	12	34.29
	New technology for service delivery and new technology for operations	12	34.29
	Missing	6	17.14
Total		**35**	**100**

5.7.2.4 New Products

When asked if they had introduced new products and services, most CFIs acknowledge the introduction of certain products and services amidst efforts to recover and increase their business resilience. Almost all the CFIs (94.29%) noted that they had introduced a new line of products. A further interrogation on the specific products introduced, they highlighted various products as summarized in Table 5.14. As noted from the results the prevalent added products included general credit facilities of different cadres including unspecified credit facilities 16(45.71%), long term credit facilities, 6(17.14%), digital credit facilities (mobile loans), 4(11.43%), and savings products, 2 (5.71%) among others

Table 5.14: New Products Introduced

	Category	n	%
New products	Additional credit facilities	16	45.71
	Additional credit facilities - digital	4	11.43
	Additional credit facilities - long terms	6	17.14
	Additional credit facilities with flexible repayment schedule	1	2.86
	Asset financing	1	2.86
	Extension of loan repayment to 120 months	1	2.86
	Insurance	1	2.86
	Loan insurance	1	2.86
	Saving products	2	5.71
	Missing	2	5.71
Total		**35**	**100**

Almost a similar trend was observed with regard to the new services introduced amidst or after the pandemic. About 29 (82.86%) of the participants acknowledged the addition of new services; the West did not identify any new services. Of the services added, automation services topped the list, with 15(42.86%), automation of both services and operations, 4(11.43%), insurance, 3(8.57%), and other services. The results are summarised in Table 5.15.

Table 5.15: New Services

	Category	n	%
New Services	Automation of services	15	42.86
	Automation of services and operations	4	11.43
	Insurance	3	8.57
	Alternative mobile banking	1	2.86
	Change of terms for some of our loan products	1	2.86
	Merchant pay bill services	1	2.86
	New CRM channels	1	2.86
	SACCO link VISA ATMs and M-Sacco	1	2.86
	Salary processing and Easy cash for members	1	2.86
	Missing	6	17.14
Total		**35**	**100**

5.7.3 Comparison of Average Credit Extended to Members

The range of credit facilities in terms of amounts was measured for the two seasons. Considering the loan issuance dynamics, it is evident that COVID-19 might have had an impact on the average amount of credit CFIs gave their members. Comparing, for example, the period before, during and after COVID-19, 24 (68.57%), 14 (40,00%) and 28 (80.0%) of the CFIs gave loans above KES1,000,000 (US$9,901), respectively. The same trend is evident for loan amounts between KES 601,000 (US$5,950.5) and KES 800,000 (US$7,921) in the three periods registered, 3 (8.57%), 1 (2.86%), and 4 (11.43%), of the CFIs being able to give credit facilities in that range.

Evidently, during COVID-19, the number of CFIs that gave credit of over KES 1000,000 (US$9,901) declined from 68.57% to 40.0%. In the period after COVID-19, there was a drastic rise in the number of CFIs that gave more than KES 1,000,000 (US$9,901) to credit facilities (from 40.0% during COVID-19 to 80.0% after COVID-19). The results and the analysis are presented in Table 5.16.

Table 5.16: Amount of Credit Offered Pre-, During and Post-COVID-19 Pandemic

	Category	**n**	**%**
Pre-COVID-19	KES 200,000 - 400,000	1	2.86
	KES 400,000 – 600,000	3	8.57
	KES 600,000 – 800,000	4	11.43
	KES 800,000 – 1,000,000	3	8.57
	>KES 1,000,000	24	68.57
Total		**35**	**100**
During COVID-19	KES 101,000 -200,000	2	5.71
	KES 201,000 - 400,000	4	11.43
	KES 401,000 – 600,000	9	25.71
	KES 601,000 – 800,000	5	14.29
	KES 801,000 – 1,000,000	1	2.86
	>KES 1,000,000	14	40.00
Total		**35**	**100**
Post-COVID-19	KES 201,000 – 400,000	1	2.87
	KES 401,000 – 600,000	2	5.71
	KES 601,000 – 800,000	4	11.34
	> KES 1,000,000	28	80.00
Total		**35**	**100**

5.7.4 Savings, Borrowings, Loan Repayments and Defaults Before, during and post-COVID-19 Pandemic

The study examined the trends of savings, borrowings, loan repayments and defaults pre-COVID-19, during and after the pandemic. Tables 5.17, 5.18, 5.19 and 5.20 summarise the participants' sentiments.

5.7.4.1 Savings

Results in Table 5.17 demonstrate that most of the CFIs, 19 (54.7%), noted that the savings were higher as compared to the post-COVID-19 period, 8 (22.9%) noted that the savings patterns were the same, while 6 (17.1%) CFIs noted that the savings were lower pre-COVID-19 as compared to post-COVID-19 period. Only two CFIs noted that savings were generally higher post-COVID-19 than pre-COVID-19. Most CFIs, 12 (34.3%), noted that the savings were improving in the transition from the COVID-19 period to post-Covid-19. However, 9 (25.7%) indicated that the savings pattern remained the same, while 7 (20.0%) showed that the savings were lower compared to pre-COVID-19 season. The KII also noted the reduction in Savings and attributed it to the financial constraints some members experienced due to the pandemic's effects or the increase in the cost of living, as evidenced in the sentiments below.

> "We also noted aaaamm, reduction in the savings of members, I think because people shifted priority to surviving the pandemic." (KIIIX)

> "They had guaranteed other people, they lose their jobs, that means that they had to suffer in terms of being tasked to pay on behalf of the people when they're...lost their jobs. So it was quite a burden." (KIII)

Table 5.17: Comparison of Savings Pre- and Post-COVID-19

		Pre-COVID-19		Post-COVID-19	
		n	%	n	%
Valid	Missing	2	5.7	2	5.7
	Higher	19	54.3	2	5.7
	Lower	6	17.1	7	20.0
	Same	8	22.9	9	25.7
	Improving	0	0	12	34.3
	Declining			2	5.7
	Total	**35**	**100.0**	**35**	**100**

5.7.4.2 Borrowing

A similar comparison was made for the pattern of borrowing over the two seasons. Notably, the majority of CFIs, 12 (34.3%), pre-COVID-19 and post-COVID-19, 13 (37.1%), registered high borrowing; meanwhile, a fairly higher number of the CFIs, 7 (20.0%), noted that they had higher borrowings pre-COVID-19 against only 2 (5.7%) who registered the same post-COVID-19. Contrarily, more CFIs, 13 (37.1%) noted that borrowings were lower in post-COVID-19 than they were pre-COVID-19, 3 (8.6%). The other variations in the borrowing trends of the two seasons have been summarised in Table 5.18. The decline in borrowing was further implied by the KIIs noting:

> "And that meant people were only doing their bare minimum in terms of financial transactions. So that also led to decline in income generation. And as I was mentioning, people, when they're psychologically free, then they take big loans or they take bigger facilities. This was interfered with and our lending generally went down. So we experienced really a decline in growth." (KIIVII)

Table 5.18: Trends of Borrowing Before and After the COVID-19 Pandemic

		Pre Covid-19		Post-Covid-19	
		Frequency	Percent	Frequency	Percent
Valid	High	12	34.3	13	37.1
	Higher	7	20.0	2	5.7
	Improving	6	17.1		
	Low	3	8.6	3	8.6
	Lower	3	8.6	13	37.1
	Same	4	11.4	4	11.4
	Total	**35**	**100.0**	**35**	**100**

5.7.4.3 Loan Repayment

The study also compared the loan repayment trends based on the sentiment of the study participants. Most CFIs, 18 (51.4%) noted that loan repayment was best pre-COVID-19. During the same period, 9 (25.7%) of the CFIs noted high loan repayment. During the period following the peak of COVID-19, most of the CFIs, 18 (51.4%), recognised that loan repayment had worsened but was improving, while 8 (22.9%) of the CFIs noted that the loan repayment was relatively high. A section of the CFIs, 5 (14.3%) noted that loan repayment was stable in their Organizations in both the period before and after the pandemic. The results of the comparison are summarised as presented in Table 5.19.

Table 5.19: Trends of Loan Repayment Before and After the COVID-19 Pandemic

		Pre- COVID-19		Post- COVID-19	
		n	**%**	**n**	**Percent**
Valid	Best	18	51.4	0	0
	Challenging	1	2.9	1	2.9
	High	9	25.7	8	22.9
	Same	2	5.7	2	5.7
	Stable	5	14.3	5	14.3
	Improving			18	51.4
	Lower			1	2.9
	Total	35	100.0	35	100

5.7.4.4 Loan Defaulting

Finally, as highlighted in the previous sections, the study compared the loan defaulting trends between the same periods. As evidenced in the summary of the results, no CFI noted that the loan defaulting was higher pre-COVID-19, while in the period post-COVID-19, 14 (40.0%) of CFIs

registered higher loan default. Interestingly, almost the same proportion of the CFIs, 14 (40.0%), pre-COVID-19, and 13 (37.1%), noted that they registered low loan defaulting pre- and post-COVID-19, respectively. While 15 (42.9%) of the CFIs registered very minimal loan defaulting pre-COVID-19, only 2 (5.7%) registered the same post-COVID-19. Table 5.20 summarises the results of the comparison. These observations coincide with the sentiments of some of the KII:

> "It's also against incomes from small businesses outside salary. These ones were affected directly, and our loan loss went up as a result of that. We also observed that members' patterns of borrowing changed.'' (KIIVII)

Table 5.20: Trends of Loan Defaulting Pre- and Post-COVID-19

		Pre-COVID-19		**Post-COVID-19**	
		n	%t	n	%
Valid		1	2.9	2	5.7
	Higher			14	40.0
	High	1	2.9		
	Low	14	40.0	13	37.1
	Minimal	15	42.9	2	5.7
	Same	4	11.4	4	11.4
	Total	**35**	**100.0**	**35**	**100.0**

5.7.4.5 Recovery Strategy

Besides the savings, borrowings, loan repayments and default trends, the study also examined some of the primary recovery strategies that the CFIs explore to recover from the impacts of the pandemic. The results are summarised in Table 5.21.

The most explored recovery strategy was strengthening loan recovery systems, 14 (40.0%) (Contracting external debt collectors, employment of additional staff and setting up credit recovery departments, and listing of bad debtors with CRB), strengthening of the check-off repayment system and reduction of repayment, 6 (17.14%), introduction of new products and services, 6 (17.14%) and expansion on investments, 2 (5.71%) respectively.

Table 5.21: Post-COVID-19 Recovery Strategies

	Category	Frequency	%
Strategies for Recovery from the Pandemic	Additional staff	1	2.9
	Additional staff of ICT and marketing of Sacco	1	2.9
	Check-off loan repayments and reduced charges	6	17.1
	Expansion on investment	2	5.7
	Introduction of new products and services	6	17.1
	Introduction of new products and services and investments	1	2.9
	Marketing of the Sacco	1	2.9
	More ICT and reconciliation.	1	2.9
	No data	1	2.9
	Strengthen loan recovery systems	14	40.0
	Technology Adoption, Product Diversification	1	2.9
	Total	**35**	**100.0**

The study investigated the critical success factors (resilience) during the pandemic. The independent variables measured as critical success factors included the age of the CFIs, the size in terms of membership, the women's composition of membership, the source of their operation funds, the products and services they extended to their members and the industry in which they operated. The analysis of the association between these success factors and the bivariate analysis (Chi-square) test was conducted because the variables were measured on a nominal scale and treated as categorical data. The results of the analysis are summarised in subsequent sections.

5.8 The Impact of COVID-19 on the Resilience of Cooperative Financial Institutions

The study measures the resilience of the CFIs based on their ability to sustain their main function, which is to offer financial assistance to their members. Consequently, the average range of credit facilities offered by the CFIs during the pandemic was considered to be the dependent variable, while factors such as the age of the CFIs, size of membership, source of finance for operation, women composition of the membership, products and services, and sector of operation. Chi-square statistical bivariate analysis was conducted to establish the possible association between the independent variables and the resilience of CFIs during the pandemic.

5.8.1 Association Between Age of CFI and Resilience

The cross-tabulation table shows the distribution of counts for each combination of the "Age of SACCO" and "Average loan given to members during COVID-19" categories; for example, among CFIs that are "More than 20 Years" old, the most common loan amount category during COVID-19 was >"KES 1,000,000," with a count of 14 members. The table also displays expected counts based on the assumption of independence between these variables. The Pearson Chi-Square test ($\chi^2 = 19.916$, df = 10, p = .030) indicates a statistically significant association between the age of CFIs and the average loan given to members during COVID-19. However, the Likelihood Ratio test ($\chi^2 = 9.053$, df = 10, p = .527) does not show a significant association between the two variables. These tests suggest that the observed differences in loan amounts across CFIs' age groups are unlikely to occur by chance alone, as shown in Table 5.22.

Table 5.22: Association Between Age of CFI and Resilience

			Average Loan given to members During COVID-19						Total
			KES > 1,000,000	KES 101,000 to 200,000	KES 201,000 to 400,000	KES 401,000 to 600,000	KES 601,000 to 800,000	KES 801,000 to 1,000,000	
Age of SACCO	16 to 20 Years	Count	0	1	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	6 to 10 Years	Count	0	0	0	1	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	>20 Years	Count	14	1	4	8	5	1	33
		Expected Count	13.2	1.9	3.8	8.5	4.7	.9	33.0
Total		Count	14	2	4	9	5	1	35
		Expected Count	14.0	2.0	4.0	9.0	5.0	1.0	35.0

Phi coefficient ($\varphi = .754$) and Cramer's V (V =.533) are measures of association between two nominal variables, providing information about the strength and direction of the relationship as shown in Table 5.23. Both measures indicate a moderately strong association between the "age of SACCO" and "the average loan given to members during COVID-19" categories.

Table 5.23: Chi-Square Statistics of Influence of Age of CFI on Resilience

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.916[a]	10	.030
Likelihood Ratio	9.053	10	.527
N of Valid Cases	35		
a. 0 cells (0.00%) have expected count less than 5. The minimum expected count is .03.			

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.754	.030
	Cramer's V	.533	.030
N of Valid Cases		35	

5.8.2 Association Between Size of Membership of CFIs and Resilience

The study investigated the possible association between the size of the CFIs in terms of membership and the resilience of the CFIs measured as a function of the average amount of loans they extended to their clientele. The results are presented in Table 5.25. The cross-tabulation table shows the distribution of counts for each combination of membership size and average Loan given to members During the COVID-19 categories. For example, among CFI with more than 500 members, the most common loan amount category during COVID-19 was >KES 1,000,000, with a count of 14 members. The table also displays expected counts based on the assumption of independence between these variables.

Table 5.24: Association Between the Size of Membership and the Average Loan Given During the COVID-19 Pandemic

			Average Loan given to members During COVID-19						**Total**
			KES > 1,000,000	KES 101,000 to 200,000	KES 201,000 to 400,000	KES 401,000 to 600,000	KES 601,000 to 800,000	KES 801,000 to 1,000,000	
Size of Membership	201 to 500 members	Count	0	1	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	>500 Members	Count	14	1	4	9	5	1	34
		Expected Count	13.6	1.9	3.9	8.7	4.9	1.0	34.0
Total		Count	14	2	4	9	5	1	35
		Expected Count	14.0	2.0	4.0	9.0	5.0	1.0	35.0

The Pearson Chi-Square test ($\chi^2 = 16.985$, df = 5, p = .005) indicates a statistically significant association between the size of membership and the average loan given to members during Covid-19 categories. The Likelihood Ratio test ($\chi^2 = 6.309$, df = 5, p = .277) does not show a significant association. These tests suggest that the observed differences in loan amounts across CFI membership sizes are unlikely to occur by chance alone. Phi coefficient ($\varphi = .697$) and Cramer's V (V = .697) are measures of association between two nominal variables, providing information about the strength and direction of the relationship. Both measures indicate a strong association between the size of membership and the "average loan given to members during COVID-19" categories, as summarised in Table 5.25.

Table 5.25: Chi-Square Statistics of Influence of Size of Membership on Resilience

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.985[a]	5	.005
Likelihood Ratio	6.309	5	.277
N of Valid Cases	35		
a. 0 cells (0.00%) have an expected count of less than 5. The minimum expected count is .03.			

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.697	.005
	Cramer's V	.697	.005
N of Valid Cases		35	

5.8.3 Source of Finance for Operation

The resilience of the CFI was analysed against the main source of finance for the operation of the CFIs to determine the possible function of the source of finance in the resilience of the CFIs during the pandemic. Table 5.26 summarises the analysis. The cross-tabulation table displays the distribution of counts for each combination of source of funds for operations and average loan given to members during Covid-19 categories. For example, among CFIs funded by members' contributions, the most common loan amount category during COVID-19 was >KES 1,000,000.

Table 5.26: Association Between Source of Finance for Operation and Resilience

			Average Loan given to members During Covid-19						Total
			KES > 1,000,000	KES 101,000 - 200,000	KES 201,000 - 400,000	KES 401,000 - 600,000	KES 601,000 - 800,000	KES 801,000 - 1,000,000	
Source of Funds for Operations	Insurance premiums, Investment, and Holding Shortcall deposits with banks	Count	0	0	0	1	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Investments, Loan interests and Borrowing from banks	Count	0	1	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Loan interests	Count	1	0	0	0	2	0	3
		Expected Count	1.2	.2	.3	.8	.4	.1	3.0
	Loan Interests and Commissions from transactions	Count	0	0	0	1	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Loan Interests and Investments	Count	1	0	1	0	0	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	Loan Interests, Investments and Insurance premiums	Count	0	0	0	0	2	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	Loan interests, loan commissions, and Investments,	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Loan interest, Fees and Charges, and Investments	Count	0	0	1	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Members contributions, Loan interests, Fixed deposits and transactional charges	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Members' contributions	Count	0	0	2	2	1	1	6
		Expected Count	2.4	.3	.7	1.5	.9	.2	6.0

	Members' contributions and Borrowing from banks	Count	2	0	0	0	0	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	Members' contributions and Loan interests	Count	4	1	0	3	0	0	8
		Expected Count	3.2	.5	.9	2.1	1.1	.2	8.0
	Members' contributions, Investments, and Loan interests	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Members' contributions, Loan interests and Investments	Count	1	0	0	2	0	0	3
		Expected Count	1.2	.2	.3	.8	.4	.1	3.0
	Members' contributions, Loan interests, and Transactional charges.	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Members' contributions, Loan interests, Investments and Borrowing from bank	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
Total		Count	14	2	4	9	5	1	35
		Expected Count	14.0	2.0	4.0	9.0	5.0	1.0	35.0

The Pearson Chi-Square test ($\chi^2 = 79.326$, df = 75, p = .344) indicates that there is no statistically significant association between the source of funds for operations and the average loan given to members during COVID-19 categories. The Likelihood Ratio test ($\chi^2 = 63.518$, df = 75, p = .825) also does not show a significant association. These results suggest that the observed differences in loan amounts across different sources of funds for CFI operations are likely due to random variation rather than a true association. Phi coefficient ($\varphi = 1.505$) and Cramer's V (V = .673) are measures of association between two nominal variables. The high values of these coefficients suggest a strong association between the source of funds for operations and the average loan given to members during COVID-19 categories. However, the association is not statistically significant based on the Chi-Square tests.

Table 5.27: Chi-Square Statistics of Influence of Source of Funds on Resilience

		Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square		79.326[a]	75	.344
Likelihood Ratio		63.518	75	.825
N of Valid Cases		35		
a. 0 cells (0.00%) have expected count of less than 5. The minimum expected count is 13.3				
Symmetric Measures				
		Value	Approximate Significance	
Nominal by Nominal	Phi	1.505	.344	
	Cramer's V	.673	.344	
N of Valid Cases		35		

5.8.4 Sector of Operation

The resilience of the SACCOs was also analysed against the CFIs' sector of operations to determine the possible function of the sector in terms of the resilience of the CFIs during the pandemic. Table 5.27 summarises the analysis. The cross-tabulation table displays the distribution of counts for each combination of sectors of operation and the average loan given to members during the COVID-19 categories. For example, among SACCOs operating in the financial and insurance activities sector, the most common loan amount category during COVID-19 was > KES1,000,000, with a count of 5 members, as shown in Table 5.28.

Table 5.28: Association Between the Sector of Operation and Resilience

			Average Loan "000'' given to members During Covid-19						Total
			KES > 1,000	KES 101 - 200	KES 201 - 400	KES 401 - 600	KES 601 - 800,	KES 801 - 1,000	
Sector of Operation	Agriculture	Count	3	0	0	0	0	0	3
		Expected Count	1.2	.2	.3	.8	.4	.1	3.0
	Construction	Count	0	0	0	1	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Education	Count	0	0	1	1	0	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	Electricity, gas, steam and air conditioning supply	Count	0	0	0	0	3	0	3
		Expected Count	1.2	.2	.3	.8	.4	.1	3.0
	Financial and insurance activities	Count	5	0	3	3	1	1	13
		Expected Count	5.2	.7	1.5	3.3	1.9	.4	13.0
	Human health and social work activities	Count	0	1	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Information and communication	Count	0	0	0	1	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Other service activities	Count	0	1	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Professional, scientific and technical activities	Count	3	0	0	2	1	0	6
		Expected Count	2.4	.3	.7	1.5	.9	.2	6.0
	Tourism and Hospitality	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0

	Transportation and storage	Count	2	0	0	1	0	0	3
		Expected Count	1.2	.2	.3	.8	.4	.1	3.0
Total		Count	14	2	4	9	5	1	35
		Expected Count	14.0	2.0	4.0	9.0	5.0	1.0	35.0

The Pearson Chi-Square test ($\chi^2 = 74.025$, df = 50, p = .015) indicates that there is a statistically significant association between the sector of operation and the average loan given to members during COVID-19 categories. The Likelihood Ratio test ($\chi^2 = 49.334$, df = 50, p = .500) does not show a significant association. These results suggest that the observed differences in loan amounts across different sectors of CFI operations are likely not due to random variation and may represent a true association, as shown in Table 5.30. Phi coefficient ($\varphi = 1.454$) and Cramer's V (V = .650) are measures of association between two nominal variables, providing information about the strength and direction of the relationship. The high values of these coefficients suggest a strong association between the sector of operation and the average loan given to members during COVID-19 categories, particularly supported by the statistically significant Pearson Chi-Square test.

Table 5.29: Chi-Square Statistics for Influence of Sector of Operation on Resilience

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	74.025[a]	50	.015
Likelihood Ratio	49.334	50	.500
N of Valid Cases	35		
a. 0 cells (0.00%) have expected count of less than 5. The minimum expected count is .03.			

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	1.454	.015
	Cramer's V	.650	.015
N of Valid Cases		35	

5.8.5 Products and Services

Additional analysis on the association between the resilience of the CFIs against the sector of types of products and services the CFIs dealt in to determine the possible function of the types of products and services in the resilience of the CFIs. Table 5.28 summarises the analysis. The cross-tabulation table displays the distribution of counts for each combination of products and services

and the average loan given to members during COVID-19 categories. For example, among CFIs offering loans, the most common loan amount category during COVID-19 was >KES 1,000,000, as shown in Table 5.30.

Table 5.30: Association Between Products and Services and Average Loan Given During COVID-19 -Cross Tabulation

			Average Loan ("000") given to members During Covid						Total
			>KES 1,000	KES 101 - 200	KES 201 -400	KES 401 - 600	KES 601 - 800	KES 801 - 1,000	
Products & Services	Development loan, financing, school fees, mobile product	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Development Loans	Count	1	0	1	0	0	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	Development, school fees, financing and emergency	Count	0	0	0	0	0	1	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Emergency loans	Count	0	0	0	1	1	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	Loans	Count	4	1	1	5	3	0	14
		Expected Count	5.6	.8	1.6	3.6	2.0	.4	14.0
	Loans and Savings	Count	8	0	1	1	0	0	10
		Expected Count	4.0	.6	1.1	2.6	1.4	.3	10.0
	Loans and services such as clearance of advance and salary processing	Count	0	0	1	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
	Loans, investments, bank accounts	Count	0	1	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0

	Loans, Savings and Investments	Count	0	0	0	1	1	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	Short-term loans most common due to uncertainty with the future.	Count	0	0	0	1	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
Total		Count	14	2	4	9	5	1	35
		Expected Count	14.0	2.0	4.0	9.0	5.0	1.0	35.0

The Pearson Chi-Square test ($\chi^2 = 82.593$, df = 45, p = .001) indicates that there is a statistically significant association between the products and services and the average loan given to members during COVID-19 categories. The Likelihood Ratio test ($\chi^2 = 44.258$, df = 45, p = .003) confirms the significant association between the two variables. These results suggest that the observed differences in loan amounts across different types of CFI products and services during COVID-19 are likely not due to random variation and may represent a true association, as shown in Table 5.33. Phi coefficient ($\varphi = 1.536$) and Cramer's V (V = .687) are measures of association between two nominal variables, providing information about the strength and direction of the relationship. The high values of these coefficients also suggest a strong association between the Products and services and the average loan given to members during COVID-19 categories, particularly supported by the statistically significant Pearson Chi-Square test.

Table 5.31: Chi-Square Statistics for Influence of Products and Services on Resilience

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	82.593[a]	45	.001
Likelihood Ratio	44.258	45	.003
N of Valid Cases	35		
a. 0 cells (0.00%) have an expected count of less than 5. The minimum expected count is .03.			

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	1.536	.001
	Cramer's V	.687	.001
N of Valid Cases		35	

5.8.6 Women's Composition of the Membership

Lastly, the study analysed the association between the resilience of the CFIs against the women's composition of the membership in the CFIs to determine the possible function of the women's gender composition on the resilience of the CFIs. Table 5.29 summarises the analysis. The cross-tabulation table displays the distribution of counts for each combination of women's gender composition in membership and average loan given to members during COVID-19 categories. For example, among SACOOs with "25 - 50%" women composition in membership, the most common loan amount category during COVID-19 was >KES 1 000, 000, with a count of 10 CFIs (28.57%), as shown in Table 5.32.

