COLLEGE OF BUSINESS AND ECONOMICS DEPARTMNET OF ACCOUNTING AND FINANCE

Determinants of Financial Performance of Consumer Cooperatives in Addis Ababa.

BY: - Melaku Sahle

ID. No: - GSE\4256\11

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Statement of Declaration

I, the undersigned, declare that this thesis entitled "Determinants of financial performance of consumer cooperative in Addis Ababa" is my original work, prepared under the guidance of **Dr. Abebaw Kassie.** All sources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been presented either in part or in full for the purpose of earning any degree in any other higher learning institution

Declared by: **Confirmed by Advisor:**

Name: Melaku Sahle **Name: Dr. Abebaw Kassie**

Signature---------- **Signature----------**

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Approval sheet

This is to certify that the thesis prepared by Melaku Sahle, entitled "Determinants of financial performance of consumer cooperative in Addis Ababa" and submitted to the partial Fulfillment of the requirements for the degree of master of Master of Business Administration in Finance complies with the regulation of the University and meets the accepted standards with respect to originality and quality.

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Abstract

This study was conducted to examine the determinants of firms' financial performance of the consumer cooperatives in Addis Ababa. A significant number of studies have been done in the area of financial performance of financial institution and some agricultural cooperatives but consumer cooperative's financial performance determinants are somehow neglected. The General Objective of the Study was to examine the determinants factors of consumer cooperative's financial performance in Addis Ababa and to achieve the study objective the research used explanatory research designed. the post-positivist philosophy and quantitative research approach. To this end, the researcher has selected twenty-one consumer cooperatives in Addis Ababa as to which subject best fits the certain of the research. The study used secondary source of data, which is panel data in nature, over the period 2016-2020. The data of audited financial statement were collected from consumer cooperatives and macroeconomic data collected from Addis Ababa plan commission and National Bank of Ethiopia. Furthermore, the assumption of CLRM needed to be fulfilled for GLS or OLS were tested and by using model selection criterion of Hausman specification test random effect model was appropriate to examine the determinants of financial performance. Results using random effect panel regression model exhibited that, Operational expense ratio, Natural Log of firm size, Social contribution and Inflation were negative and statistically significant effect on financial performance. On other hand, variables like Capital structure, Sales growth and Liquidity ratio have positive and statistically significant effect on consumer cooperatives financial performance. Based on the findings, the researcher recommended that the Management bodies of the consumer cooperative should ensure appropriate debit ratio and give greater attention to continuous increasing operating expense ratio because of an increasing operating expense. Besides, Addis Ababa city government administration of Cooperative Agency should adhere tight regulation toward the consumer cooperative sectors. Thus, the overall finding indicates that both consumer cooperative factors and macroeconomic factors had been statistically significant effect on financial performance.

***Key words**: Consumer cooperatives, Return on Asset, Return on Equity, Operational expense ratio, Firm size, Social contribution, Capital structure, Sales growth and Liquidity ratio, Inflation, Gross Domestic Product, Addis Ababa.*

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List of Acronyms

AACAPDC	Addis Ababa City Administration Plan and Development Commission
AACACA	Addis Ababa City Administration Cooperative Agency
BLUE	Best Linear Unbiased Estimator
CLRM	Classical Linear regression Model
CS	Capital Structure
DWT	Durbin Watson Test
EFCA	Ethiopia Federal Cooperative Agency
FS	Firm Size
FEM	Fixed Effect Model
GDP	Gross Domestic Product
HST	Hausman Specification Test
ILO	International Labour Organization
JBT	Jerque- Berra Test
LOG_FS	Natural Logarithm Firm size
LQ	Liquidity Ratio
MRM	Multiple Regression Model
NBE	National Bank of Ethiopia
OLS	Ordinary Least Square
OPE	Operating Expense Ratio
PRM	Pooled Regression Model
REM	Random Effect Model
RQ	Research Question
ROA	Return on Asset
ROE	Return on Equity
ROS	Return on Sales
SC	Social Contribution
SG	Sales Growth

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CHAPTER ONE

1. Introduction

We start this chapter with discussing background of the research that gives some clue on the issues of firm's financial performance and overview of consumer cooperative. After giving some clue on the issues of cooperative and financial performance, problem statement part that shows the gap that the research will be focused and justifies the reason why this study carries out and clearly shows what questions this inquiry tries to answer then after the major objective of the inquiry and specific objective of the study is followed by research question. At the end of this subsequent section discuss scope of the study, limitation of the research, significance of the research, and how the paper is organized respectively.

1.1.Background of the study

1.1.1. Background of the concept

According to (Matar & Eneizan, 2018) there has been two difference measures of performance, financial and non-financial performance. Financial performance can be measured by growth in profitability, production capacity, sales growth and utilization of the capital and financial resources. That means manager's ability to operate efficiently, profitability, survive, grow and react to the environmental opportunities and threats. As explained by the article of (Fatihudin et al., 2018) Measuring Firm financial performance has been become an interesting research topic among the financial management area because finance function or Evaluation of financial performance is also an important function of financial manager because Profit and its maximization are basic objective of majority of business organization. (Carl et al., 2011) the Measures of a company's profitability is the interest of equity investors and management that is drawn primarily from the income statement. Financial Performance measurement could also help to improve managerial performance by distinguishing best and worst activities that associated with high and low efficiency factors in the firms. (Ngui, 2018) The financial stability of a firm can be assessed using accounting metrics within the financial management context. Firms financial performance is not only important for the firm's owner but also stakeholders, society as well receive benefits and the researchers as it is important to dealing with the factors that determine the financial performance the firm. If firm's financial performance is Higher, the firm will be more effective and efficient in using its resources and it contribute to more in the country's economy.

According to (Pantea et al., 2014) performance measurement can be defined as the process of quantifying the efficiency and effectiveness of an action; For measuring of financial performance many criteria are used such as by accounting value, market value or social performance and others. In the article of financial performance of firms determinants (Ayako et al., 2015) thought, they consider firm-specific internal resources as primary factors of firm's total performance. Depending on the nature of the industry different ratios are used to measure the financial health of a firm. In the subject of accounting and finance typical firm-specific internal resources or it may also be referred as micro-level variables are financial ratios. (Carl et al., 2011) A financial ratio expresses the relationship of one amount to another. Most users of financial statements find that certain ratios assist them in quickly evaluating the financial position, profitability, and future prospects of a business (Carl et al., 2011). (Shah Mohd & Ahmed Siddiqui, 2020) different ratios are used to measure the financial health of a firm. These ratios are: return on assets, return on equity, sale, revenue, growth, profit margin, stock prices, liquidity ratio, dividend payout ratio, cash flow ratio and inventory turnover ratio These ratios are: return on assets, return on equity, sale, revenue, growth, profit margin, stock prices, liquidity ratio, dividend payout ratio, cash flow ratio and inventory turnover ratio This idea also strengthened by (Hoang et al., 2019) by suggesting firm's financial performance must be measured by using accounting value of profitability. Basically, Ratio of net sales to assets, Rate earned on total assets, Rate earned on stockholders' equity, Rate earned on common stockholders' equity, Earnings per share on common stock, Price-earnings ratio, Dividends per share and Dividend yield (Of & Flows, n.d.) Profitability ratios measure how effectively a firm's management is generating profits on sales, total assets, and, most importantly, stockholders' investment.(Bayaraa, 2017) generally, many articles used return to asset (ROA), return on sales (ROS), and return to equity (ROE).

Many researchers gave enormous research attention on the factors that affect firm's financial performance especially in terms of profitability in the field of finance. In many suggestions of strategic management research, the primary factors that determine firm's performance are the capability of the use of firms' financial resources of an organization in an efficient and effective manner to achieve specific objective of the firm.

Identifying and evaluating the determinant factors on organization's financial performance is such an important topic which has drawn the attention of business executives as well as researchers in the world and Ethiopia as well. There are more and more empirical studies on

factor affecting financial performance of institution which identify the major determinants of financial performance. The determinants of firm financial performances divided into two-part firm specific or internal factors and macroeconomic or external determinants (Al-Tamimi, 2010). (Assfaw, 2015) internal factors are individual characteristics that are stochastic variables that determine the financial performance of firm like capital structure, size, growth and liquidity are the primary determinants of firm's financial performance. Commonly, profitability indicator has been used as a proxy of financial performance. Firm specific determinants are individual firm phenomena which affect the financial performance firm and these factors are mainly affected by internal decisions of management.

Macro-economic variables influence the financial performance of an organization Those factors which are external to the management's control are referred as macroeconomic. the economic and legal environment that affects the operation and financial performance of firms. These variables are variable affect the economy as a whole or aggregate that the firm operating in its external environment in opposite to micro economic focused on the influence and choice made by individual. The most prominent variables that used in determining financial performance of the firm included: the annual change in GDP, inflation rate, the growth of money supply, the ratio of stock market capitalization to total assets, the ratio of total assets to GDP and concentration(Al-Tamimi, 2010). In our case, only two variables are considered as independent variable that affects the financial performance of consumer cooperative in the existing economy.

Thus, this research focused to study consumer cooperative specific determinants factor and macroeconomic factors of the financial performance of consumer cooperatives in Addis Ababa. The motive behind to undertake this research paper is to provide for the Addis Ababa cooperative agency and consumer cooperative management board with applied knowledge on the management of identified variables and provides them with understanding of activities that will enhance their service quality and play a pivotal role in filling gap in understanding the determinants of consumer cooperative.

1.1.2. Overview of consumer Cooperative

According to (Aaron et al., 2015) historians of cooperatives consider this organization arose at the time of the industrial revolution that means these organizations exist from very ancient times but it was then that the principles of cooperation were enacted gaining momentum in this revolutionary movement. The concept of cooperative society has the same definition but

in practice different from country to country and government to government. (Ortmann & King, 2007) a cooperative is a user-owned and user-controlled business that distributes benefits equitably on the basis of use or patronage (Peltonen, 2019) The prevailing historiography of the international cooperative movement relies on a distinct creation story that reveals the origin of modern cooperative firms in the principles drafted by the Rochdale pioneers in northern England in 1844. (Mesganaw Kifelew Woldie, 2015)In the middle of nineteenth century "retailing costs were high, price competition was weak, and customers rarely had an effective choice between more and less elaborate and costly methods of retailing. The first consumer co-operative was established in Addis Ababa in 1945 and after decree No. 44 of 1960 modern or 'imported' co-operatives were officially introduced (ILO, 1975).

According to (Emana, 2009) an exceptional increase has been observed in the number of consumers' cooperatives formed in Addis Ababa, among the 148 total During the year 2000 E.C 115 Consumers' cooperatives are mushrooming in Addis Ababa primarily in response to the high increment cost of goods and service that occurred due to increases in commodity prices. In recent time not only, the practice of the cooperative society but also cooperative society proclamation pushes cooperative society in the practice of investor owned business organization. when we see the cooperative society proclamation no.147/1997 pushes cooperatives closer to investor-owned firms or Cooperation is considered as the possible alternative mode of organizing business to assure economic stability. The fundamental role and objective of consumer cooperative societies are Supply of basic goods and services as per need of low-income level group of the consumers, Eradication of malpractices like hoarding and black marketing, artificial scarcity, cheating in measurements, Establishments of proper trading system and also consumer cooperatives supply good quality products at reasonable costs, Eradication of monopolist trader's chain. There is a long chain of middlemen between consumer and producer who add their profits making margins make things costly. Consumer cooperatives purchase things directly from producers at cheaper price.

(Mesganaw Kifelew Woldie, 2015.)This Cooperative Society Proclamation No.147/1998 cerate strong forward and backward linkage between government and cooperative society that is Cooperatives have been used as instrument by the government to interfere in the economy and also the legal recognition of special privileges to cooperatives like Government assistance, Income tax exemptions, Priority Claims, Administrative ease like No Business License, Temporary certificate pushing cooperatives from social objective model into

investor owned firms (partnership/company) that means the Cooperatives enter into market competition and profit-maximizing model. Government uses Cooperatives as a means to implement policies specially to fight inflation and to control the price and distribution of basic goods Channeling to consumers and the cooperative uses this government motives as a means of business advantage in the form privileges to cooperatives like Government assistance to get land, Income tax exemptions, Priority Claims, Administrative ease like No Business License, Temporary certificate possible only cooperators are pushing cooperatives from cooperation and social objective model into the realm of investor owned firms (partnership/company)- competition and profit-maximizing model.

(Emana, 2009) The policies define how the cooperatives are organized and supported by cooperative promotion institutions. Though, consumer cooperatives working in Addis Ababa do not follow Cooperative policies and strategies that are designed by the Ethiopia Federal Cooperative Agency (EFCA) and approved or enacted by the appropriate legislative body. Organizational structure of the Ethiopia Federal Cooperative generally there are four organizational levels of cooperatives namely, First level/primary cooperatives, Second level/cooperative unions, Third level/federation of cooperatives, Fourth level/ confederation of cooperatives. However, only two of these hierarchies are currently established primary and unions but yet they function similar activity.

1.2.Statement of the problem

According to (Results, 1995) measures of financial performance take a variety of forms. These measures differ from each other on several dimensions, and many issues concern the choice of which particular financial measure to employ. Measuring Firm financial performance is one of the most interesting research topics among the financial management area. According to (Matar & Eneizan, 2018)Financial performance is the measure of the financial health of the organizations and shows the performance of the executive leadership of the company . Firm’s financial performance is not only important for the firm’s owner but also for the scholars as it is important to understand the factors affecting financial performance of the firms. Higher the financial performance of the firm more effective and efficient the firm in using the resources and later contributes at the macro level in countries economy.

For the sec of measurement purpose there should be valuable set of tools and indicators in order to measure and test the financial performance of firm. In this regard, not only for measurement but also which tools and indicator factors mostly affect the profitability of the

firm. The factors that determining the profitability of firm are different from financial institution to non-financial institution and also, they are different with in the same financial institution and same non-financial institution. It was still arguing issue among different researchers' effects of various factors on financial performance. Hence many researchers have conducted a lot of studies on determinants financial performance due to its significance for the institutional survival. The study made across cooperative institution, non-financial institution studies and also review of previous studies on different types of financial institution in different countries shows that differentiating firm specific factor and macroeconomic factor for specific firm is very important to achieve its financial objective and institutional survival. There are a plenty of variables that affect financial performance of institutions.

Majority of the studies were prepared with reference to financial institutions like bank, insurance, saving and credit associations and the like (Ayano, 2016); (Ababa, 2016) (Assfaw, 2015) (Ongore & Kusa, 2013); (murerwa, 2015). (Matar & Eneizan, 2018) (Mauwa, 2016) and (Habtamu, 2012).

In the same time there are Similar studies worked in similar title and variables but in deferent methodology result different findings on non-financial institution from this studies like (Bayaraa, 2017), (singh et al., 2019), (mauwa, 2016) , (Tailab, 2014), (Audax, 2018), (Matar & Eneizan, 2018), (demirgünes, 2016) and (Tailab,2014) .

When we see empirical studies on Factors affecting cooperative's financial performance especially in consumer cooperative is difficult to get literature but in agricultural cooperatives there are some empirical studies, These studies include the recent studies of (Dube & Ozkan, 2019)Examining The Financial Performance Of Primary Agricultural Cooperatives In Dinsho District Of Bale Zone Of Ethiopia. An attempt has been made in this study to Evaluate the financial performances of multi-purpose primary agricultural cooperatives, An Analysis of the Financial Performance of Selected Savings and Credit Co-Operative Societies in Botswana (Sathyamoorthi et al., 2016) had been conducted the research on the factors affecting financial performance of saving and credit cooperatives . it is obvious that the empirical studies on the consumer cooperative's financial performance determinants are somehow neglected as we explained in the above.

Consumer cooperative society play a crucial role not only for their members but also for City Administration of Addis Ababa as a means to implement policies specially to fight inflation and Channeling of basic goods to consumer, similarly it is backbone for low income group of Addis Ababa residents because due to existence of consumer cooperatives consumers

automatically get the needs as their income capacity and the habit of savings and establish the fair-trading practice in the goods market. Consumer cooperative also purely acts as investor owned firms by running for competition and profit-maximizing motive and they operate within the market systems. That is to say, for sustainable multi-function, the consumer cooperatives need to be profitable.

Therefore, with this study, we try to address the gap and also analyzing the financial performance determinant factors influence performance of consumer cooperatives by evaluating and testing six micro specific factor (internal factor) variables namely firm size, capital structure, operation cost, inventory Turnover, liquidity, and sales growth and two macro specific factors (external factor) variables i.e. inflation and Real GDP growth rate that can be determine the financial performance of consumer cooperatives because we can represent missed variables in stochastic error terms in regression equation.

1.3.Research questions

Research questions are the basic questions that help to achieve the collective aim of the study. According to the problem that stated on the above, this study was given special emphasize to answering the following specific research questions (RQ).

RQ1: What were consumer cooperatives specific factors that determine the consumer cooperative's financial performance in Addis Ababa city administration?

RQ2: What were macroeconomic factors that determine the consumer cooperative's financial performance in Addis Ababa City administration?

1.4.Hypotheses of the Study

In this section the researcher was developed testable hypotheses to examine the relationship between consumer cooperative specific and macroeconomic determinants of financial performance of consumer cooperative in Addis Ababa, (Gujarati & Econometrics, 2004) Such confirmation or refutation of economic theories on the basis of sample evidence is based on a branch of statistical theory known as statistical inference (hypothesis testing). According to (Brooks, 2013) In the hypothesis testing framework, there are always two hypotheses that go together, known as the null hypothesis (denoted H0 or occasionally HN)and the alternative hypothesis (denoted H1 or occasionally HA). The null hypothesis is the statement or the statistical hypothesis that is actually being tested. The alternative hypothesis represents the remaining outcomes of interest. the researcher will be developed the following null hypotheses to estimate the sign effect of consumer cooperative specific and

macroeconomic determinants of financial performance of consumer cooperative in Addis Ababa with based on empirical evidence reviewed in the literature parts. Accordingly, the following hypotheses will be tested.

HP1: size of consumer cooperative has significant and negative impact on consumer cooperative's financial performance in Addis Ababa,

HP 2: Capital structure of a consumer cooperative has significant and positive impact on consumer cooperative's financial performance in Addis Ababa,

HP 3: liquidity of consumer cooperative has significant and positive impact on consumer cooperative's financial performance in Addis Ababa,

HP 4: sales gross has significant and positive impact on consumer cooperative's financial performance in Addis Ababa,

HP 5: operational efficiency has significant and negative impact on consumer cooperative's financial performance in Addis Ababa,

HP 6: social contribution has significant and negative impact on consumer cooperative's financial performance in Addis Ababa,

HP 7: GDP-Rate has significant and positive impact on consumer cooperative's financial performance in Addis Ababa,

HP 8: Inflation rate has significant and negative impact on consumer cooperative's financial performance in Addis Ababa,

1.5.Objective of the Study

1.5.1. General Objective of the Study

The General Objective of the Study was to examine the determinants factors of consumer cooperative's financial performance in Addis Ababa.

1.5.2. Specific objective of the study

This study was addressing the following Specific objectives;

- To determine the significance firm Size (FS) on consumer cooperative's financial performance in Addis Ababa?
- To determine the significance of operation efficiency ratio (OPE) on the consumer cooperative's financial performance in Addis Ababa?

- To determine the significance of capital structure (CS) on the consumer cooperative's financial performance in Addis Ababa?
- To determine the significance of Social responsibility (D1) on the consumer cooperative's financial performance in Addis Ababa?
- To determine the significance of sale Growth (SG) on the consumer cooperative's financial performance in Addis Ababa?
- To determine the significance of liquidity (LQ) on the consumer cooperative's financial performance in Addis Ababa?
- To determine the significance of Real GDP growth rate (GDP) on the consumer cooperative's financial performance in Addis Ababa?
- To determine the significance of Inflation rate (INF) on the consumer cooperative's financial performance in Addis Ababa?

1.6.Significance of the Research

As noted in the above sub section of objective parts the general aim of this research details with the determinants factors of consumer cooperatives in Addis Ababa is beneficial for different stakeholders such as Addis Ababa office cooperative agency , members of consumer cooperative, and for other researchers In addition, this study would initiate the consumer cooperative management to give due emphasis on the management of those identified variables and provides them with understanding of activities that will be enhance their profitability. This is due to the fact that knowing the variables that determine the financial performance will help the consumer cooperatives manager to concentrate on the most significant variables and remedial actions.

Finally, the research was contributing to the existing body of knowledge regarding how to improve financial performance of particular sectors. The researcher believes that inadequate study in cooperative activities in general in Ethiopia specially consumer cooperative so it serves as a starting point for other studies, which may focus on Determinants factors of financial performance of cooperatives, and particular might contribute sound strategic alternatives for policy makers for those involved in consumer cooperative institution at different level.

1.7.Scope the Research

This research work was limited only in Addis Ababa and the result may not necessarily represent the reality for the entire country of Ethiopia's consumer cooperative; but within the target city, Addis Ababa, the researcher tried to make representative samples in dealing with the research population. In addition to this, it has hardly to study in wider terms of all factors

that determine performance of consumer cooperative due to knowledge (experience), time and budget constraint this stud is limited to only financial performance determinants. This study is confined to only one dependent variable to measure the performance of consumer cooperatives and eight indicators as independent factors of financial performance will be used in the regression models. So, future studies may be conducted considering other financial measures indicators such as return on sales (ROS), return on equity (ROE), etc. and other independent financial performance indicators such as Total sales, total assets turnover, etc. can be taken. Moreover, for panel data analysis, random effect model or fixed effect models can be applied instead of multiple OLS regression models. Accordingly, this research methodology was delimited to descriptive, correlation and multiple ordinary least square regression analysis based on intensive secondary data review.

1.8.Limitation of the study

Limitation was concerning on the impediment and drawback of the study while conducting and after the results stated out. On this study there was some limitations which was affecting the completeness of the research findings. This study was confined to only a panel data of consumer cooperative over the period 2016 to 2020 because of lack of long run organized data in the organization.

