



***DETERMINANTS OF FINANCIAL PERFORMANCE OF URBAN SAVING
AND CREDIT COOPERATIVE SOCIETIES IN ETHIOPIA (EVIDENCED
FROM SELECTED PRIMARY SACCOs IN ADDIS ABABA, ETHIOPIA)***

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***A THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND
FINANCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE IN ACCOUNTING AND
FINANCE.***

**JUNE 2021
ADDIS ABABA, ETHIOPIA**

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT ACCOUNTING AND FINANCE
GRADUATE PROGRAM

Certification

This is to certify that this thesis prepared by Mengistu Tefera, entitled; “Determinants of financial performance of urban primary saving and credit cooperative societies in Ethiopia” in the case of selected SACCOs in Addis Ababa city Administration and submitted in partial fulfillment of the requirements for the degree of Master of Science in Accounting and Finance, complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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STATEMENT OF DECLARATION

I, Mengistu Tefera, hereby declare that this research work entitled; “Determinants of financial performance of saving and credit cooperative societies in Ethiopia” evidenced from selected SACCOs in Addis Ababa city Administration submitted by me for the award of the degree of Master of Science in Accounting and Finance, is my own original work and that all sources of materials used for the study have been duly acknowledged.

Mengistu Tefera

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ENDORSEMENT

This thesis Submitted to the School of Graduate Studies of Addis Ababa University College of Business and Economics for examination with my approval as a university advisor.

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ACKNOWLEDGEMENTS

First and foremost, I would like to thank the Almighty God for assisting me in all aspects of my life and making this work valuable. My heartfelt gratitude goes to my lovely wife, Kalkidan G., and my mother for their unwavering support in allowing me to continue my studies. Throughout my life, both my mother and wife have been supportive of all of my endeavors. This process would not have been completed without their help and faith. Thank you very much.

I'd like to express my gratitude to my thesis advisor, P.Laxmikantham (PhD), for all of his help, advice, guidance, and valuable suggestions, as well as his hard work and follow-ups in realizing this study. His extensive knowledge and experience in the worlds of academia and life have greatly aided me in shaping up the respective parts of this study.

My heartfelt gratitude also goes to my post-graduate classmates Fahmi Shifferaw and Fantaw Biyargo for their constructive ideas and positive influence on completing this study, as well as their support since the first time I met them. Thank you once more, and my God bless you in every corner of your life.

Again, I would like to express my heartfelt gratitude to the officials and experts of SACCOs of the federal cooperative agency, Addis Ababa cooperative agency, the ten sub-city audit committees of Addis Ababa SACCOs, and the selected Sacco managers and experts in Addis Ababa City Administration. Without their cooperation, the fieldwork would not have been possible.

All of you who helped me make this work a reality: you deserve credit; may God bless you abundantly.

Abstract

The purpose of this study was to look into the factors that influence the financial performance of urban SACCOs in Ethiopia. The study's populations were SACCOs in Ethiopia, with the sample frame consisting of primary SACCOs in Addis Ababa. The study's sample size was 45 primary SACCOs, as determined by purposive sampling techniques. The research design was sequential-explanatory, and descriptive. The study used both primary and secondary data; secondary data was the main source of data for this research, which was collected from audit reports from 2015 to 2019 by using document review as a data collection instrument, and primary data was collected through semi-structured interviews. STATA Version 13.0 was used for secondary data analysis, and multiple regression analysis was used to establish the nature of the existing relationship between the research variable and content, and narrative analysis was used for qualitative data analysis. According to the findings, capital adequacy, liquidity management, GDP, and SACCO union membership and competition from banks positively affect SACCO financial performance, whereas asset quality, management efficiency, inflation rate, and computation from MFI negatively affect SACCO's financial performance. The study recommended SACCO's management and officials take good care of asset quality, balance their capital structure, improve product and service quality, reorganize the SACCO union in an appropriate manner, and merge (amalgamate) SACCOs under a well-organized umbrella to strengthen and enhance their capacity.

Keyword: *SACCOs, asset quality, capital adequacy, liquidity management, management efficiency, GDP, inflation, and financial performance*

Table of Contents

List of contents	page
<i>ACKNOWLEDGEMENTS</i>	<i>i</i>
<i>Abstract</i>	<i>ii</i>
<i>List of Figure</i>	<i>vi</i>
<i>List of Table</i>	<i>vii</i>
<i>ACRONYMS & ABBREVIATION</i>	<i>viii</i>
<i>CHAPTER ONE</i>	<i>1</i>
<i>INTRODUCTION</i>	<i>1</i>
1.1. Background of the study	1
1.2. Statement of the problem	2
1.3. Objectives of the Study	4
1.3.1. General Objective	4
1.3.2. Specific Objectives	4
1.4. Research Hypothesis	4
1.5. Significance of the study	5
1.6. Scope of the study.....	5
1.7. Limitation of the study.....	6
1.8. Organization of study.....	6
<i>CHAPTER TWO</i>	<i>7</i>
<i>LITERATURE REVIEW</i>	<i>7</i>
2.1. Introduction	7
2.2. Theoretical Review	7
2.2.1. Meaning and Concepts' of SACCOs	7
2.2.2. Financial performance of SACCOs	8
2.2.3. Constraints induced theory.....	9
2.2.4. Cash Management Theory.....	9
2.3. Empirical literature review	9
2.3.1. Asset quality and financial performance	9
2.3.2. Capital Adequacy and financial performance	10
2.3.3. Liquidity Management and Financial Performance.....	11

2.3.4.	Management efficiency and financial performance.....	12
2.3.5.	Growth domestic product and financial performance.....	13
2.4.	Other literatures on SACCOs	13
2.5.	Empirical studies in Ethiopia.....	16
2.6.	Research (Knowledge) gap.....	18
2.7.	Conclusion and conceptual frame work.....	19
2.7.1.	Conclusion.....	19
2.7.2.	Conceptual Framework	20
<i>CHAPTER THREE.....</i>		<i>21</i>
<i>RESEARCH METHODOLOGY AND DESIGN.....</i>		<i>21</i>
3.1.	Introduction	21
3.2.	Research approach	21
3.3.	Research Design	21
3.4.	Sampling.....	22
3.4.1.	Population.....	22
3.4.2.	Sample size and sampling Technique	23
3.5.	Data sources.....	23
3.6.	Data Analysis Method.....	24
3.7.	Validity and Reliability Test	24
3.8.	Regression equation	25
3.9.	Operational Definitions and Measurements of variables	26
<i>CHAPTER FOUR</i>		<i>29</i>
<i>DATA ANALYSIS AND PRESENTATION</i>		<i>29</i>
4.1.	Descriptive statistics	29
4.2.	Correlation Analysis	31
4.3.	Regression Model Tests	32
4.3.1.	Model Selection (Random Effect versus Fixed Effect Models).....	32
4.3.2.	Classical Linear Regression Model (CLRM) Tests assumptions	33
4.5.	Regression Analysis.....	37
4.5.2.	Discussion of Regression result.....	39
4.6.	Narrative analysis of dummy variable in the study	43

4.6.1. Competition of bank and MFI and Financial performance	43
4.6.2. Sacco’s union membership and financial performance	45
<i>CHAPTER FIVE</i>	47
<i>SUMMARY OF FINDING, CONCLUSIONS AND RECOMMENDATION</i>	47
5.1. Introduction	47
5.2. Summary of Findings	47
5.3. Conclusion.....	50
5.4. Recommendation	52
5.5. Suggested area for farther research.....	53
<i>REFERENCE LIST</i>	54
<i>APPENDIX-1</i>	61
<i>APPENDIX-2</i>	65

List of Figure

Figure 2.1 conceptual Framework	20
Fig. 4.1Normality Test	35

List of Table

Table 3.1. proportion of sample SACCOs for the study	23
Table. 3.2. Operational definition of variable	28
Table 4.1 descriptive statistics of dependent and independent variables	29
Table 4.2 Correlation Matrix	31
Table 4.3.Hausman Test	33
Table 4.4.Multicollinearity test of variance inflation factor (VIF).....	34
Table 4.5. Heteroscedasticity test of Breusch-Pagan/Cook-Weisberg test	35
Table 4.6. Model Specification test, Ramsey RESET test of the fitted value of ROA.....	36
Table 4.7. Regression result	37

ACRONYMS & ABBREVIATION

AASACCOU	Addis Ababa saving and Credit Cooperative union
ACCOSCA	Africa Confederation of Cooperative Savings and Credit Association
ANOVA	Analysis of variance
AQ	Asset Quality
CA	Capital adequacy
CLRM	Classical linear regression model
ESCA	Employee saving and credit Association
FCA	Federal Cooperative Agency
GDP	Growth domestic product
IN	Inflation rate
LM	Liquidity management
ME	Management efficiency
MFIs	Micro finance Institutions
NGO	Non-Governmental Organization
ROA	Return on asset
ROE	Return on Equity
ROI	Return on Investment
SACCOs	Saving and credit cooperative society
SACCOU	Saving and credit cooperative union
SPSS	Statistical package for social science
STATA	General-purpose statistical software package

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Financial performance has always been the most essential issue for every organization, whether for profit or not, and it is critical for managers to understand which factors influence an organization's performance in order to take proper action (Sangali, 2013). Financial performance, in a broad sense, refers to the extent to which financial goals are being met or have been met, and it is an important part of financial risk management (Verma, 2020). Financial performance is a measure of the organization's achievements in terms of goals, policies, and operations specified in monetary terms (Njuguna et al., 2017). SACCOs' financial performance is critical to their survival. They have a goal, which is to accomplish organizational growth by controlling unexpectedly large financial risks and ensuring that the return on capital exceeds the cost of capital (Pandey, 2010).

Through financial savings mobilization loans, savings and credit cooperatives provide financial services to suit the shared wishes of members (Auka & Mwangi, 2011). Economic services are provided by SACCOs and other financial institutions such as banks. However, SACCOs are ideal for low-income families that have trouble obtaining loans from banks. SACCOs' primary function is to provide financial services to their members and the financial intermediary and investment functions of SACCO are fundamental to several functions (Ergetew, 2014). SACCO connects borrowers and savers, bringing savers and borrowers together in a system that covers all of the costs of business and is useful to both parties (Tache, 2006). Profitability is the secondary motivation of SACCO, but income is also an important source of fairness. If profits are reinvested, this may promote economic stability (Muriu, 2011).

SACCOs were founded in 1847 in southern Germany with the help of two local business leaders, Freidrich and Herman (Tache, 2006). Father John Nenulty established the first SACCO society in Africa in Ghana in 1959. English-speaking nations such as Ghana, Uganda, Nigeria, Tanzania, and Kenya are the principal SACCO adopters in Africa (Ng'ombe and Mikwamba, 2004). With cooperative proclamation number 44/1961/1953 E.C, the first SACCO in Ethiopia was established by Roads Authority employees in 1957, and the second in 1964 by Ethiopian Airlines and Telecommunication Agency employees. There have been 28 SACCOs. Those societies

formed their own country wide apex body referred to as Ethiopian thrift and cooperative societies limited from 1964-1973 (Muluneh, 2012). According to the federal cooperative agency (2021), our country Ethiopia today has over 20,000 primary SACCOs. A total of 6,000 SACCOs belong to the SACCO union. There are around 129 SACCO unions in all. There are 1,187 primary SACCOs and 2 unions in Addis Ababa (Addis Ababa Cooperative Agency, 2020).

This research was carried out in Addis Ababa city, which has 1,187 primary SACCOs in the city. The majority of these SACCOs are inactive, and the researchers purposefully chose primary SACCOs with complete 5-year audited data. Their presence continues to encourage their members and financial activity in general, but due to a variety of issues that limit their total financial performance, they are not fully benefiting from the financial market despite their long history and large number. Studies on the determinants of the overall performance of urban primary SACCOs are scarce and most similar studies are focused on SACCO unions, banks, MFIs and insurance. Furthermore, the majority has yet to reach an agreement.

As a result, the study aimed to investigate the determinants of financial performance of urban primary saving and credit cooperative societies in Addis Ababa city.

1.2. Statement of the problem

Although saving and credit cooperative societies (SACCOs) promote a savings culture among people and mobilize funds for the economy (Teach 2006). They make a significant contribution to economic growth and development. Investigating the factors that determine the financial performance of SACCOs is the question which is raised in this study. SACCOs, according to Odhiambo (2018), play an important role in financial inclusion by allowing members to engage in visible businesses that create money, allowing them to better their living standards and become investors. Despite their potential and contributions, SACCOs have failed to provide expected financial services to their members due to poor financial performance (Odhiambo, 2018). Sacco's offers similar products to banks and other financial institutions, but their financial performance is not something to be proud of compared with theirs (Gathurithu, 2011). A number of researchers have conducted various studies on SACCOs. Studies on the determinants of SACCO financial performance are numerous, but they do not place a strong emphasis on the financial performance of urban primary SACCOs, and there is no comprehensive study on this topic. For instance; studies on the determinants of financial performance of saving and credit

cooperative societies in Kenya (Hannah, 2015; Njihia and Muturi, 2016; Ndonga, 2016; Kepha & Linet, 2016; Odhaimbo (2018) were undertaken. Ergetew (2015) studied the determinants of the financial performance of saving and credit cooperative unions in the south Wollo zone, Ethiopia. Abeje (2017) study on the Determinants of Financial Performance of Saving and Credit Cooperatives with reference to Sodo Zuria woreda, in the Wolaita Zone. Tadael (2017) investigated the factors that influence employee savings and credit associations in Ethiopia Telecom Corporation. Yitayaw (2017) investigated determinates of financial performance of saving and credit cooperative unions in three zones of Amhara regional state, Ethiopia. Negalign, (2020) identified factors influencing the financial performance of the saving and credit cooperative societies of Derash and Alle woreda in SNNPRG, Ethiopia.

These studies, which were undertaken by several researchers, identified the factors affecting SACCO's financial performance by considering various variables using various methodologies and arriving at diverse conclusions. However, these studies do not conduct comprehensive studies that include both members and non-members of Sacco's union. As the literature shows, there is a variety of research on the determinants of the financial performance of Sacco's in our country, with a focus on SACCO unions. The majority of previous studies in our country were based on the SACCO union. The findings do not adequately represent all primary saving and credit cooperative societies since they do not include urban primary SACCOs that are not members of the union. As a result, there is no comprehensive study on urban primary saving and credit cooperative societies; many SACCOs are registered and exist only in name, but they do not operate properly; many SACCOs are organized for political purposes and do not meet the updated SACCO proclamation No. 985/2009 criteria, but they are not canceled from registration; and there is no recent research conducted on the determinants of financial performance of urban primary saving and credit cooperative societies in our country. These are major problems that motivated the researcher to conduct this study and helped him to indicate the solution and recommendation based on the finding of the study.