Table 5.32: Association Between Products and Services and Average Loan Given During COVID-19 Cross Tabulation

			Average Loan ('000') given to members During COVID-19						Total
			KES > 1,000	KES 101 - 200	KES 201 - 400	KES 401 - 600	KES 601 - 800	KES 801 - 1,000	
Women's Composition in Membership	0 - 24%	Count	0	0	0	1	1	0	2
		Expected Count	.8	.1	.2	.5	.3	.1	2.0
	25 - 50%	Count	10	1	3	8	4	1	27
		Expected Count	10.8	1.5	3.1	6.9	3.9	.8	27.0
	51 - 75%	Count	3	1	1	0	0	0	5
		Expected Count	2.0	.3	.6	1.3	.7	.1	5.0
	76 - 100%	Count	1	0	0	0	0	0	1
		Expected Count	.4	.1	.1	.3	.1	.0	1.0
Total		Count	14	2	4	9	5	1	35
		Expected Count	14.0	2.0	4.0	9.0	5.0	1.0	35.0

The Pearson Chi-Square test ($\chi^2 = 10.181$, df = 15, p = .808) indicates that there is no statistically significant association between the "Women's Composition in Membership" and the average loan given to members during COVID-19 categories. The Likelihood Ratio test ($\chi^2 = 12.228$, df = 15, p = .662) also does not show a significant association. These results suggest that the observed

differences in loan amounts across different women composition categories in CFIs' membership during COVID-19 are likely due to random variation and may not represent a true association, as shown in Table 5.36. Phi coefficient (φ = 0.539) and Cramer's V (V = 0.311) are measures of association between two nominal variables, providing information about the strength and direction of the relationship.

The low values of these coefficients further support the findings of the non-significant Chi-Square tests, indicating a weak or negligible association between "women's gender composition in membership and the average loan given to members during COVID-19" categories.
Phi coefficient (φ = 0.539) and Cramer's V (V = 0.311) are measures of association between two nominal variables, providing information about the strength and direction of the relationship.
The low values of these coefficients further support the findings of the non-significant Chi-Square tests, indicating a weak or negligible association between the women's gender composition in membership and the average loan given to members during COVID-19 categories.

Table 5.33: Chi-Square Statistics for the Influence of Women's Membership on Resilience

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.181[a]	15	.808
Likelihood Ratio	12.228	15	.662
N of Valid Cases	35		

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.539	.808
	Cramer's V	.311	.808
N of Valid Cases		35	

5.8.7 Proportion of Resilience against Status of the CFIs

The study sought to find out the possible association between the status of the CFIs (Size of membership, Sector of operation, Source of operational funds, the proportion of women, and products and services) and the presence of post-COVID-19 resilience strategies.

5.8.7.1 Age of CFIs Against Having Post-COVID-19 Resilience Strategies

The study further analysed the association between the age of the CFIs, women's membership, sector of operation, size of the CFI (membership), source of finance for operations, and presence or absence of resilience strategy post-COVID-19. In the same analysis, Chi-square statistical bivariate analysis was conducted to establish the possible association between these variables.

Table 5.34: Association Between Age of CFI and Presence of Post-COVID-19 Resilience Strategies

			Do you have any strategies in place post-COVID-19?		
			No	Yes	Total
Age of Sacco	16 to 20 Years	Count	0	1	1
		Expected Count	.0	1.0	1.0
	6 to 10 Years	Count	0	1	1
		Expected Count	.0	1.0	1.0
	More than 20 Years	Count	1	32	33
		Expected Count	.9	32.1	33.0
Total		Count	1	34	35
		Expected Count	1.0	34.0	35.0

A Chi-Square test of independence was conducted to examine the relationship between the age of SACCO (Savings and Credit Cooperative Organization) members and the presence of strategies in place post-COVID-19. The results revealed no statistically significant association between the age of the CFIs and the presence of post-COVID-19 resilience strategies and 95% confidence, $\chi^2(2, N = 35) = 0.062$, $p = 0.969$. Likewise, the likelihood ratio test showed no significant association, $\chi^2(2, N = 35) = 0.119$, $p = 0.942$. To take care of the size effect, the Phi coefficient ($\Phi = 0.042$) and Cramer's V ($V = 0.042$) indicate a negligible association between age groups and the presence of post-COVID-19 strategies. Table 5.35 summarises the results of the analysis.

Table 5.35: Chi-Square Statistics of Association Between Age of the CFIs and Status of Resilience Strategy Post-COVID-19

	Value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	.062[a]	2	.969
Likelihood Ratio	.119	2	.942
N of Valid Cases	35		

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.042	.969
	Cramer's V	.042	.969
N of Valid Cases		35	

5.8.7.2 Size of Membership of CFIs Against Having Post-COVID-19 Resilience Strategies

The chi-square statistic is 0.030 at a 95% confidence interval, with 1 degree of freedom, resulting in a *p*-value of 0.002. This indicates that there is a statistically significant association between the variables "Size of Membership" and "Having strategies in place post-COVID-19". Fisher's Exact Test, used for small sample sizes or when the assumptions of the chi-square test are violated, yields a *p*-value of 0.003 (two-sided) and 0.002 (one-sided). This suggests a significant Symmetric Measure: The Phi coefficient is 0.029 with a *p*-value of 0.002 and a 95% confidence interval, suggesting a weak but positive association between the size of membership and the presence of post-COVID-19 strategies. Additionally, Cramer's V is 0.029, which indicates a weak association between the variables. Overall, the analysis indicates that there is a statistically significant association between the size of membership and having strategies in place post-COVID-19, with larger organizations more likely to have such strategies. Tables 5.36. and 5.37 summarise the test of the association between the size of membership and having post-COVID-19 resilience strategies.

Table 5.36: Association Between Size of Membership and Post-COVID-19 Resilience Strategies

			Do you have any strategies in place post-COVID-19?		Total
			No	Yes	
Size of Membership	201 to 500 members	Count	0	1	1
		Expected Count	.0	1.0	1.0
	More than 500 Members	Count	1	33	34
		Expected Count	1.0	33.0	34.0
Total		Count	1	34	35
		Expected Count	1.0	34.0	35.0

Table 5.37: Chi-Square Statistics for Association Between Size of Membership and Having Post-COVID-19 Resilience Strategies

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.030[a]	1	.002		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.059	1	.008		
Fisher's Exact Test				1.000	.971
N of Valid Cases	35				

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	-.029	.002
	Cramer's V	.029	.002
N of Valid Cases		35	

5.8.7.3 Sector of Operation of CFIs Against Having Post-COVID-19 Resilience Strategies

The cross-tabulation table presents the frequency distribution of responses across different sectors of operation. For instance, in the agriculture sector, all three (3) respondents reported having strategies in place post-COVID-19. Similarly, in the construction, education, electricity,

gas, steam and air conditioning supply, human health and social work activities, information and communication, other service activities, tourism and hospitality, and transportation and storage sectors, all respondents reported having strategies in place post-COVID-19. The results of the analysis are summarised in Table 5.38.

Table 5.38: Association Between Sector of Operation and Presence of Post-COVID-19 Resilience Strategies

			Do you have any strategies in place post-COVID-19?		
			No	Yes	Total
Sector of Operation	Agriculture	Count	0	3	3
		Expected Count	.1	2.9	3.0
	Construction	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Education	Count	0	2	2
		Expected Count	.1	1.9	2.0
	Electricity, gas, steam and air conditioning supply	Count	1	2	3
		Expected Count	.1	2.9	3.0
	Financial and insurance activities	Count	0	13	13
		Expected Count	.4	12.6	13.0
	Human health and social work activities	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Information and communication	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Other service activities	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Professional, scientific and technical activities	Count	0	6	6
		Expected Count	.2	5.8	6.0
	Tourism and Hospitality	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Transportation and storage	Count	0	3	3
		Expected Count	.1	2.9	3.0
Total		Count	1	34	35
		Expected Count	1.0	34.0	35.0

The Chi-square test results indicate that there is no statistically significant relationship between the sector of operation and the presence of strategies in place post-COVID-19, as evidenced by the Pearson Chi-Square value of 10.980 with a corresponding p-value of 0.359. Similarly, the Likelihood Ratio test yielded a *p*-value of 0.873, further supporting the lack of significant statistical association. Symmetric measures (Phi and Cramer's V) also confirm the absence of a significant relationship between the sector of operation and the presence of strategies post-

COVID-19, with both measures having values of .560 and corresponding *p*-values of 0.359 as shown in Table 5.39.

Table 5.39: Chi-Square Statistics for Association Between Sector of Operation and Presence of Post-COVID-19 Resilience Strategy

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.980[a]	10	.359
Likelihood Ratio	5.263	10	.873
N of Valid Cases	35		

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.560	.359
	Cramer's V	.560	.359
N of Valid Cases		35	

5.8.7.4 Source of Operation Funds of CFIs against having Post-COVID-19 Resilience Strategies

The cross-tabulation table displays the distribution of responses across different sources of funds for operations and whether strategies are in place post-COVID-19. For instance, among respondents whose source of funds included members' contributions, six (6) reported having strategies in place post-COVID-19, while none reported not having any strategies. Similarly, for respondents whose source of funds comprised members' contributions and loan interests, eight (8) reported having strategies, and none reported not having any strategies.

Table 5.40: Association Between Source of Operation Funds and Presence of Post-COVID-19 Resilience Strategy Cross-Tabulation

			Do you have any strategies in place post-COVID-19?		
			No	Yes	Total
Source of Funds for Operations	Insurance premiums, Investment, and Holding Shortcall deposits with banks.	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Investments, Loan interests and Borrowing from banks	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Loan interests	Count	0	3	3
		Expected Count	.1	2.9	3.0
	Loan Interests and Commissions from transactions	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Loan Interests and Investments	Count	0	2	2
		Expected Count	.1	1.9	2.0
	Loan Interests, Investments and Insurance premiums	Count	1	1	2
		Expected Count	.1	1.9	2.0
	Loan interests, loan commissions, and Investments,	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Loan interest, Fees and Charges, and Investments	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Members contributions, Loan interests, Fixed deposits and transactional charges	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Members' contributions	Count	0	6	6
		Expected Count	.2	5.8	6.0
	Members' contributions and Borrowing from banks	Count	0	2	2
		Expected Count	.1	1.9	2.0
	Members' contributions and Loan interests	Count	0	8	8
		Expected Count	.2	7.8	8.0
	Members' contributions, Investments, and Loan interests	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Members' contributions, Loan interests and Investments	Count	0	3	3
		Expected Count	.1	2.9	3.0
	Members' contributions, Loan interests, and Transactional charges.	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Members' contributions, Loan interests, Investments and Borrowing from bank	Count	0	1	1
		Expected Count	.0	1.0	1.0
Total		Count	1	34	35
		Expected Count	1.0	34.0	35.0

The Chi-square test results suggest a statistically significant relationship between the CFIs' source of funds for operations and the presence of strategies post-COVID-19. The Pearson Chi-Square value is 16.985, with a corresponding p-value of 0.020, suggesting a significant association. Likewise, the Likelihood Ratio test yielded a p-value of .014, further supporting the presence of a significant relationship. Symmetric measures (Phi and Cramer's V) also confirm a significant relationship between the source of funds for operations and the presence of strategies post-COVID-19, with both measures having values of 0.697 and corresponding p-values of 0.320.

Table 5.41: Chi-Square Test for Association Between the Source of Operation Funds and Presence of Post-COVID-19 Resilience Strategy

		Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square		16.985[a]	15	.020
Likelihood Ratio		6.309	15	.014
N of Valid Cases		35		
Symmetric Measures				
			Value	Approximate Significance
Nominal by Nominal	Phi		.697	.320
	Cramer's V		.697	.320
N of Valid Cases			35	

5.8.7.5 Products and Services of CFIs against Having Post-COVID-19 Resilience Strategies

The cross-tabulation table presents the distribution of responses across various products and services offered by the CFIs and whether strategies in place post-COVID-19 are linked to the scope of the services and products offered. For example, among respondents whose products and services included loans, 13 reported having strategies in place, while one (1) reported not having any strategies. Similarly, for respondents whose products and services comprised loans and savings, ten (10) reported having strategies, and none reported not having any strategies.

Table 5.42: Association Between Source of Products and Services and Presence of post-COVID-19 Resilience Cross-Tabulation

			Do you have any strategies in place post-COVID-19?		Total
			No	Yes	
Products and Services	Development loan, financing, school fees, mobile product	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Development Loans	Count	0	2	2
		Expected Count	.1	1.9	2.0
	Development, school fees, financing and emergency	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Emergency loans	Count	0	2	2
		Expected Count	.1	1.9	2.0
	Loans	Count	1	13	14
		Expected Count	.4	13.6	14.0
	Loans and Savings	Count	0	10	10
		Expected Count	.3	9.7	10.0
	Loans and services such as clearance of advance and salary processing	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Loans, investments, bank accounts	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Loans, Savings and Investments	Count	0	2	2
		Expected Count	.1	1.9	2.0
	Short-term loans most common due to uncertainty with the future.	Count	0	1	1
		Expected Count	.0	1.0	1.0
Total		Count	1	34	35
		Expected Count	1.0	34.0	35.0

The Chi-square test results reveal a statistically significant relationship between the types of products and services offered and the presence of strategies in place post-COVID-19. The Pearson Chi-Square value is 1.544 with a corresponding *p*-value of .007, indicating a significant association. Likewise, the Likelihood Ratio test yielded a *p*-value of 0.033, further supporting the presence of a significant relationship. Symmetric measures (Phi and Cramer's V) also confirm a significant relationship between the types of products and services offered and the presence of

strategies post-Covid-19, with both measures having values of 0.210 and corresponding *p*-values of 0.017 as shown in Table 5.43.

Table 5.43: Chi-Square Test for Association between Source of Products and Services and Presence of post-COVID-19 Resilience Strategy

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.544[a]	9	.007
Likelihood Ratio	1.877	9	.033
N of Valid Cases	35		

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.210	.017
	Cramer's V	.210	.017
N of Valid Cases		35	

5.8.7.6 Level of Education of Staff of CFIs Against Having Post-COVID-19 Resilience Strategies

The cross-tabulation table presents the distribution of responses across different levels of education and whether individuals have strategies in place post-COVID-19. For example, among respondents with a bachelor's degree, 14 (40.0%) reported having strategies in place, while one (1) reported not having any strategies. Similarly, among respondents with a master's degree, 19 (54.29%) reported having strategies, and none reported not having any strategies, as shown in Table 5.44.

Table 5.44: Level of Education of Staff of CFIS Against Having Post-COVID-19 Resilience Strategies

			Do you have any strategies in place post-COVID-19?		
			No	Yes	Total
Level of Education	Bachelor's degree	Count	1	14	15
		Expected Count	.4	14.6	15.0
	Diploma/Certificate	Count	0	1	1
		Expected Count	.0	1.0	1.0
	Masters	Count	0	19	19
		Expected Count	.5	18.5	19.0
Total		Count	1	34	35
		Expected Count	1.0	34.0	35.0

The Chi-square test results indicate that there is no statistically significant relationship between the level of education and the presence of strategies in place post-COVID-19. Both the Pearson Chi-Square value (1.373) and the Likelihood Ratio value (1.734) have associated *p*-values greater than 0.05 ($p = .503$ and $p = 0.420$, respectively), suggesting that the observed association could have occurred by chance. Symmetric measures (Phi and Cramer's V) also support this conclusion, with both measures having values of .198 and corresponding *p*-values of 0.503, indicating no significant association between the level of education and the presence of strategies post-COVID-19.

Table 5.45: Chi-Square Statistics of Association Between Level of Education of the Staff and Post-COVID-19 Resilience Strategies

		Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square		1.373[a]	2	.503
Likelihood Ratio		1.734	2	.420
N of Valid Cases		35		
Symmetric Measures				
		Value		Approximate Significance
Nominal by Nominal	Phi	.198		.503
	Cramer's V	.198		.503
N of Valid Cases		35		

5.9 Critical Success Factors and Survival Mechanisms

The managers represented were asked to highlight what they considered to have been their survival secret or, otherwise, the critical success factors, especially during the pandemic. Interpretative Phenomenological Analysis (IPA) of the respondent identified five main factors as the main secrets to their resilience and success during the pandemic: technology, membership status, quick adaptability, open-mindedness and effective communication.

5.9.1 Technology Adoption

Two dimensions of technology emerged as critical success factors. Firstly, there were operational technologies and service delivery technologies. Operational technologies were adopted or advanced by the management team to run the operations of the CFIs. Such technologies included virtual meetings, board meetings, committee meetings, and AGMs. Therefore, the CFIs adopted Zoom, Google Meet, or Teams technologies for virtual conferencing to ensure that all the functions that required meetings were continued. Besides the continuity of the functions, the technologies also helped the CFIs adhere to policy regulations such as social distancing to mitigate the spread of the COVID-19 virus. The sentiments below, indicated the scope and success of operations technology adoptions as noted by the managers.

> "So for us on a positive note, yes, it accelerated adoption of technology. At board I've also mentioned to you that now we were using e-board as opposed to the traditional physical meeting. So it did, it did in a big way" (KIIVII)

> "Governance shifted towards virtual meetings and electronic voting to comply with social distancing measures. Committees continued to function remotely, ensuring continuity in decision-making processes." (KIIVI)

Secondly, service delivery technologies were also advanced or adopted to ensure customer service delivery continuity. Such technologies also facilitated the adherence to the government's guidelines for mitigation measures against the spread of the disease. For example, many CFIs digitised their services, processes, and procedures, such as membership application processing and loan application processing, through online banking or mobile banking.

> "So, yeah, that's part of the technology that we created. They changed a bit. What also changed is how now to deliver services using technology. What I kept on saying, focusing on mobile lending, just to keep on driving, driving sales" (KII V).

> "But during Covid, things had to change *tupende, tusipende* (whether we liked or not), yea. We had no other option. The pandemic accelerated our digital transformation as we had to enhanced online services: We …. we…implemented robust online banking platforms to allow members perform transactions, check balances, and apply for loans remotely…. And the Zoom, teams and Google meetings, you know, we adopted virtual conferencing for committee meetings. Yea. Then the Mobile Banking the SACCO introduced mobile banking applications to provide convenient access to banking services via smartphones. Document processing was digitized, to enable members to submit documents electronically and reducing reliance on physical paperwork." (KII IX)

5.9.2 Status of Membership

The status of the membership regarding the nature of employments turned out to be a critical success factor, as noted by the managements. It came out that CFIs whose membership was mainly composed of government employees were more stable because they did not suffer from job losses or pay cuts. They also noted that employed people generally neither defaulted nor delayed on loan repayment because, in most cases, their repayment was done on the check-off system. Conversely, members in the self-employment or informal sector suffered the greatest impacts of the pandemic because of the lockdowns, curfews, and social distancing restrictions that were enforced during

the pandemic. The mitigation measures meant forcing some members out of business or reducing business operation hours, all of which translated to financial constraints, thus exposing them to financial hardships. Some of the management noted:

> "I think for us, the secret was the nature of majority of the members. Like said before, most of our members are government employees and therefore their monthly subscriptions continued to come throughout." (KII III)

> "And then in a small way, I must also say the civil service whom we likely serve, they were not laid off. The government did not have layoffs compared to private institutions." (KII VII)

> "Our members from the hospitality sectors, hotels were closed. Closed for a very long time. So somebody was working in the hotels sector. They were sent home. So maybe first month they had salary, second month the employer was not able to pay, then they come for their savings." (KII I)

> "And we were a few members who lost their jobs. So we had to … you've been doing before the COVID. Other members now are affected in terms of recovery… hey had guaranteed other people, they lose their jobs, that means that they had to suffer in terms of being tasked to pay on behalf of the people when they're...lost their jobs. So it was quite a burden… Others were getting half pay or even very little amount. But we had to accommodate majority of them." (KII V)

5.9.3 Open-Mindedness and Quick Adaptability

It was also evident that the swiftness to adjust to the prevailing conditions created by the pandemic enabled the CFIs to manoeuvre the turbulence of the COVID-19 period. They noted that the regulatory measures were announced and implemented immediately without giving them any time to adjust. Thus, they had to quickly adjust their plans, programs and schedules to ensure they adhered to the regulatory provisions. The provisions included are social distancing, mandatory and regular sanitisation, mandatory hand washing, mandatory use of PPEs, the dusk to dawn curfews and later vaccinations. Some of the regulations forced the CFIs to embrace remote working and virtual operations. The some of the participants had the following to note:

"So the only other thing that I can say now in relation to the question is that we must, at all times, be ready to change with those circumstances. Yeah! That's flexibility. There's a business word they use there. I don't know, it's called what? Agile." (KIIX)

"I think openness and willingness to change, to change our way of doing business and taking bold decisions and very fast. ……Yes, so I think adaptability and we have swiftness in making decisions." (KIIV)

"Yes, very flexible. Yeah. So that, you know, we do, we are not overtaken ……agile decision-making to adapt to rapidly changing circumstances." (KIIVI)

5.9.4 Adherence to Healthcare Provisions

The CFIs also noted that they strictly adhered to the healthcare provisions to cushion some of their staffs who had to work from offices. Such healthcare services included the provision of PPEs, washing systems, sanitisers and social distancing in the offices. Some also noted that they enforced vaccination on all their staff to minimise the spread of the virus amongst themselves and out in the community.

"Then the issue of public masks came in. We acquired masks for our staff members and sanitizers for the same, we put in measures, aaa those floor markers for social distancing. ……..And also now spacing the offices…….So that we moved some people out so that we have now that social distances, which was a new façade back then." (KII I)

"We prioritized the health and safety of our members and staffs by implementing the recommended hygiene protocols, providing personal protective equipment (PPE)." (KII IX)

"A lot of things had to change; for example, social distances meant that many staff could not come to office. …….. The few who came had to be in the right PPEs, the masks, and had to sanitize regularly. …….. When the vaccines came, all staffs were encouraged to get the jab." (KII II)

5.9.5 Effective Communication

Equally noted with significance, was effective communication between the management and management, management and staff, and institution and members. The transparency, timeliness, and relevance indicated the effectiveness of the communication, depending on the prevailing conditions. Communication between management promoted agility in decision-making and adaptability, while communication between management and staff promoted collaboration, transparency, and staff well-being. Additionally, effective communication with members of the CFIs promoted the members' trust and alleviated any fears surrounding their savings and dividends or deposits. Some of the respondents were quoted saying:

> "Our key survival strategies included proactive communication with members." (KIIVI)

> "So we had all the information shared among our people, including important information, yea." (KII I)

> "We also diversified our investment portfolio and enhanced member communication to maintain trust and confidence." (KII VIII)

> "I think we also prioritized transparent and proactive communication with our members, keeping them informed about changes in services, safety measures, and support options available during the crisis and assuring them that everything is under control." (KII IX)

> "There's something that is normally called the going concern; and every time that we congregate with members, we always have to give them assurances that this entity is not falling tomorrow. Okay, it's called the coin coaster." (KIIX)

5.9.6 Strategy Post-COVID-19

The participants were asked whether their CFIs had any resilience strategies after the pandemic. The results show that 30(85.71%) of the CFIs have a resilience strategy, while 4(11.43%) noted that they are back to the default setting. Only 12.86% noted that they did not have any resilience strategy post-COVID-19. Table 5.46 and Figure 5.1 summarise the results.

Table 5.46: Post-COVID-19 Resilience Strategy

	Category	Frequency	%
Do you have any strategies for resilience post-COVID-19?	Yes	30	85.71
	No	1	2.86
	No, We are back to how we worked Pre-Covid-19	4	11.43
Total		**35**	**100**

The same proportion of the participants noted that there is a need for an improved resilience strategy; 30 (85.71%) suggested the need to improve the existing model.

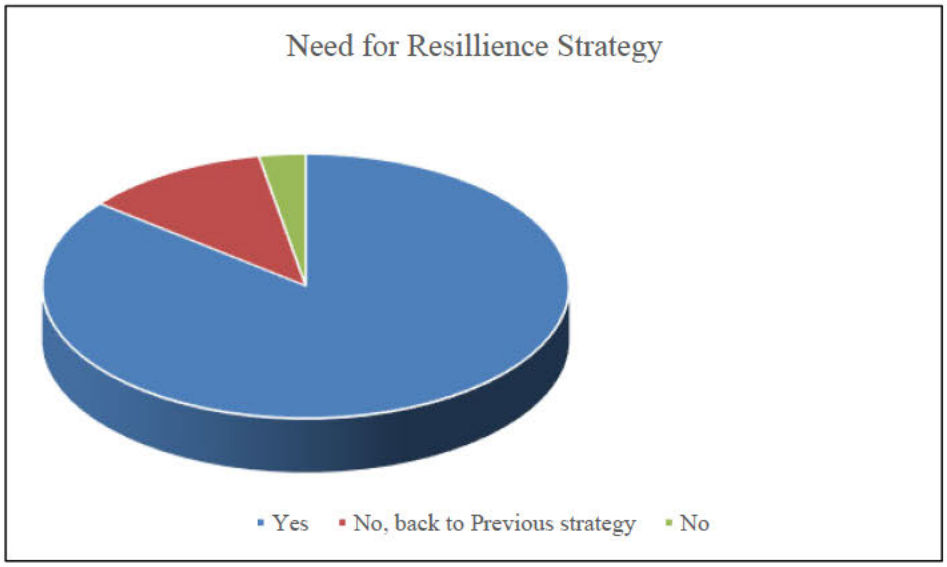


Figure 5.1: Post-COVID-19 Resilience Strategy

When asked about their strategies, the participants noted various strategies, as summarised in Table 5.47. Of the strategies highlighted, digitisation and innovation of new products and services topped the list, 10(28.57%) and 9(25.71%), respectively. Some CFIs also noted that they have come up with a slogan, "*Mteja Kwanza*", which translates to "Customer first," 4(11.43%), and institutional strengthening and membership growth coming fourth at 3 (8.57%) each. Other notable strategies noted included patronising products and services, increasing members' savings, training members on savings and investments, investments in other businesses and business continuity plans, 2(5.71%).

Table 5.47: Post-COVID-19 Resilience Strategies

	Category	Frequency	%
Resilience Strategy Post-COVID-19	Customer first	4	11.43
	Institutional strengthening	3	8.57
	Digitisation	10	28.57
	Innovation (new products and services)	9	25.71
	Membership growth	3	8.57
	Patronising products and services	2	5.71
	Increasing members savings	2	5.71
	Training of members on savings and investments	2	5.71
	Investments into other businesses	2	5.71
	Business continuity plan	2	5.71
	Improved risk management	1	2.86

Figure 5.2 below, presents a word cloud, presenting the 500 most frequently used words in the results of both the secondary and primary qualitative data collected.

Figure 5.2 Words Cloud

5.10 Chapter Summary

This chapter provided a comprehensive analysis of Cooperative Financial Institutions (CFIs), focusing on a comparative analysis of their challenges, changes, average credit facilities, savings, borrowings, loan repayments and loan repayment defaults. The chapter also focused on examining the impacts of the pandemic on the resilience of the CFIs in terms of continuity, the welfare of their staff, and the insulation of members. The chapter also delved into the critical success factors that sustained the CFIs, particularly at the height of the pandemic and its local and international impacts. A detailed comparison between the pre- and post-COVID-19 periods revealed critical changes in financial performance, especially in credit extension, savings, borrowing, loan repayments, and defaults.