1.9.Organization of the study

This research work was organizing as follows; following the introduction chapter that contain background of the research, overview of consumer cooperative, statement of the problem, research question, objective of the research, significance of the research, scope of the research, limitation of the research and organization of the paper the second chapter provides an overview of related literatures that include , the third chapter will be dedicating on research methodology applied for this research work it include research design, research approach, sampling technique, population and sample size, data gathering instruments. the fourth chapter dedicated on data presentation, analysis, and interpretation.

Chapter two

2. Review of Related Literature

2.1 Theoretical Literature

2.2.1 Definition of words

Performance is an activity applied to a part or all of outcomes of an actions in a time period, often with connection to previous or proposed expenditure efficiency, management responsibility or accountability.(Khan et al., 2017)

Finance is the process of distributing capitals in the form of loans, credit or investible capital to those business entities that need them most or can put them in the most productive use (Van Horne, 2005).

Cooperatives as an "autonomous association of individuals, who voluntarily associate on the bases of equal obligation and right; who are grappling with similar economic challenges and tries to solve this challenge mainly by conducting at their own risk and undertaking to which they have transferred one or more of such of their economic activities correspond to their common needs by utilizing their human, material and money by making joint association for their common economic and social benefit. We can understand that people cerate cooperative society to deter economic and social problem that cannot achieved individually.

(Linnea & Bråtenius, 2006) defines CSR as "...company activities, voluntary by definition, demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders"

2.2.2 Overview of cooperative society in general context

The cooperative form of enterprise is widespread use throughout the world. It is applied in most market economy countries and to an increasing amount in the newly developing countries. Though cooperatives occurred in the former Eastern Bloc, they differed radically in both form and content from the international mainstream, as well as in the meaning intended here (Zarnan, 2018)Cooperation is an age-old way of attaining a goal that is beyond the resources of an individual or when working together offers a more applied or favorable solution. The co- operative as a different form of company is already over a 150-years old. Its birth occurred at the time when the contemporary market economy was in its infancy and the need arose for an alternative structure than one based on the ownership of capital or in modern terminology, a company owned by its members and/or customer-owners

Despite this glorious background, cooperation remains surprisingly unfamiliar. It is also said– with explanation of cooperation was weak in theory but strong in practice. These factors together mean that throughout its long history, cooperation has often suffered from an identity or image problem which includes poor recognition, prejudice and misunderstandings of the society. For this reason, it is relevant to briefly discuss what cooperation is really about theoretically, historically and in practice

The concept of human cooperation is not new. It was existing even before the formation of modern cooperative with its own business principles which made it successful. There are quite considerable differences between countries in structures, regulation and their actual operating principles. However, irrespective of the market conditions in which they operate these cooperatives share a common origin and history in the establishment by the flannel weavers of Rochdale, (Biset Amene & Yadessa, 2018)The Rochdale society of equitable pioneers in 1844 was the first successful consumer cooperative business. Consumer cooperatives originated at a theatrical pace at the 1850s in Britain, the heartland of industrialization and modernization.

Ethiopia has introduced contemporary types of co-operatives in various areas of attempt after the majority of African countries where their co-operatives were established by the Western powers during their colonization period. The first consumer co-operative was established in Addis Ababa in 1945 and after decree No. 44 of 1960 modern or 'imported' co-operatives were officially introduced (ILO, 1975). And now the Ethiopian government is trying to promote co-operatives with the objective of developing them into autonomous self-help institutions.

(Mesganaw Kifelew Woldie, 2015.)This Cooperative Society Proclamation No.147/1998 cerate strong forward and backward linkage between government and cooperative society that is Cooperatives have been used as instrument by the government to interfere in the economy and also the legal recognition of special privileges to cooperatives like Government assistance, Income tax exemptions, Priority Claims, Administrative ease like No Business License, Temporary certificate pushing cooperatives from social objective model into investor owned firms (partnership/company) that means the Cooperatives enter into market competition and profit-maximizing model. Government uses Cooperatives as a means to implement policies specially to fight inflation and to control the price and distribution of basic goods Channeling to consumers and the cooperative uses this government motives as a means of business advantage in the form privileges to cooperatives like Government assistance to get land, Income tax exemptions, Priority Claims, Administrative ease like No

Business License, Temporary certificate possible only cooperators are pushing cooperatives from cooperation and social objective model into the realm of investor owned firms (partnership/company)- competition and profit-maximizing model.

2.2.3 Financial performance indicator

All business entity has an objective of making profit and profit maximization but the extent of appropriate and efficient method used to achieve this objective is determined by firm's overall efficiency and effectiveness of earning its level of asset, sales, capital employed and net worth capital employed (Sheik A.M 2014). There are many conflicting theories in which the firm profitability (financial performance) can be measure and which criterion is best to measure financial performance. However, many researchers commonly used accounting value profitability indicators as proxy for financial performance because according to (Almajali et al., 2012)The advantages of financial measures are the easiness of calculation and that definitions are agreed worldwide. Traditional, Balance sheet and data in income statement from financial ratios considered as critical measurement tools in determining financial assets of companies and performance (Nizam & Hoshino, 2015).

2.2.4 Firm specific Determinants of financial performance

The determinants of firm financial performances divided into two-part firm specific or internal factors and macroeconomic or external factors (Adjé, 2018) (Al-Tamimi & Hassan, 2010). Firm specific or internal factors are stochastic variables that determine the financial performance firm. These factors are basically influenced by internal decisions of management. In the article of Jensen (1986), Stolz (1990) and Barny (1991-2001) on their strategic management thought, they consider firm-specific internal resources as primary factors of firm's total performance. These are. In the subject of accounting and finance typical firm-specific internal resources or it may also be referred as micro-level variables are capital structure, size, sales growth, operational efficiency and liquidity are the primary determinants of firm's financial performance. Internal factors are individual firm characteristics which affect the financial performance firm. Each of firm specific indicators is further discussed below how it affects firm financial performance.

2.2.4.1Capital structure

Capital structure is measured by the ratio of total liability to total equity i.e. Debt-to-equity ratio.it shoes the extent of the amount of loans in total asset. The existing literature on the

effect of leverage on a firm's financial performance has come to mixed results and conclusions(Nikolaus, 2014). There is no common agreement accurate proportion of capital structure in the firm. Generally, cost of equity capital is higher than interest charges on debt while having some debt is good, too much debt is risky. According to Ayana K. (2006) Organizations that are more leveraged are likely to face negative results as there is risk of default, in case the firm is unable to meet its obligations, is difficulty for firm to get new debt from the market. According to (Matar & Eneizan, 2018)Leverage is not always bad, however; it can increase the stockholders' earnings on their invested funds and make better utilization of the tax benefits related to the debt financing.. So capital structure plays important role in financial performance of firm. Many empirical literatures showed mixed results on the relationship between capital structure and financial performance. Margaritas and Pillai (2010) found that capital structure is positively related to financial performance of firm. A recent research of (Nikolaus, 2014) leads to the conclusion that leverage has a negative relationship with firm performance. He suggested that the efficiency of the country's legal system affects this relationship between firm's financial performance and capital structure. Accordingly, his suggestion is that a country with an efficient legal system, the negative effect of leverage on performance is lessened. (Rotich, 2015) leverage was significant and positive. However contrary to this study, (Mirza, 2013) in Pakistan found that leverage was significant and positive and (Shah Mohd & Ahmed Siddiqui, 2020) found that capital structure had significant negative impact on financial performance.

2.2.4.2Firm size

According to (Pantea et al., 2014)Firm size has the most significant impact on performance; especially when measured through ROA (Mirza, 2013) Size of firm is measured as natural log of total assets that is calculated by moderating the Natural logarithm of Total Assets. FS= lnA. but there is no common agreement because some researcher argue that Large firms enjoy economies of scale and scope have more resources and capacity to undertake more product lines and higher production capacity together with organizational resources(Rotich, 2015).Other says smaller firms may be more flexible Theoretically it is equivocal on the precise relationship between firm's financial performance and firm size (Tailab, 2014)an insignificant negative relationship was found between size in terms of total assets and return on assets. showed a negative relationship between firm size and profitability with strong statistical significance (Yodit, 2017) (Tailab, 2014)The insignificant negative relation that size in terms of total assets has with ROA. According to (Mirza, 2013)in Pakistan found that

firm size was significant and positive. Most of the studies measuring the effect of firm size on financial performance have found positive trend between firm size and financial performance.

2.2.4.3 Liquidity

Liquidity can be measured by calculating the ratio between current assets to current liabilities (current ratio) (Matar & Eneizan, 2018). It refers to the capability of a business to discharge its current liabilities which liabilities being mature in the next one year can be repaid from current assets of the firm. If the liquidity ratio is higher, the firm's ability to meet its current liabilities will be higher in terms of the margin of safety. However, too high a ratio is an indication of poor asset management. According to (Khan et al., 2017)More liquidity will facilitate company to face unforeseen events and to manage its responsibility during operational activities of minimum profits. In general, many empirical studies show that there is inverse relationship between Liquidity and financial performance. The studies of show that liquidity have positive significant effect on profitability of the American firms(Tailab, 2014). (Matar & Eneizan, 2018)reveal that the variable of liquidity is positively related with the return on assets (ROA) (Nikolaus, 2014), (Mirza, 2013) , (Demirgünes, 2016), and (The, 1964) on the fertilizer industry of India conclude that liquidity in terms of current ratio has statistically negative effect on financial performance. Even though these evidences support the theory, some empirical studies revel contradictory to the theory also exist. According to the studies of (Khan et al., 2017) on textile industry in Pakistan, Ghosh and Maji (2003), (Borhan et al., 2014),(Hoang et al., 2019) , and (Tailab, 2014) analyzing factors effecting profitability of non-financial U.S. firms, liquidity in terms of current ratio has statistically positive effect on financial performance.

2.2.4.4 Sales growth rates

According to (Nizam & Hoshino, 2015)sales growth rates denote a percentage change in the sales of a company in a given years with the respect to the previous year sales. It tells whether the company's sales increase or decrease during a specific year and also tells the size of change. (Tailab, 2014) The shortage of inventory leads to loss in sales, while excess inventory may increase holding costs. Generally,(Noel Capon, 2020) Growth, analyzed in 88 studies, is consistently related to higher financial performance. Growth in sales individually show positive relationships to performance at both industry and firm/business levels of analysis (Noel Capon, 2020).

2.2.4.5Social Responsibility

According to (Cho et al., 2019)social responsibility refers broadly to a firm's legal, economic, ethical, and philanthropic responsibilities. (Nana et al., 2018)defines social responsibility as the pursuit of the right policy in terms of social goals or values, describing it as the duty of businesspeople to follow such decisions and actions. When to conclude the relationship between firms social responsibility and financial performance we should have to be consider the size of the firm. (Zoubir, 2015)The size is therefore a factor of mediation in the relationship between CSR and financial performance. For large firm in the correlation between CSR performance and profitability (ROA), only social contribution has a positive (+) relationship at a significance level below 5%.(Cho et al., 2019) but small firm has negative impact of CSR on the performance measured by several indicators (Zoubir, 2015).And also as reviled by (Linnea & Bråtenius, 2006) there was no significant reaction for the top performing companies' stock returns, but the general direction of the impact was negative.

2.2.4.6 Operating Expense Ratio

The operating expense ratio is the ratio between the total operating expenses (TOE) and operating income or the effective gross income for an income producing property. This ratio represents the total amount of expenditures the society pay for earning total revenue. Therefore, the lower percentage of this ratio means that the societies earn better income in the particular year. Accordingly, from the above profitability ratio everybody understands that the society incurs high expenditure to earn revenue, therefore this imply that the societies financial performance is unhealthy and inefficient to generate income by using less expenditures. (Mugun, 2020) indicated that operating expense ratio had negative and statistically significant relationship with return to assets ratio.

2.2.5 Macro(external) determinants of financial performance

Macro-economic variables influence the financial performance of an organization (Mirza, 2013) Economic factors are also important contributors to firm performance but are external to firms' control. These factors are beyond the management's control are referred as external. the economic and legal environment that affects the operation and financial performance of firms. These variables are variable affect the economy as a whole or aggregate that the firm operating in its external environment in opposite to micro economic focused on the influence and choice made by individual. The most prominent variables that used in determining financial performance of the firm are Inflation, gross domestic product, exchange rate,

unemployment, interest rate and other (Panayiotis et al., 2005) (Haider et al., 2018). In our case, only two variables are considered as independent variables that affect the financial performance of consumer cooperative in the existing economy.

2.2.5.1 Inflation

Inflation is the relative rise of price of good and service or a decreasing of a purchasing power of money. It is measured by annual percentage change in general price level. (Ifeanyi C. & Chuskwuma C., 2016) a perfect negative relationship between inflation and the value of the firm and insignificant relationship between inflation, economic value added and profitability. Firms (Nikolaus, 2014) found that the inflationary condition of a country affects the firm's financial performance and also, on the other hand, found that a higher inflation rate has a negative effect on firm performance. (Hailegebreal, 2016) inflation have negative and significant effect on financial performance. (Berk et al., 2006) inflation have negative influence on ROA in food industry(Mirza, 2013) Inflation rate had a negative impact on performance. However some studies show that inflation has positive effect on firms financial performance. (Shah Mohd & Ahmed Siddiqui, 2020) inflation have a positive effect on the ROA. (Berk et al., 2006) there is a strong positive between financial performance by commercial banks in Kenya and macroeconomic variables The reason why as we have seen in the above different researchers found that the effect of inflation on financial performance is as explained by (Habtamu, 2012) that the determination of inflation effect on firm performance depend on anticipation because inflation is high and unexpected it can be very costly to an economy (Habtamu, 2012).

2.2.5.2 Gross domestic product

Gross domestic product (GDP) is the market value of all final goods and services produced within an economy in a given period of time.(MANKIW, 2005) (Ifeanyi C. & Chuskwuma C., 2016) examined gross domestic product had a positive significant effect on firms financial performance. And also (Hailegebreal, 2016) found similar result that gross domestic product had a positive significant relationship with the profitability of Ethiopian insurance industry. (Shah Mohd & Ahmed Siddiqui, 2020) gross domestic product had a positive significant relationship effect on ROA. (Egbunike & Okerekeoti, 2018) is found to have an insignificant positive effect on ROA. Similarly, A research of Tambo (2016) examined that return on asset is positively affected by GDP and Kangal and Nadeem (2013) found that real GDP has an insignificant positive effect on financial performance. Murunga (2014) on a sample of insurance firms found that GDP had significant positive effects on performance, (Berk et al.,

2006) there is a strong positive between financial performance by commercial banks in Kenya and macroeconomic variables.

2.3 Review of Empirical Literature

This sub chapter provides so many evidences which identify the major determinants of financial performance. In case, some studies are conducted on particular institution and the others on panel of institutions. Hence many researchers have conducted a lot of research on determinants financial performance due to its significance for the institutional survival. In this case, the researcher starts reviewing empirical related literatures from the study made across cooperative institution, non-financial institution studies and also review of previous studies on different types of financial institution in different countries. There are a plenty of variables that affect financial performance institutions. In this study, the researcher focused on both consumer cooperative specific and macroeconomic determinants of financial performance consumer cooperative in Addis Ababa. consumer cooperative specific variables like; firm size, capital structure, liquidity, operational Efficiency, Inventory turnover, salsas growth and macroeconomic variables like gross domestic product and inflation.

2.3.2 Review of Empirical Literature on cooperative institutions

when we see empirical studies on determinants of financial performance of cooperatives especially in consumer cooperative is difficult to get literature but in agricultural cooperatives there are some empirical studies, These studies include the recent studies of Examining The Financial Performance Of Primary Agricultural Cooperatives In Dinsho District Of Bale Zone Of Ethiopia (Dube & Ozkan, 2019). An attempt has been made in this study to Evaluate the financial performances of multi-purpose primary agricultural cooperatives in the study area was the main objective of this study. Consequently, different ratios measurements that were commonly utilized to measure the financial performance of cooperatives were liquidity ratios, leverage and profitability ratio of nine Multi-Purpose cooperatives were examined for the period of 2015/16 and 2016/17. The final conclusion of this study indicates that the cooperative's financial position had not maintained a satisfactory level of financial assessment. (Dube & Ozkan, 2019)concluded that the current ratio of these cooperatives indicated that these cooperatives had enough liquid assets to pay off their short-term obligations. Consequently, The Liquidity ratio of the cooperative was not sound enough under the study period. Similarly, the capital structure that measured by debt to asset ratio as

an indication of the financial risk of the cooperatives also implied that the cooperatives have a shortage of their own capital.

(Sathyamoorthi et al., 2016) The variables include Interest expense percentage, Net profit ratio, Return on Total Assets, Total assets turnover, Sales to capital employed, Fixed interest cover, Interest on loans to interest on savings, Current ratio, Net book value per share, Earnings per share are independent variables and Return on capital employed is considered as dependent variable. The approach used to estimate the parameters of the model is the analytical techniques used include descriptive statistics of financial aggregates and ratios, correlation, regression and common size analyses. The study revealed that the selected SACCOSs had appreciable profitability potential which could be associated with effective utilization of resources, controlled spending on administrative and financial expenses and effective control over credit. The findings of this study further revealed that the selected SACCOSs had a sound short term and long-term solvency positions supported by huge cash and cash equivalent balances and very low external funds.

The study (Singh et al., 2019) a study on the determinants of financial performance of U.S agricultural cooperatives indicated that there are certain internal as well as macroeconomic determinants that influence Agricultural cooperatives' performance in a significant manner. Conducted research allowed them to investigate the possibility of macro aspect of economic policy uncertainty. The results also suggest that economic policy uncertainty in the U.S. in recent years may have harmed the Agricultural cooperatives' financial performance. In the case of internal factor, Growth is found positively associated with performance, While Size indicates that small Agricultural cooperatives usually earn higher rate of return on asset than large asset rich cooperative firms. With respect to size, it could be hypothesized that small Agricultural cooperatives, with a relatively small asset base, prefer to maintain higher liquidity and have a better market access ability than large firms.

2.3.3 Review of Empirical Literature on Non-Financial institutions

In the case of non-financial institutions there **are** Similar studies worked in similar title and variables but in deferent methodology result different findings on non-financial institution from this studies (Hoang et al., 2019) ROS, ROA and ROE as proxies of financial performance and capital structure, firm size, current ratio, growth rate, fixed asset investment, receivables management are independent variables. the approach used to estimate the parameters of the model is the ordinary least squares (OLS) and quintile regression approach using regression method on panel data for econometric models to examine the determinant

factors and degrees of impacts of factors on financial performance of listed firms on Vietnam stock exchange. The results revealed that firm size is positively related to financial performance; and on the contrary, capital structure, current ratios, fixed asset investment has negative relationship with business performance. At the same time, factors affecting financial performance when measured by ROA, ROE and ROS were not similar.

The Case of Mongolian Companies (Bayaraa, 2017) who has conducted a research to show the variables included were (ROA), (ROE), and (ROS) were chosen as dependent variables, while growth in assets, growth in profit, return on costs, cost to revenue ratio, sales growth, earnings per share, cost to revenue ratio, gross profit margin, were used as explanatory variables. The study found that capital structure, cost structure and profitability are the determinants of financial performance in Mongolia. In addition to this, there are some determinants attached with certain sector, such as long-term debt to total assets ratio is significant for the mining and agricultural sector only; however, short-term debt to total assets ratio is the determinant factor only for the service sector. In general, return on asset has more determinants than return on equity and return on sales, such as earnings per share, return on costs have positive impacts.

Analyzing Factors Effecting Profitability of Non-Financial U.S. (Tailab,2014) conducted a study on random-effects panel regression model for 100 firms. The variables included were leverage, liquidity, inventory, growth, size and firm's age as factors effecting financial performance. Findings also presented that inventory turnover, sales growth, firm size and capital structure have a negative significant impact on ROA, while liquidity and size in terms of sales have positive significant effect on profitability of the American firms. However, an insignificant negative relationship was found between size in terms of total assets and return on assets.

(Chytis et al., 2018) also conducted a study to determinants of Factors affecting Firm Performance in periods of Financial Crisis: Evidence from the listed on the Athens Stock Exchange Food Companies (Chytis et al., 2018). In the study, a sample of 13 food companies was examined for the period 2008 - 2012. The variables included were Corporate profitability was selected as a proxy for company financial performance and was regressed on firm characteristics and key financial performance indicators like firm size, liquidity, leverage, receivables/ payables turnover and capital employed to net fixed assets ratio. On the other hand, a negative association was found between profitability and capital employed to net

fixed assets ratio and inventory turnover days. The remaining variables were not found to be significantly correlated. Our results about the impact of firm size on firm performance confirm the findings of previous studies in Greece.

2.3.4 Review of Empirical Literature on Financial institutions

In case, some studies are conducted on particular financial institution and the others on panel of financial institutions. Hence many researchers have conducted a lot of studies on determinants financial performance due to its significance for the institutional survival. the study made across cooperative institution, non-financial institution studies and also review of previous studies on different types of financial institution in different countries shows that differentiating firm specific factor and macroeconomic factor for specific firm is very important to achieve its financial objective and institutional survival. there are a plenty of variables that affect financial performance of institutions. From the financial institutions, the recent studies of Determinants of commercial banks financial performance in Ethiopia (Ayano, 2016) by taking panel data of seven sample commercial banks out of eighteen commercial banks operated in the country over the period 2000-2014. In this study both bank-specific and macroeconomic determinants of commercial banks financial performance was conducted; The internal factors used in this study include Asset quality capital adequacy, liquidity management, earning ability, and Bank size whereas, the external factor is foreign exchange rate. Moreover, (ROA), (ROE) and (NIM) were used to measure the financial performance.