Therefore, this study was critical in bridging the knowledge gap by investigating how and why the identified major internal (asset quality, capital adequacy, liquidity management, and management efficiency) and external (GDP and inflation) factors affect the financial performance of Addis Ababa city's urban primary SACCOs. The effect of competition from

Bank & MFI and SACCO union membership on the financial performance of urban primary SACCOs in Addis Ababa city is considered as a dummy variable. So, this study has come up with diverse output and results since the drivers of financial performance are dynamic over time vary with the nature of operating and place to place.

1.3. Objectives of the Study

1.3.1. General Objective

The overall objective of the research was to investigate the determinants of financial performance of urban primary saving and credit cooperatives in Addis Ababa city administration.

1.3.2. Specific Objectives

- To analyze the effect of asset quality on the financial performance of AASACCOs.
- To examine the effect of capital adequacy on the financial performance of AASACCOs.
- To analyze the effect of liquidity management on the financial performance of AASACCOs.
- To analyze the effect of management efficiency on the financial performance of AASACCOs.
- To examine the effect of growth domestic product on the financial performance of AASACCOs.
- To examine the effect of inflation on the financial performance of AASACCOs.

1.4. Research Hypothesis

- H1: Asset quality has a positive and statistically significant effect on the financial performance of urban primary SACCOs.
- H2: Capital adequacy has a positive and statistically significant effect on the financial performance of urban primary SACCOs.
- H3: Liquidity management has a positive and statistically significant effect on the financial performance of urban primary SACCOs.
- H4: Management efficiency has a positive and statistically significant effect on the financial performance of urban primary SACCOs.
- H5: Growth in domestic product has a positive and statistically significant effect on the financial performance of urban primary SACCOs.

H6: The inflation rate has a negative and statistically significant effect on the financial performance of urban primary SACCOs.

1.5. Significance of the study

This research was conducted to investigate the determinants of financial performance of urban primary SACCOs and the survey was conducted in Addis Ababa city administration. Hence, the study has the following significance. The findings of this study could be of significant to management of SACCOs. The management of SACCOs was able to appreciate how the performance of their SACCOs is influenced by the study variables and understand the strategies to be designed so as to improve the performance of their SACCOs.

For cooperative officials, practitioners, policy implementers, decision makers, and for Sacco's management, it gives insight on factors that determine the financial performance of urban primary SACCOs and helps on how to increase the financial performance of SACCOs, take corrective action on deviations, and serve the interests of their members.

For Addis Ababa cooperative Agency and FCA, it helps in designing SACCOs' growth strategies and evaluating plat forms that are used to strengthen their financial performances.

For academicians and other researchers, it shed light on the determinant of financial performance of urban primary SACCOs and may be used as a source for other researchers and reference for related studies.

In addition, the study assisted the government and its agencies in coming up with improved and amended policies through the SACCO regulatory authority and FCA.

1.6. Scope of the study

This study investigated the determinant factors of financial performance of urban primary SACCOs in Addis Ababa city administration. The sample was taken from SACCOs located in Addis Ababa. The period of the study was covered from 2015 to 2019. The study only covered urban primary saving and credit cooperatives.

The scope is also limited to the stated objectives of the study, which spells out the variables to be studied. The study included all primary saving and credit cooperatives, evidenced by 45 purposively selected SACCOs from a total of SACCOs that fulfilled the criteria stated by the researchers. Descriptive and explanatory research designs were used. Descriptive statistics,

multiple regression and correlation models were used in analyzing collected data. Data analysis was conducted based on data collected from those SACCOs. The study investigated the determinants of financial performance of urban primary saving and credit cooperative societies, taking AASACCOs as the case study. The study collected primary data from managers or committees of selected SACCOs, officials of the federal cooperative agency, Addis Ababa cooperative agency, and 10 sub-city promotion office officials and audit committees via semi-interviews using only five years of audited financial statements (from 2015 to 2019).

1.7. Limitation of the study

The determinant of financial performance of SACCOs is very broad, and it is difficult to generalize the findings of the study to others. There is no well-organized published document at the federal cooperative agency, Addis Ababa cooperative agency, SACCO union, primary SACCOs, and online information related to Ethiopian SACCOs. The most difficult challenge during this study has been gathering the necessary data in a well-organized manner. These constrain the researcher to addressing all SACCOs in the study areas in order to produce completed findings that can be generalized to others. To collect the necessary data for the study, the researchers visited each of Addis Ababa's ten sub-cities to identify the continuously audited SACCOs, and then visited each SACCO to collect the necessary information.

1.8. Organization of study

The first Chapter comprised the introduction part of the paper explaining the background of the study, statement of the problem, research questions, objectives, hypothesis, significance and scope of the study. The second chapter is a review of various literatures pertaining to the research objective. The methodology of the study is presented in chapter three. Data presentation, discussion, and analysis can be found in chapter four. Finally, in Chapter five, the study's findings are used to draw conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The Literature review section comprises of a theoretical review, empirical literature review, research gap observed and conceptual framework. It provides clue and more understanding of the determinants of financial performance of urban primary savings and credit cooperatives societies.

2.2. Theoretical Review

The theoretical framework has to verify an understanding of the concepts and theories related to the research topic and relevant to the broader field of knowledge you are researching. A Theory selection depends on appropriateness, ease of application, and explanatory power, and the theoretical framework connects the researcher to existing knowledge (Kennedy, 2007).

2.2.1. Meaning and Concepts' of SACCOs

The Cooperative was formed on the Latin phrase "co-operari," which means "working together" because "co" means "together" and "operari" means "labor" (Bharadwaj, 2012). A Cooperative is an autonomous association of citizens joining voluntarily to achieve their common economic, social, and cultural needs, and ambitions through jointly owned and democratically controlled enterprises, International Cooperatives Alliance (ICA, 2019). This implies that cooperatives are first and foremost voluntary business associations founded by peoples of limited means through the contribution of share capital, which serves as the foundation for the distribution of profits generated by the business. Cooperative societies can be founded at several levels, from primary to federal, depending on their nature (Ethiopian Federal Negarit- Gazeta cooperative societies Proclamation No. 147/1998). Cooperative societies at the primary level are with individual people as members, whereas cooperative unions are created at the secondary level with cooperative societies as members. Cooperatives are democratically formed and people join organizations with the goal of meeting common needs (ICA, 2019). It is an egalitarian notion that takes the economic, social, and cultural situation to a new level in order to better understand the aspirations of the people. In most countries around the world, saving and credit cooperative societies have been highlighted as critical paths for economic progress.

According to Getachew (2006), SACCO are self-help financial institutions compatible with people who have their own efficient financial service-giving and who empower themselves by teaching thrift culture and making themselves credit-accessible in a sustainable manner. They are a sort of cooperative whose goal is to pool members' funds and then offer them with credit (Lari, 2009). SACCOs, like other financial organizations, play an important role in the economy by mobilizing savings and allocating credit for investment, assisting in the improvement of people's living conditions (Ergetew, 2015). SACCOs are member-owned and primarily serve the members. They are supposed to provide better and less expensive services to their members than other financial institutions such as banks (Wanyama, 2008).

Dessalew (2014), stated that SACCOs' functions include influencing the growth of youth entrepreneurship through their access to capital. The fundamental issue for traders is a lack of working cash, and SACCOs, particularly SACCOs for traders, could be quite beneficial. Members of SACCOs can obtain micro and macro credit to start or expand small businesses and SACCOs also provide loans to all members, regardless of gender (Dessalew, 2014). Ergetew (2015), mentions that the two primary functions of the SACCO Society are financial intermediation and investing. Bringing savers and borrowers together in a system that allows them to pool their money as savings and shares, and then capturing funds transformed into loans by calculating all of the costs of doing business in order to make this business profitable or useful for both parties (the SACCO Society and its members) (Getachew,2006).

2.2.2. Financial performance of SACCOs

Financial performance is a measure of how well a company can generate revenue by utilizing assets from its primary mode of operation (Bessler et al., 2008). Typically, external parties evaluate a company's capability based on its performance. This explains why a company's performance resembles a mirror. A SACCO's financial performance is determined by its ability to meet the financial demands of its members while taking into account their economic circumstances. SACCOs are expected to provide better and cheaper services to their members than banks since they understand the demands of their members because they are the SACCO's owners (Wanyama, 2008). A SACCO is said to be financially successful if it is able to process member loans quickly and at reasonable rates, has the capacity to expand its product line, has sufficient funds to provide services, and has a growing client base (Micro Finance House Ltd, 2006).

2.2.3. Constraints induced theory

Silber proposed this theory in 1983, and was cited severally by Muker (2014). This theory is founded on the assumption that the primary motivation for modernization is to improve firms' profitability. Although, as Muker (2014) pointed out, there are various external and environmental impediments that obstruct profit maximization. Financial institutions' efficiency is often harmed by these restrictions. This theory is relevant to studying the dependent variable (financial performance).

2.2.4. Cash Management Theory

According to Gibbs' perspective, deciding how much buffer money to keep is viewed as an investment decision. This method stresses holding costs, short-term and long-term borrowing costs, and the expense of marketable securities investment (Erkki, 2004). Managers have an incentive to hoard cash to increase the quantity of assets under their control and obtain discretionary authority over the firm's investment decisions, (Jensen, 1986). Because the manager has cash on hand, he or she does not need to raise external money or offer extensive information about the firm's investment projects to the financial markets (Huseyin, 2011). As a result, managers may make investments that are detrimental to shareholders' wealth. This is crucial in the firm's liquidity management and ensures a balance between satisfying present obligations to prevent liquidity shortfalls and investing in the interest of maximizing of shareholder wealth (Huseyin, 2011). This theory is relevant to independent variable liquidity management.

2.3. Empirical literature review

This section reviews studies conducted in the past on the determinate of financial performance. It is a comprehensive review of previous inquiries related to the current research questions. According to Miller and Yang (2008), through the use of a systematic approach to previous scholarly work, literature review allows a research to place this research into an intellectual and historic context. Therefore, the previous study is presented in line with its relevancy to the variable under investigation accordingly.

2.3.1. Asset quality and financial performance

According to Athanasoglou et al., 2006, one of the specific factors that influence SACCO's financial success is asset quality. Assets include current and fixed assets, credit portfolios, and other investments. The profitability of a SACCO is determined by the quality of its loan

portfolio, and the quality of a SACCO's loan portfolio has a direct impact on its profitability. The largest risk that a SACCO or any other financial institution confronts is losses stemming from late loans (Dang, 2011). As a result; non-performing loan ratios are the most accurate indicators of asset quality. All financial institutions are concerned about keeping the number of non-performing loans low. This is because a large percentage of non-performing loans have a negative impact on profitability. As a result, the low ratio of non-performing loans to total loans demonstrates the good health of the SACCO portfolios. The lower the asset quality ratio, the better the company's financial performance (Sangmi and Nazir, 2010). According to James (2013), factors that influencing the financial performance of SACCOs in Kenya were studied by considering the target population of the Capital SACCO Meru branch. It has 25 staff, 7 directors, and 4800 members among the 298 samples selected for the study. Data was obtained by observation, interviews, and questionnaires, and both primary and secondary data were employed. Descriptive and inferential statistics were used to analyze the data. The SACCO performed well in terms of operations and finances, but its product diversity was a drawback. According to the data study, the SACCO should assess its interest rates to ensure that they are competitive. The SACCO's default rate also posed a threat to the SACCO's future financial performance, necessitating the implementation of regulatory measures to minimize default rates. There was a positive correlation between the length of time it took to repay a loan, and client retention (members).

2.3.2. Capital Adequacy and financial performance

According to Sangmi and Nazir (2010), among specific factors that affect the level of profitability of saving and credit cooperative societies one is capital adequacy. According to Athanasoglou et al., (2006), capital is the amount of own funds available to support the SACCOs business and act as a safeguard in case of a difficult situation. Financial institutions' capital creates liquidity due to the fact that deposits are the most fragile and prone to runs, and, moreover, greater capital reduces the chance of distress (Diamond, 2000). According to Dang (2011), the adequacy of capital is decided on the basis of the capital adequacy ratio. The capital adequacy ratio shows the internal strength of SACCO to withstand loss during a crisis. The capital adequacy ratio is directly proportional to the resilience of the SACCO to crisis situations. It has a direct effect on financial performance by determining its expansion into risky but profitable ventures or areas (Sangmi and Nazir, 2010). Alamri and Almazari (2017) conducted a

study on the effect of capital adequacy on profitability between two banks in Saudi-Arabia, Samba and Sabb. In order to test the hypothesis, they used secondary data and descriptive analysis. They conclude that there is a strong positive relationship between ROA and capital adequacy. The study was conducted by Barus, Muturi, Kibati, and Koima (2017), to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya. The research used an explanatory research design and census method to collect secondary data through taking 83 samples of Saccos that were operational from 2011 to 2015. Multiple linear regression models were used and data was analyzed by using SPSS and STATA. The study results showed that capital adequacy positively influenced the financial performance of saving and credit societies in Kenya.