Key changes during the pandemic, such as shifts in operational funds and member behaviour, have been discussed alongside the adaptability of CFIs to these challenges. The chapter explored how CFIs managed to maintain resilience despite the economic downturn caused by the pandemic, emphasising the importance of innovation, leadership, and survival mechanisms. The analysis concluded by identifying critical success factors that enabled CFIs to continue supporting their members while navigating the unprecedented disruptions of the COVID-19 crisis.

In conclusion, the chapter established that the main challenges before COVID-19 included liquidity, loan defaults, and delayed loan repayments. During the pandemic, the main challenges remained almost similar: loan defaults, a drastic drop in members' savings, liquidity, delayed remittances, and low uptake of long-term loans. After the pandemic, a few changes occurred, but liquidity, reduced members' savings, loan defaults, reduced borrowing, delayed repayments, and inflations topped the list. The main changes registered on human capital were additional staff, working from home or remote working and social distancing, increased salaries, and mandatory vaccination. The CFIs registered irregular changes in membership, with some registering growth while others registering decline. On technology, all the CFIs had to advance in both operation technology and service delivery technology for continuity purposes. Most of the CFIs also noted that they had to introduce line lines of products and services to address the increasing diversity in demands of the markets. The average credit extended to members was highest before the pandemic and nose-dived during the pandemic, but it registered significant growth post-pandemic. It was also established that loan borrowing was highest after the pandemic, while savings were highest

before the pandemic. Loan repayment was worse during the pandemic but improved after the pandemic. Similarly, default was highest during the pandemic but declined post-pandemic.

Based on the changes observed, it was concluded that the pandemic disrupted the market thus exposing the CFIs to increased risk of loan defaults, increased cost of operations and forced the CFIs to advance in adoption of technologies of remote working as well as FinTech to encourage remote based service delivery.

Of the most notable critical success factors, technology adoption, larger membership size, open-mindedness, adherence to healthcare provision and effective communication topped the list of strategies and mechanisms that propped the CFIs to sustainability, continuity, resilience and success amidst the pandemic.

CHAPTER SIX

DISCUSSION OF RESULTS

6.1 Introduction

This section of the study critically discusses the findings against previous studies conducted on the same or closely related subjects. The sections, therefore, contain discussion on the results of demographics of the study participants, the comparative analysis of the status of CFIs pre-, during and post-COVID-19, impacts of the pandemic on the CFIs and the critical success and resilience factors during and after the pandemic.

This section introduces the chapter by outlining the focus on data analysis results and the integration of secondary data to provide a comprehensive understanding of the research findings. It highlights the structure of the chapter, explaining how primary data collected from Cooperative Financial Institutions (CFIs) were analysed and cross-validated with secondary data sources. This chapter primarily discusses the analysis results in chapter five and follows the same structure. Consequently, the chapter is organised in alignment with the general findings (demographic

characteristics of participants and the CFIs) and the first three objectives of the study. The chapter, therefore, discusses the comparative analysis of the CFIs pre-, during and after the pandemic, the impacts of post-COVID-19 on the resilience of CFIs in Kenya and the critical success factors and survival mechanisms for the CFIs post-COVID-19 in Kenya. The chapter also discusses and presents the results of secondary data analysis through the Lens of the improved resilient business model for CFIs. Among the elements highlighted are technology, CFI membership, open-mindedness and quick adaptability, effective communication, innovation, business continuity, and the cooperative principle of solidarity. This section summarises the results from the data analysis and the integration of secondary data, providing a holistic view of CFIs' performance, challenges, and resilience during the COVID-19 pandemic. Data triangulation reinforces the findings' reliability and validity, setting the stage for the conclusion and recommendations.

6.2 Demographic Characteristics

The study involved 35 participants in the quantitative segment. The first data set highlights the highest level of education among CFI employees. It reveals that the majority (54.29%) hold a Master's degree, followed by 42.85% with a Bachelor's degree, and a smaller proportion (2.86%) with a Diploma/Certificate. This suggests a relatively high level of educational attainment among the employees of the CFI who participated in the study, particularly at the postgraduate level. It suggests a stronger academic profile, which could lead to higher chances of better performance. Studies have shown that a high education level of employees is closely linked to improved Organizational performance and, thus, resilience in turbulent times. Problem-solving and innovation abilities, for instance, closely correlate with the possession of advanced critical thinking and problem-solving skills. They are more adept at analysing complex situations, identifying potential risks, and proposing innovative solutions. In times of crisis or uncertainty, such as economic downturns or market disruptions experienced during the COVID-19 pandemic, such individuals can contribute valuable insights and strategies to help the Organization adapt and thrive (Sony & Mekoth, 2016).

Higher education fosters adaptability and flexibility, enabling employees to quickly learn new concepts, technologies, and methodologies. In rapidly changing environments, such as shifting

consumer preferences and priorities or emerging regulatory requirements, educated employees are better equipped to pivot and adjust their approaches to meet evolving demands. This adaptability is essential for Organizational resilience, allowing the company to navigate challenges and seize new opportunities effectively. Additionally, higher education often equips individuals with advanced analytical and decision-making skills. Employees with a solid educational background can conduct thorough research, evaluate various alternatives, and make informed decisions based on data and evidence. This strategic thinking enables organizations to anticipate potential threats, capitalize on strengths, develop proactive plans to mitigate risks and capitalize on opportunities, enhancing resilience (Liu & Jew, 2023).

Ahmad et al. (2019) also note that higher education augments leadership capabilities, empowering employees to inspire and motivate others, foster collaboration, and drive Organizational change. Educated leaders cultivate a continuous learning and improvement culture, encouraging employees to develop new skills, embrace challenges, and adapt to change. Through ongoing education and professional development initiatives, Organizations can build a resilient workforce capable of navigating uncertainty and driving sustainable growth. In the same breadth, Organizations with a highly educated workforce often enjoy a positive reputation and instill confidence among stakeholders, including customers, investors, and partners. The perception of intellectual capital and expertise enhances the Organization's credibility and resilience, particularly during a crisis or disruption (Sony & Mekoth, 2016). Stakeholders are more likely to trust and support Organizations led by knowledgeable and capable professionals, which can bolster resilience in the face of adversity.

Moving on to the duration of service at the CFI, the data shows that a significant portion of employees have been with the Organization for 5 to 10 years (45.71%), followed closely by those with more than 10 years of service (34.29%). A smaller proportion (20.0%) has been with the CFI for 3 to 5 years. This indicates considerable experience and tenure among CFI employees, which could potentially influence Organizational stability and expertise. An employee's service duration with an Organization is linked to various aspects of employee performance, cumulatively translating to Organizational resilience and performance. However, this study did not establish a significant statistical association between the employees' service duration. Liu (2018), in his arguments, noted that with longer-term contracts, employees tend to feel more secure in their

positions, leading to higher job satisfaction and engagement. Consequently, such employees are more likely to be more invested in their work and more likely to demonstrate commitment to their employer, which can positively impact their resilience and performance. Liu adds that longer contract durations provide employees more time to develop and master their skills. They may have greater opportunities for training, professional development, and on-the-job learning, which can contribute to improved performance over time.

Another study established that with longer-term contracts, staff develop stronger ties to their Organization. They may identify more closely with the company's mission, values, and goals, leading to higher levels of Organizational commitment. This sense of commitment can drive higher levels of effort and dedication, ultimately enhancing resilience. Longer contract durations also allow employees to build deeper relationships with colleagues, supervisors, and other Organizational stakeholders. Such stronger interpersonal connections can foster teamwork, collaboration, and mutual support, positively influencing individual and team performance. Soltani and Soleimanian (2015) also noted that employees with longer-term contracts provide a sense of stability and consistency within the Organization. They can contribute to continuity in operations, knowledge retention, and the preservation of Organizational memory. This stability can create an environment conducive to high performance by reducing disruptions and facilitating long-term planning and execution.

In the same findings, Soltani and Soleimanian noted that longer contract durations may provide employees with more opportunities for career advancement within the Organization. They may have the chance to take on new responsibilities, pursue promotions, or transition into leadership roles. The prospect of career advancement can motivate employees to perform to the best of their abilities to achieve their professional goals. Conversely, Enwereuzor's (2023) research noted that while longer contract durations can have many benefits, there is also a risk of complacency. Employees who feel overly secure in their positions may become complacent or resistant to change, leading to stagnation or decreased performance over time. Against this backdrop, they recommended that employers must actively manage performance and provide ongoing feedback and incentives to mitigate this risk.

The finds of this study with regards to demographic characteristic of the CFIS and the study participants corroborate with the findings of previous studies noting that age of the CFIs, the size

of membership and membership composition influences the capabilities of the CFIs to adjust and the swiftness of the adjustments to new norms. Other studies for example have documented that where membership is composed of employed members, the member's deposits and savings is less affected by economic shocks compared to CFIs whose members are business men and women or farmers (Liu, 2018, Soltani & Soleimanian, 2015, Liu & Jew, 2023). However this study could not establishes the weight of gender compositions and its implication on resilience compared to other studies. Similarly, the demographics of the employee's matters in determining the human resource portfolio and thus the efficiency of operation and service delivery more so when it comes to digital literacy was became pivotal during the pandemic.

6.3 Comparative Analysis of CFIs Pre-and Post-COVID-19 Pandemic

The data obtained from CFIs in Nairobi City County offers valuable insights into the financial challenges faced by these institutions before, during, and after the COVID-19 pandemic.

The study found that before the pandemic, CFIs were already grappling with several financial challenges, including liquidity constraints, loan defaults, delayed repayments, and low membership growth. Though common in the financial sector, these challenges posed significant obstacles to the sustainable operation of CFIs. Liquidity constraints, for instance, limited their ability to meet the financial needs of members and fund operational expenses, while loan defaults and delayed repayments heightened credit risk and strained financial resources. The low membership growth indicated potential outreach and market penetration limitations, which could affect long-term sustainability.

Various studies found that before the COVID-19 pandemic, CFIS grappled with financial challenges associated with market volatility due to fluctuating interest rates, currency exchange rates and asset prices. Compliance with stringent financial regulations imposed costs on CFIs, including investments in compliance infrastructure, staff training, and regulatory reporting, as well as stiff competition from traditional banks, FinTech startups, and non-bank financial institutions. Competing effectively requires investment in technology, innovation, and customer experience. Additionally, cyber threats have posed significant risks to CFIs, including data breaches, fraud, and ransomware attacks. Protecting sensitive financial information and maintaining customer trust requires substantial investments in cybersecurity measures (Jurksiene & Maseko, 2022; Ouma, 2022; Ben & Atieno, 2022).

This study established that the COVID-19 pandemic exacerbated the financial challenges faced by CFIs, leading to a surge in loan defaults, reduced member savings, increased operational costs, and cash flow constraints. The economic disruptions caused by the pandemic, including lockdowns, reduced economic activity, and job losses, significantly impacted the financial stability of CFIs. Increased loan defaults reflected the financial distress experienced by members, while reduced member savings indicated a shift in priorities and financial hardships faced by individuals. Moreover, increased operational costs and cash flow constraints further strained CFIs' financial resources, as they had to adapt their operations to comply with health and safety regulations while maintaining service delivery.

These findings coincide with the findings of various studies which enumerated that the pandemic introduced unprecedented economic uncertainty, including recessionary pressures, supply chain disruptions, and increased credit risk (Jurksiene & Maseko, 2022, Ben & Atieno, 2022, Omwando, 2021). CFIs faced challenges in assessing creditworthiness, managing loan portfolios, and forecasting financial performance. Additionally, the economic downturn led to increased credit risk for CFIs, with higher loan delinquencies, defaults, and loan loss provisions. CFIs had to enhance credit risk management practices, including stress testing, loan restructuring, and portfolio diversification. Financial markets experienced heightened volatility during the pandemic, with sharp declines in asset prices, liquidity shortages, and disruptions in capital markets. CFIs faced challenges in managing liquidity, market risk, and investment portfolios amid turbulent market conditions (Ouma, 2022; Omwando, 2021; Njuguna & Mathuva, 2024).

After the COVID-19 pandemic, the study found that CFIs continued to face financial challenges despite easing restrictions and gradual recovery of economic activities. These included liquidity issues, reduced member savings, inflationary pressures, and increased loan uptake. The lingering effects of the pandemic, coupled with broader economic uncertainties, contributed to the persistence of these challenges. Reduced member savings and increased loan uptake suggested ongoing financial stress among members, while inflationary pressures and liquidity issues reflected broader macroeconomic trends impacting CFI operations.

These findings align with other researchers' findings that the post-COVID-19 period presented challenges and opportunities for CFIs as they navigated the economic recovery. CFIs must assess the impact of economic stimulus measures, changes in consumer behaviour, and industry trends

on their business models and growth prospects. Omwando (2021) for example found that the pandemic accelerated digital transformation trends in the financial industry, emphasizing the importance of digital banking, online payments, and contactless transactions. CFIs must continue investing in digital infrastructure, cyber security, and innovative digital solutions to meet evolving customer preferences and competitive pressures. Regulatory responses to the pandemic, including changes in monetary policy, fiscal stimulus measures, and regulatory relief efforts, may impact CFIs' compliance requirements, capital adequacy standards, and risk management practices. CFIs must stay abreast of regulatory developments and adapt their strategies accordingly. Thus, building operational resilience must remain a priority for CFIs in the post-COVID-19 era. This includes strengthening business continuity plans, enhancing cyber security defenses, and investing in remote work capabilities to better withstand future disruptions and crises (Omwando, 2021; Njuguna & Mathuva, 2024).

The findings have several implications for CFIs and policymakers. Firstly, CFIs need to enhance their risk management practices, mitigating the impact of financial challenges and building resilience against future crises. This may involve diversifying revenue streams, strengthening credit risk assessment processes, and implementing prudent liquidity management strategies. Secondly, policymakers should provide targeted support and incentives to help CFIs navigate these challenges and promote financial inclusion. This could include policy interventions to improve access to funding, capacity-building initiatives, and regulatory reforms to enhance the stability and governance of CFIs.

A comparison across these phases underscores the evolving nature of financial challenges. Notably, liquidity concerns, which rose during the pandemic, reverted to pre-pandemic levels post-pandemic. Loan defaults saw a sharp increase during the pandemic but reduced afterwards. Delayed loan repayments remained consistent throughout the periods, while demand for loans surged post-pandemic compared to pre-pandemic levels. The findings coincide with what other scholars found, particularly regarding the challenges faced by the CFIs during or as a result of the pandemic. Among them are Buchenau and Cuevas (2020), Andago (2020), and Dave (2021), all of whom noted that the global pandemic had both direct and indirect impacts on cooperative financial institutions (CFIs). Direct impacts refer to the immediate effects of the pandemic on CFIs themselves.

In contrast, indirect impacts encompass the effects on CFI members, including individuals and small and medium enterprises (SMEs) associated with these institutions. Such challenges included reduced savings, increased loan defaults, and increased loan repayment delays. The impacts were particularly significant for CFIs serving predominantly low-income populations. In many low- and middle-income countries (LMICs), populations faced heightened vulnerability due to limited resources that could mitigate the pandemic's effects. As a result, savings diminished as individuals redirected their attention to basic survival needs such as food, housing, and healthcare (Andago, 2020). These challenges were exacerbated in Asian and African LMICs, where business shutdowns and supply chain disruptions due to mitigation measures further worsened the impacts (Buchenau & Cuevas, 2020). These findings highlight the dynamic impact of the COVID-19 pandemic on CFIs, revealing fluctuations in financial challenges over time. CFIs adapted to changing conditions, with some challenges persisting and new ones emerging post-pandemic. Such insights are crucial for understanding the resilience and vulnerabilities of CFIs in navigating economic disruptions and planning for future contingencies.

6.4 Impact of post-COVID-19 on the Resilience of Cooperative Financial Institutions in Kenya

From this study, most of the operational challenges encountered by CFIs through three distinct periods: before, during, and after the COVID-19 pandemic revolved around management, service delivery and competition. Responses were analysed through manual coding to identify prevalent challenges during each phase, providing valuable insights into evolving operational landscapes within the CFIs sector. Before the pandemic, CFIs encountered significant operational inefficiencies (22.86%), reflecting issues such as poor communication between board members, staff, and members, financial constraints, competition (11.42%), loan defaults (8.57%), cyber security threats, and congestion in banking halls. These challenges highlighted pre-existing operational complexities within CFI operations.

The onset of the pandemic introduced new and intensified challenges for CFIs. Key challenges during this period included high operational costs (14.29%), automation and cyber-attacks (17.14%), Ministry of Health (MoH) regulations and restrictions (14.29%), loan defaults (11.43%), inaccessibility of offices, immobility of clients and staffs, remote working, and reduced incomes due to membership withdrawals (each at 11.43%). These challenges underscored the disruptive

impact of pandemic-related mitigation measures on CFI operations. Following the pandemic, CFIs continued to grapple with persistent challenges, albeit with reduced prevalence. Notable challenges post-pandemic included increased cyber risks (11.43%), slow adoption of technology (11.43%), inflation (11.43%), competition (8.57%), lack of adequate resources, unfavorable regulations (each at 8.57%), loan defaults (5.71%), and membership withdrawals. The reduction in prevalence indicated adaptations made by CFIs to navigate post-pandemic operational environments.

Comparative analysis across the three periods indicates that particular challenges persisted across all periods, such as loan defaults and competition, albeit with varying frequencies. Loan defaults, for instance, increased during the pandemic but subsequently decreased post-pandemic. Cyber threats were lowest before the pandemic, peaked during the pandemic, and then decreased afterwards. Employee absenteeism was notable before and during the pandemic but diminished post-pandemic. Poor communication, while prevalent before the pandemic, decreased in significance after the pandemic. The findings offer critical insights into CFIs' evolving operational challenges in response to dynamic external factors, particularly the unprecedented disruptions caused by the COVID-19 pandemic. The CFIs exhibited resilience by adapting to changing circumstances, leveraging technological solutions, and navigating regulatory environments to sustain operations and member engagement. Overall, the findings underscore the need for adaptive strategies and robust resilience models within CFIs to address multifaceted challenges and enhance Organizational resilience in the face of ongoing uncertainties.

Similar to the findings of this study, a significant body of research on the impacts of the COVID-19 pandemic on business organizations has pointed to profound consequences which forced most of the impacts on corporate financial institutions (CFIs) worldwide into reshaping the landscape of financial services. One of the primary impacts of COVID-19 on CFIs has been financial strain, stemming from increased credit risk and deteriorating asset quality. The economic disruptions caused by the pandemic, including business closures, job losses, and reduced consumer spending, have led to a surge in loan defaults and delinquencies. CFIs have grappled with mounting non-performing assets (NPAs) and provisioning requirements, which have strained their financial resources and impaired their profitability. Moreover, the uncertainty surrounding the duration and severity of the pandemic has made it challenging for CFIs to assess credit risk accurately, leading

to heightened caution in lending activities and a slowdown in credit growth (Mgema & Komba, 2020).

Like this study, Song et al. (2020) found that COVID-19 also exacerbated liquidity challenges for CFIs, as they faced cash flow constraints and funding pressures amid economic uncertainty. The severity of this effect was, however, dependent on the age of CFIs, their membership size, and their main sources of funds for operation. The sudden and severe nature of the pandemic prompted withdrawals of depositors, thereby reducing available liquidity and increasing the demand for short-term funding. Additionally, this study found that the disruption in financial markets and the tightening of credit conditions made it difficult for CFIs to access external funding sources, further exacerbating liquidity constraints. These findings typify the finding of other studies (Omwando, 2021; Njuguna & Mathuva, 2024) noting that , CFIs have had to adopt prudent liquidity management practices, including adjusting their funding mix, managing maturity profiles, and enhancing liquidity buffers to withstand periods of stress.

This study further established that the pandemic also forced CFIs to adapt their operations rapidly to comply with health and safety measures and ensure business continuity. This involved implementing remote working arrangements, enhancing digital capabilities, and accelerating the adoption of digital channels for service delivery and routine office and administrative operations. CFIs had, therefore, to invest in technology infrastructure, digital platforms, and cyber security measures to facilitate remote operations, expand digital banking services, and meet members' evolving needs. Lilian, (Lilian, 2023) made similar findings noting that health regulations, such social distancing requirements forced many institutions to adopt technologies such remote work arrangements to ensure lesser exposure to infection risk while at the same time maintaining continuity. While digitization has enabled CFIs to maintain essential services and enhance operational resilience during the pandemic, it has also posed challenges related to cyber security, data privacy, and digital literacy.

The shift in members' behavior, preferences and priorities due to COVID-19 as individuals meant that the CFIs had to adapt to the new economic realities and change their financial habits. The situation escalated the demand for digital banking services, contactless payments, and remote account management, reflecting a preference for convenience, safety, and accessibility (Lilian, 2023; Song et al., 2020; Osumba & Oboka, 2022). CFIs have responded by enhancing their digital

offerings, launching new digital products, and investing in Omni channel capabilities to cater to evolving member needs. However, CFIs must balance digital innovation with preserving personalised, member-centric services to maintain trust and loyalty among their customer base. Additionally, the pandemic prompted CFIs to reassess their strategic priorities and focus on building resilience to navigate future challenges effectively. This has involved strengthening risk management frameworks, enhancing capital adequacy, and diversifying revenue streams to mitigate the impact of external shocks (Osumba & Oboka, 2022; Dias et al., 2022; Jubril et al., 2024). CFIs have also prioritized sustainable growth strategies, community engagement, and stakeholder partnerships to foster long-term resilience and sustainability. Moreover, the pandemic has underscored the importance of collaboration and knowledge sharing among CFIs, industry associations, and regulatory authorities to address common challenges, share best practices, and promote collective resilience.

In summary, the COVID-19 pandemic has had far-reaching impacts on CFIs, reshaping their operations, financial health, and strategic priorities. Cooperative financial institutions have grappled with financial strain, liquidity challenges, operational disruptions, and shifts in member behaviour, necessitating rapid adaptation and innovation. By embracing digital transformation, enhancing risk management capabilities, and fostering strategic resilience, CFIs can navigate the challenges posed by the pandemic and emerge stronger, more resilient, and better equipped to serve the needs of their members and communities in the post-pandemic era.

6.5 Critical Success Factors and Survival Mechanisms for Cooperative Financial Institutions Post-COVID-19 in Kenya

The findings on resilience factors during the pandemic suggest that older CFIs, with more established histories, tended to allocate larger loan amounts to members than younger CFIs. This association underscores the importance of Organizational maturity and resilience in responding to economic challenges posed by the COVID-19 pandemic. Corporate Financial Institutions with longer operating histories may have greater capacity and experience to manage larger loan portfolios during times of crisis. The study thus provides valuable insights into the relationship between CFI age and loan distribution during COVID-19, emphasising the role of Organizational maturity and resilience in shaping lending practices within cooperative financial institutions amidst challenging economic conditions.

The findings on the association between membership size and resilience of CFIs during the COVID-19 pandemic underscore the influence of CFI membership size on lending practices during the COVID-19 crisis. Corporate Financial Institutions with larger memberships demonstrated a greater capacity to extend larger loan amounts, potentially reflecting Organizational resilience and resource availability. This association has implications for CFI management strategies and member engagement approaches during economic uncertainty. The study, therefore, highlights that intuitions look into the relationship between CFI membership size and loan issuance patterns during COVID-19, emphasising the role of Organizational scale in shaping lending activities within cooperative financial institutions, especially during turbulence of uncertain economic dynamics.

The study highlights the diverse funding sources utilised by CFIs and how they might have impacted loan distribution by CFIs during the pandemic. While strong associations are observed based on measures like the Phi coefficient and Cramer's V, caution is warranted due to the lack of statistical significance in the Chi-Square tests, indicating that these associations may not be causally linked. Further research could explore additional factors influencing CFIs' resilience and loan distribution, considering the complex interplay between funding sources, operational challenges, and member needs.

Further analysis of the relationship between the operation sector of CFIs and their resilience showed a significant association. The significance of the association identified implies that specific sectors of CFI operations exhibit distinct loan distribution behaviours during the pandemic. Based on their operational focus, CFIs operating within different sectors may face unique challenges or adopt varying strategies to disburse members' loans. Understanding the relationship between the CFI sector of operation and their resilience regarding the extension of credit facilities can inform targeted interventions or policy adjustments to support CFIs based on their operational context. Policymakers and stakeholders can leverage these insights to tailor support mechanisms that address sector-specific challenges and enhance overall CFI resilience. For instance, CFIs' membership, mainly comprised of people working in private transport, tourism, and hospitality industries, faced different challenges than CFIs, whose membership mainly consisted of civil service members. The findings, therefore, underscore the importance of sector-specific analysis in understanding CFI loan distribution behaviours, offering valuable implications for policymakers

and practitioners seeking to bolster the resilience of cooperative financial institutions in challenging economic contexts.

The study established that the critical success factors among the CFIs as they manoeuvred the pandemic included technology adoption advancement, status of membership, open-mindedness and quick adaptability, adherence to healthcare provisions and effective communication. These initiatives can be absorptive capacity, adaptive capacity or transformative capacities. Adaptive capacities are the actions that the CFIs took to moderate or buffer themselves against the effects of the pandemic without forcing the institutions to make major changes. Therefore, adaptive capacity could include adherence to the healthcare guidelines and recommendations stipulated by the Ministry of Health. The findings of this study thus align with those of Gundertofte et al. (2022); it is social protection for the staff members and comprises initiatives such as the provision of sanitisers, PPEs, hand washing stations, promoting social distances and enabling some staff members to work from home during the pandemic. Adaptive resilience factors include initiatives such as technology adoption and advancements that were notable among the majority of the CFIs. This finding aligns with that of Gundertofte and colleagues, who noted that adaptive capacity included the adoption of channels of communication that would see Information Workers' Associations disseminating information about COVID-19 and training members of staff (Gundertofte et al., 2022).

On the other hand, transformative capacity is characterized by migration, which could include migration from manual ways of doing things to digital business models. Most CFIs noted that the pandemic necessitated digital transformation to ensure the continuity of their businesses. Such transformation involved amendments to the bylaws, which formalized virtual meetings, voting, and service delivery. These findings coincide with those of Ridwansah (2020) and McKillop et al. (2020), who found that most Organizations developed innovative solutions to enhance their survival and continuity in business. On service delivery, for example, the CFIs adopted mobile and online technologies of loan application, processing and dispensation. For instance, in Bali, 172 cooperatives initiated semi-online, online or digital technology financial services in 2019, while in 2020, 133 implemented the same strategy (Rustariyuni et al., 2022). Consequently, the cooperatives experience efficiencies in transaction processes while minimising the risk of spreading the virus.

~~6.6~~ Improved Resilient Business Model for Cooperative Financial Institutions in Kenya

The study focused on four main objectives: to undertake a comparative analysis of cooperative financial institutions pre-and post-COVID-19 pandemic; to analyse the impact of post-COVID-19 on the resilience of cooperative financial institutions in Kenya; to assess the critical success factors and survival mechanisms for the cooperative financial institutions post-COVID-19 in Kenya and to develop an improved model of resilience.