By using the quantitative research approach that incorporates the three Panel data estimation method, pooled OLS regression, the random effect model and runs a redundant fixed effects test using Hausman specification test were used for extracting good result and F-test ascertained the appropriateness of Pooled OLS regression model. Hence, based on the result Capital adequacy and bank size, have significant impact on ROA with a positive relationship; which means any increase/decrease in the value of these variables heads to an increase/decrease on financial performance of Commercial banks. Accordingly, earning ability and Foreign exchange rate have significant impact on Return on Asset with a negative relationship; which means any increase/decrease in the value of these variables follow a similar direction on financial performance of Commercial banks. But, Capital Adequacy, Asset quality, earning ability, Liquidity Management and Foreign exchange rate have significant impact on Return on Equity with a negative relationship. In this study, Bank Size has significant impact on Return on Asset with a positive relationship; it shows that any

increase/decrease in the value of these variables follow a similar direction on financial performance of Commercial banks. (Mauwa, 2016) by using the generalized least square on panel data to estimate the parameter. The inquirer examined managerial efficiency, asset quality, and capital adequacy affects significantly the performance Kenyan commercial bank. The other bank specific factor liquidity management represented by liquidity ratio was found to have no significant effect on. Determinants of Financial Performance (Habtamu, 2012) who conducted study on South African commercial bank and he found that deteriorating credit quality, low liquidity and profitability in the South African commercial Bank resulting the decrement of south African commercial bank financial performance.

The study made by (Assfaw, 2015) Analytical approaches were applied. In this study, return on asset, return on equity, and net interest margin as the dependent variables and bank specific (internal) factors like management efficiency, banks size, asset quality, liquidity management, and capital adequacy as independent variables were used.

(MURERWA, 2015) tried to examine the key determinants of banks' financial performance in developing economies: evidence from Kenyan commercial banks. This study used census of all 44 banks of data for five years, and the analysis was based on descriptive and inferential analysis and presented by using charts and tables. The study has brought out that on firm specific factors (internal factors) influencing bank financial performance; A positive relationship between capital adequacy and performance of commercial banks in Kenya were established. Competition is the deepest industry specific determinants while macro-economic factors did not have that much impact on the bank's financial performance.

A research conducted by (Ongore & Kusa, 2013) Determinants of Financial Performance of Commercial Banks in Kenya the main objective of the study was to investigate the internal and external determinants of Kenya commercial banks financial performance over the period 2000 - 2014 by using linear multiple regression model and Generalized Least Square on panel data to estimate the parameters. In This empirical study the authors examined that capital adequacy, and management efficiency significantly affects the performance.

A study conducted by (Ifeacho & Ngalawa, 2014) Performance Of The South African Banking Sector Since 1994. They used financial ratios to measure credit quality performance, liquidity and profitability of five large South African commercial banks. In their final result, they examined overall bank performance increased considerably in the first two consecutive years of the analysis. A significant change in trend is noticed at the beginning of the global

financial crisis in 2007, reaching its climax during 2008-2009. This resulted in falling deteriorating credit quality, low liquidity and profitability in the South African commercial Bank.

A study made by (Almajali et al., 2012) Leverage has a significant statistical impact on Financial Performance of insurance companies that is an increase in the leverage has a positive impact on their performance. Liquidity has a significant statistical impact on Financial Performance of insurance companies. This implies that high liquidity obviates the need for management to improve annual operational performance. Company age has no significant statistical impact on Financial Performance of insurance companies.

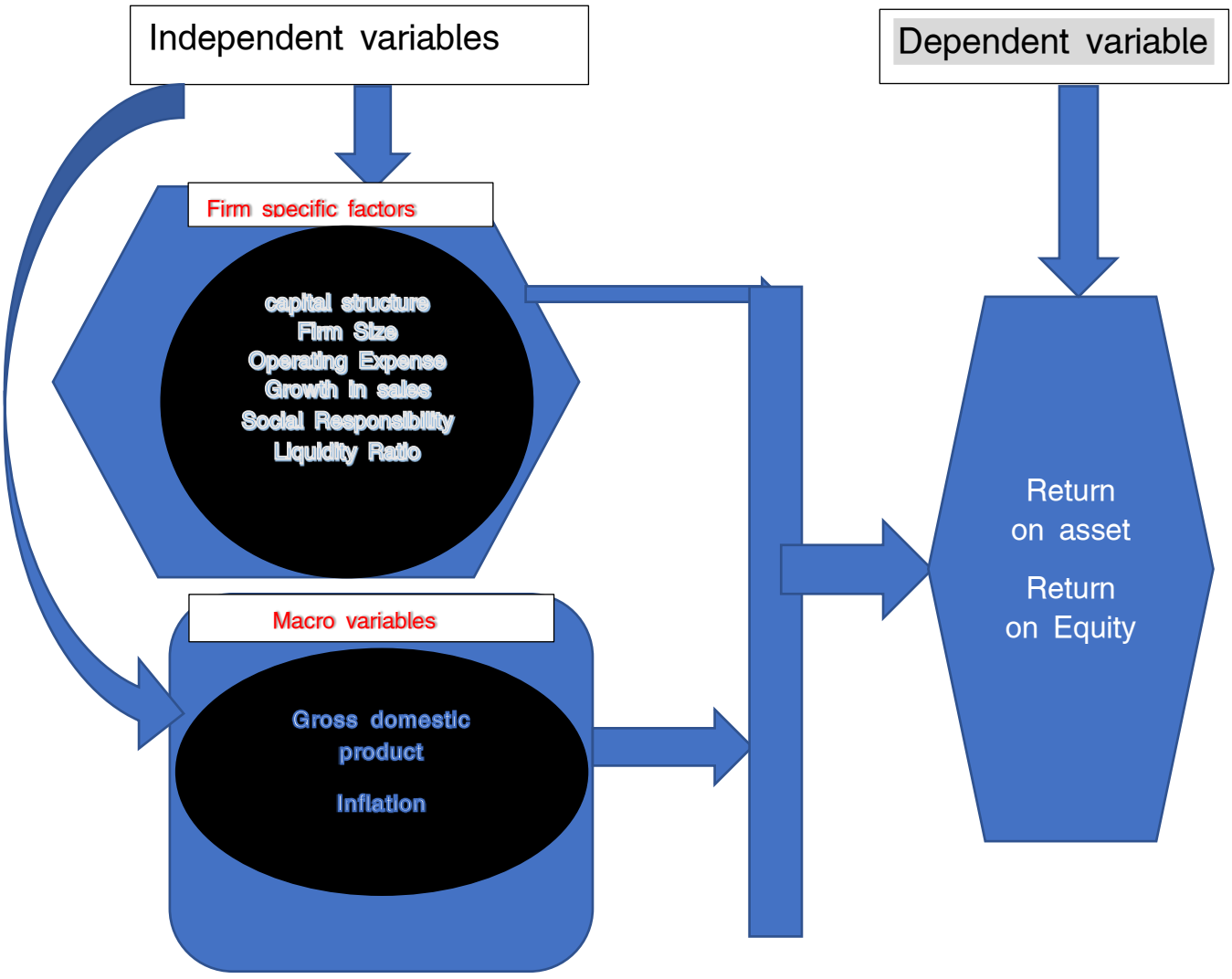
2.4 Literature Gap

As we have discussed in the above section there is large volume of literature in the area of financial performance in the light of financial institution like bank, insurance, saving and credit associations some of previous studies are (Ayano, 2016); (Ababa, 2016) (Assfaw, 2015) (Ongore & Kusa, 2013); (murerwa, 2015). (Matar & Eneizan, 2018) (Mauwa, 2016) similarly there are studies of non-financial institution from this studies like (Bayaraa, 2017), (singh et al., 2019), (mauwa, 2016) , (Tailab, 2014), (Audax, 2018), (Matar & Eneizan, 2018), (demirgünes, 2016) and (Tailab,2014) addressed different dynamics of financial performance. However, very few studies (Dube & Ozkan, 2019).(Sathyamoorthi et al., 2016)assessed financial performance of Agricultural cooperatives but when we see empirical studies on determinants of financial performance of consumer cooperative is difficult to get literature. Therefore, with this study, we try to address the gap and also analyzing the financial performance determinant factors influence performance of consumer cooperatives

2.5 Conceptual frame work

From the theoretical and empirical literature reviews suggested that the financial performances of institutions are determined by firm specific (internal) and macro (external) factors. Both firm specific and macro factors used in this study includes capital structure, Firm Size, Operating Efficiency, Growth in sales, Inventory Turnover, Liquidity, Real GDP growth rate and Inflation rate only for the study proposed dependent variables

Figure 2.1 conceptual frame works.



Source: Researchers own computation

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter was discussed about the methodology and techniques used in conducting the thesis and it organized into different sub-sections. research Methodology is defined as the systematic way of answering a research problem, by using various methods for data collection and drawing conclusions about the research data.(C.R. KOTHARI 2004) made clear and deep concept about research methodology, according to his work research methodology does not only talk about the study methods but it is a way to systematically solve the research problem. methodology of a research is dealt with what researcher will actually to do in order to address the objectives and research questions that he have developed. People often equate 'methodology' with the list of individual methods that will be applied. Generally, in this study research methodology provides the main reasons why certain techniques are used in the process inquiry of research problem. This chapter covered research design, research approach, sampling technique, population and sample size, instruments, and data analysis.

3.1 Research Design

This research was used explanatory research design of doing research because it helps the researcher to explain the causality relationship between variables and measure the concepts quantitatively because the aim of this research was examined the relationship and effect of the independent variables with dependent variable in which causation is used. According to (Saunders, M., Lewis, P.Tornhill, 2007) research design is the general plan of how we will go about answering our research question. Design of a research is master plan that specifies the procedure and method for gathering and analyzing collected information. As noted by (C.R. KOTHARI 2004) research design is guided by' the objective of the study, the purpose of the study, the type of investigation, the significance of the study, the stage of knowledge in the study area, the time period over which the data is to be collected and the type of analysis to be carried out, that is, whether quantitative or qualitative and the type of data analysis tools that the researcher use. Having this in mind the research design of this research is discussed in brief as follows.

3.1.1 Research Philosophy

According to the work of (Saunders, M., Lewis, P.Tornhill, 2007) five major philosophies in business and management: positivism, critical realism, inter pretivism, postmodernism and pragmatism. According to (Creswell., 2003) positivist is a deterministic paradigm in which every outcome or effect is the result of its cause. Thus, the problem examined by the post positivist shows that the need to find and assess the cause that determine its result or effect. It is also reductionist in that the intent is to reduce the ideas into discreet and small set of variables to test the hypothesis and to answer research question. He notified clearly that post positivist develop knowledge to careful observation and measurement of the objective reality that exists "out there" in the world., indicate that theories and laws that govern the existing world. require to be proofed or tested and refined. (Saunders et al., 2019) This emphasizes the positivist focus on strictly scientific empiricist method designed to yield pure data and facts uninfluenced by human interpretation or bias. The research was conducted within the post-positivist paradigm (philosophy).

3.1.2 Research Approach

According to (Creswell, John W 2003) three research approaches are advanced Quantitative research approach, research approach and mixed research approach and the three approaches are not as discrete as they first appear (C.R. KOTHARI 2004) quantitative research is based on the measurement of quantity or amount as the term indicated, dealt with the collection and analysis of data in numeric form. it consists of the researches that the data gathered must be analyzed in terms of numbers. According to (Saunders, M., Lewis, P.Tornhill, 2007) Quantitative research is generally associated with positivism philosophy. Quantitative methods formulate assumptions within their structure through the process of asking questions or posing hypotheses by incorporating words, such as "cause," "difference between," "effect," and "predicts," which all assist in the general quantitative research's aim of developing generalizations that allow better predictions, explanations and understanding of specific factors by the researcher. A quantitative method of doing research was used in this research because, quantitative research answers questions through a controlled deductive process, allowing for the collection of numerical data, the prediction, the measurement of variables, and the use of statistical procedures to analyze and develop inferences from that data.

3.1.3 Research Type and Purpose

According to (Saunders et al., 2019)The classification of research purpose most often used in the research methods' literature is the threefold one of exploratory, descriptive and explanatory. For the concern of this thesis, the researcher will be using casual research design by building blocks of descriptive research design. (William_G._Zikmund,_Barry_J._Babin, 2012) Descriptive Research As the name implies, the major purpose of descriptive research is to describe characteristics of objects, people, groups, organizations, or environments. Descriptive research tries to "paint a picture" of a given situation by addressing *who, what, when, where,* and *how* questions it will enable the researcher has gained a firm grasp of the situation being studied and to identify the variability in different phenomena. In contrast, Causal research seeks to identify cause and-effect relationships. explanatory or Causal research will enable to examine and explain relationships between variables, in particular cause and-effect relationships. The effect is the outcome. Explanatory design will be used to assess the effect of determinant factors on profitability of consumer cooperative organization. (Saunders, M., Lewis, P.Tornhill, 2007)The emphasis in explanatory research is to study a situation or a problem in order to explain the relationships between variables. Since, the purpose of this research is to describe the behavior of the subject under the study and descriptive format can do better than other formats for quantitative research method so, it will be used in this study and the other purpose is to examine the relationship and effect of the independent variables with dependent variable in which causation is used. Thus, the research formats for this study will be both explanatory (Causal) and descriptive design. Taking important of this the researcher was used explanatory research approach of doing research because it helps the researcher to explain the causality relationship between variables and measure the concepts quantitatively.

3.2 Sampling Design

Sample design refers to sample frame, sample size and sampling technique. Sampling is the technique of selecting the target respondent that accurately represents the population that has been studied. The primary objective of sampling is that by selecting some elements of a population, the researcher can infer generalization for the entire population. Since, taking an entire population for the study does not result in efficiency, taking sample is justifiable. Unless in some circumstances all units within the population were identical in all respects there would be no need to sample at all. especially when there is perfect homogeneity of units, taking a single unit for study reflect the population perfectly. In opposite to this ,(Saunders et al., 2019) For some research questions it is possible to collect data from an

entire population as it is of a manageable size. However, we should not consider that a census will be necessarily provide more useful results than collecting data from a sample which represents the entire population. (Saunders, M., Lewis, P.Tornhill, 2007)Sampling provides a valid alternative to a census when there are budget constraints and time constraints prevent from surveying the entire population. it is possible to collect data from an entire population as it is of a manageable size (Saunders, M., Lewis, P.Tornhill, 2007). The following section examines the target population and sample size, sampling technique that will be used by the researcher for the study, and the motivation for selecting the sampling method. It also examines the sample size and sampling technique that was used for this study.

3.2.1 Target Population

It refers the entirety of members from a formulation of people, events, or objects that are either real or hypothetical, as the researcher attempts to create a generalization of the findings from the results of the study (Barreiro &Albedos, 2001). The target population of the current research encompassed all consumer cooperative organization registered and which have certified from Addis Ababa office cooperative agency before 2008 E.C and currently working in the list of Addis Ababa Cooperative Agency. In September, 2020 Addis Ababa Cooperative Agency report showed that the total number of consumer cooperative organizations were 148. From 148 consumer cooperative organizations 116 were organized before 2016.

3.2.2 Sample size

According to (Brooks, 2013)sample size is the number of observations or data points per series in the sample. Here are some of the factors which relate to proper sample size. The correct sample size in a study is dependent on (Abowd, 2005)The Homogeneity of the Population and the purpose of the study. That means if the Population under study is homogeneous a set of participants is selected which is less in number (size) but adequately represents the population from which it is selected so that true inferences about the population can be made from the results obtained from the sample. Although there are no general rules of thumbs, the sample size usually depends on the population to be sampled. In this study to select sample size, a list of 116 consumer cooperative organizations was taken as sample frame.

Thus, among 116 consumer cooperative organization, due to time and financial limitations and the nature of the population the researcher was determined samples size by using sample determination method developed by (Carvalho, 1984).

Population size	Small	Medium	Large
51−90	5	13	20
91−150	8	20	32
151−280	13	32	50
281−500	20	50	80
501−1200	32	80	125
1201−3200	50	125	200
3201−10,000	80	200	315
10,001−35,000	125	315	500
35,001−150,000	200	500	800

Table 3.1 J. Carvalho Sample size determination.

Source: (Carvalho, 1984)

Based on the above (Carvalho, 1984) Sample size determination table fifteen (15) consumer cooperative organization will be selected as sample size from 148 consumer cooperative organization certified from city administration of Addis Ababa office of cooperative agency and currently working in Addis Ababa. The selected sample twenty-one (21) greater than small medium sample size of 20 for population size of 91−150 and less than large sample size 32 for population size 91—150 in the above Carvalho's sample size determination table. In addition to this, according to (Abowd, 2005) provided his research students (fall, 1984) with the "rule of thumb" on sample size for Population Size of 101-1,000 we can use sample 10% from this point The researcher was used twenty-one (21) samples equal to Dr. John Curry's 18% of consumer cooperative that is 105 observation. Since there is homogeneity in consumer cooperative organization, Homogeneity in a population means that the members of the population are similar on the characteristic under study the natures and type of services provided by consumer cooperative organization to their customers are homogeneous, the researcher believed that the sample size represents the target population.

3.2.3 Sampling Technique

To doing this study, the researcher will be use probability sampling methods to obtain representative data. The probability sampling is sampling methods in which each element has a known or non-zero probability of being selected in the sample. Since there is homogeneity in target population so the researcher was determined to use the most common method of sampling known as simple random sampling (Abowd, 2005). Because the number of target population were small and it was possible to record and list for lottery so, every individual in target population had an equal probability of become the possible selected samples.

3.2.4 Data Gathering method and instrument

Data collection refers to the process of gathering raw and unprocessed information that can be processed into meaningful information, following the scientific process of data analysis. (Kotler & Keller, 2010)The researcher can gather secondary data, primary data, or both. Secondary data are data that were collected for another purpose and already exist some? where. Primary data are data freshly gathered for a specific purpose or for a specific research project .For the purpose of this study, the researcher will be use secondary data type and quantitative in nature that can be best fit to the panel data analysis because as clearly explained by (Saunders, M., Lewis, P.Tornhill, 2007) that secondary data provide the only possibility of undertaking longitudinal studies.

(Gujarati & Econometrics, 2004) Panel, Longitudinal, or Micro panel Data is a special type of pooled data in which the same cross-sectional unit is surveyed over time. Panel data has the dimension of both cross section and time series. It involves the activity of pooling all observations on time series over a period of time or a cross section of units of over several time period and also the researcher got a result that are not simply detectable in pure time series or pure cross section studies. As clearly explained by (Brooks, 2013) there are three important advantages of panel date set. the First and most importantly, the researcher can address a broader range of issues and tackle more complex problems with panel data relative to pure cross section data and pure time serious data alone. The Second important advantages, to investigate which variables, or their relationship between the variables, change dynamically (over time) by combining cross-sectional and time series data, one can increase the number of degrees of freedom, the last or Third important advantages is by structuring the model in an appropriate way, the researcher can remove the impact of certain forms of

omitted variables bias in regression results. Hence, by combining cross-sectional data and time series data, the researcher can increase the number of degrees of freedom, and thus the power of test, by employing information on the dynamic characteristic of a large number of sample units at same time.

Accordingly, (Saunders, M., Lewis, P.Tornhill, 2007) the main advantage of using secondary data is the enormous saving in resources, in particular your time and money a secondary source of data that is panel in nature was preferred by the researcher since it is less expensive in terms of time and money while collecting. The data that verify consumer cooperative specific factors variables which will be gathered from the audited annual financial statements of the consumer cooperative in Addis Ababa and also it will be extracted from the financial statements and annual reports of those selected sample consumer cooperatives. The data that verify macroeconomic factors variables obtained from (NBE) National Bank of Ethiopia, AACAPDC) Addis Ababa City Administration Plan and Development Commission all data was collected on annual base and the figures for the variables will be on June 30 of each year under study.

3.3 Method of Data Analysis

To comply with the objective of this research, the research was primarily based on quantitative data, which adopted an econometric model to identify and measure determinant factors has an effect on financial performance of consumer cooperative of Addis Ababa. The researcher was adopted multiple linear regression models to identify and measure possible factors that could have an effect on financial performance as measured by the ratio of net income to total asset and the ratio of net income to total capital. Furthermore, descriptive analysis, diagnostics test, the *independent variables* correlation matrix analysis, F-test, Huisman test and the regression analysis were conducted. Regression is concerned with describing and evaluating the relation- ship between a given variable and one or more other variables.(Brooks, 2008)

The data that will be collected from audited annual financial statements of the consumer cooperative in Addis Ababa and also it was extracted from the financial statements and annual reports of those selected sample consumer cooperatives were rearranged, and calculated in order to make complete. The data that obtained from (NBE) National Bank of Ethiopia, (AACAPDC) Addis Ababa City Administration Plan and Development Commission were entered into the EViews Statistical software which is used to quantitatively

analyze the panel data both in the form of descriptive statistics and inferential statistics. The descriptive statistics was used to analyze the general trends of the data that including minimum, mean, maximum and standard deviation is used to describe and provide detailed information about selected variables; diagnostics tests of CLRM assumptions including Mean zero, Normality, Multicollinearity, Heteroscedasticity and autocorrelation tests were conducted to ensure safe application of least square method; this study also conducted correlation analysis, specifically correlation matrix to measure the degree of association between the variables under considerations; F-test is used to test more than one coefficient simultaneously different from zero and to check the significance level of all independent variables in this research models; and panel data regression analysis (panel least square method) is used to examine the effect of independent variables on dependent variable in order to conclude based on the collected data about the determinant factors in financial performance of consumer cooperative; the P-value will be used to determine the significance of the constant term and the coefficients terms for the regressions. The importance of each of the regressions will be determined by applying the F-test at 95% confidence level. The coefficient of determination R^2 was used to measure the strength to which Explanatory variables explain the variations in the explained variables.

Operationalization of variables

In this study return on asset (ROA) and return on sales (ROS) taken as dependent variable as proxy for financial performance of consumer cooperative. Return on Asset (ROA) is measured by the ratio of total income to total asset and Return on Sales (ROS) is measured by the ratio of total income to total sales. And also, capital structure (CS), Firm Size (FS), Operating Efficiency (OPE),Growth in sales (GS), Social Responsibility (SC), Liquidity (LQ), Real GDP growth rate (GDP) and Inflation rate (IF) are independent variables. According to (Brooks, 2008) including more than one independent variable in the model never indicates the absence of missed variables from the model. Thus, to minimize the effect of missed variables from the model, the researcher was included disturbance term in this research.