2.3.3. Liquidity Management and Financial Performance

Osoro and Muturi (2015) investigated the effects of liquidity-risk management strategies on the financial performance of Kissi SACCOs. Liquid asset sufficiency had a significant impact on Sacco's return on assets and asset quality. Capital leverage, on the other hand, had little effect on savings mobilization. Nyabwanga (2011) states that asset, and working capital management are critical components of corporate finance, and they directly affect a company's liquidity, profitability, and growth, as well as its financial health. Liquidity risk must be monitored as part of an integrated institution-wide risk management approach that covers accounting, market and credit risk to preserve stability and improve the loan portfolio on the balance sheet. Ross et al., (2008), stated that reducing the amount of time capital is locked up in the operational cycle increases a company's profitability and market value. There was a positive relationship between efficient working liquidity management and overall performance (Haileselasie 2012). Lack of credit follow-up, credit analysis, and unfriendly lending of money, are some of the causes that have contributed to the financial gap and poor performance (Mwaura, 2005). SACCO societies in Kenya began accepting deposits from people who were not drawn from the common bond, or public deposits, in 2003, (ICA, 2003). A sufficient degree of liquidity, according to Dang (2011), is favorably associated with bank profitability. Liquidity refers to a bank's capacity to meet its commitments, primarily those of depositors. According to the aforesaid author, the most frequent financial ratios that show a bank's liquidity status are customer deposits to total assets and total loans to customer deposits. Other researchers utilize a variety of financial ratios to assess liquidity. Ilhomovich (2009), for example, utilized the cash-to-deposit ratio to assess the liquidity

of Malaysian banks. A study conducted in China and Malaysia, on the other hand, discovered that bank liquidity has no relationship with bank performance (Said and Tumin, 2011). According to Kimathi (2014), liquidity is a business entity's ability to meet all cash payment obligations as they become due, and empirical studies define liquidity management as the process of ensuring that an institution has enough cash and liquid assets to meet client demand for loans and savings withdrawals, as well as to cover the institution's expenses. Kimathi (2014) focused on the effect of financial strategies on the liquidity of SACCOs licensed by SASRA in Nairobi, Kenya. A descriptive survey was used in the study to take a census of all 34 SASRA-licensed SACCOS. The four independent factors studied: leverage, member savings, diversification, and macroeconomic variables explain a significant 68.7 percent of the coefficient of determination of the liquidity of SACCOs operating in Nairobi County. The study shows that financial strategies have a positive and significant impact on liquidity in SASRA-licensed SACCOs in Nairobi.

2.3.4. Management efficiency and financial performance

Management efficiency ensures the resonance implementation of a firm. As firms strive to improve productivity, efficiency and effectiveness have become the norm as competition has increased (Verma, 2003). Management efficiency is one of the most important internal factors influencing a company's profitability. It is reflected in a number of financial ratios, including total asset growth, loan growth rate, and earnings growth rate (Verma, 2003). Sangmi and Nazir (2010) mention, management performance is frequently expressed qualitatively through subjective assessments of management systems, organizational discipline, control systems, staff quality, and other factors. Nonetheless, certain financial ratios in financial statements serve as proxy measures for management efficiency. Financial ratios can be used to assess management's ability to deploy resources efficiently, maximize income, and reduce operating costs. The operating profit to income ratio is one of the metrics used to assess management quality (Sangmi and Nazir, 2010). The management efficiency of a firm takes critical decisions based on its risk perfection is to set a vision and goals for the organization. This parameter is used to assess management efficiency in order to reward well-managed firms while penalizing poorly managed ones (Dang, 2011). Management efficiency has a positive and statistically significant impact on ROA (Yitayaw, 2017). The higher the operating profits to total income (revenue), the more efficient management is in terms of operational efficiency and income generation. The other

important ratio is the proxy management quality, which is the expense to asset ratio. The ratio of operating expenses to total assets is expected to be negatively associated with profitability. Management quality in this regard, determines the level of operating expenses and, in turn, affects profitability (Athanasoglou et al., 2005).

2.3.5. Growth domestic product and financial performance

Contemporary studies show that SACCOs' role in developing small micro enterprises is increasing, with Kenya's 45% GDP being driven by the cooperatives societies (Kembo, 2013). SACCOs are the leading sources of financial services providers in rural areas (Financial SASRA, 2012). According to Ledger Wood et al. (2013), commercial banks and micro finance institutions serve 22.5 percent of Kenya's 20 million adult populations, while SACCOs serve 17.6 percent. KPMG (2013) states that many countries that have achieved economic development have a vibrant and dynamic cooperative sector that contributes significantly to the growth of those economies.

2.4. Other literatures on SACCOs

Hannah (2015) assessed on the determinants of the financial performance of saving and credit cooperatives in the banking sector in Kenya. This study employed a descriptive survey design and stratified sampling technique and simple random sampling was used to obtain a sample for the study. The target population was employee and members of SACCOs in the banking sector in Kenya. From these target population the researcher select 384 samples. Secondary date was collected from the annual reports and the questionnaires were issued to the respondents. Likert scale, content analysis, component analysis and SPSS were used for data analysis. Linear regression model and ANOVA statistical model test was used by researcher. The study sought to establish the influence of competition, operating cost, internal politics, and saving culture on the financial performance of SACCOs in the banking. Based on the findings, there is a positive relationship between financial performance and bank competition, internal politics, operating costs, saving culture, and investment policy. The study concluded that all of the variables under consideration are statistically significant in explaining the financial performance of SACCOs in Kenya's banking sector.

Linet and Kepha (2016) investigated the financial performance determinants of saving and credit cooperative societies in Kiambu, Kenya, with the goal of determining the effects of financial innovation and investment decision making on the financial performance of SACCOs in Kiambu

County. The study adopted a descriptive research design and financial performance was measured by the use of return on asset, profitability and liquidity. The study targeted reaching out to employees and members of 12 SACCOs. A stratified sampling technique was used to determine the sample for the study. Within the SACCO members' stratum, simple random sampling was used to identify individual respondents, and since the SACCO employees were too few, they were all included in the study. To establish the relationship between independent variables and dependent variables, multiple regression models were used. The finding of the study shows that there is a positive relationship between financial performance and financial innovation and investment decisions in SACCOs.

According to Njihia and Muturi (2016), a study about factors influencing the financial performance of SACCOs was conducted and the study employed descriptive research design. The significance of the linear regression model used was tested by the use of the ANOVA statistical model, which is the analysis of variance. These factors, which are membership size, dividend policy, and loan default, affect the financial performance of SACCOs.

Ndonga (2018), discussed factors affecting the financial performance of the employees' saving and credit cooperative societies of PESA K-rep welfare association. This study examines the factors that affect the financial performance of employee SACCOs with specific variables like interest rates charged, attitude towards risk, amount of loan desired and the savings mobilized. The study employed descriptive design and the research used a sample of 225 respondents from a population of 450 of PESA SACCO and KWA SACCO by using a simple random sampling technique. STATA 12 was used to perform an ordinary least squares regression analysis on the data. The study found a positive and significant relationship between SACCO's financial performance and all independent variables except interest rates.

A study by Sum R. and Membo F. (2017) discussed the effects of financial innovation on financial performance, deposit taking SACCO in Kenya, a case of Kiambu country. A descriptive research design was used and the target population of the study was 11 SACCOs. The sample size was 77, which was composed of 22 managers, 22 employees, and 33 members. The study was based on the concept of financial innovation. Financial innovation involves the design, development, and implementation of innovative financial instruments and processes. The studies adopted three theories; constraint-induced theory, innovation diffusion theory, and Schumpeter's innovation theory. The study analyzed the role of product, process, service, and institutional

innovations in the financial performances of SACCOs in Kenya. The analyzed variables were found to have a statistically significant effect on the financial performance of SACCOs in the study area.

As study by Odhaimbo (2018), undertaking on the determinants of financial performance of saving and credit cooperative societies in Nakuru Town, Kenya. The study was based on key concepts like membership size, frequency of supervision and employment management practices. The study was guided by theories like organizational theory and trade-off theory. The research design was a descriptive survey research design. Inferential and descriptive statistical methods which include means, standard errors, correlation coefficients and regression coefficients, to analyze the data were used. A Census sampling technique was used to include all managers of 32 SACCOs in Nakuru town who provided data through structured questionnaires. The findings indicate that membership size affected the financial performance of SACCOs and the correlation between membership size and financial performance was positive. Employment management practices were found to affect financial performance as well as expenditure within the budget estimates.

Ndonga (2016) conducted research on the factors that influence the financial performance of employee savings and credit cooperative societies. The objectives were based on the interest rate charged, attitude towards risk, amount of loan desired and the saving mobilized. The study concludes that there is negative relationship between the interest rates and the financial performance of SACCOs. This implies that an increase in interest could have lowered the demand for loans. The ability of members to afford it is reduced, thus affecting performance

According to the study by Jema, Otuya, and Kibati (2018), the effect of credit management on the financial performance of deposit taking saving and credit cooperative societies in Nakuru town, Kenya. Sound credit management is a prerequisite for a financial institution's stability and profitability. The studies specifically focused on the objective of determine the effect of credit standards and debt recovery on the financial performance of deposit-taking SACCOs. The study employed descriptive research design. The target population was 220 employees of the selected SACCOs in Nakuru Town, and a stratified random sample of 74 employees was used in the study. Data was obtained through questionnaires. Both descriptive and inferential statistics were used in analyzing the data with the help of the statistical package for social sciences (SPSS) version 16.0. The regression results showed that credit standards and debt recovery had a

positive and significant effect on the financial performance of the SACCOs. The study concluded that all the variables under study are statistically significant in explaining the financial performance of SACCOs under the study. It recommends that SACCOs should create effective credit management standards and enhance debt recovery techniques.

2.5. Empirical studies in Ethiopia

As the literature indicated in Ethiopia, there is no enough empirical literature directly addressing the current topic. However, the following studies in the Ethiopia context were conducted on the determinants of financial performance of SACCOs.

The study by Tadael (2017) on the determinants of financial performance of employees' saving and credit associations was conducted with the general object of determining the performance of employees' SACCOs, and the study would also offer knowledge about ESCAs. The study was aimed at investigating to what degree the loan management, saving capacity, technology and literacy level of management and members had affected the overall performance of ESCAs. Descriptive research design and inferential statistics were employed for the study and multiple regression analysis was applied to data to examine the effect of explanatory variables on the performance of ESCAs. The data collected was both primary and secondary data from Ethiopia Telecommunications Corporation ESCAs. The findings of the study state that loan management, saving capacity of members, technology adoption and literacy status of workers and members have a positive significant effect on the performance of ESCAs. This study was not comprehensive. It used Ethiopian telecommunications corporation employee saving and credit cooperative association societies only as a sample. It is a very narrow scope and it's difficult to generalize the finding to the other SACCOs in Addis Ababa, and as well as Ethiopia.

The study conducted by Ergetew (2015) on the determinants of financial performance of SACCO union in the South Wollo zone addressed different issues related to the current research topic. The research is descriptive and analytical in nature and the secondary data collected was analyzed by using simple statistical analysis like percentages, tables, and financial ratio analysis tools such as liquidity ratios, leverage ratios, profitability ratios, and trend analysis of balance sheets. The liquidity level of the SACCO unions is fairly high, but at a decreasing rate, and the leverage ratio of SACCO unions is highly leveraged. Their profitability rate is below the minimum required rate. This study focused on the internal determinant factors of the financial

performance of the SACCO union. It doesn't consider external factors and emphasis only on Sacco's union data.

The study was conducted by Yitayaw (2017) on determinates of financial performance of saving and credit cooperative unions in three zones of Amhara regional state, Ethiopia. The study investigates the effect of operational efficiency, management efficiency, capital adequacy, gearing ratio, the size, long-term debts, and growth of domestic products on the financial performance of SACCO unions. A quantitative research approach can be used and an explanatory research design can be employed. The total population of the study is 10 SACCO unions in the study area. A Purposive sampling technique was employed to determine sample size. Secondary data is a source of data that is collected through document review. The collected data was analyzed using descriptive statistics, correlation, matrix and multiple linear regression analysis. The impact of determinant variables on financial performance was tested by using the Radom Effect Model (REM). The findings of the study conclude that SACCO unions were averagely generating positive ROA and ROE during the study period. The regression results show that operational efficiency, management efficiency, capital adequacy, greening ratio, and loan to total debt ratio have a positive and statistically significant impact on ROA. OPE, LTD ratio, and GDP have a positive and statistically significant impact on ROE. CA and size have a negative and statistically significant impact on ROE. This study considers the SACCO union and secondary data was only used as a source of data, since it ignored primary SACCOs which are not members of the SACCO union in the study area, so it's not a comprehensive study.

Abeje (2020), study on the determinants of financial performance of SACCOs in Sodo Zuria wored, Wolaita zone. To achieve the objective, the study looked at the factors influencing Sacco's financial performance, like: competition from Omo microfinance institution, internal politics, saving culture, liquidity management, operating costs, and financial reporting. SACCOs in Sodo Zuria woreda were the target population of the study. Stratified and simple random sampling techniques were used for sample selection. The study found that competition from Omo microfinance, internal politics, and operating costs have negative and statistically significant effects on the financial performance of SACCOs. Whereas saving culture, liquidity management, and financial reporting have positive and significant effects on the financial performance of SACCO. The study recommends that SACCOs should: prioritize the interests of members when facing competition in the market, have effective policies and strategies to handle

internal politics, update minimum monthly and annual saving targets of members and societies on a timely basis, minimize time taken for loan processing, set effective policies which could be used in reducing operating costs, and follow standard internal and external reporting of cooperatives. This study was conducted at primary level SACCOs, but it covered only two woredas.

Negalign, (2020) identified factors influencing the financial performance of the saving and credit cooperative societies of Derash and Alle-woreda in SNNPRG, Ethiopia. To achieve the objective, the study looked at the factors influencing SACCOs' financial performance, like the interest rate charged, membership enrollment, duration of loan processing, and management of loan defaulters. A descriptive research design and a quantitative research approach were used for the study. The primary sources of data were collected from 220 staff members of Study area SACCOs Derash and Alle woreda in the southern region. The stratified sampling method was used and data collected was analyzed by descriptive statistics like; mean, standard deviation, frequency, and percentages. The findings of the study indicated that loan repayment, interest rates, membership enrolment, duration of loan processing, and management of loan defaulters were identified as major factors. The researchers suggest that to improve the financial performance of SACCOs in the region, they should strengthen their applicant screening criteria and due diligence assessments to select potential risk-taking applicants and adopt appropriate pre and post credit assessments.

2.6. Research gap

As previously stated, various studies on the factors influencing the financial performance of SACCOs and SACCO unions have been conducted. These studies are conducted using various methodologies and yield varying results. However, their findings are not exhaustive, and the studies did not include both SACCO union members and non-members of primary SACCOs. On the other hand, various studies on the current topic in Ethiopia have been conducted, with the majority of previous studies focusing on the SACCO union and overlooking the primary SACCOs that are not members of the SACCO union. As a result, there is no comprehensive study on urban SACCOs, and the variables used in this study are not considered at the same time in the previous literature.

Therefore, the current study attempted to fill the gap by initiating a financial strategy towards the determinate of financial performance of SACCO like; internal factors such as asset quality, capital adequacy, liquidity management, and management efficiency; and external factors such as growth domestic product, and inflation; and other factors like computation with bank and micro-finance institutions and SACCO union membership considered as dummy variables to examine the financial performance of members and non-members of the SACCO union. Furthermore, no comprehensive and recent studies on the determinants of the financial performance of Ethiopian urban primary saving and credit cooperative societies have been conducted.