This study collected and analysed data on four main areas, namely, the demographic status of the CFIs, business status pre-, during and post-COVID-19, the resilience of the CFIs during the pandemic, and the status of the CFIs with regards to post-COVID-19 resilience. The study aimed to understand the dynamics of what might have changed in the operations of CFIs in Nairobi due to the emergence of the COVID-19 pandemic, the corresponding effects on the CFIs, and the final reaction of the CFIs to enhance their success amidst the uncertainties. The study results showed that n=30(85.71%) of the CFIs have a resilience strategy, while n=4(11.43%) noted that they are back to the default setting. Only 1 (2.86%) noted that they do not have any resilience strategy post-COVID-19.

The consideration of the critical success factors such as technology adoption advancement, membership status, open-mindedness and quick adaptability, adherence to healthcare provisions, and effective communication shows that an improved model should integrate these aspects. Notably, these strategies were not universal across the CFIs. Both the quantitative data, the qualitative data both primary and secondary demonstrate convergence of several elements including the strategies that were adopted for resilience including technology, reliance on membership as a resilience factors, open mindedness to drastic measures such as restructuring, effective communication, innovation, and leveraging of the cooperative principle of solidarity as discussed below. Accordingly, this section amalgamates the conceptual framework of the study and aligns the same to the findings in the previous chapter and also the discussion in the subsequent section

6.6.1 Technology

In today's dynamic business environment, characterised by rapid technological advancements and economic turbulence, CFIs must adapt to technological innovations to enhance their resilience.

Technology is a critical function in Enhanced Operational Efficiency (EOE). Technological innovation enables Organizations to streamline operations, automate processes, and improve efficiency. By leveraging advanced technologies such as artificial intelligence (AI), robotic process automation (RPA), and the Internet of Things (IoT), Organizations can optimise resource utilisation, reduce costs, and enhance productivity. Automated systems and digital workflows enable faster decision-making, agile response to changing market conditions, and efficient resource allocation, enhancing Organizational resilience during economic turbulence (Forliano, 2023; Sharma et al., 2022). Technological innovation facilitates the development of agile and adaptable business models that can quickly pivot in response to market disruptions and changing customer needs. Cloud computing, software-as-a-service (SaaS), and platform-based business models provide Organizations the flexibility to scale operations, deploy new services rapidly, and enter new markets with minimal upfront investment. Agile business models enable Organizations to experiment, iterate, and innovate more effectively, positioning them to thrive in turbulent economic environments by seizing emerging opportunities and mitigating risks (Robertson et al., 2022; Kolodny-Goetz et al., 2021).

Other studies have pointed out that technological innovations empower Organizations to harness the power of data analytics and business intelligence to make data-driven decisions and anticipate market trends. Big data analytics, predictive modelling, and machine learning algorithms enable Organizations to extract actionable insights from vast amounts of data, enabling proactive risk management, demand forecasting, and strategic planning. Data-driven decision-making enhances Organizational resilience by enabling timely responses to market fluctuations, identifying growth opportunities, and optimising resource allocation based on real-time insights. Additionally, certain technologies such as AI enable Organizations to enhance customer engagement, loyalty, and satisfaction through personalised Omni channel experiences. Customer relationship management (CRM) systems, social media platforms, and digital marketing tools enable Organizations to connect with customers across multiple touchpoints, understand their preferences, and tailor products and services to meet their needs. Enhanced customer engagement fosters loyalty, drives revenue growth, and insulates Organizations from economic downturns by maintaining a loyal customer base and adapting offerings to evolving market demands (Sharma et al., 2022; Kolodny-Goetz et al., 2021)

During the COVID-19 pandemic, Desjardins Group effectively leveraged technology to maintain operations, support members and clients, and enhance Organizational resilience. The pandemic brought unprecedented challenges, requiring rapid adaptation and innovation. The main areas where the Group exploited technology include digital banking and remote services, enhanced cybersecurity measures, AI and automation, remote work infrastructure, and digital collaboration tools. Regarding digital banking and remote services, Desjardins rapidly expanded and enhanced its digital banking capabilities to ensure continuous service delivery despite lockdowns and social distancing measures. Such digital banking included online banking, in which the group promoted its online and mobile banking platforms, allowing members and clients to conduct transactions, pay bills, transfer funds, and manage their accounts without visiting physical branches. These platforms' increased functionality and user-friendliness were crucial in maintaining customer engagement and satisfaction. Also, virtual consultation became possible and replaced in-person meetings. Desjardins introduced virtual consultations via video calls and secure messaging. Financial advisors and customer service representatives could provide personalised support and advice remotely, ensuring clients could still access essential financial guidance (Desjardins, 2020).

The group enhanced cyber security measures through technology to protect members' and clients' data from cyber threats. Such measures included a robust cybersecurity framework: Desjardins invested in advanced cybersecurity technologies and protocols to safeguard its digital platforms. This included using multi-factor authentication, encryption, and real-time threat monitoring to detect and mitigate potential security breaches. Additionally, Desjardins conducted awareness campaigns to educate clients and employees about cyber security best practices, helping to prevent phishing attacks and other cyber threats (Desjardins, 2020).

Desjardins equally extensively utilised artificial intelligence (AI) and automation to streamline operations and improve service efficiency during the pandemic. AI-powered chatbot was deployed on the group’s website and mobile app to handle a high volume of customer inquiries. These chatbots provided instant responses to common questions, reducing wait times and allowing human agents to focus on more complex issues. The group could also automate technologies implemented to handle routine tasks such as loan processing, document verification, and transaction monitoring (Desjardins, 2021).

Desjardins invested in a robust remote work infrastructure for its employees to ensure business continuity. For example, cloud services were used to migrate critical applications and data to cloud-based platforms, enabling secure and efficient remote access for employees. This facilitated seamless collaboration and communication among teams working from different locations. Alongside cloud services, Virtual Private Networks (VPNs) were used to ensure employees could access internal systems and data securely from their homes, maintaining productivity and operational integrity. The group tools adopted additional technologies, such as digital collaboration tools, to support remote work and maintain team cohesion. Microsoft Teams, Zoom, and Slack were widely used for virtual meetings, project collaboration, and communication. These platforms helped maintain team interactions, project management, and overall productivity during the pandemic. The Group provided digital training programs and resources to help employees adapt to new tools and technologies, ensuring a smooth transition to remote work (Desjardins, 2021).

The extensive and strategic adoption of technology during the COVID-19 pandemic significantly enhanced Desjardins Group's resilience in several ways, including business continuity, operational efficiency, employee productivity and well-being, security and trust, and adaptability and innovation. The rapid shift to digital banking and remote services ensured that Desjardins could continue to serve its clients without interruption. This maintained client trust and satisfaction during uncertainty and reduced the impact of physical branch closures. Secondly, Automation and AI reduced the burden on human resources by handling routine tasks, allowing employees to focus on higher-value activities. This improved efficiency and helped manage the increased demand for financial services during the pandemic. Thirdly, investing in remote work infrastructure and digital collaboration tools ensured that employees remained productive and engaged while working from home. This support for remote work also contributed to employee well-being by providing flexibility and reducing the stress associated with commuting and potential health risks.

Moreover, enhanced cybersecurity measures protected client data and ensured the integrity of digital transactions. This commitment to security helped maintain client trust, which is crucial for financial institutions, especially during times of crisis. The pandemic accelerated Desjardins' digital transformation, fostering a culture of innovation and adaptability. The ability to quickly implement and scale new technologies demonstrated Organizational agility and positioned Desjardins to better respond to future disruptions (Desjardins Group, 2022).

Desjardins Group's strategic use of technology during the COVID-19 pandemic ensured business continuity and operational efficiency and enhanced its resilience and adaptability. By leveraging digital banking, AI, automation, remote work infrastructure, and cybersecurity, Desjardins maintained service delivery, supported its employees, and upheld client trust. These technological initiatives have solidified Desjardins' position as a forward-thinking and resilient financial institution that is well-prepared for future challenges. In their 2022 annual reports, they noted:

> "As an organization committed to promoting digital identity nationwide, Desjardins supports Canada's Digital Identity Laboratory. The IDLab is an independent non-profit. Its aim is to accelerate the adoption and development of digital ID solutions that are compliant and interoperable with the systems used both here and abroad. Desjardins's $845,000 financial contribution will go toward setting up the laboratory, including recruiting cyber security and personal information protection specialists. This initiative promotes the introduction of digital identity as a preferred means of identification and authentication. Digital identity solutions help people better protect their privacy and give them back control over their data… In relation to its strategic directions, Desjardins Group expects to continue to commit substantial amounts throughout 2022 for its investments. These investments will continue to be made in particular in innovative technology platforms, information protection, security and improvement of business processes. These initiatives will enable Desjardins Group to enhance the member and client experiences, improve its productivity, and ensure the implementation of best practices in information security." (Desjardins Group, 2022, 6,)

> "We need to rely on third parties in order to provide top-quality, secure services. These third parties play a major role in supporting Desjardins Group's operations as well as in implementing technological innovations that allow Desjardins to improve the services it offers to members and clients (IT, office automation, telecommunications, cloud and other providers and suppliers). Using third parties can, however, generate certain risks. Desjardins recognizes the importance of these risks and is putting in place all the necessary measures to mitigate them. Inadequate management of third-party risk could affect Desjardins Group's ability to provide the services that members and clients need. This type of risk could have an impact on information security, business continuity, as well as on

other types of risks, such as reputational risk. The oversight process used for outsourcing, together with the incident management process, allow Desjardins to adequately prevent and handle third-party risk" (Desjardins Group, 2021).

Although technological innovation is crucial in enhancing Organizational resilience, cyber security and risk management capabilities, safeguarding Organizations against emerging threats and vulnerabilities must be addressed. Advanced cyber security solutions, encryption technologies, and threat intelligence platforms are necessary to help Organizations detect, prevent, and respond to cyber-attacks and data breaches effectively. By investing in robust cyber security measures and proactive risk management strategies, Organizations can mitigate operational disruptions, protect sensitive data, and preserve business continuity during turbulent economic seasons (Kure et al., 2018).

6.6.1.1 FinTech

In a drastically revolutionising era of digital technology, business operations require equal momentum to march the revolution and enhance their resilience and competitiveness. Cooperative Financial Institutions (CFIs) can leverage financial technology (FinTech) to enhance their resilience by improving operational efficiency, expanding access to financial services, and enhancing customer experiences. FinTech is a term used to describe the integration of technology into offerings by financial services companies to improve their use and delivery to customers. FinTech is a broad sector encompassing many applications, from mobile banking, payment apps, and online banking to cryptocurrency and blockchain technology (Yu, 2022).

During economic disruption, as was witnessed during the outbreak of COVID-19, all CFIs were faced with the challenges of adhering to Health sector provisions such as social distancing and a ban on gatherings. Such restriction passed a challenge to CFIs, which had to quickly plan and implement measures to ensure continuity, sustainability, and resilience amidst the pandemic. Secondary data shows that various FinTech alternatives have been successfully used globally, regionally and locally to drive continuity and sustainability amidst economic disruptions. These alternatives include digital payments and mobile banking, data analytics and artificial intelligence (AI), blockchain technology, digital lending platforms, and enhancing customer engagement through digital platforms.

6.6.1.2 Digital Payments and Mobile Banking

Digital payments and mobile banking are two prominent examples of FinTech that have revolutionised financial services globally, including in Europe, Africa, and Kenya. These technologies have enabled remote transactions for whichever reason, whether lending or borrowing, buying or selling, or account management. This implies that technology has become even more critical where minimal or no physical contact is encouraged, as during COVID-19. In Europe, for example, SEPA (Single Euro Payments Area) has been adopted on a large scale. SEPA facilitates seamless electronic payments across EU member states, enabling consumers and businesses to make and receive payments in euros under the same conditions, regardless of their location within Europe (Nguyen et al., 2023). This technology has streamlined cross-border transactions, reducing costs and increasing efficiency for consumers and businesses. One such technology is Klarna, a Swedish FinTech company providing online payment solutions, including "buy now, pay later" services, direct payments, and instalment plans. Klarna has improved consumer convenience and flexibility, increasing e-commerce sales and providing a competitive edge for retailers. Revolut is a UK-based FinTech company offering a mobile banking app that provides a range of services, including currency exchange, international money transfers, and cryptocurrency trading. Revolut has attracted millions of users by offering low fees, real-time spending notifications, and innovative financial products, disrupting traditional banking models (Rybacki, 2022).

In Germany, N26 is a digital bank offering mobile banking services across Europe. It provides a fully digital banking experience, including account management, budgeting tools, and integrated insurance products. N26 has simplified banking for its users, providing a user-friendly interface and reducing the need for physical bank branches.

In Africa, mobile banking is enabled through mobile applications, such as the Ecobank Mobile App and GTBank's 737 Service. Ecobank is a pan-African bank which offers a mobile banking app that allows users to manage their accounts, transfer money, pay bills, and access various banking services across its network in over 30 African countries. The app enhances convenience and accessibility for customers, promoting financial inclusion and improving operational efficiency for the bank. GTBank's 737 Service in Nigeria enables customers to perform banking transactions via USSD codes on their mobile phones without requiring an internet connection. This

service has made financial services and banking more accessible to those without smartphones or reliable internet access, thus broadening the reach of financial services (Pasiparowa, 2012).

In Kenya, digital payments are greatly attributed to M-Pesa. M-Pesa is a mobile money platform provided by Kenya's telecommunication giant Safaricom PLC. It enables users to perform various financial transactions via their mobile phones. M-Pesa has achieved remarkable penetration in Kenya, with over 20 million active users. It has revolutionised how Kenyans handle money, significantly increasing financial inclusion and reducing reliance on cash. It currently allows access to mainstream bank accounts of most banks and CFIs due to its penetration even to the rural parts of the country. Another technology, *PesaLink*, is an interbank money transfer service launched by the Kenya Bankers Association. It allows customers to send money between banks or CFIs in real-time using their mobile phones or online banking platforms. *PesaLink*, like M-pesa, has improved the efficiency and speed of interbank transfers, offering an alternative to traditional methods like cheques and bank drafts.

Equity Bank's Equitel**,** a mobile banking service by Equity Bank, allows users to access banking services, make payments, transfer money, and access loans through their mobile phones. The technology has expanded Equity Bank's reach, providing convenient banking services to millions of Kenyans, particularly in rural and underserved areas (Strusani & Houngbonon, 2019). Kenya Commercial Bank's (KCB) *Mobi* Bank is another FinTech which has gained popularity. Kenya Commercial Bank (KCB) offers mobile banking services through its KCB Mobi Bank app, enabling customers to manage their accounts, transfer funds, pay bills, and access credit. The technology enhances customer experience and accessibility, supporting financial inclusion and reducing the need for physical branch visits (Mitieka, 2019).

Digital payments and mobile banking are transformative FinTech innovations that have significantly impacted European, African, and Kenya financial services. In Europe, they have enhanced efficiency and user experience in a well-established financial system. In Africa, they have driven financial inclusion and economic growth by providing accessible and affordable financial services. In Kenya, they have revolutionised financial transactions, significantly increasing financial inclusion and improving the overall economic landscape. These advancements demonstrate the profound potential of FinTech to reshape financial services globally, offering

increased convenience, accessibility, and efficiency, which are paramount for resilience in times of economic disruption, for example, COVID-19, that required the least possible physical contact.

6.6.1.3 Data Analytics and Artificial Intelligence (AI)

Data analytics and artificial intelligence (AI) are two closely related fields that leverage computational techniques to extract insights from data and enable machines to perform tasks that typically require human intelligence. Data analytics involves explicitly examining raw data to draw conclusions about that information. It uses statistical, computational, and machine-learning techniques to analyse data sets and identify patterns, trends, and insights. Conversely, AI is the simulation of human intelligence in machines programmed to think, learn and act like humans. It encompasses a variety of technologies that enable machines to perform cognitive functions such as learning, reasoning, problem-solving, and understanding language (Wibisono et al., 2019).

The critical components of data analytics include the ability to summarise past data to understand what has happened. For example, data analytics can summarise reports, dashboards, and scorecards that display historical data trends. Additionally, it can help in examining the reasons behind past outcomes. For example, drill-down analyses, data mining, and correlation analysis can use historical data to forecast future outcomes, such as changes in customer preference and demand. Predictive modelling, regression analysis, and time series forecasting can be used to make recommendations on actions based on data analysis, for example, optimisation algorithms, decision trees, and simulation models most suitable in different financial market conditions (Tripalupi et al., 2022).

The components of AI, on the other hand, include Machine Learning (ML), Natural Language Processing (NLP), Computer Vision (CV), Robotics, and Expert systems. Machine Learning is a subset of AI which involves training algorithms to learn from and make predictions or decisions based on data. Examples are supervised learning (classification, regression), unsupervised learning (clustering, association), and reinforcement learning. Natural Language Processing is the ability of a machine to understand and interpret human language. Examples include sentiment analysis, language translation, and chatbots. Computer Vision is the ability of machines to interpret and understand visual information from the world. Examples include image recognition, facial recognition, and autonomous vehicles. Robotics is the technology of designing and applying robots to perform tasks; examples are industrial, surgical, and service robots. On the other hand, Expert

Systems are AI systems that emulate the decision-making abilities of a human expert, for example, in medical diagnosis systems, financial advisory systems, and customer support systems. Machine learning is widely used in algorithmic trading, credit scoring, and fraud detection in the finance industry (Kumar et al., 2021).

Data Analytics and AI technology often might overlap, as data analytics provides the foundational data and insights required to train AI models. Meanwhile, data analytics is involved in collecting and cleaning large datasets that are then used to train AI models; machine learning, a core aspect of AI, relies heavily on data analytics to train models on historical data and test their accuracy. Furthermore, AI models can analyse data and generate further refined and interpreted insights using data analytics techniques, while data analytics is used to monitor the performance of AI models, providing feedback that helps improve their accuracy and effectiveness over time. A combination of the two technologies can be harnessed to analyse historical maintenance data and identify patterns indicating equipment failure. In the analysis, AI uses these patterns to predict future failures and recommend preemptive actions. Data analytics can examine customer interaction data to identify common issues and queries. When integrated with AI, which implements chatbots and virtual assistants using NLP to resolve customer queries based on historical data, efficiency can be enhanced, particularly where CFIs rely on efficiency to outcompete other players in the same market. Data analytics can detect unusual transaction data patterns and be deployed in synch with machine learning algorithms to identify and flag potentially fraudulent transactions in real-time (Tripalupi et al., 2022).

In summary, data analytics and AI can be applied in business to enhance customer experiences, optimise operations, and drive strategic decision-making, especially in times of crisis, such as COVID-19. In finance, specifically, data analytics and AI can be used to detect fraud, manage risk, and analyse investments. One of FinTech's fears is cyber insecurity; nevertheless, the proper application of data analytics and AI can offer solutions and, therefore, can be incorporated as a risk management strategy. The same technologies can be used in inventory management, pricing strategies, and customer segmentation.

Rabobank, a Dutch multinational banking and financial services company, utilises AI and data analytics to improve credit risk assessment and customer service. By analysing customer data,

Rabobank offers personalised financial products and services, enhancing customer loyalty and operational efficiency (Idema, 2022). First National Bank (FNB) South Africa employs advanced data analytics and AI to identify customer needs, prevent fraud, and streamline operations. This approach has allowed FNB to enhance its service delivery and maintain resilience in a competitive market (Coetzee, 2018).

M-Shwari, a product by Safaricom and Commercial Bank of Africa (CBA), uses data analytics to assess the creditworthiness of its users based on their mobile phone usage and transaction history. This has enabled M-Shwari to extend micro-loans to millions of Kenyans who lack traditional credit histories, thereby enhancing financial inclusion and institutional resilience (Strusani & Houngbonon, 2019). Data Analytics and AI are transformative technologies that enable Organizations to harness the power of data for smarter decision-making and automation. Data Analytics focuses on extracting insights from data, while AI uses these insights to simulate human intelligence and perform tasks autonomously. Together, they provide powerful tools for innovation across various industries, driving efficiency, personalisation, and improved outcomes (Tripalupi et al., 2022).

These technologies can, therefore, be tapped by the CFIs, particularly in assessing the credit scores of their customers and members. This strategy can potentially reduce the burden of bad debts, which has been a serious problem with most CFIs. The COVID-19 pandemic worsened the situation, and many of the CFIs in Kenya were suffering blows of bad debts.

6.6.1.4 Blockchain Technology

Blockchain technology is a decentralised and distributed ledger system that records transactions across many computers so that the registered transactions cannot be altered retroactively. The main component is decentralisation; that is, blockchain does not have a single point of control. Instead, the ledger is maintained by multiple nodes (computers) that all have a copy of the entire blockchain. Additionally, blockchain uses distributed ledger technology, which implies that all participants in the blockchain network have access to the same data, ensuring transparency and consistency. Blockchain is also immutable; in other words, once a transaction is recorded in a blockchain, it cannot be altered or deleted, providing a permanent and tamper-proof record. Moreover, a blockchain uses a consensus algorithm such as Proof of Work (PoW) or Proof of

Stake (PoS) to validate transactions and ensure that all participants agree on the state of the ledger. In this way, Blockchain enhances cyber security. It thus alleviates the fear of cyber-attacks, a common threat to many CFIs in Kenya, including the mainstream banking sector (IBM, n.d.).

Globally, several blockchain technologies are being adopted. For example, We.trade technology is predominantly in Europe. This European blockchain-based platform facilitates secure and transparent trade finance transactions for SMEs. By using blockchain technology, We.trade enhances the trust and efficiency of cross-border transactions, making financial institutions more resilient to fraud and operational inefficiencies. In Africa, BitPesa, a Kenyan FinTech company, uses blockchain technology to facilitate faster and cheaper international payments. This has significant implications for CFIs looking to improve their cross-border transaction processes, enhancing their competitiveness and resilience.

6.6.1.5 Lending Platforms

In the context of FinTech, lending platforms refer to online platforms that use technology to facilitate the borrowing and lending process. These platforms leverage advanced algorithms, big data, and artificial intelligence to streamline and automate the loan application, approval, and disbursement processes. They connect borrowers directly with lenders, often bypassing traditional financial intermediaries like banks. This can result in faster loan approvals, lower costs, and the ability to serve a broader range of customers, including those who may not have access to traditional banking services. Consequently, lending platforms can provide significant solutions to CFIs whose primary business involves lending (Daley, 2024).

Notably, lending platforms are automatic and, thus, high-speed processing technology. The use of technology allows for faster processing of loan applications and disbursements. Moreover, algorithms and big data analytics improve credit scoring and risk assessment. On the advantage, they are accessible via the internet, often through mobile apps, making them available to a broader audience. These platforms can lower operational costs by reducing the need for physical branches and extensive paperwork.

6.6.1.6 Popular Examples of FinTech Lending Platforms

Various popular lending platforms are applied in various parts of the world. In the US, Lending Club, Kabbage, and SoFi have been adopted on a large scale. Lending Club, for example, offers

peer-to-peer (P2P) lending, a lending club that connects borrowers with individual and institutional investors. It offers personal loans, business loans, and auto refinancing. The technology uses a data-driven approach to assess credit risk, allowing for quick loan approvals. SoFi offers a range of financial products, including personal loans, student loan refinancing, mortgages, and investment services. It provides career coaching and financial advising in addition to lending services.

Kabbage is a small business lending company that offers automated loans to small businesses by analysing real-time business data. It provides a line of credit that businesses can draw from as needed, with a quick and easy application process (Daley, 2024). In the UK, Funding Circle (UK/Global) has gained popularity. Like Lending Club in the US, the Funding Circle is peer-to-peer (P2P) business lending, which focuses on providing small business loans. It connects small businesses with a pool of investors, such as CFIs. It is a streamlined application process and provides small businesses with fast access to funds. Ant Financial's MYbank in China is a digital banking and lending company that is part of Ant Financial and provides microloans to small and micro-enterprises in China. It leverages the Alipay platform for lending. It also uses big data from Alipay transactions to assess credit risk and provide instant loans (Metheri, 2023).

In South Africa, the Jumo lending platform provides mobile lending and other financial services. It partners with mobile network operators and banks to offer loans and savings products to underserved populations. It provides financial services through mobile phones, making them accessible to people without traditional banking access. In Kenya, Tala Mobile Lending, for example, has drastically grown among individuals and SMEs. Tala provides microloans to individuals in emerging markets using mobile technology. The FinTech uses non-traditional data sources, such as mobile phone usage and social media activity, to assess creditworthiness.

The main advantages of a lending platform revolve around improved efficiency, wider market catchment, enhanced risk management, seamless customer experience, and promoting financial inclusion. These enhancements strengthen CFIs' financial health and competitiveness and support the broader goal of inclusive and efficient financial services. Adopting FinTech lending platforms helps CFIs adapt to changing market conditions, meet the needs of their members more effectively, and ensure long-term sustainability.

In summary, FinTech lending platforms are revolutionizing the lending landscape by offering faster, more efficient, and more inclusive financial services. By leveraging advanced technology, these platforms can efficiently and remotely provide loans to a broader range of customers, including those whom traditional banks underserve. Popular platforms like Lending Club, Prosper, Funding Circle, SoFi, MYbank, Kabbage, Tala, and Jumo exemplify how FinTech is transforming how people and businesses access credit, driving financial inclusion and economic growth globally. In times of economic disruption, for example, an event like an outbreak with the least possible physical contacts, lending platforms would provide one of the best solutions for continuity and, thus, resilience.

6.6.1.7 Robo- Advisors

Another fairly popular FinTech worth adoption by CFIs is Robo-Advisors. Robo-advisors are digital platforms that provide automated, algorithm-driven financial planning services with little human supervision. They offer investment advice and management services, typically through an online interface, using algorithms and data analytics to create and manage investment portfolios. Robo-advisors are designed to make investing more accessible, affordable, and efficient for a broad range of investors, including CFIs, who are struggling with investment decisions (Yasar, 2023).

Some key features of Robo-Advisors include automated portfolio management, affordability, accessibility, diversification, regular rebalancing, tax optimisation and personalisation. In automated portfolio management, Robo-advisors use algorithms to create and manage diversified investment portfolios based on an investor's risk tolerance, financial goals, and time horizon. By automating investment management, Robo-advisors characteristically offer cheaper services than traditional financial advisors. Additionally, the platforms are often user-friendly and accessible through mobile apps and websites, making them available to a wide range of investors, including CFIs with smaller portfolios. The investment solutions provided by Robo-advisors are based on modern portfolio theory to create diversified investment portfolios, which can include a mix of asset classes such as stocks, bonds, and ETFs. The technology automatically rebalances portfolios to maintain the desired asset allocation as markets fluctuate. This can help manage liquidity, which has been challenging for most CFIs, particularly SACCOs. These optimize taxes by offering tax-efficient investment strategies, such as tax-loss harvesting, to help investors minimize their tax

liabilities. The technology can also customize investment recommendations by allowing CFIs to complete questionnaires about their financial situation and goals, which the Robo-advisor uses to tailor investment recommendations (The Investopedia Team, 2024).