3.3.1 Operationalization of dependent variables

The firm's Financial performance reflects on variable related to directly to firm's financial reports (Kioko,2010). The most commonly used accounting financial report variables like return on asset (ROA), return on equity (ROE), return on investment (ROI) and return on

sales (ROS) are proxies for financial performance of a firm also strengthened this idea by suggesting firm's financial performance must be measured by using accounting value. In this study return on asset (ROA) and return on sales (ROE) taken as dependent variable as proxy for financial performance of consumer cooperative. return on asset (ROA) is the ratio of total income to total asset when it is higher the firm effectively and efficiently utilized its asset. The reason for choosing this variable is that the return on assets (ROA)) it measures the effectiveness of the economic unity in using its assets to generate profit (Xu & Banchuenvijit, 2012).

3.3.2 Operationalization of independent variables

Operationalization of independent variables describes the independent variables that use in the econometric model to estimate the dependent variable. Following prior studies towards the determinants of financial performance and by considering the firm specific and macroeconomic specific, the following independent variables; capital structure (CS), Firm Size (FS), Operating Efficiency (OE),Growth in sales (GS), Inventory Turnover (IT), and Liquidity (LQ), are firm specific independent variables. the Gross domestic product (GDP) and inflation rate (INF) are macroeconomic specific variables that used as the determinants of financial performance in this study. The variables of the study are clearly described below.

Capital structure

Capital structure is measured by the ratio of total liability to total equity i.e. Debt-to-equity ratio.it shoes the extent of the amount of loans in total asset. (Nikolaus, 2014)The existing literature on the effect of leverage on a firm's financial performance has come to mixed results and conclusions. Generally, cost of equity capital is higher than interest charges on debt while having some debt is good, too much debt is risky. (Matar & Eneizan, 2018) the existing literature on the effect of capital structure on firm's financial performance has come to mixed results and conclusions. In a study about the relationship between capital structure and firm performance have a positive statistical effect (Almajali et al., 2012), A recent research of (Nikolaus, 2014) leads to the conclusion that leverage has a negative relationship with firm performance. (Rotich, 2015) leverage was significant and positive However contrary to this study, (Mirza, 2013) in Pakistan found that leverage was significant and positive and (Shah Mohd & Ahmed Siddiqui, 2020) found that capital structure had significant negative impact on financial performance.

$$\text{Capital structure} = \frac{Total\ Liabilities}{Total\ \text{equity.}}$$

Firm size

As noted by (Pantea et al., 2014)Firm size has the most significant impact on performance; especially when measured through ROA. (Mirza, 2013) Size of firm is measured as natural log of total assets that is calculated by moderating the Natural logarithm of Total Assets. According to (Tailab, 2014) an insignificant negative relationship was found between size in terms of total assets and return on assets. showed a negative relationship between firm size and profitability with strong statistical significance (Yodit, 2017) (Tailab, 2014)The insignificant negative relation that size in terms of total assets has with ROA Most of the studies measuring the effect of firm size on financial performance have found negative trend between firm size and financial performance.

$$\text{Firm Size} = \log \text{of total assets}$$

Liquidity

It can be measured by calculating the ratio between current assets to current liabilities (current ratio) (Matar & Eneizan, 2018). The current ratio is the most wide-spread liquidity indicator by deriving the proportion of current assets available to cover current liabilities. The studies show that liquidity have positive significant effect on profitability of the American firms (Tailab, 2014). (Matar & Eneizan, 2018)reveal that the variable of liquidity is positively related with the return on assets (ROA) (Nikolaus, 2014), (Mirza, 2013) , (Demirgünes, 2016), and (The, 1964) on the fertilizer industry of India conclude that liquidity in terms of current ratio has statistically negative effect on financial performance. Even though these evidences support the theory, some empirical studies rival contradictory to the theory also exist. According to the studies of (Khan et al., 2017) on textile industry in Pakistan, Ghosh and Maji (2003), (Borhan et al., 2014),(Hoang et al., 2019) , and (Tailab, 2014) analyzing factors effecting profitability of non-financial U.S. firms, liquidity in terms of current ratio has statistically positive effect on financial performance.

$$Liquidity\ Ratio = \frac{Current\ Assets}{Current\ Liabilities.}$$

Sales Growth Rates

Sales growth rates is percentage change in the sales of a company in a given years with the respect to the previous year sales. (Tailab, 2014) The shortage of inventory leads to loss in sales, while excess inventory may increase holding costs. Generally, (Pouraghajan et al., 2012) (Noel Capon, 2020) Growth, analyzed in 88 studies, is consistently related to higher financial performance. the growth rate by sales had a positive effect on ROA(Hoang et al., 2019). Growth in sales individually show positive relationships to performance (Noel Capon, 2020).

$$\text{Sales Growth Rates} = \left(\frac{\text{sales}_t - \text{sales}_{t-1}}{\text{sales}_{t-1}}\right) \text{X } 100$$

Operating expense ratio

The operating expense ratio is the ratio between the total operating expenses (TOE) and operating income or the net sales. This ratio represents the total amount of expenditures the society pay for earning total revenue. Therefore, the lower percentage of this ratio means that the societies earn better income in the particular year. (Mugun, 2020)Operating expense ratio exhibited a negative correlation with returns on assets ratio. (Mugun, 2020) indicated that operating expense ratio had negative and statistically significant relationship with return to assets ratio.

$$\text{operating expense ratio} = \frac{\text{operating expense}}{\text{Net sales}}$$

Social Contribution

As we see Social Contribution is qualitative in nature so we use dummy variable that is Cooperatives in certain contribution represented by ‘1”, otherwise “0”. When to conclude the relationship between firms social responsibility and financial performance we should have to be consider the size of the firm. (Zoubir, 2015)The size is therefore a factor of mediation in the relationship between CSR and financial performance. For large firm in the correlation between CSR performance and profitability (ROA), only social contribution has a positive (+) relationship at a significance level below 5%.(Cho et al., 2019) but small firm has negative impact of CSR on the performance measured by several indicators (Zoubir, 2015).And also as reviled by (Linnea & Bråtenius, 2006) there was no significant reaction for the top performing companies’ stock returns, but the general direction of the impact was negative. the companies that are making efforts in the areas of social welfare and the

protection of the environment, achieve operating results lower than the other companies, the consequent negative effects on the value of their shares on the stock exchange. (Wang & Gao, 2016). social commitment by firms have no impact on the financial performance of firms (Nyeadi et al., 2018)

Inflation

Inflation is the relative rise of price of good and service or a decreasing of a purchasing power of money. It is measured by annual percentage change in general price level. (Ifeanyi C. & Chuskwuma C., 2016) a perfect negative relationship between inflation and the value of the firm and insignificant relationship between inflation, economic value added and profitability. Firms (Nikolaus, 2014) found that the inflationary condition of a country affects the firm's financial performance and also, on the other hand, found that a higher inflation rate has a negative effect on firm performance. (Hailegebreal, 2016) inflation have negative and significant effect on financial performance. (Berk et al., 2006) inflation have negative influence on ROA in food industry (Mirza, 2013) Inflation rate had a negative impact on performance. However some studies show that inflation has positive effect on firm's financial performance. (Shah Mohd & Ahmed Siddiqui, 2020) inflation has a positive effect on the ROA. (Berk et al., 2006) there is a strong positive between financial performance by commercial banks in Kenya and macroeconomic variables The reason why as we have seen in the above different researchers found that the effect of inflation on financial performance is as explained by (Habtamu, 2012) that the determination of inflation effect on firm performance depend on anticipation because inflation is high and unexpected it can be very costly to an economy (Habtamu, 2012).

Gross domestic product

Gross domestic product (GDP) is the market value of all final goods and services produced within an economy in a given period of time.(MANKIW, 2005) (Ifeanyi C. & Chuskwuma C., 2016) found that GDP Rate has a significant impact on financial performance. (Hailegebreal, 2016) GDP have statically positive and significant relationship with the profitability of Ethiopian insurance industry. (Shah Mohd & Ahmed Siddiqui, 2020)real GDP is found to have an insignificant positive effect on ROA. (Egbunike & Okerekeoti, 2018) is found to have an insignificant positive effect on ROA. (Berk et al., 2006) there is a strong positive between financial performance by commercial banks in Kenya and macroeconomic variables.

3.4 Summery for Operationalization of the study variables.

The summery of dependent and independent variables and their expected sign.

ROA and ROE were used as explained variables in the study and which can be affected by eight listed explanatory variables. A positive sign "+ "indicates direct effect of independent variables on dependent variable, where as a negative sign "– "indicates an inverse effect of independent variables on dependent.

Table 3.2 the summery of dependent and independent variable and their expected sign.

	Variable	Notation	Proxy measurement	Used by (some Empirical Evidence)	Expected Result
DEPENDENT	Return on Asset	ROA	Net income before tax to its total asset.	(Hoang et al., 2019), (Almajali et al., 2012), (Nizam & Hoshino, 2015)	
	Return on Equity	ROE	Net income after tax to its total capital.	(Bayaraa, 2017),(Xu & Banchuenvijit, 2012), (Assfaw, 2015)	
INDEPENDENT	Capital structure	CS	The ratio of total liability to total equity i.e. Debt-to-equity ratio.	(Nikolaus, 2014), (Almajali et al., 2012), (Matar & Eneizan, 2018).	+
	Sales Growth	SG	A percentage change in the sales in a given years with the respect to the previous year sales.	(Noel Capon, 2020), (Tailab, 2014),(Hoang et al., 2019)	+
	Liquidity	LQ	The ratio between current assets to current liabilities (current ratio).	(Matar & Eneizan, 2018), (Nikolaus, 2014), (Mirza, 2013) , (Demirgünes, 2016),	+
	Operating Expense ratio	OPE	The ratio between the total operating expenses (TOE) and operating income	(Mugun, 2020),	-
	Firm size	Log_FS	The Natural logarithm of Total Assets	(Pantea et al., 2014), (Tailab, 2014) , (Yodit, 2017)	-

Firm Social Contribution	D1	Cooperatives in certain contribution represented by ‘ 1” , otherwise “ 0”	(Zoubir, 2015) , (Cho et al., 2019),(Linnea & Brătenius, 2006)	-
Rate of GDP	GDP_Rate	The market value of all final goods and services produced within an economy in a given period of time.	(Berk et al., 2006), (Shah Mohd & Ahmed Siddiqui, 2020), (Hailegebreal, 2016)	+
Inflation	IF	The relative rise of price of good and service or a decreasing of a purchasing power of money.	(Hailegebreal, 2016), (Habtamu, 2012). (Ifeanyi C. & Chuskwuma C., 2016),	-

Source: Researcher own Computation.

3.5 Model specification

The literature reviewed in the previous chapter identified determinants of financial performance. This sub chapter presents a framework of analysis on the basis of these studies, and involves adopting a model that will help to demonstrate the responsiveness of certain key variables that determine financial performance. In order to determine the kind of relationship, positive or negative, and also the strength of this relationship a linear regression model will be used. Linear regression models gage the relationship between independent and dependent variables. To examine the significance of factors that determinants the financial performance of consumer cooperative an Ordinary Least Square method in which multiple regression model was used to link the independent variables to the dependent variables.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

(Brooks, 2013) dependent variable usually denoted by y that the model tries to explain or that depend on the independent variables; they are the outcomes or results of the influence of the independent variables. The variables which are thought to affect the dependent variable are referred to as independent (explanatory or regressor) (denoted by X_1, X_2, X_3. . . X_6). This paper will be using Ordinary Least Square of multiple regression model the panel regression to examine the determinants consumer cooperative’s financial performance. Return on asset is representing consumer cooperative’s financial performance that is dependent variable and Firm size, Operating efficiency, Growth in sales, Liquidity, Real GDP growth rate and Inflation are independent variables.

The finally employed model becomes:

$$ROA = \alpha + \beta_1 LnFS + \beta_2 \text{OPE} + \beta_3 GiS + \beta_4 LQ + \beta_5 \text{SC} + \beta_6 \text{D1} + \beta_7 \text{GDP} + \beta_8 IF + \varepsilon$$

$$ROE = \alpha + \beta_1 LnFS + \beta_2 \text{OPE} + \beta_3 GiS + \beta_4 LQ + \beta_5 \text{SC} + \beta_6 \text{D1} + \beta_7 \text{GDP} + \beta_8 IF + \varepsilon$$

Where;

ROA is Return on Asset

ROE is Return on Equity

CS is capital structure

LnFS is natural Logarithm of Firm Size that is natural Log to total asset.

OPE Is Operating Expense Ratio

GS is Growth in sales

D1 is Social Contribution

LQ is Liquidity

GDP is Real GDP growth rate

IF is Inflation rate

3.6 Model Assumptions

3.6.1 The Classical Linear Regression Model (CLRM).

There are many diagnostic tests were conduct to decide whether the model used in the study appropriate and to fulfill the classical linear regression model assumption. According to (Brooks, 2013) These were required to show that the estimation technique, ordinary least squares (OLS), had a number of desirable properties, and also so that hypothesis tests regarding the coefficient estimates could validly be conducted.

The following diagnostic tests were carried out to ensure that the data suits the classical linear regression model.

Test for average value of the error term is zero (E (u_t) = 0) Assumption

This is the first assumption that tells the mean value of the disturbances term is zero.

The mean of the residuals is always zero provided that there is a constant term in the regression. If the regression did not include an intercept, and the average value of the errors was non-zero as a result several undesirable consequences could arise like R^2 can be negative that means R^2 and $\bar{R}^2$ are usually meaningless in such context and could lead to potentially severe biases in the slope coefficient estimates.

Tests for Heteroscedasticity $\mathbf{var}(u_t) = \sigma 2 < \infty$) Assumption

According to (Brooks, 2013)It has been assumed thus far that the variance of the errors is constant, $\sigma 2$ – this is known as the *assumption of homoscedasticity*. This Assumption tells that the variance of the errors is constant, σ^2 this is known as the assumption of

homoscedasticity. If the errors do not have a constant variance the OLS standard errors will be too large for the intercept when the errors are heteroscedastic and the standard errors could be wrong and hence any inferences made could be misleading. Whether the standard errors of slope coefficient calculated using the usual formula were too big or too small depend upon the form of the heteroscedasticity. There are different types of formal tests to detect the heteroscedasticity problem like The Goldfield Quandt (GQ) test, Breusch-Pagan-Godfrey test, White's Test, park test, Glejser test and Spearman's rank correlation test. In this research the Breusch-Pagan-Godfrey test method was applied.

Test for absence Autocorrelation Assumption $(cov(u_i, u_j) = 0 \text{ for} i \neq j)$

This Assumption tells that the covariance between the error terms over time is zero or there is no autocorrelation between the error terms. That means there is no pattern in the errors or errors are uncorrelated with one another. If there are patterns in the residuals from a model, we say that they are auto correlated. There are different types of **formal tests to detect** patterns in the residuals from a model but the researcher used Breusch-Godfrey Serial Correlation LM Test because according (Brooks, 2013)The Breusch--Godfrey test is a more general test for autocorrelation up to the r^{th} order.

Testing for Multicollinearity Assumption

One of an implicit assumption that is made when using the OLS estimation method is that the explanatory variables are not correlated with one another. If this assumption is violated multicollinearity is existed. This problem occurs when the explanatory variables are very highly correlated with each other. If multicollinearity is perfect in the sense, the regression coefficients of the X variables are indeterminate and their standard errors are infinite. There are different arguments toward multicollinearity. As stated by (Gujarati & Econometrics, 2004) multicollinearity problems exist when the correlation coefficient among variables greater than 0.75. (Cooper & Schindler, 2003) Suggested that a correlation above 0.8 between explanatory variables should be corrected. To detect the problem of multicollinearity the researcher applied the correlation matrix for independent variable.

Testing for the Normality Assumption

To test the normality Assumption, descriptive statistics was applied. One of the most commonly applied tests for normality is the Bera Jarque normality test (Brooks, 2008)A normal distribution is not skewed and is defined to have a coefficient of kurtosis of 3.By formalizes these ideas by testing whether the coefficient of Skewness and the coefficient of excess kurtosis are zero and three respectively. (Brooks, 2008) Also states that, if the

residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant at 5% significant level.

Chapter Four

Result and Discussion

4.1 Introduction

In the previews chapters important literatures relating to the title that gives enough understanding about the subject matter and used to identify knowledge on the area were reviewed. To meet research objective, to answer research question and to test research hypothesis under the research design used for this study discussed in the preceding chapter. In this chapter, Results of the analysis and Discussion of the study were presented in order to achieve research objective.

This chapter deals with Results of the analysis and Discussion of the study. The data were analyzed by using EViews 11 statistical software. The descriptive statistics and the correlation analysis were discussed. Followed by tests of the assumption of classical linear regression model. Then model selection and regression results were presented. Finally, the result of regression analysis was discussed by supporting empirical evidence.

4.2 Descriptive Statistics

This section presents the descriptive statistics of dependent and independent variable used in the study sample consumer cooperatives. The dependent variables used in this study were ROA and ROE while the independent variables were capital structure, sales growth, liquidity ratio, operational expense ratio, firm size, social contribution, GDP rate and inflation. Thus, the total observation for each explained and explanatory variables were 105 (panel data of 21 consumer cooperatives for 5 years). The table 4.1 demonstrates the mean, median, standard deviation, minimum and maximum values for dependent and independent variables for sample consumer cooperatives over the years 2016 to 2020.

Table 4.1 summary of descriptive statistics.

	DEPENDENT VARIABLES		INDEPENDENT VARIABLES							
	ROA	ROE	CS	SG	LQ	OPE	LOG_FS	GDP_RATE	IF	D1
Mean	0.148	0.196	0.303	0.072	6.338	0.626	6.833	0.106	0.184	0.381
Median	0.039	0.076	0.235	0.058	3.911	0.641	6.831	0.109	0.183	0.000
Maximum	0.105	0.298	.904	0.321	10.220	0.918	7.533	0.119	0.282	1.000
Minimum	0.004	0.005	0.001	-0.169	1.202	0.254	6.315	0.088	0.091	0.000
Std. Dev.	0.085	0.106	0.266	0.099	2.71	0.172	0.224	0.012	0.064	0.488
Observe.	105	105	105	105	105	105	105	105	105	105

Source: Authors computation of the EViews 10 output from consumer cooperatives financial statements

Note: Return on Asset (ROA), Return on Equity (ROE), Capital Structure (CS), Sales Growth (SG), Liquidity Ratio (LQ), Operating Expense ratio (OPE), Firm Size (Logs FS), Growth Domestic Product Growth Rate (GDP Rate), Inflation (IF) and Social Responsibility or Dummy (D1)

All variables were calculated by utilizing financial statements hence, this research adopted the book value instead of market value as explained by The General Accepted Accounting Principles (GAAP) and the researcher was used mean value as Evaluating standard for relating variables. The ROA measured by the net income before tax divided by total asset has a mean value of 14.8%. These indicate that sample consumer cooperatives on average earned a NIBT of 14.8% of total asset with dispersion of 0.085. This standard deviation indicates that a narrow variation in ROA among sample consumer cooperatives. Since ROA indicates the efficiency of the management of a firm in generating NIBT from all resources of the institutions. The higher ROA shows that the firm is more efficient in using its resource. The maximum value of ROA was 14.8% and the minimum value of ROA was 0 .4%. That means the most profitable consumer cooperative and least profitable consumer cooperative among sampled consumer cooperative earned 10.5 cents and 0.4 cents of net income for a single birr invested in the asset of the firm respectively. This implies that return on asset of Addis Ababa consumer cooperatives increased by 0.4% at minimum and incrassated by 10.5 % at maximum.

The possible reason for positive and narrow variation in ROA among sample consumer cooperatives could be the management of a firm relatively efficient in using its resource in generating NIBT from all resources of the institutions. Even though, there is difference in profitability among sampled consumer cooperatives lies on how effectively the cooperative management is generating profit from total asset, money they borrowed and sales.

The ROE which measured by the net income after tax divided by total equity has a mean value of 19.6%. This implies that, sample consumer cooperatives on average earned a NIAT of 19.6% of total capital. Accordingly, during the study period the sample consumer cooperatives in Addis Ababa had relatively good performance which was measured by ROE when it compared to ROA because in all cases i.e. mean value, median, minimum and maximum value of ROE greeter than ROA.

According to (Brooks, 2013), a low standard deviation shows that the data point tends to very close to the mean, a high standard deviation shows that the data point are spread out over a large range of value. As we have seen in table 4.1 the standard deviation of ROA and ROE are 0.085 and .106 respectively. This indicate that variation among consumer cooperatives in terms of their financial performance varies from the mean by 0.063, so it is very close to the mean This standard deviation indicates that a narrow variation in ROE among sample consumer cooperatives.

Regarding to the firm specific determinants of independent variables of the model Capital Structure (CS) which was measured by the ratio of total debt to total equity capital with mean value of 0.303 which indicate that consumer cooperatives very much rely on debt and preferred to use equity than debt. The table presents minimum and maximum value were 0.001 and 0.904 respectively. This indicates that there was a huge gap between minimum solvency of 0,001 consumer cooperatives and maximum level of 0.904 solvencies. The standard deviation was 0.226 shows the existence of variation of debt to equity ratio between the selected consumer cooperative level dispersion toward the mean.

Among the firm specific variables of the model is sales growth which is measured by a percentage change in the sales of a company in a given years with the respect to the previous year sales with mean value 0f 0.072 and standard deviation of 0.099. This shows that less variance in sales growth in selected consumer cooperatives. The minimum and maximum value of sales growth (SG) was -0.169 and 0.321 respectively. A negative sign of sales growth indicates that the existence of different conditions that decreased sales of consumer

cooperatives over the sample period that could be due to difference in supply, demand or a combination of both.

The other firm specific determinant independent variable is liquidity ratio (LQ) measured by the ratio of current asset to current liability revealed the highest standard deviation of 2.71, which means, it was the most derivate variable from its mean value of 6.338 compared to other firm specific variables. This indicates the existence of high variation among Addis Ababa consumer cooperatives in terms of their liquidity ratio. The minimum and maximum value was 1.202 and 10.220 respectively.