2.7. Conclusion and conceptual frame work

2.7.1. Conclusion

According to the findings of the literature review, different outcomes exist in terms of the financial performance of saving and credit cooperative societies. Different researchers conducted the study on the financial performance of SACCOs with different study areas, methodology, and sample size, and they came up with different results (findings). These studies were conducted by different researchers like James (2013), who discussed factors influencing the financial performance of saving and credit cooperative societies in Kenya. Osoro and Muturi (2015) investigated the effects of liquidity-risk management practices on the financial performance of SACCOs in Kisii, Kenya. Hannah, (2015) assessed the determinants of financial performance of savings and credit cooperatives in the banking sector in Kenya. Njihia and Muturi (2016) investigated the factors that influence the financial performance of cooperative saving and credit societies. Ndonga (2016) conducted research on the factors influencing the financial performance of Sacco employees. Dr. Kepha and Linet (2016) investigated the financial performance determinants of saving and credit societies in Kiambu, Kenya. Odhaimbo (2018) discussed the financial performance determinants of SACCOs, and Jema, Otuya, and Kibati (2018) discussed the effect of credit management on the financial performance of deposit-taking saving and credit cooperative societies in Nakuru, Kenya. Ndonga (2018) discussed the factors that influence the financial performance of employee savings and credit cooperative societies (a case study of PESA K-rep welfare association SACCOs). Dr. Sambasivam (2013) investigated the financial performance of GOHE cooperative savings and credit Union using the common financial ratio. Ergetew (2015) investigated the determinants of the financial performance of a saving and credit

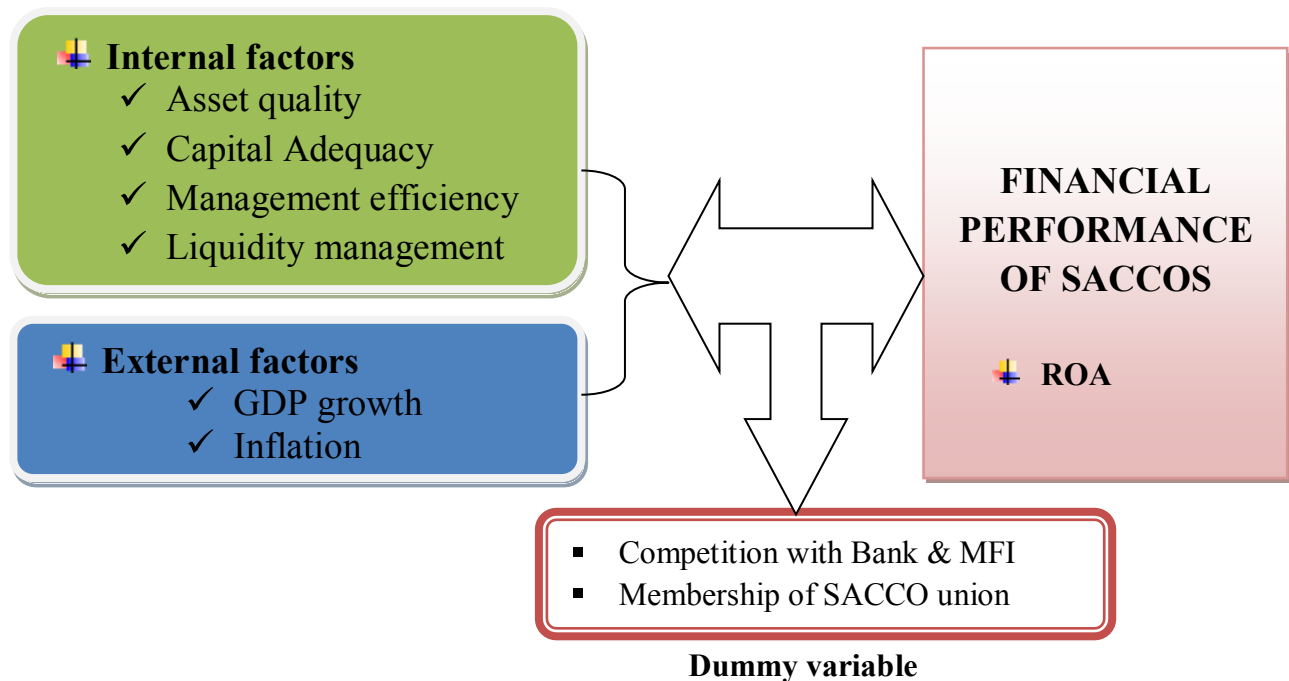
cooperative union in Ethiopia's south Wollo zone. Tadael (2017) investigated the performance determinants of Employees Saving and Credit Associations in Ethiopia Telecom Corporation. Yitayaw (2017) conducted research on the factors that influence the financial performance of savings and credit cooperative unions in three zones of Amhara regional state, Ethiopia. Abeje (2020) conducted research on the financial performance determinants of SACCOs in Sodo Zuriawored, Wolaita zone. Negalign (2020) discussed the factors influencing the financial performance of saving and credit cooperative societies in the Derash and Alle woredas of Ethiopia's SNNPRG region.

As a result, the researcher clearly identifies the gap in previous studies and is motivated to conduct the research using the identified variable to achieve the study's ultimate goal.

2.7.2. Conceptual Framework

Conceptual framework involves forming an idea about the relationship between variables in the study and showing relationship graphically or diagrammatically (Mugenda, 2003). figure 2.1 show the relationship between specific internal and external factors, and Competition of bank & MFI, SACCO union membership as dummy variables and financial performance of SACCOs.

Figure 2.1 conceptual Framework
Independent Variables



Source: - Adapted by the researcher from literature review

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1. Introduction

This section discusses the methodology of the research adopted in order to achieve the objectives of the study. The research approach and design, population, sample size and sampling techniques, data sources, data collection methods, and data analysis techniques that were used are included in this chapter. According to Dawson (2009), research methodology is the philosophy or general principles which guide research.

3.2. Research approach

Creswell and Crewell (2018) define research approaches as "research plans and procedures that span the stairs from large assumptions to certain techniques of information collection, analysis, and interpretation." This plan necessitates several decisions, which do not have to be made in the order in which they make sense to us or in which they are presented. Furthermore, this research approach is used due to the nature of the research problem or issue being addressed, the researchers' personal experience, and the study's audience.

The researchers used a mixed research approach (quantitative & qualitative) for this study. The reason for using this approach is that the mixed method is an approach to inquiry involving collecting both qualitative and quantitative data integrated into forms. Mixed research was a suitable approach that yielded positive benefits, and this approach has the potential to provide a greater depth and breadth of information which is not possible by utilizing singular approaches in isolation (Creswell & Crewell, 2018).

3.3. Research Design

A research design provides a framework and organization for the way for gathering and analysis of data in accordance with the research objective. It is a road map to gathering, evolution, and analysis of data. The choice to be made about what, where, when, how much, and by what means to address research forms a research design (Kothari, 2004).

The researchers used sequential explanatory and descriptive research designs. A sequential explanatory design is a popular mixed methods strategy. It explains the research topic and thus answers the questions what, why, and how. It is typically used to explain and interpret quantitative results through the collection and analysis of additional qualitative data (Creswell,

2009). The strategy gives more emphasis on quantitative data, and then mixes the data collected with qualitative data collection. Thus, the researcher used this strategy to describe, explain, and interpret factors and improve the cause and effect of variables and provide more opportunities for the researcher to study new perspectives. Descriptive research design includes various types of surveys and fact-finding inquiries, and it is an exhaustive type of research design to answer what and how Kothari (2005). The primary goal of descriptive research is to describe other states of affairs as they currently exist. The designs in such studies concentrate on formulating the study's objective, designing the data collection methods, selecting the sample, collecting the data, processing and analyzing the data, and reporting the findings.

3.4. Sampling

Population, sample size and sampling technique are identified to select the required sample from the theoretically determined population. The representative sample was selected based on the researcher's judgments (purposively) with appropriate sampling technique.

3.4.1. Population

Mugenda and Muganda, (2003) mentioned that a population is an entire group of people, events, or objects having the same observable characteristic that the researcher wishes to investigate. The researcher's theoretical target populations are Ethiopian saving and credit cooperative societies (SACCOs), and the sample frame consists of primary SACCOs in Addis Ababa, which are selected by the researcher's judgment. The study was carried out at primary saving and credit cooperative societies (SACCOs) in Addis Ababa. According to the Addis Ababa Cooperative Agency (2020), there are 1,187 registered SACCOs in Addis Ababa, but the majority of them are inactive, with 49 percent (581 SACCOs) being active. Among the total SACCOs in the study areas, 348 are registered as members of two SACCO unions in Addis Ababa, while the remaining 839 are non-members of the union. The first SACCO union is the Addis Ababa SACCO union, which was founded in 1995 E.C. and has 265 primary SACCO members. The Ras-Agaz SACCO union, founded in 1998 E.C., is the second. This union has 83 primary SACCOs as members (Addis Ababa cooperative Agency, 2020). These unions, however, are not as strong, and many of the union members' primary SACCOs are inactive.

As a result, the researcher conducted the research on selected primary SACCOs, which were chosen from both members and non-members of the SACCO union, and the target population for

this study was primary SACCOs in Addis Ababa from all sub-cities that had a 5 year consecutive audit report.

3.4.2. Sample size and sampling Technique

The researchers purposively selected sample SACCOs from 10 sub-cities based on these criteria. The criteria for selecting a sample are; SACCOs registered before 2014 and which are properly audited for a consecutive five years (from 2015-2019). According to these criteria, 45 SACCOs are chosen as a sample from all sub-cities using a purposive sampling technique. The researcher gathered quantitative and qualitative data from a pre-selected sample. Secondary data were gathered from audited financial statements of the selected sample SACCOS, while primary data were gathered through interviews with each sample Sacco's manager or committees, each sub-city cooperative promotion and organization official, and federal cooperative agency Sacco's expert.

Table 3.1. Proportion of sample SACCOs for the study

No	Addis Ababa Sub-cities	Numbers of sample SACCOs	Proportion
1	Nifas silk lafto sub-city	3	6.67%
2	Lideta sub-city	5	11.11%
3	Kerkos sub-city	5	11.11%
4	Akakikality sub-city	5	11.11%
5	Arada sub-city	3	6.67%
6	Gulele sub-city	5	11.11%
7	Addis ketema sub-city	5	11.11%
8	Yeka sub-city	5	11.11%
9	Bole sub-city	4	8.89%
10	Kolfekeraniyo sub-city	5	11.11%
Total sample		45	100%

Source:- from each sub city Cooperative organization and promotion office. March 2021

3.5. Data sources

Secondary as well as primary data were used in this study. Secondary data was collected as the main source of information for this study in the area of the determinants of urban primary Sacco's financial performance, as well as qualitative data. Secondary data sources include

SACCO financial statements or annual audit reports, as well as reports from SACCO unions and agencies. Secondary data was gathered by reviewing documents as a data collection instrument. Data for the years 2015 to 2019 were gathered from audited financial statements of a sample of SACCOs. Semi-structured interviews were also used to collect primary data from Sacco's managers, personnel, and committees.

3.6. Data Analysis Method

The researchers used document reviews to collect quantitative data as well as interviews so that he could be qualitatively ready for analysis. The data gathered was used to examine the financial performance determinants of Ethiopia's urban primary saving and credit cooperative societies. The collected data was regressed and analyzed using descriptive statistics, correlation, matrix and multiple linear regression analysis. STATA version 13.0 was used for secondary data and inferential was employed through the use of multiple regression analysis to establish the nature of the existing relationship between the research dependent variable (ROA) and six explanatory variables. For the qualitative data analysis of dummy variables, content and narrative analysis were used.

3.7. Validity and Reliability Test

In order to check the validity of data collected, and the instruments used, professional opinion sought from seniors, researchers and peers on face, content and format of the interview. Consultations with these people help the researcher to identify errors and offer the opportunity to modify and improve the instrument.

To determine whether the assumptions of the classical linear regression model (CLRM) are valid or not in the model, diagnostic tests are performed. Consequently, the basic CLRM assumptions tested in this research are errors have zero mean, multicollinearity, homoscedasticity, normality, and model specification.

The first assumption is that errors have a mean of zero. The assumption will be violated, according to Brooks (2008), if the regression equation excludes the constant term. As a result, as stated in section 4.4.2, the study accepts this assumption.

The second assumption is multicollinearity, which refers to the condition in which the explanatory variables are strongly related to one another. The variance inflation factor (VIF) test was used in the study to check for multicollinearity.

The third assumption under consideration is heteroskedasticity. The homogeneity of variance of the residuals is one of the basic assumptions for ordinary least squares regression. The assumption of heteroskedasticity, according to Gujarati (2004), holds if the variance of the errors is not constant. The Breusch-pagan/Cook-Westerberg test is used to determine whether heteroskedasticity exists.

The fourth assumption is the normality of the error distribution, which assumes that estimation errors (differences between actual and estimated dependent variable scores) are normally distributed. A kernel density estimate graph of the residuals with a normal distribution can be used to detect violations of this assumption. The kernel density estimate with the normal option displays a density graph of the residuals with a normal distribution superimposed on the graph to verify that the residuals are normally distributed.

3.8. Regression equation

Multiple regressions are a statistical tool that allows you to investigate the relationship between multiple explanatory variables and a dependent variable (Brooks, 2008). On the basis of the general regression equation one multiple regression model is specified and estimated to investigate the relationship between the dependent variable, ROA, and six explanatory variables, which include asset quality, capital adequacy, liquidity management, management efficiency, GDP growth rate, and inflation rate. The models are specified as follows;

$$\mathbf{ROA_{it} = \beta_0 + \beta_1 AQ_{it} + \beta_2 CA_{it} + \beta_3 LM_{it} + \beta_4 ME_{it} + \beta_5 GDP_{it} + \beta_6 IN_{it} + \epsilon}$$

Where;

ROA= Return on Asset

Financial performance= ROA

AQ= Asset Quality

CA=Capital adequacy

LM= Liquidity management

ME= Management efficiency

GDP= Growth domestic product

IN= Inflation rate

ϵ = The Error Component for firm i at time t assumed to have zero mean $E\{\epsilon_{it}\} = 0$

β_0 =Constant

$\beta = 1, 2, 3, 4 \dots 6$ are estimated parameters

i = primary SACCOs, $i = 1, 2, 3 \dots 45$

t = time period, $t = 1, 2 \dots 5$

3.9. Operational Definitions and Measurements of variables

In the case of the quantitative study, and in order to make the study clear to all readers, how groups of variables are defined and measured has been clearly stated (Creswell, 2009). The operational definition and measurement of each variable in this study are provided below.