Various calibres of the technologies are in use in various parts of the world. In the US, Betterment, Wealthfront, Vanguard Personal Advisor Services, Schwab Intelligent Portfolios and Acorns are common. Betterment is one of the largest and most well-known Robo-advisors and offers personalized financial advice and investment management. It provides features like tax-loss harvesting, goal-based investing, and retirement planning tools. Wealthfront, another leading Robo-advisor, offers automated investment management and financial planning services. The solutions include features such as tax-loss harvesting, direct indexing, and financial planning tools for homeownership, college savings, and retirement.

Vanguard Personal Advisor Services combines automated investment management with access to human financial advisors. The technology offers an integrated approach, providing both Robo-advisory services and personal advice from human advisors. Schwab Intelligent Portfolios, offered by Charles Schwab, provides automated investment management for free. Its solutions include automatic portfolio rebalancing and tax-loss harvesting. Acorns focuses on micro-investing by rounding up everyday purchases and investing the spare change; it targets new and young investors by making investing easy and automatic through small, regular contributions (WealthUp, 2024).

In the UK, Nutmeg is a leading Robo-advisor, offering a range of investment options, including ISAs, pensions, and general investment accounts. It provides personalized portfolios based on the potential investor's risk tolerance and investment goals. In Singapore, Malaysia, Hong Kong, and UAE, StashAway is the equivalent of Betterment, Wealthfront, Vanguard Personal Advisor Services of the US and Nutmeg of the UK. StashAway is an Asia-based Robo-advisor that offers personalized investment management. It uses a proprietary investment framework called the Economic Regime-based Asset Allocation (ERAA) to optimise portfolios (Robo-advisors - United Kingdom, Statista market forecast, n.d.).

In Kenya, Robo-advisors were adopted about eight years ago (since 2016). The adoption was part of a broader trend where financial technology (FinTech) innovations began to gain traction in the

Kenyan market. Companies like Abacus and SmartMEI started offering digital investment services, leveraging the growing internet and mobile penetration to reach a wider audience.

Abacus, launched in 2016, is one of the pioneering Robo-advisory platforms in Kenya. It offers online investment tools and services aimed at helping Kenyans invest in stocks, bonds, and mutual funds. It allows users to create and manage investment portfolios, access market data, and receive investment advice based on algorithms. In the same year, another early entrant in the Kenyan robo-advisory market was SmartMEI, which offers a platform for managing investments and personal finance—the primary focus of the technology is on using technology to simplify investment processes and provide personalized financial advice. Bamboo, launched in 2020, offers Kenyans the ability to invest in U.S. stocks and ETFs through a mobile app with some automated investment features. The technology allows users to automate their investments in U.S. markets and provides educational resources to help them make informed investment decisions (Robo-advisors – Kenya, Statista market forecast (n.d.).

The introduction of Robo-advisors in Kenya has contributed to democratising investment opportunities, making it easier for individual investors to access financial markets and investment products. This has been particularly beneficial in the country where traditional financial advisory services may be out of reach for many due to cost or lack of access. Although Robo-advisors have great potential, a significant challenge to their adoption in Kenya is the population's financial literacy level. Many potential users may not fully understand the benefits and functionalities of Robo-advisors. Additionally, potential investors might have trust issues in automated financial services, which is crucial. Thus, concerns about online platforms' security and personal financial data safety must be addressed. Moreover, the regulatory framework for digital financial services in Kenya is evolving. Ensuring compliance with regulations and maintaining investor protection are important for the growth of Robo-advisory services (CR Advocates LLP, 2024).

Robo-advisors' future in Kenya looks promising, driven by increasing internet and smartphone penetration, a growing middle class, and ongoing efforts to improve financial literacy. As the FinTech ecosystem develops, more innovative solutions are likely to emerge, further enhancing the accessibility and appeal of automated investment services. Adopting Robo-advisors in Kenya is part of a larger trend towards digital transformation in financial services, offering new

opportunities and solutions for investment and financial management to a wider audience, including CFIs. Like the other technologies highlighted, the technology is cost-effective, convenient, accessible, consistent and educational (Robo-advisors – Kenya, Statista market forecast, n.d).

Robo-advisors represent a significant innovation in the financial advisory industry, leveraging technology to provide accessible, affordable, and efficient investment management services. By automating many aspects of portfolio management and financial planning, they help investors achieve their financial goals with minimal effort and cost. Popular platforms like Betterment, Wealthfront, Vanguard Personal Advisor Services, Schwab Intelligent Portfolios, Nutmeg, StashAway, and Acorns demonstrate the widespread adoption and success of robo-advisory services globally (WealthUp, 2024).

India's Cooperative Banks: Many cooperative banks in India have adopted mobile banking and digital payment solutions to increase their reach and efficiency. The Jan Dhan-Aadhaar-Mobile (JAM) trinity has enabled millions of unbanked individuals to access financial services through mobile phones, significantly enhancing financial inclusion. Ecobank, a pan-African banking conglomerate, has leveraged mobile banking to reach underserved populations across 33 African countries. Their mobile app allows customers to perform transactions, pay bills, and access other financial services, thus enhancing the bank's resilience by broadening its customer base and reducing operational costs. Equity Bank: In Kenya, Equity Bank’s mobile banking platform, Equitel, allows customers to access banking services via their mobile phones. This innovation has increased the bank’s customer base and transaction volumes, demonstrating how mobile banking can enhance the resilience of financial institutions by making them more adaptable and accessible.

6.6.2 CFI Membership

The membership status in terms of size and employment played a role in resilience. The study found that Cooperative Financial Institutions (CFIs), whose membership comprised of government employees, were more resilient in the sense that such members did not significantly suffer in terms of financial constraints induced by economic disruptions. In other words, those members have a consistent income flow subjected to the check-off system. Consequently, CFIs, whose majority of members were government employees, did not suffer setbacks and challenges such as reduced

members' savings due to the pandemic. Additionally, the results of the analysis showed that the size of the membership added resilience value equally. CFIs with huge memberships often have a broad financial base and a more resilient financial reservoir than CFIs with small memberships. Additionally, big membership implies more active borrowers, thus enhancing financial sustainability (Yitayaw, 2021). Therefore, CFIS must conduct customized marketing targeting people in stable sectors and government employees. The marketing should be formulated in such a way that it appeals to both market niches.

Membership size in CFIs can be a significant resilience factor, particularly during economic disruptions. CFIs, including credit unions and cooperative banks, are member-owned and member-operated institutions that provide financial services to their members. The resilience of these institutions can be influenced by several factors, including the size and diversity of their membership base. Three dimensions of CFI membership can directly influence their resilience. These include the influence of membership on economies of scale, risk diversification and member engagement.

6.6.2.1 Economies of Scale

Economies of scale are the benefits a firm enjoys due to the cost advantage of increasing the level of output. The advantages are a product of the inverse relationship between per-unit fixed cost and the quantity of output in the long run. In a commercial sense, economies of scale can emerge due to a reduction in the per-unit fixed cost of production or due to a fall in the average variable cost with an increase in output. In the science of commerce, efficient production means buying in bulk, cheaper capital, and reduction in logistics costs, spread of risk, and reduction in proportion.

The sentiment that large memberships in Cooperative Financial Institutions (CFIs) create economies of scale and offer advantages is widely recognized in the financial sector. This is primarily due to the ability of larger institutions to spread fixed costs over a greater number of members, leading to lower per-unit costs and improved efficiency. Economies of scale can be internal or external. Internal economies of scale are unique advantages a single form has over the rest of the firms in the industry and may include a patent over a mass production technology, which allows its average cost of production to be lower than the competitors' cost of production.

In the case of CFIs, membership is a critical factor of economies of scale because the membership size of a CFI, for example, can directly impact its long-term sustainability and resilience, more so in times of economic crises. A CFI with a large membership is more likely to be stronger, more stable, and more resilient. Many Organizations count on membership growth and improved partnerships for CFIs. Substantial benefits are associated with the size of membership in CFIs. Firstly, membership growth is directly and positively linked with the growth of the cooperative society. In other words, when a CFI's membership grows drastically and steadily, it creates the impression that the CFI is attractive in terms of the products and services it offers and that the CFI is trustworthy in terms of the welfare of the members (Retegi & Igartua, 2023). Secondly, large membership increases the inflow and outflow of cash as more members are encouraged to deposit their savings or shares. Additionally, more people will apply for loans, and in doing so, the CFI will generate more revenue from the interest charged on the loans. From the member's deposits, the CFIs can expand their investments, services and products and thus grow financially and in terms of capital (Navy Federal Credit Union, 2022). Thirdly, large membership gives the CFIs a large pool of human resources from which they can access diversified human resources to manage day-to-day operations.

Credit unions in the U.S. provide a clear example of economies of scale. Larger credit unions benefit from reduced costs per member due to their ability to invest in modern technologies, including FinTechs, which offer a more comprehensive range of products and services and negotiate better rates for their members. For instance, the Navy Federal Credit Union, the largest in the U.S., leverages its large membership base to offer competitive loan rates and lower fees. According to a study by the National Credit Union Administration (NCUA), larger credit unions tend to have lower operating expense ratios that translate into better rates and services for their members (Navy Federal Credit Union, 2022).

Desjardins Group, a federation of credit unions in Quebec, Canada, exemplifies how local CFIs can benefit from large memberships. As Canada's largest cooperative financial group, Desjardins leverages its large member base to achieve economies of scale. This has allowed it to offer a broad range of financial products and services at competitive rates. Desjardins' ability to invest in technology and innovation also benefits its members through enhanced service delivery and operational efficiency (Desjardins Group, 2020). "We joined the Partnership for Carbon

Accounting Financials to measure the greenhouse gas (GHG) emissions generated by our financing and investment activities, using a recognized scientific method. …… We continue to focus our own direct infrastructure investments in renewable energy. In September 2020, we announced a $100 million investment in 4 wind farms and a solar farm in the United States. The farms will ultimately generate enough clean energy to power 140,000 households and displace the equivalent of the GHG emissions produced by 280,000 cars annually. As at September 30, 2020, we'd invested $1.21 billion in the renewable energy infrastructure sector. That's approximately 44% of our infrastructure portfolio. As concerns reducing the carbon footprint of our own investments, in 2020, we reached our carbon footprint reduction target for our own investments in publicly traded stocks and bonds. As at December 31, the carbon footprint of these portfolios was 32% lower than the stock and bond market index average, outperforming the 25% reduction target we set for 2020" (Desjardins Group, 2020, p 27).

The Mondragon Corporation, a federation of worker cooperatives based in the Basque region of Spain, is another example. It operates in various sectors, including finance, through its cooperative bank, Laboral Kutxa. Mondragon's extensive membership base and diversified operations allow it to achieve significant economies of scale. This has enabled the cooperative to invest in innovation and offer comprehensive financial services to its members at competitive rates (Retegi & Igartua, 2023). Rabobank, originally a cooperative bank, is one of the largest financial institutions in the Netherlands. It has successfully harnessed economies of scale through its extensive network and large membership. This allows Rabobank to offer lower interest rates on loans and higher interest rates on deposits compared to smaller competitors. Its large scale also supports significant investments in technology and infrastructure, enhancing its service delivery (The Cooperative Rabobank, 2022).

Stokvels are community-based savings groups popular in South Africa. Absa Bank has tailored products like the Stokvel Account to cater to these groups. While individual stokvels may not have large memberships, the aggregation of these groups allows Absa to achieve economies of scale in servicing these accounts. This enables the bank to offer lower fees and better interest rates to stokvel members, illustrating how, even locally, larger collective memberships can result in cost advantages and improved services (Absa Group Limited, 2022). The Cooperative Bank of Kenya serves as a regional example in Africa. With over 15 million members, it is one of the largest banks

in the country. Its large membership base enables it to spread operational costs across a broad customer base, reducing costs per transaction and allowing the bank to offer competitive products. Additionally, the bank has been able to invest heavily in technology, which further drives down costs and improves customer service (Cooperative Bank, 2020).

In summary, economies of scale in CFIs arise from the ability to spread fixed costs over a larger member base, enabling investments in technology, improved service delivery, and competitive pricing. This phenomenon is evident globally, regionally, and locally, as seen in examples from the U.S., Spain, the Netherlands, Kenya, Canada, and South Africa. These institutions demonstrate that large memberships can be a significant advantage, allowing CFIs to serve their members better and compete effectively in the financial market. Therefore, it is a critical factor of resilience, and CFIs should invest in strategies that can help them recruit more members to enjoy economies of scale. In so doing, they will reduce their operational costs while generating more revenue from member deposits for savings or share capital. The revenue generated can then be invested to earn the CFIs more revenue, from which they can enhance their resilience.

6.6.2.2 Risk Diversification

Large memberships in Cooperative Financial Institutions (CFIs) contribute to risk diversification and offer significant advantages. Risk diversification is a strategy used to manage and reduce risk or their impacts by spreading investments across various sectors, assets or geographic regions. The main philosophy is that by investing in a diverse portfolio, the negative performance of some investments can be offset by the positive performance of others, thereby minimizing the overall risk. Risk diversification can take different forms, including various investments, sector diversification, geographic diversification, or company diversification.

Investment diversification involves investing in different types of assets, such as bonds, stocks, real estate, money markets, and commodities. Each investment characteristically behaves differently under various economic conditions. Sector diversification can be achieved by investing in various sectors. For example, one can invest in technology, healthcare, finance, and consumer goods in the stock market. This helps mitigate the risk associated with a downturn in any sector. Within a sector, diversification can also mean investing in multiple companies rather than putting all funds into a single entity. This reduces the risk of significant loss if one company underperforms. Investing in different geographic regions can reduce the risk associated with

economic downturns in a specific country or region. For instance, global diversification helps investors avoid being overly affected by regional recessions or political instabilities.

In CFIs, risk diversification can be seen through a diverse member base. Serving members from various economic sectors such as agriculture, small businesses, cooperates, and salaried employees helps spread the risk. Economic challenges in one sector are less likely to impact all members equally. CFIs operating in multiple regions can mitigate the risk associated with local economic downturns, political disruptions or natural disasters affecting a particular area, like in the case of the COVID-19 pandemic. Offering a range of financial products (loans, savings accounts, insurance) also reduces reliance on any single source of income and spreads risk across different financial services. Risk diversification is, therefore, a fundamental principle in risk management, aiming to reduce the overall risk of a portfolio or financial institution by spreading investments or services across different assets, sectors, and regions. This strategy helps achieve more stable returns and minimises potential losses (Cavaliere et al., 2021).

Raiffeisen Bank International, part of Austria's larger Raiffeisen cooperative banking group, serves a diverse membership base across several European countries. This diversity in membership across different economies and sectors helps the bank to mitigate risks. For instance, economic downturns in one country or sector can be offset by stability or growth in another. This geographic and economic diversification allows Raiffeisen to maintain stability and manage risks effectively, even during regional financial crises. The ILCU represents a network of credit unions across Ireland. Each credit union serves a diverse membership base, including individuals from different economic backgrounds and regions. This diversity helps spread risk and ensures that the financial impact of economic downturns in specific areas or sectors is mitigated. During the 2008 financial crisis, Irish credit unions demonstrated resilience due to their diversified member base, which helped them manage and distribute risk more effectively (Raiffeisen Bank International, 2022). Co-operatives UK is a network of cooperative businesses across the United Kingdom, including financial cooperatives. This network's broad membership base, spanning various agriculture, retail, and finance industries, allows for effective risk diversification. If one sector faces economic challenges, the impact is buffered by the stability or growth in other sectors within the cooperative network. This cross-sectoral membership helps manage risks and maintain overall financial health.

The Co-operative Bank in the UK has a large and diverse membership base that includes individual consumers, small businesses, and community Organizations. This diversity helps the bank spread its risk across various economic sectors. For example, during the 2008 financial crisis, the bank's broad membership base and cooperative structure helped it weather the economic storm better than many conventional banks, as the risks were distributed across a wider pool of members and economic activities. FONDESURCO, a financial cooperative in Peru, serves a large and diverse membership base primarily composed of small farmers and entrepreneurs in rural areas. By providing financial services to members involved in different types of agricultural activities and small businesses, FONDESURCO can diversify its risk. Poor yields in one crop type or economic challenges in a particular business sector do not critically impact the cooperative's overall financial health due to its membership's diversity.

Bharatiya Mahila Bank, now part of the State Bank of India, was established to serve women across the country. Although it no longer operates as a separate entity, its initial large and diverse membership base of women from various socioeconomic backgrounds across India provided significant risk diversification. By serving women from different regions and economic sectors, the bank could mitigate risks associated with localized economic downturns or sector-specific issues (Cavaliere et al., 2021).

In Kenya, various CFIs leverage their membership to diversify their risks. KUSCCO, the umbrella Organization for Savings and Credit Cooperative Organizations (SACCOs) in Kenya, provides various services, including financial, technical, and advocacy support to its member SACCOs. The large and diverse membership base of KUSCCO, which includes SACCOs from different sectors such as agriculture, transport, and public service, helps spread risks. KUSCCO's member SACCOs come from various sectors. For instance, poor harvests or price fluctuations might affect the agricultural sector. Still, the transport sector might simultaneously experience growth due to increased urbanization and demand for transport services. Sectoral diversity among its members ensures that risks are spread across different economic activities, minimizing the impact of sector-specific downturns. KUSCCO's member SACCOs are spread across different regions in Kenya. This geographic diversity helps mitigate risks associated with regional economic downturns, climatic changes, or localized socio-political issues. For example, if one region faces drought,

impacting agricultural SACCOs, other regions might still perform well, balancing the overall risk (The SACCO Societies Regulation Authority (SASRA), 2022).

The Co-operative Bank of Kenya, commonly referred to as "Co-op Bank," is one of the largest CFIs in the country. It serves millions of members, including individuals, businesses, and cooperatives. A diverse Membership base includes individuals from various economic backgrounds, such as farmers, small and medium-sized enterprises (SMEs), salaried employees, and large corporations. This diversity helps in risk distribution, as financial challenges faced by one group, for example, small-scale farmers during a drought, are offset by the stability or growth of other groups for salaried employees or urban SMEs. Harambee SACCO is one of the largest SACCOs in Kenya, primarily serving government employees. Its extensive membership provides significant advantages in terms of risk diversification. Serving a large number of government employees, Harambee SACCO benefits from the relatively stable income and employment status of its members. This stability reduces the risk of loan defaults and ensures a steady flow of savings deposits because a check-off system manages the deposits. The large and diverse membership allows for cross-subsidisation of risks. For example, the SACCO can use the surplus generated from low-risk members to support services for higher-risk members, thereby spreading the overall risk (Harambee SACCO, 2014).

Kenya Police SACCO provides financial services to police officers and other security personnel. It has a large membership base, which offers several advantages. Police officers typically have stable employment and income, reducing the risk of loan defaults. This stability contributes to the overall financial health of the SACCO. Kenya Police SACCO offers a variety of financial products, including personal loans, mortgages, savings accounts, and investment opportunities. The large membership base allows for effective risk pooling. The financial risks associated with individual members are spread across the entire membership, reducing the impact of individual defaults on the SACCO's overall financial stability (Kenya Police Investment Co-operative Society, 2022).

In summary, large memberships in Kenyan CFIs provide significant advantages in terms of risk diversification. These institutions can spread risks across different economic sectors, geographic regions, and financial products by serving a diverse member base. This diversification helps

mitigate the impact of localised economic challenges, ensuring greater financial stability and resilience. Examples from KUSCCO, Co-operative Bank of Kenya, Harambee SACCO, and Kenya Police SACCO illustrate how large memberships contribute to effective risk management and overall institutional stability.

Large memberships in CFIs provide substantial advantages in risk diversification. By serving a broad and diverse member base, CFIs can spread risks across different economic sectors and demographic groups, reducing the impact of localized economic challenges. This diversification aids in maintaining financial stability and resilience, enabling CFIs to continue offering competitive products and services. Examples from global, regional, and local contexts, such as Raiffeisen Bank International, The Co-operative Bank in the UK, Bharatiya Mahila Bank, Co-operatives UK, FONDESURCO in Peru, and the Irish League of Credit Unions, illustrate how large and diverse memberships contribute to effective risk management and financial stability.

6.6.3 Open-Mindedness and Quick Adaptability

Open-mindedness and quick adaptability are crucial for sustainability and resilience in times of trouble and economic disruption. Open-mindedness is the willingness to consider new ideas, perspectives, and experiences without prejudice or bias. It involves being receptive to different viewpoints and being ready to learn from others, even when their opinions or beliefs differ from one's own. An open-minded person or institution is curious about the world and eager to explore new concepts and ideas. Such individuals or institutions are tolerant of ambiguity and diversity, understanding that different perspectives can coexist. Consequently, such institutions are willing to change their mind or beliefs when presented with new evidence or compelling arguments. Additionally, open-minded individuals respect others' opinions and are willing to engage in constructive dialogue.

Open-minded individuals are more likely to learn new things and acquire a broader knowledge base quickly, thus improving their problem-solving abilities. Considering diverse perspectives can lead to more innovative and effective solutions. Being open-minded fosters respect and understanding in personal and professional relationships. On the other hand, quick adaptability refers to the ability to adjust rapidly to new situations, challenges, or environments. It involves being flexible and resilient in the face of change. Adaptable institutions/individuals can easily modify their approach or behaviour to meet the new demands of changing times, recover faster

from setbacks, and continue moving forward. Additionally, quick adaptability often involves anticipating and preparing for change in advance. Subsequently, adaptable institutions can find creative solutions to emergent problems and maximise available resources.

Internationally operating companies need open-minded employees who can appreciate and adapt to different cultural norms and practices in different countries in which they operate. This helps in building strong international relationships and successful cross-cultural collaborations. Additionally, research institutions or research-dependent institutions working on complex problems often benefit from open-mindedness, as it allows them to integrate insights from different disciplines, leading to more comprehensive and innovative solutions. Quick adaptability proved to be the real deal when the COVID-19 pandemic emerged. The COVID-19 pandemic forced many companies, including CFIs, to shift to remote work almost overnight. Employees who quickly adapted to new technologies and workflows were essential in maintaining productivity and business continuity.

The COVID-19 pandemic posed unprecedented challenges to financial institutions worldwide. CFIs demonstrated notable resilience during this period, primarily due to their open-mindedness and quick adaptability. This ability to navigate the crisis by swiftly implementing new strategies and technologies was instrumental in their survival and continued operation. For example, Navy Federal Credit Union, the largest credit union in the U.S., exemplified quick adaptability and open-mindedness during the pandemic. Recognizing the need for digital transformation, Navy Federal accelerated its deployment of digital banking services. They expanded their mobile banking capabilities and enhanced online services to ensure members could manage their finances remotely. This rapid shift maintained member engagement and facilitated uninterrupted financial services despite physical branch closures. The credit union also implemented remote work policies for employees, ensuring business continuity and safety.

Rabobank, a major cooperative bank in the Netherlands, showcased its adaptability by supporting its diverse member base, particularly in the agricultural sector, which was heavily impacted by the pandemic. The bank launched tailored financial relief programs, including loan deferrals and emergency funding, to support farmers and agribusinesses. Additionally, Rabobank expanded its digital advisory services, providing members with crucial financial planning and support during

uncertain times. This approach helped mitigate the economic impact on its members and maintained financial stability. In their paper, Develtere and Papoutsi (2021, p. 6) note that flexibility is an added advantage to resilience as it enables many CFIs to adapt quickly to the dynamics instigated by a crisis, " ..the impact on our group audit. We have reassessed our planned audit procedures in relation to the work of component auditors, such as organizing video conference meetings with local management and component teams instead of our annual site visits. Additionally, where we have gained full digital access to component files, we performed a remote review of selected working papers of the work performed by component teams. Furthermore, active dialogues, clear communication and effective use of technology have allowed us to direct and supervise the performance of our component teams: the impact on the Bank's control environment due to remote working. We assessed that the impact of the COVID-19 pandemic, including working in a remote environment, on the effective operation of controls was limited. Our procedures are explained in the section 'Key Audit matter: Design and effectiveness of IT General Controls' of our report. The majority of the Bank's day-to-day accounting and operational processes were already performed electronically and had the ability to be performed remotely. Therefore, the transition to a remote working environment did not cause significant change or disruption in the Bank's control environment. … The Bank's operations and financial reporting system are heavily dependent on IT systems, including automated accounting procedures and IT-dependent manual controls. Our procedures included evaluating and testing the design and operating effectiveness of certain controls over the continued integrity of the IT systems that are relevant to financial reporting, focusing on Entity level controls over information technology in the IT organization, including IT governance, IT risk management and cybersecurity management; Management of access to programs and data, including user access to the network, access to and authorizations within applications, privileged, access rights to applications, databases and operating systems and physical access to data centres." (The Cooperative Rabobank, Annual Report 2020, p 107).

In Kenya, the Co-operative Bank demonstrated significant open-mindedness and adaptability. The bank quickly enhanced its digital banking platform to cater to the surge in demand for online services. They introduced a mobile banking app with expanded functionalities, allowing customers to access a wide range of banking services remotely. Furthermore, Co-op Bank launched various financial support measures, such as loan restructuring and payment holidays, to assist members

facing financial difficulties due to the pandemic. This proactive approach ensured continued member support and operational stability. Stima SACCO, which primarily serves employees in the energy sector, adapted rapidly to the challenges presented by COVID-19. Recognizing the importance of maintaining member engagement and service delivery, Stima SACCO transitioned to digital platforms for transactions and communications. They implemented an online loan application system and digital member meetings, allowing seamless operations despite movement restrictions. Stima SACCO also provided financial literacy programs through virtual workshops, helping members manage their finances during the crisis. In their 2020 annual integrated reports, the Cooperative Bank and Stima SACCO noted, "…the bank, through its strong digital journey framework, continues to adapt to technological changes without compromising on security, usability and stability. In order to re-invent and catalyze its performance, the bank has maintained a strong social media presence to address queries raised by customers with a team to analyze social media trends on a daily basis. b. Enhanced automation of processes to improve efficiency, c. We have acquired systems, knowledge and skills to defend our systems, networks and data from cyber-attacks, d. Enhanced system connectivity and interoperability to create unrivalled user experience, e. Leveraging on data and analytics in decision making, f. Continuous innovations to meet customer needs and changing expectations, and g. Exploring opportunities for collaboration with FinTech and system developers with a view to deploring the best of breed in terms of technology platforms. (Cooperative Bank Integrated Report, 2020). Stima Sacco Annual Reports also indicated in 2022 report "As we look ahead to the coming year, we are confident in our ability to continue to deliver strong financial performance and business success for our shareholders. We will continue to focus on product innovation, market expansion, customer experience, and sustainability, and we believe that these efforts will continue to drive growth and success for our SACCO in the years ahead….. We have continued to invest in technology to enhance the efficiency and effectiveness of our operations, and this has paid off tremendously. In this regard, the SACCO embarked on a process to overhaul the previous enterprise resource planning (ERP) system that had been in place, replacing it with a core banking system. Dubbed Project Angaza, a dedicated team was mobilized to enable the seamless migration of data into the new system. (Stima Sacco Annual Reports and Financial Statements, 2022, p.53)

Harambee SACCO, one of the largest CFIs in Kenya, adapted swiftly to ensure continuous service delivery to its members. The SACCO expanded its mobile banking services, allowing members to

perform transactions, apply for loans, and access financial advice remotely. Harambee SACCO also introduced flexible loan repayment options and financial support packages for members affected by the pandemic. By leveraging digital solutions and maintaining open communication channels, Harambee SACCO effectively navigated the challenges posed by COVID-19. Unaitas SACCO has demonstrated remarkable adaptability, serving a diverse membership of farmers, SMEs, and salaried employees. The SACCO enhanced its digital platforms, providing members easy access to financial services via mobile and online banking. Unaitas also introduced virtual training sessions on financial management and business continuity planning, supporting members in adapting to the new economic realities. These measures ensured that Unaitas could continue supporting its members while maintaining operational resilience.