Operating Expense ratio (OPE) that measured by total operating expense divided by net sales mean value of 0.626 this implies most consumer cooperatives incurred 62.6 percent operating expense out of the operating income per year. In other word consumer cooperatives incurred 62.2 cents as operating expense out of one-birr operating income. The most efficient consumer cooperatives incurred 25.4 percent operating expense ratio and the most inefficient consumer cooperatives incurred 91.8 percent operating expense ratio. This indicates that the most efficient consumer cooperatives have cost management advantage over inefficient consumer cooperatives. The standard deviation of 17.2 percent shows that relatively high managerial efficiency disparity among Addis Ababa consumer cooperatives.

Regarding firm size (log_FS) which was measured by natural logarithm of total asset mean value of 6.338 and standard deviation of 0.224. It shows less variance among consumer cooperatives in terms of their size. The minimum and maximum value of Firm size was 2319972.56 birr and 39872698.75 birr respectively.

The last descriptive statistic for firm specific independent variable is Social responsibility. It is qualitative in nature so we used dummy variable that is Cooperatives in certain contribution represented by ‘1”, otherwise “0” from this point of view the minimum and maximum value of social contribution (D1) was 0 and 1 respectively because only have two chances that is present or absent. The standard deviation was 0.488 shows the existence of variation of social contribution between the selected consumer cooperative level dispersion toward the mean.

The remaining explanatory variables were the macro determinant variables that can affect consumer cooperatives financial performance over time. The mean value of Growth Domestic Product Rate (GDP_ Rate) was 10.6 percent indicating the average growth rate of the city’s economy over the past five years. The minimum growth of the economy was

recorded in the year 2009 (i.e. 0.088) and the maximum was in the year 2009 (i.e. 0.119). since the year 2008 the city has been recording double digit growth rate with little dispersion toward the average over the period under study with the standard deviation of 1.2 percent. This indicates the economy of the city continued to grow.

At the last, Inflation rate of the city on average 18.4 percent over the past five years was more than the average GDP growth rate. The minimum inflation rate was recorded in the year 2008 (i.e. 0.091) and the maximum inflation rate was in the year 2012 (i.e. 0.282). The rate of inflation was dispersed over the period under study towards its mean with the standard deviation of 6.4 percent. There is greater variability in the general rate of inflation which has large standard deviation in relative to growth rate GDP. This indicates that inflation rate in Addis Ababa during the study period remain unstable and it continued in double digit.

4.3 Correlation Analysis

Correlation analysis is a statistical analysis technique known as product moment correlation person or PPM, is found by (Pearson, 1904). Correlation is measured by a statistic called the correlation coefficient, which represents the strength of the putative linear association between the variables in question(M.M Mukaka, 2012). The correlation between two variables measures the degree of linear association between two or more stationary variable that is completely a symmetrical way. This correlation technique is generally used in the study to analyze the phenomena that occurred and connect between one variable with other variables related (Assagaf & Ali, 2017).The movements in the two variables are on average related to an extent given by the correlation coefficient. If the correlation coefficient is +1, there is strong direct relationship; the correlation coefficient is 0 (zero) there is no or weak relationship on other hand the correlation coefficient is -1 there is strong inverse relationship. The strength of relationship can be anywhere between -1 and +1.

The sample size or observation no is crucial element to determine whether or not the correlation coefficient is different from zero or statistically significant. As observation number approaches to 100 the correlation coefficient of about or above 0.2 is significant at 5% level of significance. The sample size of the study was 5*21 matrixes of 105 observations which were almost 100 hence the study was used this justification for significant correlation coefficient. Correlation analysis is displayed in what is called a correlation matrix. Each cell in the matrix contains the Pearson correlation coefficient and the 2-tailed significance level. Hypothesis testing because there is sampling distribution for Pearson r which can compare the statistics to check whether it is statistically significant or not.

The null hypothesis states that no relationship exists between the variables.

$H_{O:}\ r_1=0,\ r_2=0,\ r_3=0,\ r_4=0,\ r_5=0,\ r_6=0,\ r_7=0,\ r_8=0$

The alternative hypothesis states that no relationship exists between the variables.

$H_{l:}\ r_1\#0,\ r_2\#0,\ r_3\#0,\ r_4\#0,\ r_5\#0,\ r_6\#0,\ r_7\#0,\ r_8\#0$

Table 4.2 shows the correlation matrix for the phenomena associated with consumer cooperatives financial performance of variables Return on Asset (ROA), Return on Equity (ROE), Capital Structure (CS), Sales Growth (SG), Liquidity Ratio (LQ), Operating Expense ratio (OPE), Firm Size (Log_FS), Growth Domestic Product Growth Rate (GDP Rate), Inflation (IF) and Social Responsibility or Dummy(D1).In this correlation analysis resulting correlation coefficient between these variables and significant degree of relationship between these variables.

Table 4.2 Pearson Correlation Matrix for dependent and independent variables

Pearson **Correlations matrix**											
		ROA	ROE	CS	SG	LQ	OPE	log FS	GDP_ RATE	If	d1
ROA	Pearson Correlation	1.000									
	Sig. (2-tailed)										
ROE	Pearson Correlation	.818**	1.000								
	Sig. (2-tailed)	.000									
CS	Pearson Correlation	-.27**	.124	1.000							
	Sig. (2-tailed)	.005	.206								
SG	Pearson Correlation	-.347*	.288**	-.049	1.000						
	Sig. (2-tailed)	.000	.003	.619							
LQ	Pearson Correlation	.214*	.262**	-.057	.257**	1.000					
	Sig. (2-tailed)	.029	.007	.563	.008						
OPE	Pearson Correlation	-.59**	-.44**	.324**	-.178	.190	1.000				
	Sig. (2-tailed)	.000	.000	.001	.069	.052					
log FS	Pearson Correlation	-.31**	-.37**	-.223*	-.167	-.086	-.073	1.000			
	Sig. (2-tailed)	.002	.000	.022	.089	.382	.457				
GDP_ RATE	Pearson Correlation	.297**	-.039	-.58**	.033	-.117	-.35**	.135	1.000		
	Sig. (2-tailed)	.002	.692	.000	.740	.234	.000	.171			
If	Pearson Correlation	-.55**	-.48**	.073	-.087	.270	.397**	.407**	-.149	1.000	
	Sig. (2-tailed)	.000	.000	.462	.377	.020	.000	.000	.129		
d1	Pearson Correlation	-.071	-.058	-.036	-.013	.000	-.087	-.123	.183	-.33**	1.000
	Sig. (2-tailed)	.591	.324	.715	.894	.086	.377	.210	.062	.000	

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS 25 output from consumer cooperatives financial statements

As can be seen in table 4.2 Operating Expense ratio (OPE) was the most negatively correlated firm specific variables with the movement of Return on Asset (ROA) with a correlation coefficient of -0.590. This correlation results clearly indicates the existence of inverse linear relationship between ROA and OPE. It indicates that as operating expense ratio increase in one unit, the return on asset decreased in 0.59 unit. And also sig. (2-tailed) value is 0.029 implies there is a statistically significant correlation between ROA and OPE. Therefore, the researcher rejects the null hypothesis that has no relationship between Return on Asset (ROA) and Operating Expense ratio (OPE). Similarly, Operating Expense ratio (OPE) was the most negatively correlated firm specific variables with the movement of Return on Equity

(ROE) with a correlation coefficient of -0.44. This correlation results clearly indicates the existence of inverse linear relationship between ROE and OPE. It indicates that as operating expense ratio increase in one unit, the return on asset decreased in 0.44 unit. And also sig. (2-tailed) value is 0.000 implies there is a statistically significant correlation between ROA and OPE. Therefore, the researcher rejects the null hypothesis that has no relationship between Return on Equity (ROE) and Operating Expense ratio (OPE).

Besides, Firm size (LOG_FS) is negatively correlated firm specific variable with the movement of consumer cooperative's ROA with a correlation coefficient of -0.31and ROE -0.37 indicate that as firm size increase in one unit, the financial performance decreased by 0.37. and sig.(2-tailed) value is 000 implies there is statistically significant correlation between firm size and financial profitability. Therefore, the researcher rejects the null hypothesis that has no relationship between Return on Asset (ROA) and firm size as well as ROE.

In opposite to this, Sales Growth (SG) is positively associated with ROA with the coefficient of 0.347 0 And sig. (2-tailed) value of 0.000. This correlation coefficient clearly shows that as sales growth increase in one unit, the ROA also increased by 0.347 unit and it is statistically significant at 0.000. thus, the researcher rejects the null hypothesis that has no relationship between Return on Asset (ROA) and Sales Growth (SG). In similar, Sales Growth (SG) is positively associated with ROE with the coefficient of 0. 228. And sig. (2-tailed) value of 0.003. This correlation coefficient clearly shows that as sales growth increase in one unit, the ROA also increased by 0. 228 unit and it is statistically significant at 0.003. thus, the researcher rejects the null hypothesis that has no relationship between Return on Equity (ROE) and Sales Growth (SG).

Person's correlation coefficient value of Liquidity ratio (LQ) and Return on Asset (ROA) of cooperatives is $0.214^{*.}$ As Liquidity ratio of cooperatives increase in one unit the ROA increase in 0.214 units and sig. (2-tailed) value of 0.029. This correlation coefficient clearly shows that as Liquidity ratio (LQ) increase in one unit, the ROA also increased by 0. 214 unit and it is statistically significant at 0.029. Thus, the researcher rejects the null hypothesis that has no relationship between Return on Equity (ROE) and Sales Growth (SG). In similar fashion correlation coefficient value of Liquidity ratio (LQ) and Return on Equity (ROE) is $0.262^{.}$

The last and the least consumer cooperative specific variable is social contribution (D1), its correlation coefficient is -0.071 in relation to ROA and -0.058 in relation to ROE and sig. (2-tailed) value is 0.591 and 0.324 for ROA and ROE respectively. This negative correlation

coefficient results clearly expresses that as social contribution increases in one unit the financial performance of consumer cooperatives decreased by 0.324 units and statistically insignificant. Therefore, the researcher rejects the null hypothesis that there is a relationship exist between social contribution and cooperative financial performance.

The macroeconomic variables that affect firm financial performance are inflation and gross domestic product rate are included in this study. Gross domestic product rate (GDP-Rate) is positively associated with ROA with the coefficient of 0.297 and sig. (2-tailed) value of 0.002. This correlation coefficient clearly shows that as Gross domestic product rate (GDP-Rate) increase in one unit, the ROA also increased by 0.297 units and it is statistically significant at 0.002. Thus, the researcher rejects the null hypothesis that has no relationship between Return on Asset (ROA) and Gross domestic product rate (GDP-Rate). In opposite to this, Gross domestic product rate (GDP-Rate) is negatively associated with ROE with the coefficient of -0. 039. And sig. (2-tailed) value of 0.692. This correlation coefficient clearly shows that as Gross domestic product rate (GDP-Rate) increase in one unit, the ROE decreased by 0. 039 units and it is statistically insignificant at 0.692. Thus, the researcher rejects the null hypothesis that has relationship between Return on Equity (ROE) and Gross domestic product rate (GDP-Rate).

Inflation rate (IF) was the most negatively correlated macro variables with the movement of Return on Asset (ROA) with a correlation coefficient of -0.55. This correlation results clearly indicates the existence of inverse linear relationship between ROA and inflation rate. It indicates that as inflation rate increase in one unit, the return on asset decreased in 0.59 unit. And also sig. (2-tailed) value is 0.000 implies there is a statistically significant correlation between ROA and IF. Therefore, the researcher failed to rejects the null hypothesis that has relationship between Return on Asset (ROA) and inflation rate (IF). Similarly, inflation rate (IF) was the most negatively correlated macro variables with the movement of Return on Equity (ROE) with a correlation coefficient of -0.48. This correlation results clearly indicates the existence of inverse linear relationship between ROE and IF. It indicates that as inflation rate (IF) increase in one unit, the return on asset decreased in 0.48 unit. And also sig. (2-tailed) value is 0.000 implies there is a statistically significant correlation between ROA and If. Therefore, the researcher fails to rejects the null hypothesis that has relationship between Return on Equity (ROE) and inflation rate (IF).

In general, even though the Paterson's correlation analysis shows the direct and indirect linear association between variables, it does not allow the researcher to make cause and affect inferences regarding the relationship between the listed variables. Therefore, in determining

the effects of selected independent variables on consumer cooperative financial performance, the econometric regression analysis that is discussed in the forthcoming parts of the research paper gives tangible evidence to overcome the shortcoming of correlation analysis.

There are many diagnostic tests were conduct to decide whether the model used in the study appropriate and to fulfill the classical linear regression model assumption. According to (Brooks, 2013) These were required to show that the estimation technique, ordinary least squares (OLS), had a number of desirable properties, and also so that hypothesis tests regarding the coefficient estimates could validly be conducted.

The following diagnostic tests were carried out to ensure that the data suits the classical linear regression model.

4.4 Regression Model Diagnostic Test

As explained in the methodology part of this research, as far as the classical linear regression model assumption hold true, for validity of hypothesis tests regarding the coefficient estimates of both α (constant term) and β (independent variable coefficient) that are determined by ordinary least squares have been a number of desirable properties. There are many diagnostic tests were conduct to decide whether the model used in the study appropriate and to fulfill the classical linear regression model assumption. In this section the following diagnostic tests were carried out to ensure that the data suits the classical linear regression model. i.e. average value of the error term is zero, Heteroskedasticity, absence of Autocorrelation, Multicollinearity, and Normality.

4.4.1 Test for average value of the error term is zero

The first assumption required is that the mean value of the disturbances term is zero. In fact, If the regression included an intercept, and the average value of the errors term was zero.

Therefore, since the constant term (i.e. α) was included in this regression model the mean value of the residuals in this research expected to be zero. And also R^2 and $\bar{R}^2$ are non-negative that means the average value of the errors term was zero.

4.4.2 Test for absence Autocorrelation

The basic condition for classical linear regression models tests for absence autocorrelation This Assumption tells that the covariance between the error terms over time is zero or there is no autocorrelation between the error terms. That means there is no pattern in the errors or errors are uncorrelated with one another. If there are patterns in the residuals from a model, we say that they are auto correlated. To check for this, the researcher was applied The Breusch-Pagan-Godfrey Serial Correlation LM Test because according (Brooks, 2013)The Breusch--Godfrey test is a more general test for autocorrelation up to the r^{th} order.

Following the general null hypothesis of The Breusch-Pagan-Godfrey Serial Correlation LM Test, the researcher developed the following hypothesis to check the absence of autocorrelation:

H_o: No autocorrelation in error term

H_l: Autocorrelation in error term

Table 4.3 The Breusch-Pagan-Godfrey Serial Correlation LM Test for ROA

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.382416	Prob. F(2,95)	0.6833
Obs*R-squared	0.838590	Prob. Chi-Square(2)	0.6575

Source: View 11 output from consumer cooperatives financial statements

Table 4.4 The Breusch-Pagan-Godfrey Serial Correlation LM Test for ROE

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	2.259982	Prob. F(2,94)	0.1100
Obs*R-squared	4.817259	Prob. Chi-Square(2)	0.0899

Source: View 11 output from consumer cooperatives financial statements

As we can be seen in the above table 4.3 The Breusch-Pagan-Godfrey Serial Correlation LM Test for ROA and Table 4.4 the Breusch-Pagan-Godfrey Serial Correlation LM Test for ROE F test result and the P-value of F-statistics for ROA and ROE was 0.6833 and 0.1100 respectively which was above the significance level of 5 percent. Since the null hypothesis of no serial correlation failed to reject at 5% of significance level. This indicates that there is no significance evidence for existence autocorrelation in this research model. The chi-square P-value of the research model also supports the absence of serial correlation. Therefore, we can be concluded that, the covariance between error term is zero, data is absence of serial correlation.

4.4.3 Heteroskedasticity Test

The condition for classical linear regression model indicates that there must be Heteroskedasticity between variables. This Assumption tells that the variance of the errors term is constant or Homoskedasticity otherwise, the errors do not have a constant variance the OLS standard errors would be heteroscedastic. To check for this, the researcher was applied The Breusch-Pagan-Godfrey test. (Gujarati & Econometrics, 2004)This popular

method is applicable if one assumes that the heteroscedastic variance, $\sigma 2$ is positively related to *one* of the explanatory variables in the regression model. The Breusch-Pagan-Godfrey tests of null hypothesis are the error variance are all equal and opposite to this the alternative hypothesis that the error variances are multiplicative function of one or more variable.

Therefore, the researcher developed the following hypothesis:

H_o: homoscedastic error term

H_l: heteroskedastic error term

Table 4.5 Breusch-Pagan-Godfrey test of heteroskedasticity test for ROA

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	1.743046	Prob. F(9,95)	0.0898
Obs*R-squared	14.88135	Prob. Chi-Square(9)	0.0942
Scaled explained SS	20.42286	Prob. Chi-Square(9)	0.0155

Source: View 11 output from consumer cooperatives financial statements

Table 4.6 Breusch-Pagan-Godfrey test of heteroskedasticity test for ROE

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	1.984360	Prob. F(8,96)	0.0565
Obs*R-squared	14.89935	Prob. Chi-Square(8)	0.0611
Scaled explained SS	20.90039	Prob. Chi-Square(8)	0.0074

Source: EViews 11 output from consumer cooperatives financial statements

As we have seen in the above tables i.e. Table 4.5 Breusch-Pagan-Godfrey test of heteroskedasticity test for ROA and Table 4.6 Breusch-Pagan-Godfrey test of heteroskedasticity test for ROE both F-statistics test and chi-square test statistics give the same conclusion that there is no significant evidence for the existence of heteroskedasticity in ROA and ROE. Since the P-values of both F-statistics test and chi-square test statistics were above 0.05. This indicates that there is no significant evidence for the presence of heteroskedasticity in this research model. Therefore, the null hypothesis of homoscedastic error term is failed to reject at 5 percent of significance.

4.4.4 Multicollinearity Test

The other test which is conducted in this research is the multicollinearity test, It is the explanatory variables are not correlated with one another or double effect independent variable from the model. This problem occurs when the explanatory variables are very highly correlated with each other. Perfect multicollinearity occurs when there is an exact relationship between two or more variables. If multicollinearity is perfect in the sense, the regression coefficients of the X variables are indeterminate and their standard errors are infinite. There are different arguments toward multicollinearity. As stated by (Gujarati & Econometrics, 2004)multicollinearity problems exist when the correlation coefficient among variables greater than 0.75. (Cooper & Schindler, 2003) Suggested that a correlation above 0.8 between explanatory variables should be corrected. To detect the problem of multicollinearity researcher was applied the correlation matrix for independent variable.

Table 4.7 The correlation matrix for independent variable

	CS	SG	LQ	OPE	LOG_FS	GDP_RATE	IF	D1
CS	1.000	0.0359	-0.5229	0.4349	-0.179	-0.07375	0.09871	-0.14779
SG	0.0359	1.0000	-0.0022	-0.193	-0.166	-0.01321	-0.08706	0.19595
LQ	**-0.5229**	-0.0022	1.0000	-0.385	0.0465	0.06641	-0.07386	-0.12085
OPE	0.4349	-0.1938	-0.3856	10000	-0.125	-0.10752	0.37637	-0.22044
LOG_FS	-0.179	-0.1669	0.0465	-0.125	1.0000	-0.12341	0.40667	0.12028
GDP_RATE	-0.073	-0.0132	0.0664	-0.107	-0.123	1.00000	-0.33392	-1.49e-7
IF	0.0987	-0.0870	-0.0738	0.3763	0.4066	-0.33392	1.00000	6.34e-18
D1	-0.147	0.1959	-0.1208	-0.220	0.1202	-1.75e-7	6.34e-18	1.00000

Source: Output of EViews 11 from consumer cooperatives financial statements

Table 4.7 showed that there is no strong pair-wise correlation between the independent variables (CS, SG, LQ, OPE, LOG_FS, GDP Rate, IF and D1). In this research the highest correlation coefficient is -0.522 between liquidity ratio (LQ) and capital structure (CS). Therefore, we can be concluded using the rule of (Kennedy, 2008) that all variables have low

correlation power which indicates no multicollinearity problems in the independent variables selected to financial performance of consumer cooperative.

4.4.5 Normality Test

The normality Assumption test was applied to descriptive statistics to determine is well-modeled or not, One of the most commonly applied tests for normality is the Jarque-Bera normality test (Brooks, 2008)A normal distribution is not skewed and is defined to have a coefficient of kurtosis of 3.By formalizes these ideas by testing whether the coefficient of Skewness and the coefficient of excess kurtosis are zero and three respectively. If the data is well modeled the residuals are normally distributed that means the histogram is bell shaped and the Jarque-Bera statistics is not significant.

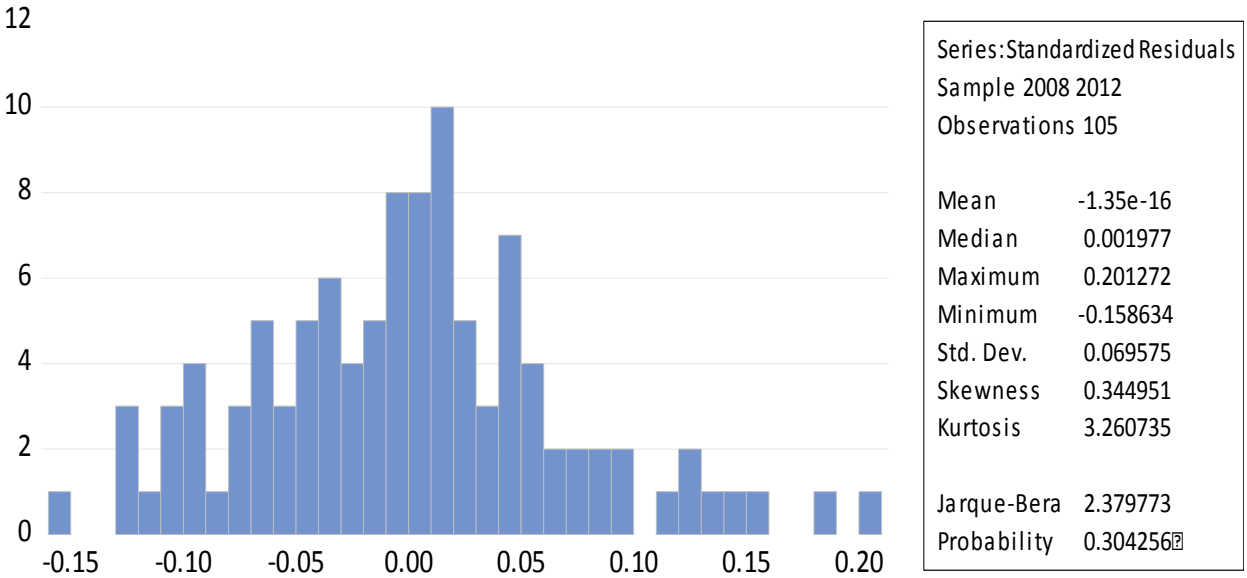
Therefore, the following hypothesis tests for normality distribution.