Dependent Variable

The research used return on asset (ROA) as a proxy to measure the performance of SACCOs, which reflects whether the SACCOs are profitable and/or efficient in their operations. As a result, it is a critical financial performance indicator. The ROA of SACCOs is calculated as the ratio of earnings after interest and tax to total assets for each firm over the course of a year.

Independent Variables

Asset quality

Asset quality is a component of financial institution management that entails evaluating a firm's asset to facilitate the measurement of the level and size of credit risk associated with its operation. It is related to the left-hand side of a company's balance sheet and focuses on the quality of loans that provide earnings for the company (Basel, 1997). Asset quality and loan quality are two terms that essentially mean the same thing, and their management is extremely important in the finance industry.

Capital adequacy

The amount of capital available to support firm operations and act as a buffer in the event of a bad situation is referred to as capital (Athanasoglou et al. 2005). According to Dang (2011), the capital adequacy ratio is used to assess capital adequacy (CAR). The capital adequacy ratio demonstrates a company's internal strength in the face of a crisis. The capital adequacy ratio is directly proportional to a company's ability to withstand a crisis. Capital adequacy ratios require that a portion of deposits be set aside whenever a loan is made. These deposits are set aside as

reserves to cover losses if the loan fails. As a result, these provisions limit the amount of deposits that can be loaned out, thereby limiting credit creation.

Liquidity management

Liquidity is defined as the ability to meet cash and collateral obligations without incurring significant losses. The ease with which an asset or security can be converted into ready cash without affecting its market price is referred to as liquidity. In either case, liquidity management refers to an investor's or manager's effort to reduce their exposure to liquidity risk (Sean Ross, 2021).

Management Efficiency

Management efficiency is one of the most important internal factors influencing a company's profitability. It is reflected in various financial ratios such as total asset growth, loan growth rate, and earnings growth rate. Nonetheless, it is one of the complexes that can be captured using financial ratios. Additionally, operational efficiency in managing operating expenses is a dimension of management quality (Athanasoglou et al. 2005).

Growth domestic product

Gross Domestic Product (GDP) is the total monetary value of all final goods and services produced (and sold on the market) within a country over a given time period. GDP measures the monetary value of final goods and services—that is, those purchased by the end user—produced in a country over a given time period. It includes all of the output produced within a country's borders. GDP is made up of goods and services produced for market sale, as well as some nonmarket production, such as government-provided defence or education services.

Inflation rate

Inflation is defined as an increase in the prices of most goods and services used on a daily or frequent basis, such as food, clothing, housing, recreation, transportation, consumer staples, and so on. Inflation is defined as the average price change over time of a basket of commodities and services. Inflation is defined as a decrease in the purchasing power of a country's currency unit.

Table 3.2. Operational measurements of variables

Variables		Notation in the model	Measurement	Variable description in regression model
Dependent Variable	Return on Asset	ROA	$\frac{\text{Net Income}}{\text{Total Asset}}$	Net income to total Asset
Independent variable	Asset quality	AQ	$\frac{\text{Non performing loan}}{\text{Total loan}}$	Non-performing loan to total loan
	Capital adequacy	CA	$\frac{\text{Total capital}}{\text{Total Asset}}$	Total capital to total Asset
	Liquidity management	LM	$\frac{\text{Current Asset}}{\text{Current Liability}}$	Current Asset to current liabilities
	Management efficiency	ME	$\frac{\text{Operating expense}}{\text{Net operating income}}$	Operating expense to net operating income
	Growth domestic product	GDP	GDP rate	Yearly growth domestic product
	Inflation rate	INF	General Inflation Rate	Yearly general inflation rate

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

This chapter presents the data analysis and the results of the data from Addis Ababa's urban primary SACCOs. The study made use of annual unbalanced panel data, in which all variables were observed for each cross-section and time period. The study has a time series segment spanning from the period 2015 up to 2019, and a cross section segment which considered 45 saving and credit cooperative societies in the Addis Ababa city administration. Accordingly, the results of descriptive statistics, correlation analysis, the test assumptions and the result of the regression analysis are presented in the following sub-sections.

4.1. Descriptive statistics

The descriptive statistics for the dependent and independent variables for 45 SACCOs in Addis Ababa from year 2015 to 2019 with a total of 225 observations are presented below.

Table 4.1 Descriptive statistics of dependent and independent variables

	Dependent variable	Independent variable					
	ROA	CA	AQ	LM	ME	GDP	INF
Mean	0.0343	0.1425	0.1153	1.2009	3.4399	-1.0545	0.1154
Max	0.4844	0.9713	0.9713	7.6908	13.3516	-0.9833	0.9713
Min	0.0002	-0.0115	-0.4702	0.0351	0.2139	-1.1785	-0.4702
SD	0.0462	0.1306	0.6043	0.7034	2.2074	0.1321	0.6043
Obser.	225	225	225	225	225	225	225

Source: - Computed from Stata-13 result

As indicated in the above table, the financial performance or return on assets of urban primary SACCOs in the study area has achieved a mean positive before tax profit of birr 3.43 over the last five years. The mean ROA for the entire sample was 3.43 percent, with a maximum of 48.44 percent and a minimum of 0.02 percent. Accordingly, the highest profitable SACCOs return is 48.44 percent among the sampled SACCOs, and the standard deviation indicates that the value of ROA deviates from its mean on both sides by 4.62 percent, indicating that there was moderate variation from the mean.

According to descriptive statistics, the mean value of capital adequacy was 142.51 percent, with the maximum and minimum values being 97.13 percent and -1.15 percent, respectively. This result shows that the majority of the 45 SACCOs under study had moderate capital adequacy, while some had extremely low capital adequacy, resulting in poor financial performance. The standard deviation of capital adequacy is 13.59 percent, indicating that there is very little variation from the mean and that nearly all urban SACCOs studied during the study period had insufficient capital.

According to descriptive statistics, the mean value of liquidity management was 120.09 percent, with a maximum and minimum value of 769.08 percent and 70.34 percent, respectively. This result indicates that the majority of saving and credit cooperatives retained 120.09 percent of their total assets as current assets. The average value of 1.2009 indicated that there were birr 1.2009 current assets to meet each birr current liability's immediate obligation. With a standard deviation of 70.34 percent, this means that it deviates from its mean by this amount on both the right and left sides. This indicates that there is little variation from the mean.

According to the descriptive statistics shown in the above table, the mean value of asset quality was 11.53 percent, with maximum and minimum values of 97.13 percent and -47.05 percent, respectively. The standard deviation for asset quality was 60.43 percent, indicating that there is high variation from the mean. This result shows that the majority of SACCOs under study had non-performing loans and their asset quality ratios were relatively high, indicating that there were high non-performing loans and the financial performance of SACCOs under study was negatively influenced.

According to the above-mentioned descriptive statistics, the mean value of management efficiency was 343.99 percent, with maximum and minimum values of 1335.16 percent and 21.39 percent, respectively. The standard deviation for management efficiency was 220.74 percent, indicating that there was little variation from the mean. This implies that the majority of SACCOs in the study generate low revenue when compared to the expenses incurred to generate it, resulting in poor financial performance. If operating expenses are excessively high, net operating income suffers.

The outputs of descriptive statistics show the country's annual GDP growth and its relationship to financial performance; the natural logarithm of annual GDP is used as a proxy. The natural logarithm of GDP's mean was -105.45 percent. It had a maximum value of -98.33 percent and a minimum value of -117.85 percent. The standard deviation of growth domestic product was 13.21 percent, indicating that there was high variation from the mean.

The results of descriptive statistics show the country's annual inflation rate and its relationship with financial performance; the natural logarithm of annual inflation is used as a proxy. The mean natural logarithm of the inflation rate was 11.5 percent. It had a maximum value of 97.13 percent and a minimum value of -47.02 percent. The standard deviation of the inflation rate was 60.43 percent, indicating that there was high variation from the mean.

4.2. Correlation Analysis

This section presents the results and discussion of the Correlation analysis, which was used to determine the relationship between the independent variable and Sacco's financial performance (ROA). The degree of linear relationship between variables is measured by the Correlation. According to Brooks (2008), the correlation coefficient value is always between +1 and -1. A correlation coefficient of +1 indicates that there is perfect positive relationship between two variables, while a correlation coefficient of -1 indicates that the two variables have a perfect negative relationship. A correlation coefficient of zero indicates the absence of relationship between two variables (Brooks, 2008). The table below shows the correlation matrix among dependent and independent variables.

Table 4.2 Correlation Matrix

	ROA	CA	LM	ME	GDP	INR	AQ
ROA	1.0000						
CA	0.2720	1.0000					
LM	0.0247	0.0128	1.0000				
ME	-0.3295	-0.1671	-0.1190	1.0000			
GDP	0.0337	0.0592	-0.0635	-0.0096	1.0000		
INR	-0.0325	0.0152	0.0744	0.0672	-0.6197	1.0000	
AQ	0.0270	0.6633	0.0723	-0.1230	0.0225	0.0030	1.0000

Source:- computed from Stata-13 result

According to the correlation matrix, capital adequacy ratio, liquidity management, asset quality, and growth in domestic products are all positively correlated with return on assets. This meant that increasing these positively correlated independent variables would result in increased SACCO performance, while decreasing them would result in decreased SACCO performance. Management efficiency and inflation rate had a negative correlation with return on assets. This implied that the increment of management efficiency and inflation rate would result in decreased performance of SACCOs, while the decrement of management efficiency and inflation rate would result in an increment of performance. Management efficiency measures operating expenses to net operating income. If operating expenses are high, they affect performance negatively, which results in low net operating income.

4.3. Regression Model Tests

The test of assumption of regression model is required for valid hypothesis testing and to make data available for reliable results. Accordingly, the study has gone through the most critical regression diagnostic tests consisting of multicollinearity, heteroskedasticity, normality, and model specification tests taken in the study.

4.3.1. Model Selection (Random Effect versus Fixed Effect Models)

According to Brooks (2008), there are two types of panel estimator approaches that can be used in financial research: fixed effects models and random effects models. A Hausman test is used to select between the two approaches. To conduct a Hausman test, the number of cross sections should be greater than the number of coefficients to be estimated. Thus, to determine whether the fixed effects are necessary or not, this study used the Hausman specification test as recommended by Brooks (2008) and others. The hypothesis for the model selection test was formulated as follows:

H₀: Random effects model is suitable

H₁: Fixed effects model is suitable

$\alpha = 0.05$

Decision Rule: Reject H₀ if the P value is less than the significant level of 0.05. Otherwise, do not reject H₀.

Table 4.3. Hausman Test

```
. hausman fe re
```

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fe	(B) re		
CA	.1452881	.1453624	-.0000743	.0029787
LM	.0015937	.0016256	-.0000319	.0004421
ME	-.0060566	-.0060984	.0000418	.0001445
AQ	-.1262495	-.1254885	-.000761	.0042028

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

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
 = 0.15
 Prob>chi2 = 0.9972

Source: - computed from Stata-13 result

The p-value for the Hausman model selection test in this study is 0.9972. As a result, the null hypothesis, which is the random effect model, was accepted, and the random effect model was used in the study.

4.3.2. Classical Linear Regression Model (CLRM) Tests assumptions

Before delving deeper into panel data econometric measurement, the first issue is to test the assumption of the classical linear regression model (CLRM). These were required to demonstrate that the estimation technique, ordinary least squares (OLS), had a number of desirable properties, and that hypothesis tests on the coefficient estimates could be conducted validly (Brooks, 2008). In this study, the following CLRM assumptions must be tested: errors equal zero mean test, multicollinearity, heteroskedasticity, normality, and model specification test.

4.3.2.1. The errors have zero mean ($E(u_t) = 0$)

The first assumption required by the classical linear regression model is that the average value of the errors is zero. If a constant term is included in the regression equation, this assumption will never be violated (Brooks, 2008). As a result, because this study included a constant term (β_0) in the regression model, it met the first assumption.

4.3.2.2. Test for Multicollinearity

Multicollinearity is a concern for multiple regressions, not because it exists, but because of the degree to which it exists. The regression model estimates of the coefficients become unstable as the degree of multicollinearity increases, and the standard errors for the coefficients can become wildly inflated. The variance inflation factor (vif) test was used in the study to check for multicollinearity.

Table 4.4. Multicollinearity test of variance inflation factor (VIF)

Variable	VIF	1/VIF
CA	1.83	0.545121
AQ	1.80	0.555147
INR	1.65	0.605749
GDP	1.64	0.608446
ME	1.05	0.949414
LM	1.03	0.971700
Mean VIF	1.50	

Source: - computed from Stata-13 result

If VIF values are greater than 10, it may need further investigation. Tolerance= 1/VIF, is used to check the degree of collinearity. The method used in this study to test the existence of multicollinearity was the variance inflation factor. As the VIF test result showed above, all variables VIF value were not greater than 10, i.e. they had a value of less than 10, which indicates that multicollinearity is not a problem for this study.

4.3.2.3. Test for Heteroskedasticity Assumption ($\text{var}(ut) = \sigma^2 < \infty$)

As indicated by Brooks (2008), if the variance of the errors is constant, this assumption holds, but the assumption is violated if the errors do not have a constant variance, which is termed as heteroscedasticity. In this study, the Breusch-Pagan/Cook-Weisberg test was used to test for the existence of heteroscedasticity across the range of explanatory variables.