This study established that the management of the CFIs was open-minded to the new norm, including remote work arrangement, digital transformation, adherence to health guidelines enforced to mitigate the spread of COVID-19, and virtual meetings, including the Annual General Meeting (AGM). The swift shift of the business operation model from physical to virtual was one of the main critical success factors cited by all the CFIs who participated in the study. Although some resistance was registered, it turned out that remote work arrangements, for example, can save Organizations certain costs, such as the cost of managing HR in physical offices. Additionally, virtual meetings, including AGMs, are the main means of saving the CFIs from huge budgets for organizing and implementing AGMs as required in regulation. Although the health regulations were made and implemented immediately, for example, the enouncements of the lockdowns, dusk to dawn curfews, the ban on public gatherings and wearing of face masks, social distancing, hand washing, and sanitizations and later vaccinations, the CFIs were flexible and adaptable to the new regulations. This level of adaptability helped the CFIs to improve their resilience amidst the pandemic.

Earlier studies indicate that open-mindedness and adaptability, particularly during economic market disruption, are critical resilience factors Organizations must embrace and implement. Open-mindedness and quick adaptability are integral components of Organizational resilience, as they enable Organizations to navigate uncertainty, embrace change, and thrive in dynamic and uncertain environments. Boylan and Turner (2017) found that open-mindedness involves being receptive to new ideas, perspectives, and ways of doing things. Organizations must be open to

change and innovation in a rapidly evolving business landscape, as was the case with the COVID-19 pandemic era. Being open-minded allows leaders and employees to adapt to new technologies, market trends, and customer preferences, positioning the Organization to seize opportunities and mitigate risks effectively. Additionally, open-mindedness and adaptability encourage creativity and innovation within the Organization. When employees feel empowered to share their ideas and experiment with new approaches, it fosters a culture of innovation.

In other studies, open-minded and adaptable Organizations value diversity and inclusion, recognizing the importance of different perspectives and experiences. By embracing diversity, Organizations can tap into a broader range of talents and ideas, leading to more creative solutions and better decision-making (Shani, 2020). For example, adapting to adherence to social distances opened the eyes of most CFIs to the potential and benefits of remote working. Inclusive environments also foster a sense of belonging among employees, which contributes to their engagement and resilience. Akgün and Keskin (2014) add that flexibility and adaptability encourage a growth mindset, where individuals view challenges as opportunities for learning and development. Organizations that prioritise continuous learning and skill development are better equipped to adapt to changing circumstances and overcome obstacles.

Quick Adaptability to External Factors: In a rapidly changing business environment, Organizations must adapt quickly to external factors such as technological advancements, regulatory changes, and market disruptions. Open-mindedness enables Organizations to assess new information objectively, identify emerging trends and threats, and adjust their strategies and operations accordingly. Quick adaptability allows Organizations to stay ahead of the curve and remain competitive in volatile markets (Shani, 2020). Shani (2020) adds that Open-mindedness and quick adaptability contribute to Organizational resilience by enabling Organizations to respond effectively to challenges and setbacks. Rather than being resistant to change or stuck in old ways of thinking, resilient Organizations embrace change as an opportunity for growth and innovation. They can pivot quickly in response to adversity, leveraging their flexibility and creativity to overcome obstacles and emerge stronger than before.

The ability of CFIs to survive and thrive during the COVID-19 pandemic can be attributed to their open-mindedness and quick adaptability. By embracing digital transformation, providing tailored financial support, and maintaining open lines of communication, CFIs across the globe, regionally

in Kenya, and locally in various communities were able to navigate the crisis effectively. These examples highlight the importance of flexibility and innovation in ensuring financial institutions' continued success and resilience during challenging times.

6.6.4 Effective Communication

This study found that effective communication was a critical success factor concerning the ability of the CFIs to withstand the adverse impacts of the COVID-19 pandemic. The findings noted that internal, external, and effective communication between the CFI management and staff and between the CFIs and their customers and other stakeholders ensured that they made quick and suitable decisions and that the CFIs assured their customers and members of their status. Additionally, the study found that effective and prompt communication of accurate information to all stakeholders promoted continued support. Various studies have singled out effective communication as a critical function that promotes loyalty among staff, board members, and the members of the CFIs.

In their study, Kim (2021) noted that clear communication ensures that everyone in the Organization understands its goals, strategies, and expectations. When objectives are communicated effectively, employees can align their efforts towards common goals, which strengthens the Organization's ability to respond to challenges. Kim adds that timely communication is essential in times of crisis. It enables leaders to disseminate important information promptly and inform employees about developments that may impact the Organization. Chewning, Lai and Doerfel (2013) added that transparent communication builds trust between leaders and employees. When leaders are honest and open about challenges, uncertainties, and decisions, it fosters a sense of trust and confidence in their leadership. This trust is crucial when employees look to leaders for guidance and reassurance during a crisis. This helps prevent misunderstandings and minimizes uncertainty, allowing quicker responses to emerging threats.

Effective communication also facilitates collaboration and information-sharing among teams. When employees feel comfortable expressing their ideas and concerns, it promotes innovation and problem-solving. In a resilient Organization, diverse perspectives are valued, and open communication channels allow for exploring different solutions to challenges (Doerfel et al., 2020). Resilient Organizations are adaptable and flexible in the face of adversity. Clear

communication channels enable swift decision-making and rapid adjustments to changing circumstances. Teams can communicate feedback and insights in real-time, allowing the Organization to pivot strategies or operations to overcome obstacles. Doerfel and colleagues (2020) add that effective communication promotes employee engagement by keeping them informed and involved in Organizational matters. Employees who feel valued and connected to the Organization are more likely to remain committed and resilient during challenging times. Clear communication also boosts morale by recognizing and celebrating achievements, contributing to a positive Organizational culture.

During crises, communication becomes even more critical. Resilient Organizations have crisis communication plans in place to ensure that accurate information is communicated promptly to all stakeholders (Chewning et al., 2013). This helps manage the situation effectively, maintain public trust, and facilitate the Organization's recovery process. Effective communication supports a culture of learning and continuous improvement. When Organizations encourage open feedback and communication, they create opportunities to learn from past experiences and adapt strategies for future challenges. This iterative learning and improvement process strengthens the Organization's resilience over time.

Evidence from secondary data shows that several CFIs implemented effective communication to manoeuvre through the turbulences induced by COVID-19. During the COVID-19 pandemic, CFIs worldwide leveraged effective communication strategies to navigate their unprecedented challenges. Effective communication was crucial in maintaining customer trust, ensuring business continuity, and supporting customers and employees through the crisis. In the wake of the pandemic, members of CFIs needed transparency and timely updates. Many CFIs across the globe ensured they maintained transparent and timely communication with their customers about the changing circumstances and available support options. JPMorgan Chase & Co., for example, implemented a robust communication strategy to keep customers informed. The bank's CEO, Jamie Dimon, issued regular updates via emails and the bank's website, explaining how the bank was responding to the pandemic. These communications included information on branch closures, digital banking options, and relief measures such as payment deferrals. In their 2020 annual report, they noted, "We also developed convenient, less intrusive and more effective ways to communicate with – and collect payments from – customers who fall behind. By updating our

communication strategy and tactics, we reduced the time required to set up a payment plan and, as a result, doubled the share of digital payment plans year-over-year" (JPMorgan Chase & Co. Annual Report, 2020, p.70).

The Commonwealth Bank of Australia provides regular updates through multiple channels, including their website, email newsletters, and social media. They shared information about the economic impact of the pandemic, government relief measures, and the bank's financial assistance programs. This transparency helped reassure customers and guide them through uncertain times. In their annual report for the year 2020, they reported, "The health and safety of our people, their families, our customers and communities has been paramount. The board has encouraged and supported management's effort to establish frequent and transparent communication to help our people feel safe, act responsibly, and stay fully informed about the Banks's support for employees, customers and communities" (The Commonwealth Bank Annual Report, 2020 p.64).

Most CFIs shifted most of their communication to digital communication channels to enhance communication. With physical branches closed or operating at limited capacity, CFIs increased their reliance on digital communication channels to stay connected with customers. BBVA (Spain) enhanced its mobile app and online banking platforms to ensure seamless communication with customers. They introduced a chatbot that could answer frequently asked questions about COVID-19 support measures, reducing the load on call centres. Additionally, they provided video call options for more personalised financial consultations. DBS Bank in Singapore expanded its use of digital communication tools, including its banking app and social media platforms, to provide real-time updates and financial advice. They launched a dedicated COVID-19 support portal on their website, offering resources and guidance on financial planning during the pandemic. The bank also used webinars and virtual events to engage with customers and provide expert insights. In their annual reports, they noted: "Transparent, Clear and Responsible Communication: a lever to improve financial health Transparency, clearness and responsibility (herein after TCR) are three principles which BBVA systematically integrates into the design and implementation of the main solutions, deliverables and experiences for customers in order to help them make the best decisions for themselves and thus take care of their financial health. The objective pursued is, as well as helping customers make good life decisions, to maintain and increase their confidence in the Bank and increase their recommendation rates. Three work lines are developed to turn these principles

into reality: Implementing the TCR principles in new digital solutions through the participation of TCR experts in the conceptualization and design of these solutions, especially in massive impact digital solutions for retail customers. Incorporating the TCR principles into the creation and maintenance of key content for customers in terms of product sheets, contracts, sales scripts, responses to claim letters, communication regarding COVID-19, etc. Awareness-raising and training on TCR throughout the Group, through a virtual community, workshops and online activities, and a virtual community with more than 24,000 training activities since 2014 (7,827 in 2020). In 2020, a new course about financial health has been launched for all the employees of the Group". (BBVA Annual Report, 2020 p.33)

Some CFIs use personalized communication to address individual customer needs and concerns during the pandemic and enhance communication effectiveness. For example, NatWest Group (United Kingdom) utilized customer data to personalize communication, sending targeted messages based on customer segments and their specific needs. For instance, they sent tailored emails to small business owners outlining government support schemes and how to apply for them. Through dedicated phone lines, they also provided personalized financial advice to vulnerable customers, such as older people. The RBC (Royal Bank of Canada) employed data analytics to understand customer behaviour and preferences, enabling them to send relevant and personalized communications. They provided customized financial advice via their MyAdvisor platform, which allowed customers to have virtual meetings with financial advisors. This approach helped RBC maintain strong customer relationships despite the physical distancing measures. In their integrated annual reports for the year 2020, they reported "NatWest Group ensures colleagues have a common awareness of the financial and economic factors affecting its performance through quarterly 'Results Explained' communications and Workplace Live events with the Group Chief Executive Officer and Chief Financial Officer. ….. The primary audit engagement team interacted regularly with the component audit teams where appropriate throughout the course of the audit, which included holding planning meetings, maintaining regular communications on the status of the audits, reviewing key working papers and taking responsibility for the scope and direction of the audit process. (NatWest Group Annual Report, 2020, p. 78, 82). The

Effective internal communication was essential for CFIs to support their employees, ensure their well-being, and maintain productivity during remote work transitions. Wells Fargo (United States)

prioritised internal communication to keep employees informed and engaged. They launched a series of virtual town hall meetings where senior executives addressed employee concerns, provided updates on the company's response to the pandemic, and shared mental health and well-being resources. They also created a dedicated COVID-19 intranet portal with information on health guidelines, remote work tips, and company policies. ING Group (Netherlands) implemented a comprehensive internal communication strategy to support their employees. They used internal newsletters, video messages from leadership, and virtual Q&A sessions to keep employees connected and informed. Additionally, they offered online training programs to help employees adapt to new working methods and maintain their professional development during the pandemic. They noted in their annual integrated report for 2020 “In an effort to mitigate the risks associated with a transition away from LIBOR, our LIBOR Transition Office (LTO) has undertaken initiatives to: (i) develop more robust fallback language and disclosures related to the LIBOR transition, (ii) develop a plan to seek to amend legacy contracts to reference such fallback language or alternative reference rates, (iii) launch and enhance systems to support new products, including mortgages, commercial loans, securities and derivatives linked to the Secured Overnight Financing Rate and other alternative reference rates, (iv) develop and evaluate internal guidance, policies and procedures focused on the transition away from LIBOR to alternative reference rate products, and (v) prepare and disseminate internal and external communications regarding the LIBOR transition. (Well Fargo Annual Reports, 2020 p.35)

Effective communication was also critical in enabling many CFIs to implement their community engagement and corporate social responsibility (CSR) to communicate their CSR efforts and community support initiatives to reinforce their commitment to societal well-being during the crisis. Santander (Spain), for example, launched several community support initiatives and effectively communicated these efforts through press releases, social media, and their website. They donated millions of euros to COVID-19 research and healthcare support and provided financial assistance to vulnerable communities. Their transparent communication about these initiatives helped build trust and demonstrate their social responsibility. They reported “We launched communication campaigns with webinars, online consultations and new helplines. We also offered support to managers through a change experience framework, which they could draw on to outline their employees' journey. …. In 2020, our Mexico team's Línea Ética (ethical channel) added a COVID-19 category for employees to report violations of internal health protocols,

hygiene measures and potential infections. This was driven by a strong communications campaign, timely follow-ups on filed complaints, action plans and disciplinary measures….. We aim to align our interests with our shareholders, creating long-term value and maintaining their trust and the trust of broader society. We provide shareholders and investors with information that meets their expectations and upholds our values and corporate culture. We communicate with them continually, making sure their opinions are taken into account by the Board." (Santander Annual Report, 2020, p. 48)

In Kenya, CFIs enhanced communication approaches amidst the pandemic to help them manage the situation. CFIs such as SACCOs effectively leverage communication to enhance resilience. The pandemic necessitated a rapid shift in how these institutions operated and engaged with their members. Kimisitu Sacco maintained regular communication with its members by sending out frequent updates on their operations, financial health, and the measures taken to protect members' investments. They utilised multiple channels, including emails, their website, and social media, to provide information about branch operations, health and safety protocols, and the availability of online services. In their Annual reports for the year ended 2020, they noted "Communication is sent to all members, including all AGM documents on the website/ member portal and monthly member statements. The SACCO has acquired a CRM system to improve on answering all member inquiries on email and calls and loan processing as well as live streaming for the AGM/Twitter/Facebook and social media platforms" (p. 8)…. "We have enhanced information sharing in relation to changes in market" (Kimisitu Sacco Annual Report, 2020, p. 30).

Sheria SACCO focused on member support by providing financial relief options like loan restructuring and payment holidays. They effectively communicated these options through text messages, social media, and their website. Additionally, Stima SACCO engaged in community support by donating to COVID-19 relief efforts, which they communicated to their members to highlight their commitment to the community. As noted in their annual report, they indicated that effective communication was key in maintaining the members' trust amidst the uncertainties of the pandemic. They reported "The Society adopted virtual education during the year as a way of interacting with members. Various stations were covered at minimal cost, thus proving to be an effective medium of reaching to members. Those who logged in for the sessions expressed their appreciation while those unable had reservations. Challenges encountered should be addressed in

future for the good of all and members should be encouraged to embrace the new normal." (Sheria Sacco Annual Report, 2020 p.21)

In summary, effective communication was a critical component of CFIs' strategies to navigate the challenges of the COVID-19 pandemic. By maintaining transparency, enhancing digital communication channels, personalising messages, supporting employees, and engaging in community initiatives, CFIs were able to sustain operations, reassure stakeholders, and emerge more resilient. These examples demonstrate how proactive and adaptive communication strategies can play a pivotal role in crisis management for financial institutions.

6.6.5 Innovation

Innovation refers to implementing new ideas, creating dynamic products, or improving existing services. It involves a departure from traditional ways of thinking to adopt more effective, efficient or creative approaches which help meet the customers' demands. In the business context, innovation can mean developing new products, services, processes, or business models that significantly enhance value for customers and stakeholders. Cooperatives need various types of innovation to remain in a successful business. Among the most notable classes that are indispensable for CFIs include innovation in human resources, innovation in products and services, innovation of increasing membership, innovation in technology adoption and innovation in marketing (Lewis & Conaty, 2012).

Innovation proved to be a critical resilience factor for Cooperative Financial Institutions (CFIs) during the COVID-19 pandemic across the globe. By rapidly adopting new technologies, business models, and approaches, many CFIs could continue operations, support their members, and maintain financial stability in the face of unprecedented challenges. For instance, Innovation through digitization is an indispensable digital strategy, as noted by Develtere and Papoutsi (2021). "Cooperators noted how digitalization has become a fundamental element in their everyday work and the tension and stress that this has brought to different members. Teleworking has become a fundamental tool. There has been previous discussion of the Industrial Revolution 4.0 and how to reach that point, but the pandemic brought it closer and has accelerated an ongoing transition. Key examples of innovative digital responses were also shared. Cooperatives have been very creative in using new technologies to connect with staff, with members and the outside world. Meetings of Boards of Directors or staff meetings were conducted through WhatsApp sessions. Cooperatives

reached out to members and carried out additional work with webinars or radio shows. One Italian network of tourism cooperatives, the Association of Responsible Tourism, launched an original campaign during this period of zero tourism. With the campaign, labelled 'Turisti Solidali', virtual trips were organized to offer a valuable activity to the cooperatives' staff, to entertain their members and the public at large, to involve partners in other places and other countries, and to generate some income for their cooperative partners in over 20 Least Developed Countries (LDCs). (Develtere & Papoutsi, 2021, p. 3)

Desjardins Group, for example, one of North America's largest cooperative financial groups, leveraged innovation to continue providing services to its members during the pandemic. They quickly introduced new digital tools, such as enhanced mobile banking features and virtual financial advisor services, to ensure their members could access services without visiting branches. Desjardins also developed innovative financial relief programs, including emergency loans and deferred loan repayment options, to help members cope with financial hardships. Their proactive use of technology and tailored financial products significantly mitigated the impact of the pandemic on their members and operations. In one of their reports, they indicated that "To keep things running during the pandemic, 40,639 employees—more than 80% of our workforce— made the switch to working from home. We followed public health recommendations and enforced strict information security standards. We owe the success of this major shift of people and technology to our employees. We also wanted to be sure our employees were properly and comfortably equipped for telework, so we created an employee allowance for ergonomic and IT equipment and accessories. Keeping people safe on site, nothing was overlooked at our sites to make sure we could keep our staff, members and clients safe. We installed plexiglass barriers and hand sanitizing stations, posted physical distancing signs, required masks, and more. To limit the spread of COVID-19, we temporarily closed some locations and reduced in-person business hours and raising the contactless payment limit. We were the first financial institution in Canada to raise the contactless payment limit for our debit and credit cards. We increased the limit from $100 to $250 for all purchases, meaning more of our members and clients could pay touch-free. Speeding up automation. We reduced the need for in-person visits by automating a number of procedures for our members and clients (using online forms for things like direct deposit registration) (Desjardins Group, 2020, p. 211)

Banco Credicoop, a large cooperative bank in Argentina, implemented innovative measures to support its members during the pandemic. They expanded their digital banking infrastructure, allowing members to perform transactions, access loans, and receive financial advice online. Additionally, Banco Credicoop launched financial literacy programs and virtual workshops to help members manage their finances during the crisis. These innovations ensured continued member engagement and financial stability despite the challenging economic environment. In their auditing reports, it was noted "Technology is critical for the evolution of the Group's core businesses and significant investments have been made in systems and the IT environment, including cyber security. The Group has technological infrastructure in place to support its business activities, as well as ongoing plans for the improvement and maintenance of the access management and changes in the respective systems and applications, the development of new programs, automated controls and automated components in the relevant business processes. Controls to authorize, restrict, and cancel access to the technology environment and program changes are fundamental for mitigating the potential risk of fraud or error based on the misuse or improper change in the systems of the Group, thus ensuring the integrity of the financial information and accounting records…. The Group has an information technology structure, which comprises more than one technology environment with different processes and segregated controls; furthermore, it is currently in a continuous digital transformation" (Credicorp Ltd. and Subsidiaries Consolidated Financial Statements as of December 31, 2020, and 2019, pp. 3, 4).

Many CFIs in East Africa, including those in Uganda and Tanzania, adopted innovative approaches to remain resilient during the pandemic. For instance, they stepped up mobile banking solutions to facilitate remote transactions and loan applications. CISs also leveraged partnerships with FinTech companies to provide digital financial services and expand their reach to underserved communities. These innovations helped CFIs maintain operations and support their members during the lockdowns and economic disruptions caused by COVID-19. The Sacco Supervision Report indicated "The usage of ICT in the provisional of financial services will continue being the main transformative competitive edge of financial institutions which will be able to weather the storm of a highly competitive financial services sector driven mainly by digital services. SACCOs must thus embrace digital and online access to their main services including savings mobilizations, application for and access to credit facilities, loan repayments, transactional inquiries among others. Whereas many SACCOs are already in the digital and online space of financial services

delivery through mobile money platforms, online and internet platforms, ATMs, and SACCO agencies, a lot more needs to be done, particularly regarding efficiencies and turn-around times for their digital services" (The Sacco Supervision Annual Report, 2021, pp 78, 79).

Locally, Kenya Women Microfinance Bank (KWFT) used innovation to support its members during the pandemic. KWFT accelerated its digital transformation by enhancing its mobile banking platform and introducing online loan application processes. The bank also developed tailored financial products, such as emergency loans and flexible repayment plans, to assist members affected by the pandemic. By leveraging digital solutions and innovative financial products, KWFT was able to provide uninterrupted services and financial support to its members. Mwalimu National SACCO demonstrated resilience through innovation during COVID-19. They introduced various digital services, including mobile banking and online loan applications, to ensure members could access financial services remotely. Ushuru SACCO also implemented virtual training sessions for members on financial management and digital literacy, helping them navigate the economic challenges instigated by the pandemic. These innovations enabled Ushuru SACCO to maintain operational stability and support its members effectively. This is reported in their annual report for the year ending 2020, as captured verbatim below. They noted "To support all KWFT Staff with skills development as well as support staff training activities at the Institution during the COVID-19 [sic] pandemic period (where carrying out physical staff training was a challenge), KWFT, through Partnership, developed an E-Learning [sic] App to support staff training. KWFT provides deep penetration into rural and peri-urban areas of Kenya and enjoys a unique status in financial services as the only financial Institution to focus solely on women clients. It has created a portfolio of competitive products and services focused on meeting the needs of women and their families." (Kenya Women Microfinance Bank, 2021, p 1)

While CFIs in Kenya showed some progress in IT, product and service innovation, and governance, there was still considerable room for improvement. The pandemic highlighted the need for accelerated digital transformation, diversified product offerings, and robust governance structures. Continued efforts in these areas are crucial for the resilience and competitiveness of CFIs in the face of economic disruptions. External challenges such as Limited Digital Infrastructure were and remain predominant in Kenya. Many CFIs in Kenya, especially smaller CFIs, have historically relied on manual processes and lacked robust digital banking infrastructure.

Consequently, many have registered slow digital transformation, slowing the transition to digital platforms and affecting their ability to serve members efficiently during disruptions.

Evidence gathered from secondary data shows that several CFIs had to accept the bitter pill and face the situation amidst many limitations. The evidence shows that such CFIs were not just confined to Kenya but in other parts of the world as well. For example, India's Urban Cooperative Banks (UCBs) struggled significantly during the pandemic. Many UCBs were not well-equipped with digital banking solutions, which hampered their ability to provide seamless online services. The lack of advanced digital infrastructure led to difficulties reaching customers during lockdowns, resulting in decreased customer engagement and financial transactions. Saraswat Bank, the largest Urban Cooperative Bank in India, had to quickly adapt to the changing environment by enhancing its digital services to remain competitive and serve its customers effectively. However, many smaller UCBs could not keep pace and faced significant operational challenges. “Your bank has achieved growth in deposits, owned Funds, Investments, Working Capital and Net Profit. However, there was a marginal decrease in Advances on account of steep fall in economic activities on account of lockdown. Although the lockdown was relaxed in a phase manner during min-financial year, lack of availability of workers resulted in lesser than expected improvement in economic activities, resulting in minimal off-take of credit.” (The Goa Urban Cooperative Bank Ltd, Annual Reports, 2020-2021, p 32).