H_O: Residuals follows a normal distribution

H_I: Residuals do not follow a normal distribution

Decision rule for hypothesis: accept H_O if P-value of JB greater than significance level of 0.05. Otherwise do not accept H_O.

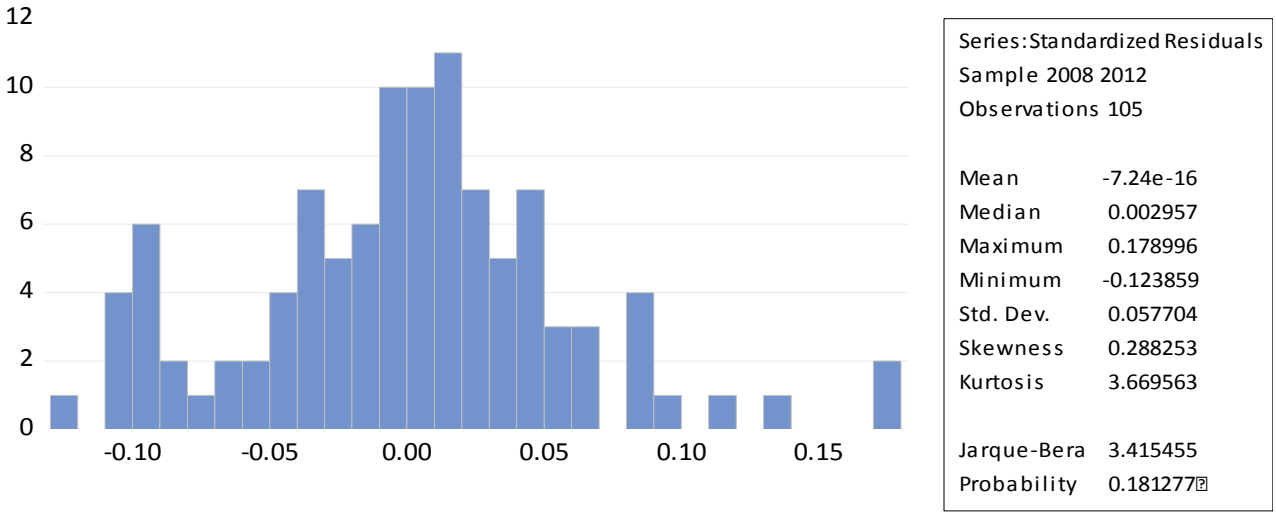
Figure 4.1 The Jarque- Bera normality test for ROA



Source: EViews 11 output from consumer cooperatives financial statements

As shown in the histogram above in figure 4.1 kurtosis is almost nearest 3(3.260735) and skewness close to 0 (0.344951). The Jarque-Bera statistics was not significant at 5% level of significance as per the P_ value shown in the histograms (i.e. 0.304256). then, null hypothesis of the error term follows a normal distribution accepted at 5%of significance level.so, we conclude that there is no normality problem on ROA.

Figure 4. 2 The Jarque-Bera normality test for ROE



Source: EViews 11 output from consumer cooperatives financial statements

As shown in the histogram above in figure 4.1 kurtosis is almost nearest 3 (3.669563) and skewness close to 0 (0.288253). The Jarque-Bera statistics was not significant at 5% level of significance as per the P_ value shown in the histograms (i.e. 0.181277). then, null hypothesis of the error term follows a normal distribution accepted at 5%of significance level.so, we conclude that there is no normality problem on ROA.

4.5 Model Selection Criteria

The result so far, shows that all classical linear regression assumptions are not violated. So that, the ordinary least square regression model safely applied. The econometrics model used to investigate the effect of Capital Structure (CS), Sales Growth (SG), Liquidity Ratio (LQ), Operating Expense ratio (OPE), Firm Size (Log_FS), Growth Domestic Product Growth Rate (GDP Rate), Inflation (IF) and Social Responsibility or Dummy (D1) on financial performance of consumer cooperatives in Addis Ababa was panel data regression model which is among Pooled OLS Regression, Fixed effect or LSDV and Random Effect model.

We should have to be select among the three models which model is preferable to use Pooled OLS Regression, Fixed effect or LSDV and Random Effect model.

Pooled OLS Regression model

Pooled OLS Regression model is a model which pools all cross-section observations together and run the regression model, neglecting the cross section and time series nature of the data.

The major problem with this model is that it does not distinguish between the various nature of cross section that we have. That means by combining all companies by pooling we deny the heterogeneity or individuality that may be exist among the number of cross section observation. It assumes that there is no difference among the sample consumer cooperatives or all sample consumer cooperatives are assumed to be homogenious.so this is unrealistic assumption and the researcher dropped this model.

Fixed effect model

Fixed effect model allows heterogeneity or individually among cross section by allowing having its own intercept value.

The term fixed effect is due to the fact that although the intercept may differ across cross section, but intercept does not vary over time, that is it is time invariant.

Random effect model

Random effect model in this model all cross section has a common mean value for the intercept. This approach proposes different intercept term for each item and these intercepts are constant over time.

To determine whether to use fixed effect model or random effect model a Hausman specification test was applied. The null hypothesis for this test is that different intercept term for each item and these intercepts are constant over time or random effect model is appropriate. If null hypothesis is rejected the fixed effect model is appropriate.

H_O: Random effect model is appropriate.

H_l: Fixed effect model is appropriate.

Decision rule: Reject H_O if P-value less than significance level 0.05. Otherwise, do not reject H_O.

Table 4.8 Hausman Test for ROA Model

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

Source: EViews 11 output from consumer cooperatives financial statements

As shown from the above 4.8 Hausman specification test, the P-value of ROA model were 1.0000, which is more than 5 percent level of significance. Therefore, the null hypothesis of random effect model is appropriate accept at 5% of significance level. This indicate that, more appropriate than fixed effect model. According to (Brooks, 2013) and (Fesha, 2018)it is often said that the REM is more appropriate when the entities in the sample can be thought of as having randomly selected from the population. Hence, the sample for this research was selected randomly.

Table 4.9 Hausman Test for ROE Model

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

Source: EViews 11 output from consumer cooperatives financial statements

As shown from the above 4.8 Hausman specification test, the P-value of ROE model were 1.0000, which is more than 5 percent level of significance. Therefore, the null hypothesis of random effect model is appropriate accept at 5% of significance level. This indicate that, more appropriate than fixed effect model.

4.6 Regression Analysis Result

As clearly depicted in the previous sub section the researcher used EViews 11, EViews 11 output is divided into three panel parts. The first or top panel generalized the inputs to the regression model, the middle or the second panel contains the data of each regression coefficient, and the last or the bottom provides summary statistics about the whole regression equation. He two most important numbers," R_squared" it shows how much percent of the

variance in the dependent variable in the regression explained, and "S.E. of regression" it shows how far is the estimated standard deviation of the error term. Five more elements of bottom panel elements "sum square residuals", "log likelihood", "Akaike info criterion", "Schwarz criterion" and "Hannan-Quinn criterion" are used for making statistical comparison between two different regression. The ''Adjusted R_squared '' makes an adjustment to plain -old to take account of the number of explained variable.

"F- Statistics'' and ''Prob (F- statistics)'' come together as pairs and are used to test the hypothesis that none of the independent variable actually explains anything. That is, "F-statistics'' computes the standard F-test of joint hypothesis that all coefficients, except the intercept, equal to zero. ''Prob (F- statistics)'' displays the P-value corresponded to the reporting F- statistics. The final summary statistics is the ''Durbin-Watson'' it is the classical test for serial correlation. The ''Durbin-Watson'' close to 2.0 is consistent with no serial correlation. However, the researcher was applied The Breusch-Pagan-Godfrey test. (Gujarati & Econometrics, 2004)This popular method is applicable if one assumes that the heteroscedastic variance, $\sigma 2$ is positively related to *one* of the explanatory variables in the regression model. As concluded that random effect model is appropriate regression analysis for this research.

4.6.1 Operational Model

The operational panel regression model used to determine the significant factors of consumer cooperatives in Addis Ababa measured by return on asset (ROA) and return on equity (ROE) were:

$$ROA_{it} = \alpha + \beta_1 LnFS + \beta_2 \mathrm{OPE} + \beta_3 GiS + \beta_4 LQ + \beta_5 \mathrm{SC} + \beta_6 \mathrm{D1} + \beta_7 \mathrm{GDP} + \beta_8 IF + \varepsilon$$

$$ROE_{it} = \alpha + \beta_1 LnFS + \beta_2 \mathrm{OPE} + \beta_3 GiS + \beta_4 LQ + \beta_5 \mathrm{SC} + \beta_6 \mathrm{D1} + \beta_7 \mathrm{GDP} + \beta_8 IF + \varepsilon$$

4.6.1.1 Operational Regression model Result of Return on Asset (ROA)

This section presents the overall results of regression analysis on determinants of financial performance of consumer cooperatives measured by ROA. Table 4.10 shows the regression analysis for dependent variable ROA and Independent variables CS, SG, LQ, OPE, LogFS, D1, GDP-Rate and IF. As shown in the above table the model was

$$\mathrm{ROA} = 0.99 - 0.085\mathrm{LnFS} - 0.34\mathrm{OPE} + 0.17\mathrm{SG} + 0.04\mathrm{LQ} + 0.016\mathrm{CS} - 0.036\mathrm{D1} + 0.037\mathrm{GDP} - 0.319\mathrm{IF} + \varepsilon$$

The estimation result indicated in table 4.9 depicted that, R_squared and adjusted R_squared values of 0.66 and 0.633 respectively. This indicate that the model is a good fit because 63.4%of variation in return on asset of Addis Ababa consumer cooperatives were explained by independent variables included by the model. However, the remaining 36.6% changes in

return on asset of Addis Ababa consumer cooperatives are caused by other variables that are not included in the model represented by error term(ε).Furthermore, the F-statistics 23.38 and the probability of not rejecting the null hypothesis that there is no statistically relationship existing between the explained variable(ROA) and the explanatory variables, is 0.00000 implies that the overall model is highly significant at 0.05 and that all the explanatory variables are jointly significance in causing in variation in return on asset.

The random effect estimation regression result of ROA table 4.9 shows that, intercept coefficient (β_0)is 0.99. this means, when all independent variables took a value of zero, the average value of ROA would be taking 0.99 unit and statistically significant (i.e. 0.00000) at 5 percent level of significance.

As shown in table 4.9 the coefficient estimates of Operational expense ratio (OPE), Natural Log of firm size (LOG_FS), Social contribution (D1), and Inflation (IF) were negative and statistically significant at 5% level of significance. The coefficient estimates the aforementioned four explanatory variables were -0.34, -0.08, -0.036 and -0.319 respectively. The negative sign of the coefficient estimates with 5% significance level indicate that strong inverse relationship between ROA and the above-mentioned independent variables. Hence, it can be concluded that, a decrease on those variables lead to an increase in ROA of Addis Ababa consumer cooperatives. In opposite to this, the coefficient estimates of Liquidity ratio (LQ) and Sales Growth (SG) were positive and statistically significant at 0.05 significant level. The positive sign of the coefficient estimates with 5% significance level indicate that strong inverse relationship between ROA and the above-mentioned independent variables. Hence, it can be concluded that, an increase on those variables lead to an increase in ROA of Addis Ababa consumer cooperatives. But Capital structure (CS) was negative and statistically insignificant at 5% level of significance with coefficient estimates of -0.016. Gross Domestic product rate (GDP Rate) was positive and statistically insignificant at 5% level of significance with coefficient estimates of 0.037.

Table 4.10 Model regressed using ROA as a proxy of financial performance.

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 04/21/21 Time: 08:59
Sample: 2008 2012
Periods included: 5
Cross-sections included: 21
Total panel (balanced) observations: 105
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.986409	0.199321	4.948847	0.0000
CS	-0.015648	0.019111	-0.818794	0.4149
SG	0.165924	0.059416	2.792593	0.0063
LQ	0.040363	0.011685	3.454284	0.0008
OPE	-0.336595	0.048356	-6.960762	0.0000
LOG_FS	-0.084837	0.027946	-3.035768	0.0031
GDP_RATE	0.037085	0.023527	1.576285	0.1182
IF	-0.318879	0.101391	-3.145039	0.0022
D1	-0.036386	0.012532	-2.903362	0.0046

Effects Specification	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	0.053325	1.0000

Weighted Statistics			
Root MSE	0.052805	R-squared	0.660784
Mean dependent var	0.150247	Adjusted R-squared	0.632516
S.D. dependent var	0.091100	S.E. of regression	0.055225
Sum squared resid	0.292781	F-statistic	23.37572
Durbin-Watson stat	1.681309	Prob(F-statistic)	0.000000

Unweighted Statistics			
R-squared	0.660784	Mean dependent var	0.150247
Sum squared resid	0.292781	Durbin-Watson stat	1.681309

Source: EViews 11 output from consumer cooperatives financial statements

- **Firm size (LOG-FS) and Return on Asset (ROA)**

The estimation result reported in table 4.10 depicted that, the coefficient of firm size (LOG_FS) measured by natural logarithm of total asset is -0.085 and its p=value is 0.0031. Holding other explanatory variables constant at their average value, when consumer cooperative's size (LOG_FS) increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives is decreased by 8.55 and statically significant at 5%significant level. That means there is significant negative relationship between consumer cooperative's size and consumer cooperative's ROA. Therefore, the researcher accepts the null hypothesis that there is negative relationship between consumer cooperative's size and

consumer cooperative's ROA. In other word, there is no sufficient evidence to support the positive relationship between consumer cooperative's size and consumer cooperative's ROA.

Generally, there is no common agreement about effect of firm size on firms financial performance between researchers because some researcher argue that Large firms can exploit economies of scale and scope and thus being more efficient compared to small firms (Almajali et al., 2012). Larger institutions are believed to have more profitable investment opportunities, higher efficiency, more diversification and a lower risk level (Rotich, 2015). Other says smaller firms may be more flexible Theoretically it is equivocal on the precise relationship between firm's financial performance and firm size (Tailab, 2014), (Yodit, 2017) and (Tailab, 2014).

As expected, consumer cooperatives size has a negative effect on ROA in Addis Ababa consumer cooperatives. This results support the research results of (Almajali et al., 2012) , (Rotich, 2015), (Pantea et al., 2014), (Tailab, 2014) stated that small firm have negative and significant relationship with their financial performance.

The possible reason for the significant negative relationship could be consumer cooperatives have no ability to attain economies of scale because they are not highly resourceful and little capacity to enhance their profitability by participating actively in market environment and they are not able to mitigate their cost to boost financial performance.

- **Operating Expense ratio (OPE) and Return on Asset (ROA)**

As it presented in the table 4.9 above, the coefficient of Operating Expense Ratio (OPE) measured by the ratio of operating expense and the net sale is -0.34 and its p=value is 0.0000. Holding other explanatory variables constant at their average value, when consumer cooperative's Operating Expense Ratio (OPE) increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives is decreased by 0.34 birr, and statically significant at 5%significant level. That means there is significant negative relationship between consumer cooperative's Operating Expense Ratio (OPE) and consumer cooperative's ROA. Therefore, the researcher failed to reject the null hypothesis that there is negative relationship between consumer cooperative's Operating Expense Ratio (OPE) and consumer cooperative's ROA. In other word, there is no sufficient evidence to support the positive relationship between consumer cooperative's Operating Expense Ratio (OPE) and consumer cooperative's ROA.

This ratio represents the total amount of expenditures the society pay for earning total revenue. It is related with the capability of the management to use its resources efficiently, income intensification, decreasing operating costs (Assfaw, 2015). Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Ongore & Kusa, 2013). The researcher concluded that the poor management quality especially poor financial skill, Extravagancy, corruption and embezzlement lead to high operating expense resulting decrement of profitability.

As expected, consumer cooperatives Operating Expense Ratio (OPE) have a negative effect on ROA in Addis Ababa consumer cooperatives. This results support the research results of (Ongore & Kusa, 2013), (Assfaw, 2015) Operating expense ratio had negative and significant relationship with return to assets ratio (Mugun, 2020).

- **Liquidity ratio (LQ) and Return on Asset (ROA)**

As the above random effect regression EViews output table 4.10 shows that, the coefficient of liquidity ratio (LQ) measured by the ratio of current asset to current liability is 0.04 and its p-value is 0.0008. Holding other explanatory variables constant at their mean value, when consumer cooperative's liquidity ratio (LQ) increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives be increased by 0.04 birr, and statically significant at 5% significant level. That means there is significant positive relationship between consumer cooperative's liquidity ratio (LQ) and consumer cooperative's ROA. Therefore, the researcher failed to reject the null hypothesis that there is positive relationship between consumer cooperative's liquidity ratio (LQ) and consumer cooperative's ROA. In other word, there is no sufficient evidence to support the negative relationship between consumer cooperative's liquidity ratio (LQ) and consumer cooperative's ROA.

The goal of liquidity management should be to enable a firm to maximize profits of its operations while meeting both short-term debt and upcoming operational expenses that is to preserve liquidity (Audax, 2018). The effect of liquidity ratio on financial performance for non-financial firm is positive. The result is consistent with the findings of (Matar et al., 2018), (Nikolaus, 2014), (Mirza, 2013), (Audax, 2018) , (Demirgünes, 2016), (Matar & Eneizan, 2018) regarding the relationship of liquidity and firm performance found to be supported as the results suggest positive

The possible reason for the significant positive relationship could be consumer cooperatives are non-financial firms. They could be increasing their operating cash flow, through reduction of credit period may lead to increment in liquidity ratio and financial performance.

- **Sales Growth (SG) and Return on Asset (ROA)**

As it presented in the table 4.10 above, the coefficient of **sales growth** (SG) measured by percentage change in the sales of a company in a given years with the respect to the previous year sales is 0.1659 and its p=value is 0.0063. Holding other explanatory variables constant at their average value, when consumer cooperative's **sales growth** (SG) increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives be increased by 0.1659 birr, and statically significant at 5%significant level. That means there is significant positive relationship between consumer cooperative's **sales growth** (SG) and consumer cooperative's ROA. Therefore, the researcher failed to reject the null hypothesis that there is positive relationship between consumer cooperative's **sales growth** (SG) and consumer cooperative's ROA. In other word, there is no sufficient evidence to support the negative relationship between consumer cooperative's **sales growth** (SG) and consumer cooperative's ROA.

Generally, the result is consistent with the findings of (Pouraghajan et al., 2012), (Hamidzadeh & Zeinali, 2015), (Matar et al., 2018) and (Noel Capon, 2020) the growth rate by sales had a positive effect on ROA (Hoang et al., 2019) growth in sales individually show positive relationships to performance.

The possible reason for the significant positive relationship could be the consumer cooperatives increase their sales because they retail basic consumer goods received by government so, that could make a profit from additional sales.

- ***Capital Structure (CS) and Return on Asset (ROA)***

The estimation result reported in table 4.10 depicted that, the coefficient of Capital structure (CS) measured by the ratio of total liability to total equity is -0.0156 and its p= value is 0.4149. Holding other explanatory variables constant at their average value, when consumer cooperative's Capital structure (CS) increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives be decreased by 1.65%, and statically insignificant at 5%significant level. That means there is insignificant negative relationship between consumer cooperative's Capital structure (CS) and consumer cooperative's ROA. Therefore, the researcher rejects the null hypothesis that there is positive relationship between

consumer cooperative's Capital structure (CS) and consumer cooperative's ROA. In other word, there is no sufficient evidence to support the positive relationship between consumer cooperative's Capital structure (CS) and consumer cooperative's ROA.

Generally, regarding capital structure, there is no common agreement accurate proportion of capital structure in the firm. Cost of equity capital is higher than interest charges on debt while having some debt is good, too much debt is risky. The existing literature on the effect of leverage on a firm's financial performance has come to mixed results and conclusions (Nikolaus, 2014). According to (Matar & Eneizan, 2018)Leverage is not always bad, however; it can increase the stockholders' earnings on their invested funds and make better utilization of the tax benefits related to the debt financing..

However, this research result is consistent with the result of (Hoang et al., 2019),(Audax, 2018), (Shah Mohd & Ahmed Siddiqui, 2020) and (Nikolaus, 2014) conclude that leverage has a negative relationship with firm performance. (Mirza, 2013) suggested that the efficiency of the country's legal system affects this relationship between firm's financial performance and capital structure. Accordingly, his suggestion is that a country with an efficient legal system, the negative effect of leverage on performance is lessened and found that capital structure had significant negative impact on financial performance.

This negative association between capital structure and return on asset could bet fixed charged credit fund beyond their cost that means an increase in debt increases the interest payment hence decrease in financial performance. Therefore, optimal debt financing is essential for the firm to realize better financial performance.