H0: Error has constant variance (Homoscedasticity)

H1: Error has no constant variance (Heteroscedasticity)

Table 4.5. Heteroscedasticity test of Breusch-Pagan/Cook-Weisberg test

```
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of ROA

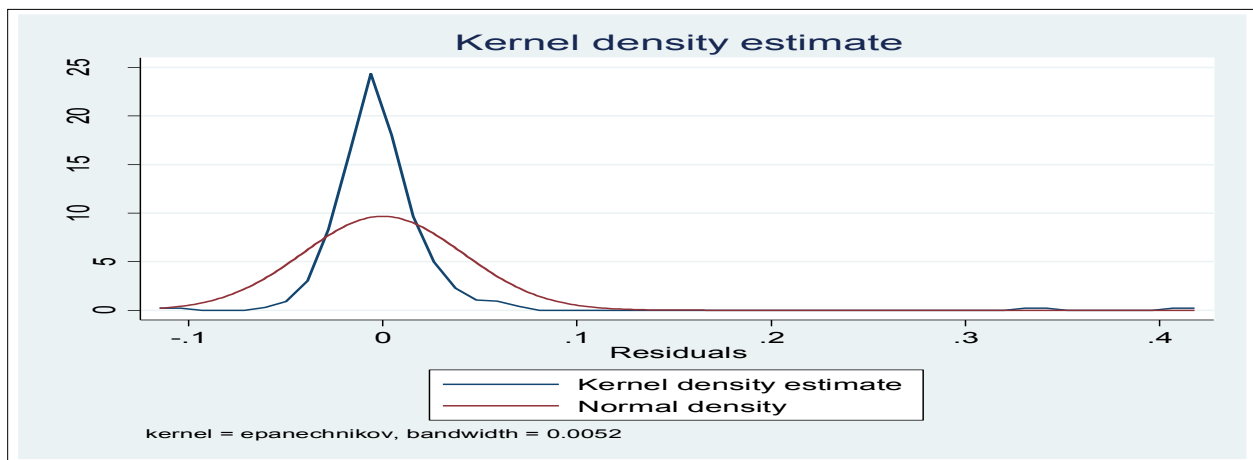
      chi2(1)      =    404.43
      Prob > chi2  =    0.0000
```

Source: - Computed result using Stata-13

The Breusch-Pagan/Cook-Weisberg test for this study has a Chi-square (1)= 404.43 with p-value of 0.0000 for the regression models, which is less than 0.05. Therefore, in this situation the studies do not accept the null hypothesis, H_0 and conclude the problem of heteroskedasticity in the model. As a result, the problem of heteroskedasticity arose in the study; to address this, and to solve the difficulty of heteroskedasticity, robust regression was used (El-Melegy and Moumen, 2014).

4.3.2.4. Normality Test

Figure 4.1. Normality Test



Source: - computed from Stata-13 result

In verifying that the residuals are abnormally distributed due to the high variation between the data of SACCOs under the study, which is a very important assumption for regression, the kernel density estimate with the normal option displays a density graph of the residuals with a normal distribution superimposed on the graph.

The kernel's bandwidth is a free parameter that has a significant impact on the resulting estimate. The above diagram witnesses that the red curve is the true density (a normal density with a mean of 0 and variance 1). In comparison, the Kernel density estimate, grey curve, normality assumption holds with an Epanechnikov, Bandwidth of 0.0052 because its density estimate is far close to the true density, therefore there is no evidence of abnormality in the data.

4.4. Model Specification

When one or more relevant variables are omitted from the model or one or more irrelevant variables are included in the model, a model specification error occurs. Specification errors can be detected using a variety of methods. Among all regression specification error tests (RESET) for omitted variables, the Ramsey RESET test was used in this study, which used powers of the fitted values of the dependent variable (ROA).

The hypothesis for the model specification test was formulated as follow:

H₀: model has no omitted variables

H₁: model has omitted variables

Decision Rule: Reject H₀ if P value is less than significant level 0.05. Otherwise, do not reject H₀.

Table 4.6. Model Specification test, Ramsey RESET test of the fitted value of ROA

```
. ovtest

Ramsey RESET test using powers of the fitted values of ROA
Ho: model has no omitted variables
      F(3, 216) =      1.17
      Prob > F =      0.3208
```

Source: - computed from Stata-13 result

The Ramsey RESET test model selection test for this study has a p-value of 0.3208 for the regression models. Thus, the null hypothesis, which is that the model has no omitted variables, was accepted. Therefore, the model was perfect and it had no omitted variables that affected the dependent variable (ROA).

4.5. Regression Analysis

This section presents the empirical findings from the econometric output on the determinants of financial performance of urban SACCOs in Addis Ababa, Ethiopia. Under the following regression outputs, the beta coefficient may be negative or positive; beta indicates each variable's level of influence on the dependent variable.

4.5.1. Regression result

Empirical model: the empirical model used in the study in order to investigate the determinants of financial performance of urban saving and credit cooperative societies in Addis Ababa.

$$ROA_{it} = \beta_0 + \beta_1AQ_{it} + \beta_2CA_{it} + \beta_3LM_{it} + \beta_4ME_{it} + \beta_5GDP_{it} + \beta_6INR_{it} + \varepsilon$$

The section that follows delves into the results analysis for each explanatory variable as well as the impact of specific internal and external factors on the financial performance of Addis Ababa's urban primary saving and credit cooperative societies. Furthermore, the discussion analyzed the statistical findings of the study in relation to the previous empirical evidence. Hence, the following discussions present the interpretation of the random effects model regression results.

Table 4.7. Regression result

ROA	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
CA	.1453624	.0289844	5.02	0.000	.0885541	.2021706
LM	.0016256	.0040305	0.40	0.687	-.0062741	.0095253
ME	-.0060984	.0012993	-4.69	0.000	-.0086449	-.0035518
GDP	.0024055	.0563175	0.04	0.966	-.1079748	.1127859
INR	-.0063222	.0271778	-0.23	0.816	-.0595896	.0469453
AQ	-.1254885	.035975	-3.49	0.000	-.1959981	-.0549789
_cons	.0435482	.0795255	0.55	0.584	-.1123189	.1994154
sigma_u	0					
sigma_e	.04198867					
rho	0	(fraction of variance due to u_i)				


```

. xtreg ROA CA LM ME GDP INR AQ, re

Random-effects GLS regression              Number of obs   =       225
Group variable: Year                       Number of groups =         5

R-sq:  within = 0.1989                    Obs per group:  min =        45
        between = 0.8317                    avg =       45.0
        overall = 0.2019                    max =         45

corr(u_i, X) = 0 (assumed)                Wald chi2(6)    =       55.17
                                                Prob > chi2     =       0.0000

```

Source: - computed from Stata-13 result

The R-squared value indicates how well the regression model explains actual variations in the dependent variable (Brooks, 2008). The model's overall R-squared value was 20.19 percent. It

indicates that the total variability of examining the impact of the specific internal and external factors on the financial performance of urban primary saving and credit cooperative societies in Addis Ababa by the variables in the model was 20.19percent. Thus, these variables, collectively, are moderately suitable explanatory variables to investigate the effect of the determinants of urban primary saving and credit cooperative societies in the study area.

According to various literatures, R-square is not very informative in panel data analysis. In panel data analysis, rely on individual and overall model significance rather than R-square or adjusted R-square. In general, the R-square is lower in cross-sectional data than in time series data. It is not too high in panel data due to the heterogeneity of cross-sections. When your data is more time dominant, the R-square may be higher than when the panel data is more cross section dominant. In general, the inclusion of more related explanatory variables raises the value of R-square. However, this study needs to focus more on the research objectives, such as individual significance and overall significance of the model, to ensure that there is no model specification bias and to avoid spurious regressions. Another thing to keep in mind is that a very high R-square in the presence of very few significant t-values indicates the presence of multicollinearity and spuriousness in the regression.

The regression F statistic (55.17) and p-value of zero (0.0000) indicate that all independent variables in the model jointly influence our dependent variables, return on assets. Thus, it implies that the model's independent variables were able to explain variations in the dependent variable; in other words, all of the model's independent variables jointly influenced our dependent variables (ROA). In addition to these, three independent variables were significant at the 1% level of significance among the independent variables in the model, fitting the criteria (at least 50 percent).

The beta coefficient in the regression outputs can be negative or positive; beta indicates the level of influence of each variable on the dependent variable. A positive beta coefficient indicates that the variable has a positive impact on the dependent variable, while a negative one indicates that the variable has a negative impact on the dependent variable. It tells us that when the independent variable increases by 1 percent (1 birr), the dependent variable increases or decreases by the beta amount, but the independent variables should have a statistically significant impact on the dependent variable.

The model result of this study indicates that the coefficient of capital adequacy (CA) is 0.1454, indicating that SACCO capital adequacy had a positive significant relationship with ROA at the 1% level of significance. The coefficients of asset quality (AQ), management efficiency (ME), and inflation rate (IN) are -0.1235, -0.0061, and -0.0063, respectively, indicating that asset quality and management efficiency of SACCOs had a negative significant relationship with ROA at the 1% level of significance. At the 1% level of significance, the inflation rate had a negative insignificant relationship with ROA. Furthermore, liquidity management (LM) and GDP growth had coefficients of 0.0016 and 0.0024, indicating a positive and insignificant relationship with ROA, respectively.

4.5.2. Discussion of Regression result

The regression output obtained from Table 4.7 clearly show that there is a significant relationship between the dependent and independent variables of urban primary SACCOs with ROA, which are included in the model of this study. The specifics of each variable's relationship to the dependent variable return on asset (ROA) are discussed further below.

4.5.2.1. Asset quality and financial performance

H1: Asset quality has a positive and statistically significant effect on the financial performance of urban primary SACCOs.

According to the regression output in table 4.7 above, asset quality is statistically significant because its p-values equal 0.001, which is less than the usual significance level of 5%, and asset quality has a negative relationship with study area urban primary SACCOs' financial performance, i.e., it has a coefficient estimate of -0.1235. Holding other independent variables constant, an increase in asset quality of one birr reduces the return on assets (ROA) of urban primary SACCOs in Addis Ababa by 0.1235 birr. This indicates that poor asset quality or high non-performing loans to total assets are related to SACCO performance. The losses resulting from non-performing loans pose the greatest risk to the firm, and non-performing loan ratios are the best proxies for asset quality (Dang, 2011). It is the major concern of any firm to keep the amount of non-performing loans at a low level. This is due to the fact that non-performing loans affect the performance of the bank. The finding did not support the working hypothesis that asset quality has a positive and statistically significant effect on the financial performance of urban primary SACCOs. The previous study indicated that a low non-performing loan to total loan ratio indicates that the company is in good health and the lower the ratio, the better the

performance (Sangmi and Nazir, 2010). In this study, the negative correlation coefficient between poor asset quality and ROA is strong. Thus, asset quality determines the performance of urban primary SACCOs in Addis Ababa, Ethiopia.

The study confirmed through interviews that the low asset quality ratio is better; implying that provision for doubtful debt is lower when compared to loans advanced, as SACCOs are financial institutions based on finance-related activities. According to the researcher's observations, institutionally based SACCOs provide satisfactory loans based on members' savings and salary scales, and they are highly protected from non-performing loans. Whereas community-based SACCOs in the study demonstrated low loan capacity due to the fact that the majority of those SACCOs are organized with very small members, capital, and basic awareness of SACCOs' advantages. As a result, SACCOs' financial performance suffers, and loans are only granted infrequently or in inadequate amounts.

4.5.2.2. Capital adequacy

H2: Capital adequacy has a positive and statistically significant effect on the financial performance of urban primary SACCOs.

According to the regression output above, capital adequacy (CA) is statistically significant because its p-value equals 0.000, which is less than the usual significance level of 1%, and it also has a positive relationship with urban primary SACCOs' financial performance, with a coefficient estimate of 0.1454. Holding all other independent variables constant, a one-birr increase in capital adequacy raises the return on assets (ROA) of urban primary SACCOs by 0.1454 birr. As a result, the findings support the working hypothesis that capital adequacy has a significant positive effect on the financial performance of urban primary SACCOs. According to interviewees, capital is the lifeblood of urban primary SACCOs. SACCOs provide financial services to their members by using member patrons to fund their SACCOs. The capital adequacy ratio calculates the proportion of a member's capital to the total assets. The study found that capital adequacy had a positive and significant effect on the financial performance of Addis Ababa's urban primary SACCOs.

In consistency with this study, studies conducted by Sangmi and Nazir (2010), Dang (2011), Alamri and Almazari (2017), Barus, Muturi, Kibati, and Koima (2017). Their findings concluded that capital adequacy influenced SACCO financial performance positively. Furthermore, the

capital adequacy ratio assesses the extent to which SACCO's member patrons own all of their SACCO assets. According to USAID (2015), SACCO unions with a capital adequacy ratio greater than 50% are considered to have a good capital adequacy ratio. The researchers concluded in this study that the capital adequacy ratio of many urban primary SACCOs is less than standard. This implies that the patron of the member is insufficient. This proxy is consistent with the findings of the (Ergetew, 2015) study on cooperative unions. The SACCO union's liquidity is fairly high, but decreasing, and their profitability rate is lower than the minimum required rate.

4.5.2.3. Liquidity management

H3: Liquidity management has a positive and statistically significant effect on the financial performance of urban primary SACCOs.

According to the regression output, liquidity management (LM) is statistically insignificant because its p-value equals 0.687, which is greater than the usual significance level of 5%, and it also has a weak positive relationship with urban primary SACCOs' financial performance, with a coefficient estimate of 0. This means that, other independent variables being constant, increasing liquidity management by one birr raises the return on assets (ROA) of urban primary SACCOs by 0.0016birr. Thus, the study implies that liquidity management has a positive impact on Sacco's financial performance and is also strongly insignificant. The liquidity ratio in this study does not meet the recommended standard (2:1) over the study period. This implies that performance is about more than just maintaining a high level of liquidity; it is also about asset quality, capital adequacy, efficiency, and other factors. This is not to say that the liquidity status of SACCOs has no effect. Rather, it means that liquidity has less of an impact on SACCO performance in Ethiopia.

The finding consists of (Vincent and Gemechu, 2013) concluded that liquidity management ratio had a positive but insignificant effect on the performance of commercial banks in Kenya. The other finding that agrees with this finding is Abera A. (2017), point out that liquidity management affected the financial performance of Sodo Zuriya SACCOs and Huseyin (2011) and Erkki (2004) argued that liquidity management ratio had a positive and insignificant effect on financial performance and the determination of the amount of buffer money.

4.5.2.4. Management efficiency

H4: Management efficiency has a positive and statistically significant on the financial performance of urban primary SACCOs.

According to the regression output, management efficiency (ME) is statistically significant because its p-values equal 0.000, which is less than the usual significance level of 1%. Also, according to the regression result, management efficiency has a weak negative relationship with urban primary SACCOs' financial performance, i.e., it has a coefficient estimate of -0.0061. This means that, holding all other explanatory variables constant, an increase in management efficiency of one birr reduces the return on assets (ROA) of urban primary SACCOs by 0.0061 birr. As a result, the findings did not support the working hypothesis that management efficiency has a negative and statistically insignificant effect on the financial performance (ROA) of Addis Ababa's urban primary saving and credit cooperative societies from 2015 to 2019.