In the Philippines, many cooperative banks and credit unions faced challenges due to limited digital banking capabilities (Kim & Ravanera, 2020). With strict lockdowns in place, members found it difficult to access financial services, and the lack of online platforms for loans, deposits, and other transactions exacerbated the situation. This highlighted the need for these institutions to adopt more robust digital solutions. Numerous local cooperative banks and credit unions scrambled to implement digital solutions during the pandemic. This situation highlighted the critical need for these institutions to invest in robust online banking platforms and mobile applications to ensure continuity of services in future crises. Oro Integrated Cooperative provided disinfecting equipment to local communities yet faced difficulties maintaining regular operations and ensuring member services. Mediatrix Multi-Purpose Cooperative donated PPE but experienced operational setbacks and had to implement flexible working schedules and partial openings to adaptbecause they were slow on innovation (CUInsight). A report from secondary data

noted, “When a cooperative bank was in distress, as in the case of the Cooperative Bank of Misamis Occidental, which had been put into receivership, OIC readily offered a helping hand in coordination with other cooperatives, as together they worked for its rehabilitation, the first of its kind in the whole country. Indeed, OIC is a kindred spirit to those in need. OIC has showcased what cooperativism should be, which a vehicle of social transformation is. It has become a feather in the cap of the cooperative movement not only locally but also nationally and even globally.” (Republic of the Philippines Cooperative Development Authority, June 2020, p 55)

Many credit unions in the United States were not prepared for the sudden shift to digital-only operations. Smaller credit unions, in particular, faced issues with providing online banking services, mobile banking apps, and digital loan processing. The lack of innovation in these areas led to operational disruptions and member dissatisfaction during the pandemic. Spanish cooperative banks within the Confederación Española de Cajas de Ahorros (CECA) experienced difficulties from limited digital transformation. The pandemic highlighted the reliance on traditional banking methods, and many members faced challenges accessing financial services remotely. The slow pace of digital adoption hindered their ability to serve customers effectively during lockdowns. Canadian credit unions, especially those in rural areas, struggled with the digital divide during the pandemic. Limited access to high-speed internet and advanced digital banking platforms made it difficult for these institutions to provide uninterrupted services. The reliance on in-person transactions and manual processes became a significant hurdle in maintaining operations during lockdown. Stan Yu (2022), in his study of the Top Co-op Issues 2021, noted: “The 2021 survey found that co-operative leaders put the need for access to capital/financing as their second biggest challenge (up from third in 2020 and garnering 17% of the overall vote). They increasingly need this financing to digitize their businesses given shifting shopping patterns coming out of COVID-19, but also for more traditional investments like buildings, equipment, and renovations. As one respondent summarized, “We must remain competitive. Consumers will no longer be loyal because you are a co-op or you are local. You must be digital, competitive and provide high-quality products and services. The ability to fund this development through retained earnings is going to be more difficult.” Many co-operative leaders said that financial institutions do not understand the co-operative model and, as a result, struggle to assess value based on formulas developed with non-co-operatives in mind. This, in turn, leads to higher interest costs for co-operatives relative to their competitors. Some respondents pointed to a related problem, namely the difficulty lenders

have in understanding the concept that a co-operative might have an increase in sales but not an increase in profit and retained earnings because of low prices or patronage returns. Other respondents added that some financial institutions view co-operatives as non-profit organizations. As a result, co-operatives must work hard to demonstrate their ability to generate revenue to pay back their loans." (Yu, 2022, p 91)

Similar observations were made in Brazil, where many cooperatives are facing operational challenges due to minimal digital infrastructure. Many cooperative members had to visit branches physically for transactions, which became problematic during the pandemic. The lack of online banking and mobile solutions limited their ability to support members effectively during this period. Australia's mutual banks and credit unions also encountered difficulties due to their limited digital offerings; the sudden need for remote banking services during lockdowns exposed gaps in their digital capabilities. Institutions that had not invested in online banking, mobile apps, and digital customer support found it challenging to meet member needs.

Afya SACCO, primarily serving healthcare workers, lacked an internal robust IT infrastructure to support digital transactions and remote services. The SACCO's product offerings were not adaptable to the increasingly changing needs of its members during the pandemic, limiting financial support options. Subsequently, the lack of digital service options made it difficult for members to access their funds and obtain necessary financial services during lockdowns. The rigid product offerings failed to address the immediate financial pressures faced by members, particularly those on the frontlines of the healthcare response to COVID-19.

Mhasibu SACCO also registered slow technology adoption for service, products and governance. Mhasibu SACCO, which caters to professionals in the accounting sector, was slow to adopt modern digital banking solutions, affecting service delivery during the pandemic. The SACCO struggled to maintain effective communication and engagement with its members due to inadequate digital communication platforms. The delay in transitioning to digital platforms resulted in operational disruptions and delays in service delivery. Members were often unaware of the support measures available to them, leading to increased financial stress and dissatisfaction. Ushirika SACCO heavily relied on traditional banking methods and had not significantly invested in digital infrastructure. The SACCO faced governance challenges that impeded its ability to

implement necessary changes during the pandemic swiftly. The reliance on traditional banking methods led to service disruptions when physical branches were closed or operated at reduced capacity. Governance issues prevented the SACCO from effectively managing the crisis and supporting its members adequately. “Social networks play a critical role in determining the success of cooperative sectors. The Kenyan Cooperative sector is robust and multi-tiered, but many cooperatives feel disconnected from the broader sector and struggle to find service providers and resources specialized to cooperatives. Cooperatives that form a network of regional or national clusters can develop innovative solutions to challenges, provide effective support mechanisms and expand client bases for their members. In 2021, Global Communities conducted a study to evaluate the successes and challenges of Ushirika Hub, a Social Systems Network Analysis (SSNA) initiated in 2019. The current study leveraged on the baseline to explore ways in which cooperators and other stakeholders want to use a social network and identifies opportunities for improvement. Data was collected in 7 counties through 170 surveys, 11 key informant interviews, and 1 “meaning-making session” (dissemination and validation workshop). The study results indicated that most users struggled to use Ushirika Hub but still desired an accessible virtual network to better connect, find service providers, and sell their products and services”. (9th Technical committee of the Africa Ministerial Cooperative Conference, 2022, p 17).

Nation DT SACCO had minimal digital banking capabilities. This made it difficult to provide continuous services during lockdowns and mobility restrictions. The SACCO had a limited range of financial products and did not innovate quickly to offer new services that could help members cope with the economic impact of the pandemic. Members faced significant challenges accessing their funds and obtaining loans during the pandemic. The SACCO’s inability to adapt and offer relevant financial solutions resulted in financial strain for many of its members. Chai SACCO experienced governance challenges, which were compounded by the pandemic. The lack of effective governance structures made making swift and necessary changes difficult. The SACCO had been slow to adopt modern banking technologies, affecting its ability to shift to remote service delivery during the pandemic. They reported, “System Upgrade: The current system has various challenges that need to be managed as the system upgrade is fast-tracked. Management is on track in ensuring that this is scheduled for implementation in the planned phase.” (Nation DT Sacco, Annual Report and Financial Statements, 2023, p 41).

These examples highlight a broader pattern where CFIs that were slow to innovate in terms of IT infrastructure, product offerings, and governance faced significant operational challenges during the COVID-19 pandemic. This underscores the need for ongoing investment in digital transformation and adaptive product development to enhance resilience against future economic disruptions.

In a nutshell, innovation has been a key factor in the resilience of Cooperative Financial Institutions during the COVID-19 pandemic. By adopting new technologies, creating innovative financial products, and implementing creative solutions to meet member needs, CFIs globally, regionally, and locally in Kenya were able to navigate the crisis effectively. These examples underscore the importance of innovation in enhancing the adaptability and sustainability of financial institutions in the face of unprecedented challenges.

6.6.6 Business Continuity Units

A Business Continuity Unit (BCU) is an Organization's dedicated team or department responsible for developing, implementing, and managing the business continuity plan (BCP). The primary goal of a BCU is to ensure that critical business functions can continue during and after a disruption, such as natural disasters, cyber-attacks, or pandemics. A Business Continuity Plan (BCP) is a comprehensive stratagem outlining procedures and protocols to ensure that essential business functions can continue or resume quickly during a disruption. The primary goal of a BCP is to minimise downtime, maintain critical operations, and mitigate the impact of unexpected events such as natural disasters, cyber-attacks, pandemics, or other emergencies. Effective BCPs are characterised by comprehensive risk assessment and business impact analysis, response and recovery strategies, resource management, communication plan, testing training and documentation and maintenance (Fani & Subriadi, 2019).

The role of a business is, therefore, confined to the development and implementation of business continuity plans. To achieve these, the Business Continuity Unit (BCU) must undertake risk assessment and management by identifying potential risks and threats the Organization faces, assessing the likelihood and impacts of the risks, and developing strategies to mitigate the identified risks. The unit is also responsible for business impact analysis (BIA), which determines the potential impacts of disruptions on business operations and establishes recovery time

objectives (RTO) and recovery point objectives (RPO) for each critical function. After identifying and characterising the potential impacts, it is incumbent for BCU to develop an elaborate plan by outlining detailed procedures and the resources needed to maintain, restore or improve business operations. Additionally, BCU should ensure that the plan takes care of all the critical dimensions and dynamics of the organization, including human resources, ICT, facilities, and infrastructure (Muflihah & Subriadi, 2018).

After developing the BCP, the BCU must proceed to implement and coordinate by ensuring that the BCP is effectively communicated and understood across the Organization and coordinate with different departments to implement the BCP. Establishing a crisis management team and clearly defining their roles and responsibilities is essential. This might require training and awareness of all the departments and stakeholders. Regular training sessions and drills should be conducted so the staff can familiarise themselves with the BCP and raise awareness about the significance of business continuity. It is also imperative to test the BCP regularly through simulations and exercises to ensure its effectiveness, and the BCP should be reviewed and updated periodically to reflect changes in the business environment or Organizational structure (Fani & Subriadi, 2019).

An effective BCU minimises downtime during disruptions by ensuring that critical operations continue with minimal interruption. Secondly, effective business continuity management helps maintain customer trust and protect the Organization's reputation by demonstrating resilience and preparedness. Thirdly, many industries are subject to regulations that require business continuity planning (Muflihah & Subriadi, 2018). An effective BCU ensures that the Organization complies with these legal and regulatory requirements. For example, during the COVID-19 pandemic, CFIs, which had BCU, quickly adhered to the WHO and Ministries of Health recommendations such as social distancing, regular hand washing and sanitization, and wearing of PPEs to help curb the spread of the virus. Additionally, reducing the impact of disruptions helps maintain financial stability by preventing significant losses and ensuring continued revenue generation. A correctly implemented BCP prioritizes employee safety and provides clear guidelines on how to act during emergencies, such as in the case of COVID-19.

In the UK, Hong Kong and Shanghai Banking Corporation (HSBC), which happens to be one of the largest banking and financial services Organizations, has a dedicated Business Continuity Unit

to manage its global operations. The BCU at HSBC ensures that the bank can maintain critical functions during disruptions, such as cyber-attacks or natural disasters. The unit conducts regular drills, updates the BCP, and coordinates response efforts across different regions to ensure seamless operation. Australian Mutual Bank is a member-owned financial institution that provides banking services to individuals and businesses. During the COVID-19 pandemic, the bank activated its Business Continuity Plan (BCP) to ensure uninterrupted services. They enhanced their digital banking platforms to accommodate the increased demand for online services, ensuring that members could access their accounts and manage their finances remotely. The swiftness in adaptation of digital services and the robust BCU ensured minimal disruption in banking operations, maintaining member confidence and service delivery. Hongkong and Shanghai Banking Corporation reported "The group operates a wide-ranging stress testing programme that is a key part of our risk management and capital and liquidity planning. Stress testing provides management with key insights into the impact of severely adverse events on the group and provides confidence to regulators on the group's financial stability. Our stress testing programme assesses our capital and liquidity strength through a rigorous examination of our resilience to external shocks. As well as undertaking regulatory-driven stress tests, we conduct our own internal stress tests, in order to understand the nature and level of all material risks, quantify the impact of such risks and develop plausible business as usual mitigating actions. Many of our regulators – including the Hong Kong Monetary Authority ('HKMA') – use stress testing as a prudential regulatory tool, and the group has focused significant governance and resources to meet their requirements" (Hongkong and Shanghai Banking Corporation (HSBC), Annual Report and Accounts, 2020, p 102).

In Canada, Vancity Credit Union, one of the largest credit unions serving members in Vancouver and beyond, implemented its Business Continuity Plan, focusing on remote work for employees and enhanced digital services for members. The credit union also provided financial relief programs, such as loan deferrals and emergency loans, to support members impacted by the pandemic. Vancity's proactivity enabled it to continue operating efficiently while supporting its members through financial hardship, reinforcing its commitment to community support. In the US, Navy Federal Credit Union activated its BCP, which included remote working arrangements for staff, enhanced online and mobile banking services, and increased cyber security measures. They also offered financial assistance programs for members facing economic challenges due to

COVID-19. These measures ensured the continuity of services without compromising security or member satisfaction, demonstrating resilience during a crisis. In their annual reports for 2020, they reported “When planning for 2020, we had recognized that we needed to be bolder, to move at a swift pace to modernize our business and to place an emphasis on climate justice. Our focus going into 2020 was to further embed our purpose in all we do, improve our members’ experience, including digital products and services, and find efficiencies in internal functions. Then came the COVID-19 pandemic. It required us to mobilize our resources in new ways in support of our members. It also reinforced our mission to help communities thrive and prosper, especially in times of crisis. What we learned in that process helped shape our new plans. Responsible recovery from the pandemic and planning to meet the challenges of the climate crisis guided development of our 2021–2023 plan. We will focus on building community resilience by strengthening local economies and addressing systemic inequities to support a just climate transition. We plan to simultaneously grow our positive impact and our financial bottom line (Vancity Credit Union, Annual Report, 2020, p 128).

In Africa, Capitec Bank of South Africa implemented a comprehensive Business Continuity Plan (BCP) focused on digital transformation, enabling clients to conduct banking transactions through mobile apps and online platforms. They also established a support system for employees to work from home effectively. Capitec's strong focus on digital banking and employee support ensured seamless operations during the pandemic, allowing them to maintain service delivery and customer engagement. Standard Bank, one of Africa's largest financial institutions, has a robust Business Continuity Unit (BCU) that oversees its business continuity planning. The BCU focuses on risk assessment, impact analysis, and the development of strategies to ensure that critical banking services remain operational during crises. During the COVID-19 pandemic, the BCU played a vital role in transitioning to remote work and ensuring that digital banking services were uninterrupted. Every year, the EXCO runs strategic workshops to review our objectives with input from a wide range of employees. We then define our medium to long-term intent. Once we have set our objectives we run a collaborative business planning and budgeting process. We ask questions such as “how will we fund our plan” and “what are the initiatives that we need to achieve our objectives” per divisional area. We measure the agreed plans continuously through integrated KPIs for teams and individuals, linking performance to remuneration. This ensures that we are all

aligned, and everyone knows exactly what is expected. (Capitech Integrated Annual Report, 2020, p 67).

In Kenya, various CFIs activated their BCUs. Kenya Police SACCO leveraged its BCU to transition to remote working arrangements and enhance its digital platforms, enabling members to access services online. They also introduced financial relief programs, such as loan restructuring and moratoriums, to support members affected by the pandemic. The proactive measures taken by Kenya Police SACCO ensured continuous service delivery and member support, helping to mitigate the financial impact of COVID-19 on its members. Stima SACCO also activated its BCP to facilitate remote working for staff and enhance digital service delivery. They also offered financial assistance, including loan rescheduling and emergency loans, to help members cope with the economic challenges brought by the pandemic. The SACCO's ability to quickly adapt to remote operations and provide essential financial support to members demonstrated the effectiveness of its BCU, ensuring operational resilience and member satisfaction. In their report, they noted: "The base case represents a most likely outcome and is aligned with information used by the SACCO for other purposes such as strategic planning and budgeting. The other scenarios represent more optimistic and more pessimistic outcomes. Periodically, the SACCO carries out stress testing of more extreme shocks to calibrate its determination of these other representative scenarios." (Stima Sacco Annual Report, 2023, p 11).

Equity Bank in Kenya has an active Business Continuity Unit responsible for ensuring the bank's resilience against disruptions. The BCU at Equity Bank developed and implemented comprehensive plans to handle various crises, including the COVID-19 pandemic. The unit facilitated remote work for employees, enhanced digital banking services, and ensured continuous customer support, demonstrating the bank's preparedness and adaptability. In summary, a Business Continuity Unit (BCU) is essential for Organizations to effectively prepare for, respond to, and recover from disruptions. By managing the business continuity plan, conducting regular training, and ensuring continuous improvement, the BCU plays a critical role in maintaining the resilience and stability of the Organization.

However, the pandemic found that most CFIs in Kenya had neither BCU nor BCP. Many Cooperative Financial Institutions (CFIs) in Kenya faced significant challenges during COVID-19

due to a lack of Business Continuity Units (BCUs) and Business Continuity Plans (BCPs). The pandemic exposed many Organizations' vulnerabilities worldwide, and Kenya's CFIs were no exception. While some institutions were able to adapt and implement measures to mitigate the impact, many struggled due to inadequate preparedness.

Many CFIs in Kenya found it challenging to transition to remote operations due to a lack of digital infrastructure and preparedness. For instance, smaller CFIs that relied heavily on physical interactions could not process transactions efficiently during lockdowns. The pandemic led to increased loan defaults as members, predominantly in informal sectors, lost their income. Without a BCP, CFIs like Harambee SACCO faced liquidity issues as they struggled to collect repayments while still needing to disburse emergency loans to distressed members. CFIs such as the Mwalimu National SACCO had difficulty offering consistent support and communication to their members. The lack of a robust communication plan resulted in members being unaware of available relief measures, leading to frustration and mistrust from the members. Furthermore, Many CFIs did not have the technological infrastructure to support digital banking and online services. For example, the Kenya Police SACCO faced challenges in quickly scaling up their online services, which hampered their ability to serve members remotely. As the noted in their report "Social networks play a critical role in determining the success of cooperative sectors. The Kenyan Cooperative sector is robust and multi-tiered, but many cooperatives feel disconnected from the broader sector and struggle to find service providers and resources specialized to cooperatives. Cooperatives that form a network of regional or national clusters can develop innovative solutions to challenges, provide effective support mechanisms and expand client bases for their members. In 2021, Global Communities conducted a study to evaluate the successes and challenges of Ushirika Hub, a Social Systems Network Analysis (SSNA) initiated in 2019. The current study leveraged on the baseline to explore ways in which cooperators and other stakeholders want to use a social network and identifies opportunities for improvement. Data was collected in 7 counties through 170 surveys, 11 key informant interviews, and 1 "meaning making session" (dissemination and validation workshop). The results of the study indicated that most users struggled to use Ushirika Hub but still desired an accessible virtual network to better connect, find service providers, and sell their products and services. (9th Technical Committee of the Africa Ministerial Cooperative Conference, 2022, p 7).

Studies of CFIs in Kenya during COVID-19, such as Harambee SACCO, Mwalimu SACCO, and Stima SACCO, show that the pandemic found them unprepared. Harambee Sacco, for example, faced liquidity issues due to increased loan defaults, decreased deposits and increased withdrawals. The lack of a pre-existing BCP meant they were unprepared for the sudden economic shock. The SACCO had to hastily implement measures such as loan restructuring and negotiating with creditors to maintain operations. The lack of a structured continuity plan led to inefficiencies and delayed responses to members' needs. Mwalimu National SACCO struggled with communication and operational continuity. Many members were unaware of relief measures due to ineffective communication strategies.

Consequently, they had to develop ad-hoc solutions to improve member communication and support. However, the absence of a formal BCP led to inconsistent service delivery and member dissatisfaction. Stima SACCO faced issues similar to other SACCOs, such as disruptions in service delivery and financial stress. They were relatively better prepared and managed to implement a digital transformation quickly. However, their initial lack of a comprehensive BCP meant the transition was slow and reactive rather than proactive, leading to some operational hiccups.

The COVID-19 pandemic highlighted the importance of resilience and preparedness for CFIs in Kenya. While some institutions managed to adapt, many struggled due to the absence of structured BCUs and BCPs. The experiences during the pandemic have hopefully underscored the need for these institutions to develop and implement comprehensive continuity plans to navigate future crises better.

6.6.7 Leveraging the Cooperative Principle of Solidarity

The principle of solidarity is a foundational concept within cooperative movements, emphasising mutual support, shared responsibility, and collective action. Solidarity within cooperatives refers to the commitment of members to support one another, share resources, and work collectively towards common goals. It is rooted in the belief that cooperative efforts can achieve more significant benefits for all members compared to individual efforts. The principle of solidarity has historical roots in the cooperative movements of the 19th century (Novkovic, 2006). Cooperatives emerged as a response to industrialisation, aiming to protect workers and small producers from economic exploitation by pooling resources and sharing risks.

In light of the principle of solidarity, cooperatives are expected to provide mutual support. Members of cooperatives should consistently provide mutual aid and support, particularly in times of need, as was the case during COVID-19. This can include financial assistance, sharing of expertise, and joint problem-solving. The principle also provides for shared responsibility. In other words, Cooperative members collectively bear the responsibility for the success and sustainability of their enterprise. This shared responsibility fosters a sense of ownership and accountability. Lastly, the principle encourages collective action. Solidarity encourages collective action to achieve common goals, such as negotiating better terms with suppliers, accessing markets, or advocating for policy changes (Novkovic, 2006).

The main rationales of the principle of solidarity include Economic benefits, social cohesion, and resilience. Solidarity helps to distribute economic benefits more equitably among members. By working together, cooperatives can achieve economies of scale, reduce costs, and increase bargaining power, leading to improved financial outcomes for all members. Additionally, the principle of solidarity strengthens social bonds among cooperative members. It fosters a sense of community, trust, and mutual respect, which are crucial for the cooperative's long-term viability. Observably, cooperatives based on solidarity are often more resilient to economic shocks and crises. The collective support system allows members to pool resources and share risks, making the cooperative more adaptable and sustainable in the face of challenges (Oczkowski et al., 2013). In their recommendations, Develtere and Papoutsi (2021) underscored the necessity of effective solidarity, noting "Promote international cooperation between cooperatives in line with the new international development cooperation paradigm that stresses the importance of win-win-win arrangements for mutual benefit of all stakeholders. …….. Promote partnerships with global and regional networks of cooperatives and enable synergies with CSO actors, including women's organizations and youth to ensure collective action." (Develtere & Papoutsi, 2021, pp 10-11).

Evidence from secondary data demonstrates that cooperatives aligned themselves to the principle of solidarity in countries where cooperatives (CFIs) did not suffer as much as CFIs, which operated in isolation. In Spain, the Mondragon Corporation adapted its operations to ensure the well-being of its members. During the pandemic, Mondragon restructured its business strategies to protect jobs and maintain economic stability. The corporation emphasised shared responsibility by engaging all members in decision-making processes regarding work schedules, safety measures,

and financial adjustments. During the period, many credit unions in the USA exemplified solidarity by providing financial assistance to their members. They offered loan deferments, reduced interest rates, and emergency loans to help members cope with the economic fallout. For instance, the National Association of Federally-Insured Credit Unions (NAFCU) reported that credit unions across the country quickly mobilised resources to support their members through flexible financial products.

Agricultural cooperatives in India, such as Amul, played a significant role in supporting farmers during the pandemic. Amul ensured that the dairy supply chain remained uninterrupted, allowing farmers to continue earning an income despite market disruptions. The cooperative also engaged in advocacy efforts to secure government support for the agricultural sector, highlighting the importance of collective action. Develtere and Papoutsi (2021), in the Meeting paper "Rebuilding and realizing a resilient global society through cooperatives. In the paper for the expert group meeting on "The role of cooperatives in economic and social development: Recover better from the COVID-19 pandemic," Noted the following: "This is also what we have witnessed during the current crisis. Cooperatives have not tried to escape the swamp in splendid isolation. The principle of cooperation among cooperatives has shown its essence and its strength as it is the practical expression of the cooperative value of solidarity. Cooperatives from all over the world have shown solidarity with each other in multiple forms. For example, cooperatives involved in Fairtrade operations have activated their existing mutualistic funds or have created new solidarity funds. In May 2020, fair trade cooperatives launched the COVID-19 Producer Relief Fund. In the meantime, the Fund already supported more than 900 producers' organizations in 59 countries and as such reached out to over 540,000 farmers and workers. Another example of international cooperation amongst cooperatives is the collaboration between the Italian and Bulgarian consumer cooperatives. By working together, Coop Italia and the Central Cooperative Union of Bulgaria managed to serve and protect consumer-members and their local communities by providing much-needed key protective goods, such as disinfectants and cleaning detergents (Develtere & Papoutsi, 2021, p 39).

The 9th Technical Committee of the Africa Ministerial Cooperative Conference (2022) noted that among the major challenges faced by African CFIs operating in Isolation. The quest for business advantages escalates the situation. In their report, they noted "But DT-SACCOs on their own have

been unable to provide ATMs card or other cashless payment instruments due to lack of a central settlement framework and connectivity to any national payment system infrastructure. The foregoing has seen members of DT-SACCOs transferring their funds to commercial banking institutions, so as to access ATM card services provided by commercial banking institutions, which are connected to the national payment system infrastructure and are capable of making transactional settlements." (The Sacco Supervision Annual Report, 2020, p 15)

6.7 Chapter Summary

This chapter leveraged the results of the analysis in the previous chapter. It discussed in detail the implications of the results for each of the study's objectives. It first discussed what the demographic results could imply in the study. Secondly, it discussed the analysis results, noting that the periods before, during the pandemic and after present some distinctions and some seminaries based on aspects such as challenges, changes, average credit facilities, savings, borrowings, loan repayments and loan repayment defaults. The chapter also focused on examining the impacts of the pandemic on the resilience of the CFIs in terms of continuity, welfare of their staff, insulation of members, and financial performance, especially in credit extension, savings, borrowing, loan repayments, and defaults. In conclusion, this study established that the outbreak and spread of the COVID-19 pandemic aggravated the financial and operational challenges faced by CFIs, leading to a surge in loan defaults, reduced member savings, increased operational costs, and cash flow constraints. Additionally, lockdowns, reduced economic activity, and job losses significantly impacted the financial stability of CFIs. Increased loan defaults demonstrated the financial hardship experienced by members, while reduced member savings indicated a shift in priorities of individual members of the CFIs. Moreover, increased operational costs and cash flow constraints strained CFIs' financial resources.

The COVID-19 pandemic has had far-reaching impacts on CFIs, reshaping their operations, financial health, and strategic priorities. Cooperative financial institutions have grappled with financial strain, liquidity challenges, operational disruptions, and shifts in member behaviour, necessitating rapid adaptation and innovation. By embracing digital transformation, enhancing risk management capabilities, and fostering strategic resilience, CFIs can navigate the challenges posed by the pandemic and emerge stronger, more resilient, and better equipped to serve the needs of their members and communities in the post-pandemic era.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This chapter presents a summary of findings, conclusions and recommendations based on the study objectives. This study investigated the post-COVID-19 resilience of cooperative financial institutions in Kenya. Specifically, the study sought to a) Undertake a comparative analysis of cooperative financial institutions pre-and post-COVID-19 pandemic, b) Analyse the impact of post-COVID-19 on the resilience of cooperative financial institutions in Kenya, c) Assess the critical success factors and survival mechanisms for the cooperative financial institutions post COVID-19 in Kenya, and d) Formulate an improved resilient business model for cooperative financial institutions in Kenya during times of economic shocks and crises. This chapter, therefore, summarises the findings, conclusions and recommendations from the study and proposes areas for further research.