- **Social Contribution(D1) and Return on Asset (ROA)**

As the above random effect regression EViews output table 4.10 shows that, the coefficient of **Social Contribution(D1)** measured by dummy variable that is Cooperatives in certain contribution represented by '1", otherwise "0". is -0.0364 and its p-value is 0.0046. Holding other explanatory variables constant at their average value, when consumer cooperative's Social Contribution (D1) increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives be decreased by 0.0364 birr, and statically significant at 5% significant level. That means there is significant negative relationship between consumer cooperative's Social Contribution (D1) and consumer cooperative's ROA. Therefore, the researcher failed to reject the null hypothesis that there is negative relationship between consumer cooperative's Social Contribution (D1) and consumer cooperative's ROA. In other

word, there is no sufficient evidence to support the positive relationship between consumer cooperative's Social Contribution (D1) and consumer cooperative's ROA.

.(Cho et al., 2019) small firm has negative impact of CSR on the performance measured by several indicators (Zoubir, 2015).And also as reviled by (Linnea & Bråtenius, 2006) there was no significant reaction for the top performing companies' stock returns, but the general direction of the impact was negative. the companies that are making efforts in the areas of social welfare and the protection of the environment, achieve operating results lower than the other companies, According to (Nyeadi et al., 2018) and (Wang & Gao, 2016) the consequent negative effects on the value of their shares on the stock exchange.

- **Inflation (IF) and Return on Asset**

The estimation result reported in table 4.10 depicted that, the coefficient of Inflation (IF) measured by the relative rise of price of good and service or a decreasing of a purchasing power of money is -0.3189 and its p=value is 0.0022. Holding other explanatory variables constant at their average value, when Addis Ababa city price level increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives is decreased by 0.3189, and statically significant at 5% significant level. That means there is significant negative relationship between Addis Ababa city Inflation (IF) and consumer cooperative's ROA. Therefore, the researcher failed to reject the null hypothesis that there is negative relationship between Addis Ababa city Inflation (IF) and consumer cooperative's ROA. In other word, there is no sufficient evidence to support the positive relationship between Addis Ababa city Inflation (IF) and consumer cooperative's ROA.

Generally, regarding inflation rate results are not clear whether financial performance affect positively or negatively. The expected negative coefficient estimates of inflation and financial performance is inconsistence with (Shah Mohd & Ahmed Siddiqui, 2020) , (Berk et al., 2006) and (Fesha, 2018) found that the higher inflationary condition of a country positively affects the firm's financial performance. The reason why as we have seen in the above different researchers found that the effect of inflation on financial performance is as explained by the above studies the determination of inflation effect on firm performance depend on anticipation because inflation is high and unexpected it can be very costly to an economy

However, the result of this research is consistent with the result of (Ifeanyi C. & Chuskwuma C., 2016), (Hailegebreal, 2016), (Habtamu, 2012), (Nikolaus, 2014) and (Mirza, 2013) they

found that a perfect negative relationship between inflation rate and (ROA) firm performance and also had significant effect on financial performance.

The negative relationship between inflation and return on asset could be attributed to the fact that the existing higher inflation rate in Addis Ababa makes costly to the consumer cooperatives in Addis Ababa by increasing the price level and that result from inability of consumer cooperatives to accurately predict the level of inflation.

- **Gross Domestic Product (GDP-Rate) and Return on Asset (ROA)**

  As it presented in the table 4.10 above, the coefficient of Gross Domestic Product (GDP-Rate) measured by the rate of the market value of all final goods and services produced within an economy in a given period of time is 0.037 and its p=value is 0.1182. Holding other explanatory variables constant at their average value, when Addis Ababa's Gross Domestic Product (GDP-Rate) increased by one birr, Return on Asset (ROA) of sampled Addis Ababa consumer cooperatives be increased by 0.037 birr, and statically insignificant at 5% significant level. That means there is insignificant positive relationship between Addis Ababa's Gross Domestic Product (GDP-Rate) and consumer cooperative's ROA. Therefore, the researcher failed to reject the null hypothesis that there is positive relationship between Addis Ababa's Gross Domestic Product (GDP-Rate) and consumer cooperative's ROA. In other word, there is no sufficient evidence to support the negative relationship between Addis Ababa's Gross Domestic Product (GDP-Rate) and consumer cooperative's ROA.

  The effect is positive as expected and this positive effect between Addis Ababa's Gross Domestic Product (GDP-Rate) and financial performance could be attributed be the fact that consistence with existing and previous studies of (Ifeanyi C. & Chuskwuma C., 2016) , (Shah Mohd & Ahmed Siddiqui, 2020) , (Egbunike & Okerekeoti, 2018) , (Berk et al., 2006) and (Matar et al., 2018) examined gross domestic product had a positive significant effect on firms financial performance And also, (Hailegebreal, 2016),found similar result that gross domestic product had a positive significant relationship with the profitability of Ethiopian insurance industry Measured by ROA.

  The possible reason for the positive relationship could be GDP growth rate leads to the increment of income for society this makes to increase the purchasing power and rise in consumption this leads to increase sales of retail firm as a result increase in financial performance.

4.6.1.2 An Integration of Regression Results of ROA and ROE

Before discussing the result of regression result of the model ROE, let discuss similarity and different result of the two models of ROA and ROE. As shown in the table 4.11 the independent variables like sales growth, liquidity ratio, operating expense ratio, firm size, social contribution and inflation have similar sign results in both models of ROA and ROE. However, capital structure and rate of gross domestic product have different sign results in both models of ROA and ROE. The justification behind capital structure that results different sign in both models is that the negative association between capital structure and return on asset could bet fixed charged credit fund beyond their cost that means an increase in debt increases the interest payment hence decrease in financial performance. Therefore, optimal debt financing is essential for the firm to realize better financial performance. However, positive association between capital structure and return on equity could high leverage make beneficial by improving managerial efficiency by making them to efficient utilization of debt hence increase in financial performance. Therefore, optimal debt financing is essential for the firm to realize better financial performance.

Regarding rate of gross domestic product that results different sign in both models is that the positive relationship could be GDP growth rate leads to the increment of income for society this makes to increase the purchasing power and rise in consumption this leads to increase sales of retail firm as a result increase in financial performance. However, the possible reason for the negative relationship could be GDP growth rate affect some shareholders jump from low income level to middle income level this leads to change consumption character from subsidiary basic goods to necessity good this leads to decreasing of some customer resulted decrement of financial performance.

Table 4.11 An Integration of Regression Results of ROA and ROE

Independent Variable	Dependent Variable			
	Result of ROA	Statistical significance test	Result of ROE	Statistical significance test
Capital structure	Negative	insignificant at 5%	Positive	significant at 5%
Sales Growth	Positive	significant at 5%	Positive	insignificant at 5%
Liquidity	Positive	significant at 5%	Positive	significant at 5%
Operating Expense ratio	Negative	significant at 5%	Negative	significant at 5%
Firm size	Negative	significant at 5%	Negative	significant at 5%
Firm Social Contribution	Negative	significant at 5%	Negative	insignificant at 5%
Rate of GDP	Positive	insignificant at 5%	Negative	insignificant at 5%
Inflation	Negative	significant at 5%e	Negative	significant at 5%e

Source: Researcher own computation

4.6.1.3 Operational Regression model Result of Return on Equity (ROE)

This section presents the overall results of regression analysis on determinants of financial performance of consumer cooperatives measured by ROE. Table 4.12 shows the regression analysis for dependent variable ROE and Independent variables CS, SG, LQ, OPE, LogFS, D1, GDP-Rate and IF. As shown in the above table the model was

$$ROE = 1.164 + 0.08CS + 0.09SG + 0.06LQ - 0.413\text{OPE} - 0.0995LnFS - 0.025\text{D1} - 1.6^{-5}\text{GDP} - 0.348IF + \varepsilon$$

The estimation result indicated in table 4.12 depicted that, R_ squared and Adjusted R_ squared values of 0.571 and 0.536 respectively. This indicates that the model is a good fit because 57.1% of variation in return on equity of Addis Ababa consumer cooperatives was explained by independent variables included by the model. However, the remaining 42.8% changes in return on equity of Addis Ababa consumer cooperatives are caused by other variables that are not included in the model represented by error term(ε).Furthermore, the F-statistics 16.01 and the probability of not rejecting the null hypothesis that there is no statistically relationship existing between the explained variable(ROE) and the explanatory variables, is 0.00000 implies that the overall model is highly significant at 0.05 and that all the explanatory variables are jointly significance in causing in variation in return on equity.

The random effect estimation regression result of ROE table 4.11 shows that, intercept coefficient (β_0)is 1.164. this means, when all independent variables took a value of zero, the average value of ROE would be taking 1.164 unit and statistically significant (i.e. 0.00000) at 5 percent level of significance.

As shown in table 4.12 the coefficient estimates of Operational expense ratio (OPE), Natural Log of firm size (LOG_FS) and Inflation (IF) were negative and statistically significant at 5% level of significance. The coefficient estimates the aforementioned three explanatory variables were -0.413, -0.099, and -0.347 respectively. The negative sign of the coefficient estimates with 5% significance level indicate that strong inverse relationship between ROE and the above-mentioned independent variables. Hence, it can be concluded that, a decrease on those variables lead to an increase in ROE of Addis Ababa consumer cooperatives. In opposite to this, the coefficient estimates of Liquidity ratio (LQ) and Capital Structure (CS) were positive and statistically significant at 0.05 significant levels with coefficient estimates of 0.06 and 0.08 respectively. The positive sign of the coefficient estimates with 5% significance level indicate that strong inverse relationship between ROA and the above-mentioned independent variables. Hence, it can be concluded that, an increase on those variables lead to an increase in ROE of Addis Ababa consumer cooperatives. But Sales Growth (SG) was positive and statistically insignificant at 5% level of significance with coefficient estimates of -0.089. Social Contribution (D1) and Gross Domestic product rate (GDP Rate) were negative and statistically insignificant at 5% level of significance with coefficient estimates of -0.025 and -1.6^5.respectively.

Table 4.12 Model regressed using ROE as a proxy of financial performance

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 04/21/21 Time: 07:34
Sample: 2008 2012
Periods included: 5
Cross-sections included: 21
Total panel (balanced) observations: 105
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.164459	0.256619	4.537693	0.0000
CS	0.080289	0.021350	3.760647	0.0003
SG	0.089429	0.074618	1.198491	0.2337
LQ	0.060681	0.017924	3.385521	0.0010
OPE	-0.412760	0.062177	-6.638433	0.0000
LOG FS	-0.098740	0.036815	-2.682039	0.0086
GDP RATE	-1.62E-05	2.37E-05	-0.682796	0.4964
IF	-0.347456	0.130850	-2.655384	0.0093
D1	-0.024974	0.020229	-1.234583	0.2200

Effects Specification

	S.D.	Rho
Cross-section random	0.008575	0.0159
Idiosyncratic random	0.067391	0.9841

Weighted Statistics

Root MSE	0.068930	R-squared	0.571474
Mean dependent var	0.188543	Adjusted R-squared	0.535763
S.D. dependent var	0.105802	S.E. of regression	0.072088
Sum squared resid	0.498887	F-statistic	16.00296
Durbin-Watson stat	1.853476	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.573219	Mean dependent var	0.196026
Sum squared resid	0.506501	Durbin-Watson stat	1.825613

Source: EViews 11 output from consumer cooperatives financial statements

As shown in the above table 4.11 results the model was: -

$$ROE = 1.164 + 0.08CS + 0.09SG + 0.06LQ - 0.413\text{OPE} - 0.0995LnFS - 0.025\text{D1} - 1.6^{-5}\text{GDP} - 0.348IF + \varepsilon$$

- ***Capital Structure (CS) and Return on Equity (ROE)***

As the above random effect regression EViews output table 4.12 shows that, the coefficient of Capital structure (CS) measured by the ratio of total liability to total equity is 0.080 and its p= value is 0.0003. Holding other explanatory variables constant at their average value, when consumer cooperative's Capital structure (CS) increased by one birr, Return on Equity (ROE) of sampled Addis Ababa consumer cooperatives be decreased by 8%, and statically significant at 5% significant level. That means there is significant positive relationship between consumer cooperative's Capital structure (CS) and consumer cooperative's ROE. Therefore, the researcher failed to reject the null hypothesis that there is positive relationship between consumer cooperative's Capital structure (CS) and consumer cooperative's ROE. In other word, there is no sufficient evidence to support the negative relationship between consumer cooperative's Capital structure (CS) and consumer cooperative's ROE.

Generally, regarding capital structure, there is no common agreement accurate proportion of capital structure in the firm. cost of equity capital is higher than interest charges on debt while having some debt is good, too much debt is risky. The existing literature on the effect of leverage on a firm's financial performance has come to mixed results and conclusions (Nikolaus, 2014). According to (Matar & Eneizan, 2018) Leverage is not always bad, however; it can increase the stockholders' earnings on their invested funds and make better utilization of the tax benefits related to the debt financing..

However, this research result is consistent with the result of (Rotich, 2015), (Khan et al., 2017) , (Chytis et al., 2018) and (Bayaraa, 2017) conclude that leverage has a significant positive relationship with firm performance suggested that high leverage benefits shareholders on share of their capital and can put together proper utilization of tax benefits related to loans this relationship between firm's financial performance and capital structure determined positively.

This positive association between capital structure and return on equity could high leverage makes beneficial by improving managerial efficiency by making them to efficient utilization of debt hence increase in financial performance. Therefore, optimal debt financing is essential for the firm to realize better financial performance.

- Sales Growth (SG) and Return on Equity (ROE)

As the above random effect regression EViews output table 4.12 shows that, the coefficient of sales growth (SG) measured by percentage change in the sales of a company in a given

years with the respect to the previous year sales is 0.089 and its p=value is 0.2337. Holding other explanatory variables constant at their average value, when consumer cooperative's sales growth (SG) increased by one birr, Return on Equity (ROE) of sampled Addis Ababa consumer cooperatives be increased by 0.089 birr, and statically insignificant at 5% significant level. That means there is insignificant positive relationship between consumer cooperative's sales growth (SG) and consumer cooperative's ROE. Therefore, the researcher failed to reject the null hypothesis that there is positive relationship between consumer cooperative's sales growth (SG) and consumer cooperative's ROE. In other word, there is no sufficient evidence to support the negative relationship between consumer cooperative's sales growth (SG) and consumer cooperative's ROE.

Generally, the result is consistent with the findings of (Tailab, 2014), (Pouraghajan et al., 2012), (Hamidzadeh & Zeinali, 2015), (Matar et al., 2018) and (Noel Capon, 2020) the growth rate by sales had a positive effect on ROE (Hoang et al., 2019) growth in sales individually show positive relationships to performance.

The possible reason for the significant positive relationship could be the consumer cooperatives increase their sales because they retail basic consumer goods received by government so, that could make a profit from additional sales.

- **Liquidity ratio (LQ) and Return on Equity (ROE)**

The estimation result reported in table 4.12 depicted that, the coefficient of liquidity ratio (LQ) measured by the ratio of current asset to current liability is 0.06 and its p-value is 0.0010. Holding other explanatory variables constant at their mean value, when consumer cooperative's liquidity ratio (LQ) increased by one birr, Return on Equity (ROE) of sampled Addis Ababa consumer cooperatives be increased by 0.06 birr, and statically significant at 5% significant level. That means there is significant positive relationship between consumer cooperative's liquidity ratio (LQ) and consumer cooperative's ROE. Therefore, the researcher failed to reject the null hypothesis that there is positive relationship between consumer cooperative's liquidity ratio (LQ) and consumer cooperative's ROE. In other word, there is no sufficient evidence to support the negative relationship between consumer cooperative's liquidity ratio (LQ) and consumer cooperative's ROE.

The goal of liquidity management should be to enable a firm to maximize profits of its operations while meeting both short-term debt and upcoming operational expenses that is to preserve liquidity (Audax, 2018). The effect of liquidity ratio on financial performance for

non-financial firm is positive. The result is consistent with the findings of (Tailab, 2014), (Matar et al., 2018), (Nikolaus, 2014), (Mirza, 2013), (Audax, 2018) , (Demirgünes, 2016), (Matar & Eneizan, 2018) regarding the relationship of liquidity and firm performance found to be supported as the results suggest positive

The possible reason for the significant positive relationship could be consumer cooperatives are non-financial firms. They could be increasing their operating cash flow, through reduction of credit repayment period may lead to increment in liquidity ratio and financial performance.

- **Operating Expense ratio (OPE) and Return on Asset (ROE)**

As the above random effect regression EViews output table 4.12 shows that, the coefficient of Operating Expense Ratio (OPE) measured by the ratio of operating expense and the net sale is -0.413 and its p=value is 0.0000. Holding other explanatory variables constant at their average value, when consumer cooperative's Operating Expense Ratio (OPE) increased by one birr, Return on Equity (ROE) of sampled Addis Ababa consumer cooperatives be decreased by 0.413 birr, and statically significant at 5% significant level. That means there is significant negative relationship between consumer cooperative's Operating Expense Ratio (OPE) and consumer cooperative's ROE. Therefore, the researcher failed to reject the null hypothesis that there is negative relationship between consumer cooperative's Operating Expense Ratio (OPE) and consumer cooperative's ROE. In other word, there is no sufficient evidence to support the positive relationship between consumer cooperative's Operating Expense Ratio (OPE) and consumer cooperative's ROE.

This ratio represents the total amount of expenditures the society pay for earning total revenue. It is related with the capability of the management to use its resources efficiently, income intensification, decreasing operating costs (Assfaw, 2015). Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Ongore & Kusa, 2013). The researcher concluded that the poor management quality especially poor financial skill, Extravagancy, corruption and embezzlement lead to high operating expense resulting decrement of profitability.

As expected, consumer cooperatives Operating Expense Ratio (OPE) have a negative effect on ROA in Addis Ababa consumer cooperatives. This results support the research results of (Ongore & Kusa, 2013), (Assfaw, 2015) Operating expense ratio had negative and significant relationship with return to assets ratio (Mugun, 2020).

- **Firm size (LOG-FS) and Return on Equity (ROE)**

As it presented in the table 4.12 above, the coefficient of firm size (LOG_FS) measured by natural logarithm of total asset is -0.099 and its p=value is 0.0086. Holding other explanatory variables constant at their average value, when consumer cooperative's size (LOG_FS) increased by one birr, Return on Equity (ROE) of sampled Addis Ababa consumer cooperatives be decreased by 9.9%, and statically significant at 5% significant level. That means there is significant negative relationship between consumer cooperative's size and consumer cooperative's ROE. Therefore, the researcher failed to reject the null hypothesis that there is negative relationship between consumer cooperative's size and consumer cooperative's ROE. In other word, there is no sufficient evidence to support the positive relationship between consumer cooperative's size and consumer cooperative's ROE.

Generally, there is no common agreement about effect of firm size on firms financial performance between researchers because some researcher argue that Large firms can exploit economies of scale and scope and thus being more efficient compared to small firms (Almajali et al., 2012). Larger institutions are believed to have more profitable investment opportunities, higher efficiency, more diversification and a lower risk level (Rotich, 2015). Other says smaller firms may be more flexible Theoretically it is equivocal on the precise relationship between firm's financial performance and firm size (Tailab, 2014), (Yodit, 2017) and (Tailab, 2014).

As expected, consumer cooperatives size has a negative effect on ROA in Addis Ababa consumer cooperatives. This results support the research results of (Almajali et al., 2012) , (Rotich, 2015), (Pantea et al., 2014), (Tailab, 2014) stated that small firm have negative and significant relationship with their financial performance.

The possible reason for the significant negative relationship could be consumer cooperatives have no ability to attain economies of scale to enhance their profitability and they are not able to mitigate their cost to boost financial performance

- **Social Contribution(D1) and Return on Equity (ROE)**

As the above random effect regression EViews output table 4.12 shows that, the coefficient of Social Contribution(D1) measured by dummy variable that is Cooperatives in certain contribution represented by '1", otherwise "0". is -0.025 and its p-value is 0.2200. Holding other explanatory variables constant at their average value, when consumer cooperative's Social Contribution(D1) increased by one birr, Return on Equity (ROE) of sampled Addis

Ababa consumer cooperatives be decreased by 3.64 percent, and statically insignificant at 5% significant level. That means there is insignificant negative relationship between consumer cooperative's Social Contribution (D1) and consumer cooperative's ROE. Therefore, the researcher failed to reject the null hypothesis that there is negative relationship between consumer cooperative's Social Contribution (D1) and consumer cooperative's ROE. In other word, there is no sufficient evidence to support the positive relationship between consumer cooperative's Social Contribution (D1) and consumer cooperative's ROE.

.(Cho et al., 2019) small firm has negative impact of CSR on the performance measured by several indicators (Zoubir, 2015).And also as reviled by (Linnea & Bråtenius, 2006) there was no significant reaction for the top performing companies' stock returns, but the general direction of the impact was negative. the companies that are making efforts in the areas of social welfare and the protection of the environment, achieve operating results lower than the other companies, the consequent negative effects on the value of their shares on the stock exchange (Wang & Gao, 2016). social commitment by firms have no impact on the financial performance of firms (Nyeadi et al., 2018)

- **Inflation (IF) and Return on Equity (ROE)**

The estimation result reported in table 4.12 depicted that, the coefficient of Inflation (IF) measured by the relative rise of price of good and service or a decreasing of a purchasing power of money is -0.347 and its p=value is 0.0093. Holding other explanatory variables constant at their average value, when Addis Ababa city price level increased by one percent, Return on Equity (ROE) of sampled Addis Ababa consumer cooperatives be decreased by 0.347, and statically significant at 5% significant level. That means there is significant negative relationship between Addis Ababa city Inflation (IF) and consumer cooperative's ROE. Therefore, the researcher failed to reject the null hypothesis that there is negative relationship between Addis Ababa city Inflation (IF) and consumer cooperative's ROE. In other word, there is no sufficient evidence to support the positive relationship between Addis Ababa city Inflation (IF) and consumer cooperative's ROE.

Generally, regarding inflation rate results are not clear whether financial performance affect positively or negatively. The expected negative coefficient estimates of inflation and financial performance is inconsistence with (Shah Mohd & Ahmed Siddiqui, 2020) , (Berk et al., 2006) and (Fesha, 2018) found that the higher inflationary condition of a country positively affects the firm's financial performance. The reason why as we have seen in the above different researchers found that the effect of inflation on financial performance is as

explained by the above studies the determination of inflation effect on firm performance depend on anticipation because inflation is high and unexpected it can be very costly to an economy

However, the result of this research is consistent with the result of (Ifeanyi C. & Chuskwuma C., 2016), (Hailegebreal, 2016), (Habtamu, 2012), (Nikolaus, 2014) and (Mirza, 2013) they found that a perfect negative relationship between inflation rate and (ROE) firm performance and also had significant effect on financial performance.

The negative relationship between inflation and return on asset could be attributed to the fact that the existing higher inflation rate in Addis Ababa costly to the consumer cooperatives in Addis Ababa and that result from inability of consumer cooperatives to accurately predict the level of inflation.

- **Gross Domestic Product (GDP-Rate) and Return on Equity (ROE)**

  As it presented in the table 4.12 above, the coefficient of Gross Domestic Product (GDP-Rate) measured by the rate of the market value of all final goods and services produced within an economy in a given period of time is $-1.6^{-5}$and its p=value is 0.4964. Holding other explanatory variables constant at their average value, when Addis Ababa's Gross Domestic Product (GDP-Rate) increased by one birr, Return on Equity (ROE) of sampled Addis Ababa consumer cooperatives be increased by -1.6^{-5}birr, and statically insignificant at 5% significant level. That means there is insignificant negative relationship between Addis Ababa's Gross Domestic Product (GDP-Rate) and consumer cooperative's ROE. Therefore, the researcher rejects the null hypothesis that there is positive relationship between Addis Ababa's Gross Domestic Product (GDP-Rate) and consumer cooperative's ROE. In other word, there is sufficient evidence to support the negative relationship between Addis Ababa's Gross Domestic Product (GDP-Rate) and consumer cooperative's ROE.

  The effect is negative and this negative effect between Addis Ababa's Gross Domestic Product (GDP-Rate) and financial performance could be attributed be the fact that inconsistence with existing and previous studies of (Ifeanyi C. & Chuskwuma C., 2016) , (Shah Mohd & Ahmed Siddiqui, 2020) , (Egbunike & Okerekeoti, 2018) , (Berk et al., 2006) and (Matar et al., 2018) examined gross domestic product had a positive significant effect on firms financial performance

  The possible reason for the negative relationship could be GDP growth rate affect some shareholders jump from low income level to middle income level this leads to change

consumption character from subsidiary basic goods to necessity good this leads to decreasing of some customer resulted decrement of financial performance.

4.7 Summary Analysis

This chapter discussed the result of research analysis regarding the determinant factors of financial performance of consumer cooperatives in Addis Ababa. Lest, descriptive statistics, correlation matrix, and the five-diagnostic test for classical linear regression model assumption, model selection was presented.

Furthermore, to achieve the intended objective tests the appropriateness of random effect regression model rather than fixed effect model and pooled regression model.

Table 4.13 Summary and Comparison of test result with Expectation for ROA Model

Dependent Variable		ROA		
Independent Variable	Expected Result	Actual result	Actual Statistical significance test	Hypothesis Status
Capital structure	Positive	Negative	insignificant at 5%	**Reject**
Sales Growth	Positive	Positive	significant at 5%	Failed to Reject
Liquidity	Positive	Positive	significant at 5%	Failed to Reject
Operating Expense ratio	Negative	Negative	significant at 5%	Failed to Reject
Firm size	Negative	Negative	significant at 5%	Failed to Reject
Firm Social Contribution	Negative	Negative	significant at 5%	Failed to Reject
Rate of GDP	Positive	Positive	Insignificant at 5%	**Reject**
Inflation	Negative	Negative	significant at 5%	Failed to Reject

Source: Researcher own computation

As shown from summary table 4.13 the independent variables capital structure was deviated from the expected result that means the researcher hypothesized positive relationship but the finding results is negative. Hence, the possible reason for the negative association between CS and ROA could be fixed charged credit fund beyond their cost that means an increase in debt increases the interest payment hence decrease in financial performance. Therefore, optimal debt financing is essential for the firm to realize better financial performance. The possible reason for the insignificant positive relationship could be GDP growth rate leads to

the increment of income for society this makes to increase the purchasing power and rise in consumption this leads to increase sales of retail firm as a result increase in financial performance but the increase in rate of GDP outweigh by increasing inflation rate this makes the positive relationship become insignificant.

Table 4.14 Summary and Comparison of test result with Expectation for ROE Model

Dependent Variable		ROE		
Independent Variable	Expected Result	Actual result	Actual Statistical significance test	Hypothesis Status
Capital structure	Positive	Positive	significant at 5%	Failed to Reject
Sales Growth	Positive	Positive	Insignificant at 5%	Reject
Liquidity	Positive	Positive	significant at 5%	Failed to Reject
Operating Expense ratio	Negative	Negative	significant at 5%	Failed to Reject
Firm size	Negative	Negative	significant at 5%	Failed to Reject
Firm Social Contribution	Negative	Negative	significant at 5%	Failed to Reject
Rate of GDP	Positive	Positive	Insignificant at 5%	Reject
Inflation	Negative	Negative	insignificant at 5%	Reject

Source: Researchers own computation

As shown from summary table 4.14 the independent variables Sales growth, Gross Domestic product and social contribution were deviated from the expected result that means the researcher hypothesized significant relationship but the finding results is insignificant.

CHAPTER FIVE

SUMMERY, CONCLUSION and RECOMENDATION

Based on the findings of the study summary and conclusion are drawn and possible recommendation is forwarded. In this chapter accordingly, the first section presents the summary of the main finding, conclusion and the possible recommendation consecutively.

5.1. Summary

The main objective of this thesis was to examine the determinants of financial performance of consumer cooperatives in Addis Ababa. According to previous researches financial performance was determined by both internal factors and external factors. Internal factors are factors that are mainly influenced by firm's management and also called firm specific factors. Those factors include capital structure, liquidity ratio, sales growth, firm size, operating expense ratio and social responsibility. Furthermore, external factors represent events outside the influence of the consumer cooperatives and called macroeconomic factor's which is gross domestic product and inflation. And two regression models are used for financial performance measure ROA and ROE.

By using firm specific factors such as capital structure, liquidity ratio, sales growth, firm size, operating expense ratio and social responsibility with external variables of gross domestic product and inflation. This study examined the determinants of financial performance of consumer cooperatives in Addis Ababa over the period 2016-2020, which were analyzed using descriptive statistics, correlation matrix and multiple regression analysis. In this research panel data of twenty-one consumer cooperatives for five years was used for analysis purpose. Data used for the firm specific factor were obtained from each sampled consumer cooperatives audited financial reports, whereas data of external factors were obtained from NBE and Addis Ababa plan commission. Before making regression analysis, the study goes through all diagnostic test, including Mean zero, heteroscedastic, multicollinearity, autocorrelation and normality were made for the classical linear regression model by using E-views 11 software.

In relation to financial performance measured by ROA; Operational expense ratio (OPE), Natural Log of firm size (LOG_FS), Social contribution (D1), and Inflation (IF) were negative and statistically significant at 5% level of significance. In opposite to this, the coefficient estimates of Liquidity ratio (LQ) and Sales Growth (SG) were positive and statistically significant at 0.05 significant levels. But Capital structure (CS) was negative and

statistically insignificant at 5% level of significance. Gross Domestic product rate (GDP Rate) was positive and statistically insignificant at 5% level of significance.

With regard to ROE as financial performance measure for the study; Operational expense ratio (OPE), Natural Log of firm size (LOG_FS) and Inflation (IF) were negative and statistically significant at 5% level of significance. In opposite to this, the coefficient estimates of Liquidity ratio (LQ) and Capital Structure (CS) were positive and statistically significant at 0.05 significant levels. But Sales Growth (SG) was positive and statistically insignificant at 5% level of significance. Social Contribution (D1) and Gross Domestic product rate (GDP Rate) were negative and statistically insignificant at 5% level of significance.

5.2. Conclusion

Following the interpretation of collected data during the course of the research, we can be concluded that there is certain micro as well as macroeconomic determinants' that influence consumer cooperatives' financial performance in a significant manner. Based on the result of the regression analysis, the researcher came up with the following conclusion.

- Regarding consumer cooperative specific variables, effect of Operating Expense Ratio on consumer cooperatives financial performance in Addis Ababa. The finding indicates that Operating Expense Ratio was negative and statistically significant in explaining the financial performance of Addis Ababa consumer cooperatives. This implies that the society incurred more expenditure to get additional income. The researcher concluded that the poor management quality especially poor financial skill, Extravagancy, corruption and embezzlement lead to high operating expense resulting decrement of profitability.
- Effects of Liquidity ratio on financial performance in Addis Ababa consumer cooperatives.

  The finding indicates that Liquidity ratio was positive and statistically significant in explaining the financial performance of Addis Ababa consumer cooperatives. This implies that consumer cooperatives increasing their operating cash flow, through reduction of credit repayment period may lead to increment in liquidity ratio and financial performance because consumer cooperatives are non-financial firms.
- The other consumer cooperative specific variables, effect of firm size on consumer cooperatives financial performance in Addis Ababa. The finding indicates that firm size was negative and statistically significant in explaining the financial performance

of Addis Ababa consumer cooperatives. This implies that as a small firm consumer cooperative have no ability to attain economies of scale to enhance their profitability and they are not able to mitigate their cost to boost financial performance

- Effect of sales growth on consumer cooperatives financial performance in Addis Ababa. The finding indicates that Liquidity ratio was positive and statistically significant in explaining the financial performance of Addis Ababa consumer cooperatives. This implies that the consumer cooperatives increase their sales because they are retailers of basic consumer goods received by government with a certain profit margins' hence, when they increase their sale at same time they get additional profit margin that makes to increase a profit from additional sales.
- Regarding consumer cooperative specific variables, effect of capital structure on consumer cooperatives financial performance in Addis Ababa. The finding assures that leverage is not always bad, it increases the stockholders' earnings on their invested funds and makes better utilization of the tax benefits related to the debt financing and also, high leverage makes beneficial by improving managerial efficiency by making them to efficient utilization of debt hence increase in financial performance. Therefore, optimal debt financing is essential for the firm to realize better financial performance.
- The other consumer cooperative specific variables, effect of social contribution on consumer cooperatives financial performance in Addis Ababa. The finding indicates that social contribution was negative and statistically significant in explaining the financial performance of Addis Ababa consumer cooperatives. This implies that the social contribution activities have been conducted as mandatory activities rather than benevolently activities as a result the society did not give attention and did not add value for the business rather it is a cost for the consumer cooperatives as a result it deteriorate financial performance
- Regarding to macro variables, Effects of inflation on financial performance in Addis Ababa consumer cooperatives. The finding indicates that inflation was negative and statistically significant in explaining the financial performance of Addis Ababa consumer cooperatives. This implies that the existing higher inflation rate in Addis Ababa costly to the consumer cooperatives in Addis Ababa and that result from inability of consumer cooperatives to accurately predict the level of inflation.
- Effect of GDP growth rate on consumer cooperatives financial performance in Addis Ababa. The finding indicated a surprising result that GDP growth rate was negative

and statistically insignificant in explaining the financial performance of Addis Ababa consumer cooperatives. This implies that GDP growth rate affect income of shareholders as a result some of them jump from low income level to middle income level this leads to change consumption character from subsidiary basic goods to necessity good this leads to decreasing of some customer number resulted decrement of financial performance.

- Thus, the overall finding of the research indicates that both micro and macroeconomic factors do have statistically significant effect on financial performance.

5.3. Recommendation

Based on the research findings of regression analysis and conclusion the following recommendations were forwarded for stakeholders: -

- The Management bodies of the consumer cooperative has control over the consumer cooperative specific factors so, they have possibility to improve the financial performance of consumer cooperatives by giving more attention on the identified internal factors such as operating expense ratio, firm size, capital structure, liquidity ratio and sales growth.
- Great attention should be paid to operating expense ratio because in regression analysis it is the major factor that affect consumer cooperative and also this ratio increases continuously during study period hence, The Management bodies of the consumer cooperative should reduce operating expense by creating transparent financial system to reduce corruption and embezzlement
- . The Management bodies of the consumer cooperative should ensure appropriate debit ratio (capital structure) to enhance their financial performance because listed consumer cooperatives have almost low debit ratio as a result they loss the advantage of tax shield so, they could increase their debt ratio.
- The Management bodies of the consumer cooperative should have to build their own asset (firm size) in order to make building more fixed asset this makes consumer cooperatives to have an ability to attain economies of scale to enhance their profitability and they able to mitigate their cost to boost financial performance
- Addis Ababa city government administration should adhere tight regulation toward the consumer cooperative sectors were one of the major government instruments as a means to implement price stability policies specially to fight inflation and to control the price and distribution of basic goods Channeling to consumers

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Appendices

Appendices

Appendix 1: - Breusch-Godfrey Serial Correlation LM Test for ROA

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.382416	Prob. F(2,95)	0.6833
Obs*R-squared	0.838590	Prob. Chi-Square(2)	0.6575

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 04/20/21 Time: 22:31
Sample: 1 105
Included observations: 105
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.038642	0.279096	-0.138456	0.8902
CS	0.000783	0.022075	0.035454	0.9718
SG	0.019559	0.081310	0.240545	0.8104
OPE	-0.006447	0.065753	-0.098050	0.9221
LOG FS	0.004817	0.038386	0.125496	0.9004
GDP RATE	0.057632	0.649070	0.088791	0.9294
IF	0.015086	0.146352	0.103084	0.9181
D1	-0.000446	0.015435	-0.028916	0.9770
RESID(-1)	0.059353	0.104923	0.565677	0.5729
RESID(-2)	0.072471	0.108127	0.670242	0.5043

R-squared	0.007987	Mean dependent var	-1.82E-16
Adjusted R-squared	-0.085994	S.D. dependent var	0.069951
S.E. of regression	0.072897	Akaike info criterion	-2.309142
Sum squared resid	0.504829	Schwarz criterion	-2.056384
Log likelihood	131.2300	Hannan-Quinn criter.	-2.206719
F-statistic	0.084981	Durbin-Watson stat	1.981803
Prob(F-statistic)	0.999789		

Appendix 2: - Breusch-Godfrey Serial Correlation LM Test for ROE

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	2.259982	Prob. F(2,94)	0.1100
Obs*R-squared	4.817259	Prob. Chi-Square(2)	0.0899

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 04/20/21 Time: 23:54
Sample: 1 105
Included observations: 105
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.053246	0.221550	-0.240334	0.8106
CS	0.002592	0.017378	0.149164	0.8817
SG	0.006422	0.061341	0.104686	0.9168
LQ	4.63E-07	2.01E-05	0.022992	0.9817
OPE	-5.99E-05	0.051247	-0.001169	0.9991
LOG FS	0.006120	0.030374	0.201478	0.8408
GDP RATE	0.042735	0.506676	0.084344	0.9330
IF	0.024704	0.114011	0.216678	0.8289
D1	9.90E-05	0.011997	0.008254	0.9934
RESID(-1)	0.223496	0.105256	2.123345	0.0364
RESID(-2)	-0.047779	0.107947	-0.442619	0.6591

R-squared	0.045879	Mean dependent var	-2.12E-16
Adjusted R-squared	-0.055624	S.D. dependent var	0.055169
S.E. of regression	0.056683	Akaike info criterion	-2.803839
Sum squared resid	0.302015	Schwarz criterion	-2.525805
Log likelihood	158.2015	Hannan-Quinn criter.	-2.691174
F-statistic	0.451996	Durbin-Watson stat	2.029620
Prob(F-statistic)	0.916257		

Appendix 3: - Breusch-Pagan-Godfrey test of heteroskedasticity test for ROA

Heteroskedasticity Test: Breusch-Pagan-Godfrey
NuIlThypothesis: Homoskedasticity

F-statistic	1.743046	Prob. F(9,95)	0.0898
Obs*R-squared	14.88135	Prob. Chi-Square(9)	0.0942
Scaled explained SS	20.42286	Prob. Chi-Square(9)	0.0155

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 04/20/21 Time: 22:42
Sample: 1 105
Included observations: 105

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.031336	0.020707	1.513296	0.1335
CS	-0.001435	0.001640	-0.874972	0.3838
SG	0.013388	0.005764	2.322415	0.0223
OPE	0.004153	0.004859	0.854632	0.3949
LQ	9.89E-07	1.88E-06	0.525858	0.6002
INVT	2.97E-06	2.12E-05	0.140325	0.8887
LOG FS	-0.003001	0.002829	-1.060880	0.2914
GDP RATE	-0.081656	0.047904	-1.704584	0.0915
IF	-0.013690	0.010834	-1.263562	0.2095
D1	0.000264	0.001142	0.231638	0.8173

R-squared	0.141727	Mean dependent var	0.003014
Adjusted R-squared	0.060417	S.D. dependent var	0.005545
S.E. of regression	0.005375	Akaike info criterion	-7.523796
Sum squared resid	0.002744	Schwarz criterion	-7.271038
Log likelihood	404.9993	Hannan-Quinn criter.	-7.421374
F-statistic	1.743046	Durbin-Watson stat	1.674112
Prob(F-statistic)	0.089781		

Appendix 4: - Breusch-Pagan-Godfrey test of heteroskedasticity test for ROE

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	1.984360	Prob. F(8,96)	0.0565
Obs*R-squared	14.89935	Prob. Chi-Square(8)	0.0611
Scaled explained SS	20.90039	Prob. Chi-Square(8)	0.0074

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 04/20/21 Time: 23:53
Sample: 1 105
Included observations: 105

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.032390	0.020315	1.594426	0.1141
CS	-0.001436	0.001620	-0.886554	0.3775
SG	0.013446	0.005722	2.349952	0.0208
LQ	9.99E-07	1.87E-06	0.534198	0.5944
OPE	0.004100	0.004826	0.849486	0.3977
LOG FS	-0.003134	0.002793	-1.121939	0.2647
GDP RATE	-0.081882	0.047664	-1.717894	0.0890
IF	-0.013617	0.010706	-1.271954	0.2065
D1	0.000261	0.001132	0.230056	0.8185

R-squared	0.141899	Mean dependent var	0.003015
Adjusted R-squared	0.070390	S.D. dependent var	0.005549
S.E. of regression	0.005350	Akaike info criterion	-7.541456
Sum squared resid	0.002748	Schwarz criterion	-7.313974
Log likelihood	404.9265	Hannan-Quinn criter.	-7.449276
F-statistic	1.984360	Durbin-Watson stat	1.683328
Prob(F-statistic)	0.056470		

Appendix 5: - Hausman Test for ROA Model

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

* Cross-section test variance is invalid. Hausman statistic set to zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.

CS	-0.013996	-0.045633	0.001346	0.3885
SG	0.074043	0.112578	0.000595	0.1142
LQ	0.000100	-0.000235	0.000000	0.0968
OPE	-0.371721	-0.313259	0.000684	0.0254
LOG_FS	-0.046407	-0.099594	0.003620	0.3767
GDP_RATE	-0.612403	-0.596866	0.002646	0.7626
IF	-0.318173	-0.293078	0.009428	0.7961

Cross-section random effects test equation:
Dependent Variable: ROA
Method: Panel Least Squares
Date: 05/09/21 Time: 08:13
Sample: 2008 2012
Periods included: 5
Cross-sections included: 21
Total panel (balanced) observations: 105
WARNING: estimated coefficient covariance matrix is of reduced rank

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.818616	0.456560	1.793007	0.0769
CS	-0.013996	0.045980	-0.304398	0.7616
SG	0.074043	0.055961	1.323113	0.1897
LQ	9.95E-05	0.000315	0.315764	0.7530
OPE	-0.371721	0.046870	-7.930920	0.0000
LOG_FS	-0.046407	0.068520	-0.677277	0.5003
GDP_RATE	-0.612403	0.386446	-1.584705	0.1171
IF	-0.318173	0.137278	-2.317726	0.0231
D1	NA	NA	NA	NA

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.808291	Mean dependent var	0.147542
Adjusted R-squared	0.741069	S.D. dependent var	0.084744
S.E. of regression	0.043122	Akaike info criterion	-3.226374
Sum squared resid	0.143184	Schwarz criterion	-2.518652
Log likelihood	197.3847	Hannan-Quinn criter.	-2.939591
F-statistic	12.02412	Durbin-Watson stat	2.064528
Prob(F-statistic)	0.000000		

Appendix 6: - Hausman Test for ROE Model

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

* Cross-section test variance is invalid. Hausman statistic set to zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CS	0.084976	0.110358	0.002338	0.5996
SG	0.038528	0.089568	0.001019	0.1098
LQ	-0.000060	-0.000533	0.000000	0.0735
OPE	-0.589282	-0.487180	0.001174	0.0029
LOG_FS	-0.059389	-0.150014	0.006324	0.2544
GDP_RATE	-0.892957	-0.801276	0.004610	0.1769
IF	-0.220512	-0.207526	0.016427	0.9193

Cross-section random effects test equation:
Dependent Variable: ROE
Method: Panel Least Squares
Date: 05/09/21 Time: 08:30
Sample: 2008 2012
Periods included: 5
Cross-sections included: 21
Total panel (balanced) observations: 105
WARNING: estimated coefficient covariance matrix is of reduced rank

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.079235	0.606402	1.779735	0.0791
CS	0.084976	0.061070	1.391452	0.1681
SG	0.038528	0.074328	0.518347	0.6057
LQ	-6.00E-05	0.000419	-0.143320	0.8864
OPE	-0.589282	0.062252	-9.466008	0.0000
LOG_FS	-0.059389	0.091009	-0.652559	0.5160
GDP_RATE	-0.892957	0.513277	-1.739717	0.0859
IF	-0.220512	0.182332	-1.209396	0.2302
D1	NA	NA	NA	NA

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.784600	Mean dependent var	0.196369
Adjusted R-squared	0.709070	S.D. dependent var	0.106187
S.E. of regression	0.057275	Akaike info criterion	-2.658729
Sum squared resaid	0.252592	Schwarz criterion	-1.951006
Log likelihood	167.5833	Hannan-Quinn crier.	-2.371946
F-statistic	10.38795	Durbin-Watson stat	2.241913
Prob(F-statistic)	0.000000		