Consistence to this study Mulualem (2015), mentioned that the management efficiency ratio is the most negatively correlated variable with return on assets (ROA) and return on equity. Moreover, against to this study finding management efficiency of banks has a statistically significant and positive relationship with bank performance, as depicted in the study by Yiregalem (2015).

4.5.2.5. Growth domestic product

H5: Growth domestic product has a positive and statistically significant effect on the financial performance of urban primary SACCOs.

According to the regression output depicted that growth domestic product (GDP) has statistically insignificant because its p-values equal 0.966, which is greater than the usual significance level of 5% and also according to the regression result growth domestic product has weak positive relationship with urban primary SACCOs financial performance i.e., it has a coefficient estimate of 0.0024. This means that holding other independent variables constant and when one present increases in growth domestic product, consequently it increase return on asset (ROA) of urban primary SACCOs by 0.2406 percent.

Inconsistency with this study Vincent and Gemechu (2013); Flaminiet et al., 2009 concluded that GDP has a negative and strong insignificant relationship with return on assets.

4.5.2.6. Inflation rate

H6: Inflation rate has negative and statistically significant effect on financial performance of urban primary SACCOs.

According to the regression output, the inflation rate (IN) is statistically insignificant because its p-values equal 0.816, which is greater than the usual significance level of 5%. Also, according to the regression result, the inflation rate has a weak negative relationship with urban primary SACCOs' financial performance, i.e., it has a coefficient estimate of -0.0063. This means that holding other independent variables constant and when one present, increases in inflation rate result in decreasing return on assets (ROA) of urban primary SACCOs by 0.6322%.

Consistency with this study Vincent and Gemechu (2013) conclude that inflation is significantly and negatively related to the financial performance.

4.6. Narrative analysis of dummy variable in the study

This section of the analysis provides the interview results for two dummy variables, bank and MFI computation and SACCO union membership that are not included in the research model. To obtain accurate and complete information, the researcher interviewed various concerned bodies, such as the Federal cooperative agency, Mr. Brehanu D. the finance director of the federal cooperative agency and Sacco's expert, each sub-city cooperative promotion and organization officials, and the personnel or committees of each sampled SACCO. The outcome is analyzed through narration based on the information gathered through interviews.

These two dummy variable computations of Bank and MFI and Sacco's union membership are purposefully included in this study. The inclusion of these variables is intended to help researchers better understand the impact of other financial institutions and SACCO union membership on the financial performance of urban SACCOs.

4.6.1. Competition of bank and MFI and Financial performance

SACCOs, like other financial institutions, provide financial services to their members and operate in the same sectors. The study's SACCOs were divided into institutional and community-based SACCOs. SACCOs organized within an institution by employees who are aware of and interested in SACCOs are referred to as institutional-based SACCOs. Community-based SACCOs, on the other hand, were SACCOs formed within specific communities by citizens who

shared common interests and had low income levels. The majority of community-based SACCOs in the study areas are not particularly capable or appealing, and their financial capacity is extremely limited. This discourages their members, prompting them to seek out other financial institutions.

According to the findings of the interviews, banks and SACCOs do not compete fiercely. Banks exist to help SACCOs improve their performance by preserving their liquid assets. SACCOs encourage their members to save by collecting small amounts of money in accordance with their bylaws. When compared to banks, the main challenge for the majority of SACCOs in the study is the low quality of their products and services. Sacco offers low-quality products and services that take a long time to obtain. Whereas the bank provided high-quality products and services that could be accessed at any time, place, or condition. These SACCO members who require the best product and quality service leave the SACCO and seek out other financial institutions. However, the presence of a bank aids Sacco's performance. This implies that SACCOs in urban areas face a negligible positive effect from banks. The findings revealed that urban SACCOs had a negative and low significant relationship with MFI. Simultaneously, MFIs provide products that are nearly identical to SACCOs, but with higher quality and faster delivery. Furthermore, MFIs serve low-income communities through a variety of strategies, such as SACCOs, and they have greater capacity and product quality. As a result, the presence of MFIs, particularly in urban communities, has a negative impact on the financial performance of community-based urban SACCOs.

In agreement with this finding, Auka and Mwangi (2013) reported that SACCOs were facing stiff competition as their members were seeking financial services from commercial banks and other financial service providers in Kenya. Although Sacco's membership and the demand for loans from SACCOs were reported to have increased, SACCOs were facing the problem of a low capital base, thus causing SACCOs members to seek financial services from other financial service providers (Njagi, Kimani & Ngugi, 2012). Moreover, Abeje (2017) findings indicated that there was low competition from the Omo MFI and it can be concluded that there exists a negative significant relationship between competition from the Omo MFI and the financial performance of the SACCOs. The result reveals that competition is statistically significant in explaining the financial performance of the Sacco's.

4.6.2. Sacco's union membership and financial performance

The saving and credit cooperative union is a secondary cooperative generation formed from a group of primary saving and credit cooperative societies (SACCOs). In Addis Ababa, there are two SACCO unions and 1,187 primary SACCOs. The first SACCO union was the Addis Ababa SACCO union, which was founded in 1995 E.C. and has 265 primary SACCO members. The second is the Ras-Agaz (WISE) SACCO union, which was founded in 1998 E.C. This union has 83 primary SACCOs as members (Addis Ababa cooperative Agency, 2020).

In theory, secondary SACCOs (SACCO unions) play an important role in improving and assisting the financial performance of primary SACCOs by adjusting the smooth platform by providing necessary training, consultation services, and facilitating service or financial needs that exceed the capacity of primary SACCOs.

However, according to this study, the SACCO union in Addis Ababa is weak and does not carry out its duties and responsibilities in accordance with the cooperative society's proclamation, rules, and regulations. The performance of the Addis Ababa SACCO union, which has a fund in Kasanchi, has been declining over time due to a variety of factors, including a lack of effective and well-educated leadership, political interference, the negative influence of federal cooperative agency officials, and policy and structure issues, all of which contribute to the SACCO union's poor performance. As a result, former members such as Addis Ababa University employee SACCOs, Civil Aviation employee SACCOs, Ethiopian Electric Power SACCOs, Ethiopian Agriculture Research Center employee SACCOs, and others who are pillars of this union are discouraged and their participation within the union is reduced. This implies that the Addis Ababa SACCO union in the study area has a negative impact on the financial performance of the study's members primary SACCOs.

The Ras-Agez (WISE) SACCO union, on the other hand, had a positive significant effect on the financial performance of its members' primary SACCOs. The Ras-Agez SACCO union around Mamo is a SACCO union that is heavily supported by NGOs and the government. This union's primary SACCOs are the only women's saving and credit cooperative societies in Addis Ababa. This union offers substantial assistance to community-based SACCOs formed solely by women. When primary SACCOs are formed (organized), this union assists them with various financial and service supports for a period of five years, after which the primary SACCOs continue as

members with partial support compared to the previous one. Generally, according to this study, the Ras-Agez SACCO union has a strongly positive and significant effect on the financial performance of primary SACCOs under it.

As a result, according to this study, the effect of SACCO union membership on financial performance of SACCOs is both positive and negative. To summarize the study's findings, considering their problem as a control factor, membership in a SACCO union has a positive effect on the financial performance of primary SACCOs.

CHAPTER FIVE

SUMMARY OF FINDING, CONCLUSIONS AND RECOMMENDATION

5.1. Introduction

The following summary of findings, conclusions, and recommendations were derived from the data collected and analyzed in the previous chapter. The outcome is based on secondary data analysis and interviews related to the study's objectives. The researchers had intended to investigate the effects of the explanatory variables on the performance of urban primary saving and credit cooperative societies.

5.2. Summary of Findings

The study's primary goal was to investigate the determinants of financial performance of urban saving and credit cooperative societies and how asset quality, capital adequacy, liquidity management, management efficiency, growth in domestic product, and inflation affect the financial performance of Addis Ababa's urban primary SACCOs. The competitions of banks and MFIs, as well as Sacco union membership, were found to have an impact on the financial performance of the SACCOs studied.

According to the findings of this study, asset quality has a statistically significant and negative relationship with the financial performance of SACCOs in the study area. The negative correlation coefficient between poor asset quality and return on assets is strong in this study. If the asset quality ratio rises, the financial performance of the Sacco falls. This indicates that Sacco's financial performance is being harmed by poor asset quality or a high ratio of non-performing loans to total assets. Thus, asset quality determines the performance of Addis Ababa urban primary SACCOs. As a researcher observation, institutional based SACCOs provide satisfactory loans with low interest rates and are based on members' savings and salary scales, and they are highly saved from non-performing loans. In contrast, when compared to institutional SACCOs under the study, the majority of community-based SACCOs provide low-interest loans due to their limited capacity and have relatively high nonperforming loans.

The study concludes that capital adequacy has a statistically significant and positive relationship with the financial performance of Addis Ababa's urban primary SACCOs. This implies that as capital adequacy improves so will the financial performance of the SACCOs under study. According to observations and interviews, the majority of SACCOs studied have a low capital

adequacy ratio. As a result, this study concludes that the majority of urban primary SACCOs have a lower capital adequacy ratio than the standard. This implies that the patron of the member is insufficient. This is due to the fact that the capital structures of the majority of SACCOs, particularly community-based SACCOs, are insufficient, because SACCO members are small in number and not as motivated to buy shares, resulting in insufficient capital.

The study sought to find out the extent to which liquidity management affects the financial performance of urban primary SACCOs. The study finds that liquidity management has a statistically insignificant and weak positive relationship with the financial performance of the urban primary SACCOs under study, and the study liquidity ratio does not meet the standard (2:1) over the study period. This implies that performance is about more than just maintaining a high level of liquidity; it is also about asset quality, capital adequacy, efficiency, and other factors. This is not to say that the liquidity status of SACCOs has no effect. Rather, it means that liquidity has less of an impact on the performance of Ethiopia's urban primary SACCOs.

The findings of this study sought to determine to what extent management efficiency influences financial performance of urban primary SACCOs in the study areas. The study found out that management efficiency has a statistically significant and weak negative relationship with SACCOs in Addis Ababa. This means that holding other independent variables constant and when management efficiency ratio increases, it results in a decreased return on assets (ROA) of urban SACCOs under the study over the study period.

The study sought to find out the extent to which growth in domestic product (GDP) affects the financial performance of urban primary SACCOs. The study found GDP has a statistically insignificant and weak positive relationship with the financial performance of urban primary SACCOs in Addis Ababa. This implies that GDP has a positive impact on SACCOs' return on assets, and that as GDP rises, so will SACCOs' financial performance.

The study sought to determine the extent to which the rate of inflation affects the financial performance of urban primary SACCOs. According to the findings of the study, the inflation rate has a statistically insignificant and weak negative relationship with the financial performance of urban primary Sacco's. This means that, while other independent variables remain constant, increases in the inflation rate result in a decrease in the return on assets (ROA) of the study's

urban primary SACCOs. Overall, inflation affects every business sector, including SACCOs, but inflation has little effect on the SACCOs under study.

The study sought to determine whether or not there is stiff competition between banks and SACCOs. Banks exist to help SACCOs perform better by preserving their liquid assets. When compared to banks, the main challenge for the majority of SACCOs in the study is the low quality of their products and services. Whereas the bank provided high-quality products and services that could be accessed at any time, place, or condition. As a result, Sacco members who require the best product and quality service leave the Sacco and seek out other financial institutions. However, the existence of a bank aids Sacco's performance. This implies that the bank has an insignificant positive effect on the urban SACCOs under study. The study also discovered that urban SACCOs had a negative and statistically insignificant relationship with MFI. At the same time, MFIs offer nearly identical products to SACCOs, but with higher quality and faster delivery. Furthermore, MFIs address low-income communities through various strategies, such as SACCOs, and they have greater capacity and product quality. As a result, the presence of MFIs, in particular, has a negative impact on the financial performance of community-based urban SACCOs.

According to this study, the SACCO union in Addis Ababa is weak and does not carry out its duties and responsibilities in accordance with the cooperative society's proclamation, rules, and regulations. The performance of the Addis Ababa SACCO union, which has a fund in Kasanchi, has been declining over time due to a variety of factors, including a lack of effective and well-educated leadership, political interference, the negative influence of federal cooperative agency officials, and policy and structure issues, all of which contribute to the SACCO union's poor performance. This implies that the Addis Ababa SACCO union in the study area has a negative impact on the financial performance of the study's member's primary SACCOs.

On the other hand, the Ras-Agez (WISE) SACCO union had a positive significant effect on the financial performance of its members' primary SACCOs. Ras-Agez SACCO union around Mamo is a SACCO union that is highly assisted by NGOs and the government. The members' primary SACCOs of this union are only women's saving and credit cooperative societies in Addis Ababa. This union, by nature, provides strong support for community-based SACCOs

formed solely by women. The Ras-Agez SACCO union has a strongly positive and significant effect on the financial performance of primary SACCOs under it, according to this study.

Therefore, according to this study, the effect of SACCO union membership has both a positive and a negative effect on the financial performance of SACCOs. However, to conclude the findings of this study by considering the problem as a control factor, membership of the SACCO union has a significant and positive effect on the financial performance of primary SACCOs.

5.3. Conclusion

Saving and credit cooperative societies make a significant and valuable contribution to the Ethiopian economy. This contribution, however, has been influenced by some financial factors that have an impact on Sacco's performance. In order to survive negative shocks and improve their capacity to maintain good financial stability, Sacco's officials and experts, financial managers and policy makers should identify the determinants of financial performance of SACCOs. However, studies on the financial performance of urban primary saving and credit cooperative societies have not been undertaken so far. In view of this, the researchers are motivated to undertake this study to investigate the determinants of the financial performance of urban primary SACCOs. The conclusions were arrived at on the effect of independent variables (Asset quality, capital adequacy, liquidity management, management efficiency, growth in domestic product and inflation rate) on the financial performance of urban SACCOs based on the findings of the study.

The study concludes that asset quality has a statistically significant and negative relationship with the financial performance of SACCOs. Asset quality and return on assets have an inverse relationship; if the asset quality ratio rises, the Sacco's financial performance falls. This indicates that Sacco's financial performance is being harmed by poor asset quality or a high ratio of non-performing loans to total assets.

The study concludes that capital adequacy has a statistically significant and positive relationship with the financial performance of urban primary SACCOs. This implies that if capital adequacy is increased, the financial performance of SACCOs under the study will increase. According to observations and interviews, the majority of SACCOs studied have a low capital adequacy ratio. As a result, this study concludes that the capital adequacy ratio of the majority of urban primary SACCOs is lower than the standard. This implies that the patron of the member is insufficient.

This is due to the fact that the capital structures of the majority of SACCOs, particularly community-based SACCOs, are insufficient, because SACCO members are small in number and not as motivated to buy shares, resulting in insufficient capital.

The study concludes that liquidity management has a statistically strongly insignificant and weak positive relationship with the financial performance of urban primary SACCOs. This indicates that performance is not about keeping high liquid assets; rather it is about asset quality, capital adequacy, efficiency, and others. But, this doesn't mean that the liquidity status of SACCOs has no effect at all. Rather, it means that liquidity has less effect on the performance of urban primary SACCOs in Ethiopia.

According to the study, management efficiency has a statistically significant but weak negative relationship with SACCOs. This means that when other independent variables are held constant, and management efficiency increases, the return on assets (ROA) of urban SACCOs decreases.

According to the findings of the study, GDP has a statistically insignificant and weak positive relationship with the financial performance of urban primary SACCOs. This implies that GDP has a positive impact on SACCOs' return on assets, and that as GDP rises, so will SACCOs' financial performance.

The study concludes that the inflation rate has a statistically insignificant and weak negative relationship with urban primary Sacco's financial performance. This means that holding other independent variables constant and increases in inflation rate result in decreasing return on assets (ROA) of urban primary SACCOs.

According to the study's findings regarding the dummy variable, there is no stiff competition between banks and SACCOs. The presence of a bank helps SACCOs perform better by preserving their liquid assets. This implies that banks have a negligible positive impact on urban SACCOs. The study also concludes that urban SACCOs have a negative and low significant relationship with MFI. At the same time, MFIs offer nearly identical products to SACCOs, but with higher quality and faster delivery. Furthermore, MFIs address low-income communities through various strategies, such as SACCOs, and they have greater capacity and product quality. Therefore, the existence of MFI negatively affects the financial performance of communities based on urban SACCOs.

The study concludes that the SACCO union in Addis Ababa is not strong and does not perform its duties and responsibilities according to the cooperative society's proclamation, rules and regulations. According to the findings, the Addis Ababa SACCO union in the study area has a negative impact on the financial performance of its members' primary SACCOs. The Ras-Agez (WISE) SACCO union, on the other hand, had a significant positive effect on the financial performance of its members' primary SACCOs. Therefore, to summarize the study's findings, membership in a SACCO union has a significant and positive effect on the financial performance of primary SACCOs when the SACCO union is considered as a control factor.

5.4. Recommendation

Based on the findings, the study forwarded the following recommendations.

- The study recommended that SACCO management and expertise take good care of assets because they play a significant role in generating finance for the SACCOs and contributing to good financial performance. The loans provided to members should be managed with a structured procedure, provided on time, in sufficient quantity, and easily accessible to meet the satisfaction of the members, and improved credit management practices to ensure that those who are advanced with loans repay them on time. Members' trust, confidence, and satisfaction are boosted as a result.
- The study recommended that SACCOs balance their capital structure by selling shares, amalgamate SACCOs under large umbrellas to increase membership, provide ongoing training and information to SACCO management, committees, and members to improve operational and management efficiency, and hire experienced and dedicated high-quality managers to ensure sustainability and competitiveness through good governance and efficient financial management.
- It recommends that the SACCOs should give attention and enhance the competition from banks and MFIs be managed well. They should also provide competitive-quality products and services to their members through well-trained employees, an organized digital system that centralizes control, and the use of databases to keep data in an organized manner.
- The study recommended that Sacco officials and experts focus on forming a strong SACCO union. To perform its role and responsibilities and improve the financial performance of SACCOs, the Addis Ababa SACCO union requires reorganization and new structures.

- Although Addis Ababa has a large number of primary SACCOs, they are not particularly powerful and the majority of them are dormant. As a result, the study recommended that SACCOs improve their financial capacity by combining various primary SACCOs into a single entity under a large umbrella.
- Finally, the governance and officials of cooperatives should pay close attention to continuously supervising, inspecting, auditing, and developing regulatory situations in order to make them financially prudent and to improve the development of infrastructures in various areas where difficulties are encountered on the way to providing financial services.

5.5. Suggested area for farther research

This study was not exhaustive, so it is suggested that other researchers conduct research in the following areas. To investigate, examine, and analyze the determinants of financial performance of urban SACCOs by including other SACCOs and variables that the researchers did not include in this study that may affect SACCO financial performance. Future research could also concentrate on the development of modern SACCOs, the automation and digitization of SACCO services, SACCO leadership, reorganizing SACCOs in our country into a few similar sectors, and the use of different research methodologies.

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APPENDIX-1

1. Regression result

```
. reg ROA CA LM ME GDP INR AQ
```

Source	SS	df	MS			
Model	.096502723	6	.016083787	Number of obs =	225	
Residual	.381352466	218	.001749323	F(6, 218) =	9.19	
Total	.477855188	224	.002133282	Prob > F =	0.0000	
				R-squared =	0.2019	
				Adj R-squared =	0.1800	
				Root MSE =	.04182	

ROA	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
CA	.1453624	.0289844	5.02	0.000	.0882369	.2024878
LM	.0016256	.0040305	0.40	0.687	-.0063182	.0095694
ME	-.0060984	.0012993	-4.69	0.000	-.0086591	-.0035376
GDP	.0024055	.0563175	0.04	0.966	-.108591	.1134021
INR	-.0063222	.0271778	-0.23	0.816	-.059887	.0472426
AQ	-.1254885	.035975	-3.49	0.001	-.1963917	-.0545853
_cons	.0435482	.0795255	0.55	0.585	-.113189	.2002855

```
. xtreg ROA CA LM ME GDP INR AQ, re
```

Random-effects GLS regression
Group variable: Year

R-sq: within = 0.1989
between = 0.8317
overall = 0.2019

corr(u_i, X) = 0 (assumed)

Number of obs = 225
Number of groups = 5
Obs per group: min = 45
avg = 45.0
max = 45

Wald chi2(6) = 55.17
Prob > chi2 = 0.0000

ROA	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
CA	.1453624	.0289844	5.02	0.000	.0885541	.2021706
LM	.0016256	.0040305	0.40	0.687	-.0062741	.0095253
ME	-.0060984	.0012993	-4.69	0.000	-.0086449	-.0035518
GDP	.0024055	.0563175	0.04	0.966	-.1079748	.1127859
INR	-.0063222	.0271778	-0.23	0.816	-.0595896	.0469453
AQ	-.1254885	.035975	-3.49	0.000	-.1959981	-.0549789
_cons	.0435482	.0795255	0.55	0.584	-.1123189	.1994154

sigma_u	0	
sigma_e	.04198867	
rho	0	(fraction of variance due to u_i)

2. Model selection

```
. xtreg ROA CA LM ME GDP INR AQ, fe
note: GDP omitted because of collinearity
note: INR omitted because of collinearity
```

Fixed-effects (within) regression

Number of obs = 225
Group variable: Year Number of groups = 5

R-sq: within = 0.1989
between = 0.8444
overall = 0.2015

Obs per group: min = 45
avg = 45.0
max = 45

F(4,216) = 13.41
Prob > F = 0.0000

corr(u_i, Xb) = 0.0603

ROA	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
CA	.1452881	.029137	4.99	0.000	.0878588	.2027174
LM	.0015937	.0040547	0.39	0.695	-.0063981	.0095856
ME	-.0060566	.0013073	-4.63	0.000	-.0086333	-.0034799
GDP	0	(omitted)				
INR	0	(omitted)				
AQ	-.1262495	.0362196	-3.49	0.001	-.1976387	-.0548604
_cons	.0471097	.0085397	5.52	0.000	.0302778	.0639416
sigma_u	.00202355					
sigma_e	.04198867					
rho	.00231717	(fraction of variance due to u_i)				

F test that all u_i=0: F(4, 216) = 0.10 Prob > F = 0.9812

```
. estimates store fe
```

```
. xtreg ROA CA LM ME GDP INR AQ, re
```

Random-effects GLS regression

Number of obs = 225
Group variable: Year Number of groups = 5

R-sq: within = 0.1989
between = 0.8317
overall = 0.2019

Obs per group: min = 45
avg = 45.0
max = 45

Wald chi2(6) = 55.17
Prob > chi2 = 0.0000

corr(u_i, X) = 0 (assumed)

ROA	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
CA	.1453624	.0289844	5.02	0.000	.0885541	.2021706
LM	.0016256	.0040305	0.40	0.687	-.0062741	.0095253
ME	-.0060984	.0012993	-4.69	0.000	-.0086449	-.0035518
GDP	.0024055	.0563175	0.04	0.966	-.1079748	.1127859
INR	-.0063222	.0271778	-0.23	0.816	-.0595896	.0469453
AQ	-.1254885	.035975	-3.49	0.000	-.1959981	-.0549789
_cons	.0435482	.0795255	0.55	0.584	-.1123189	.1994154
sigma_u	0					
sigma_e	.04198867					
rho	0	(fraction of variance due to u_i)				

```
. estimates store re
```

```
. hausman fe re
```

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fe	(B) re		
CA	.1452881	.1453624	-.0000743	.0029787
LM	.0015937	.0016256	-.0000319	.0004421
ME	-.0060566	-.0060984	.0000418	.0001445
AQ	-.1262495	-.1254885	-.000761	.0042028

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

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 0.15
Prob>chi2 = 0.9972

3. Correlation Matrix

```
. pwcorr ROA CA LM ME GDP INR AQ, sig
```

	ROA	CA	LM	ME	GDP	INR	AQ
ROA	1.0000						
CA	0.2720 0.0000	1.0000					
LM	0.0427 0.5241	0.0128 0.8481	1.0000				
ME	-0.3295 0.0000	-0.1671 0.0120	-0.1190 0.0748	1.0000			
GDP	0.0337 0.6150	0.0592 0.3766	-0.0635 0.3429	-0.0096 0.8864	1.0000		
INR	-0.0325 0.6279	0.0152 0.8208	0.0744 0.2665	0.0672 0.3157	-0.6197 0.0000	1.0000	
AQ	0.0270 0.6871	0.6633 0.0000	0.0723 0.2803	-0.1230 0.0656	0.0225 0.7372	0.0030 0.9644	1.0000

```
. pwcorr ROA CA LM ME GDP INR AQ
```

	ROA	CA	LM	ME	GDP	INR	AQ
ROA	1.0000						
CA	0.2720	1.0000					
LM	0.0427	0.0128	1.0000				
ME	-0.3295	-0.1671	-0.1190	1.0000			
GDP	0.0337	0.0592	-0.0635	-0.0096	1.0000		
INR	-0.0325	0.0152	0.0744	0.0672	-0.6197	1.0000	
AQ	0.0270	0.6633	0.0723	-0.1230	0.0225	0.0030	1.0000

```
. corr ROA CA LM ME GDP INR AQ
(obs=225)
```

	ROA	CA	LM	ME	GDP	INR	AQ
ROA	1.0000						
CA	0.2720	1.0000					
LM	0.0427	0.0128	1.0000				
ME	-0.3295	-0.1671	-0.1190	1.0000			
GDP	0.0337	0.0592	-0.0635	-0.0096	1.0000		
INR	-0.0325	0.0152	0.0744	0.0672	-0.6197	1.0000	
AQ	0.0270	0.6633	0.0723	-0.1230	0.0225	0.0030	1.0000

4. Descriptive statistics

```
. sum ROA CA LM ME GDP INR AQ
```

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	225	.0343299	.0461875	.0002004	.4843667
CA	225	.1425088	.1305873	-.0115263	.971329
LM	225	1.200865	.7033721	.03506	7.890773
ME	225	3.43994	2.207374	.2139057	13.35162
GDP	225	-1.054485	.0636146	-1.166216	-.9833845
INR	225	-.9656852	.1321147	-1.178486	-.8002448
AQ	225	.1153611	.1042574	-.0470164	.971329

5. Model Specification Test, Ramsey RESET

```
. ovtest
```

Ramsey RESET test using powers of the fitted values of ROA
Ho: model has no omitted variables
F(3, 216) = 1.17
Prob > F = 0.3208

APPENDIX-2



**ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTEMENT OF ACCOUNTING AND FINANCE**

Research Interviews

Dear Respondent

First of all, I would like to thank you for your cooperation in filling out this questionnaire. I am a student at Addis Ababa University pursuing a master's degree in MSc in Accounting and Finance. This is to introduce you to the academic-based research study being conducted on the determinants of the financial performance of urban primary SACCOs. Thank you so much for volunteering for this interview. The purpose of this interview is to get further information regarding the determinants of the financial performance of urban SACCOs. I kindly request your assistance in answering this interview and hope you will help me to provide relevant and quality data that will be crucial for the completion of this study. Please answer each interview question carefully. The information you provide through the interview will be used for scientific analysis and academic research purposes to partially meet the requirements of the Master of Science in Accounting and Finance. The researcher will do their best to protect the confidentiality of your identity and respond.

Thank you again for your precious time providing me and using the available information.

Yours Sincerely

MengistuTefera

Phone No. 09-10-09-99-55

E-Mail; mengistut20@gmail.com

Section one semi-Structured Interview Checklists.

Open-ended interview

1. From your experience, how does asset quality affect the financial performance of your SACCOs?
2. From your experience, what do you say about the effect of capital adequacy on financial performance?
3. What do you think about your SACCOs' management efficiency?
4. Please express your opinions on why all SACCOs are not managed by managers.
5. How do GDP and inflation affect the financial performance of SACCOs?
 - 5.1. Why does the inflation rate influence the financial performance of SACCOs in urban areas?
6. What do you think about the competition between SACCOs and banks and MFIs?
 - 6.1. Do you think the quality of products and services provided by banks and MFIs affects the financial performance of SACCOs?
 - 6.2. What is the advantage of a bank and MFI availability for the financial performance of SACCOs?
7. What is the advantage of SACCO union membership for Sacco's financial performance?
 - 7.1. Why are all SACCOs not members of the SACCO union?

Thank you for your time and co-operation. The information you have provided will be treated at most confidentiality.