7.2 Summary of Findings of the Study

The demographics from the study provided a sufficient outlook on the status of CFIs' business operation model and their establishment in their wider global community of financial architecture. A total of 35 (22%) of the respondents participated in quantitative data from eleven (11) CFIs that participated as well as eleven (11) CEOs. The study found that the majority, 19 (54.29%) of the participants, had a Master's degree, and almost the same proportion, 15 (42.85%), had Bachelor's degree education qualifications. Their service duration at their stations was fairly long, with the majority, 16 (45.71%), indicating that they had served in their current station for between 5 and 10 years and 12 (34.29%) more than 10 years. The participants were distributed into various positions, with the majority, 11(31.43%), being technical officers, followed by heads of credit and heads of accounting and finance, 7(20%) in each category, heads of operations, 5(14.26%), heads of marketing, 4 (11.43%) and head of customer care, 1(2.86%).

CFIs represented in the study were regulated by SASRA, which is a body that regulates cooperative financial institutions in Kenya and conducts quality checks and controls in the day-to-day operations as per the stipulated rules and regulations. Almost all 34 (97.14%) of the CFIs had a membership of more than 500, except one (1) had a membership of between 200 and 500 members. Regarding gender composition of the membership, in most CFIs, 27

(77.14%) women formed 25% to 50% of their membership, which indicated that women were represented in CFIs as members. Most CFIs, 33 (94.29%), had been in operation for more than 20 years, while the remaining two had been in operation for between 6 and 10 years, 1(2.86%), or between 16-20 years, 1(2.86%). Top on the list of products predominantly offered to members was loans, 13 (37.14%), as a stand-alone product combined with other products and services such as savings, 10 (28.57%).

Most of the CFIs relied on members' contributions and loan interests, 8 (22.86%), members' contributions, 6 (17.14%), members' contributions, loan interests and investments, 3 (8.57%), and interest earned from loans, 3 (8.57%). A few other CFIs were additionally borrowed from banks or generated funds from commissions, transaction changers, and insurance premiums. Almost all the CFIs relied on members' contributions, 24 (68.57%), interest earned from loans, 26 (74.29%), and revenue from investments, 37.14 (37.14%).

Secondary data collected through desktop reviews showed that some CFIs trade with and invest in Kenya government treasury bonds. For example, the Cooperative Bank of Kenya acknowledges investment in interest-bearing assets, including call deposits, fixed deposits, corporate bonds, and Kenya government bonds. The Cooperative Bank of Kenya is known as the bank for CFIs. Notably, the growth in most CFIs was directly linked to investment income and growth in interest income from members' loans. Cooperative financial institutions in Kenya actively invest in property, mainly land assets, to diversify revenue streams and enhance financial stability, which is extended to members at marginal profits.

The main challenges faced by the members during the pandemic included financial constraints, 15 (42.86%), which might have been caused by pay cuts, job losses, closure of business, lockdowns and curfews, minimal accessibility of facilities, 9 (25.71%), difficulty of navigating the technology of the automated processes, 7 (17.14%), death of members, 4 (11.43%), and cyber security, 2 (5.71%). Some of the most notable changes on staff included additional staff (14.29%), Having to learn to work from home through technology, 5 (14.29%), remote working and social distancing, 4 (11.43%), increased salaries, 4 (11.43%), mandatory vaccination (11.43%), voluntary retirement/resignation/increased turnover, 3 (8.57%), increased sense of ownership, 3 (8.57%), training/capacity building, 3 (8.57%), increased health awareness, 3 (8.57%) and COVID-19 insurance, 2 (5.71%).

7.3 Conclusions of the Study

The conclusions of this study are based on the findings of the objectives and discussions of the primary and secondary data from the review of relevant documents on CFIs' resilience in Nairobi, Kenya, and globally. The respondents affirmed the need for this timely study post-COVID-19 to document the state and the lessons learnt compared to the previous season without COVID-19.

The COVID-19 pandemic entirely infiltrated the operations of CFIs and business development. The historical pandemic remains the greatest challenge to many businesses to date. While the institutions are bouncing back post-COVID-19, the economy remains stagnated, hence heavily affecting the operations of CFIs. In undertaking this study, the status of CFIs before, during, and post-COVID-19 was compared. The study findings have orchestrated the remodelling of CFIs' resilience in readiness for the occurrence of the next pandemic. The contribution to the body of knowledge from the findings of this study forms the basis for re-planning to concur the effects of pandemics in the future as well as repositioning in resource mobilisation, adopting workable technology, context-specific mechanisms to enhance continuity regardless of the pandemic or any other eventualities that may influence the operation of businesses negatively. Therefore:

1. The study established a distinctive comparison of the state of performance and operation of CFIs pre and post-COVID-19 pandemic. During and post-COVID-19, loan defaulting was extremely high due to the impact of COVID-19, which affected business operations, unemployment, and the laying off of most employees. It was noted that loan repayment was best pre-COVID-19, and CFIs recorded lower borrowing during and post-COVID-19 due to uncertainties and the new normal that affected businesses. During the same period, 9 (25.7%) of the SACCOs noted high loan repayment. During the period following the peak of COVID-19, Most, 18 (51.4%) of the SACCOs recognised that loan repayment had worsened but was currently reported to be at the peak of improvement.
2. From the study findings, the impact of post-COVID-19 on the resilience of CFIs in Kenya was reported to be unacceptably high and has continued, although the businesses are bouncing back. The average range of credit facilities offered by the CFIs during the pandemic was considered to be the dependent variable, while factors such as the age of the CFIs, size of membership, source of finance for operation, women composition of the membership, products and services, and sector of operation were not statistically

significant. The CFIs' resilience depended on the type of business and source of income. The business-oriented CFIs were extremely affected in operation, borrowings, and loan returns.

3. The study further demonstrated that critical success factors and survival mechanisms for the CFIs post-COVID-19 in Kenya were curated and incubated, and the new normal was eventually adopted in operation despite the challenges in accelerating the practice due to shocks and uncertainties, financing, new technologies utilisation and procurement. The most explored recovery strategy was strengthening loan recovery systems, 14 (40.0%) (Contracting external debt collectors, employing additional staff and setting up credit recovery departments, and listing bad debtors with the CRB), strengthening the check-off repayment system and reducing repayment, 6 (17.14%), introduction of new products and services, 6 (17.14%), and expansion on investments, 2 (5.71%). However, in the construction, education, electricity, gas, steam and air conditioning supply, human health and social work activities, information and communication, other service activities, tourism and hospitality, and transportation and storage sectors, all respondents reported having strategies in place post-COVID-19. To date, COVID-19 remains a yardstick for preparation and response to other pandemics in the future.
4. The study established the need for an improved resilient business model for CFIs in Kenya during economic shocks and crises, with 30 (85.71%) respondents affirming the importance. The improved model considers the gaps of the previous existing model, which failed to maintain resilience during the COVID-19 pandemic.

7.4 Recommendations

This subsection provides recommendations on enhancing the resilience of CFIs for their continuity, sustainability, competitiveness, and the welfare of their members amidst times of crisis, as well as recommendations on areas for further research.

7.4.1 Recommendations of the Study

i. The established differences in the comparative analysis of CFIs pre- and post-COVID-19 pandemic pointed out the existing challenges and opportunities for inventing new and improved models of operation to enhance the performance and continuity of businesses without interruptions in the event of other future pandemics.

ii. The impact of post-COVID-19 on the resilience of CFIs in Kenya was and remains evident. Adopting multifaceted strategies to aid in continuously maintaining and improving resilience is essential. Hence, planning, adapting to best practices and engaging with different stakeholders with influence will enhance efficiency and effectiveness.
iii. Adopting critical success factors and survival mechanisms for the CFIs post-COVID-19 in Kenya will continually inform planning and effective implementation.
iv. An improved resilient business model for CFIs in Kenya during economic shocks and crises improves performance, operations and business development; this provides shock absorbers and best practices for implementation during and post-pandemics.

7.4.2 Summary of the Recommended Fundamentals on the Improved Business Operations Model

Liquidity- The existing laws should be reviewed so that cooperative financial institutions can access concessional resources from multilateral development institutions, thus stabilising and strengthening their balance sheets, especially during pandemics.

Products/innovations- The cooperative financial institutions need to revise their offerings (loans), adopt innovations, especially ICT and access to deposits with mechanisms that have sustainability at their core. Some clients withdrew their deposits due to the pandemic and walked away from the institutions, thus weakening them. CFIs had to quickly craft new products without deep analysis to support their members, affecting their balance sheets. The CFIs' adoption of ICT must be measured by the capacity, disruption, and longevity of such technologies.

Governance/Leadership- The Cooperative and SASRA Acts are rigid**.** The parliament of Kenya and related stakeholders must defer some responsibilities to county assemblies or devolved units so that noncritical supervisory processes post-COVID-19 are flexible. To reduce bureaucracy, restructuring or liquidating the CFIs is challenging and can easily collapse with member deposits.

In this regard, this research recommends an improved post-COVID-19 cooperative financial institution business operation model with the following principles:

1. Enhanced risk-based leadership and Organizational culture with sustainability at the core of people, profit formula, key processes, and resources within CFIs.

2. Broadened collaboration and partnership within CFIs' ecosystem coordinated by apex institutions like the Cooperative Alliance of Kenya and the Cooperative University of Kenya, thus entrenching best practices within the industry.
3. The government should adopt some cost-effective, un-distortive subsidies extended to other private sector SMEs to the CFIs. These incentivised subsidies must be efficient, effective and sustainable.
4. The CFIs' business model must be structured with a mechanism to detect when liquidation or insolvency is inevitable. This mechanism can trigger actions for recovery where CFIs elevate levels of efficiency and effectiveness, thus coping with related pandemics in the future.
5. Broad-based liquidity avenues for CFIs should include exploring avenues for equity outside of membership deposits and investment profits that are not enough to withstand disruptions of the COVID-19 pandemic.
6. The exploitation of technology for tomorrow, including artificial intelligence- The CFIs must utilise these technological innovations in manageable ways regarding cost and availability capacity, especially in informal settlements and rural areas.
7. The CFI business model needs to adopt private-sector capital mobilisation, as it is the future.

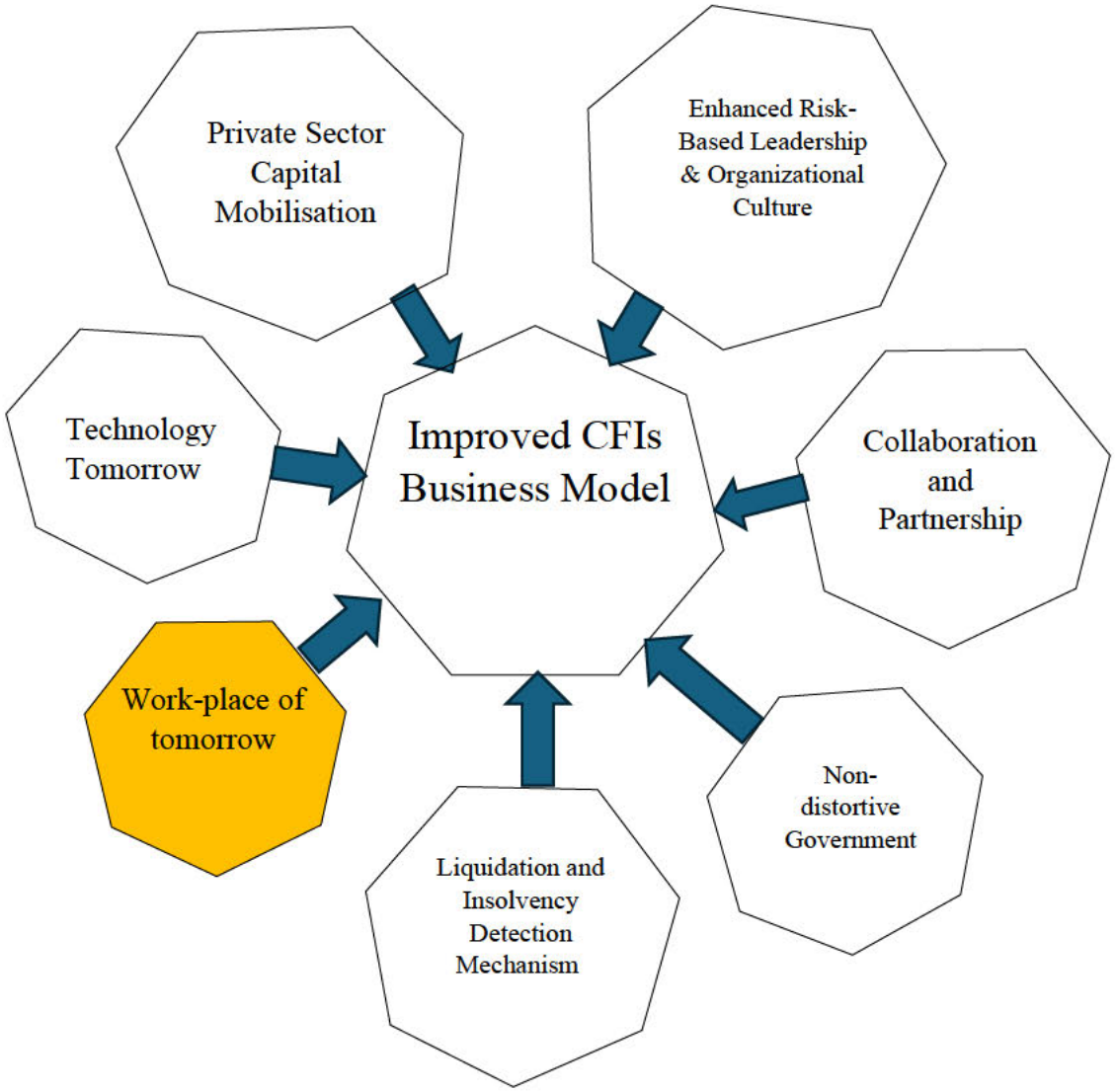


Figure 7.1 Improved Business Model

7.4.3 Recommendations for Further Study

Many observations were made in this critical and pertinent study, which are relevant post-COVID-19. It is envisioned that the findings from the study inform policy, action, and preparation for the pandemic. Timely planning and implementing actions learned from this study will enhance response for the resilience of CFIs in Kenya and beyond. The following gaps are opportunities for conducting robust studies in a scaled manner:

1. An Afrocentric context-specific study on the impact of COVID-19 on CFIs should be conducted to enhance generalisability for the continent.
2. A study should be conducted to compare the status of CFIs in different African countries before, during and post-COVID-19.

3. An intervention-based study should be conducted on CFIs to determine the effect of the intervention on the performance of CFIs in the continent of Africa and scale up the intervention in preparation for the next pandemic.
4. A context-specific study should be conducted to profile the transitions caused by COVID-19 and the state of preparedness for the next pandemic.

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APPENDICES

APPENDIX I: Interviewer-based Questionnaire

Benard William Chitunga 222049462

UKZN Ph.D. Management Study on the Post-Covid 19 Resilience of Cooperative Financial Institutions in Kenya

Title of the study: Management Study on the Post-Covid 19 Resilience of Cooperative Financial Institutions in Kenya

1. Date of interview: ☐☐/☐☐/2023

Financial Institution…….. County ……..

Interviewer's initials…… ……..

Introductory Statement

Benard Chitunga, a Kenyan is from the University Kwazulu Natal, South Africa, and together with the research team is conducting a study in Nairobi County Kenya **on the Post-Covid 19 Resilience of Cooperative Financial Institutions (SACCOS) in Kenya.**
for the study is for academic purposes, however the findings will inform current efforts by government and multilateral institutions on post COVID-19 recovery. This is strengthened by attached gatekeeper letters from Kenya, Office of the President and Ministry of Cooperatives and MSMEs. Mr. Chitunga, Kwazulu Natal University and the gatekeepers extends assurance of confidentiality. Your representation will also my anonymous in the findings report. The information that you and your institution provide us with will be combined with information collected from other participants. Your participation is voluntary, even when you decide to take part; you can withdraw your consent at any time.

S/N……

#	Theme	Questions and options		
Selection criteria for inclusion in the survey				
A.A.1	SELECTION CRITERIA	**Choose the correct answer below that applies to leadership available for the interview**		
		1	Head of Finance and Accounts	
		2	Head of Operations	
		3	Head of Credit	
		4	Head of Customer care	
		5	Head of Marketing	
		6	Other Technical officers	
A.A.4	SELECTION CRITERIA - FORMALITY	**Is the cooperative financial institution SASRA regulated**		
		1	Yes	
		2	No	
		3	Don't know/refused to say	
Section A: General Business Information				
A1	INTERVIEWEE PROFILE	**For how long you have been in the institution**		
		1	Between 3-5 years	
		2	Between 5-10 years	
		3	Above 10 years	Single selection
A2	INTERVIEWEE PROFILE	**What is your highest level of education? (single selection)**		
		1	Secondary Education and Below	
		2	Diploma/Certificate	
		3	Bsc,(Bachelors)	
		4	Masters	Single selection
		5	Other	
A3	INTERVIEWEE PROFILE			
		1		
		2		
		1		
		2		
		3		Single selection
		4		

A5	OWNERSHIP OF BUSINESS	**How many owners / shareholders does this business have? (single selection)**		Single selection
		1	<200 members	
		2	200 to 500	
		3	>500	
A6	OWNERSHIP OF BUSINESS	**What percentage of your members are women ?** * as indicator of the percentage of contribution in the business done by women and youth		
		1	0-24%	
		2	25-50%	
		3	51-75%	
		4	76% - 100%	
A7	BUSINESS DEMOGRAPHICS	**How many years has your business been in existence? (single selection)**		Single selection
		1	3 to 5 years	
		2	6 to 10 years	
		3	11 to 15 years	
		4	16 to 20 years	
		5	more than 20 years	
A8	BUSINESS DEMOGRAPHICS	**Which sector/ industry does your main business operate in?**		Single selection
		1	Agriculture, forestry and fishing	
		2	Mining and quarrying	
		3	Manufacturing	
		4	Electricity, gas, steam and air conditioning supply	
		5	Water supply; sewerage, waste management and remediation activities	
		6	Construction	
		7	Wholesale and retail trade; repair of motor vehicles and motorcycles	
		8	Transportation and storage	
		9	Accommodation and food service activities	
		10	Information and communication	
		11	Financial and insurance activities	
		12	Real estate activities	
		13	Professional, scientific and technical activities	

		14	Administrative and support service activities	
		15	Public administration and defense; compulsory social security	
		16	Education	
		17	Human health and social work activities	
		18	Arts, entertainment and recreation,	
		19	Other service activities	
		20	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use,	
		21	None	
B: Section Business operations				
B1	SCALING UP	**How do you finance your operation**		
		1		
		2		
		3		
		4		
		17		
B2	SCALING UP	**Which products were commonly extended to the members before the pandemic:**		
		1		
		2		
		3		
		4		
B3	SCALING UP	**What was average amount during covid period**		
		1	KES 1 < 50,000	
		2	KES 50,001 <100,000	
		3	KES 100,001 < 200,000	
		4	KES 200,001 < 400,000	
		5	KES 400,001 < 600,000	
		6	KES 600,001 < 800,000	
		7	KES 800,001 < 1,000,000	
		8	> KES 1,000,000	
B4	SCALING UP	**What is the average lending during COVID**		
		1	KES 1 < 50,000	

		2	KES 50,001 <100,000	
		3	KES 100,001 < 200,000	
		4	KES 200,001 < 400,000	
		5	KES 400,001 < 600,000	
		6	KES 600,001 < 800,000	
		7	KES 800,001 < 1,000,000	
		8	> KES 1,000,000	
		What was the average credit lending after COVID?		
		1	KES 1 < 50,000	
		2	KES 50,001 <100,000	
		3	KES 100,001 < 200,000	
		4	KES 200,001 < 400,000	
		5	KES 400,001 < 600,000	
		6	KES 600,001 < 800,000	
		7	KES 800,001 < 1,000,000	
		8	> KES 1,000,000	
	SCALING UP	**Decisions made during the pandemic centered on which stakeholders and why**		
B6	SCALING UP	**What were the financial challenges when before, during and after COVID-19 pandemic**		
		1		
		2		
		5		
		6		
		7		
		8		
		9		
		10		
Section C: Operational challenges				

C1	CHALLENGES	**What are the key challenges faced pre-during and post COVID-19 by the cooperative financial institution (top 5)**		
		1		
			Based on classification of your membership, what challenges did they face in general during pandemic?	
		1		
		2		
		3		
		4		
		5		List
C2	CHALLENGES	**What were the notable differences?**		
		1		
		2		
		3		
		4		
		5		
		6		
		7		
		8		
		6		
		7		List
Section C: Strategies Post COVID				
C1	RESILIENCE	**Do you use any strategies in place post COVID-19? If Yes, Which ones?**		
		1	Yes	
		2	No	
		3	No, we are back to how we worked pre-covid	List
C2	Human Capital	**What has changed/or otherwise on staff**		
		1		

		2		
		3		
		4		
C3	MEMBERSHIP	**What has changed/or otherwise on membership**		
		1		
		2		
		3		
		4		
		5		
		6		
		7		
C4	TECHNOLOGY	**What has changed/or otherwise on technology**		
		1		
		2		
		3		
		4		
		5		
		6		
		7		
C5	Products and Services	**What has changed/or otherwise purpose**		
		Products- New, old etc		
		1		
		2		
		3		
		4		
		5		
C6	PRODUCTS	**Do you have new products?**		

	SERVICES		Do you have any new services? If yes Name them	
		1		
		2		
		3		
		4		
C7	Balance sheet/cash flow		**What has changed/or otherwise for the institution to recover and scale.**	
		1		
		2		
		3		
		4		
		5		
		6		
		7		
		8		
		9		
		10		
	BALANCE SHEET/CASH FLOW		**How would you compare the savings before, during and after Pandemic?**	
		1		
		2		
		3		
		4		
		5		
	BORROWINGS		**How would you compare the borrowings before, during and after Pandemic?**	

	LOAN REPAYMNET		**How would you compare the loan repayment before, during and after Pandemic?**	
	LOAN DEFAULTING		**How would you compare the loan defaulting before, during and after Pandemic?**	
	RECOVERY		**What has changed/or otherwise for the institution to recover and scale up?**	
			Did the Status of the SACCO before COVID-19, inform any planning during and/or after the pandemic	
			Yes **No**	
	LESSONS – DURING COVID-19		**Lessons the cooperative financial institutions learnt during the pandemic**	
	LESSONS POST COVID-19		**Lessons the cooperative financial institutions learnt post the pandemic**	

Do you think there is need for a new model of resilience?

Yes [ ] No [ ]

Any other thoughts about resilience of cooperative financial institutions into the future

……
……
……
……
……

Appendix II: Key Informant Interview

1. Kindly describe what happened to the institution immediately the World Health Organization announced Covid- 19 as a pandemic and Kenya Government announced a shut down?
2. What fundamentally changed on
   - Membership
   - Staff/human capital
   - Processes
   - Service provision
   - Governance especially Committees and AGM

3. What was the status Purpose, profit formula, key processes and key resources of the cooperative financial institutions before Covid-19, during Covid-19, and post-Covid-19?
4. Kindly share with me technological changes before Covid-19 and during Covid 19?
5. What made you survive during Covid 19 (**survival secret-strategies, initiatives, activities**)
6. In May 2023, the WHO announced end of Covid 19 as a PUBLIC HEALTH EMMERGECY world pandemic. What has happened at the institution to return to normalcy?
7. What is the comparison Purpose, profit formula, key processes and key resources between now after the announcement and before Covid Feb. 2020?
8. What other activities, technologies, policies, programs have been put in pace to ensure the institution returns to optimum post covid-19 pandemic effects?
9. What would be different if another pandemic hit for you and this institution?

Appendix III: Letter of Approval Ministry of Cooperatives and Micro, Small and Medium Enterprises Department

REPUBLIC OF KENYA

MINISTRY OF COOPERATIVES AND MICRO, SMALL AND MEDIUM ENTERPRISES DEVELOPMENT

STATE DEPARTMENT FOR MICRO, SMALL AND MEDIUM ENTERPRISES DEVELOPMENT

OFFICE OF THE PRINCIPAL SECRETARY

Telephone +[redacted]
Web: www.msme.go.ke
Email: cs@ushirika.go.ke
When replying please quote

SOCIAL SECURITY BUILDING
BISHOP ROAD
P.O. [redacted]
NAIROBI-KENYA

REF: MC/SD/MSME/ADM/1/98

3rd October, 2023

TO WHOEVER IS CONCERNED

Dear Sir/Madam,

University of KwaZulu Natal (UKZN), South Africa, College of Law, and Management Studies PhD candidate, **Benard Chitunga (222049462@stu.ukzn.ac.za)** will be conducting research on the resilience of cooperative financial institutions, post Covid-19 pandemic in Nairobi County, Kenya with the purpose of formulating an improved resilient business model for cooperative financial institutions during times of systemic economic shocks and crises.

Cooperative financial institutions contribute immensely to the economy of Kenya. This research envisages to contribute to the body of knowledge for various stakeholders in the movement to draw lessons and best practices for continued growth during this recovery period from Covid-19.

We kindly ask you to extend necessary support to him during the research period.

Benard Chitunga is guided by a strict internal code of conduct and ethics to which all UKZN researchers adhere.

[redacted]

Susan Mange'ni
PRINCIPAL SECRETARY

Appendix IV: Gate Keeper Letter, Executive Office of the President, Chief of Staff and Head of Public Service

EXECUTIVE OFFICE OF THE PRESIDENT
CHIEF OF STAFF AND HEAD OF THE PUBLIC SERVICE

Telegraphic Address
Telephone: [redacted]
When replying please quote

STATE HOUSE
P.O. Box [redacted]
Nairobi, Kenya

Ref. No ..... and date

....., 20.....
2nd October 2023

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: RECOMMENDATION

The University of KwaZulu Natal (UKZN), South Africa, College of Law, and Management Studies PhD candidate, **Benard Chitunga (222049462@stu.ukzn.ac.za)** will be conducting research on the resilience of cooperative financial institutions, post Covid-19 pandemic in Nairobi County, Kenya with the purpose of formulating an improved resilient business model for cooperative financial institutions during times of systemic economic shocks and crises.

Cooperative financial institutions contribute immensely to the economy of Kenya. This research envisages to contribute to the body of knowledge for various stakeholders in the movement to draw lessons and best practices for continued growth during this recovery period from Covid-19.

We kindly ask you to extend necessary support to him during the research period.

Benard Chitunga is guided by a strict internal code of conduct and ethics to which all UKZN researchers adhere.

[redacted]

Mukhtar A. Ogle, EBS, OGW
For: CHIEF OF STAFF AND HEAD OF PUBLIC SERVICE

Appendix V: Ethics Clearance Certificate

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

12 November 2023

Benard William Chitunga (222049462)
School of Man Info Tech & Gov
Westville Campus

Dear BW Chitunga,

Protocol reference number: HSSREC/00006356/2023
Project title: Post-coronavirus disease resilience of cooperative financial institutions in Kenya
Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 17 October 2023 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 12 November 2024.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd